



MedArtSal

Sustainable Management Model for Mediterranean Artisanal Salinas

Operational plan and guidelines for policy development. Contributions at national and Mediterranean level

A 3.4.2

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Guidelines for policy development contribution

WP3

28/07/2023 - Málaga, Spain

Activity period: 06/2021 –07/2023

Delivery date: July 2023

Partner in charge: IUCN

Partners involved: all

Status: definitive

Distribution: public

MedArtSal is funded by the European Union under the ENI CBC Med Programme.
The project total budget is € 3.2 million and the EU contribution is € 2.9 million (90%).



About the MedArtSal project

MedArtSal - sustainable management model for Mediterranean Artisanal Salinas - is funded by the European Union under the ENI CBC Med Programme. The project total budget is € 3.2 million, and the EU contribution is € 2.9 million (90%). MedArtSal is a four-year project which aims to promote the sustainable development of artisanal salinas, providing concrete support on economic, environmental and governance issues. Addressing common challenges in four Mediterranean regions (Italy, Spain, Lebanon and Tunisia), the project will promote the development of a sustainable and adaptable management model fostering the territorial valorisation of artisanal salinas. The project is led by CUEIM – University Consortium for Industrial and Managerial Economics (Italy) and the partners are Association for the Development of Rural Capacities (Lebanon), Fair Trade Lebanon (Lebanon), IUCN Centre for Mediterranean Cooperation (Spain), Mediterranean Sea and Coast Foundation (Italy), Saida Society (Tunisia), University of Cádiz (Spain) and Tuniso-Italian Chamber of Commerce and Industry (Tunisia).

<https://www.enicbcmed.eu/projects/medartsal>

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This publication has been produced with the financial assistance of the European Union under the ENI CBC Mediterranean Sea Basin Programme. The contents of this document are the sole responsibility of IUCN and can under no circumstances be regarded as reflecting the position of the European Union or the Programme management structures.

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Operational plan and guidelines for policy development

July 2023- FINAL VERSION



PROJECT PARTNERS



ASSOCIATED PARTNERS





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Contributors and Acknowledgements

This publication was prepared by Yana Korneeva Abdulaeva and Esperanza Macarena Castro Casas from the University of Cadiz (UCA) and Helena Clavero Sousa, Catherine Numa, Lourdes Lázaro and Andrés Alcántara from the IUCN Centre for Mediterranean Cooperation (IUCN-Med), with the contributions of the project partners and under the coordination of IUCN-Med. It has been reviewed and edited by Santiago Suárez O’Solan and Helena Clavero Sousa (IUCN-Med).

The MedArtSal partners would like to thank all the individuals and organisations who provided valuable input to the development of this document, whether by reviewing and sharing their comments on its content, providing feedback, or simply being part of the process that led to this publication. Individuals who participated in the national analyses for this document are listed in each of the country sections.

Design of the infographic: miniestudio.es



Executive summary

This document describes an Operational Plan for the development of policies for the sustainable management of Mediterranean artisanal salinas, from an Ecosystem-Based Management perspective. The purpose of the document is to develop different strategic lines that improve the sustainability of the salinas. The plan's objectives include utilising a sustainability model and identifying constraints and opportunities for implementing the model.

As initial step, a SWOT (strengths, weaknesses, opportunities, and threats) analysis was conducted to identify critical issues and main challenges. The proposed methodology consisted in analysing the SWOT matrix at national and regional levels, identifying goals for each SWOT element and defining tangible actions. Each country has developed its own SWOT to indicate how each hierarchical level of relevant stakeholders will tackle the sustainability challenges of artisanal salinas.

A specific sub-operational plan has been discussed for the four MedArtSal partner countries (Lebanon, Tunisia, Italy and Spain) highlighting the primary challenges faced by artisanal salt producers in keeping salt pans in operation in a profitable and sustainable manner, as well as the potential solutions and opportunities. The main focus of the plan is to determine who has to do what to ensure the maintenance and improvement of the traditional salt activity and the saltworks and establish different levels of assessment, planning, and management at regional, national and international levels.



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1. Background and introduction

An operational plan is a strategic document that outlines the daily operations and processes required for running a successful business. It entails activities that different teams or departments such as recruitment, marketing, and finance, need to perform to achieve company goals and objectives. The purpose of this document is to develop different strategic lines that improve the sustainability of the salinas from an Ecosystem-Based Management point of view. This document is part of the toolkit developed by the MedArtSal project to support the traditional salt sector and to inform all the actors involved in its maintenance about actions to improve and promote this traditional activity and about the importance of the ecosystems of the salt pans.

Objectives

The Operational Plan (OP) aims to achieve multiple objectives by utilizing the sustainability model developed previously. This model provides inputs at various territorial and hierarchical levels, enabling different stakeholders to contribute towards salinas' environmental responsibility and social sustainability (e.g., human rights, social security, etc.). The OP is based on a diagnosis of constraints and opportunities at the regional and national level and identification of solutions and recommendations. It further establishes the conditions in which the model can be better implemented, within a regional focus, therefore the collaboration of all MedArtSal partners is crucial in order to build a more accurate OP that



benefits all stakeholders in the territory. By creating a network and implementing the model, all stakeholders will benefit from improved sustainability. The level of change needed for each territory must be assessed to implement the model and determine which aspects of the OP are needed for each specific context.



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The main idea behind this plan can be summarised as "Who has to do what to improve what", in the context of seeking the sustainability of the artisanal salinas. To answer this question we establish different levels, with the general approach of *Assessment -> Planning -> Management and focus on the general /regional national and international levels.*

2. Identification and assessment of critical issues

The SWOT analysis serves as the basis for developing improvement or reinforcement tasks and identifying critical issues and main challenges. A first SWOT matrix (Appendix A) was developed as a base and was sent to MedArtSal partners in Excel format with instructions to work on it. The proposed methodology consists of two main parts:

1. Each country analyses the elements of the matrix at a local level with the help of experts in the field. Each participant of this assessment will choose five strengths, weaknesses, opportunities and threats, which then will be ranked from 1 to 5 in order of relevance. The one that has been chosen by more experts has more relevance for the diagnosis of the situation of each country.
2. Once the five main weaknesses and threats have been identified, it is time to propose tangible actions to be implemented by different key stakeholders at local, national and international level. To make it easier to propose specific actions, the experts have to define a goal for each SWOT element.



2.1. Countries sub-operational plan

Based on the methodology described above, each country formulated its own SWOT to later indicate how each hierarchical level of relevant stakeholders will face the challenges of the sustainability of artisanal salinas.

2.1.1. Analysis for Lebanon

Seven experts carried out Lebanese SWOT matrix analysis. Among them are salt producers as well as Fair trade Lebanon and Association for the Development of Rural Capacities (ADR) colleagues (Table 1).

Table 1. Participants in the analysis process of the Lebanese SWOT matrix.

#	Name	Institution
1	Benoit Berger	Fair Trade Lebanon
2	Nabil Chebib	Fair Trade Lebanon
3	Hiba Fawaz	ADR
4	Jessica Najjar	Salt producer
5	Georges Sleiman	Salt producer
6	Imad Malek	Salt producer
7	Maya Masri	Fair Trade Lebanon

In Lebanon, artisanal salt producers face various challenges that affect their productivity and profitability. The primary challenges relate to the legal status of the salinas, which are mainly rented from monasteries. In addition, there is a deficit in regulations due to their age, lack of adaptation to the current salt context and lack of coordination among administrative bodies.



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Furthermore, promoting local and artisanal products is difficult due to limited knowledge and the lack of cooperatives where companies work together. Likewise, many salt producers experience difficulties to maintain their facilities, many of which have been abandoned for years

Despite these challenges, Lebanon has abundant natural resources, including high-quality products and services that are currently highly demanded in various economic sectors. This presents enormous potential for diversification of products and activities in the artisanal salinas. However, developing complementary activities to the extraction of salt, such as ecotourism and gastronomic tourism, would require more public administrative and financial support. The creation of own brands and denominations of origin would be crucial for promoting the products effectively.



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Table 2. Lebanese SWOT main elements after the experts' analysis. Prepared by the authors.

 Strengths	 Opportunities
<ul style="list-style-type: none"> ● Abundance of natural resources in salinas that can be harnessed to provide economic benefits, but also for nature, tourism activity, heritage and cultural preservation, as well as food and gastronomy-related 	<ul style="list-style-type: none"> ● Improving the protection of important natural sites through salt-production activities
<ul style="list-style-type: none"> ● Promoting Fleur de sel - a highly valued salt variety in haute cuisine 	<ul style="list-style-type: none"> ● Developing "salt tourism" as a business model that harnesses the beauty of the landscape and ecological value of artisanal salinas
<ul style="list-style-type: none"> ● Diversifying products and services (macro & microalgae, tourism, outdoor activities to maximise benefits 	<ul style="list-style-type: none"> ● Developing local ecotourism clusters to promote tourism in the zone concerned
<ul style="list-style-type: none"> ● Very specific and high-quality products and services that can only be obtained or developed in certain places, such as in the Mediterranean 	<ul style="list-style-type: none"> ● Boom of gastronomic tourism is creating a high demand for natural, healthy, functional and organic products
<ul style="list-style-type: none"> ● Potential to create gourmet products that are becoming increasingly popular. 	<ul style="list-style-type: none"> ● Developing a single designation of origin or label, which unifies several different brands, especially to target international markets
	<ul style="list-style-type: none"> ● Carrying out some institutional promotion and local direct sales actions in the municipalities could help to increase revenue



<p>SWOT</p> <p>W Weaknesses</p>	<p>SWOT</p> <p>T Threats</p>
<ul style="list-style-type: none"> ● Lack of infrastructure: better infrastructure could enable tourism to develop in salinas: signage, tourist information points, accesses, basic services, etc. 	<ul style="list-style-type: none"> ● Uncertain legal status of salinas, for example, when land is rented from religious entities or when the timeframe remains unspecified
<ul style="list-style-type: none"> ● Need for direct financial public aid and credit, as well as advice to support corporate actions and brand development 	<ul style="list-style-type: none"> ● Inconsistent regulations for this sector (laws may be very old, not adapted to current context, offering insufficient coverage, etc)
<ul style="list-style-type: none"> ● Limited marketing efforts: lack of promotion (both physical and online). Poor knowledge of market segmentation 	<ul style="list-style-type: none"> ● Costly maintenance of the structures of the salinas for small businesses and entrepreneurs
<ul style="list-style-type: none"> ● Quality certification: lack of synergies between salinas and associations to develop common quality standards, for example, appellations of origin, labels, etc. 	<ul style="list-style-type: none"> ● Low competitiveness of local and organic products compared to the prices of industrial salt
<ul style="list-style-type: none"> ● Support to entrepreneurship: business projects require initial support to assess project viability, as well as for the implementation, helping to tackle both economic and administrative challenges 	<ul style="list-style-type: none"> ● Lack of an adequate legal framework to protect and promote the artisanal management of salt pans
<ul style="list-style-type: none"> ● Low levels of profitability: artisanal salt products are usually undervalued 	<ul style="list-style-type: none"> ● Lack of coordination inside public administration, high amount of bureaucracy slowing down the processes
<ul style="list-style-type: none"> ● Land and property management: salinas often lay within neglected land, where ownership is fragmented. 	



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Key policy recommendations for Lebanon



Source: Prepared by the authors

2.1.2. Analysis for Italy

Five experts (Table 3) from the MedSea Foundation and University Consortium for Industrial and Managerial Economics (CUEIM) met in Italy to analyse the SWOT matrix according to the methodology agreed for the operational plan.

Table 2. Participants in the analysis process of the Italian SWOT matrix.

#	Name	Institution
1	Manuela Puddu	MedSea Foundation
2	Elisa Ulazzi	MedSea Foundation
3	Francesca Etzi	MedSea Foundation
4	Tiziana Campisi	CUEIM
5	Luca Foschi	MedSea Foundation

In Italy, the main challenges faced by artisanal salt producers are related to the product vision and the economic sphere. The production of sea salt is in some ways still anchored to certain ancient traditions,



even if a certain degree of mechanization has been introduced over time, and even if it cannot be defined as zero-emission production, in general terms it has a lower environmental impact than the production of rock salt. It should be noted that the production of sea salt is not an extractive activity as well (despite the fact salinas are administratively and economically included in the extractive industry) but it is more a natural product transformation (sea water into salt through sun evaporation) more similar to an agro-food activity. To this we must add the natural value of the coastal "artisanal" salt pans which represent natural and ecosystem oases. Some products (like *fleur de sel*) can have natural iodine in their formulation even if this amount does not reach the WHO recommended level. Sea salt incorporates a vision of history, flavours, quality, nature and the environment, which differentiates it from rock salt. Unfortunately, the higher production costs mean that it is not always a competitive product.

Italian experts consider that there is a lack of recognition of artisanal salt as a high-value product, which means that it currently has little profitability in the market. A local, not internationalized and not very competitive market, in addition to the high cost of maintaining the facilities, puts salt producers in a difficult economic situation. Additionally, there is some concern about the consequences that climate change may have on the natural system of the salinas.

Like Lebanon, Italy has abundant resources and values in the salinas that can be taken as an economical advantage. The opportunities to develop new economies associated with the diversification of products and services are vast. Advocating for local and international cooperation, the market could be opened to other countries, promoting activities that allow the maintenance of the natural values of the salinas as well as economic profitability



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Table 4. Italian SWOT main elements after the experts' analysis. Prepared by the authors.

 Strengths	 Opportunities
<ul style="list-style-type: none"> ● Abundance of resources in commercial salinas offers a wide array of possibilities to develop economic activities, based on natural, touristic, historical, cultural, gastronomic or heritage-related values 	<ul style="list-style-type: none"> ● Expanding commercial activity to enter international markets
<ul style="list-style-type: none"> ● Artisanal treatment allows to create personalised salt varieties to fit the standards of gourmet cuisine 	<ul style="list-style-type: none"> ● Developing comprehensive projects that apply the Nature-based Solutions standard to protect, sustainably manage, and ecosystems while addressing societal challenges effectively
<ul style="list-style-type: none"> ● Artisanal salinas which are active play an important role in preserving nature (not only in terms of species, but also of ecosystem services) 	<ul style="list-style-type: none"> ● Exploring synergies with other small business to carry out joint marketing actions
<ul style="list-style-type: none"> ● There is a high potential to simultaneously develop diverse products and services, e.g. macro and microalgae cultivation, tourism 	<ul style="list-style-type: none"> ● The unique landscape and natural value of artisanal salinas is well-suited to develop ecotourism, especially at a moment of increasing demand for nature and outdoor experiences, as well as for tailor-made tourism, as in <i>saliturismo</i>
<ul style="list-style-type: none"> ● Artisanal salinas can produce gourmet products which are becoming increasingly popular, such as <i>fleur de sel</i>, algae, etc. 	<ul style="list-style-type: none"> ● Promoting the universal value of salinas by fostering the exchange and international cooperation between researchers, businesses and others

SWOT

W Weaknesses

- Maintaining the technical infrastructure of salinas entails a **high economic cost**
- **Lack of compliance** with legal obligations
- **Missing a regulatory authority** which certifies the quality of *fleur de sel* and virgin salt
- Artisanal salt remains an **undervalued product** with low levels of profitability
- **Marketing efforts are still limited** to smaller local markets and don't target international ones

SWOT

T Threats

- In the absence of a clear regulation or standard to certify the quality, there is a **lack of differentiation** between artisanal salt and industrial salt
- **Salt flats are declining**, losing their natural quality or even disappearing as a result of climate change effects
- **Low market prices** threaten the competitiveness of local and organic salt products
- **Business activities** in salinas struggle to become economically sustainable
- Business projects are **lacking financial, administrative and policy support** from the public administration, which is key for implementing, sustaining the projects and making them more profitable



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Key policy recommendations for Italy



Source: Prepared by the authors

2.1.3. Analysis for Spain

The team of Spanish experts (Table 5), who belong to the International Union for Conservation of Nature (IUCN) and the University of Cádiz, held various meetings to analyse the SWOT matrix in depth following the proposed methodology.

Table 3 Participants in the analysis process of the Spanish SWOT matrix.

#	Name	Institution
1	Helena Clavero	IUCN
2	Lourdes Lázaro	IUCN
3	Catherine Numa	IUCN
4	Macarena Castro Casas	UCA
5	Yana Korneeva	UCA
6	Andrés Alcántara	IUCN
7	Alejandro Pérez Hurtado	UCA - Central Research Service, Salina La Esperanza

In Spain, the many gaps and inconsistencies in coastal planning and local regulations pose serious



challenges to artisanal salinas. Urban pressure in favour of intensive economic activities is a major threat for small artisanal salinas. This means that artisanal products are not properly valued compared to those obtained industrially. Due to this and given the lack of political support, the salt producers experience great difficulties in establishing their companies and projects, which ultimately limits the number of active salt producers to a restricted group of elderly workers.

In light of these difficulties, it is very important that the salt producers create synergies among themselves in search of a greater recognition of the product and to promote the change of regulations at the national level. As with the other countries participating in the project, the natural and cultural potential of the Spanish salinas is crucial for the creation of opportunities based on sustainability. Again, the diversification of products and services is a key step on the way to economic profitability and environmental protection.



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Some elements of the matrix were modified to better adjust them to the characteristics of the Spanish saltworks and thus be able to rank them appropriately. The top five strengths, weaknesses, opportunities and threats are presented in the following table:



Table 6. Spanish SWOT main elements after the experts' analysis. Prepared by the authors.

 Strengths	 Opportunities
<ul style="list-style-type: none"> ● High environmental value in active artisanal salinas (biodiversity and ecosystems services) 	<ul style="list-style-type: none"> ● Potential of Nature-based Solutions to protect, sustainably manage, and restore natural and modified ecosystems addressing societal challenges effectively
<ul style="list-style-type: none"> ● High potential for diversification of products/services (macro & microalgae, halophytes plants, healthy activities, tourism) 	<ul style="list-style-type: none"> ● Increased demand for tailor-made tourism which benefits from the landscape and ecological value of the artisanal salinas, including nature & outdoor experiences, and "salt tourism" (ecotourism)
<ul style="list-style-type: none"> ● Potential to create gourmet products in which there is growing interest: fleur de sel, algae, etc 	<ul style="list-style-type: none"> ● Resurgence of the gourmet and natural market. Gourmet salt market growth both in volume (3.6% per year) and in value (4.8% per year)
<ul style="list-style-type: none"> ● Existence of abundant resources and values in the salinas that can be exploited economically: natural, tourist, heritage, historical, cultural and gastronomic 	<ul style="list-style-type: none"> ● High demand for natural, healthy, functional, artisanal, organic and local products.
<ul style="list-style-type: none"> ● Very specific and high-quality products and services that can only be obtained or developed under certain conditions 	<ul style="list-style-type: none"> ● Blue Carbon market as a possible source of future business

<p>SWOT</p> <p>W Weaknesses</p>	<p>SWOT</p> <p>T Threats</p>
<ul style="list-style-type: none"> ● Need for synergies between salinas and associations to foster legitimacy, e.g. through the development of labels or designations of origin 	<ul style="list-style-type: none"> ● Lack of differentiation between artisanal salt and industrial salt. There is no clear regulation or standard to certify artisanal salt as a product
<ul style="list-style-type: none"> ● Advanced age of salinas owners/workers and difficulties for generational renewal 	<ul style="list-style-type: none"> ● Insufficient or deficient administration and/or spatial planning regulations
<ul style="list-style-type: none"> ● Lack of coordination in the corresponding administrations, slowness and bureaucracy. Complicated governance, lack of legal framework to protect artisanal management and old regulations 	<ul style="list-style-type: none"> ● Pressures due to urban developments or land use changes in favour of tourism, intensive agricultural or aquaculture developments
<ul style="list-style-type: none"> ● Artisanal salt products haven't been sufficiently linked to other products and services provided by salinas, such as aquaculture, gastronomy, tourism or environmental education 	<ul style="list-style-type: none"> ● Lack of public financial and policy support for the implementation, maintenance and viability of business projects, need for economic and administrative incentives
<ul style="list-style-type: none"> ● Significant deficit of infrastructure that would allow the development of tourism in the salinas: signage, tourist information points, accesses, basic services, etc. 	<ul style="list-style-type: none"> ● Scarcity of local commercial links



Bahía de Cádiz salt pans. © MEET Network/Estamosgrabando



Key policy recommendations for Spain

RECLASSIFY artisanal salt production as agriculture, instead of mining, acknowledging its low environmental impact and enabling appropriate regulation

SIMPLIFY ADMINISTRATIVE PROCESSES and review the status of use concessions to promote active salinas

PROFESSIONALISE THE SECTOR by developing a specific training programme and a professional category for salt workers

DEVELOP A SPECIFIC REGULATORY FRAMEWORK for the artisanal sector and provide technical support, promoting public subsidies for salt workers & entrepreneurs

GAIN INSTITUTIONAL SUPPORT for nature conservation, natural resource management, governance and decision-making

ESTABLISH A LOCAL NETWORK among salt owners to develop a common label which supports their products and services to make them more competitive on a larger scale

DISSEMINATE THE INHERENT NATURAL AND CULTURAL VALUES of salinas through outreach, awareness-raising and educational campaigns (fair, public and private advertising, reaching target markets, etc)

Source: Prepared by the authors

2.1.4. Analysis for Tunisia

An online anonymous survey was carried out to gather information about the SWOT elements. After this, a group of Tunisian experts analysed these elements and proposed actions to face the threats and weaknesses found.

The main findings of this analysis point to the fact that the Tunisian salt market is currently economically unprofitable due to the undervaluation of salt as a product and the confusion surrounding the terms 'organic' and 'artisanal'. Likewise, a lack of technical and digital skills makes it difficult for producers to access the online and international market. Furthermore, insufficient infrastructures limit the development of activities which could potentially be profitable for salt producers.



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Most of these difficulties can be overcome by a greater national and international cooperation between administrations, companies and research institutions. There is currently a high demand for organic and local products, which gives artisanal salinas an advantage and offers them an opportunity to create projects that pursue the diversification of products and services in the Tunisian salinas. Such projects would help them achieve economic profitability without compromising the natural values of the area.



Table 7. Tunisian SWOT main elements after the experts' analysis. Prepared by the authors.

 Strengths	 Opportunities
<ul style="list-style-type: none"> ● Salinas hold significant potential as recreational sites and to carry out outdoor activities 	<ul style="list-style-type: none"> ● Increasing profit by placing artisanal salt as a product on international markets
<ul style="list-style-type: none"> ● Salinas offer many opportunities for product and service diversification (from macro & microalgae cultivation to tourism, etc.) 	<ul style="list-style-type: none"> ● Bringing attention to the value of salinas by promoting national and international cooperation among businesses, research groups and other key actors
<ul style="list-style-type: none"> ● Quality of salt and food are highly suitable to create gourmet products which are becoming increasingly popular, e.g. <i>fleur de sel</i>, algae, etc. 	<ul style="list-style-type: none"> ● Promoting the ecological value of artisanal salt based on the positive perception of agro-environmental products
<ul style="list-style-type: none"> ● The abundant resources and values offered by artisanal salinas can be utilised to create economic activities based on natural, gastronomic, historical, cultural, heritage and tourism-related assets 	<ul style="list-style-type: none"> ● Strengthening e-commerce presence by extending marketing efforts to new commercial channels
<ul style="list-style-type: none"> ● High environmental value of active artisanal salt mines provides precious ecosystem services and contributes to preserve endemic biodiversity 	<ul style="list-style-type: none"> ● Suitable sites to develop projects related to Nature-based Solutions that protect, sustainably manage, and restore ecosystems while effectively addressing societal challenges
	<ul style="list-style-type: none"> ● Improving the environmental protection of salinas

<p>SWOT</p> <p>W Weaknesses</p>	<p>SWOT</p> <p>T Threats</p>
<ul style="list-style-type: none"> ● Undervalued product and low profitability 	<ul style="list-style-type: none"> ● The online market is mainly being supplied by large distribution companies
<ul style="list-style-type: none"> ● Need for better coordination between corresponding administrations, to speed up administrative procedures 	<ul style="list-style-type: none"> ● Lack of differentiation between artisanal salt and industrial salt
<ul style="list-style-type: none"> ● Weak digital, technical and marketing skills 	<ul style="list-style-type: none"> ● Market price pressure threatens competitiveness of local and organic products
<ul style="list-style-type: none"> ● Important deficit of infrastructure that would allow the development of tourism in salinas: signage, tourist information points, accesses, basic services, etc. 	<ul style="list-style-type: none"> ● Large distribution requires a high volume of production
<ul style="list-style-type: none"> ● Insufficient investment in productive information and communication technologies 	<ul style="list-style-type: none"> ● Misguided belief among consumers that ecological, bio and natural products are synonyms
<ul style="list-style-type: none"> ● High economic and technical cost of maintaining the structure of salt works 	





Key policy recommendations for Tunisia



Source: Prepared by the authors

3. Conclusions and general recommendations

1. Promote and encourage the organisation of salt producers in networks, cooperatives or associations to foster collaboration, exchange of information and standardisation of processes and prices. The creation of a network or coalition of salina owners can also help to facilitate participation in legislative procedures and the defence of the sector's interests.
2. Change regulations at national and international level to give artisanal coastal salinas their own legal framework, highlighting their importance and value of the products and services they can provide.
3. Protect the natural habitat of the salinas by including them in the catalogues of protected natural areas or other types of protection, preventing their abandonment and promoting biodiversity conservation plans.



4. Provide adequate technical and financial support to salt producers to help diversify their products and revive and ensure the sustainability of traditional salt farms, in order to maintain the ecosystem services and benefits to local economies provided by salina ecosystems, as well as their associated culture.
5. Internationalise and modernise the sector by providing salt producers with access to and training in technology, marketing and sales techniques.
6. Create a professional category for salt workers and apprentices.
7. Create thematic clusters or networks that include both salt producers and key business sectors, such as HoReCa (Hotels, Restaurants and Cafés) in the territory where the saltworks are located, in order to promote the role of salinas as drivers of local economies.



MedArtSal partners in Cádiz (Spain). © IUCN



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Appendices



Appendix A: SWOT matrix for the salinas in the four countries of the MedArtSal project

Table A-1. Joint SWOT matrix for the salinas of the four countries of the MedArtSal project (Spain, Italy, Lebanon and Tunisia).

THREATS	WEAKNESSES	STRENGTHS	OPPORTUNITIES
Difficult maintenance of the structures of the salinas	Fragmented and abandoned property for many years.	Product known by society and increasingly valued.	Resurgence of the gourmet and natural market
Necessary differentiation between artisanal salt and industrial salt.	Lack of coordination in the corresponding administrations, slowness and bureaucracy	<i>Fleur de sel</i> as a « haute cuisine » product	Opening to international markets.
Need for ecological certification	Undervalued product and low profitability	Place of recreation for society	Implement new commercial channels, e-commerce.
Lack of accessible and standardized information for the consumer.	Traditional craft without professionalization	Outdoor activities	Promote tourism in the area
Insufficient or deficient sector regulations.	Complicated governance	High potential of diversification of products/services (macro & microalgae, tourism)	Improve the environmental protection of the salinas
Non-existence of the local commercial link	Old regulations	Historical and cultural values	Blue Carbon market
Age of salinas owner and worker with no interest from new generations	Weak technical information	Increased demand for tailor-made tourism and nature & outdoor experiences	Nature-based Solutions opportunities to protect, sustainably manage, and restore natural and modified ecosystems addressing societal challenges effectively
Denaturalisation (and disappearance) as a consequence of climate change effects	Lack of a legal framework to protect and promote the artisanal management of saltpans	Increased interest from the gastronomic sector in settling in saltpans and cooking their high added-value products	From farm to fork EU policy strategies
Market price pressure threatens the competitiveness of local and organic products	Non-compliance with the legal obligations	Very specific and high-quality products and services that can only be obtained or developed in certain places, such as in the Mediterranean	High demand for natural, healthy, functional and organic products. Gastronomic tourism boom.



THREATS	WEAKNESSES	STRENGTHS	OPPORTUNITIES
Large distribution requires a high volume of production	Poor and underdeveloped online marketing channels	Industrial salinas do not usually offer tourist services	Relevance of the ethical positioning of companies
Rise of Himalayan Salt and false belief in its properties	Little ability to generate marketing strategies optimized for the market.	Potential to create Gourmet products in which there is growing interest	Networking to carry out marketing actions with other small businesses
Widespread use of industrial salt in homes	Lack of promotion both physical and online. Little knowledge of market segmentation.	Existence of abundant resources in the salinas that can be exploited economically: natural, tourist, heritage, cultural and gastronomic	Development of a "salt tourism" taking advantage of the landscape and ecological value of the artisanal salinas
Strong position in the industrial saltworks market	Important deficit of infrastructures that allow the development of tourism in the salinas: signage, tourist information points, accesses, basic services, etc.	Possibilities of preparing a "tailor-made" salt for gourmet cuisine	Taking advantage of the image of the agro-environmental product due to the ecological value of the artisanal salinas
Consumer belief that ecological, bio, natural, etc. they're synonyms	Investment in productive information and communication technologies is low	Institutional support for the development of natural products.	Concentration of brands for the creation of a single designation of origin or label, especially for the international market
Health-related aspects (salt causes high blood pressure)	Lack of synergies between salinas and associations to create, for example, designations of origin, labels, etc.		Growth in the use of gourmet salt in exotic foods
The online market is concentrating on large distribution companies	Little innovation in formats, packaging, etc.		Gourmet salt market growth both in volume (3.6% per year) and in value (4.8% per year)



THREATS	WEAKNESSES	STRENGTHS	OPPORTUNITIES
Unfair competition between extensive and artisanal salinas in relation to the <i>fleur de sel</i>	Marketing in very local markets, lack of internationalization.		
There is no clear regulation of the organic salt standard.	Difficulty making marketing strategies profitable.		
It is difficult to make projects in artisanal salinas economically sustainable.	Regarding <i>fleur de sel</i> , the law does not apply. That would allow the artisanal survival of salinas.		
	Certifications are not used to differentiate different types of salt.		
	The artisanal salt product is not complemented with other typical products of salinas, such as aquaculture, gastronomy, environmental education, etc.		
	There is not a regulatory council for quality approval for <i>fleur de sel</i> and virgin salt.		
	The responsibility for the protection of the traditional salt flats is under the Ministry of Mines, it must pass from the Ministry of Industry to the Ministry of Agriculture		
	Direct financial public aid and via credit are required, advice for corporate actions and brand creation, institutional promotion and local direct sales actions in the municipalities.		
	Initial support would be necessary for the implementation and viability of business projects, both economic and administrative facilities.		



Appendix B: Lebanon - Proposed actions to increase the sustainability of salinas

Table B-1. Proposed actions to address the main **threats** affecting Lebanese salinas, identified from the SWOT analysis, for the different components of the MedArtSal Model.

Threats	Key Stakeholders/User Community for implementation	MedArtSal sustainability components			
		Governance	Environment	Socio-economic	Diversification
Difficult maintenance of the structures of salinas	Regional / EU policy-makers				
	Policy-makers (at local level)	Facilitate the work of saltworkers during maintenance season			
	National authorities	Legalize the status of the salinas through updated regulation			Grand permission for salinas owners to carry out diverse activity such as eco-tourism
	Technology engineering				
	Salinas owners	<p>Create a coalition of salinas owners to facilitate participation in law-making consultative procedures to legalise the status of salinas and request support for maintenance</p> <p>Work with decision makers to legalize the status of salinas and request support for maintenance</p>			

Threats	Key Stakeholders/User Community for implementation	MedArtSal sustainability components			
		Governance	Environment	Socio-economic	Diversification
Old regulations (Insufficient or deficient sector regulations)	Regional / EU policy-makers				
	Policy-makers (at local level)				
	National authorities	New regulations for salt production. Create a model of certification for artisanal salt	Include the salinas in the Management of the PA that will be created in the region of the salinas		
	Technology engineering				
	Salinas owners	Lobbying to have new regulation for Salt Production	Campaigning to include the salinas in the National natural heritage		
Market price pressure threatens the competitiveness of local and organic products	Regional / EU policy-makers				
	Policy-makers (at local level)				
	National authorities	New policies to limit the imported salt			
	Technology engineering			optimize the production while respecting the traditional know-how	
	Salinas owners	Lobbying toward the Ministries in order to reduce the import of Salt			Development of new products (salt with spices...)

Threats	Key Stakeholders/User Community for implementation	MedArtSal sustainability components			
		Governance	Environment	Socio-economic	Diversification
Lack of a legal framework to protect and promote the artisanal management of salt pans	Regional / EU policy-makers				
	Policy-makers (at local level)	Develop a legal framework for protecting artisanal salinas (special regulation)	include the salinas in the Management of the PA that will be created in the region of the salinas		
	National authorities	Have some municipal decree that leads to the protection of salt pans			
	Technology engineering				
	Salinas owners				
Legal Status of Salinas	Regional / EU policy-makers	Lobbying towards Ministries regarding the importance to sustain the artisanal salinas			
	Policy-makers (at local level)	Legalize the status of the salinas through updated regulation			
	National authorities	Create a model of certification for artisanal salt			
	Technology engineering				
	Salinas owners				Develop local tourism and activities related to salt production
Threats		MedArtSal sustainability components			

	Key Stakeholders/User Community for implementation	Governance	Environment	Socio-economic	Diversification
Lack of coordination in the corresponding administrations, slowness and bureaucracy	Regional / EU policy-makers	<p>Encourage regional or EU-level policy reforms that emphasize efficient coordination and decision-making processes to counteract bureaucracy</p> <p>Encourage the development and utilization of centralized platforms to facilitate quick and efficient information sharing among various stakeholders, promoting collaboration and synchronization</p>			
	Policy-makers (at local level)	<p>Tailor regional or national policies to suit local contexts, ensuring they address specific bureaucratic challenges faced at the local level.</p> <p>Invest in capacity-building programs to enhance the administrative capabilities of local stakeholders, ensuring they can effectively navigate bureaucratic processes.</p>			
	National authorities	Review and streamline bureaucratic processes within the national framework,			



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		making them more accessible and efficient for stakeholders involved in the MedArtSal project.			
	Technology engineering				
	Salinas owners	Foster partnerships with regional and national authorities, encouraging a collective effort to overcome bureaucratic hurdles			

Table B-2. Proposed actions to address the main **weaknesses** of Lebanese salinas, identified from the SWOT analysis, for the different components of the MedArtSal Model.

Weaknesses	Key Stakeholders/User Community for implementation	MedArtSal sustainability components			
		Governance	Environment	Socio-economic	Diversification
Fragmented and abandoned property for many years	Policy-makers (at local level)				
	National authorities	Facilitate the process of obtaining permission for the maintenance and reactivation of salinas			
	Technology engineering				
	Salinas owners	Create a structure to unify the salt producers (cooperatives...)	Gradually revive the abandoned salinas		
Undervalued product and low profitability	Policy-makers (at local level)				
	National authorities	Anfeh is the only village producing artisanal Salt in Lebanon, the Municipality can link this issue to all the Municipality plans and events to highlight the value of artisanal Salt			
	Technology engineering		Producing studies that provide evidence on the		

Weaknesses	Key Stakeholders/User Community for implementation	MedArtSal sustainability components			
		Governance	Environment	Socio-economic	Diversification
			environmental value of saltponds		
	Salinas owners				Diversify activities to raise awareness on the importance of salinas, their preservation and the quality of their products
Lack of synergies between salinas and associations to create, for example, designations of origin, labels, etc	Policy-makers (at local level)				
	National authorities				
	Technology engineering				
	Salinas owners	Establish a legal body such as a cooperative or association to advocate for the interests of the sector and enhance communications with other associations and ministries			
Lack of promotion both onsite and online. Little knowledge of market segmentation	Policy-makers (at local level)	Facilitate the process of exporting artisanal salt			
	National authorities			Organise an international event to promote local salinas	

Weaknesses	Key Stakeholders/User Community for implementation	MedArtSal sustainability components			
		Governance	Environment	Socio-economic	Diversification
	Technology engineering				
	Salinas owners	Registration of their salinas in the corresponding list of the Ministry of Economy and Industry in order to be able to export		Create market linkages with international partners	Promote artisanal salt as part of the diversified activities of salinas such as eco-tourism, educational-tourism etc.
Important deficit of infrastructures that allow the development of tourism in the salinas: signage, tourist information points, accesses, basic services, etc.	Policy-makers (at local level)				
	National authorities	Create a national/regional branding "appellation d'origine"; improve the access to the salinas; provide information on the tourist services offered by the salinas at the tourist information points			
	Technology engineering				
	Salinas owners	Create a national/regional branding "appellation d'origine"; develop a signage system			Promote networking with travel agencies and tour operators to disseminate information about the salinas. Commercialise visits to salinas

Weaknesses	Key Stakeholders/User Community for implementation	MedArtSal sustainability components			
		Governance	Environment	Socio-economic	Diversification
Direct financial public aid and via credit are required, advice for corporate actions and brand creation, institutional promotion and local direct sales actions in the municipalities.	Policy-makers (at local level)	Facilitate the credit and ensure financial aid for salt ponds owner in order to revive new salinas and develop the existing ones			
	National authorities	Promote initiatives by the Municipality to present the artisanal salt pans and the salt produced			
	Technology engineering				
	Salinas owners			Develop commercial brands for salinas	
Initial support would be necessary for the implementation and viability of business projects, both economic and administrative facilities.	Policy-makers (at local level)	Create a Program of Support for salinas owners			
	National authorities				
	Technology engineering				
	Salinas owners				

Appendix C: Italy - Proposed actions to increase the sustainability of salinas

Table C-1. Proposed actions to address the main **threats** affecting Italian salinas, identified from the SWOT analysis, for the different components of the MedArtSal Model.

Threats	Goal	Key Stakeholders/Us er Community for implementation	MedArtSal sustainability components			
			Governance	Environment	Socio-economic	Diversification
Lack of differentiation between artisanal salt and industrial salt. /There is no clear regulation of the organic salt standard (product)	Defining a legal framework of certification for artisanal salt	Regional / EU policy-makers	To boost recognizing of artisanal salt as an organic and artisanal product through strengthening alliances with other countries.	Advocate for salinas to be recognised as natural and cultural habitats.		
		National authorities	To develop guideline for setting criteria on a definition of artisanal salt versus extensive salt production.	Advocate the organic salt has an environmentally friendly (compared to the industrial one)	Incorporate salinas and their products in the promotional campaigns of national products	
		Policy-makers (at local level)	To create advisory group of stakeholders to work on this differentiation (At regions level). Advocate for salt to be recognised as an artisanal product.	Advocate the organic salt has an environmentally friendly (compared to the industrial one)	Incorporate salinas and their products in the promotional campaigns of artisanal products (local, regional, national ...levels)	
		Technology transference from science				
		Salinas owners	Create and participate in local groups and advocacy.		Add their products to the national and regional promotional campaigns	



Threats	Goal	Key Stakeholders/Us er Community for implementation	MedArtSal sustainability components			
			Governance	Environment	Socio-economic	Diversification
Denaturalisation (and disappearance) as a consequence of climate change effects	Implementing adaptation measures according to the National and Regional Adaptation strategy to climate change	Regional / EU policy-makers	Define action plans and funding schemes devoted to implement actions for climate change mitigation and adaptation.	Advocate salinas to be recognized as natural and cultural habitats to be protected.		
		Regional authorities	Define action plans & funding schemes devoted to implement actions for climate change mitigation and adaptation.	Advocate salinas to be recognized as natural and cultural habitats to be protected.		
		National authorities	Define action plans and funding schemes devoted to implement actions for climate change mitigation and adaptation.			
		Technology engineering (Public/private research centres and universities)		Networking and sharing experience on engineering solution to increase the capability of the salina to act against climate change effects.	Networking and sharing experience on engineering solution to increase the capability of the salina to act against climate change effects.	



Threats	Goal	Key Stakeholders/Us er Community for implementation	MedArtSal sustainability components			
			Governance	Environment	Socio-economic	Diversification
Denaturalisation (and disappearance) as a consequence of climate change effects		Salinas owners	Create and participate to groups and network for knowledge transfer and access to funding opportunities to foster the importance of artisanal salinas in contrasting climate change effects	Create and participate to groups and network for knowledge transfer and access to funding opportunities to foster the importance of artisanal salinas in contrasting climate change effects		
Market price pressure threatens the competitiveness of local and organic products	Creating a national market of artisanal salts	Regional / EU policy-makers	To boost recognizing of artisanal salt as an organic and artisanal product through strengthening alliances with other countries			
		Policy-makers (at local and regional level)	To develop guideline for setting criteria on a definition of artisanal salt versus extensive salt production.		Incorporate salinas and their products in the promotional campaigns of national products	

Threats	Goal	Key Stakeholders/Us er Community for implementation	MedArtSal sustainability components			
			Governance	Environment	Socio-economic	Diversification
		National authorities	Provincial advisory group of stakeholders to work on this differentiation (At regions level). Advocate to be recognised salt as artisanal product.	Advocate the organic salt has an environment-tally friendly (compared to the industrial one)	Incorporate salinas and their products in promotional campaigns of artisanal products (local, regional, national ...levels)	
		Technology engineering (Public/private research centres and universities)				
		Salinas owners	Create and participate in local groups and advocacy.		Add their products to the national and regional promotional campaigns	To invest in potentiate or create new products and services.
It is difficult to make projects in artisanal salinas economically sustainable	Develop a business visibility of artisanal salinas	Regional / EU policy-makers	To create dedicated funding schemes devoted to actions to support economic sustainability of salinas.			
		Policy-makers (at local and regional level)	To create dedicated funding schemes devoted to actions to support economic sustainability of salinas.		To support creation of associations or clusters	
		National authorities	To create dedicated funding schemes devoted			

Threats	Goal	Key Stakeholders/Us er Community for implementation	MedArtSal sustainability components			
			Governance	Environment	Socio-economic	Diversification
			to actions to support economic sustainability of salinas.			
		Technology engineering (Public/ private research centres and universities)	Networking and sharing experience on sustainable solutions in term of technology, creation of new revenues, production technologies, other management solutions.			Networking and sharing experience on sustainable solutions in term of technology, creation of new revenues, production technologies, other management solutions.
		Salinas owners	Create and participate to groups and network for knowledge transfer and access to funding opportunities.	Foster salinas environmental character, implement programme for sustainable eco-friendly tourism.	Develop crowdfunding actions as well as visibility actions	To invest in potentiate or create new products and services.
Lack of public financial and policy support for the implementation, maintenance and viability of business projects, both economic and administrative	Develop a sectoral plan for artisanal salinas	Regional / EU policy-makers	Salinas recognition as a habitat in EU Habitat directive. Promote salinas as a World Intangible Cultural Heritage by UNESCO.			
		Policy-makers (at local level)	Offer a professional training for salt workers to improve capacities and anticipate and match future skills (new technologies, efficiency energy,		Promotional campaign for public to increase awareness of salinas products value.	Provide financial support for innovative products and activities (microalgae, macroalgae cosmetics, eco-tourism...)

Threats	Goal	Key Stakeholders/Us er Community for implementation	MedArtSal sustainability components			
			Governance	Environment	Socio-economic	Diversification
ve facilities.			etc Simplification in authorisation and bureaucracy for smaller and artisanal salt plants			
		National authorities	Professionalization of salt production sector. Develop a new professional/vocational qualification to be included in the National Catalogue of Professional Qualifications from the Ministry of Education. Public financial programme/plan for salt workers and entrepreneurs (subsidies, etc)			
		Technology engineering (Public/private research centres and universities)			Promote transference from research to technological private sector for innovative solutions in salt production and promotion. Create a scientific cluster for sector innovation	
Lack of public financial and policy support for the implementation, maintenance and						



Threats	Goal	Key Stakeholders/Us er Community for implementation	MedArtSal sustainability components			
			Governance	Environment	Socio-economic	Diversification
viability of business projects, both economic and administrative facilities.		Salinas owners	<p>Create a coalition of salinas owners to request grants for maintenance, new products development and professional trainings</p> <p>Explore cooperative entrepreneurship to reduce costs and develop joint sales and marketing strategies</p>		Facility the access to general public (opening hours, visits, etc..)	

Table C-2. Proposed actions to address the main **weaknesses** of Italian salinas, identified from the SWOT analysis, for the different components of the MedArtSal Model.

Weaknesses	Goal	Key Stakeholders/Us er Community for implementation	MedArtSal sustainability components			
			Governance	Environment	Socio-economic	Diversification
High economic and technical cost of maintenance of salinas structures	To create a sustainable value chain for the salt pans	Policy-makers (at local level)	Public subsidies for salt workers and entrepreneurs	Include salina natural area in the local General Urban Plan (i.e. scope of the salt pans)		Supporting the retraining of the facilities in the salinas as cultural heritage
		National authorities	Public subsidies for salt workers and entrepreneurs			
		Technology engineering (Public/private research centres and universities)	Networking and sharing experience on sustainable solutions in term of technology, creation of new revenues, production technologies, other management solutions.			Co-design of new projects and solutions
		Salinas owners	Adopting a 3-year business strategy			Including diversification in the business strategy

Weaknesses	Goal	Key Stakeholders/User Community for implementation	MedArtSal sustainability components			
			Governance	Environment	Socio-economic	Diversification
Non-compliance with the legal obligations	To reduce the burden of administrative processes and to change the regulation of the artisanal sector	Policy-makers (at local level)	Supporting the compliance process	Include salina natural area in the local General Urban Plan		
		National authorities	Creating a clear and simplified framework for artisanal salt producers	Definition of the environmental framework for salt pans area including a private-public cooperation.		
		Technology engineering (Public/private research centres and universities)				
		Salinas owners	Creating a plan for reduce the legal existing gaps			
There is not a regulatory council for quality approval for fleur de sel and virgin salt.	To define a tailored regulatory framework	Policy-makers (at local level)				
		National authorities	Definition of regulatory framework			
		Technology engineering (Public/private research centres and universities)			Supporting the technical requirements for the new framework	
		Business actors				Supporting the market
		Salinas owners	Providing a sustainable management plan proportionate to the production unit		Creating a national association for the quality valorisation of artisanal salt productions	

Weaknesses	Goal	Key Stakeholders/User Community for implementation	MedArtSal sustainability components			
			Governance	Environment	Socio-economic	Diversification
Undervalued product and low profitability	To promote the salinas as innovation ecosystem	Policy-makers (at local level)	Provide technical and financial support for diversification and innovative actions from local clusters		Incorporate salinas and their products in the promotional campaigns of artisanal products (local, regional, national ...levels)	
		National authorities			Incorporate salinas and their products in the promotional campaigns of national products	
		Technology engineering (Public/private research centres and universities)	Networking and sharing experience on sustainable solutions in term of technology, creation of new revenues, production technologies, other management solutions.		Networking and sharing experience on sustainable solutions in term of technology, creation of new revenues, production technologies, other management solutions.	Networking and sharing experience on sustainable solutions in term of technology, creation of new revenues, production technologies, other management solutions.
		Salinas owners	Create and participate to groups and network for knowledge transfer and access to funding opportunities. Explore cooperative entrepreneurship to reduce costs and develop joint sales and marketing strategies	To potentiate the environmental character of the salina and implement programme for sustainable eco-friendly tourism.	Add their products to the national and regional promotional campaigns	Invest in potentiate or create new products and services.

Weaknesses	Goal	Key Stakeholders/User Community for implementation	MedArtSal sustainability components			
			Governance	Environment	Socio-economic	Diversification
Marketing in very local markets, lack of internationalization.	To support international cooperation or internationalisation of the sector	Policy-makers (at local level)	Support local initiatives with an international attractiveness Support cluster creation for internationalisation			
		National authorities			Incorporate salinas and their products in the promotional campaigns of national products	
		Technology engineering (Public/private research centres and universities)				
		Business actors	Participating in cluster actions		Participate to international initiatives	Supporting new ideas and projects as well as the international market
		Salinas owners	Explore cooperative entrepreneurship to develop joint sales and marketing strategies, even internationalization		Participate to international initiatives	Creating new value chains with other sectors (tourism, gastronomic, wellness)

Appendix D: Spain - Proposed actions to increase the sustainability of salinas

Table D-1. Proposed actions to address the main **threats** affecting Spanish salinas, identified from the SWOT analysis, for the different components of the MedArtSal Model.

Threats	Goal	Key Stakeholders/User Community for implementation	MedArtSal sustainability components			
			Governance	Environment	Socio-economic	Diversification
<p>Lack of differentiation between artisanal salt and industrial salt</p> <p>There is no clear regulation of the organic salt standard (product)</p> <p>Lack of differentiation between artisanal salt and industrial</p>	Define a legal framework of certification for artisanal salt	Regional / EU policy-makers	<p>To boost recognizing of artisanal salt as an organic and artisanal product through strengthening alliances with other countries.</p> <p>Advocate for the recognition of salinas as natural and cultural habitats.</p>			
		National authorities	<p>To develop guideline for setting criteria on a definition of artisanal salt versus extensive salt production.</p> <p>Explore whether the “Consejo Regulador de Productos Ecológicos” (Regulatory Board for Organic Products) can certify artisanal salt as organic.</p>		Incorporate salinas and their products in the promotional campaigns of national products	
		Policy-makers (at local level)	<p>Provincial advisory group of stakeholders to work on this differentiation (at the level of ‘diputaciones’ - provincial councils-).</p> <p>Advocate for the salt to be recognised as an artisanal product.</p>		Incorporate salinas and their products in the promotional campaigns of artisanal products (local, regional, national ...levels)	
		Technology transference from science				

Threats	Goal	Key Stakeholders/User Community for implementation	MedArtSal sustainability components			
			Governance	Environment	Socio-economic	Diversification
<p>salt.</p> <p>There is no clear regulation of the organic salt standard (product)</p>		Salinas owners	Create and participate in local groups and advocacy		Add their products to the national and regional promotional campaigns	
<p>Insufficient or deficient administration and/or spatial planning regulations</p>	<p>Reduce and simplify administrative burdens and procedures</p>	Regional / EU policy-makers				
		Regional authorities	<p>Increase control of real activities in concessions</p> <p>Update the database with real active salinas</p> <p>Land use planning and regulation (eg.: <i>Plan de Ordenación del Territorio de Andalucía</i>, (POTA) - the Andalusian Spatial Planning Plan-)</p> <p>Single and simplified administrative process (one-stop administrative window)</p>			
		National authorities				
		Technology engineering (Public/private research centres and universities)				
		Salinas owners				

Threats	Goal	Key Stakeholders/Us er Community for implementation	MedArtSal sustainability components			
			Governance	Environment	Socio- economic	Diversification
Pressures due to urban developments or land use changes in favour of intensive agri/aquacultural developments	Spatial planning favourable to traditional salt activity and the preservation of artisanal salt pans	Regional / EU policy-makers				
		Policy-makers (at local and regional level)	Mainstreaming biodiversity and climate change into spatial planning. To favour environmentally sustainable activities	Identify key areas for environmental protection and restoration. Include salinas as a key element of green/blue infrastructure. Develop natural capital accountability for salinas. Promote ecological coastal corridors	Support dialogues for disseminating lessons and best practices on integrated planning.	Promote activities diversification in salinas to increase sustainability
		National authorities				Promote activities diversification in salinas to increase sustainability
		Technology engineering (Public/private research centres and universities)				
		Salinas owners		Develop natural capital accountability for salinas		Diversify products and activities to increase profitability
Lack of public financial and policy support for	Develop a sectoral plan for	Regional / EU policy-makers	Salinas recognition as a habitat in EU Habitat directive.			

Threats	Goal	Key Stakeholders/Us er Community for implementation	MedArtSal sustainability components			
			Governance	Environment	Socio- economic	Diversification
the implementati on, maintenance and viability of business projects, both economic and administrativ e facilities.			Promote Salinas as a World Intangible Cultural Heritage by UNESCO.			
		Policy-makers (at local and regional level)	Offer a professional training for salt workers to improve capacities and anticipate and match future skills (new technologies, efficiency energy, etc)		Promotional campaign for general public to increase awareness of Salinas products value.	Provide financial support for innovative products and activities (microalgae, macroalgae cosmetics, eco- tourism...)
		National authorities	1. Professionalization of salt production sector. Develop a new professional/vocation al qualification to be included in the National Catalogue of Professional Qualifications from the Ministry of Education. 2. Public financial programme/plan for salt workers and entrepreneurs (subsidies, etc)			
		Technology engineering (Public/private research centres and universities)			Promote transference from research to technological private sector for innovative solutions in salt production and promotion. Create a	
Lack of public financial and policy support for						

Threats	Goal	Key Stakeholders/Us er Community for implementation	MedArtSal sustainability components			
			Governance	Environment	Socio- economic	Diversification
the implementation, maintenance and viability of business projects, both economic and administrative facilities.					scientific cluster for sector innovation	
		Salinas owners	<p>Create a coalition of salinas owners to request grants for maintenance, new products development and professional trainings</p> <p>Explore cooperative entrepreneurship to reduce costs and develop joint sales and marketing strategies</p>		Facility the access to general public (opening hours, visits, etc.)	
Scarcity of local commercial links	Create and reinforce clusters	Regional / EU policy-makers				
		Policy-makers (at local level)	<p>Guidelines to strengthen links between primary artisanal salt producers and other food industry sectors (increase understanding of different parts of the supply chain)</p>		Information campaign to general public to increase local artisanal salt demand	

Threats	Goal	Key Stakeholders/Us er Community for implementation	MedArtSal sustainability components			
			Governance	Environment	Socio- economic	Diversification
Scarcity of local commercial links		National authorities			Information campaign to general public to increase local artisanal salt demand	
		Technology engineering (Public/private research centres and universities)				
		Salinas owners	Promote local cluster to enhance the visibility of salinas products, develop eco-tourism activities, organise fair trade market.			Support development e- commerce platform for artisanal products

Table D-2. Proposed actions to address the main **weaknesses** of Spanish salinas, identified from the SWOT analysis, for the different components of the MedArtSal Model.

Weaknesses	Goal	Key Stakeholders /User Community for implementation	MedArtSal sustainability components			
			Governance	Environment	Socio-economic	Diversification
Age of Salinas owners/ workers and difficulties for generational renewal	To revive, valorise and modernise the salt productions sector to increase the attractiveness as a job for young people	Policy-makers (at local level)			Incentives for young/women job position for salt makers	
		National authorities	Acknowledge the metier of salt makers: new niche of young employment		Campaign for the valorisation of a traditional profession (IES, universities) and modernise the sector.	
		Technology engineering (Public/private research centres and universities)	Participate in a working group to develop innovative approaches/ technologies			
		Salinas owners	Creation a working group (with salina owners, <i>Grupos de Desarrollo Rural</i> - Rural Development Groups-, universities, education authorities) to define a roadmap for the development of a curricular educational plan for training as salt maker			

Weaknesses	Goal	Key Stakeholders /User Community for implementation	MedArtSal sustainability components			
			Governance	Environment	Socio-economic	Diversification
Lack of coordination in the corresponding administrations , slowness and bureaucracy. Complicated governance, old regulations	To reduce the burden of administrative processes and to change the regulation of the sector from mining legislation to agricultural legislation.	Policy-makers (at local level)	Single and simplified administrative process (one-stop administrative window) Recognise local concession holders as potential beneficiary for grants			
		National authorities	Facilitate the transfer of the Administrative competences from the mine legislation to agriculture regulation. Reconogise local concession holders as potential beneficiary for grants			
		Technology engineering (Public/private research centres and universities)				
		Salinas owners	Advocate for salt-producing to be considered under the agricultural regulation			

Weaknesses	Goal	Key Stakeholders/ User Community for implementation	MedArtSal sustainability components			
			Governance	Environment	Socio-economic	Diversification
Lack of synergies between salinas and associations to create, for example, designations of origin, labels, etc.	To promote the creation of local network of salina owners for common label products and services as way to increase competitiveness	Policy-makers (at local level)	Provide technical and financial support for local salinas association and label creation			
		National authorities				
		Technology engineering (Public/private research centres and universities)				
		Salinas owners	Boost local associationism among salina owners			
The artisanal salt product is not complemented with other typical products of salinas, such as aquaculture, gastronomy, environmental education, etc. or have difficult conditions for tourism	To promote local clusters with complementary local entrepreneurs	Policy-makers (at local level)	Provide technical and financial support for diversification and innovative actions from local clusters			
		National authorities	Promote financial support specifically for salinas innovation			
		Technology engineering (Public/private research centres and universities)			Promote knowledge transfer from academy to salt owners. Know-how	

Weaknesses	Goal	Key Stakeholders/ User Community for implementation	MedArtSal sustainability components			
			Governance	Environment	Socio-economic	Diversification
					on innovative products: micro & macro algae	
		Salinas owners	Create a cluster to unify products labels (Eg: ecotourism package)	Create partnership with environmental organisations to develop joint projects for sustainability (biodiversity/blue carbon/circular economy)		Create partnership with Universities, NGOS and regional administrations to prepare joint proposals for funding
Little ability to generate marketing strategies optimized for the market.	To develop capacity building on marketing strategies	Policy-makers (at local level)	Promote financial support specifically for salinas innovation including marketing Digital and marketing training			
		National authorities	Promote financial support specifically for salinas innovation including marketing			

Weaknesses	Goal	Key Stakeholders/ User Community for implementation	MedArtSal sustainability components			
			Governance	Environment	Socio-economic	Diversification
		Technology engineering (Public/private research centres and universities)				
		Salinas owners	Participate in training courses (e.g.: natural capital/ecommerce, marketing, etc.) Develop joint strategies marketing (ecommerce, etc)			



Appendix E: Tunisia - Proposed actions to increase the sustainability of salinas

Table E-1. Proposed actions to address the main **threats** affecting Tunisian salinas, identified from the SWOT analysis, for the different components of the MedArtSal Model.

Threats	Key Stakeholders/User Community for implementation	MedArtSal sustainability components			
		Governance	Environment	Socio-economic	Governance
The online market is concentrating on large distribution companies	Regional / EU policy-makers				
	Policy-makers (at local level)				
	National authorities				
	Technology engineering				
	Salinas owners			<p>More visibility and support for a better positioning of artisanal salt mines and their products</p> <p>The use by artisanal salt works of online marketing to reach new markets</p>	<p>Product diversification to better access the international market and to better exploit the local and sectoral market</p>
Necessary differentiation between artisanal salt and industrial salt.	Regional / EU policy-makers	Updating legislation in force to protect SMEs			
	Policy-makers (at local level)	Updating legislation in force to			

Threats	Key Stakeholders/User Community for implementation	MedArtSal sustainability components			
		Governance	Environment	Socio-economic	Governance
		protect SMEs			
	National authorities				
	Technology engineering				
	Salinas owners			Better promote the artisanal product and make it known to customers	
Market price pressure threatens the competitiveness of local and organic products	Regional / EU policy-makers				
	Policy-makers (at local level)				
	National authorities	Invest in the sustainable development of artisanal salinas			
	Technology engineering				
	Salinas owners				
Large distribution requires a high volume of production	Regional / EU policy-makers				
	Policy-makers (at local level)				
	National authorities				
	Technology engineering				

Threats	Key Stakeholders/User Community for implementation	MedArtSal sustainability components			
		Governance	Environment	Socio-economic	Governance
	Salinas owners			Clustering and search for synergies between different artisanal salinas and between Tunisian and international salinas	
Consumer belief that ecological, bio, natural, etc. they're synonyms	Regional / EU policy-makers				
	Policy-makers (at local level)				
	National authorities				
	Technology engineering				
	Salinas owners				



Table E-2. Proposed actions to address the main **weaknesses** of Tunisian salinas, identified from the SWOT analysis, for the different components of the MedArtSal Model.

Weaknesses	Key Stakeholders/User Community for implementation	MedArtSal sustainability components			
		Governance	Environment	Socio-economic	Diversification
Undervalued product and low profitability	Regional / EU policy-makers				
	Policy-makers (at local level)				
	National authorities				
	Technology engineering				
	Salinas owners	Invest in scientific research to improve the quality of salt and increase the selling price accordingly.			
Lack of coordination in the corresponding administrations, slowness and bureaucracy	Regional / EU policy-makers				
	Policy-makers (at local level)				
	National authorities	Unify the sector into a union structure			
	Technology engineering				
	Salinas owners				
Weak technical information	Regional / EU policy-makers				
	Policy-makers (at local level)				
	National authorities				

Weaknesses	Key Stakeholders/User Community for implementation	MedArtSal sustainability components			
		Governance	Environment	Socio-economic	Diversification
	Technology engineering				
	Salinas owners			Strategic clustering and share of information and know-how among artisanal salinas Promoting transmission of technical knowledge from the old to the new generations	Establishment of partnerships with experienced foreign producers useful to improve the existing products and services and start producing new ones.
Important deficit of infrastructures that allow the development of tourism in the Salinas: signage, tourist information points, accesses, basic services, etc.	Regional / EU policy-makers				
	Policy-makers (at local level)				
	National authorities				
	Technology engineering				
	Salinas owners	Urge regions to work to value artisanal salt pans			
Investment in productive information and communication technologies is low	Regional / EU policy-makers				
	Policy-makers (at local level)				
	National authorities				
	Technology engineering				

Weaknesses	Key Stakeholders/User Community for implementation	MedArtSal sustainability components			
		Governance	Environment	Socio-economic	Diversification
High economic and technical cost of maintaining salt works structures	Salinas owners				
	Regional / EU policy-makers				
	Policy-makers (at local level)				
	National authorities	Encourage SMEs through adequate funding with payment facilities and provide the necessary support			
	Technology engineering				
	Salinas owners				The integration of new sustainable activities such as ecotourism or the development of fish resources that naturally enter the basins could be an asset for artisanal salinas



MedArtSal aims to promote the sustainable development of artisanal salinas, providing concrete support on economic, environmental and governance issues.

The MedArtSal project is funded by the European Union under the ENI CBC Med Programme and promoted in four Med regions (Spain, Italy, Tunisia and Lebanon). The project total budget is € 3.2 million and the EU contribution is € 2.9 million (90%).