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# The Future Regional Nature Park of Jezzine An Environmental Analysis to Preserve Natural Beauty

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#### **Abstract**

The concept of a Regional Nature Park has not yet been officially established by the Ministry of the Environment in Lebanon, but the preservation of natural areas and the enhancement of local ecosystems are growing concerns. Law No. 130, enacted in 2019, concerning protected areas, defines a nature park a vast rural area, partially inhabited, with exceptional natural and cultural heritage, as well as biodiversity, recognized at national level and deserving longterm protection. The park's perimeter represents a significant challenge between economic local development and the preservation of its natural, cultural, and heritage assets.

In all development projects or the establishment of leisure or sports infrastructure in each region, the opinion of stakeholders and decisionmakers has become essential for their implementation. These issues concern the environmental projects carried out by the Union of Jezzine Municipalities and the projects to be undertaken in the future. They address the difficulties in project implementation with the current Lebanese economic crisis. the importance of protected knowledge of environmental policies, in the region, and the opinion poll regarding implementation of the Regional Nature Park in the Jezzine region.

**Keywords:** Lebanon – Jezzine, Union of Municipalities of Jezzine, Regional Nature Park, project implementation, protected areas

#### \* Introduction

With its position at the crossroads of the Mediterranean

basin, Lebanon has been a transit route since ancient times in a desert environment (Benoit & Comeau, 2005).

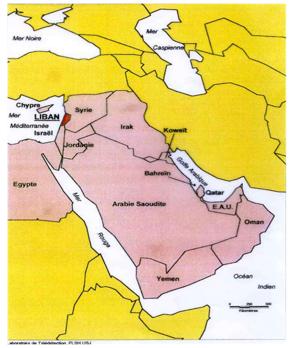


Figure 1: Lebanon's location in the Eastern Mediterranean basin

Source: Remote Sensing Laboratory, FLSH USJ

Singers and poets have always celebrated Lebanon's grand and picturesque landscapes, its snow-capped peaks towering over the clear blue of the sea, its rivers winding their way through bustling cities, and its fertile, well-watered land with its variety of fruits and vegetables (Doyle, 2017)



Figure 2: The mountain of Jezzine under the snow

Source: Aerial Photographer Rami Rizk - January 28, 2017

Following its independence (1943), Lebanon established in 1963, the Green Plan administration, to undertake collective action to reforest slopes and carry out comprehensive regional development schemes (Doueiri, 1996).

But the long civil war (1975-1990) put an end to this program and the bombing caused several forest fires and forced the population to leave Beirut, not to mention the 90,000 families displaced from their towns and villages. The demand for new housing has led to the gradual concrete of slopes planted with pine trees, creating new residential areas.

From 1985 till May 2000, a part of Southern Lebanon, including Jezzine's region was occupied by Tsahal army in response of attacks carried out by Palestinian militants and Hezbollah militiamen. During this time Jezzine's town has dwindled

from 30, 000 to 5,000 inhabitants. Those who stayed were forced to work for the occupants. The tragedy of this occupation was a kind of chess game played with human lives. But after Tsahal retreat Lebanese authorities has not developed a plan for the return of displaced families or a plan for economic development in a region devastated by a long military occupation.

1- Actions taken by the Ministry of the Environment: After the civil war, the Ministry of the Environment was established in 1992 and, in 1996, it undertook an action to preserve Lebanon biodiversity with IUCN and UNDP (Jabbra & Jabbra, 2021). In Lebanon, protected areas take various forms depending on their conservation and management objectives. Legal protections apply to protected areas established by law, decree, or ministerial or presidential decision. Here are some of protected areas represented in Lebanon:

The ministry has joined MaB Unesco Program and has classified 3 biospheres (Jabal Moussa, Chouf, and Jabal el Rihane), and there are 4 sites are part of the Ramsar Agreement Coast Nature (Tyr Reserve, Aammig Wetland, Palm Islands Nature Reserve, and Ras El Chaqaa). In 2024, 15 natural Reserve are classified because of their fauna,

flora, and distinctive geological features (MOE, 2023). Protected under forests in Lebanon, of the Ministry jurisdiction Agriculture, are vital areas biodiversity preservation and forest ecosystem regulation. As of 2023, 15 forests were classified as protected. Examples include the Bkassine protected forest in Jezzine. And you have a community-based heritage areas, also known as Himas, that were reintroduced in Lebanon by the NGO Society Protection of Nature Lebanon (SPNL). Hima is traditional method of sustainable natural resource management adopted by and by local communities. Lebanese municipalities established 8 Himas in Lebanon.

## \* Last law regarding protected areas

Law No. 130, enacted in 2019, concerning protected areas, defines a nature park as a vast rural area, partially inhabited, with exceptional natural and cultural heritage, as well as a biodiversity recognized at the national level and deserving long-term protection. The law also specifies four types of protection: nature reserve, natural park, natural site or monument, and Hima.

But the concept of a Regional Natural Park has not yet been officially established by the Ministry.

of The Union Jezzine Municipalities (UJM, created in 2005), located in South Lebanon, covers approximately 130 includes 30 member municipalities, and 15 small villages that do not have a municipal council and are located within its outer geographical boundaries (Union ofJezzine Municipalities, 2023). The UJM considers all of them as a single municipal entity, whose growth and development fall its under responsibility.

The UJM has lately set up agreements with PACA Region in France and is planning to implement a Regional Natural Park (RNP) in the region. The park's perimeter represents a significant challenge between economic local development and the preservation of its natural cultural and heritage assets.

A regional natural park does not only consider the environment, although this idea is commendable (TANNEAU, 2019). But we cannot think solely about a place based only on the conservation of certain species and natural habitats. The challenges are numerous, such as ensuring a good quality of economic and healthy life, reducing environmental risks, and enhancing cultural and natural heritage, addressing both

development and protection (Baron & Lajarge, 2015).

The feasibility and opportunity study for the creation of a natural park takes into consideration both the expectations of the stakeholders involved in this project of regional park and the outcomes and impacts on local sustainable development, as well as the social (social acceptability), economic, facing political challenges and obstacles of the region in relation to the missions of a Regional Natural Park (Helin, 1997).

#### \* The issue is as follows

Can we create a Regional Natural Park in Lebanon, particularly in the Jezzine region, with the dedication involvement and of stakeholders to make sure it helps promote local sustainable development in terms of environment, economy and society aiming to preserve and enrich the regions natural beauty, cultural significance and human history, particularly during Lebanon's severe economic crisis?

### \* Research questions

1- What are the key factors influencing the establishment of a Regional Natural Park in Jezzine, and what are the perceptions and attitudes of local stakeholders and decision-makers towards this initiative?

- 2- How has the crisis in Lebanon impacted the implementation of projects in the country, and in Jezzine region?
- 3- How has the Union of Jezzine Municipalities leveraged external partnerships to overcome these challenges?
- 4- What are the potential socioeconomic benefits of establishing a Regional Natural Park in Jezzine?
- 2- Methodology: Following literature review, we engaged in discussions with stakeholders. decision-makers. experts, investors. These interviews aimed not only to "decode a social system from within," but also to understand "what it means to be a field actor" (BASTIEN, 2007). Therefore, any implementation of a Regional Natural Park (RNP) in each region requires consulting stakeholders to better understand their expectations and needs regarding local development and territorial planning.

Before conducting individual interviews, a preliminary involved a meeting organized by the UJM, bringing together presidents of municipalities from various villages during a municipal council meeting. During this gathering, we detailed the RNP project and its implementation in the Jezzine region. The presence of UJM

President Mr. Khalil Harfouche ensured support for the project and marked his commitment to the upcoming stages.

It was important to study and compare the viewpoints of decision-makers and stakeholders within Jezzine city and those from the wider region.

Once this communication step with stakeholders regarding the RNP was completed, we developed an interview guide for 71 stakeholders and decision-makers (approved by the Ethics committee of Saint-Joseph University of Beirut (USJ), in which I'm preparing my PhD) because their participation in the study is essential for increasing the reliability and transparency of the process. The interview guide consisted of openended questions concerning their profiles, general information about Jezzine region, laws environmental protection in Lebanon, environmental protection in Jezzine, and their perception on the creation of a regional natural park. During the interviews, we asked stakeholders to rate their opinions and impressions on a scale of 1 to 5, on the topics we presented. All interviews were recorded after obtaining permission from the interviewee.

The positions held by these stakeholders are detailed in Table 1.

Table 1: The positions held by the various stakeholders and decision-makers met from the region

Stakeholders and	Number
decision-makers of the	
UJM	
Local political actors	27
Former and current	7
deputies	
Presidents of political	2
movements	
Minister of Environment	1
Tourism and service	7
officials	
Experts and researchers	8
Association presidents	8
Investors	5
School directors	6

Data analysis was conducted either manually for certain questions after categorization or using IBM SPSS software for others.

3- Role of the Lebanese state for the implementation of the PNR in Jezzine

As part of the efforts to implement the PNR in Jezzine, a key component is the development of comprehensive planning frameworks, such as the UJM's Master Plan, which outlines the strategic vision and actionable steps for sustainable development in the region.

3- 4- UJM'S MASTER PLAN: Following a municipal council decision, a master plan was adopted in 2012 to protect the region's environment, classify land plots, and rehabilitate residential facades to preserve traditional architecture of houses and rural dwellings (MORES, 2012).

A partnership was signed in 2018 with Southern region of France concerning several projects. Implementing a Regional Natural Park in Jezzine's Region is one of them.

4- Regional Natural Park in Jezzine region: Having a RNP in a group of localities provides an effective tool for its economic and tourist development, as well as conditions to improve the quality of life for residents (Laslaz, 2022). UJM gave priority to such a project and has developed a common Charter with regulations to be followed and respected by residents, local visitors, and tourists. All the presidents of the UJM have signed in 2018 the mini charter for sustainable territory, in the presence of the Mokhtars<sup>1</sup> from the small villages and all the region's stakeholders. This Charter aims to

<sup>1</sup> A "mokhtar" (or "mukhtar") is a local community leader responsible for administrative tasks, conflict resolution, and

representing the interests of their village or town.

preserve natural spaces from polluting and urban activities that will contribute to the development of the region (Charte de Territoire Durable, 2018).

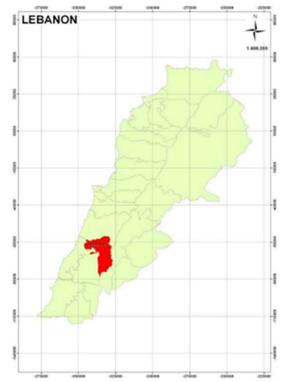


Figure 3: Location map of Jezzine in Lebanon – The Caza of Jezzine in red Source: MORES s.a.r.l. 2012

According to Lebanese law, the natural park includes one or more controlled management zones, one or more sustainable development zones, and possibly one or more conservation zones. The natural park can include one or more categories of protected areas or zones that can become protected.

As part of the development of the RNP, all villages under the responsibility of the UJM will be included in the targeted objectives and activities. However, before classifying the sites according to the zoning specified by law, we need to divide the UJM territory into two zones (see figure N° 4) based on their characteristics:

In a transition zone that falls within the coastal area, there are no forests or cultural heritage to preserve around the villages, no conservation area to plan and develop.

The park's perimeter starts from Kfarfalous, covering the central areas of the region up to the Tawmat hills (1700 m), which marks the boundaries of the future nature reserve.



Figure 4: RNP in Jezzine region Source: Rita Abou Nader - 2022

Law N° 130/2019 on protected areas first defines what a natural park is: a vast rural territory, partially inhabited, with exceptional natural and cultural heritage, as well as biodiversity recognized at the national level and deserving long-term protection. Then the law includes three types of protection: the conservation zone, the controlled

management zone, and the sustainable development zone.

Parks are organized around a project that combines economic development and the protection of natural and cultural attributes within the framework of a common Charter project. This park is established by decree taken by the Council of Ministers, based on the proposal of Ministers of the Interior. Environment. Municipalities, and following the request of municipalities concerned and/or of municipalities. unions It managed by a committee with administrative and financial independence.

1-The conservation zone is an area to be preserved as a priority due to its high ecological and environmental importance, especially in terms of biodiversity and characteristic natural habitats, and must be protected from any activities impacting on its ecological unity, integrity, and natural attributes.

2- The controlled management zone, on the other hand, is an area where sustainable resource exploitation and traditional human activities compatible with the environment are permitted, without compromising environmental protection goals. Activities eco-tourism such as development, beekeeping, and

organic farming are allowed, subject to an Environmental Impact Assessment (EIA) if deemed necessary by the Ministry of Environment.

3- Additionally, the sustainable development zone is an inhabited area and/or includes villages where activities are compatible with environmental protection according to the natural park's Charter.

The Lebanese law defines the zones but does not detail the classification with precise criteria for establishing a delineation plan for the three zones of the UJM's Regional Nature Park. We defined the criteria used in this study without drawing on pre-existing works. These criteria were established based on our own analysis and understanding of the specific issues in the Jezzine region, considering conservation objectives, ecological characteristics, and the socio-economic needs of the local population. Our approach was guided combination of by field observations and a thorough review of the literature related to regional nature parks.

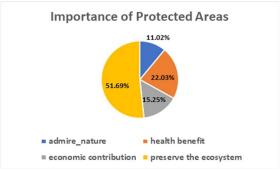
These criteria, based on the data available in UJM territory, led to the development of the following map.



Figure 5: The Three Zones of the UJM
Regional Nature Park
Source: Rita Abou Nader – 2022

4- 2- The importance of protected areas in the opinion of stakeholders

This question assesses stakeholders' knowledge of the importance of protected areas to better guide our park project.



**Figure 6: Importance of Protected Areas** Source: Personal Survey

All respondents recognized the necessity of protected areas. The majority (51.69%) highlighted their role in preserving ecosystems, crucial for water resources, biodiversity, and Effective natural heritage. management of these areas prevents fires, combats desertification, and enhances resilience climate to change. Additionally, 22.03% of respondents noted the health benefits,

such as improved air quality and recreational opportunities, which could support medical tourism in the Jezzine region. Economic potential was also acknowledged by 15.25% of respondents, who emphasized that well-managed protected areas attract tourists, boost green tourism, and stimulate local economic development. Lastly, 11.02% valued the aesthetic appeal of these areas, appreciating their natural beauty and contribution to regional charm.

4- 3- Knowledge of environmental the region: policies, in Most stakeholders and decision-makers seem unaware of environmental laws and policies, with 40.19% believing they do not exist in Lebanon. Most of the responses surprised us, especially comes when it to municipal presidents who are unaware of the environmental laws they need to enforce in their areas. For instance, creating a 'Hima,' one of the protected areas, requires agreement from the municipal council and the community. The presidents who gave us this response claim that each municipality can act independently because it knows its own territory, and that the state should grant more powers to municipalities since the work is carried out at the local level. Thus, each region has its own specifics, and only municipalities and

associations work on the ground, while the state does not intervene.

Some even claimed that the Ministry of Environment does not exist or does not play a significant role because its decisions are not independent but rather linked to other ministries, with several studies being funded.

On the other hand, 14.95% (second position) are familiar with laws regarding quarries, construction codes, and the Lebanese Master Plan for Spatial Development (SDATL). president of UJM. The Harfouche, confided that the police do not act effectively on the ground, especially concerning the highly politicized quarry sector. In third place, two laws are mentioned: the hunting law and the law on the creation of natural reserves, Himas, and regional natural parks, each with an equivalent percentage of 13.08%. To hunt legally, hunters must obtain a hunting license issued by the competent authorities, which generally involves passing exams and undergoing training on safety rules, ethical hunting practices, and current laws. Forest protection laws, which also include agriculture laws (such as removing dead trees, cutting olive and oak trees, etc.), come in fourth place with 8.41%, along strategies implemented to combat

fires and prohibitions on cutting trees and leaving waste within natural reserves. Following this, 5.61% of stakeholders and decision-makers cited Law No.444, which pertains to Environmental Impact Assessment (EIA) and Decree No. 3633 studies. Finally, 4.67% impact mentioned laws regarding and waste wastewater treatment management (Law No. 80/2018) concerning source separation, landfill elimination, and recycling plants.

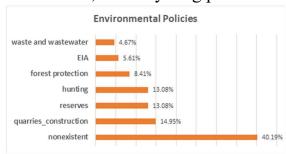


Figure 7: Environmental Policies Source: Personal Survey

4- 4- The opinion poll regarding the implementation of the RNP in the Jezzine region: Overall, stakeholders, decision-makers, experts, and investors see establishing a park as a valuable opportunity for the region. However, two municipal presidents do not prioritize the park due to the current crisis and people's immediate needs. Despite this, crises can present opportunities for development and foreign aid.

4- 5- Difficulties in Implementing Projects: Several difficulties prevent stakeholders and decision-makers from realizing their future projects, especially the implementation of the RNP in the region.

Following the surveys we carried out in the region and among decision-makers in 2022, their responses fall into five categories.

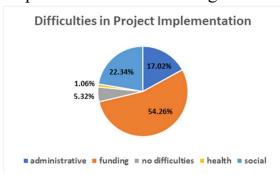


Figure 8 : Difficulties in Project Implementation

Source: Personal survey

The highest percentage, 54.26%, is attributed to the economic difficulties and project financing. Especially during the current economic situation in the country due to the economic crisis since 2020, it is challenging to implement projects without adequate funding, particularly at the municipal level where most municipalities suffer from resource shortages.

This financial crisis and the deteriorating security situation in the Middle East, has led to a decline in tourism with the fall in tourist numbers, and a lack of cooperation from international NGO's in obtaining financing and investments for several development projects because of the political crisis affecting the country. One municipal

president stated that international organizations benefit from the information, statistics, and studies conducted in the region but do not provide projects.

In second place are social problems at 22.34%, manifested in inconsistency of municipal the council ideas, acceptance by elected officials, and social acceptability with moral support from population for all necessary projects in the region. In some cases, political overshadow essential issues development projects in the region; for example, currently, municipality of Jezzine secured USAID funding for a waste treatment project that begins with source separation and continues with an environmentally compatible composting plant, according to an environmental impact assessment by Ministry of Environment. the However. political parties encouraged residents to protest in front of the municipality and the project was rejected.

Furthermore, the region faces difficult living conditions during the current country global situation, and environmental projects do not seem to be a priority for the Lebanese authorities. There is a need for a change in the mindset of stakeholders and residents, with cooperation from

municipal presidents and people working together, motivating youth for voluntary work in charitable societies and associations such as Caritas, Foundation of Malta and the Lebanese Red Cross.

Any suggested project requires time, qualified staff, and integration into the regional network. Additionally, one investor noted the absence of Lebanese labor despite available funds and a lack of knowledge on how to invest in modern agriculture.

Administrative difficulties rank third at 17.02%, such as the lack of evolution in laws due to the absence of the State, corruption negatively impacting public administrations and official transactions. There is a need for a common strategy accepted by all municipal presidents to facilitate cooperation with the private sector and make decisions away from politics.

Finally, 5.32% of stakeholders and decision-makers stated that there are no difficulties in realizing their projects if investors keep their promises. In one village (Karkha), an investor is financing all projects to create an authentic typical village. Similarly, the Red Cross faces no difficulties because projects are

funded by the Red Cross General Directorate or financiers.

Lastly, 1.06% cite health difficulties and the inability to meet, especially if the project requires physical presence, particularly among youth, helping them develop and communicate with others to evolve their mindsets.

4- 6- Opinion Survey on the Implementation of the RNP in the Jezzine Region: Overall, establishing a RNP in the Jezzine region is an innovative and unprecedented project in Lebanon, especially since the government does not prioritize this project. Municipal presidents and some deputies were already aware of this project because the municipal presidents have signed the Charter with UJM and are all collaborating to achieve common success.

Its establishment will attract tourists and contribute to investments and the growth of the region by improving the living conditions of the residents. The park will generate other small projects in the region and create job opportunities, especially for young people. Improving the economic situation will help to retain residents in their villages and contribute to achieving a balance between villages and UJM.

According to most of the stakeholders (47.96%), this project is

vital for the region as it will ensure international visibility and serve as excellent publicity, putting the Jezzine region on the global tourist map.

This project for local sustainable development will help create a network of support among villages to attract tourists throughout the region.

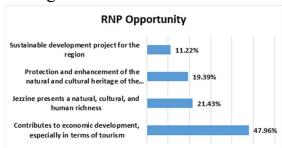


Figure 9: RNP Opportunity

Source: Personnel Survey

21.43% of stakeholders, decision-makers, investors, and experts state that the Jezzine region has all the environmental potential to host an RNP.

19.39% affirm that the park preserves and enhances biodiversity, historical sites, greenery, and nature with organized urban sprawl to combat destruction. It organizes protected areas to present a new image and a beautiful model, making the region increasingly exceptional, especially environmentally. Stakeholders also affirm that forests are vital organs to protect, and the park adds cultural value to the region. However, if the protected areas are public, then the municipality and the

union have the power and duty to protect them.

Only 11.22% emphasize selfmanagement of the RNP for the future. This vital project will allow the population to recognize nature and educate a future generation concerned with the environment. Therefore, it is a long-term project, but efforts should start immediately.

For our entire sample, Jezzine has high potential to realize such long-term sustainable local development projects aimed protecting and enhancing attracting tourists, and initiating economic development while preserving the heritage.

To complete this theme, three questions were asked successively: "Are you interested in the creation of a regional natural park in the Jezzine region? »; "Are you willing to actively participate in the implementation of this project? »; and "Are you willing to adhere to the charter for protecting the region from environmental issues and risks?"

All respondents (100%) answered YES to all three questions. This response reassures and confirms our confidence as they have affirmed their commitment and participation in the project while respecting the charter, which some of them have already signed.

#### \* Conclusion

In Lebanon in 2024, forest areas are still under threat from urban expansion, pollution, and fires. We can only congratulate the strategies put in place by the Ministry of the Environment and the role of local associations and NGOs in preserving green spaces. The UJM took this into account in its 2012 plan, and the implementation of the RNP is a concrete expression of this commitment.

The establishment Regional Natural Park (RNP) in Jezzine holds significant potential for fostering local sustainable development, preserving biodiversity, enhancing the and cultural heritage of the region. Despite Lebanon's economic and political challenges, the feasibility study reveals strong local support and clear vision for integrating environmental protection with socioeconomic growth. Stakeholders recognize the multifaceted benefits of the RNP. including economic development, tourism enhancement, and improved quality of life for residents.

The collaboration with external partners, such as the PACA Region in France, underscores the importance of international cooperation in overcoming financial

and administrative barriers. The unanimous positive response from stakeholders to actively participate and adhere to the RNP's Charter collective demonstrates a commitment to achieving this ambitious project. Moving forward, it is crucial to address the identified difficulties, such as economic constraints and administrative inefficiencies, by leveraging strong community support and developing a comprehensive implementation plan. The creation of the RNP in Jezzine not only represents a pioneering initiative in Lebanon but also serves a model for other regional Lebanon, development in ecological conservation balances with human well-being.

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