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British Embassy  
Chisinau

# ▶ Sweetening the potential for decent work

A market systems analysis of the honey sector in the Republic of Moldova



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### Notes

**On confidentiality.** *All data collected through primary research have been made anonymous so that individuals cannot be identified. Instead, we refer in generic terms to ‘interviewee(s)’, ‘informants’ or ‘respondents’.*

**On study limitations.** *The study is largely developed based on the perceptions and opinions of key sector stakeholders. Although information was triangulated by different sources where possible, it is recognised that not all opinions and perceptions could be cross-checked and validated.*

**On the views and opinions.** *The views and opinions in this assessment are those of the authors and not of the International Labour Organization or its regional office in Budapest.*



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## Abbreviations

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<b>ANARM</b>	National Beekeepers Association
<b>ANSA</b>	National Agency for Food Safety
<b>CRDV</b>	National Centre for Veterinary Diagnostic
<b>DCFTA</b>	Deep and Comprehensive Free Trade Area
<b>EBRD</b>	European Bank for Reconstruction and Development
<b>EIB</b>	European Investment Bank
<b>EU</b>	European Union
<b>EUR</b>	Euro (€)
<b>FAO</b>	Food and Agriculture Organization
<b>FCDO</b>	UK Foreign, Commonwealth and Development Office
<b>GGF</b>	Good Governance Fund
<b>GDP</b>	Gross Domestic Product
<b>HEA</b>	Honey Exporters Association
<b>IFAD</b>	International Fund for Agricultural Development
<b>ILO</b>	International Labour Organization
<b>LFP</b>	Labour Force Participation
<b>LFS</b>	Labour Force Survey
<b>LLC</b>	Limited Liability Company
<b>LPA</b>	Local Public Administration
<b>M4P</b>	Making Markets Work for the Poor
<b>MADRM</b>	Ministry of Agriculture, Regional Development and Environment
<b>MDL</b>	Moldovan Lei
<b>MEI</b>	Ministry of Economy and Infrastructure
<b>MSA</b>	Market Systems Analysis
<b>MSD</b>	Market Systems Development
<b>MT</b>	Metric Tonne
<b>NBS</b>	National Bureau of Statistics of the Republic of Moldova
<b>ODIMM</b>	Organization for Small and Medium Enterprises Sector Development
<b>SME</b>	Small and Medium Enterprise
<b>SDC</b>	Swiss Agency for Development and Cooperation
<b>UNDP</b>	United Nations Development Programme
<b>US\$</b>	United States Dollar
<b>VET</b>	Vocational Education and Training

## ▶ Executive Summary

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With funding from the British Embassy Chisinau via the UK's Good Governance Fund, the International Labour Organization (ILO) was tasked to conduct a market systems analysis of the honey sector in the Republic of Moldova. The aim of this study was to better understand the market constraints that limit job creation, higher incomes and greater productivity within the sector – particularly in relation to women and people with disabilities – and to identify a practical set of evidence-informed actions that address and remove those constraints.

The Republic of Moldova has a long history of honey production. Despite its relatively small size, the sector is growing: total annual production of honey has doubled over the last 20 years, while exports increased in value by a factor of ten in the eight years from 2011 to 2019. Of strategic importance for the country in this regard is access to European markets, with honey being one of the only animal-based products currently allowed to be exported to the European Union.

In terms of the target group, only **8 per cent of the total number of registered apiaries are owned by women**. While many more women are involved in the honey sector in other ways, this relatively low level of ownership is a **key limiting factor to improving income and job quality for women**. Similarly, despite the lack of readily available data on persons with disabilities in the honey sector, the research suggests that **considerable efforts should be made to foster greater inclusion** through proactive measures to integrate them into employment.

Based on the analysis of the honey market system, the key market constraints include: 1) low productivity of the sector; 2) high mortality of bee families; 3) limited access to technology and infrastructure; 4) underdeveloped education and research; 5) low access to finance; and 6) limited value addition.

A potential intervention strategy was developed to address these six key market constraints, with a total of eight recommendations divided across three broad intervention areas:

The first intervention area focuses on **upscaling production and productivity within the honey sector**. This entails facilitating greater access to beekeeping equipment and technological improvements; encouraging collaboration around research and development; widening access to current public subsidy schemes; and easing the entry and integration of newcomers into the sector through working with training and education institutions.

The second intervention area looks at **improving bee health and access to the honey base within the country**. This consists of developing win-win propositions on pollination services between beekeepers and farmers, as well as improving collaboration with the Government to facilitate greater access to the forest honey base.

The third intervention area seeks to **improve access to local and international markets** for those working in the honey sector. Recommended activities in this regard include stimulating the development of new markets for value-added honey products and services; and promoting greater inclusion for women and persons with disabilities in beekeeping through a cooperative approach.

It is hoped that the findings from this report will be used by current and potential future programmes working to develop the honey sector in the Republic of Moldova in a way that promotes sustainability, scalability, local ownership and a private-sector driven focus.



## ▶ Introduction

### Project introduction

The Good Governance Fund (GGF) is an initiative of the United Kingdom's Foreign, Commonwealth and Development Office (FCDO), which aims to support focus countries in the Eastern Partnership region and the Western Balkans develop greater resilience against internal and external shocks. It seeks to build long-term stability through reforms which strengthen economies, make governments more accountable and responsive, promote higher rates of investment and job creation, tackle corruption, modernise key sectors, and promote free and independent media and civil society.

As part of its commitment in the Republic of Moldova, one of the GGF's priority areas is Sustainable Economic Growth and Enabling Business Environment. Within this context, the International Labour Organization has been tasked with conducting studies on the honey and berry value chains in Moldova to better understand the market constraints that limit job creation, better incomes and business performance, and to identify a practical set of evidence-informed actions that address and remove those constraints.

These studies take the form of market systems analyses, which take a holistic approach to understand and address the underlying root causes that are constraining market performance and limiting opportunities for decent work. The market systems approach builds on the capacities and incentives of market actors – both private and public – to increase the likelihood that positive results are sustained and even scaled-up after intervention.

#### Box 1: What is a market system?

A market system is the inter-connected network of actors and factors that interact to shape the outcomes of an economic exchange. These exchanges are governed by a range of:

- ▶ *Supporting functions.* The context- and sector-specific functions that inform, support and shape the quality of exchange; such as information, skills, infrastructure, finance and access to markets.
- ▶ *Rules and Norms.* The legislative and regulatory environment, including policies, voluntary standards and social norms that guide day-to-day attitudes and conduct.

Supporting functions and rules are carried out by a wide range of market actors, from businesses to financial institutions, trade associations, regulators and government agencies. When certain rules or functions do not operate well, a market system *constraint* is created that reduces the effectiveness of the system and reduces the value captured by the people and market actors involved in the transaction.

Market systems development programmes aim to create positive systemic changes. A systemic change takes place when there is a lasting improvement in one or more market system constraints which leads to improved outcomes for target groups, be they workers suffering from poor safety and health conditions, or young people excluded from the labour force. Programmes discover why market actors have not addressed such constraints themselves, and then work on improving their incentive and capacity to perform new or improved roles.

From the ILO LAB brief “A Systemic Approach to Creating More and Better Jobs”, 2019

The aim is that the honey and berry market systems analyses provide a more detailed understanding of the *underlying* issues that hinder productivity and decent working conditions in both value chains; and an analysis of the key actors most likely to bring about positive change, concluding with a set of recommendations to inform relevant, future programming that may take place through the GGF as well as other mechanisms. Taking such an approach and working within the existing structures of the market where possible should improve the prospects that market growth and the creation of employment opportunities are sustainable, rather than relying upon donor funding ad infinitum.

Inclusiveness and gender mainstreaming are two cross-cutting themes of the Good Governance Fund's Moldova strategy. Therefore, to the extent possible, due consideration is given to unique, additional constraints that may exist specifically for women and persons with disabilities.

## Study purpose and scope

This report is focused on the honey market system. The core research question it seeks to answer is: *What are the systemic constraints to and opportunities for generating greater value and decent employment in the honey value chain in Moldova?*

The scope of the research includes all those currently working in the honey sector as well as those with the potential to enter into employment in the sector. Additional considerations are given to women and persons with disabilities where possible. The geographical scope covers the entire Republic of Moldova.

## Study methods

The research was carried out in two phases:

1. **Desk research:** Available literature was gathered to provide a framework for the primary data collection process. This included a review of national laws and development plans, sector data and market trends as well as relevant studies conducted by other development agencies. A list of the sources consulted can be found in Annex A.
2. **Field research:** Primary research was remotely conducted with Moldovan stakeholders during December 2020 and January 2021. During this stage, a total of 21 interviews were carried out. The interviews were semi-structured and conducted with stakeholders including national and local government officials, producer associations, training institutions, formal and informal business owners, and donor programmes. The interviews provided a detailed picture of the sector from a diverse set of actors and opinions. An anonymised list of the various stakeholders interviewed is included in Annex B.



The research is based on the methods of ILO's *Value Chain Development for Decent Work* guide (ILO, 2021) and the Springfield Centre's *Operational Guide on the M4P Approach* (Springfield Centre, 2014). Results were validated through triangulation of data and methodologies, with the findings validated by relevant stakeholders during a virtual validation workshop in February 2021.

## Report structure

The structure of this report is as follows:

**Section 1** gives the background to this report, its purpose and methodological approach.

**Section 2** provides an overview of the honey value chain in Moldova. It looks at how this sector has developed over time and the direction in which it appears to be heading. Special consideration is given to how the honey value chain impacts the key target group of the research, along with any potential environmental concerns.

**Section 3** analyses the honey market system, taking into account possible constraints coming from the core honey value chain as well as from the supporting functions and rules, which surround it. The key constraints are summarised at the end of the chapter, and are prioritised according to: i.) the feasibility of addressing them; and ii.) their relevance to the Good Governance Fund.

**Section 4** builds on the key constraints identified in the previous chapter to suggest potential areas for project intervention. This entails outlining a vision for what a future programme could hope to achieve during its implementation phase, an assessment of the key actors involved in the market system with their relative incentives and capacities for change, and suggested intervention activities.





## ► Sector structure

### Market overview

The Republic of Moldova is a small, landlocked country situated in Eastern Europe and bordered by Romania and Ukraine. Its estimated population is 2.64 million (NBS, 2020, p. 37), with an equivalent gross domestic product (GDP) per capita of US\$4,590 in 2019.<sup>1</sup> Moldova's labour force participation (LFP) rate stands at 42 per cent, with sizeable geographical and gender gaps: the LFP rate for those in rural areas is 12 percentage points lower than those in urban areas, while the female LFP rate is 9 percentage points lower than the corresponding male figure (NBS, 2020, p. 24).

21 percent of the total working population in the Republic of Moldova is employed in Agriculture, Forestry & Fishing, down from almost 40 per cent in 2018. Agriculture is currently the second largest employer in the country after Public Administration, Education, Health & Social Work (NBS, 2020, p. 65). In terms of value, agriculture-based economic activities contributed 10.7 per cent towards gross economic output in 2019 (NBS, 2020, p. 240). The average monthly earnings for those working in the agricultural sector in 2019 was 4,769 Moldovan Lei (MDL), equivalent to roughly US\$275– the lowest across all sectors of the economy (NBS, 2020, p. 92).

Figure 1: Map of the Republic of Moldova



According to the National Beekeepers Association (ANARM), it is estimated that there are roughly 8,000 beekeepers in Moldova. This corresponds well with official figures from the National Agency for Food Safety (ANSA), which, as of 1 January 2021, had registered 8,020 apiaries and a corresponding total of 281,000 bee colonies.

Beekeepers can be broadly grouped into three categories: hobbyists, professionals, and start-ups. The vast majority of beekeepers in Moldova are hobbyists, with estimates around 70 per cent according

<sup>1</sup> World Bank Open Data, 2020

to key informants. For hobbyists, beekeeping is not their main economic activity and they are not professionalised. They tend to have very low production: a function of the number of hives they have – usually only up to 30 – as well as the productivity of their beekeeping operations, with an estimated average harvest of only 15–25 kg of honey per hive per year.

Professional beekeepers are far less common (around 10 per cent), but are typically well trained in apiculture and dedicated to honey production as their main profession. They tend to have at least 70 hives, and often upwards of 200, with an average yield above 50 kg of honey per hive.

Finally, in between these two extremes is a relatively new group of ‘start-ups’: often younger people interested in developing a honey business and willing to make some investments into the sector but lacking the technical knowledge of professionals. They are estimated at around 20 per cent of beekeepers and tend to have production and yield levels between the other two groups i.e., 30–70 hives; 25–50 kg of honey per hive.

Raw honey is the key focal product for beekeepers. Recent statistics on total annual honey production vary. Official data used by the Food and Agriculture Organization (FAO) states that production was 3,927 metric tonnes (MTs) in 2019.<sup>2</sup> The Ministry of Agriculture, Regional Development and the Environment (MADRM), meanwhile, estimates the figure at 5,700 MTs for 2019 (up from 5,200 in 2017) with production fairly evenly split across the north (30 per cent), centre (36 per cent) and south (34 per cent) of the country.

While current production estimates may vary, there is broad consensus that the potential production capacity is not being met. An expert from Agricultural University estimates this to be around 22,500 MTs given the existing melliferous base.<sup>3</sup> Honey production of Moldova can ensure maintenance of 4.5 times more beehives than are recorded. Potential reasons as to why this is not being realised are explored later in the report.

Honey produced by bees can be sold as a final product itself – either in wholesale, often to businesses, or in smaller jars destined for consumers – as well as being used as an ingredient in added value honey-based products. Other beekeeping products include natural wax, pollen and propolis. Markets for these products are relatively nascent, with MADRM only approving the technical conditions for their sale in November 2020.

The local market for honey in Moldova is rather small. Key industry players estimate that domestic honey consumption is between 500 and 700 grams per person per year – compared to European countries such as Germany where annual per capita consumption is over 1,000 grams (Statista, 2021). Moldovans tend to source their honey directly from the producer – often upon recommendation – rather than from markets/supermarkets, as they feel this provides an additional level of trust in the quality of the product they are purchasing. It is not clear if this is actually the case, however, given that honey sold in supermarkets has to adhere to minimum quality standards that are generally not applied to direct sales. The direct sale of honey from beekeepers to consumers is often ‘informal’, operating outside of the formal economy, which makes it difficult to measure.

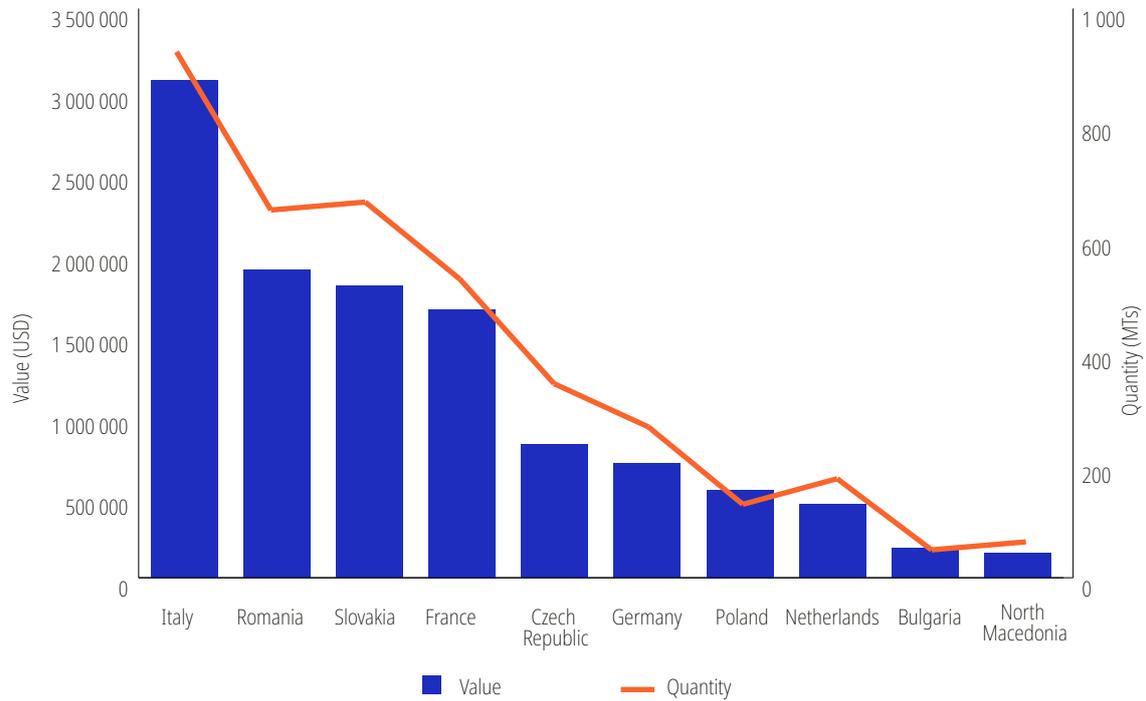
Honey is rather unique in that it is one of the only animal-based products that can be exported from Moldova to the European Union (EU). Looking at global markets, Moldova exported an estimated 3,889 MTs of honey in 2019, equating to 99 per cent of officially registered production. The total value of this exported honey was US\$11.6 million or just under US\$3 per kilogram. Exported honey is almost exclusively exported in bulk, often in packages of 200 kg. The buyers are commonly honey processors, who aggregate, package and re-sell the honey to businesses and/or consumers (ITC, 2021b).

The top four importers of Moldovan honey in 2019 were Italy, Romania, Slovakia and France respectively. Smaller amounts were also exported to the Czech Republic, Germany, the Netherlands and Bulgaria (see Figure 2 below). Compared to other exporters in the world, Moldova ranks as the 27th largest exporter of honey by quantity and 30th largest exporter by value (ibid.).

<sup>2</sup> FAOSTAT, 2021

<sup>3</sup> [https://ibn.idsi.md/sites/default/files/imag\\_file/258-263\\_1.pdf](https://ibn.idsi.md/sites/default/files/imag_file/258-263_1.pdf)

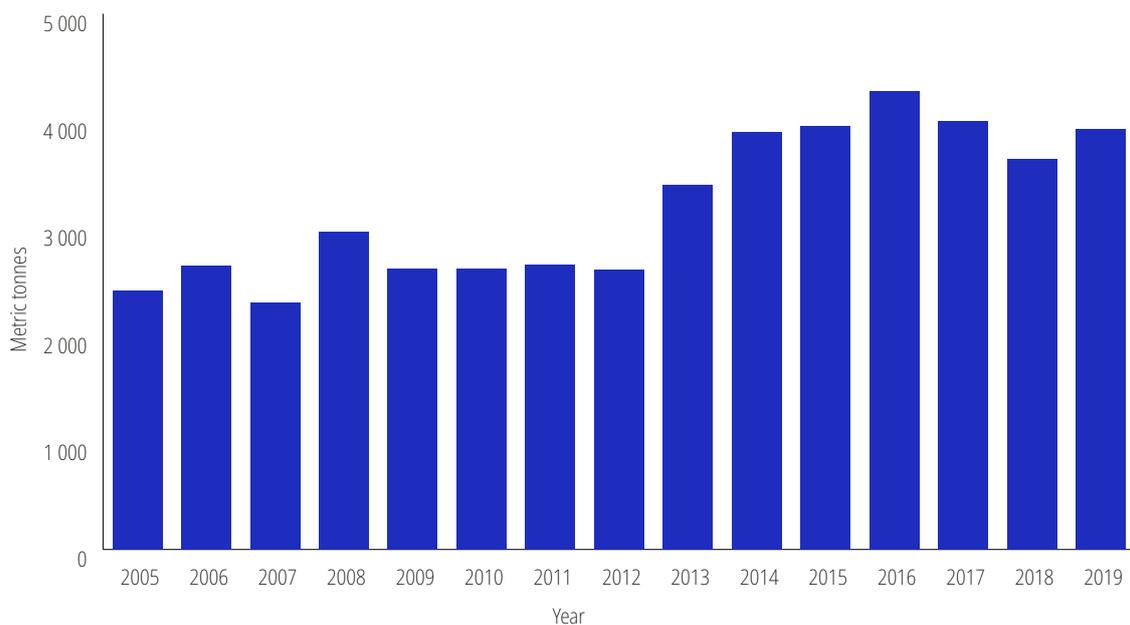
**Figure 2:** Largest importing markets for Moldovan honey, 2019 (Source: ITC Trade Map)



## History and trends

Moldova has a long history of honey production, with many families traditionally keeping a small number of bee colonies as a hobby. According to official statistics, annual honey production has roughly doubled over the past twenty years, from around 2,000 MTs in 2000 to a maximum of 4,275 MTs in 2016. Since this peak, production has dropped somewhat but still remains between 3,500 and 4,000 MTs per year (see Figure 3).

**Figure 3:** Annual honey production in Moldova, 2005–2019 (Source: FAOSTAT)

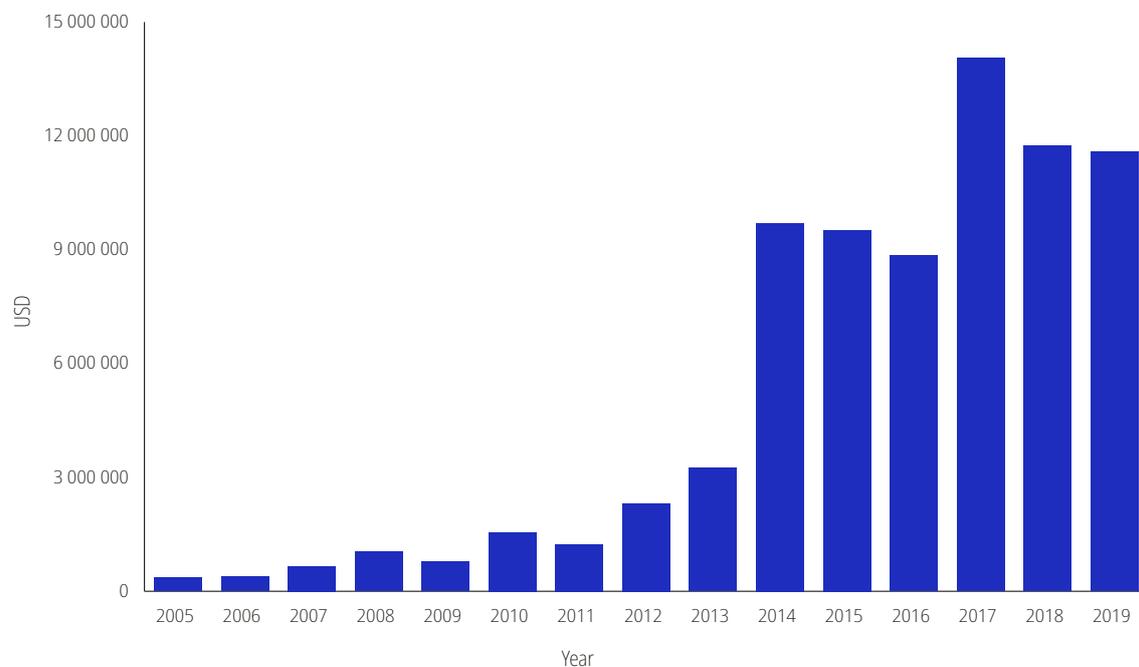


Over a similar time period, the value of Moldovan exports of honey has skyrocketed. The total value of exported honey in 2019 was more than 10 times the corresponding amount in 2011, while export figures reached their highest in 2017 with a total export value of more than US\$14 million. Between 2015 and 2019, the average annual growth in exports of honey has been 7 per cent by value and 9 per cent by quantity (ITC, 2021a).

As shown in Figure 4, two significant upticks in honey exports appear in 2014 and 2017. This would appear to be due to the EU-Moldova Deep and Comprehensive Free Trade Area (DCFTA), part of Moldova's EU Association Agreement, which was provisionally applied in 2014 and officially entered into force in 2016. The DCFTA allowed Moldova to export honey into the EU without any duties or taxes, one of only two animal-based products given this privilege (FAO, 2018).

Access to free trade with European markets should continue to be a positive prospect for Moldovan honey given that the EU is the largest honey consumer in the world, accounting for around 20 per cent of global consumption. While it is also the second largest producer of honey in the world, production is decreasing and the EU imports around 40 per cent of its honey – a figure that looks set to increase given an annual growth rate in imports of 10 per cent between 2005 and 2015 (ibid.).

**Figure 4:** Total value of exported honey in Moldova, 2005–2019 (Source: ITC Trade Map)



An important point, which is not captured in the data, is the significant difficulties faced by honey producers in 2020 and 2021. This is primarily due to poor climatic conditions in 2020, which massively affected honey production. One industry insider described 2020 as the most challenging of the last ten years for beekeepers, with many either suffering extremely low yields or not collecting any honey at all. The National Beekeepers Association, meanwhile, estimated that over 30 per cent of honey was not harvested due to the combination of cold, rainy weather in the spring followed by hot drought over summer. The ongoing COVID-19 pandemic presumably also had a negative effect on the business operations of many honey value chain actors, though all those interviewed referred to the poor climatic conditions as the key reason for low yields, production, revenues and profits for 2020 and 2021.



Considering the impressive increase in Moldovan honey production and exports, several donors have invested in further developing the sector. A number of donor-funded programmes supporting the value chain currently ongoing or recently finished in the country include:

**High Value Agriculture Activity (HVAA)**<sup>4</sup> USAID programme offering support until 2022. HVAA supports the honey sector with a focus on the development of the value chain through: 1) training/education, 2) building capacity of the National Association of Beekeepers (ANARM), 3) creating the Honey Export Association (HEA), and 4) financing different innovations, such as a mobile honey extracting laboratory, vertical model of hives, a laboratory for genetic material.

**International Fund for Agriculture Development (IFAD)**<sup>5</sup> has been implementing different programmes for agriculture development in Moldova since 2001. The support focuses not only on grants but also on credits for investments. For example, a credit line for young people was established with a 40 per cent matching grant for horticulture and zootechnical sectors. Similarly, a grant programme for women from rural areas offers grants up to US\$5,000 for micro - businesses that account for climate resilience – including beekeeping.

**Moldova Agriculture Competitiveness Project (MACP)**,<sup>6</sup> 2012–2021, is a World Bank project whose objective is to enhance the competitiveness of the country's agri-food sector by supporting the modernisation of the food safety management system; facilitating market access for farmers; and mainstreaming agro-environmental and sustainable land management practices. The project offers grants up to US\$350,000 for groups of producers for post-harvest facilities, two of which have supported the honey sector.

**European Union-funded programmes in Moldova**:<sup>7</sup> The EU supports a number of different projects in Moldova, not specifically focused on the honey sector but incorporating thematic areas of entrepreneurship and agricultural development – both of which include actors in the honey value chain. Some of the currently active projects include i.) Support to SMEs in Rural Areas, which co-finance the National Women in Business Programme and PARE 1+1 programme focusing on migrant workers and implemented by the National SME Development Agency (ODIMM); and ii.) EU Focal Regions: Cahul and Ungheni, an inclusive economic empowerment project implemented by UNDP aimed at improving socio-economic growth and standards of living in the regions.

**UNDP Moldova** is implementing two related projects: i.) *Migration and Local Development*<sup>8</sup> – financed by the Swiss Agency for Development and Cooperation (SDC) - focused on supporting local economic development in rural communities, including honey projects; and ii.) *Sustainable and Resilient Communities through Women Empowerment*<sup>9</sup> – financed by Sweden and seeking to empower women to practice alternative livelihoods in the context of increased environmental degradation and vulnerabilities to extreme weather patterns.

4 <https://www.usaid.gov/moldova/fact-sheets/fact-sheet-high-value-agriculture-activity>

5 <https://www.ucipifad.md/en/granturi/>

6 <http://www.capmu.md/en/>

7 <https://eu4moldova.md/en>

8 [https://www.md.undp.org/content/moldova/en/home/projects/MIDL\\_Project\\_2.html](https://www.md.undp.org/content/moldova/en/home/projects/MIDL_Project_2.html)

9 <https://www.md.undp.org/content/moldova/en/home/projects/sustainable-resilient-communities-through-women-empowerment.html>

## Role of the target group

The objective of this research is to establish the systemic constraints to and opportunities for generating greater value and decent employment in the honey value chain in Moldova, with a focus where possible on the target groups of women and the disabled.

Looking first at the position of women in the world of work, it seems that they are at a disadvantage compared to men. It was mentioned at the outset of this chapter that there is a sizeable gender gap of 9 percentage points in the labour force participation rate between women and men in Moldova.

One interesting detail from the data of the 2019 Labour Force Survey (LFS) is the change in women's employment rate according to whether or not they have children. For instance, the employment rate for women aged 25–49 with no children is 63 per cent while the corresponding figure for those with at least one child drops to 39 per cent, a significant 24 percentage point decrease (NBS, 2021a).

The most recent Time Use Survey, carried out in 2012, provides an indication of the additional, unpaid work that women are shouldering which may explain the drop in employment. The average 25–64-year-old man spends 4.6 hours in employment and 2.8 hours on household and family care, while the corresponding figures for women are 3.5 and 5.1 hours: meaning that total (i.e., paid + unpaid) is on average 1.2 hours longer per day for women (NBS, 2021b).

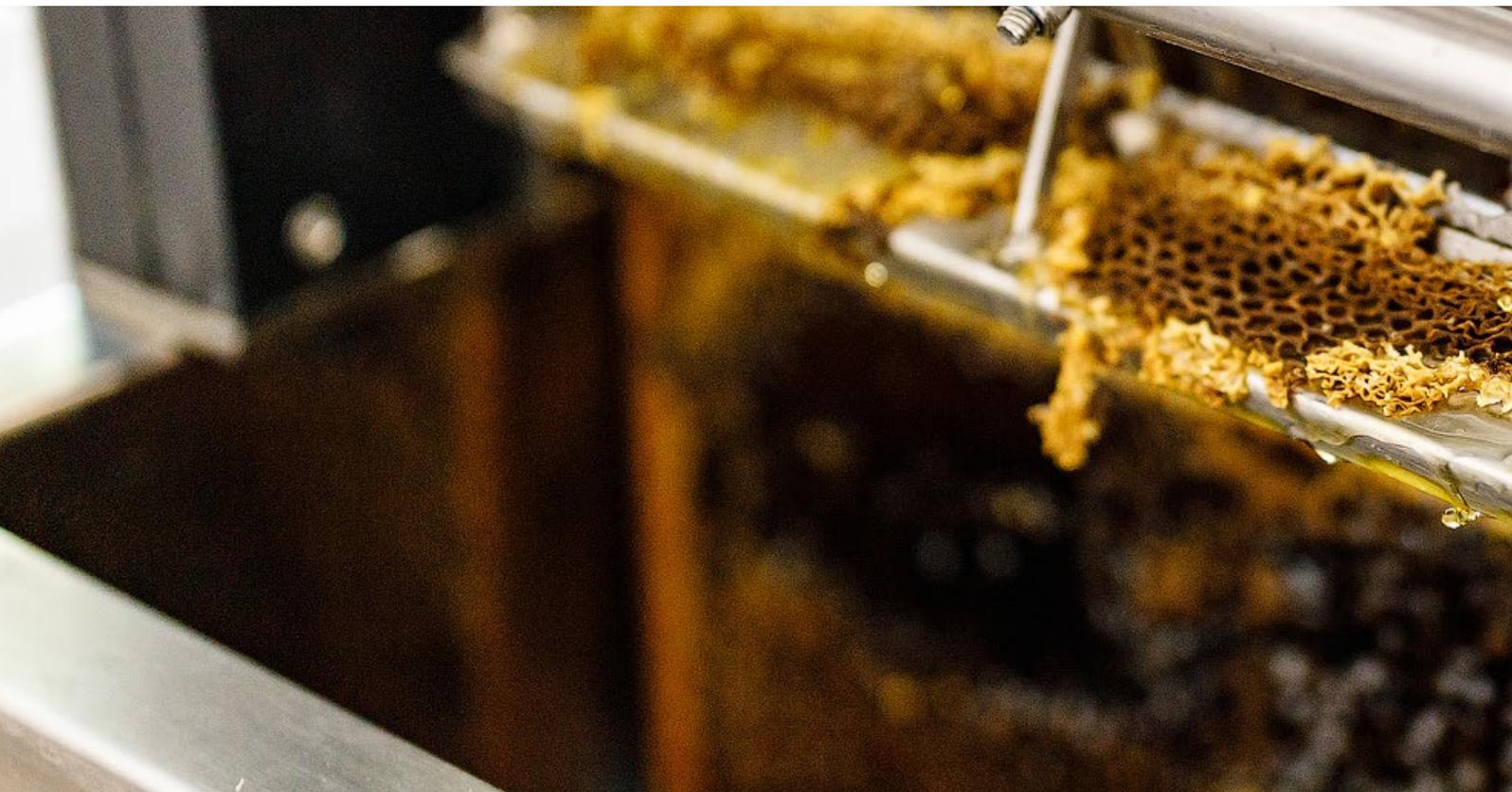
Women account for 39 per cent of total employed persons in the agricultural sector (NBS, 2021a), though estimates from key informants during the field research suggest this figure is far lower for the honey sector at around 5–10 per cent. Encouragingly, this figure has reportedly been increasing in recent years due to state funding programmes.

When asked about the challenges she faces as a woman, one young businessperson said:

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**“There is no impediment for me as a woman. In Moldovan society, it is more so because we are young. We are seen as lacking credibility and people have little trust... they do not take us seriously.”**

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She and other interviewees, however, did mention that the physical activities of beekeeping can be arduous at times – which might explain the scarcity of female beekeepers. For instance, the carrying of hives and honey can be heavy and therefore particularly challenging for some women.

According to official data from the National Council for Determining Disability and Work Capacity, there are estimated to be around 14,000 persons in Moldova aged 18 and over with a recognised disability – of which around 60 per cent are male and almost two-thirds are from rural parts of the country (NBS, 2021c).

Data on employment and labour force participation amongst disabled persons are not readily available from the National Bureau of Statistics (NBS). When asked about the situation of disabled people in Moldova, one female beekeeper who herself has a locomotor disability, put it bluntly:

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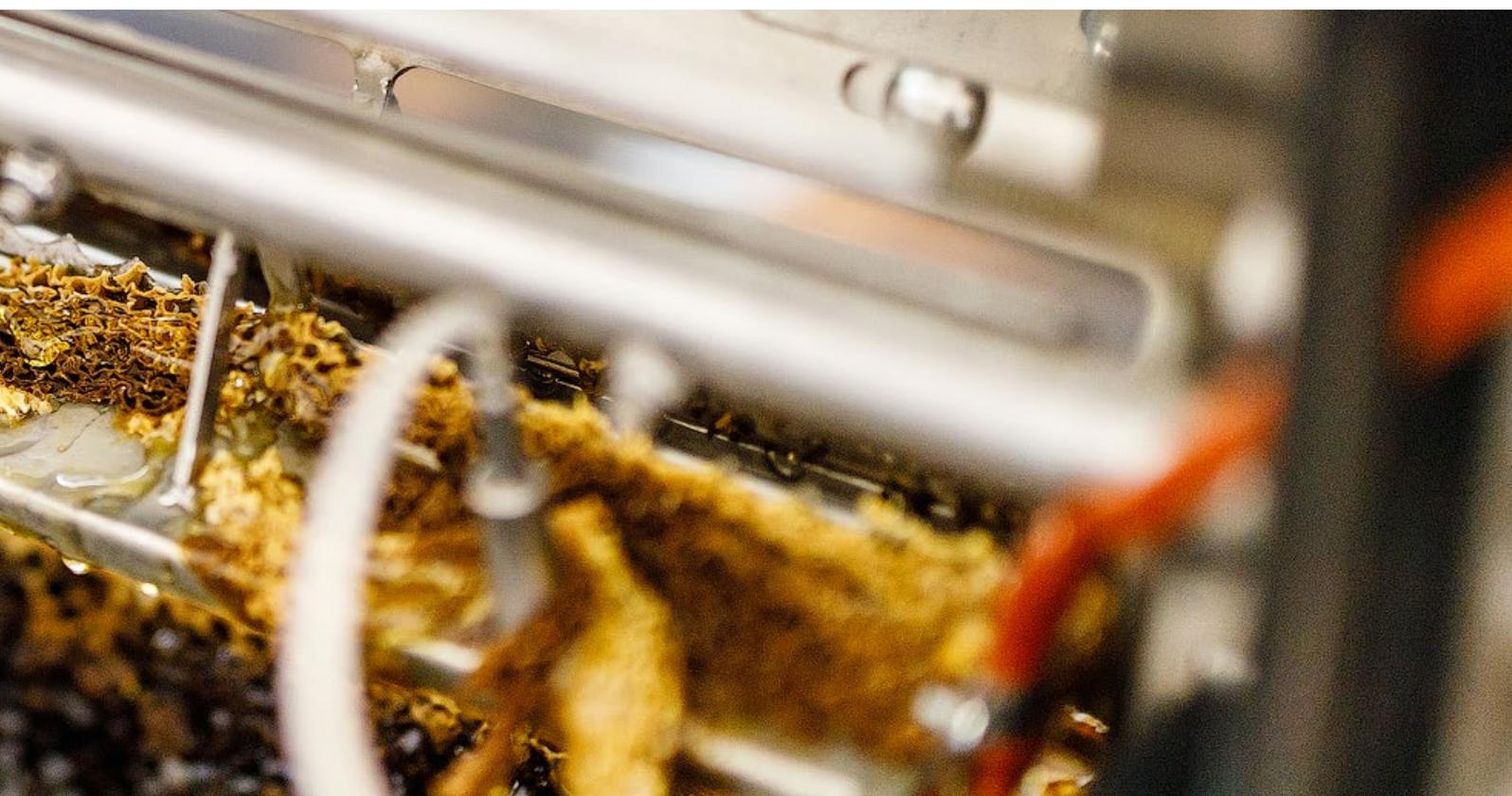
**“The majority of disabled are not working. There is no support for their integration into employment.”**

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One promising step towards the integration of people with disabilities into the labour market was made through a recent change in legislation: Law no. 137 of 16.07.2020<sup>10</sup>. According to this law, starting from February 2021, an employer who employs an unemployed person with a disability for a duration of at least 18 months receives monthly subsidies of 30 per cent of their average monthly salary for a period of 6 months. In addition, the National Employment Agency compensates 50 per cent - in the case of hiring people with ‘moderate’ disabilities - and 75 per cent - in the case of hiring people with ‘severe’ disabilities - of the necessary costs required to create or adapt the workplace to suit the needs of those employees.<sup>11</sup>

<sup>10</sup> Law no. 137, 16/07/2020, regarding the amendment of Law no. 105, 14/06/2018, on the promotion of employment and unemployment insurance, [https://www.legis.md/cautare/getResults?doc\\_id=122538&lang=ro](https://www.legis.md/cautare/getResults?doc_id=122538&lang=ro)

<sup>11</sup> <https://www.anofm.md/ro/node/64>



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Parteneriatului Local de Ocupare Cahul



## ► The market system

The honey market system provides a holistic picture of how the sector operates. It includes the supply-demand transactions in the core value chain – from beekeeper to end consumer – and the ‘supporting functions’ and ‘rules and regulations’ that shape the way in which businesses and employees work in this core chain. The market systems approach therefore takes a broader scope beyond simply the core value chain, because these actors do not operate in a vacuum. Rather, their commercial success is influenced - directly and indirectly - by what happens in their surroundings. For example, access to financial services, which is a supporting function, does not directly feature within the honey value chain, but strongly influences how honey-related businesses set-up, grow and operate.

**Figure 5: Illustrative market system of the honey sector in the Republic of Moldova**

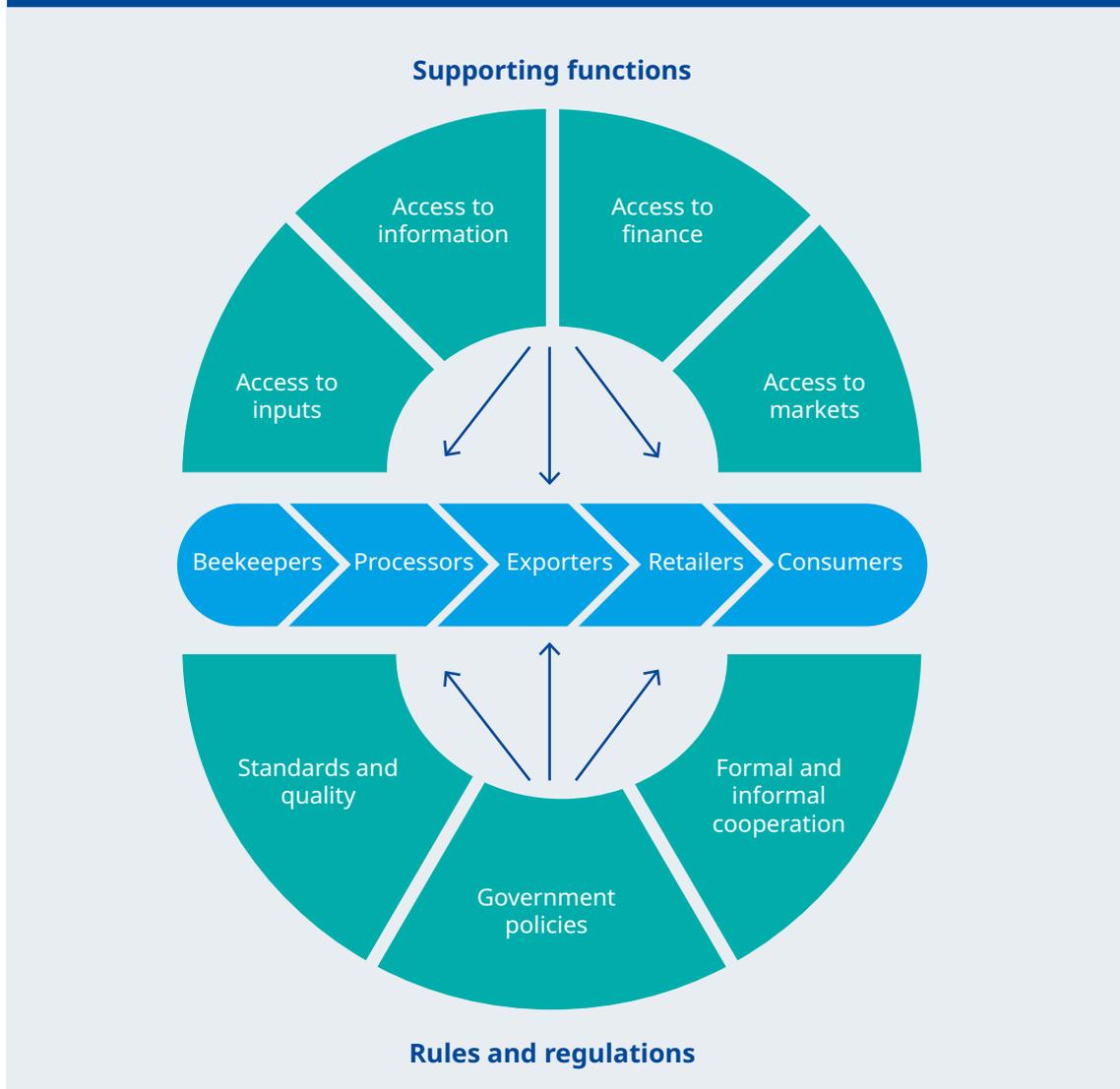


Figure 5 shows an illustrative market system for Honey Sector in Moldova, which includes a simplified value chain surrounded by the supporting functions and rules & regulations which strongly influence and constrain market performance. Going forward, the analysis (Section 3) and opportunities (Section 4) sharpen the focus on including women entrepreneurs and workers, and persons with disabilities – the target group of focus for this study – with a view to encouraging synergy creation for the greater income generation and employment opportunities in the country.

## Core market

### Supply side

The main actors on the supply side of the core honey market in Moldova are **beekeepers, processors and exporters**. The demand for Moldovan honey, meanwhile, is particularly high from **export markets** with much smaller but nascent **local markets**.

#### ► Beekeepers

According to official data on registered apiaries from the National Agency for Food Safety (ANSA), as of January 2020, 86 per cent of beekeepers were classified either as 'micro' (56 per cent, <30 beehives) or 'small' (29 per cent, 30–50 beehives), who usually have hives on the land near their house and **carry out beekeeping activities as a hobby rather than as a profession**.<sup>12</sup> For this reason, they are also less likely to practice pastoral beekeeping – which entails moving the hives to different locations in order to induce greater honey production.

Almost all beekeepers in Moldova operate as individuals (95 per cent).<sup>13</sup> According to the estimates of The National Association of Beekeepers of the Republic of Moldova, 80 per cent are of advanced age (i.e., 55–65 years old) (USAID, 2017), and refrain from investing in new technologies. A more recent trend is that young people join the sector, often starting up businesses through grants or subsidies, but who **lack beekeeping experience and knowledge of management practices. As a result, the productivity in the sector is very low**, with average honey yields at 22 kg per hive per year – contrasted with yields among professional beekeepers above 50 kg (ibid.).

The professional beekeepers who manage apiaries as a business make up around 5 per cent of the market share in Moldova, either as a registered limited liability company (LLC) (2 per cent) or as so-called 'peasant farmers' (3 per cent) – individuals who own a plot of agricultural land with a right of juridical status, which also allows them to obtain subsidies from AIPA.

According to ANSA's National Registry of Beekeepers, **only 8 per cent of the 7,696 apiaries are registered by women**. Encouragingly, they have a similar average number of bee families compared to men (see table below). However, only a single LLC out of the total of 143 is registered to a woman – which suggests that while women are already significantly under-represented in beekeeping generally, they are **almost completely absent from the professional beekeeping industry**.

**Table 1:** Selected statistics from the National Registry of Beekeepers, as of 01 January 2020  
(Source: ANSA)

Registered apiaries	Number	%	Avg. no of bee families
Male	7,058	92%	34
Female	638	8%	32
Limited Liability Company (LLC)	143	2%	81
Peasant Farmer	252	3%	70
Non-registered	7,301	95%	32

However, there is a lot of potential to further integrate women into beekeeping. The profession is not very physically demanding – management and decision-making skills are much more important. The biggest barrier hindering women from getting involved in beekeeping nowadays in Moldova is access to investment capital and a general lack of knowledge of the practicalities of starting a beekeeping business (USAID, 2017).

<sup>12</sup> <http://ansa.gov.md/ro/content/informa%C5%A3ii-publice>

<sup>13</sup> Ibid.

The rate of mortality among bees has increased substantially in recent years due to a number of reasons, including **poor climatic conditions, varroa mite disease, low quality of medicines and inefficient management of apiaries by beekeepers**. Regarding climatic conditions, temperatures have been decreasing in May, the main pollination period for acacia and when bee-families are growing the most, which has had a negative impact on both the number of bee families surviving and indeed honey production.

Another important reason for bee mortality is due to **poisoning of bees by farmers using pesticides on their crops**. This tends to arise because of **poor communication and/or coordination between farmers, beekeepers and local public administrations (LPAs)**, but also because of **low control and enforcement of spraying from state agencies** such as ANSA.

Despite pastoral beekeeping practices leading to greater honey harvests, small beekeepers face a number of difficulties to doing this. Firstly, many beekeepers **don't have access to the necessary logistics**, such as ways in which to transport hives, or lightweight polystyrene hives that can be easily transported. In addition, **the honey base** (the plants and trees used by bees to create honey) **is located unevenly, with access to forests being particularly challenging**. Common constraints include a lack of information on where the honey base is located (detailed maps); **limited infrastructure** to access such locations (sufficient quality roads) and in some instances the fact that access for beekeepers is not permitted by the National Forestry Agency (Moldsilva). Finally, the aforementioned **lack of communication and coordination between beekeepers and farmers** means that potential **'win-win' pollination services are not developed**, possibly due to low understanding of the positive effects this activity can have both on honey production and on pollination of crops.

In terms of the different types of honey that can be harvested, the most highly demanded (and higher priced) honey is the monofloral<sup>14</sup> (acacia) variety, particularly when sourced from the forest. In Moldova, most of the honey produced is **polyfloral<sup>15</sup> (sunflower, field flowers etc.) which is considered as industrial-grade honey with a correspondingly much lower price**.

## ► Processors

Processors are those actors who create added value from the raw honey - using their own honey sources and/or collecting honey from other beekeepers - through the processing and selling of honey or honey-based derivatives.

There are two categories of processors. In the first category are 1) **small processors that add value to their own produced honey**. In most cases, these processors are honey producers themselves (with 50+ hives) and who collect additional honey from other local producers when needed. Their main products are bottled honey in small jars (from 20 grams mini jars upwards), honey mixed with different ingredients (herbs, berries, nuts) and also honey-based products like energy bars. Usually, they create their own local brand and try to promote this on the market as an artisanal or premium product (e.g. Dulce Plai,<sup>16</sup> Sweet Land,<sup>17</sup> Honey House<sup>18</sup>). They sell the products mostly at beekeeping fairs, as gifts, online but also directly to businesses (B2B) including premium or ecological stores, supermarkets and the hospitality industry.

The key challenges for **small** processors are **the high price for collecting quality acacia honey, access to markets and the low honey consuming culture in Moldova**. Collecting honey from small beekeepers could also be a problem because of the differing quality between multiple producers as well as the additional **costs involved for testing honey at the laboratory**, which is charged per lot of honey rather than by quantity.

The second category are the **big processors of food/sweets and hospitality industry actors (around 25 companies)<sup>19</sup>** that use honey as a raw material to produce sweets and chocolates for bakeries and patisseries. Actors in this category often have **insufficient motivation to work with small farmers**, due to the risks of buying inhomogeneous quality, high logistics costs, and ultimately a higher selling price than imported honey from abroad.

14 <https://www.cbi.eu/sites/default/files/market-information/product-factsheet-uk-monofloral-honey-2015.pdf>

15 <https://www.zizira.com/blogs/raw-honey/difference-between-uniflora-and-multiflora-honey>

16 <https://dulceplai.com/>

17 <https://sweetland.md/en/>

18 <https://honey-house.md/eng.html>

19 <https://madein.md/en/companies/confections-and-desserts>



The output of the honey processing sector is primarily offered on local markets. The final products reach retailers that include small grocery stores, supermarkets, open markets, bars and restaurants. In the last few years, the range of honey-based products has increased, and some beekeeper-processors have even opened their own honey shops, creating a direct connection to and building credibility with consumers.

## Demand side

### ► Local market

Honey is sold in local markets either **in raw form, directly from beekeepers and open markets**, or – less commonly – **processed and sold in the supermarket chains**. The beekeepers sell their honey in different markets in urban and rural areas, and participate at different trade fairs organized annually in Chisinau and Balti (north region).

Processed honey is sold mainly through existing chains of markets, supermarkets and hypermarkets in Moldova, including: *Metro* (3 hypermarkets, 2 in Chisinau and 1 in Balti), *Kaufland* (3 hypermarkets, 2 in Chisinau and 1 in Balti), *Nr.1* (15 supermarkets and 2 hypermarket, in Chisinau), *Fidesco* (22 supermarkets, 15 in Chisinau and 7 in other towns), *Green Hills* (6 supermarkets, 5 in Chisinau, 1 in Balti), *Fourchette* (15 supermarkets), *Linella* (106 markets, distributed regionally), *Pegas* (6 markets, in Chisinau), and *Bonus* (1 hypermarket and 2 markets, in Chisinau).

These supermarket chains work with processors of honey and are focused on consistent supply and quality. They also directly import honey from Ukraine, Russia or Romania, generally at a lower price.

**Low- and middle-income consumers prefer to buy unprocessed honey either directly from the source or from open markets.** Consumers with higher income prefer to buy from supermarkets or premium stores. Still, the price of honey is considered very high on the local market, similar to a luxury good, given it costs roughly four times more than substitute products like sugar or syrup. Unlike some European countries, Moldova does not have a strong honey consumption culture. Greater consumer awareness of honey and promotion of its consumption is being facilitated by different agricultural exhibitions and trade fairs organized by ANARM, other support organisations and donor-funded projects.

## ► Export

The vast majority of collected honey goes toward export. The **price usually depends on international market demand and buyer requirements**. In recent years, the price has decreased from €3.50 to €2.50 per kg. Currently, the Republic of Moldova exports about 70 per cent of its honey, mainly on the EU market to countries such as Italy, France, Germany, Slovakia, and Romania (Government of the Republic of Moldova, 2020). In 2019, out of the approximately 5,700 metric tonnes (MTs) of products produced in Moldova, about 4,000 MTs were exported (ibid.).

According to the registry of the National Agency for Food Safety, there are 24 honey exporters.<sup>20</sup> **The collection and processing capacity of the exporters are estimated to be 20 times greater than the currently available honey supply, according to HEA**. Because of high demand in Europe, many Moldovan entrepreneurs are trying to find a partner buyer in the EU and collect as much honey as they possibly can from Moldovan beekeepers. As a result, exporters do not cooperate between themselves and it becomes difficult to create long-term collaboration between exporters and beekeepers.

In the last few years, and especially in 2020, some of these exporters have started to process and sell their honey on the local market in small bottles of 30 – 1,000 grams in order to diversify their risk.

## Supporting functions

### Access to inputs

The suppliers of beekeeping input materials in Moldova are usually beekeepers themselves, who extend their activities through importing and selling inputs and/or producing genetic material for sale as 'integrated beehives' (hive, queen, bee family, wax frames). There is only one producer of bee medicines and one producer of wax frames in the domestic market. The main inputs include the following categories of products:

- Beehives
- Medicines
- Genetic material (Queens, bee families)
- Wax frames
- Equipment
- Accessories

The main suppliers' stores are in Chisinau (5) and Balti (north) (3), and they usually promote new technologies/ equipment and medicines on the market. Low demand for modern equipment for the harvesting and processing of honey is caused by the **high price of modern equipment** and low number of professional beekeepers in Moldova.

According to the Ministry of Agriculture (MADRM), only ten apiaries are accredited to produce genetic material "*carpatina*", which cover only 15 per cent of the demand according to ANARM. Most of these apiaries were accredited in the last 5 years, so they are still maturing and do not have a high degree of experience or specialisation. Because of this, there is **low trust among beekeepers of local genetic material** and **low transparency of the quality of genetic material**. At the same time, however, more beekeepers are also becoming accredited apiaries in order **to meet the increasing demand for queens**, especially as 50 per cent of the associated costs are subsidised by the state. In accordance with the Regulation, Sub-measure 1.5 aimed at stimulating the procurement of breeding animals and maintaining their genetic background, beekeepers can benefit from a 50 per cent discount on purchasing queen bees up to three months old.<sup>21</sup>

Because of **long processes to register new medicines on the market in Moldova**, there are many cases of unofficially/illegally imported medicines – many of which are either inefficient or can potentially cause harm to bees. **In the last years there has been a supply deficit of wax frames**, because of internal use by beekeeper-processors and high demand for wax in other sectors.

<sup>20</sup> <http://ansa.gov.md/ro/content/informa%C5%A3ii-publice>

<sup>21</sup> [https://www.legis.md/cautare/getResults?doc\\_id=114080&lang=ro](https://www.legis.md/cautare/getResults?doc_id=114080&lang=ro)

The problem with the varroa mite disease and bee mortality remains one of the main issues for beekeepers, because of a **lack of knowledge in treatment and no access to veterinary services in apiculture**. Most of the veterinary specialists are not capable of treating bee families, which requires **specific knowledge in apiculture and bee practices**.

## Access to information

### ► Education & knowledge

The education system for the honey sector is very underdeveloped. Only one vocational education and training (VET) centre in Bubuieci teaches apiculture, which is a 2-year beekeeping course for students and shorter-term 3-month courses for adults.<sup>22</sup> The State Agricultural University in Chisinau<sup>23</sup> has a veterinary specialisation, but most of the graduated specialists are in livestock and animal domains.<sup>24</sup> The main challenge for the honey sector is **the lack of specialists and teachers of apiculture on the market**. According to key market actors in the sector, there is reportedly only one professor in beekeeping – which clearly limits how many additional students can learn about this profession at any given time. This results in low productivity and quality in the sector as most beekeepers have not studied the practice, instead learning by experience, the internet or with help from older persons.

Three Beekeeping Training and Consulting Centres (CICA) were established in the Republic of Moldova in 2020 by ANARM, in partnership with the Honey Exporters Association (HEA), supported by the USAID High Value Agriculture Activity (HVAA) project.<sup>25</sup> The initiative aims to facilitate access on the part of beekeepers from the regions to expert assistance in order to develop their capacities to start up a beekeeping business, as well as for its efficient management. Within CICA, beekeepers in the regions are trained in technological and managerial best practices in the field of beekeeping. They are also encouraged and supported to practice professional beekeeping to increase their productivity and the quality of honey and bee products. This service is on track to becoming profitable and should therefore achieve sustainability, paying for itself after the first steps have been taken.

### ► Extension services

The extension services for the honey sector refer to the support of main actors in: providing information about: 1) legal norms and rules, 2) financial opportunities, and 3) cooperation opportunities. Furthermore these extension services: 4) support the promotion of local products, and provide 5) agriculture & business development consulting. This support is maintained by local agriculture departments (at rayon level), civil society organisations (Non-Governmental Organizations (NGOs), sector associations, cooperatives), consultants, input suppliers, state organisations and donors.

There are two main sector associations for honey: the National Association of Beekeepers (ANARM)<sup>26</sup> and the Honey Export Association (HEA).<sup>27</sup> ANARM supports beekeepers through their 28 local associations, but **there is low trust in these district-level associations**, which are focused on small beekeepers. According to interviews with honey sector stakeholders, this is because the capacity of the association at the local level is weak and not promoted (and knowledge is often outdated), while cultural factors such as general distrust for cooperation after Soviet times are also at play. Despite the existence of the two associations, neither appears to be heavily involved in promoting information and technologies to improve productivity and output of honey for beekeepers.

The main challenge here, therefore, is that many beekeepers do not know about information opportunities, or have no trust in local consultants, and specialists in the sector (mostly due to the outdated research and development infrastructure in the sector, and lack of educated specialists, especially concerning new varieties and innovation).

22 <https://spbubuieci.md/>

23 <https://uasmd.md/en>

24 <https://drive.google.com/file/d/14Fz60grEsSPqMpwfWsh8L9Lwvj6sockA/view>

25 <http://anarm.md/anarm-a-dat-start-activitatilor-de-instruire-in-cadrul-proiectului-de-dezvoltare-a-centrelor-de-instruire-si-consultanta-apicola/>

26 <http://anarm.md/>

27 <https://honeymoldova.md/en/>



## Access to market

### ▶ Access to export markets

Access to export markets is supported by the Honey Exporters Association (HEA), Chambers of Commerce and the Agency of Investments. The HEA was created in 2019 by 12 main exporters of honey in Moldova. The main constraints of exporters are **the low power of negotiation with European buyers due to regional competition with Ukraine and the relatively small quantity of honey produced in Moldova.**<sup>28</sup> As a result, Moldovan honey sells at a low export price (€2.5/kg)<sup>29</sup> and in bulk as 200–300 kg bulk packages of industrial honey. Multiple exporters stressed that demand for Moldovan honey was far greater than supply, and that their biggest challenge was shoring up a steady supply of high-quality honey to meet the demands of buyers. For instance, one beekeeper-processor told of how she received significant interest in her honey from the United Arab Emirates. However, the quantity being requested was simply too high for her to deliver and the buyer was not interested in important smaller amounts, so the opportunity broke down.

#### **Moldova does not have a country brand of honey for international promotion and positioning.**

An additional challenge to export is the prohibitively high costs for testing honey for export, due to the fact that **there is no trust from international buyers in the capacity of local laboratories.** Exporters therefore must pass double tests of honey, locally to CRDV (National Centre for Veterinary Diagnostic) laboratories and to an international laboratory recognised by the buyer (usually in Bremen, Germany).

### ▶ Access to local markets

Sales of honey on the local market are usually done either through stores and supermarkets or directly at source, often on recommendation. Support in access to local markets is offered by ANARM, which organises different trade fairs for honey. They also try to lobby through supermarkets for direct access of beekeepers to the sales channels, but the issue is that retailers don't want to buy small quantities – especially at varying quality. The quantity of the honey sold on the local market is small, about 20 per cent.

This is due to two main reasons:

- ▶ **the culture of honey consumption is very low.** The honey consumption per capita in Moldova is only around 0.7 kg per year, compared to upwards of 1.1 kg in Germany (Statista, 2021).
- ▶ **low consumer trust in quality of honey products from supermarkets and high prices in the stores.** Historically, stores sold only artificial honey and as a result, consumers continue to buy honey directly from beekeepers.

## Access to finance

Access to finance is facilitated by two main pillars:

### 1. Private financial institutions - savings and credit associations (SCAs), microfinance organisations and banks

Access to finance remains a challenge for beekeepers because most of them are individuals and cannot apply for a business loan from the bank. The international credit lines such as IFAD, EU4 Business (EBRD), Livada Moldovei (EIB) are available through local banks for investments in apiculture business.

The major challenge related to accessing other forms of finance is **insufficient collateral** required to obtain loans because **the beehives and bee families cannot be accepted as a collateral.** If a small farmer buys only beehives and bee families, they would need to propose additional assets as collateral to obtain finance. An additional challenge to obtaining a loan for **young start-ups is that they are higher risk because of their limited experience** and National Bank requirements relating to the provision of loans. Some solutions offered are through the state loan guarantee fund managed by ODIMM (Organization for Small and Medium Enterprises Sector Development).<sup>30</sup>

28 <https://www.europarl.europa.eu/news/ro/headlines/economy/20180222STO98435/piata-mierii-din-ue-in-cifre-infografic>

29 <https://www.globaltrademag.com/the-eu-honey-market-slipped-back-slightly-to-1-4b/>

30 <https://www.odimm.md/ro/banci-partenere-fgc>

However, for long term loans, banks prefer to work with collateral – which poses a significant challenge for young people.

## 2. State funding programmes (subsidies and grants from AIPA and ODIMM) and donor programmes, implemented by development organizations.

Main support here is focused on financing bee families and equipment for honey processing, in order to grow beekeepers' income and to create better employment opportunities.

There is an opportunity to obtain financial support from ODIMM (Organization for Small and Medium Enterprises Sector Development), but in order to access this, it is **necessary to be registered**. ODIMM have a series of programmes, with financial support ranging from €8,000 in the "Women in Business" programme, to €9,000 for young people, and up to €12,000 for the PARE 1+1 programme for migrants.

The Agency for Investments and Payment in Agriculture (AIPA)<sup>31</sup> is the main investor in the agriculture sector, providing a post-investment subsidy of 50 per cent for investments up to €25,000. For young people and women, AIPA offers an extra 10 per cent of financing for post investment subsidies. Crucially, the fact that this is a **post-investment** subsidy means that beekeepers have to initially make 100 per cent of the investment from their own sources and then, after presenting the necessary confirmatory documents, receive 50 per cent of the amount back from AIPA. Given the aforementioned challenges related to financing through private financial institutions, this condition of post-investment subsidy is very difficult for beekeepers to take advantage of. AIPA also has a scheme of **pre-investment subsidies** for first time young people and women farmers, with 65 per cent of total investments up to 1 million MDL (€50,000). However, because of the required 35 per cent contribution, plus VAT, the demand is not so high.<sup>32</sup>

Similar to the case for the State Subsidy Fund, to obtain financing from AIPA, the main challenge for beekeepers is **to be registered as an entity, at minimum as a 'peasant farmer'**, and have all invoices for acquisitions (queens, hives, equipment, etc.).

Many beekeepers, especially the majority who are small-scale in operation, **either don't know how to apply to funding programmes or think it is too complicated** (application procedure, need to buy registered queens and bee family, all procurement on official invoices, control procedures from donors). This is compounded by the fact that there seems to be **deep distrust of state institutions**, with a number of interviewees suggesting that another reason for low registration is the fear among beekeepers that this is simply a ploy for government to extract greater taxes from them.

Finally, some donors' projects also provide financial subsidies, though these are also usually limited to registered entities and come with specific requirements for eligibility, such as innovative projects, marketing initiatives and projects focused on export. Moreover, these subsidies still require own contribution from beekeepers from 10 to 50 per cent of total investment, which can still be a challenge (e.g., EU, USAID HVVA, IFAD, WB MACP). Usually, the financial support of donors is offered as a result of a competition to the more active and stronger SMEs.

## Rules and regulations

### Government policies

The honey sector of Moldova is surrounded by various actors involved in the process of legal regulation, the establishment of necessary standards in producing honey, and controlling honey quality standards.

The most important government players who participate in the honey market system to ensure functioning of the value chain and set *rules and regulations* are the following:

**Ministry of Agriculture, Regional Development and Environment (MADRM):** Responsible for policy development and apiary accreditation. Honey is currently not a 'priority sector' for the Ministry, despite the establishment of a National Honey Sector Development Plan (see below).

31 <http://aipa.gov.md/>

32 [https://www.legis.md/cautare/getResults?doc\\_id=123859&lang=ro](https://www.legis.md/cautare/getResults?doc_id=123859&lang=ro)

**National Agency for Food Safety (ANSA):** Responsible for overseeing apiary passports (document giving the owner the right to sell beekeeping products); advice and checking of bee health; checking the quality and food safety of final products.

**Agency for Investments and Payment in Agriculture (AIPA):** Administrative authority under the Ministry of Agriculture, Regional Development and Environment tasked to manage financial resources to support agricultural producers, monitoring of fund distribution, quantitative and qualitative evaluation of the impact of support measures to farmers by the state. Annually AIPA manages a fund with more than 950 million MDL (€50 million). Around 150 beekeepers apply annually for financing.

**Ministry of Economy and Infrastructure (MEI):** Responsible for policy development in business environment, infrastructure and export promotion. Honey is the only animal product permissible for export to the EU according to the DCFTA agreement.

**Local Public Administration (LPA):** Responsible for registering apiaries and managing the communication between farmers and beekeepers. Also provide access for beekeepers to public land for pastoral activities.

**National Centre for Veterinary Diagnostic (CRDV):** Veterinary institution accredited by the state, main laboratory providing services for the honey sector: 1) diagnosis and research of animal health; 2) quality control and harmlessness of food of animal origin; 3) control of veterinary pharmaceutical and biological products; 4) certification of food of animal origin.

In 2020, the National Plan for Honey Sector Development 2021–2025<sup>33</sup> was approved. Its core focus is on: i.) honey base development; ii.) bee health; iii.) technological improvements; and iv.) consolidation of associative forms. The main challenge to success of the Plan will be to ensure monitoring of its implementation and involvement of all responsible parties. A second challenge will be to approve the regulation and corresponding budget for Moldosilva Forest Agency to extend the honey base and improve access for beekeepers.

The key challenge relating to standards and quality is the **insufficient control of disease and poor bee health**, due to a lack of specialists in apiculture within ANSA. Another challenge on this theme is how to increase access to export markets, based on improving testing procedures and accreditation in accordance with EU requirements.

## Formal and informal cooperation

Formal cooperation is presented through two national associations in the honey sector, which help producers with access to information, and skills enhancement in order to access the market and share the experience:

- ▶ **National Beekeepers Association of Moldova (ANARM):**<sup>34</sup> represents roughly 8,000 beekeepers in Moldova and has 28 district-level associations. Membership fees are paid to the district associations. The association offers a wide range of services for its members and beekeepers, including: a) training and consultancy for beekeepers; b) supporting the transition of beekeepers from beekeeping near home to business; c) support in access to finance; d) organization of pollination; e) organization of promotional and/or sales events for beekeepers.
- ▶ **Honey Exporters Association (HEA):**<sup>35</sup> formed in 2019, represents 13 honey producers, consolidators and processors. Its mission is to strengthen the Moldovan honey sector by identifying & developing local & export markets. Unclear how much activity is through the HEA as most exporters are involved in developing their own businesses rather than collaborating with others.

In the sector, cooperation is more commonly represented by informal agreements and practices between exporters, who are looking to collect honey, and small-scale beekeepers, who are looking to sell theirs. This cooperation can also lay the foundations for deeper cooperation, such as buying inputs and treatments for beekeepers, with the possibility of repayment in kind with honey products, as well

<sup>33</sup> <https://gov.md/sites/default/files/document/attachments/subiect-14.pdf>

<sup>34</sup> <http://anarm.md/despre-noi/>

<sup>35</sup> <https://honeymoldova.md/en/about-moldovan-honey/>

as by providing services, such as technical advice on production practices. Naturally, this requires some years of cooperation (for example, two to three years of working together) in order to develop a trusting buyer-seller relationship. But it is clearly in the best interests of both parties. A number of initiatives have also been launched to establish cooperatives to increase market share and reduce sales costs. One such initiative is the Cahul Honey Cooperative Local Employment Partnership (LEP) project, funded by the ILO.<sup>36</sup>

### Box 2: Case Study – Beekeeping is for everyone



Viorica Anghel from Andrușul de Jos village, in the Cahul district in Southern Moldova, has worked hard all her life. Due to a disability it has always been difficult for her to find employment. *“Healthy persons cannot get a job, even less, the ones like you!”*, some employers told her.

In summer 2019, she saw an announcement about a free course on beekeeping on social media, which she then applied for. To her surprise, she was accepted into the programme. Her disability and the fact that she was a woman were not a problem. Prior to that she had been told that beekeeping was not a woman’s job. So this is how Viorica became a beneficiary of the first Local Employment Partnership (LEP) in Cahul district, a project of the International Labour Organization (ILO). Viorica Anghel, along with 75 other people from the region, completed a theoretical and practical training course in beekeeping.

*“It was so interesting and useful that in those few weeks of the course I didn’t miss a lesson. I have the feeling that I read a library full of books on beekeeping”,* says Viorica.

The training in beekeeping was only the beginning. Within the framework of the LEP programme, Viorica developed a business plan and was among 20 people who won a grant to start a beekeeping business. According to her, this enabled her to regain her self-esteem and feel empowered again.

For more information, see ILO Voices story [“Bees – A Remedy for Business Success”](#), 2021 and the ILO Beneficiary story [“LEP in Moldova offers people not only jobs but also self-esteem”](#), 2020

The main overarching challenges preventing greater cooperation appear to be **insufficient trust and experience in a cooperative approach** due to past negative experience with the privatisation of land and creation of cooperative in other agricultural sectors, which led to **high suspicion of both government and other members of the cooperative, low motivation of the members to contribute financially and lack of management and logistics skills**. After 2000, once the agricultural reforms (and corresponding massive privatisation of land) were completed, land was split into very small plots with a maximum acreage of 1 hectare per person. This was when the campaign to create cooperatives really started, which created around 1,000 cooperatives across the country – of which only a few are still active today.

36 [https://www.ilo.org/global/topics/cooperatives/news/WCMS\\_759147/lang--en/index.htm](https://www.ilo.org/global/topics/cooperatives/news/WCMS_759147/lang--en/index.htm)

## Constraints summary

This section includes a summary table of the key constraints of the Moldovan honey sector, their underlying causes and their impact on the market.

**Table 2:** Constraints Summary Table for the Honey Sector in Moldova

Constraint	Underlying causes	Impact on market/decent work
<b>Core market</b>		
<b>Low productivity of sector</b>	<ul style="list-style-type: none"> <li>• Most beekeepers are individuals and do it as a hobby</li> <li>• Lack of knowledge of apiculture management and processes</li> <li>• Less using pastoral, most of apiaries are static</li> <li>• Low cooperation and trust between beekeepers</li> </ul>	<ul style="list-style-type: none"> <li>• Low supply for local market</li> <li>• Low supply for export markets</li> <li>• Low income and salaries</li> <li>• Low job opportunities</li> <li>• Low sector growth</li> </ul>
<b>High level of mortality of bee families</b>	<ul style="list-style-type: none"> <li>• Low level of knowledge in treatment of disease</li> <li>• Using unregistered drugs and antibiotics</li> <li>• It takes a long time to register a new drug for the market</li> <li>• Poisoning of bees by farmers</li> </ul>	<ul style="list-style-type: none"> <li>• Low level of treatment</li> <li>• Risk of residues in honey and reputational damage of Moldovan honey</li> <li>• Reduced number of bee families</li> <li>• Low growth of the sector</li> </ul>
<b>Uneven honey base</b>	<ul style="list-style-type: none"> <li>• No access roads in the forests</li> <li>• Poor information about available honey base</li> <li>• No pollination services developed</li> <li>• No organised and managed processes</li> </ul>	<ul style="list-style-type: none"> <li>• Limited amount of total production</li> <li>• Increasing costs of production</li> </ul>
<b>Supporting functions</b>		
<b>Supply infrastructure</b>	<ul style="list-style-type: none"> <li>• Low traceability and quality of genetic material</li> <li>• No access to veterinary services in apiculture</li> </ul>	<ul style="list-style-type: none"> <li>• Low demand for genetic material</li> <li>• Increased level of diseases</li> </ul>
<b>Access to Information</b>	<ul style="list-style-type: none"> <li>• Lack of management and technical knowledge</li> <li>• Limited market players providing extension services</li> <li>• Problems with certification and preliminary testing in existing laboratories</li> </ul>	<ul style="list-style-type: none"> <li>• Suppresses quality standards</li> <li>• Reduce access to export markets</li> <li>• Limits value-added for beekeepers</li> </ul>
<b>Undeveloped education and research</b>	<ul style="list-style-type: none"> <li>• Lack of specialists and teachers on the market</li> <li>• Low level of educational institutions in apiculture</li> <li>• Lack of budget/infrastructure for R&amp;D</li> </ul>	<ul style="list-style-type: none"> <li>• Poor quality genetic material</li> <li>• Increase of illegal imports</li> <li>• Decrease in number of students</li> </ul>
<b>Access to finance</b>	<ul style="list-style-type: none"> <li>• Subsidy system for companies (not individuals)</li> <li>• Limited knowledge of access to finance and business planning</li> <li>• Limited access to finance for start-ups and young people</li> <li>• High cost of financing</li> </ul>	<ul style="list-style-type: none"> <li>• Low level of investments, particularly by the majority (95 per cent) of individual, non-registered beekeepers</li> </ul>

Constraint	Underlying causes	Impact on market/decent work
<b>Low level of demand on local market</b>	<ul style="list-style-type: none"> <li>No traceability of quality</li> <li>No trust in locally processed honey</li> <li>Lack of promotion</li> <li>Low level of customer education</li> <li>There are no specialised stores/markets</li> </ul>	<ul style="list-style-type: none"> <li>Poor reputation of local processors</li> <li>Increase in competition from substitute products</li> <li>Increase in imports of low-quality products</li> </ul>
<b>Export honey as a raw material at a low price</b>	<ul style="list-style-type: none"> <li>No promotion of Moldovan honey as an international brand</li> <li>High cost of penetrating markets with a final product</li> <li>Small quantities and variable quality</li> <li>No range of certified apiculture products developed</li> <li>Low cooperation of processors/exporters</li> </ul>	<ul style="list-style-type: none"> <li>Poor reputation as a country brand</li> <li>Low export prices</li> <li>Low profitability of honey exports</li> <li>Low prices for honey collection by beekeepers</li> </ul>
<b>Rules and regulations</b>		
<b>Government policies</b>	<ul style="list-style-type: none"> <li>Sector not a priority for MADRM</li> <li>Poor control of poisoning of bees by farmers and pesticides</li> <li>Monitoring of National Plan of Honey Sector Development</li> </ul>	<ul style="list-style-type: none"> <li>Limits investment and growth in the sector</li> <li>Low level of job opportunities</li> </ul>
<b>Standards &amp; quality</b>	<ul style="list-style-type: none"> <li>Insufficient control of bees' health and treatment</li> <li>Limited possibilities of CRDV lab</li> </ul>	<ul style="list-style-type: none"> <li>Decreases honey quality</li> <li>Reduces export potential</li> </ul>
<b>Limited coordination/cooperation between producers</b>	<ul style="list-style-type: none"> <li>Lack of trust</li> <li>Low motivation of members to contribute financially</li> <li>Lack of management and logistics skills</li> </ul>	<ul style="list-style-type: none"> <li>Increases costs</li> <li>Lack of possibilities to penetrate other markets</li> <li>No county brand developed</li> </ul>



## ▶ Opportunities

A market systems approach seeks to identify, address and remove system-level constraints inhibiting the growth of more inclusive markets. By nature, projects using the market systems approach pilot many different interventions, hoping that some gain traction and drive a larger systemic change benefitting the many while expecting that some never make it to a point where they can have significant impact (though do no harm). The reason for this is that lots of factors, many of which are often outside of programme control, determine the success or failure of a pilot intervention. Such factors could include partner capacity and motivation, and market forces which affect prices and demand.

Once pilots are tested and have been demonstrated as effective for generating greater value and decent employment in the honey sector, the project could then try to see how these approaches can be upscaled to have further impact. Sustainability and scalability will be a central focus, ensuring that business and intervention models can be scaled up and replicated by market actors to further increase the long-term impacts.

### Box 3: Facilitating market system interventions

Traditional value chain development projects tend to orient their interventions towards the question of “what problems do value chains have and how can the project solve them?” rather than focusing on “why isn’t the market environment providing solutions to these?” and “how can the project address the constraints that prevent it from effectively doing so?”

A market systems approach opts for a ‘light touch’ way of intervening, running a temporary package of activities designed to stimulate lasting behaviour change among public or private market players. The facilitation approach encourages market actors to take on new or improved roles which will lead to systemic change in the market system.

Anything is possible with facilitation: from ‘hard’ tactics like cost-sharing and technical advice, to ‘softer’ tactics like brokering relationships - as long as the facilitation stays true to the MSA principles on developing a more efficient and inclusive system that benefits the poor and which doesn’t have to rely on continued external support. There is no ‘correct’ single way to do facilitation and decisions must always be contextual.

Some general ‘rules of thumb’ are outlined in the ILO LAB brief “Market systems facilitation, how good are you?”, 2017

## Key market actors

For sustainability purposes, it is recommended that the project implement with existing market actors taking the lead in delivering interventions. To help ensure that the partners have the right incentives and abilities to take initiatives forward, the below table summarises perceived organisational motivation and human and financial resource capacity to drive change in such initiatives. Motivation indicates the perceived organisational motivation to drive change in the sector. Capacity is related to human resource capacity to drive change in the sector. Both of these were gauged by the team based on the semi-structured interviews which took place during the field research.

**Table 3: Key Stakeholders in the Sector**

Organisation	Relevant information	Motivation/Capacity <sup>37</sup>
ANARM – National Association of Beekeepers	<ul style="list-style-type: none"> <li>Composed of central association and 28 district-level associations from across the country: the most representative association in the sector (est. 8,000 beekeepers).</li> <li>Represents and supports the interests of its members both at the level of the legislative and executive bodies of the country and at the level of other central or territorial institutions.</li> <li>Provides assistance and trainings for beekeepers. Helped by USAID HVAA project, they created 3 training centres for practical lessons for beekeepers.</li> <li>Limited resources and 2 full-time professional staff.</li> <li>The trust in local associations is low and local representatives need more capacity to work with/provide services to members.</li> <li><a href="https://www.anarm.md">https://www.anarm.md</a></li> </ul>	Motivation: High Capacity: Low
HEA – Honey Exporters Association	<ul style="list-style-type: none"> <li>Founded in 2019 and represents 13 honey producers, consolidators, and processors in Moldova.</li> <li>Members process and export about 90 per cent of the honey exported from Moldova, which can influence the market in collection side and sales/export.</li> <li>Initiated development of National Brand and promotion of honey consuming culture within the country.</li> <li>Created and set up by donor-funded project, deficiencies in staff and members motivation.</li> <li>Many companies prefer to work themselves rather than through the association.</li> <li><a href="https://honymoldova.md/en/">https://honymoldova.md/en/</a></li> </ul>	Motivation: Medium Capacity: Medium
MADRM – Ministry of Agriculture, Regional Development and Environment	<ul style="list-style-type: none"> <li>Responsible for policy development and apiary registration legal regulation, the establishment of necessary standards in producing honey, controlling honey quality.</li> <li>Apiculture is not a priority sector for the ministry.</li> <li>Because honey is only animal product exported to EU, MADRM has begun supporting different initiatives for its development.</li> <li>Developed in 2020 the National Programme for Honey Sector Development and collaborate with sector Associations, but less staff focused on implementation.</li> <li><a href="https://madr.gov.md/">https://madr.gov.md/</a></li> </ul>	Motivation: Medium Capacity: Medium
ANSA – National Agency for Food Safety	<ul style="list-style-type: none"> <li>Responsible for registration of apiaries and monitoring bee health.</li> <li>Provide supervision and monitoring of honey and other bee-related products.</li> <li>Limited capacity and staff for support and control in apiculture sector.</li> <li><a href="http://ansa.gov.md/en/node/17">http://ansa.gov.md/en/node/17</a></li> </ul>	Motivation: Medium Capacity: Medium

<sup>37</sup> Motivation indicates the perceived organisational motivation to drive change in the sector. Capacity is related to human resource capacity to drive change in the sector. Both of these were gauged by the team based on the semi-structured interviews which took place during the field research.

Organisation	Relevant information	Motivation/Capacity
Faguraș de Aur LLC	<ul style="list-style-type: none"> <li>• Started in 2010, operating as a cooperative.</li> <li>• Became one of the important local suppliers of genetic material, bee families and hives in. Managing apiary of more than 3,000 bee families, with annually sales of &gt;2,000.</li> <li>• Financed by MACP World Bank project, invested in a processing factory more than 1,000 m sq.</li> <li>• Plan to produce packaged apiculture products and export through mobilization of beekeepers.</li> <li>• <a href="http://sandic.md/">http://sandic.md/</a></li> </ul>	<p>Motivation: High Capacity: High</p>
Ecostup LLC	<ul style="list-style-type: none"> <li>• Part of registered producers group cooperative created by 5 members.</li> <li>• One of the main players in field of supplying new technologies and equipment.</li> <li>• Very well integrated in the value chain, importing equipment/medicines (supplier), having own store in Chisinau, producing and selling genetic material and bee families, apiary – 1,000 bee families, sales of honey and apiculture products.</li> <li>• Financed by MACP World Bank project, invested in a processing factory more than 1,000 m sq.</li> <li>• Future focus on export.</li> <li>• <a href="https://ecostup.md/">https://ecostup.md/</a></li> </ul>	<p>Motivation: High Capacity: High</p>
Casa Albinei LLC	<ul style="list-style-type: none"> <li>• A leader in the field of honey production, processing and export, always implementing different collaboration models and technologies.</li> <li>• Member of Board of Honey Products created by MADRM for involving the main players from the sector.</li> <li>• Processes and exports over 500 MTs of honey annually.</li> <li>• Has developed a new, long-term approach in collaboration with beekeepers. Started different initiatives in support and teaching of start-ups in beekeeping as well as prefinancing for equipment.</li> <li>• <a href="http://casaalbinei.md/">http://casaalbinei.md/</a></li> </ul>	<p>Motivation: High Capacity: High</p>
Vastdial LLC	<ul style="list-style-type: none"> <li>• Main activities in beekeeping and processing of apiculture products, bottling and marketing honey and other apiculture products.</li> <li>• Certified in the International Standards of Quality Management System: ISO 9001:2000 and Food Safety Management System: ISO 22000:2005.</li> <li>• One of the pioneers selling bottled honey on local market.</li> <li>• Vast experience in market development and export.</li> <li>• <a href="http://apismd.com/en/acasa">http://apismd.com/en/acasa</a></li> </ul>	<p>Motivation: Medium Capacity: Medium</p>

Organisation	Relevant information	Motivation/Capacity
Regina Naturii LLC	<ul style="list-style-type: none"> <li>Has become one of the largest exporters of honey in Moldova.</li> <li>Most modern infrastructure for collecting and processing honey, which is a model for processors.</li> <li>Has recently launched their products on the local market and testing an aggressive marketing strategy.</li> <li>Is certificated in the International Standards of Quality Management System: ISO 9001:2000 and Food Safety Management System: ISO 22000:2005.</li> <li>Annual production capacity of 1,300 MTs.</li> <li>600 partner beekeepers.</li> <li>Owns an apiary with 600 bee families.</li> <li>Produces organic honey and is in conversion phase with a group of other 10 beekeepers.</li> <li><a href="https://reginanaturii.md/">https://reginanaturii.md/</a></li> </ul>	Motivation: High Capacity: High
Efimira SRL	<ul style="list-style-type: none"> <li>Young beekeeper from Soroca, Northern region.</li> <li>Manages an apiary with 1,200 bee families.</li> <li>President of Association of Beekeepers from Soroca, managing a ANARM training Centre (CICA) for beekeepers from North, becoming an important player in the northern part.</li> <li>Annual sales of 2,000 Bee Packages / bee families.</li> <li>Annual sales of 5 MTs of honey.</li> <li>Plans to become accredited apiary for production of genetic material.</li> <li>Needs capacity building in business organisation and quality management.</li> </ul>	Motivation: High Capacity: Medium
Bubuieci VET	<ul style="list-style-type: none"> <li>Only education entity from Moldova which has beekeeping course for students.</li> <li>From 2019 started a course for adults.</li> <li>Helped by HVVA USAID all the education tools were updated.</li> <li>The main problem is they have only one teacher in the field, also promotion of profession is low.</li> </ul>	Motivation: Medium Capacity: Medium
Moldsilva	<ul style="list-style-type: none"> <li>State Agency for managing the forests.</li> <li>Responsible for managing and planting of trees.</li> <li>The agency could facilitate the access to honey base for the premium honey (acacia and lime).</li> <li>Lacking resources to develop the map of honey base, control and regulation.</li> </ul>	Motivation: Low Capacity: Medium

## Potential areas for intervention

Based on the findings of the constraints analysis and given the assessment of the key market actors, several potential areas for intervention have been identified. These interventions are focused on addressing the underlying causes to key constraints. They also have a sustainability and scalability focus, such that businesses and organisations can continue, scale-up or replicate interventions beyond the life of project activities.

The below is tentatively proposed as an action plan for a project, such as one commissioned through the Good Governance Fund, to take forward. This should be reviewed and updated with regularity when new market information or analysis becomes available in light of changing sector dynamics.

The identified interventions take a portfolio approach: it is recognised that some may never get traction while others may become very successful. The idea here is to test many initiatives and put resources into those that succeed while minimising investment into those that do not.

**The proposed interventions can be summarised into an intervention strategy, based on 3 key areas:**

## **1 ▼**

### **Upscale sector production and productivity**

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#### **Intervention 1**

Demonstrate the market opportunities for equipment suppliers and exporters to work directly with beekeepers to support increased productivity through new technologies.

#### **Intervention 2**

Promote a collaboration platform across the R&D, academic and private sectors in order to grow the volume, quality and efficiency of genetic material.

#### **Intervention 3**

Develop the business case to government for extending the AIPA subsidy scheme to non-registered individuals.

#### **Intervention 4**

Facilitate the integration of newcomers – particularly women and disabled persons – into the sector by working with VET and private educational institutions to develop accessible, dual education courses in beekeeping.

## **2 ▼**

### **Improve honey base access and bee health**

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#### **Intervention 5**

Develop pollination services through improved cooperation between beekeepers, farmers and local government.

#### **Intervention 6**

Develop a collaboration model with Moldsilva to improve access to forest honey base for premium, monofloral honey.

## **3 ▼**

### **Increase access to local and international markets**

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#### **Intervention 7**

Stimulate the development of new markets for value-added honey products and services.

#### **Intervention 8**

Build on the ILO cooperatives approach to promote greater inclusion for women and disabled persons in beekeeping.

## Upscale sector production and productivity

**INTERVENTION 1. Demonstrate the market opportunities for equipment suppliers and exporters to work directly with beekeepers to support increased productivity through new technologies.**

Equipment suppliers and honey exporters both have a vested interest in beekeepers producing more and better quality honey. For equipment suppliers, this is because in order to achieve this goal beekeepers will need the necessary technology and equipment – which they can purchase from these suppliers. While from the exporter’s perspective, this outcome would allow them to shore up their supply which – based on the analysis – is a key constraint to exporting greater quantities of honey.

**Equipment suppliers** can boost the demand for their relatively more affordable products by demonstrating to beekeepers how to use modern practices and technologies, such as vertical beehives; polystyrene hives potentially better suited for women and pastoral beekeeping; multiple level hives; technology for extracting honey from frames; improved bee medicines; and cleaner packaging for final honey product. If suppliers are aware of the potential market demand that exists from smaller scale beekeepers, such an approach could be seen as a useful marketing and outreach strategy for suppliers to develop their sales and build trust in their brand among local beekeepers.

For **honey exporters**, and potentially also **large suppliers**, this can go a step further to address the additional capital constraint that many beekeepers face through a prefinancing or leasing scheme for equipment and other technologies. Here, exporters with sufficient cash reserves and motivation can partner with their most trusted suppliers to create long-term partnerships: selecting a few beekeepers and working intensively with them to grow their production. The beekeepers can then either repay the exporters for the capital outlay over time through production i.e., as honey in kind. From the beekeeper’s perspective, this is a good deal as, assuming they use the technology correctly, it allows them to boost their productivity and production of honey. Meanwhile, for the exporter it means working with fewer beekeepers in total and therefore lower costs for logistics and testing.

A similar model is currently working in the traditional agriculture sector in Moldova, developing cooperation between suppliers of seeds, plant protection substances/ fertilizers and farmers. The supplier creates a support system for the farmer, offering in advance of the season everything that is necessary for improved production/yields (seeds, chemicals, fertilizers) as well as individual technical assistance from agronomists to ensure their correct use. Subsequently, at harvest time, the farmer pays the equivalent of the price of the service and products received in advance in production (i.e., in kind). This creates a long-term collaboration relationship. Interestingly, through this model a number of input suppliers developed into exporters of agricultural products. At the aggregate level, the model ensured an increase in the volume of exports of cereals and technical crops.

**To implement this intervention in the honey sector, the following actions will be needed (taking into account the motivation of suppliers and exporters to implement this model):**

- ▶ Identify suppliers of apiculture technologies and evaluate the relevant product range
- ▶ Identify exporters interested in developing a long-term cooperation model
- ▶ Make recommendations and offer support to implement them, including cost-sharing of market research and initial activities, in order to address the small-scale beekeepers’ needs
- ▶ Facilitate elaboration of support scheme and financing model
- ▶ Support suppliers to create an extensive distribution network through local partners
- ▶ Facilitate creation of demo-plots in targeted regions, where viable
- ▶ Promote the results via success stories and field-visits

### Expected outputs:

1. **Beekeepers** increase their income from selling more and/or better quality honey,
2. **Suppliers of** equipment and infrastructure improve their product range and increases sales,
3. **Exporters** collect and sell more and/or better quality honey and creates longer-term, relationship with honey suppliers (beekeepers).

**INTERVENTION 2. Promote a collaboration platform across the R&D, academic and private sectors in order to grow the volume, quality and efficiency of genetic material.**

Accredited apiaries that produce genetic material have significant importance in the development of the sector as a whole. Currently, only 15 per cent of the demand for genetic material is covered domestically through breeders, with the rest either produced internally or imported from Ukraine. Greater collaboration between the various relevant actors here could help develop this. For instance, the **zoological institute** could develop a standard for genetic material and also develop a new variety or proposal for authorization of new breeds. In order to maintain quality, a minimum standard for control will need to be developed. Creating collaboration with **R&D institutions** will help to promote and increase the trust of beekeepers in local genetic material producers. An **association of producers of genetic material** could be developed, working in similar fashion to ANARM, whose role would be to promote quality standards, local products, lobby government for greater development of this part of the sector, and promote a local brand of genetic material to beekeepers.

**To implement this intervention, assessing the motivation of producers of genetic material and R&D institutions will be important. The suggested actions are as follows:**

- ▶ Identify suppliers of genetic material and analyse their capacity and interest to collaborate
- ▶ Identify R&D institutions interested to collaborate and their challenges
- ▶ Organise a collaboration platform between MADRM, R&D, ANARM and genetic material producers
- ▶ Support increasing capacity of production
- ▶ Promote the local products and brand

**Expected outputs:**

1. **Beekeepers** can buy higher quality, locally bred genetic material,
2. **Suppliers** of genetic material improve their quality and sales/profits,
3. **R&D institutions** participate more actively in genetic reproduction,
4. **Association of Producers of Genetic Material** is created.

**INTERVENTION 3. Develop the business case to government for extending the AIPA subsidy scheme to non-registered individuals.**

According to the ANSA registry of apiaries, 95 per cent of beekeepers are not registered as either a Limited Liability Company (LLC) or peasant farmer and therefore cannot access the generous subsidies from AIPA which significantly limits their growth – and by extension that of the sector as a whole. According to AIPA, they receive only around 150 applications per year for subsidies – despite there currently being over 8,000 beekeepers. Extending this subsidy to individual beekeepers could allow many of them to invest in upgrading their operations: changing the old model of hives, purchasing equipment and anti-varroa medicines and potentially grow to a level where they can formalise and begin contributing into the tax base. Crucially, this could have a transformative effect for **female beekeepers**, who account for just 0.5 per cent of registered LLC and peasant farmers – 16 times less than the corresponding figure among non-registered individuals.

Making a rough calculation as an illustrative example, an average apiary has 30 hives, usually horizontal. To increase its efficiency, a minimum of 60,000 MDL (€3,000 Euro) is needed over 2–3 years to invest in: i.) 30 vertical hives (30,000 MDL); ii.) 1 extracting machine (10,000 MDL); and iii.) a platform for pastoral beekeeping activity (20,000 MDL). Generally, the average annual yield per hive is 24 kg, but after making investments this could increase up to 50 kg/hive. The minimum price of honey is 35 MDL/kg. The annual costs per hive will increase from 750 MDL/hive to 1,000 MDL/hive with investments. The state can co-finance 50 per cent of investments, i.e., 10,000 MDL (€500) per year.

The rough cost-benefit analysis below shows that, assuming the beekeeper roughly doubles his/her harvest, they recover their investment within maximum 5 years. This model will increase incomes and interest of small beekeepers to grow their business and become a professional beekeeper.

Extrapolating this effect to 6,000 beekeepers we can increase the total quantity of honey production to more than 4,500 MTs of honey.

**Table 4:** Rough estimate of sales revenue and profit with and without investment

Years	Sales without investments, (medium harvest 24 kg/hive)	Profit obtained without investments, MDL	Investment, MDL	Sales after investments, (medium harvest increase up to 50 kg/hive)	Profit obtained after investments, MDL	Investment efficiency
1	25,200	2,700	20,000	25,900	900	-21,800
2	25,200	2,700	20,000	43,400	15,900	-28,600
3	25,200	2,700	20,000	52,500	22,500	-28,800
4	25,200	2,700	-	52,500	22,500	-9,000
5	25,200	2,700	-	52,500	22,500	10,800

**To implement this intervention, the following actions are recommended:**

- ▶ Commission a detailed cost-benefit analysis for government to extend the AIPA subsidy scheme to individuals, taking into account different maximum thresholds per individual per year and factoring tangible and intangible benefits: such as increased production and exports; increased tax revenues from exports and broadened tax base (as more beekeepers grow into registered companies); and the positive externality effects of investments such as anti-varroa treatments
- ▶ Commission additional qualitative and quantitative research on the similar policy that was established in Romania, and the impact this has had on the economy since it came into effect
- ▶ Present the findings to key government stakeholders including MADRM and AIPA to demonstrate the potential for extending the subsidy and the benefits accruing to government as a result
- ▶ Provide the data and reports/presentations to ANARM, HEA and donor-funded programmes in order for these organisations to further lobby government for the reform of subsidies

**Expected outputs:**

1. **Government** is more aware of the costs and benefits associated with extending subsidy to individuals, as well as the threshold level at which it makes most economic sense,
2. **Sector associations (ANARM, HEA) and other key stakeholders (donor-funded programmes)** use the findings of the study to further encourage government to adopt the measures,
3. **Beekeepers** – and particularly **female beekeepers** – have new opportunities to develop their businesses: increasing production, efficiency, and medium-to-long term revenues.

**INTERVENTION 4. Facilitate the integration of newcomers – particularly women and disabled persons – into the sector by working with VET and private educational institutions to develop accessible, dual education courses in beekeeping.**

The total number of well-informed and educated beekeepers in the sector depends directly on access to relevant information and education. Facilitating the development of a programme for capacity building of beekeepers and in particular for the integration of newcomers in the sector, with a focus on typically under-represented and marginalised groups such as women and the disabled, will help to grow the level of knowledge in the sector.

A first step here is to develop a curriculum on beekeeping and integrate this at a minimum in one VET each in the North and South of the country – using the Bubuieci VET beekeeping curriculum as a starting point. Additionally, as a service for both existing and newcomer beekeepers, ANARM and potentially either Bubuieci VET or other private institutions could organise courses for better apiculture.

management, how to make money from this business, and turning a hobby into a profession. For newcomers, courses should ideally be integrated with a support and mentorship model to ensure greater sustainability, and provide a combination of theoretical and hands-on, practical knowledge.

In order to increase the likelihood of take up by the target group, the services provided will need to be tailored to their needs. For example, if focusing on women and disabled persons, the training premises will need to be easily accessible and with facilities catering to people with different disabilities. The timings of courses should be adapted to reflect when would-be attendees are most likely to be free. Childcare should ideally be provided where possible so that this gendered responsibility does not prevent women from attending. Lessons on beekeeping itself should also focus on methods that are easiest for the target group, such as the use of lightweight, polystyrene hives.

**In order to implement this intervention, the following activities are needed:**

- ▶ Analyse the structure, capacity and motivation of local district-level ANARM associations
- ▶ Analyse the existing learning system in apiculture (Bubuieci VET, other training offers)
- ▶ Elaborate the learning programme for apiculture sector
- ▶ Facilitate an update to the curriculum for beekeeping
- ▶ Facilitate the integration of beekeeping courses in VET entities and ANARM/private entities
- ▶ Elaborate the support and mentorship programme for newcomers from under-represented and marginalised groups
- ▶ Facilitate ANARM and HEA involvement in dual education coordination and implementation

**Expected outputs:**

1. **Beekeepers** have access to continued learning programme,
2. **Additional VET** implement the beekeeping curricula,
3. **ANARM** adopts an official annual programme for courses for beekeepers,
4. **Women and disabled persons** start apiculture businesses, equipped with necessary skills and assisted by mentors.

## Improve honey base access and bee health

### **INTERVENTION 5. Develop pollination services through improved cooperation between beekeepers, farmers and local government.**

Honeybees are essential for plant reproduction through pollination. It is estimated that they pollinate more than 150 farm different crops in Moldova, significantly increasing agricultural productivity. For instance, the pollination of apple orchards is estimated to increase their productivity by 20 to 50 per cent (USAID, 2017). At the same time, greater opportunities for pollination allow bees to produce more honey.

There is therefore a clear **win-win opportunity** for beekeepers and farmers to develop pollination services, whereby beekeepers are given permission to station their beehives on farmland in return for pollinating the crops. What seems to be lacking for this to already be taking place is i.) knowledge of farmers relating to the benefits of pollination on agricultural harvests; and ii.) trust and cooperation between farmers and beekeepers. It is therefore suggested to work through local district-level associations such as the Beekeepers Association (ANARM) and the Moldova Fruit Association and/or Local Farmers Association, in coordination with the district-level Ministry of Agriculture staff acting as the bridge between these associations in order to build up mutual trust and cooperation. This greater cooperation between the two groups will also enable better understanding between them on issues relating to bee poisoning, ideally with fewer incidences and improved bee health in addition to productivity gains. Finally, given that the two sectors under study in this project are honey and berries, it would make sense to focus especially on berry farmers in order to boost synergies between the two sectors.

An alternative solution could be to encourage **beekeeping equipment suppliers** to work directly with crop farmers to assist them in creating their own apiary for improved crop production. They could do

this by documenting and sharing data and success stories to demonstrate the benefits of pollination to farmers on agricultural productivity and output.

**To implement this intervention the following actions will be needed:**

- ▶ Identify the main actors from farmers associations and the Ministry of Agriculture in relevant districts
- ▶ Organise a discussion with district-level beekeepers associations to identify potential solutions for cooperation
- ▶ Facilitate an informal collaboration platform between ANARM, Moldovafruct and other farmers associations to discuss opportunity of working with beekeepers on pollination
- ▶ Facilitate a demo-plot for pollination through ANARM or other motivated actors
- ▶ Test the motivation of beekeeping equipment suppliers to market their products directly to farmers, potentially through cost-sharing of market research
- ▶ Explore opportunities to link this intervention with the berry sector to develop mutually beneficial pollination services

**Expected outputs:**

1. **Bees** are healthier, more productive and less likely to be poisoned,
2. **Beekeepers** obtain greater production and income through pollination,
3. **Farmers** benefit from improved yields of crops,
4. **Platform** of monitoring and collaboration is started between ANARM, beekeepers and farmers associations.

**INTERVENTION 6.      Develop a collaboration model with Moldsilva to improve access to forest honey base for premium, monofloral honey.**

Monofloral varieties of honey such as **acacia** and **lime** have a higher value and are also highly demanded. Such trees are abundant in forests across Moldova, with **Moldsilva** being the responsible government agency for their maintenance and sustainable development. For this reason, one potential intervention could be to collaborate with Moldsilva to **improve information of and access to the forest honey base**. According to the Ministry of Agriculture (MADRM), the forestry agency – together with MADRM – planned to create a **map** showing the various forests that could be used as a honey base, as well as developing regulations for access for beekeepers. However, resources appear to be constrained and this has not yet occurred. Therefore, the project could help facilitate this process by working together with **Moldsilva** and **ANARM**.

**Suggested activities to implement this intervention include:**

- ▶ Develop a collaboration agreement between ANARM and Moldsilva
- ▶ Create a collaboration platform between district-level Moldsilva entities and ANARM associations
- ▶ Support Moldsilva in analysing and identify the forest honey base and current access
- ▶ Facilitate the elaboration of a digital forest honey base map
- ▶ Facilitate discussions between Moldsilva and national beekeeper's association on developing regulations for accessing the forest honey base
- ▶ Co-organise information campaigns at the district level alongside ANARM and Moldsilva to promote the forest honey base map and provide information on access

**Expected outputs:**

1. **Moldsilva** develops strong evidence base for forest honey base through map,
2. **Moldsilva and ANARM** develop better mutual understanding of respective needs and functions,
3. **Beekeepers** benefit from increased information and access to honey base.

## Increase access to local and international markets

### INTERVENTION 7. Stimulate the development of new markets for value-added honey products and services.

There appear to be a number of ways to increase the value accruing to honey producers by developing markets for honey-related products and services. These include **derivatives of the honey-making process** such as propolis, pollen, royal jelly, bee venom and beeswax; **honey-based value-added products** – such as combining honey with nuts, berries or dried fruits, or using it for energy bars as in the example of Dulce Plai; and **honey-related services** such as apitourism and apitherapy, potentially situating these within existing tourism services related to chateaux and Moldovan wine, for example.

For products, one idea to stimulate and promote innovation could be **business plan competitions** – potentially organised in collaboration with local chambers of commerce and business associations providing business incubation services. For services, the **honey associations** (HEA, ANARM) could develop collaborative relationships with **tourism and wine associations** to learn from their experiences and even promote their own products/services through these actors.

#### Implementing this intervention could involve the following activities:

- ▶ Analyse and identify interested business membership organisations and chambers of commerce
- ▶ Work through these groups to develop and fund honey-related business plan competitions
- ▶ Facilitate a platform for cooperation between wine, tourism and honey associations
- ▶ Link innovative honey business ideas with relevant incubators to develop their offer
- ▶ Promote success stories of honey entrepreneurs providing value-added products and services

#### Expected outputs:

1. **Honey entrepreneurs** develop products and services that increase the value-add accruing to them,
2. **Business associations** are better informed of innovations in the honey sector and support them,
3. **Business incubators** provide valuable market services to high growth potential honey businesses,
4. **Honey associations** learn from other associations on how to better improve their marketing and branding.

### INTERVENTION 8. Build on the ILO cooperatives approach to promote greater inclusion for women and disabled persons in beekeeping.

The ILO public-private **Local Employment Partnerships (LEPs)** project in Cahul supported the creation of cooperatives in honey production and processing, working with existing beekeepers and new ones and including female and disabled members. While this is less of a private sector-led initiative than traditional MSD intervention, it is important to consider in order to promote inclusion and encourage the participation of marginalised groups. The cooperatives model from Cahul can be replicated in other districts with highly skilled and motivated local beekeeping associations, working through them to build trust among the community.

The cooperative will require someone to manage and lead the initiative, ideally a paid employee with a salary rather than a cooperative member who is not paid and may not be impartial. Inclusion can be a unique selling point of the product, which can be sold under the banner of a social enterprise, with profits being reinvested into the cooperative for increased production of honey.

#### To implement this intervention, the following activities are anticipated:

- ▶ Analyse and identify motivated district-level beekeeping associations
- ▶ Discuss with ILO Moldova the key success factors and lessons learned from LEP project

- ▶ Facilitate the creation of 2–3 cooperatives, building on the experiences of ILO
- ▶ Support the development of a range of products and oriented markets
- ▶ Promote cooperatives on national level as a livelihood opportunity, particularly for marginalised groups

**Expected outputs:**

1. **New and existing beekeepers**, particularly from marginalised groups, increase income and work together for collective production,
2. **Two to three cooperatives** are created as a model for further replication,
3. **Honey products** from small beekeepers are directly sold to clients through the cooperative.

## Validation and prioritisation of interventions

The full set of findings and recommended interventions was discussed with key stakeholders from the honey sector during a validation workshop, which took place on Friday 19 February 2021. Based on this consultation, the key findings and full set of recommendations were validated and endorsed by the attendees. At the same time, however, it was put to the attendees to prioritise the interventions they believed would have the greatest likelihood of positive impact on the development of the honey sector. According to these discussions, the top-ranked interventions are as follows:

1. **Intervention 7:**  
Stimulate the development of new markets for value-added honey products and services.
2. **Intervention 1:**  
Demonstrate the market opportunities for equipment suppliers and exporters to work directly with beekeepers to support increased productivity through new technologies.
3. **Intervention 6:**  
Develop a collaboration model with Moldsilva to improve access to forest honey base for premium, monofloral honey.
4. **Intervention 4:**  
Facilitate the integration of newcomers – particularly women and disabled persons – into the sector by working with VET and private educational institutions to develop accessible, dual education courses in beekeeping.
5. **Intervention 2:**  
Promote a collaboration platform across the R&D, academic and private sectors in order to grow the volume, quality and efficiency of genetic material.

## Conclusion

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This report has demonstrated the considerable opportunities that exist to develop the honey sector in the Republic of Moldova in a way that generates greater value and decent employment for beekeepers and other actors in the honey value chain, with an additional focus on women and persons with disabilities. The analysis provides potential future projects with a starting point to engage with and drive change in the sector, and through it, eight potential recommendations have been identified across three intervention areas.

The first intervention area focuses on upscaling production and productivity within the honey sector. This entails facilitating greater access to beekeeping equipment and technological improvements; encouraging collaboration around research and development; widening access to current public subsidy schemes; and easing the entry and integration of newcomers into the sector through working with training and education institutions.

The second intervention area look at improving access to the honey base within the country. This consists of developing win-win propositions on pollination services between beekeepers and farmers, as well as improving collaboration with government to facilitate greater access to the forest honey base.

The third intervention area seeks to improve access to local and international markets for those working in the honey sector. Recommended activities in this regard include stimulating the development of new markets for value-added honey products and services; and promoting greater inclusion for women and persons with disabilities in beekeeping through a cooperative approach.

Finally, it should be noted that although this analysis is considered comprehensive, a potential future project should strive to revisit, update and build upon this evidence base as the project team gathers more insights in the sector, its constraints and the market actors. This will help such a project more aptly adapt and deliver in an evolving sector.

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## Annex B: Research interview list

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2.	Agency for state subsidies and payment in Agriculture (AIPA)
3.	National Agency for Food Safety (ANSA)
4.	Local agriculture department
5.	High Value Agriculture Activity in Moldova (HVVA)
6.	National Association of Beekeepers of the Republic of Moldova (ANARM)
7.	The Honey Exporters Association (HEA)
8.	Key Informant – Beekeeper from Calarasi (1)
9.	Key Informant – Beekeeper from Singerei (2)
10.	Key Informant – Beekeeper from Soroca (3)
11.	Key Informant – Small-scale Beekeeper from Cahul (4)
12.	Key Informant – Small-scale honey cooperative member from Cahul (5)
13.	Key Informant – Beekeeper from Ialoveni (6)
14.	Big supplier of genetic material and beehives
15.	Large beekeeping equipment supplier (1)
16.	Small processing company
17.	Exporter of Honey (1)
18.	VET Institution
19.	Exporter of Honey (2)
20.	Input supplier and beekeeping shop (2)
21.	Exporter of Honey (3)





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