



# ZAATAR IN LEBANON

VALUE CHAIN ASSESSMENT AND ANALYSIS

Executive Summary and Recommendations



## LIST OF ABBREVIATIONS

<b>ALI</b>	Association of Lebanese Industrialists
<b>BDS</b>	Business Development Services
<b>CNRS</b>	National Council for Scientific Research
<b>CV</b>	Coefficient of Variance
<b>GMP</b>	Good Manufacturing Practices
<b>GHP</b>	Good Hygienic Practices
<b>GAP</b>	Good Agricultural Practices
<b>GI</b>	Geographical Indication
<b>HACCP</b>	Hazard Analysis and Critical Control Point
<b>IDAL</b>	Investment Development Authority of Lebanon
<b>IRI</b>	Industrial Research Institute
<b>LARI</b>	Lebanese Agricultural Research Institute
<b>LIRA</b>	Lebanese Industrial Research Achievement
<b>LSFI</b>	Lebanese Syndicate of Food Industrialists
<b>LCRP</b>	Lebanon Crisis Response Plan
<b>LAFT</b>	Lebanese Association of Food Technologists
<b>MOA</b>	Ministry of Agriculture
<b>MOI</b>	Ministry of Industry
<b>MOET</b>	Ministry of Economy and Trade
<b>MSMEs</b>	Micro, Small and Medium Size Enterprises
<b>NGO</b>	Non-Governmental Organization
<b>RBM</b>	Results Based Management
<b>SD</b>	Standard Deviation
<b>UNDP</b>	United Nations Development Programme
<b>UNIDO</b>	United Nations Industrial Development Organization
<b>VCI</b>	Value Chain Index
<b>VASyR</b>	Vulnerability Assessment of Syrian Refugees

# Keywords and descriptive information

Dunam (du)	1000 m <sup>2</sup>
1 USD	1500 Lebanese Pounds (Lira)
Metric Tonne (MT)	1000 Kg
Data treatment and Analysis	Excel Statistics
Source of data	All data presented in this study report, either as tables or figures or otherwise, were gathered, treated and analysed by ICU team unless otherwise stated
Zaatar	Used in context as; Thyme and/or Zaatar meant the variety <i>Origanum Syriacum</i>
Selection of Zaatar sub-sector	Zaatar was pre-selected by the donor and therefore it was not subject to benchmarking for prioritization on the national level.





# Executive Summary



Following an exhaustive survey carried out by the ICU team concerning Zaatar (*Thyme, Saatar, Zoubee*) production in Lebanon, together with data and information collected from various sources of research and development works, the analysis and assessments of the Zaatar value chain have been established. **The survey included 55 organizations (including 38 cooperatives), 28 farmers, 14 collectors, and 23 institutions, which are engaged in a way or another with Zaatar production-marketing operations.** Data and information were collected according to a pre-set and evaluated forms that respond to the assessment and analysis requirements. The main objective of this assessment and analysis study is to uncover the current baseline of Zaatar production in Lebanon and identify needs for its development.

The methodology used was an adapted standard of the value chain approach, which consists of (1) describing the actual facts and figures related to Zaatar chain performance; (2) mapping the Zaatar chain and describing operations and main actors, (3) Analysing the value chain technical capacity, (4) analysing economic performance of the value chain including cost of production, profits and accumulated added-value index, and (5) formulating an up-grading value chain for Zaatar including possible interventions at micro-, meso, and macro-levels.

Main findings of the assessment study may be summarized as follows:

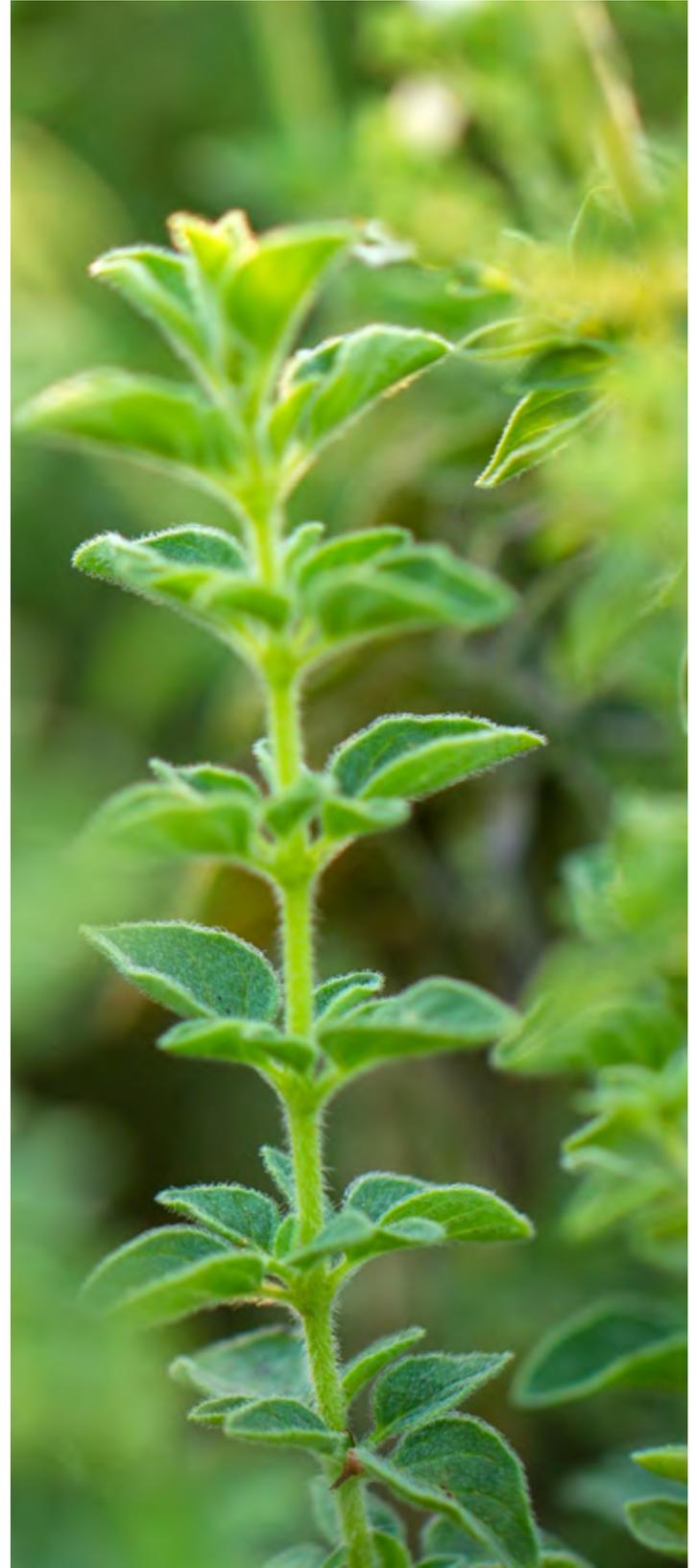
- *Following a comprehensive survey on Zaatar collection and cultivation production and marketing in Lebanon, it has been observed that the production of Zaatar is mainly concentrated in South Lebanon (cultivation), North Lebanon, particularly Akkar (Collection), and to a lesser extent in Mount Lebanon. Whereas, Beqaa productivity of Zaatar is limited for both cultivated (newly introduced in the region) and collected (not present in the wild).*
  - In conclusion, data generated from the survey showed that Zaatar can provide promising opportunities to improve the livelihoods of poor and/or small holding farmers and rural women either at the individual level, or at the level of those involved or associated with organizations such as cooperatives.
- Over 60 % of producers are farmers and retirees, mainly involved in the cultivation rather than in the collection process. Women, especially widows, are contributing by 12% of the market share, relying mainly on the collection of wild Zaatar. The diversity of producers allow for a market of complexity and diversity, as well as for different and various product qualities and fluctuation prices, while maintaining the traditional trust. Regarding marketing platforms, exporters, including wholesalers, have the greatest share (over 60%).
- The distribution of Zaatar farm holding areas in meter square showed that about 57% of farmers hold farming areas ranging between 1000 – 5000 m<sup>2</sup>, and only 7% have holdings above 5000 m<sup>2</sup>.
- The cost of production is relatively high for all forms of Zaatar; therefore, the selling price will be even higher. It was observed that farmers and Zaatar producing entities, including cooperatives, amplify the cost of production due to miscalculations and wrong assumptions.
- The estimated volume of imported Zaatar reaches around 1000 MT compared to about the same volume of locally-produced Zaatar.
- The highest cost pertaining to the installation of an infrastructure for the cultivation of Zaatar is related to the irrigation system, with a total of 34 % and an additional 9% during production, resulting in an over 40 % total sum for the water and irrigation systems.
- Regarding the access to funds, what is most challenging are the rules governing guarantees and collaterals that should be

satisfactorily provided by farmers, which is, in most cases, similar to commercial banks.

- Functional percentages of Zaatar chain actors showed that about 30% of actors are involved in all production operations from A to Z. The vast majority are emphasizing on marketing Zaatar with about 77% of the total firms (55).
- The locally produced Zaatar on dry weight basis covers 50% of the market share, and the remaining 50% are covered by the imported product. Wholesalers and exporters control over 60% of the locally produced and almost all the imported volume, whereas food establishments, cooperatives and farmers manage about 30% of the locally produced Zaatar. Although data showed that retailers and food services consume only 4%, it is believed that their share is much higher; thus, it was suggested to carry out a market study to generate more convincing data.
- The female labour engagement in Zaatar sub-sector, especially collecting, post-harvest operations, and processing represent about 32% of the total, while benefited women, adding labourers and dependants, reach over 50%.

- Integration of Zaatar and its supportive chains in clusters can facilitate flow of goods and information, with a particular focus on marketing.

Details of upgrading strategies are further elaborated in recommendations, and furthermore within the context of this study report.



Based on the outcome of the data and information analysis, it is suggested to set a strategic vision based on the following:

- A market-driven network formulation with strengthened interactions between vertical and horizontal chains should be formulated
- Technical assistance, institutional support, and training should be intensively provided, supported by practical demonstrations and promotional activities on medium to long-term basis
- Reorganisation/establishment of an integrated and holistic value chain structure is essential to reduce costs, improve productivity, enhance water management control, and facilitate market access

# Recommendations

From an environmental point of view, Zaatar is a low-input crop that is adapted to marginal lands and constitutes a suitable alternative to tobacco monoculture. As such, it can contribute to crop diversification, which is a key factor for sustainable agriculture in rural areas, and has a multi-benefit effect both on agro-ecosystems and on income-generation flow. Meanwhile, as water scarcity and land hardness are limiting the choices of alternative crops, medicinal and aromatic plants tolerate water scarcity and represent good candidates. In addition to Zaatar, it is possible to focus on beekeeping and on sumac, sesame, rose, carob, laurel, and other local species which are adapted to the local environment, are part of the local diet, and have traditional uses.

Zaatar is economically suitable for production in remote rural areas since it is marketed in dry form and has a long shelf life, without a need for sophisticated or expensive storage requirements. In addition, Zaatar processing is a value-added activity which can be traditionally undertaken at a small, even household scale,

without need for high technology. As such, it constitutes an income-generation opportunity which can help limit rural exodus. The following actions are recommended for expanding market opportunities for Zaatar and its by-products and contributing to its added value:

- *Promote Zaatar as a medicinal plant and healthy food which would help establish a niche market;*
- *Investigate potential benefit from complementarity with other high-value goods, such as Zaatar honey (honey produced near Zaatar fields, and characterized by its particular taste);*
- *Encourage the local cultivation of different ingredients of Zaatar mixes, such as sumac and sesame, to meet the expected increase in Zaatar production while ensuring good quality products;*
- *Develop related value-adding activities (packaging, labelling, and GIs) and investigate different Zaatar-related products (herbal tea, essential oil) in order to enlarge*





*market potential.*

### ***Support Zaatar chain with advanced technology inputs***

Water scarcity and the elevated cost of deep-water pumping constitute the main bottlenecks limiting the up-scaling of Zaatar production to its full potential. It is therefore recommended to:

- Develop rainwater harvesting projects in the area, at the community level, as a pre-requisite to the establishment of a collective irrigation network serving farmers.
- Further promote drip irrigation for its benefits in terms of water-use efficiency and reduction of labour costs associated with watering activities. However, in view of the elevated cost of drip irrigation-system installation, government and civil society support may be needed at the initial phase to facilitate the acquisition of this technology.
- Conduct further research on the mechanization of some of the production phases of Zaatar, including adapted technologies for weeding, harvesting, and threshing, in order to increase the productivity and competitiveness of Zaatar, reduce the labour component of production cost. and increase net benefit.

### ***Provide technical assistance and capacity building programmes at all levels***

Farmer's confidence level in the feasibility and profitability of Zaatar production should be carefully built. In contrast, for short term-projects of one year or less - wherein technical assistance is limited to the implementation of training modules and distribution of planting material and infrastructural-irrigation systems - long-term success is threatened; farmers quickly convert back to old practices at the first obstacle, abandoning the material or shifting it to other uses. Consequently, it is recommended that technical assistance programmes planning to develop the cultivation of such perennial species as Zaatar and sumac be designed to cover periods of at least three years in order to achieve solid and

replicable results on a sustainable basis. During this period, capacity-building programmes, technical assistance, and day to day follow-up are essential to ensure success of the initiative.

The success of technical assistance programmes also depends on the ability to promote collaboration mechanisms between farmers and the careful selection of beneficiaries during the preparatory phase in order to avoid parasitic tendencies.

***Enhancing Zaatar cultivated material to promote overall characteristics of Zaatar varieties***

Genetic and chemical analyses of the various Zaatar species/varieties are needed in order to better characterize, assess, and cluster the specific diversity of the cultivated material. Selecting interesting planting material based on its genetic, chemical, and morpho-agronomic profile will help orient farmers accordingly to cultivars which are best suited to different market types. In particular, the essential oil profile plays an important role in determining the suitability of specific cultivars for use as fresh leafy vegetables, dried herbs, dried Zaatar mixes, or input for the pharmaceutical and cosmetic industries. Benefit from biotechnology applications, notably tissue culture, may be used in order to produce certified Zaatar planting material in large quantities. Providing research and development trials related to value-adding activities in order to develop new products

***Develop a holistic market-driven approach based on the establishment of effective inter-firm linkages with effective and sustainable communication***

A market driven approach is convenient to the marketing environment and conditions in Lebanon, which are mostly based on relations, partnerships and effective communication. Although, Farmers may be trained, further steps should be considered such as:

- Establishment of sustainable service centres to follow up on the build-up of marketing networking, and effective

communications with internal and external chain actors, to support the sector extension.

- Carrying out a market study on Zaatar in order to provide information about marketing needs, prices, selling platforms, and communicate it along the chain.
- Reorganisation/establishment of the value chain structure (associations or clusters), when necessary, to reduce costs and improve productivity
- Enhancement and follow up of the formulation of effective norms and standards regarding grading of Zaatar products and mixes.



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Resilient nations.*

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