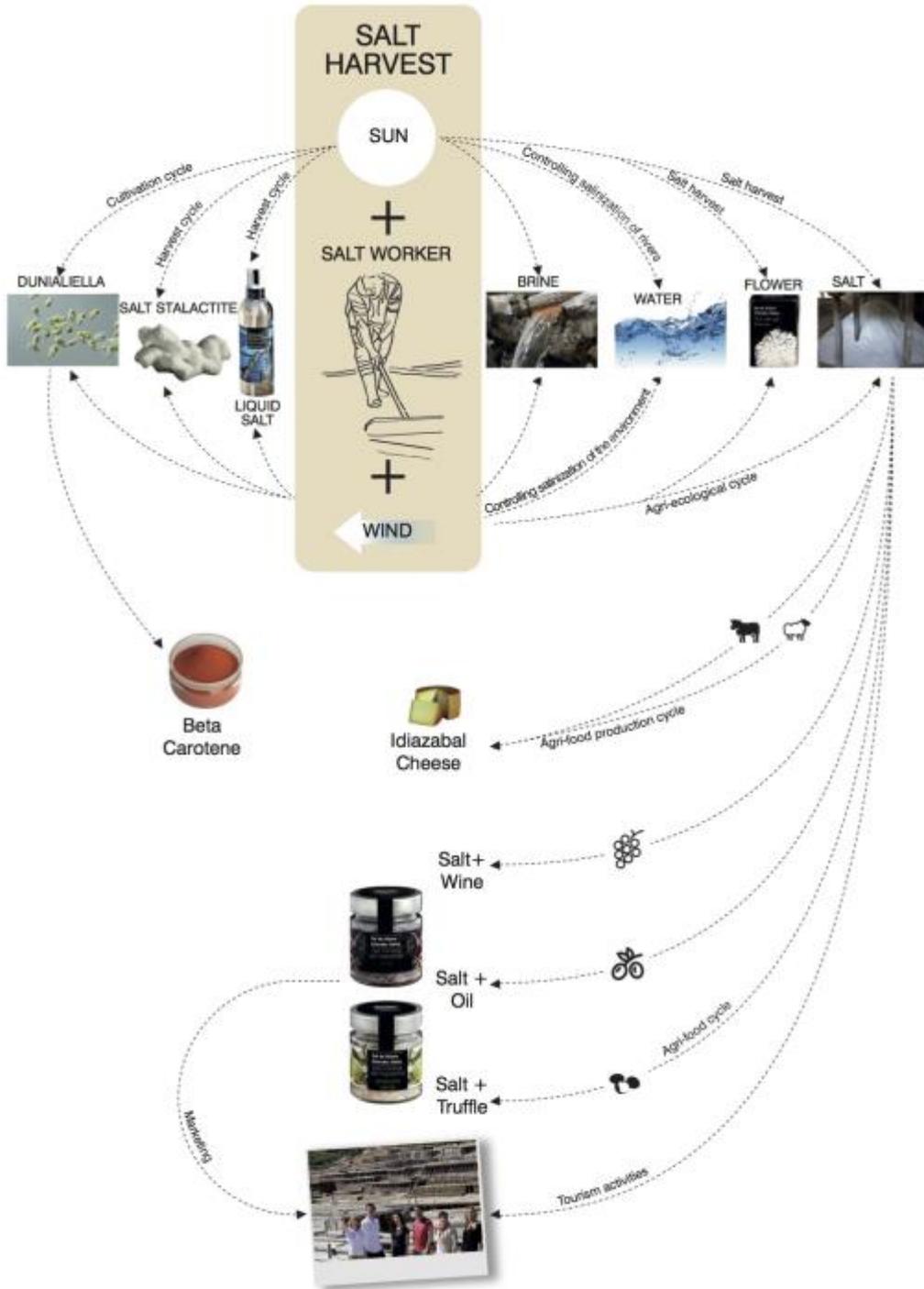


### III. Action Plan for the Valle Salado de Añana Agricultural System



### III. Action Plan for the Valle Salado de Añana Agricultural System

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### **III.1.- Introduction**

In general terms, the Action Plan that we present is based on a solid plan developed between 2000 and 2004 and updated in 2013, which has been implemented by a large multidisciplinary team that studied the Valle Salado from all its perspectives and proposed the way forward to achieve its implementation. The evolutionary nature of the project and the experience accumulated throughout this period have led to the obligation to develop new lines of work and introduce changes and improvements to those already outlined above.

In 2017, in order to present the Candidacy of the Valle Salado de Añana to the Global Important Agricultural Heritage System (GIAHS), the Action Plan is updated again, after carrying out a new analysis of the Threats and Challenges, as detailed in section III. 3. The updated Action Plan includes proposals based on policies, strategies and actions that are added to all the proposals implemented until 2017, with emphasis being placed on the Environmental Program, the Program for the Production of Artisanal Salt as the axis of the Agrifood Development and Promotion of the System and, finally, the Program for the Promotion and Dissemination of the Valle Salado.

In summary, the actions Programd and developed in the Agricultural System Valle Salado can be classified into two groups: between 2000 and 2017 and those from 2017 until 2021, specifically developed to present the Candidacy of the Valle Salado de Añana as Global Important Agricultural Heritage System (GIAHS).

### **III.2.- Programs and actions developed between 2000 and 2017**

Following a precise methodology, based on Documenting and Analysing and, thereafter, Proposing, we keep these objectives present:

- Recovering and preserving the material culture and the agricultural and environmental landscape values, to guarantee its sustainability.
- To produce with traditional techniques, in a sustainable way and respecting the millennial know-how of salt makers, a high-quality salt whose revenues are contributing to the self-financing of the project.
- To develop cultural and tourism initiatives, within the approach of a recovery open to citizens, that are being the driving force of social, economic and tourism development in the region.

The following Programs were developed:

#### **III.2.1.- Program for the creation of a Managing Body**

At the end of 2009, the Managing Body -a trust- was created under the name "Fundación Valle Salado de Añana", with the participation of trustees representing the salt makers (Gatzagak), the City Council of Salinas de Añana, the Basque Government and the Provincial Government of Álava, which has been leading the project since its inception.

#### **III.2.2.- Program for a Project Open to Society and Cultural Activities**

The project had to be open to society, for which it was necessary to prepare the site beforehand, developing infrastructures for visitors (since 2000) and a Visitor Program (since 2005), both with the idea of continuing over time.

### **III.2.3.- Environmental Program**

The fact that the Valley is a Ramsar Wetland, and that it has a mutually interdependent relationship with the Diapiro de Añana Protected Biotope and the Special Conservation Area of Lake Arreo-Caicedo de Yuso is both a conditioning factors and an added value. The valley acts as a reservoir of water for the aquifer, ensuring the quantity and quality of the water flows needed for the dilution of brine for the production of sal. It thereby regulates the flow and prevents the salinization of the land downriver. The Management Plan of the Dipairo de Añana Protected Biotope was developed between the years 2004 and 2017, providing a normative basis for the environmental protection of the Agricultural System Valle Salado of Añana.

### **III.2.4.- Historical-Archaeological Program**

Based on a series of activities for the Maintenance and the Recovey of the salt making facilities, which started in 2000 and has a permanent character.

### **III.2.5.- Program destined to Other uses**

Different activities have been developed, among which the art shows performed in the valley, which started in the year 2006 and will continue to do so in the future.

### **III.2.6.- Program of Health-related actions**

It encompasses all those activities that are being developed since 2005 at the saline spa, with maniluvium, pediluvium and flotarium, as well as beauty treatments and cosmetic products related to salt, under the generic name Therapeutic Visits and that will continue to be developed.

### **III.2.7.- Program of Cooperation with the World of Gastronomy**

Among the most noteworthy are the cooperation established with the Basque Culinary Center (from 2017 onwards), the cooperation agreements with the Hospitality Schools of the Basque Country (2017), the agreement with Slow Food Araba (2013) and the Gastronomical Visits (2013).

### **III.2.8.- Promotion and Dissemination Program**

Essential in this respect have been the cooperation with tourism and cultural stakeholders (since 2009), the development of International Work Camps (2009-2016), the participation in EU-funded Programs (SAL project 2004-2007 and ECOSAL ATLANTIS Project 2010-2012) as well as the participation in international salt-related venues (2nd International Conference on Salt).

### **III.2.9.- Salt production Program**

The maintenance of a good part of the salinas has been recovered, to produce salt. The idea is not to produce a salt of low quality and in a massive way, as it was done previously, but a diversity of high level products has been sought -made in an artisanal and sustainable way- that can compete in the market with the European salinas that occupy this market for sale. Since 2010 salt for sale is being produced again in a sustained way.

## Results obtained

All these actions have been developed from 2000 to 2017, and the fruits of these developments can be objectively proven:

- The Valle Salado of Añana receives 80,000 yearly visitors.
- It has earned a good number of awards, which consolidate it as one of the agricultural and environmental jewels of the Basque Country.
- It is an example of economically sustainable heritage recovery, as it has attained a 40% degree of financial self-sufficiency.
- Its economic activity is becoming an economic engine for the maintenance and settlement of dwellers in the Cuadrilla de Añana area, a fact supported by the following data:
  - Impact on the Production of 1.48.
  - Impact on Employment, with more than 50 employees.
  - Tax Return of 87%
  - Self-financing above 40%.



### **III.3.- Threats and challenges**

The System Valle Salado of Añana has always lived under the influence of negative situations and the effects of pressure that could negatively affect its stability and development. Fortunately the strong resilient character of its people has allowed to accept and overcome them. At present, it is undeniable that there are negative situations, external to the project of the Agricultural System Valle Salado of Añana, which may threaten it, so that, where appropriate, it will be necessary to design an adequate strategy to circumvent them. These are the threats that are most clearly perceived at this moment:

#### **III.3.1.- Threats**

##### **III.3.1.1. - Competition with other salinas**

The production of salt is the element that ensures the sustainability of the entire Valle Salado System; without this production, all the additional elements that enable the harmonious development of the whole would collapse. However, producing salt but failing to find a sensible outlet for the stocks generated would be senseless; the salt produced by the Valle Salado System must find its place in the local, domestic, and international markets, where it faces fierce competition.

In the middle of the last century, coastal satworks and salt mines quickly took over the markets by using railroads and taking advantage of their low production costs. This situation has remained unchanged since then, and it would be impossible to compete in the agri-food markets (preserves, bakeries, and dairy products, mainly). Nor with the table salt market that is not linked to quality considerations, where price is more important than quality and where the importance of traditional and sustainable production systems goes unnoticed.

As an alternative those, Añana Salt has found a niche in gourmet markets; however, the competition in these is also very strong. Consequently, we must compete against excellent salt products, such as: pyramid salt from Cyprus, Himalayan Pink Salt, Kala Namak black salt, Murray River salt, smoked salt from Sierra Nevada, red salt from Hawaii, Namibian pearl salt, Persian blue salt, Maldom salt or Guérande salt; all serious competitors of Añana Salt that are offering quality products and have very powerful marketing policies.

##### **III.3.1.2. - The decline of agriculture and stockbreeding in the area**

The limited capacity of the primary sector to develop alternative services and products in the district, has resulted in the salt system losing a travelling companion that, for many years, generated synergies that resulted in a balanced and sustainable production model based on salt-agriculture-stockbreeding.

The predominant agricultural model in the region is based on traditional extensive farming. It is a fact that the number of farms has declined but not the surface of cultivated land, as the established farmers rent or buy the lands available. In the Agrarian Census of 1989, 673 agricultural holdings were registered, summing a SAU (Useful Agricultural Surface, in its Spanish acronym) of 23,704 ha and 408 stockbreeding holdings, counting 4,695 UGM (Larger Cattle Units, in its Spanish acronym). In 2016, 396 agrarian holdings were reported, with a SAU of 23,821 ha and 196 stockbreeding with a herd of 4,282 UGMs.



In this respect, we indicate that the average age of the heads of agricultural holdings has increased from 51.3 years in 1999 to 53.9 years to 2009, which indicated a lack of generational replacement and dynamism in the agrarian sector.

Their production system is based on volume, not on adding value to their products. In fact, there is no star product in the district, other than Añana salt. The strictly agricultural and stockbreeding production of Añana is not identified in the markets by its provenance, nor can it be consumed/distinguished locally by consumers or restaurants.

There is no food processing industry, or relevant vegetable and fruit production. There have been some minor, recent initiatives based on organic farming, and a local market every first Sunday of the month in Villanueva has become a highly appreciated venue where several farmers sell their produce directly.

Agriculture and stockbreeding in the area has always been a sector for salt workers who did not own salt pans or do not currently work for the Fundación Valle Salado de Añana in winter. The decline of these primary sector activities can result in the loss of the economically active population and have a negative effect on the salt production.

The Valle Salado area needs a carefully groomed environment to prevent the salt being polluted during the production process by leaves, pollen, etc. Stockbreeding and agriculture contribute to this care and their disappearance could become a threat.

### **III.3.1.3. – Depopulation and ageing of the local community**

The Valle Salado de Añana System is located in the municipality of Añana, which belongs to the administrative unit of the “Cuadrilla de Añana”, in the province of Álava, in the Autonomous Community of the Basque Country in Spain.

According to official data of the municipal register of inhabitants (INE, 2013), there is a total of 8,822 inhabitants in the Cuadrilla de Añana, of whom 1,514 are over 65 years of age. This figure represents 17.2% of the total population, i.e. almost 2 out of every 10 citizens in the “Cuadrilla” are elderly.

Of this figure of elderly people, 499 are octogenarians, which accounts for 6% of the total population of the Cuadrilla and 33% of the elderly population.

Women are the dominant gender among the population of octogenarians, almost doubling the number of men in the same age group. When compared with the information on the province of Álava, the Basque Country, Spain, and Europe, we find that the rate of elderly people in the Cuadrilla is a few percentage points below the rate for Álava (19%), 4 percentage points below the data of the Basque Country, and very close to the figures for the State (18%) and the European average (16%).

When studying the data at municipality level, we can find significant differences. Among the municipalities that make up the Cuadrilla de Añana, for example, Salinas de Añana has a total of 165 people, and Iruña de Oca, had a total population in 2014 of 3,108. These differences in the figures represent enormous differences in the population structures in the various municipalities.

The current data regarding the percentages of children, the elderly, and extremely elderly people represent the demographic profile of the municipalities. Those that contain a higher percentage of elderly population are: Salinas de Añana (29.7%) and Valdegovía (28.7%), where they account for almost one-third of the total population; Berantevilla (24.5%) and Kuartango (24.4%) where 1 out of every 4 people are elderly; or Lantarón (21.9%) and Zambrana (20.4%), municipalities where more than 20% of the population are elderly. The municipalities with younger populations are Iruña de Oca (11.0%), where only one person out of 10 is elderly, and Armiñón, with a rate of 15.6%. Therefore, although the overall figures for the Cuadrilla may seem to present a group of municipalities with a low overall rate of elderly people (17%) compared to provincial or regional rates, the truth is that, at municipal level, these rates are quite high.

According to the data provided by Eustat (the Basque Institute of Statistics), the variation of the population over the last decade has been different in each of the municipalities. Armiñón is, for example, the municipality that has seen the highest increase in population in relative terms, 54.32% in 2014. It is followed by Iruña de Oca with an increase of 48.49%, and Ribera Alta with an increase of 29.48%. In contrast, we have Salinas de Añana, which has experienced a 10.81% population decline; Kuartango, where the population has decreased by 2.2%, and Valdegovía or Lantarón where the population has declined slightly, a case where it could be argued that it has remained the same over the last 10 years.

Consequently, the Valle Salado System is located in a demographic area that is clearly losing population and that presents an ageing population pyramid.

#### III.3.1.4. – Global Change

It is clear that we live in a complex, multi-faceted world where any strategic project (the Valle Salado project) facing the future and ensuring sustainability must necessarily consider a number of uncertainties. Among these, and without wishing to underestimate those arising from specific issues (social and economic developments in the area), those related to Global Change are particularly relevant. This concept refers to all transformations that have a significant impact on the dynamics of a territory, either affecting biophysical components (water and biodiversity, among others), altering the behaviour of the ecosystems and/or generating effects on social-economic systems at various levels. As a result, the prediction of future scenarios, which must be necessarily flexible, requires a certain knowledge of the uncertainties to take them into account in the overall management process.

However, the uncertainties not only relate to future scenarios, they may also refer to the current scenario, if the knowledge of key elements in the functioning of the relevant system presents significant gaps.

In the Valle Salado System, the entire project revolves around salt, as a resource, and the culture of its production, with a socio-economic and local-regional development approach. However, speaking about Salt implies speaking about the Water that supplies this resource to the salt pans of the system. To date, and since far back in time, the settlers used the salt water that flowed from the surface to extract salt, using various methods that are now part of that culture we wish to recover/preserve.

Here lies the first uncertainty, the diagnosis: we are not sufficiently familiar with the underground water flow scheme (water and salt), far less with its temporal dynamics, which determine the contribution of the resource to the Valley. There

are many questions (let's not forget that asking the relevant questions is essential to establishing the scope of the answers): From where and how does the salt reach the springs? Is there any hydrochemical variability in the water over time? How does rain affect the flow of salt water? And the use of the land in the surrounding area? What is the area of influence of the saline flows? What could the expected impact of Climate Change be? Would the provision of salt to the springs be guaranteed? Can we expect the quality of the dissolved salt to change?

Global Change has not been confirmed as a threat, but prudence dictates it should be considered... and studied as such.

### **III.3.1.5. – Natural disasters**

The Action Plan included geological studies that examined potential geological hazards such as flooding, landslides, erosion... A plan was also designed to include prediction and prevention measures for those hazards. In general, we analysed the potential external and internal hazards. The first group refers to geological processes outside Valle Salado but that may affect its existence and the second refers to those that can be generated within the site.

We have studied the activities and uses which would alter the geotic environment and, consequently, affect the salt. Among them, special attention has been paid to the protective perimeter of the springs that supply brine to the productive infrastructure.

The type of natural disaster that poses the greatest risk to Valle Salado is flooding. There are historical records of floods that caused significant damage. Currently, the state of the structures and the accumulation of debris at certain points in the course of the Muera river, increase the risk that a flood would result in significant damage. Work is under way to clean the river bed of these materials. This action will limit any damage in the event of future flooding.

The last big flood that hit Valle Salado and placed its future at risk took place in 1787, when the flood destroyed the platform of the main springs. To avoid new threats, the king's architects built a large stone dam that served to protect and centralise the brine in a single spring. They then channelled the river by lining the course with stone and wood to reduce the effects of future floods.

With regard to potential geological hazards associated with landslides, human action within the salinas has not involved major cuts in the hillside that may have destabilised the area. The only environment that has suffered from such treatment is the former clay quarry, where clay was obtained to waterproof the production salt-pans, located on the southern slope of the valley in the area known as "lesares". This quarry was mainly used in the nineteenth century and was subsequently abandoned. There have been minor landslides in this area, but they did not affect the salt production structures. The vegetation that has grown on the site has helped to stabilise the ground. Regarding the rest of the Cultural System, and based on the historical records, there have been no significant landslides. Therefore, it can be assumed that the area does not need special protection measures for this type of geological hazard.

Seismicity, which usually occurs at around diapirs, is normal, in line with the levels usually found in such enclaves. Based on historical records, according to which there has been no seismic activity that has generated significant damage, and according to the National Geographic Institute, Salinas de Añana is located

in a low-risk area. Therefore, regarding this kind of geological hazard, Valle Salado does not require any special type of protection.

### **III.3.2.- Challenges**

Since the inception of the trust, we have been aware that our tasks could not focus solely on the Agricultural System of Valle Salado de Añana and its salinas, but that it had to go beyond and set the stage for a multi-functional future. After more than a decade of work, we have already shown that compliance with the roadmap established at the beginning of the Plan has transformed Valle Salado into a key element of the economic and social revitalization of the area.

The three main lines of work followed by the trust, which are fully interconnected and that ultimately seek to continue the process of sustainability of the Valle Salado Agricultural System and recover the optimum level it once enjoyed, in general, in past centuries, are:

**III.3.2.1. - Maintaining the Agricultural System**

**III.3.2.2. - Building a sustainable salt production activity with a view to producing different types of high-quality salt and selling them to generate enough revenue so that the project can fund itself in the future**

**III.3.2.3.- Developing a range of cultural activities to keep the Valle Salado alive and contribute to the social and economic regeneration of the district**

### **III.3.3.- The strategy**

The Valle Salado is threatened by strong competition from the salt markets exerted by industrial coastal saltworks and salt mines, due to the undeniable decline of its traditional supporting activities, such as agriculture and stockbreeding in its immediate area of influence; the consequences of population loss and ageing in the area; the undeniable consequences of global change, among which climate change is of outstanding importance, and the possible emergence of natural disasters. The strategy that inspires this Action Plan is to eliminate the threats and, if not possible, to minimize them; and, as a last resort, to adapt to the consequences they bear, or, at the least to be prepared upon their emergence.

### **III.4.- Action Plan 2017- 2021**

Between the years 2000 and 2017, a fair number of activities have been developed, which have been described above. These activities have had good results, but we have seen there are some threats to avoid and challenges to overcome, which we have considered in our Action Plan for 2017 -2021.

#### **III.4.1.- Innovations in traditional salt production**

As mentioned above, we live in a time when the competition in all salt market segments is fierce, and the salt production system used at the Valle Salado System must adapt to what the markets demand.

Based on the studies conducted by the Fundación Valle Salado, which included the assistance of experts on agri-food marketing, two key aspects were identified that required innovations regarding the traditional production of salt:

#### **III.4.1.1.- Achieving the production of ground artisanal salt from Añana**

To date, the production of salt at the Valle Salado de Añana System has focused mainly on the production of Salt Flower (fleur de sel), Mineral Salt, and Liquid Salt.

The gastronomic features of these three products are not in line with the type of salt that is most widely demanded: table salt.

While it is not possible to produce this type of salt directly on the salt pans in the Valle Salado System, a simple grinding process will produce Table Salt from Mineral Salt without any organoleptic alteration in the new product and, even more importantly, without affecting the sustainability that the production technique used ensures.

#### **III.4.1.2.- Improving the efficiency in the production of flower of salt**

The production of salt at the Valle Salado System is quite modest. It is adjusted to the amount that can be sold on the markets, guided by the philosophy behind the project: sustainability and tradition. To mention a number, we could be speaking of an annual production of 15 tonnes of Salt Flower (Fleur de Sel) and 150 tonnes of Mineral Salt.

The sale of the Salt Flower harvest falls short in the current market conditions: there is potential to sell quite a bit more Salt Flower than is currently produced.

For this reason, we are experimenting with traditional and sustainable production methods, which reduce the amount of Mineral Salt produced and maximise the amount of Salt Flower. The 2017 harvest will be indicative in this respect.

#### **III.4.2.- Promoting local agro-biodiversity values**

The 2016 Rural Development Plan for the Cuadrilla de Añana envisages a number of issues: a diversified agri-food sector with added value for the entire Cuadrilla de Añana, the consolidation of heritage and nature tourism so that it can become the driving force behind other sustainable economic activities, the coordination and collaboration between the local administrations and private stakeholders to provide high-quality provincial services, while respecting the environment and strengthening the identity of the district.

The Valle Salado System is aware of its potential as a driving force thanks to Añana Salt and, therefore, it is committed to collaborating with farmers and livestock breeders to develop an added value to a diversified primary and agri-food sector. With this idea in mind, it is planning the following actions aimed at products that can use salt in their production processes and those that can be mixed directly with our salt to create new products.

#### **III.4.2.1.- Developing Añana salt blends with local flavors**

In order to promote the development of local crops, the Valle Salado System plans to develop two ranges of Añana Salt (involving Salt Flower and Mineral Salt) that incorporate two elements ascribed to the philosophy of sustainability that the Fundación Valle Salado is promoting.

#### **III.4.2.1.1.- Añana truffle**

We take advantage of the existence of a Program to promote the growing of fruit in the Cuadrilla de Añana, since the black winter truffle (*Tuber melanosporum* Vitt) grows naturally along with holm oaks and other types of oak trees in various parts of the district. The black winter truffle is a top-quality truffle that is very popular thanks to its importance in gastronomy and is known as the “cuisine diamond”. There are two reserves for this species in the Cuadrilla de Añana. Rivavellosa, which is a few kilometers from the Valle Salado System, is the key municipality regarding the growing and harvesting of these wild varieties.

A good way of generating synergies would be the preparation of Añana Salt with Black Truffles from Añana, products that, in addition to being local and sustainable, would provide added value through the pairing of the black diamond and the white gold of Añana.

The Valle Salado System Project is planning to start the necessary tests to achieve the perfect pairing of salt and truffles. There is a 5-year Program in place to design the product from a technical point of view and to reach agreements with local truffle growers and harvesters to market this new product range.

#### **III.4.2.1.2.- Añana fine herbs**

The Cuadrilla de Añana, thanks to the characteristics of the land and soil, is suitable for growing herbs, such as dill, tarragon, star anise, and others.

As in the case of the black truffle, the Action Plan envisages the development of a new product range that will combine Añana salt and herbs, in a process in which Añana salt would add value to a latent and undeveloped line of products, such as the fine herbs found in the Cuadrilla de Añana, by, as in the previous case, designing the product and reaching agreements with the local producers / harvesters of fine herbs, to bring to the market a new sustainable and completely local product range.

#### **III.4.2.1.3.- Commitment to the Basque KALITATEA quality labels**

The Action Plan provides for the gradual replacement of three pairings that have been produced to date using products that were not covered by the Eusko Label denomination, a mark, whose symbol is a “K”, and that serves to identify and distinguish products produced, processed and/ or made in the Autonomous Community of the Basque Country whose quality or uniqueness exceed the general average. The three pairings that we intend to achieve throughout the development of the Action Plan are: Añana Salt and Arróniz Olives, Salt with Eusko Label tomato, and Salt with Gernika peppers and Ibarra chili peppers.

### **III.4.3.- Promoting cooperation with the local transformation industry**

#### **III.4.3.1.- Project of the development of a agrifood cluster in Añana**

A shy awakening of agricultural and livestock farmers is taking place in the Cuadrilla de Añana. They are starting to produce local products that need to be

processed but the processing facilities are not easy to provide in the area where they are produced.

The purpose of this project would be to develop an Agri-Food Processing Zone on a small estate that exists in the municipality of Tuesta, where it would be possible to take advantage of the synergies generated by an association of small-scale producers.

The idea would be to group all the primary sector stakeholders that want to participate, at the estate mentioned above, around what would be the facilities of the Fundación Valle Salado, to process the handling, packaging, and subsequent storage and shipping activities based on the following roadmap:

The first part of the process, which is already underway in 2017, consists in studying all the socio-economic stakeholders that might be interested in taking advantage of the synergies generated by the activities of the Fundación Valle Salado, and proposing a cooperation strategy that would involve all of them.

Based on a participatory arrangement, we are contacting all the producers, artisans, and traders of local products with a view to receiving and sorting their views and proposals regarding the possibility of establishing their businesses at the above mentioned estate. This would create the necessary conditions to generate the synergies required to ensure that the above-mentioned stakeholders could develop an economic strategy that this study would advance.

Based on the conclusions of this phase, we would identify the specific needs, in order to develop a project to build the necessary facilities and, based on the availability of funds, to proceed with the construction work.

#### **III.4.3.2.- Provision of salt to the cheese makers of Artzai-Gazta**

The Artzai Gazta Association (cheese from the indigenous “latxa” sheep) is a non-profit association that brings together shepherds in the area of influence of the Idiazábal Designation of Origin. It was created in the 1980s to improve the quality of the sheep cheese and enhance its identity. It currently brings together 116 members from the three provinces of the Basque Country: Álava, Gipuzkoa and Bizkaia.

The work method of Artzai Gazta differs from the rest and one of the most important steps in the cheese-making process consists in salting the cheese in brine, which takes place for 14 to 16 hours at 12°C. It can be wet or dry, and the maximum duration is forty-eight hours when immersed in the brine; in the case of cheeses up to two kilogrammes, only sodium chloride is used.

The proposed cooperation between the Fundación Valle Salado and the Artzai Gazta Association is aimed at producing a high-quality product by introducing the innovation that consists in the absolute respect for the “0 km” proximity food production concept and using an order management system based on ICT. Thus, this type of traditional cheese will cease to use general marine salt produced by industrial techniques, and far away from the areas where the cheese is made.

### III.4.4.- Promoting agricultural innovation and development

#### III.4.4.1.- Dunaliella salina Project

The project proposes setting up crops of Dunaliella in two consecutive phases:

Phase 1: The medium-term objective is to develop a small local farm in the salinas, supported by an extensive farming technique that will only exploit the resources listed above, causing zero environmental impact to the saline ecosystem.

Phase 2: The scope of the long-term objective is to establish of a crop based on intensive farming techniques, to be established outside the boundaries of the salinas. In addition to the resources listed above, it will require a power supply to stir the crops, the supply of nutrients, and the harvesting and processing of the biomass produced.

As a result of the Project, the following products will be available for marketing: Dehydrated Dunaliella algae (10% Carotene) as an animal feed supplement and Beta-caretene extract as a food additive and in wellness products, as well as a dehydrated flour as a secondary product resulting from the extraction of beta-carotene, to be used as animal feed supplement, due to its protein vale.

#### III.4.4.2.- Project Seasoning with other products: cider, wine and txakolí

When making wine and cider from grapes and apples, respectively, a large number of by-products are generated that are not sufficiently valued today.

The objective of the project is to develop new native seasoning products based on combinations of Añana salt and the by-products from Basque wine and cider makers that have an outstanding phenolic and fibre profile. Such a combination would combine a series of essential features for their commercial success and to meet the current demand of consumers.

The idea would be, therefore, to develop new 0 km products based on local raw materials that are deeply rooted in the tradition and culture of our territory (spring salt, by-products from apples and grapes from the cider and wine industries), that would have an impact on our gastronomy and gastronomic tourism while maintaining their Basque identity, based on the use of a technology developed in the Autonomous Community of the Basque Country that will have an impact on employment and on boosting the regional economy.

The participants in this project would be Ekonek (which would provide the agri-food by-product drying technology); the txakoli winery Itsamendi and the Rioja Alavesa winery Baigorri, which would provide the grape lees; the Petritegi cider cellar, which would provide the lees from preparing cider; the Fundación Valle Salado, which would provide various types of salt (Mineral Salt and Salt Flower); and Tecnalía Research & Innovation, which would be the main research entity that would coordinate the entire project.

The project would be developed in five phases throughout 2017 and 2018.

The funding will be obtained from the 2017 HAZITEK Aid account for Projects in support of R&D; it would be based on a Win-Win Business Strategy to achieve a result based on new products validated for commercial use, based on local products and guided by the 0 Km idea.

### **III.4.5.- Underlining the Environmental Aspects of the Valle Salado**

#### **III.4.5.1.- Environmental Itinerary**

The project for the new interpretative itinerary on the geological and environmental values of Valle Salado is the result of the need to create a new route through the valley that displays the site's ecological aspects and features and pays special attention to the agrobiodiversity of the salinas. We must not forget all the cultural, historical, archaeological... elements that are essential to understand the rich and varied environment of the salinas.

Nature and culture are inextricably linked, resulting in a characteristic and unique habitat. There is now an interpretive tour that mainly focuses on the history, activities and production of salt, which includes certain points that refer to the environmental features. However, the correct understanding of the valley requires a new route that focuses on the ecological values and on diversity, on specific ecological and biological aspects, as well as explaining how this biodiversity is involved in the salt production process. All this would be combined with cultural information.

The new route would include the key points and adapt to group tours, ensuring the safety of the visitors and including basic visits and milestones (river course, wells...) needed to interpret and understand the biodiversity found in the valley.

The project has been approved and will be executed in three phases during the years 2017, 2018 and 2019.

#### **III.4.5.2.- Botanical enclave at the Santa Engracia spring**

This unique addition to the Valle Salado will be located on the Santa Engracia plot, next to the source of the saline Muera river and with a surface area of 1,800 square meters. It is precisely at the spring where a boundary is created between the saline and the non-saline zones, which, with recovery and regeneration work, will allow to count again on typical riparian vegetation. All this is accompanied with specific halophilic or saline species, such as *Frankenia pulverulenta*, *Juncus acutus*, *Hordeum maritimum* or *Puccinellia fasciculata*, among others.

In addition, the botanical enclave and the vegetation regeneration work will contribute to botanical study and research, given their uniqueness.

The project will be fully implemented in 2017.

#### **III.4.5.3.- Biosphere Certification**

One of today's most important challenges, and a responsibility of all the actors involved in tourism, is the design of sustainable tourism models that allow to develop "products" and "sustainable destinations".

In relation to this vision, the ITR (Institute of Responsible Tourism) has created the System of Responsible Tourism (STR). This system develops a series of certifications to ensure compliance with certain requirements regarding the principles of sustainability and continuous improvement in line with these principles.

The Responsible Tourism System is developed through a system of standards such as a private, voluntary and independent certification system.

Biosphere certification is based on standards based on the 17 UN Sustainable Development Goals (SDGs) integrated in Agenda 2030, following the guidelines and recommendations of the World Charter for Sustainable Tourism +20 proclaimed at the Second World Summit on Sustainable Tourism, an event sponsored by COP21, UNESCO, UNWTO and UNEP.

We plan to achieve this certification between 2017 and 2018, for which we have already begun the preparatory work.

### **III.4.6.- Commitment to an Inclusive Society**

#### **III.4.6.1.- Visitors with functional diversity and virtual reality**

The Valle Salado de Añana intends to be a salt-based agricultural and cultural system that is accessible to all people, regardless of any functional diversity they may have.

Bearing this in mind, we have adapted tours that make it possible for people with functional diversity to take a specially designed itinerary that offers a complete experience: understand the agricultural process of salt, understand why and how salt is produced, appreciate its unique biodiversity, and enjoy the therapeutic benefits of saltwater at the Salt Spa.

From the year 2017, we are improving the degree of accessibility to Valle Salado de Añana by incorporating a model that represents a salt farm for visitors with impaired vision and a video for people with hearing difficulties. The video will provide a complete virtual tour that will also complement the range of tours during the low season.

### **III.4.7.- Cooperation the the University and the academic world**

Inspired by the vision of the Valle Salado System as a giant outdoor laboratory, this section of the Action Plan aims to establish the basis for collaboration with the University and the better established scientific organizations.

The collaborative scope in which the above is produced is important, which not only includes the Fundación Valle Salado but also important stakeholders such as the University of the Basque Country - Euskal Herriko Unibertsitatea, NEIKER - Basque Institute of Agricultural Research and Development and URA - Basque Water Agency.

#### **III.4.7.1.- Spatio-temporal monitoring of the environmental features of the Valle Salado System**

As mentioned previously, in the case of the Valle Salado System, the entire project revolves around salt, as a resource, and the culture of its production, with a socio-economic and local-regional development approach. However, speaking about Salt implies speaking about the Water that supplies this resource to the valley's saltpans. To date, and since far back in time, the settlers used the salt water that flowed from the surface at several points in the valley to extract salt, using various methods that are now part of that culture we wish to recover/preserve.



ere lies the first uncertainty, the diagnosis: we are not sufficiently familiar with the groundwater flow scheme (water and salt), far less with its temporal dynamics, which determine the contribution of the resource to the valley. There are many questions (let's not forget that asking the relevant questions is essential to establishing the scope of the answers): From where and how does the salt reach the springs? Is there any hydrochemical variability in the water over time? How does rain affect the flow of salt water? And the use of the land in the surrounding area? What is the area of influence of the saline flows? What could the expected impact of Climate Change be? Would the provision of salt to the springs be guaranteed? Can we expect the quality of the dissolved salt to change?

It has not been confirmed that Global Change is a threat. However, it would be prudent to take it into account...and study it as such, and in that regard, we intend to carry out a series of activities that will begin in 2017.

The activities planned for 2017 are intended to update the geological knowledge of the hydrological environment of the Valle Salado based on implementing and operating a hydrological and hydrochemical monitoring network (springs, piezometers, streams).

The information thus gathered will provide a better understanding of the subsurface flows and how they affect the emergence of the salt springs. At the same time, they will provide criteria to be taken into account for the future management of the resource.

Based on prior information available in the studies conducted by the Fundación Valle Salado, there are several springs in the valley that emerge under different conditions (altitude, flow) and with different saline levels, including those from which salt water has been collected for many years. Despite this, the available data (flow, quality) are very limited and, in many cases, old. There has not been a commitment to monitor the spatial- temporal aspects (monitoring) of the hydro-geological-hydro-chemical variables, which would have allowed the appropriate conceptualisation of the water and salt flow schemes.

In order to achieve the proposed goals, the following lines of action are established, to be developed in 2017 and 2018: implementations of a control network, data collection, physical-chemical analysis of salt and water. All of which within the framework of the cooperation agreement between the Fundación Valle Salado and the University of the Basque Country. The plan is to renew this agreement, so as to deepen this line of cooperation.

#### **III.4.8.- Promotion and Dissemination of the Valle Salado**

Program in which two activities exist, to be developed in 2017 and 2018: The presentation of the candidacy to GIAHS in July and the preparation of Salinas de Añana as a venue of the 3rd International Conference on Salt to be held in 2018.

## Overview of the Action Plan between 2017 and 2021

PROGRAM	ACTIVITY	Period of activity	Years of activity				
			2017	2018	2019	2020	2021
III.4.1.- Innovation in the production of salt	III.4.1.1.- Achieve the ground artisanal Añana salt	2017 - 2021	●	●	●	●	●
	III.4.1.2.- Improve the efficiency in the production of Salt Flower	2017 - 2021	●	●	●	●	●
III.4.2.- Strengthening the values of local agrobiodiversity	III.4.2.1.- Developing Añana salt blends with local flavors	2017 - 2021	●	●	●	●	●
III.4.3.- Promoting the cooperation of the local transformation industry.	III.4.3.1.- Development of a agrifood cluster in Añana	2017 - 2021	●	●	●	●	●
	III.4.3.2.- Provision of salt to the cheese makers of Artzai-Gazta	2017 - 2021	●	●	●	●	●
III.4.4.- Promoting agrarian innovation and development.	III.4.4.1.- Dunaliella salina Project	2017 - 2021	●	●	●	●	●
	III.4.4.2.- Project Seasoning with other products: cider, wine and txakolí	2017 - 2021	●	●	●	●	●
III.4.5.- Underlining the environmental values of the Valle Salado	III.4.5.1.- Environmental Itinerary	2017 - 2021	●	●	●	●	●
	III.4.5.2.- Botanical enclave	2017 - 2018	●	●			
	III.4.5.3.- Biosphere certification	2017 - 2018	●	●			
III.4.6.- Commitment to an inclusive society	III.4.6.1.- Visitors with functional diversity and virtual reality	2017 - 2021	●	●	●	●	●
III.4.7.- Cooperation with the university and the academic world.	III.4.7.1.- Spatio-temporal monitoring of the environmental features of the Valle Salado Sys	2017 - 2021	●	●	●	●	●
III.4.8.- Promotion and dissemination of the Valle Salado	III.4.8.1.- SIPAM - GIAHS	2017 - 2018	●	●			
	III.4.8.2.- 3rd International Conferenc on Salt	2018		●	●		

### III.5.- Contribution of the GIAHS Valle Salado System

The acknowledgement of the Valle Salado System as a GIAHS would have positive effects on several aspects.

The implementation of the Action Plan we have presented would result in the possibility of overcoming the challenges we have set out and it would cancel or mitigate the threats that we have identified.

All this would contribute to recovering the lost sustainability that the Valle Salado System once knew and that we are struggling to recover.

The contributions would be distributed at various levels

Recognising the Valle Salado System as a GIAHS would have an undeniable first effect on the community of salt workers and all aspects that make up their socio-economic base by strengthening their sense of identity and pride of belonging to a group that has managed to preserve this legacy.

Secondly, we must bear in mind that the safest way to ensure these people remain committed to preserving and improving the Valle Salado System will be by ensuring improvements in their daily living standards, in the coverage of the basic needs and expectations of the local community; i.e. meeting one of the goals set out by the Fundación Valle Salado, and ensuring that the Valle Salado System becomes a driving force in the economic, social and tourist development of the region.

There is no doubt that the recognition would bring about these improvements and would ensure a greater involvement, if possible, of the community; achieving that long-awaited cohesion of the local community.

We can be sure that the Province of Álava, and the Autonomous Community of the Basque Country, would share in the above-mentioned pride and in the improvements in the daily living standards of the local community.

In a situation in which there is no GIAHS recognition in Europe, the granting of this recognition would be a boost to the cultural, environmental, agricultural, and rural development policies being promoted by the EU, the Spanish State, and Local Governments, demonstrating that it is possible to combine territories that respond to socio-economic systems based on industrial and service economies with sites that have managed to preserve their ancestral culture and know-how, going through tough times and surviving.

The Valle Salado de Añana experience would be easy to replicate at existing inland salinas in other parts of Spain (Salinas de Peralta de la Sal, Salinas de Calasanz, Salinas of La Rolda, Salinas de Léniz, etc...) and in other countries, such as Argentina, Peru, Chile, and Bolivia.

Replicating the Valle Salado de Añana System would be very interesting, the experience accumulated over more than 15 years could be placed at the service of other countries that could benefit from it and even opt to be recognised as GIAHS systems, giving rise to a new Agricultural System among Globally Important Agricultural Heritage Systems: salinas.

### III.6.- Marco económico y políticas estratégicas aplicadas

The board of trustees of the Fundación Valle Salado de Añana currently consists of four trustees: The Provincial Council of Alava, the Basque Government, the City Council of Salinas de Añana and the salt workers' association, Gatzagak.

The Provincial Council of Alava is the institution that has driven the project since its inception and had taken on much of the economic effort and responsibility for the work performed until the trust was established. Its annual economic contribution guarantees a portion of the project. The Basque Government, which also net contributor of economic resources, while the Town Council of Añana, and the salt workers' association, Gatzagak, contribute indirectly to the funding but, above all, they contribute the ownership of all the salt-pans in Valle Salado and provide support and collaboration, becoming a driving force regarding the cultural activities in the area.

The trust's funding is completed by several strategic partners with which agreements are reached, involving varying amounts and periodicity:

- The Department of Culture of the Provincial Council of Alava
- The Department of Culture of the Basque Government
- The Department of Consumer Affairs, Trade and Tourism of the Basque Government
- The Department of the Environment of the Basque Government
- URA, Basque Water Agency
- Kutxabank – Fundación Vital
- The Department of Agriculture - Basque Government Leader Program
- European Funds - EAFRD
- 1.5% for Culture of the Ministry of Civil Works of the Government of Spain

The structure of the board of trustees and the strategic partners ensure the involvement and financial support of the public administrations in the project, as well as full social support. Although the world crisis we are going through has led to a reduction in the contributions from the various entities, there are multi-year agreements that guarantee the continuity of the project.

Institutional financial support is complemented by the economic resources that the Fundación Valle Salado is capable of generating through its own activities. Part of the income is generated by the guided tour Programs that have been introduced to make the Agricultural System available to society. However, we have one differentiating element, salt. Progress in the production, marketing and sale of different types of Añana salt, as already demonstrated, has a great potential to become, in the not too distant future, the driving force for Valle Salado and the surrounding area.

The Fundación Valle Salado has prepared the following Economic Management Plan for the 2017 - 2021 period, based on the funding that can be obtained from the Strategic policies that we have outlined above, and that are promoted by the various institutions, together with its own resources generated from the activities performed at the Valle Salado System:

Origin of the Funds	Action Plan 2017 - 2021					Total Action Plan
	2017	2018	2019	2020	2021	
Own resources	770.360	822.558	858.476	886.001	914.607	4.252.002
Institutional contribution	1.194.058	978.247	978.504	983.206	987.524	5.121.539
<b>Total Resources (€)</b>	<b>1.964.418</b>	<b>1.800.805</b>	<b>1.836.980</b>	<b>1.869.207</b>	<b>1.902.131</b>	<b>9.373.541</b>

These Financial Resources will be used to finance the Programs detailed in the Action Plan 2017-2021 and those Programs that the Fundación Valle Salado has been promoting since 2000 and that have made possible the results obtained to date.

Use of funds: Financed programs	Action Plan 2017 - 2021					Total Action Plan
	2017	2018	2019	2020	2021	
III.2.1.1.- Functioning of the Fundación Valle Salado (*)						
III.2.2.1.- Development of visitor infrastructures (*)						
III.2.2.2. Development of the Visitor Program (*)						
III.2.4.1.- Maintenance and Recovery Activities (*)						
III.2.5.1.- Art performances (*)	1.089.050	963.435	976.569	989.785	1.003.083	5.021.922
III.2.6.1.- Therapeutic visits (*)						
III.2.7.4.- Gastronomical visits (*)						
III.2.8.1.- Cooperation with Tourism and Cultural stakeholders (*)						
III.4.1.- Innovation in the Production of salt						
III.4.2.- Strengthening the values of local agrobiodiversity						
III.4.3.- Promoting the cooperation of the local transformation industry.						
III.4.4.- Promoting agrarian innovation and development.	875.368	837.370	860.411	879.422	899.049	4.351.620
III.4.5.- Underlining the environmental values of the Valle Salado						
III.4.6.- Commitment to an inclusive society						
III.4.7.- Cooperation with the university and the academic world.						
III.4.8.- Promotion and dissemination of the Valle Salado						
<b>Total:</b>						<b>9.373.542 €</b>

Each and every one of the actions contained in the proposals that form the backbone of this Action Plan 2017-2021, regularly implemented since the year 2000, are funded through the Strategic Policies developed by Institutions and the Fundación Valle Salado de Añana's own policy to generate our own resources to meet the challenges and overcome the threats identified. The ultimate aim is to recover the sustainability that has been lost, achieving a balance between the social, economic, productive, and environmental components of the Valle Salado de Añana System.

### III.7.- Indicators to measure the evolution of the System

The agricultural system of Valle Salado de Añana is a small site when compared with other landscapes considered GIAHS, that is also managed completely by a trust and the Provincial Council of Álava, being both the repository of all the information provided by other agencies and institutions. This implies the existence of many regular inspections on the state of conservation, as Valle Salado is a living system and its very activity contributes to its conservation. However, the possibility of being recognised as a GIAHS has led us to submit a new proposal of indicators to measure the evolution of the agricultural system.

These are the indicators that will be used:

General Domain	Specific Domain	Type of indicator	Frequency of measurement	Implementing agency
Capacity to create R+D+i	Institutional commitment	Actions supported by institutions	Yearly	FVS
	Cultural projects	Developed cultural projects	Yearly	ADR
	Projects in support of agriculture	Developed projects	Yearly	EHU/FVS
	Documentary projects	Research performed	Yearly	FVS
Dissemination, Publicity and Integration	Training	Developed programmes	Yearly	FVS
	Dissemination and cooperation	Developed activities	Yearly	FVS
Ecological Conservation	Agricultural land	Land use	Continuous	FVS
	Agrobiodiversity	Changes in flora and fauna	Yearly	DFA / URA
	Agricultural landscape	Conservation of productive elements	Continuous	DFA / FVS
	Agricultural services	Physical-chemical analysis of water and brine	Continuous	FVS / EHU
Economic Development	Agrifood products	Species and varieties	Continuous	FVS
	Sustainable tourism	Quality and data from visits	Continuous	FVS
	Economic indicators of the system	Production and sale of different types of salt	Monthly	FVS
	General economic indicators	Economic data	Biyearly	GOVA
Social Cohesion	Commitment of the local community	Activities organised by the local community	Yearly	CA / ADR
	Demographic indicators	Demographic data	Biyearly	GOVA
	Female participation	Women taking part in the activities of the system	Continuous	FVS
	Inclusion	Inclusive activities organised	Yearly	FVS
Cultural Tradition	Knowledge of agricultural traditions	Conservation of know how	Continuous	FVS / ASG
	Cultural traditions	Conservation of historical documents	Continuous	DFA / AA
	Urban cultural centres	Conservation of urban spaces	Continuous	DFA / AA
	Cultural events	Events developed	Yearly	FVS / AA

FVS: Fundación Valle Salado

DFA: Diputación Foral de Álava / Provincial Council of Álava

EHU: Universidad del País Vasco / University of the Basque Country

ADR: Asociación de Desarrollo Rural / Rural Development Association

GOVA: Gobierno Vasco / Basque Government

ASG: Asociación de Salineros Gatzagak / Salt Workers' Association Gatzagak

CA: Cuadrilla de Añana