



**DEVELOPMENT AND
INTEGRAL MANAGEMENT
OF PROJECT**





A INTEGRAL PROJECT

SOCIO-CULTURAL

TURÍSTIC

ECONOMIC-PRODUCTIVE





a privileged beach and mountain location suitable for
Tourism Development in compatibility with the emerging Alguiculture Industry





It is located in a territory of 12,900 hectares,
with mountains, native forests, native flora and fauna
and a 5.9 km coastline

ancestral property of the
CAWUÑALBUHE MAPUCHE COMMUNITY
incorporating neighboring communities
The coastline could reach 21 km.



SECTOR OF THE PROJECT

Latitude: -40.3167 / Lengyh: -73.75

because they are ancestral lands,
The Community cannot sell them
but the Chilean State allows them to generate
USE AND ENJOYMENT CONTRACTS
FOR 99 RENEWABLE YEAR
Swith private investors
for joint project development

**caleta
milagro**
cauñaibuhe

San Juan de la Costa
Osorno / Chile



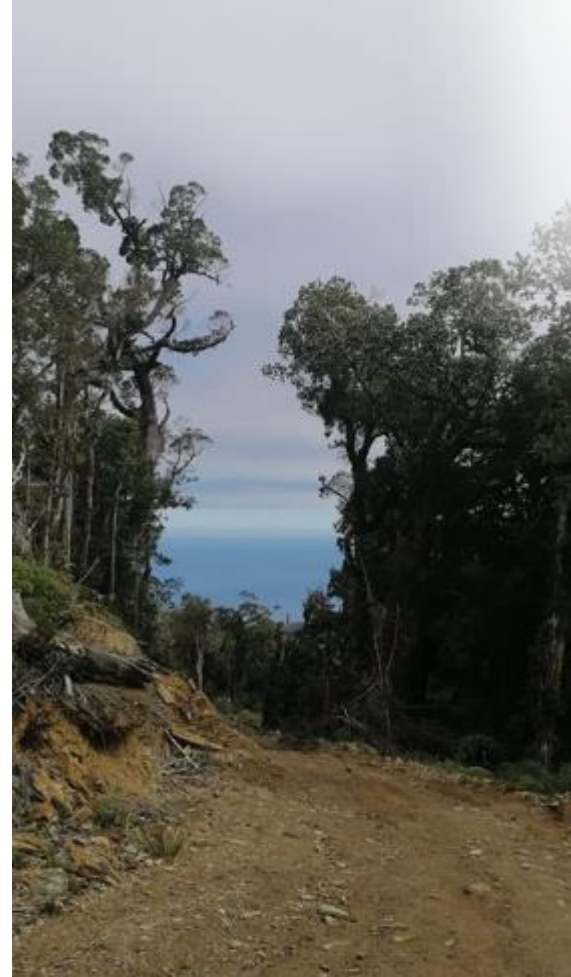
NATURAL LANDSCAPES, DIVERSE... UNTOUCHED



NATURAL RIVER
(born on the property)



VIRGIN FORESTS



SMALL RURAL
ACCESSES

caleta
milagro

cawñalbuhe

San Juan de la Costa
Osorno / Chile

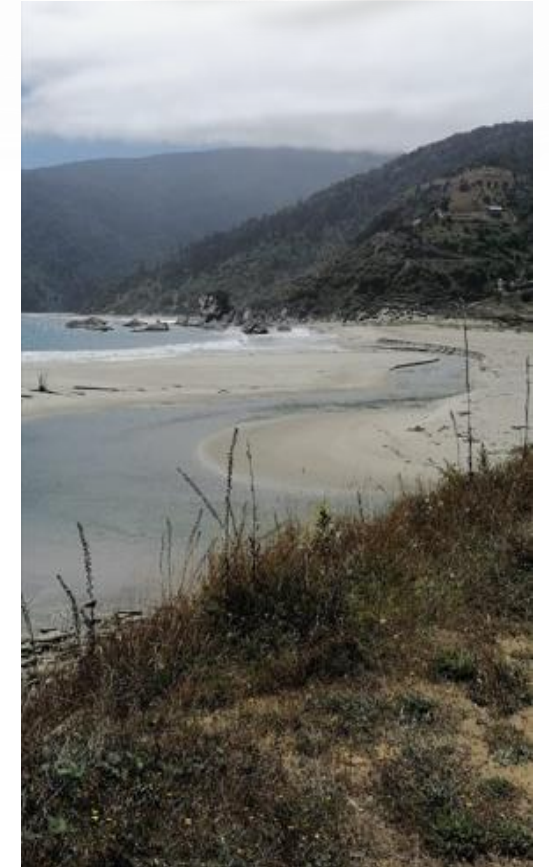
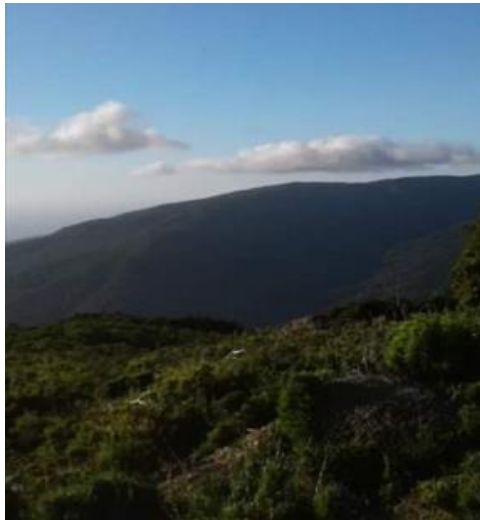


VARIED MICROCLIMES

THE COAST... WITH ITS WEALTH AND OPPORTUNITIES



- 6 km of coast, which could be extended to 21 km of beach, on the front line, for tourist development.
- Banks of Natural Mollusks and Algae that will be exploited in a controlled and sustainable manner, taking care of the resource.
- Technological processing plants will be installed to obtain products with high added value.
- They will be grouped in an Industrial Park, towards the back of the property, and their processes will be incorporated as tourist attractions given the type of native products that will be processed..



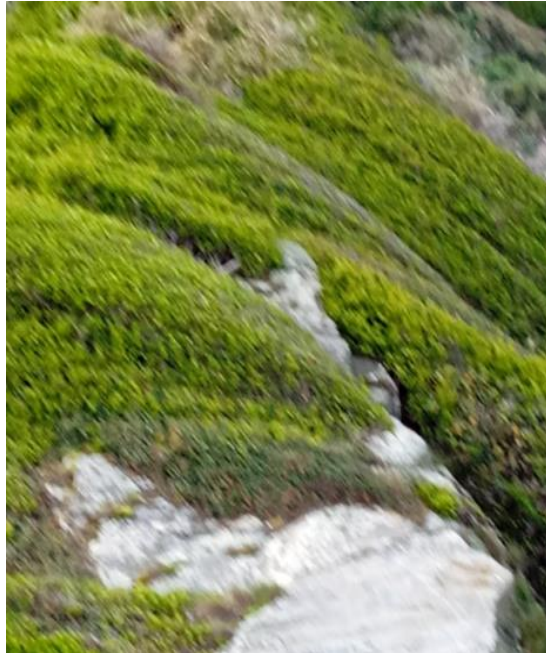
SNOWY LANDSCAPE ALL YEAR ROUND



In the upper sectors of the property, a microclimate occurs that has permanent snow all year round.

A unique Ski Center of its kind is planned, very close to the sea, a great attraction for tourists.

Full Services for tourists, to ensure an optimal visit of rest and relaxation.



A PROJECT OF GREAT EXTERNALITY SOCIAL / CULTURAL / ECONOMIC POSITIVE!

generates social and cultural connection and integration
high lighting the Mapuche Culture

provides a consistent offering of
Sea and Mountain Tourist Services
Hotels - Gastronomy - Hot Springs

installs a diverse Aquaculture Industry
production and extraction of sea and fresh water resources

generates strong local and regional employment
and installs Caleta Milagro as an example of integration
and pole of social, tourist and productive development





SUSTAINABLE AND SUSTAINABLE

is **sustainable**

because its value proposition is the integration of cultures, from which it enhances the territory as a tourist destination generating income, employment and other multiple benefits giving visibility to the community, the region and the country

es **sustainable**

because it responds to a Circular Economy model that preserves, strengthens and exploits responsibly and ecologically natural resources



SOCIO-CULTURAL AXIS



**caleta
milagro**
cañuñalbuhe

San Juan de la Costa
Osorno / Chile

Integration with Local Communities is sought
jointly exploring developments

Agricultural / Aquaculture / Forestry / Gastronomic / Artisanal



TOURIST AXIS



**caleta
milagro**
cañalbuhe

San Juan de la Costa
Osorno / Chile

- ☑ A high standard hotel on the seafront at medium height
- ☑ 60 comfortable cabins of native construction with views of the sea, with cafeteria and restaurant service serving typical foods from Chile and the area, especially “Mapuche cuisine” and the use of local ingredients.
- ☑ Zoning for the development of Ethnic and Rural Tourism
- ☑ A Mountain Village / Ski Center: with Hotels, Cabins and Gastronomic Services, Mountain Sports School, Equipment Rental

Caleta Milagro

It has a microclimate that allows you to have a ski center very close to the sea, which makes it a unique and attractive place for national and foreign visitors



ECONOMIC - PRODUCTIVE AXIS



**caleta
milagro**
cañalbuhe

San Juan de la Costa
Osorno / Chile

- ❑ Production of Algae in the Sea and its subsequent processing, laboratory for incubation of genetic material and development.
- ❑ Production of Off-Sea Algae (with advanced technology), which allows the production of algae of high commercial value such as spirulina or algae for the extraction of astaxanthin, a natural dye highly in demand by salmon farming (considered the food of the future).
- ❑ Production of Polysaccharides; seaweed with high added value such as carrageenans, agar-agar and alginates. There are countless food industries that use algae as the main raw material, intended for diet, vegan and similar products (consumer trend).
- ❑ Extraction and Planting of Mollusks and other species
- ❑ Development of Naturopathy and Mapuche Ancestral Medicine Products adding value to raw materials typical of this territory and culture.
- ❑ Production of Bottled Water and Craft Beer
- ❑ Sea Salt Production
- ❑ Promote the Goat Dairy Sector (packaged goat milk and cheese).





INVESTMENT DESCRIPTION





1
**PRELIMINARY
INVESTMENTS**



1.- PRELIMINARY WORKS AND OTHERS



- There are 20 km that must be built from the main road to the access to the property. In addition to interior roads
- The normal materiality is considered for the construction of this type of roads.

- Consider the construction of access roads to the property that guarantee entry to residents and tourists.
- In addition, the River that originates on the property will be intervened, without affecting its normal course.
- It is expected to obtain aggregates that will be used to build the units and work will be done to channel it to avoid future overflows.

Project Company
 which intervenes in the rivers that cross the property to obtain aggregates, (at a lower cost) for the construction of roads, fences and homes, which also allows to substantially improve the edge of the channel to avoid possible overflows..





2 INFRASTRUCTURE INVESTMENT, ADMINISTRATION AND SERVICES DEPENDENTS



2.- INFRASTRUCTURE INVESTMENT, ADMINISTRATION AND SERVICES DEPENDENTS



OFFICES OF
CENTRAL ADMINISTRATION



ACCESS PORTAL AND CONTROL



SECURITY



2.- INFRASTRUCTURE INVESTMENT, ADMINISTRATION AND SERVICES DEPENDENTS



UNDERGROUND SOLAR LED LIGHTING
THROUGHOUT THE PROJECT



Industrial Park that will contain the productive units
associated with the project.



Villas for staff who will stay in the project



Medical and dental service, which will attend to
emergencies of tourists, project workers and industrial park
workers.

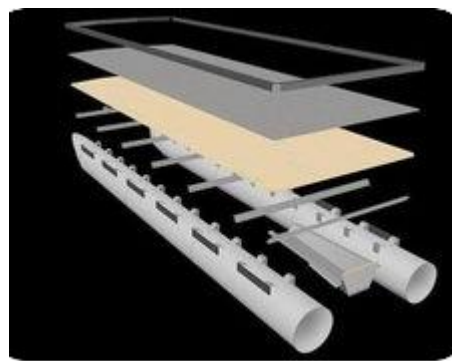


Fire and Rescue Station, linked to the fire control
of the CONAF Fire Brigade and Firefighters.

2.- INFRASTRUCTURE INVESTMENT, ADMINISTRATION AND SERVICES DEPENDENTS



DOCK FOR MANEUVERS AT SEA



**CROP TOURISM
SUBMARINES**

2.- INFRASTRUCTURE INVESTMENT, ADMINISTRATION AND SERVICES DEPENDENTS

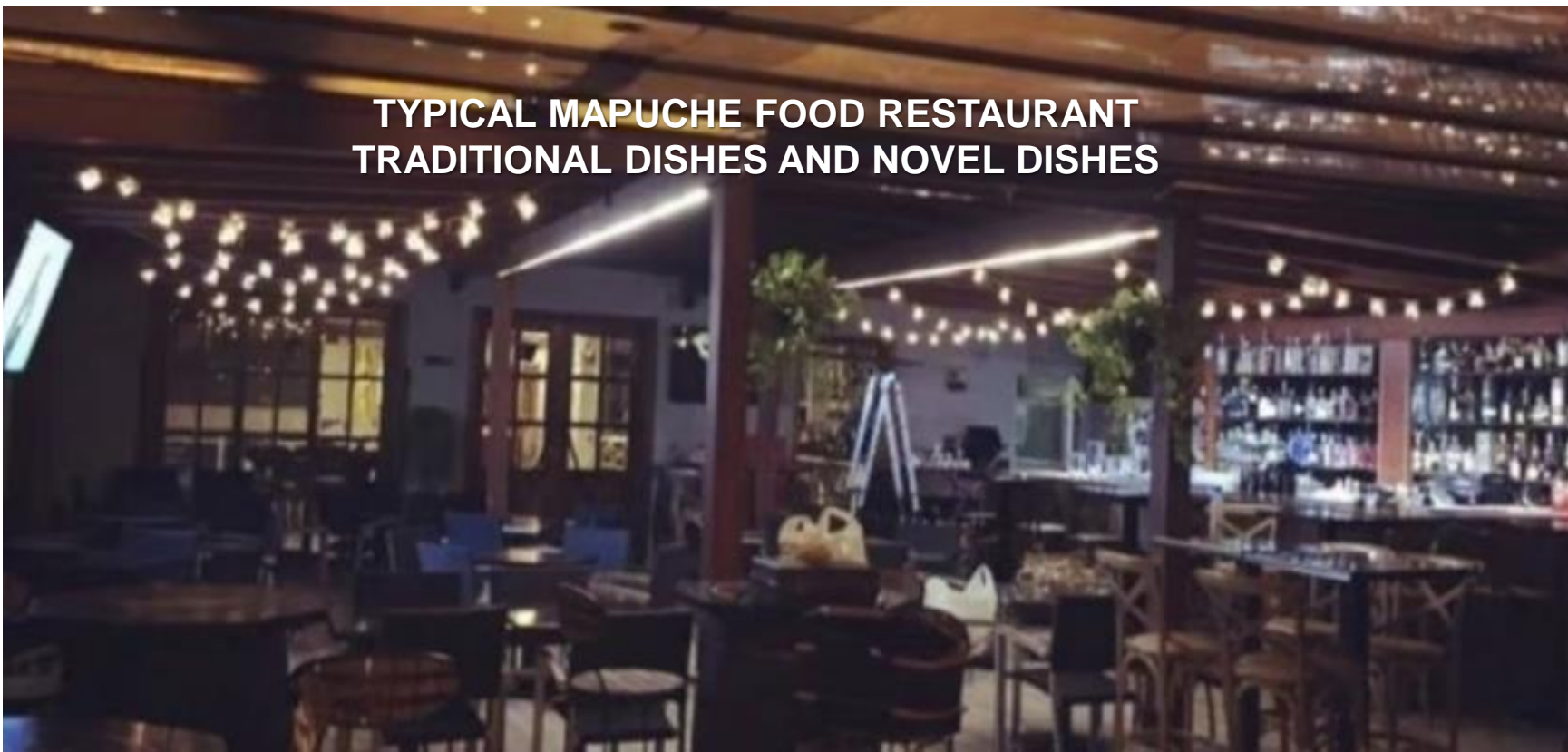
MAPUCHE GASTRONOMY SCHOOL



- It is the first educational center especially intended for Mapuche students, which seeks to develop human capital that maintains its roots and specializes in dishes made with autonomous, endemic ingredients provided mainly by the project's industrial park.
- The operational costs will be covered with subsidies through scholarships from the Chilean government through the CONADI National Indigenous Development Corporation
- .It will have rooms for students who come from other regions.
- It will be linked in the short term to a widely recognized University in Chile



2.- INFRASTRUCTURE INVESTMENT, ADMINISTRATION AND SERVICES DEPENDENTS



TYPICAL MAPUCHE FOOD RESTAURANT
TRADITIONAL DISHES AND NOVEL DISHES

WHAT'S NEW IN DISHES



2.- INFRASTRUCTURE INVESTMENT, ADMINISTRATION AND SERVICES DEPENDENTS

SALUTE PER ACQUA - SPA / THERMAL NATUROTHERAPY

A Thermal SPA is planned, which has at least the 5 main services such as:

SPA circuit with tempered water

SPA + Massage Circuit

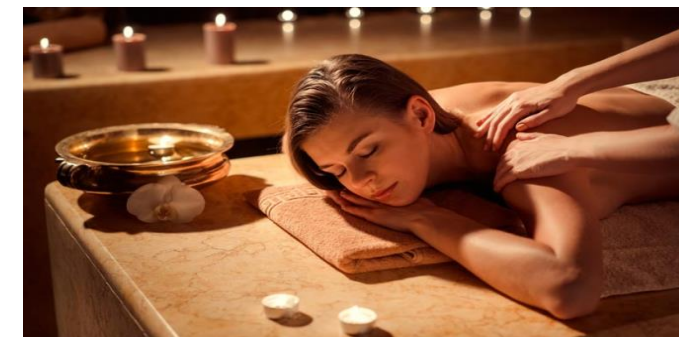
Massages Relaxing or decontracting massages (mainly).

Facial massage.

Therapeutic massage.

SPA and food (breakfast, lunch and dinner

Rituals. It is advisable to explain the service, if it is not understood – it will not be sold.



2.- INFRASTRUCTURE INVESTMENT, ADMINISTRATION AND SERVICES DEPENDENTS

AGGREGATE COMPANY

- Taking advantage of the expertise expressed by the Mapuche community, they have extensive experience in the construction of rural roads, so resources will be dedicated to machinery and hire this group to build all the access roads, parking lots and interior roads of the project.
- It contemplates the acquisition of machinery that, once the construction of this project is completed, will leave installed capacity to support the development of other communities, allowing the production of algae or other seafood - to supply our projects, always maintaining the concept of sustainability.
- The development of this project - considers the expansion to Mapuche communities with little technical development. For this reason, it is important to develop genetic material that will allow the expansion of the proposed products or access to new varieties of commercial importance.
- It will produce sand, stabilized material, balls, and stones of different sizes.



2.- INFRASTRUCTURE INVESTMENT, ADMINISTRATION AND SERVICES DEPENDENTS

BASIC AND MIDDLE EDUCATION SERVICE / PROFESSIONAL TECHNICAL

In the sector, there are rural schools, where investment will be made in infrastructure, which allows children who belong to the Mapuche and NON-Mapuche communities to receive the appropriate education so that they do not migrate to large cities and strengthen their education with a view to working in the same project, in the different job options that it offers.

It is for this reason that the project considers leaving the installed capacities to continue with the construction of rural roads that allow approaching vehicles and minimize school dropouts.



Current school near the project



Children's tour to attend classes



It is contemplated to build childcare centers for project workers on project premises..



3
INVESTMENT TOURISM
INFRASTRUCTURE HOTEL / CABINS



3.1.- INVESTMENT TOURISM INFRASTRUCTURE HOTEL / CABINS

3.1.- INVESTMENT IN BORDEMAR HOTEL AND TOURIST ROUTES	PROJECTED INVESTMENTS IN EUROS				
	Year 1	Year 2	Year 3	Year 4	Grand Total EUROS
Construction of Hotel + Equipped International Restaurant	23.000.000	0	0	0	23.000.000
Construction of 60 cabins for 2,4,6 and 9 people, equipped.	22.080.000	0	0	0	22.080.000
Enclosure for cabin services (laundry, living room, others, etc)	736.000	0	0	0	736.000
Electric vehicle dedicated to the office	27.600	0	0	0	30.000
Cafes (2) both equipped	506.000	506.000	0	0	1.012.000
SPA with hotel thermal pool + services + Naturopathy	0	2.392.000	0	0	2.392.000
Heated pool with infinity view	1.840.000	0	0	0	1.840.000
Office equipment (PC, printer, photocopy, etc.)	220.800	0	0	0	220.800
Mapuche events, cultural and sports center (5000 P).	0	27.600.000	0	0	27.600.000
Office furniture	165.600	0	0	0	165.600
Investment Subtotal	48.576.000	30.498.000	0	0	79.076.400



HOTEL BORDEMAR DE CALETA MILAGRO

- Using the spectacular oceanfront view that the property provides, a 5-star hotel is planned, which will have an endless pool and high-standard services for tourists.
- The Hotel will have the traditional services that a hotel of these characteristics offers, but will differ in that its commercial proposal is focused on the ancestral Mapuche culture.
- It will have direct communication with all the other units of the project, allowing tourists, its green areas, its virgin forest, to visit the industries and cultivation centers, as well as the programming of guided visits to the town of Mapuche artisans and the implemented sector of according to their own cultural development and by the way, they will also have access to the ski center and the sports and cultural center.

3.1.- INVESTMENT TOURISM INFRASTRUCTURE HOTEL / CABINS



SEA FRONT HOTEL

The hotel will be located facing the sea, with a high standard of services. It is planned to have an endless pool in the front and will have 30,000 square meters of green areas and guided tours of forests, horseback riding, trekking, mountain biking, visits to industrial centers that will be designed with a side corridor that will allow tourists , observe how the different industrial tasks of the site are developed.

Also, it will be in direct connection with the Ski center and the sports and cultural center.



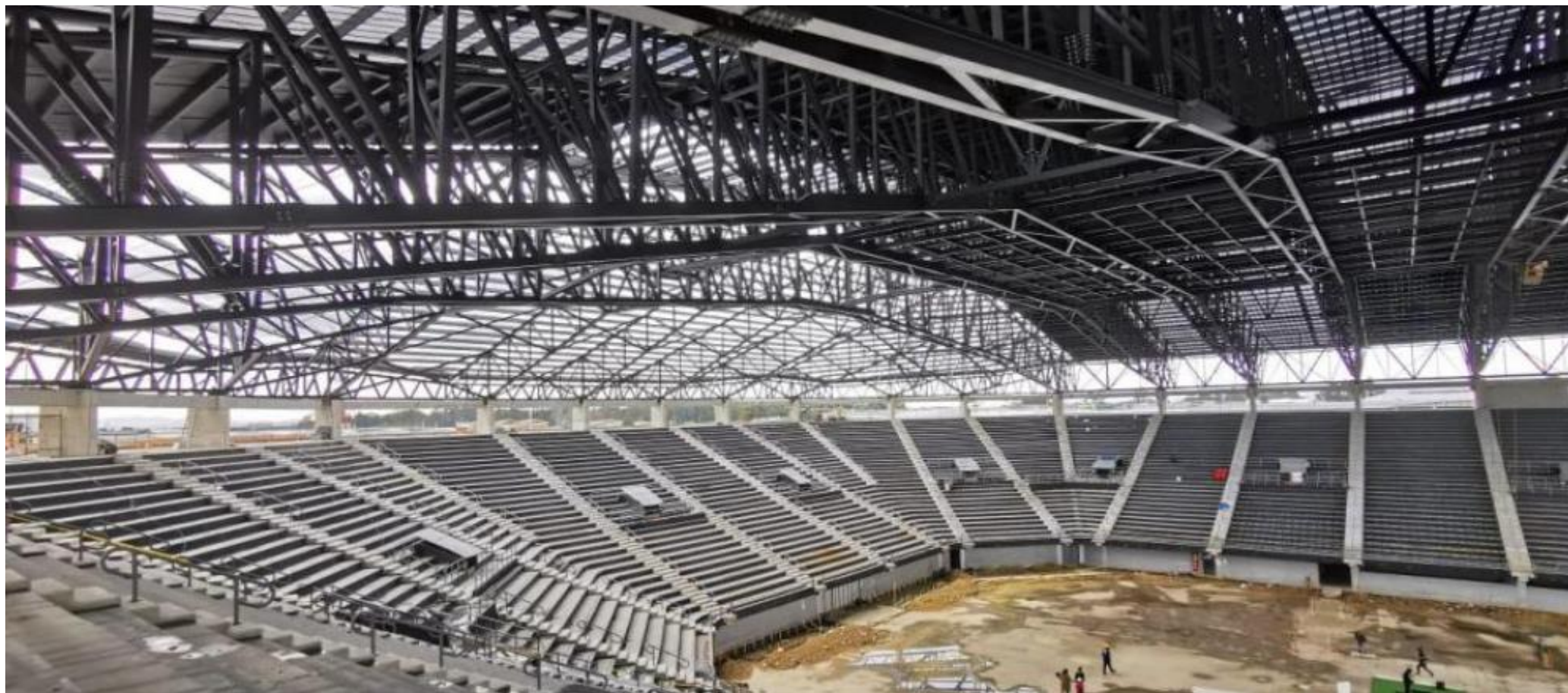
3.1.- INVESTMENT TOURISM INFRASTRUCTURE HOTEL / CABINS

- The project will have 60 cabins equipped to a high standard, for 2, 4, 6 and 8 people; with or without hot water jars.
- The cabins are located on the banks of the river and will be available for rent all year round.
- They will be arranged in an area with excellent views, for the enjoyment of the family.
- Those who rent the cabins will have the option of using the project's services.



3.1.- INVESTMENT TOURISM INFRASTRUCTURE HOTEL / CABINS

- The central project considers the construction of a Roofed Gym of approximately 25,000 M2, for the holding of sporting and cultural events, where basketball is one of the favorite sports in the area and there is no place for the development of large-scale cultural activities. .
- The aim is also to develop activities that bring the general public closer to the tourist center and to the consumption of food in the stores that will be enabled.



3.1.- INVESTMENT TOURISM INFRASTRUCTURE HOTEL / CABINS

42 km of circuits will be built, immersed in the full extent of the native forest, for trekking, running, mountain biking or horseback riding activities. A unique experience for those who love outdoor life and sports.





3.2 INVESTMENTS INFRASTRUCTURE ETHNIC AND RURAL TOURISM



3.2.- INVESTMENTS INFRASTRUCTURE ETHNIC AND RURAL TOURISM



12 Mapuche Rucas equipped with its characteristics in each space.



The project contemplates the creation of a large Mapuche cultural center, directed, administered and enhanced by members of the same culture.



3.2.- INVESTMENTS INFRASTRUCTURE ETHNIC AND RURAL TOURISM



The active participation of the Mapuche Community is considered, to receive and guide visitors or tour operators, to show all aspects of their culture and worldview. Among them, their way of living, their gastronomy, their medicine and crafts

.It seeks to stimulate sensory perception when contemplating nature:

- Listen to the flow of the river and the song of wild birds.
- Smell the essences of flowers, mint and the virgin forest
- Taste herbs and vegetables harvested under Mapuche sacred geometry.
- Feel the heat of the sun and the hot water in the jars.
- Admire the colors of the elements of the virgin nature that surrounds us.



3.2.- INVESTMENTS INFRASTRUCTURE ETHNIC AND RURAL TOURISM



A will be installed Mapuche Pharmacy in the village of artisans, to bring this ancient medicine closer to the people, today.



Village of Mapuche Artisans for sale to the public of their handcraft products in wood, metal, stone, basketry and fabrics.

An installation with containers so that each entrepreneur can adapt it to their products and requirements, which will allow them to be presented and offered with unity of design and safety to improve the environmental conditions of the products..

A sector will be enabled for the traditional game of Palín or Chueca.

With official championships in addition to showing this ancient game to tourists.



Mapuche Cafe





3.3

INVESTMENTS INFRASTRUCTURE TOURISM - SKI CENTER – HOTEL RESTAURANT - MOUNTAIN VILLAGE



3.3- INVESTMENTS IN INFRASTRUCTURE: SKI CENTER - HOTEL - MOUNTAIN VILLAGE



3.3- INVESTMENTS IN INFRASTRUCTURE: SKI CENTER - HOTEL - MOUNTAIN VILLAGE

The rates at the New Ski Center for one week start at USD2,350, which includes: accommodation in a double room with a view of the Hotel valley, eight-day tickets, four daily meals (breakfast/lunch/snack/dinner) and access to all services: heated outdoor pool, jacuzzis, gym and yoga classes, among others.

The values will be assimilated for the Mountain Village complex, with the same services offered by the Hotel



Cafeteria and Terrace



Convention Center (250 - 600 p.)



Mountain Village high standard 30 units



4 INVESTMENTS INFRASTRUCTURE INDUSTRIAL





4.1 INVESTMENTS ALGAE PRODUCTION AT SEA



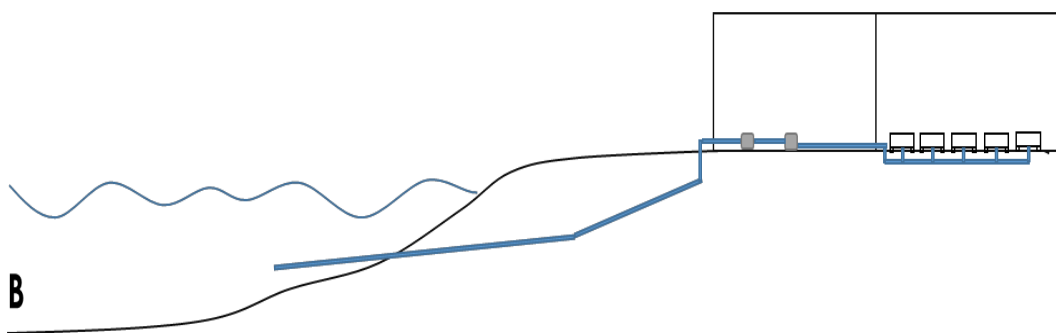
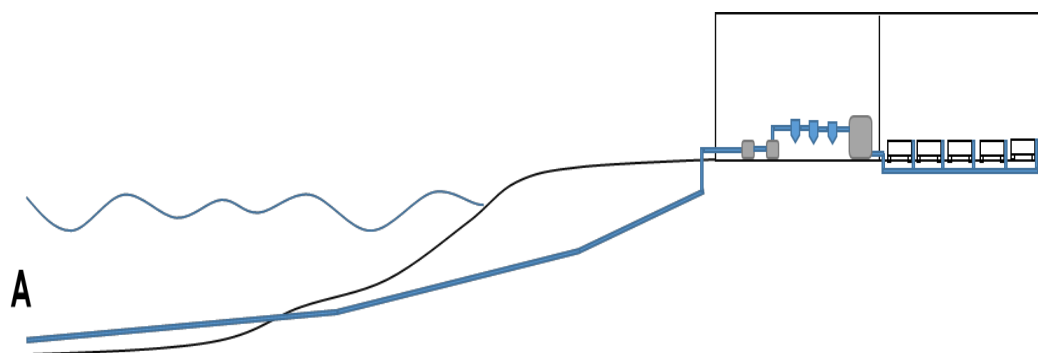
4.1- INFRASTRUCTURE INVESTMENTS: SEA ALGAE PRODUCTION

Most macroalgae cultures have to develop their initial cultivation phases (settlement, germination and incubation) in the laboratory (land facilities) prior to their transfer and final cultivation in the sea.

Seawater supply and drainage system in a macroalgae cultivation center.

In A, a seawater suction system for crop development is shown.

A seawater drainage system from the farming center is shown in B.



4.1- INFRASTRUCTURE INVESTMENTS: SEA ALGAE PRODUCTION



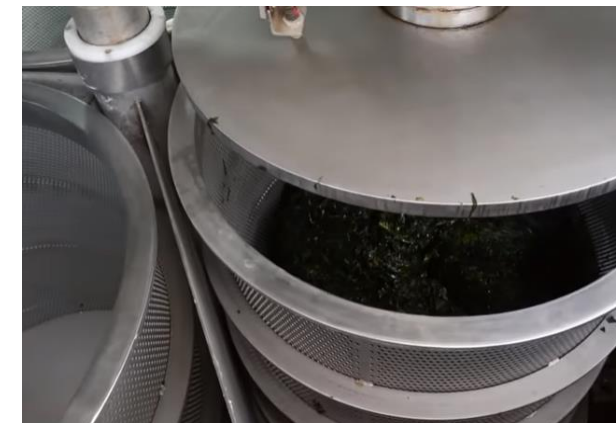
ALGAE IN SEA



WASHED



DRAIN



CENTRIFUGED



DRYING PREPARATION



DRYING



DRY PRODUCT

FINALLY, THE DRIED PRODUCT IS SENT TO EXTRACTION PROCESSES OR PACKAGED FOR EXPORT.



4.1- INFRASTRUCTURE INVESTMENTS: SEA ALGAE PRODUCTION

INDUSTRIAL PLANT

- For the drying process, a basic primary drying is used that allows obtaining a drained raw material through the use of solar energy or wind.
- This product is entered into the rotary dryer that dries the product from a humidity of 50% to 6%.
- The rest of the process is similar to the previous one.



CONTINUOUS ROTARY DRYER WITH NOMINAL CAPACITY 14 TON / HOUR PRE-DRIED SEAWEED





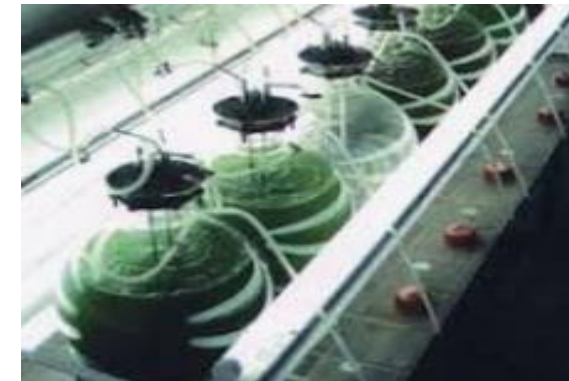
4.1.1 INFRASTRUCTURE INVESTMENT R&D LABORATORY (All Project)



4.1.1- INFRASTRUCTURE INVESTMENT: CENTRAL R&D LABORATORY

Laboratory-grown algae: the future of food

- By 2050, the world population is expected to reach almost 10 billion people. Taking into account climate change and the instability of certain political systems, food security is an emerging critical concern both in Europe and the world.
- Obtaining new food sources is key to guaranteeing a sufficient, safe and nutritious supply.
- Companies are beginning to change our vision of food and how it is obtained.
- This industrial method of producing plant-based proteins allows for unprecedented yields, profitability and health protection, while meeting market demand for healthy and environmentally friendly products.
- This new food avoids many of the disadvantages associated with the production of other types of proteins. It does not require synthetic fertilizers, does not cause depletion of agricultural soils, does not emit greenhouse gases, does not pollute and has unlimited supply potential to satisfy the needs of the food industry.





4.2 INFRASTRUCTURE INVESTMENT ALGAE PRODUCTION - OUT OF SEA



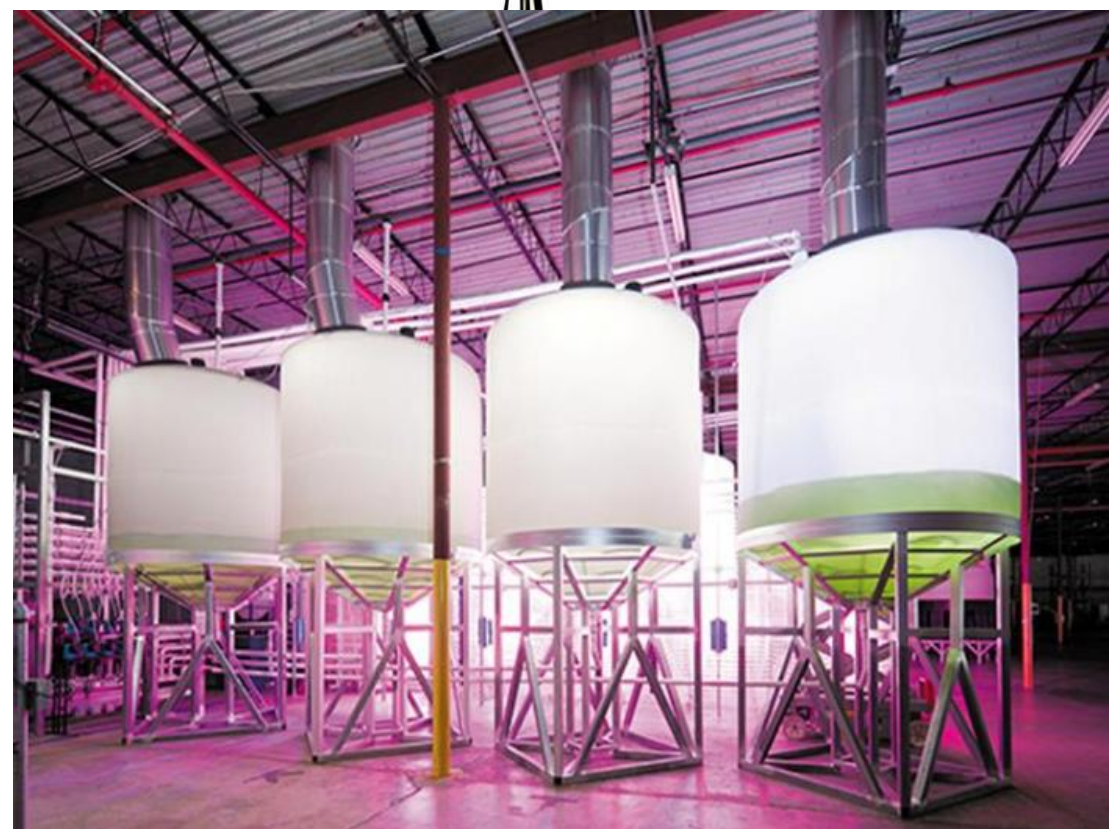
4.2.- INFRASTRUCTURE INVESTMENT ALGAE PRODUCTION - OUT OF SEA

Innovative algae and microalgae production system in a closed and absolutely controlled circuit, which allows the production of algae that do not occur regularly in the sector and that complements the range of products that will be offered to the market.



RECEIVER "SUN Light"

FIBER OPTICS, WHICH TRANSMITS "SUNLIGHT" INSIDE THE POND



4.2.- INFRASTRUCTURE INVESTMENT ALGAE PRODUCTION - OUT OF SEA



Alga Nori



Alga Wakame



Algas



Musgo estrellado

EXAMPLES OF POTENTIAL ALGAE TO PRODUCE



Kombu



Lechuga de mar



Musgo de Mar



Codium



Dulse



Espagueti de mar



Espirulina



4.3 INFRASTRUCTURE INVESTMENT SEAFOOD PRODUCTION



4.3 INFRASTRUCTURE INVESTMENT SEAFOOD PRODUCTION



mussels



Locos



Product to Process

MARKETS

4.3 INFRASTRUCTURE INVESTMENT SEAFOOD PRODUCTION



The Mussels are reproduced in the laboratory and then taken to the sea on hangers and when they reach commercial size, they are extracted and enter the process.

In the case of “Loco”, these have not been reproduced in the laboratory. The natural banks are cared for in their habitat, and only the units that are commercial in size are harvested.

It is prohibited to harvest smaller products since for their protection, the State of Chile dictates bans on the product and applies significant fines for harvesting smaller specimens, which allows the species to be cared for and the project to be sustainable.

Due to the high value of the product, an appropriate harvest and permanent surveillance must be carried out.



**caleta
milagro**
cañañalbuhe

San Juan de la Costa
Osorno / Chile

4.4 INFRASTRUCTURE INVESTMENT ALGAE PROCESSOR AGAR-AGAR - CARRAGENIN - ALGINATES



4.4 INFRASTRUCTURE INVESTMENT IN ALGAE PROCESSING INDUSTRY

HYDROCOLLOIDS

- The cell walls of seaweed contain long-chain polysaccharides, which gives them flexibility and allows them to adapt to the movement of the water depending on where they grow. These molecules are called hydrocolloids.
- They are a large, heterogeneous group of polymeric substances that mainly include polysaccharides and some proteins.
- They are widely used in almost all industries due to their physical-chemical characteristics, which give them uniqueness and versatility in their applications in different types of industries such as: food, medical, cosmetics, paint manufacturing, textiles, beverages, etc.
- .The most used are: Carrageenans



Agar-Agar.



Alginates



4.4 INFRASTRUCTURE INVESTMENT IN ALGAE PROCESSING INDUSTRY

PHYCOCOLOIDS

Parecido al agar, pero con alto contenido de cenizas. Requiere mayor concentración para formar geles.

Los principales componentes κ - y λ -carragenano.

Carrageenans: characteristics, uses and species

En la industria alimentaria: sopas, dulces y bebidas. En medicina y odontología. En industria farmacéutica, textil y tintes.

Algas rojas: *Chondracanthus chamissoi*, *Mazzaella laminarioides*, *Chondrus canaliculatus* y *Callophyllis variegata*.



Compuesto por agarosa y agarpectina. Insoluble en agua fría, soluble en agua a 80°C y gelifican entre 30 y 40°C

Clarificador de mostos.
Reemplaza a harinas o féculas de pan.
Alimento en Asia y Europa.
Protector de carnes.
Recubre medicamentos.

Agar Agar: characteristics, uses and species

En medios de cultivo de bacterias, microalgas y macroalgas



Algas rojas:
Gracilaria spp.,
Gelidium spp.,
Gelidiella spp.,
Pterocladia spp.,
Gracilariopsis lemaneiformis

Sales del ácido algínico formadas con Na, K, Mg o Ca, formando sales con diferentes grados de solubilidad en agua. Representa hasta 40% del peso seco del alga.

Estabilizador, aglutinante, espesante, gelificante y formador de películas delgadas sobre superficies. Impresiones dentales.

Alginates: characteristics, uses and species



Algas pardas:

Macrocystis spp., *Lessonia* spp.,
Durvillaea spp., *Fucus* spp., *Laminaria* spp.,
Ecklonia spp., *Alaria* spp.,
Ascophyllum spp. y *Sargassum* spp.



4.5 INFRASTRUCTURE INVESTMENT FOOD PROCESSING INDUSTRY



4.5 INFRASTRUCTURE INVESTMENT FOOD PROCESSING INDUSTRY



PATÉ VEGETAL CON ALGAS ZANAHORIA Y CÚRCUMA - BIO



PATÉ VEGETAL CON ALGA PERCEBE - BIO - ECOLÓGICO



PATÉ DE ALGAS VEGETAL - CON BASE DE TOFU - BIO



CREMA DE SÉSAMO Y ALGAS (TAHÍN) BIO



PALITOS DE SÉSAMO Y ALGAS BIO



ALGAS Y SETAS (WAKAME CON SHIITAKE) - BIO - DESHIDRATADA



SOPA JULIANA CON ALGAS BIO



PASTA INTEGRAL CON ALGAS - ESPAGUETI - Algamar



PASTA INTEGRAL CON ALGAS - FLORES DE MAR



Snacks de Legumbres con algas - Guisantes,

4.5 INFRASTRUCTURE INVESTMENT FOOD PROCESSING INDUSTRY

PRODUCTS

- DEHYDRATED SEAWEED
- SEAWEED FOR SEASONING
- MICROALGAE
- FRESH SEAWEED IN SALT
- SEAWEED SALTS
- SEAWEED SALADS
- TARTARE AND SAUCES
- CLASSIC PRESERVES
- CANNED SEAFOOD
- TAPAS SPECIAL
- PACKS INFUSIONS
- CAKES
- RICE
- PASTA
- SNACKS
- DEHYDRATED MUSHROOMS



SPECIES

- WAKAME
- SEA SPAGHETTI
- KOMBU
- SUGAR KOMBU
- SEA MOSS
- DULSE
- CODIUM
- SPIRULINA
- CHLORELLA
- NORISEA LETTUCE
- FUCUS





4.6 INFRASTRUCTURE INVESTMENT SEA SALT PRODUCTION



4.6 INVESTMENT INFRASTRUCTURE PRODUCTION SEA SALT

- The traditional process to extract sea salt is to generate dams or small pools, which, through solar evaporation, remove the water and concentrate the salt for collection.
- Due to the permanent rain in the sector, it is impossible to carry out this operation, but it will be used with heated greenhouses for evaporation.
- This process is more expensive and it may be thought that it is not profitable, but the final product that the project aims at has added value that makes it profitable.
- The generation of salt blocks with the addition of essential minerals is sought for the formulation of a nutritional supplement for animal livestock. It is important to note that each animal consumes 100 grams per day and the project area is the main livestock area in the country.

TRADITIONAL PROCESS



PORPOSE PROCESS



4.6 INVESTMENT INFRASTRUCTURE PRODUCTION SEA SALT





4.7

INFRASTRUCTURE INVESTMENT

AROMAS - COLORS – FLAVORS

FROM THE SOUTH OF THE WORLD



4.7 INFRASTRUCTURE INVESTMENT: AROMAS – COLORS – FLAVORS

1.- Supercritical CO₂ extraction is a common method to separate various plant components, as it produces a pure, clean and safe product.

It is a process for obtaining extracts and other substances using gases in supercritical or subcritical conditions. Supercritical gases retain all the physical properties of gases, but are incompressible and have the same dissolving power as liquids.



2.- The freeze-drying equipment is dried by freezing, without going through the liquid state.

The best technology for obtaining dehydrated fruit pulp



4.7 INFRASTRUCTURE INVESTMENT: AROMAS – COLORS – FLAVORS

- To enhance Mapuche ancestral medicine, an additional Industry is considered, but one that will have cutting-edge technology, to produce, promote and insert MAPUCHE NUTRACEUTICAL products into the market.
- In parallel, it will develop products such as AROMAS, COLORS AND FLAVORS from PATAGONIA, managing to diversify and obtain a mix of natural and organic products.
- To do this, the latest technologies on the market will be used, such as freeze dryers, extractors in a CO2 environment in a supercritical state, among others..



WHAT ARE NATURAL AROMAS?

- The aromas we perceive are the sum of hundreds of different substances that are dissolved in the air, giving rise to odors. Nature is full of pleasant and unpleasant aromas for one of the most powerful chemical senses, smell. It is these natural odors that we want to produce
- We all like the smells of flowers, woods and citrus fruits so much that we capture them in the fragrances we use in daily life, but we also dislike odors produced by some microorganisms, which is why we are always looking for new products capable of neutralizing them.

ESSENTIAL OILS

- The essential floral ingredients, such as rose, nardo, narcissus, gardenia, jasmine and lavender, are the most popular aromatic ingredients in the cosmetic industry.
- Other essential ingredients that are commonly used in cosmetics with the final result of Citronella, Orange, Eucalyptus and Menta.

4.7 INFRASTRUCTURE INVESTMENT: AROMAS – COLORS – FLAVORS

- Mapuche communities, based on a large amount of land, are often used in the forest sector.
- The project contemplates the production of lavender to realize the extraction from this plant and generate a rapid commercial sale mechanism, obtaining products of high quality.
- All the industries presented, generate an important trading center for the communities and the region, which strongly affects local development.



FLAVORINGS



SALT



LIQUID SALT
WITH
ESENTIAL OILS





4.8 INVESTMENT IN PACKAGING PLANTWATER AND BEER PRODUCTION



4.8 INVESTMENT IN WATER PACKAGING PLANT AND BEER PRODUCTION



LINE OF WATER PRODUCTIONS



LINE OF BEER PRODUCTIONS





4.9
**INVESTMENT IN: GREENHOUSE /
RECYCLING AND HAPPY CHICKEN
EGGS**



4.9 INVESTMENT IN: GREENHOUSE / RECYCLING AND HAPPY CHIKEN EGGS

COPYRIGHT M2 - 2024



GREENHOUSE



EGGS OF MAPUCHE CHIKEN



NUEVA TECNOLOGÍA RECICLAJE





4.10 INVESTMENT IN PRODUCTION PLANT GOAT "MILK AND CHEESE"



4.10 INVESTMENT IN PRODUCTION PLANT GOAT "MILK AND CHEESE"

- Mapuche communities have a large amount of land, available for productive diversification and have a “breeding culture” of goats.
- To differentiate itself from local beef production, goats present an excellent productive opportunity, since there is a critical mass that absorbs milk and is complemented by a market that seeks these products.
- Pasteurized and packaged goat milk for the public with lactose intolerance problems and goat cheese that is widely consumed in Chile and abroad.
- This project allows the generation of an important purchasing center for raw materials that will impact the goat dairy sector, to increase the mix of Mapuche products that are sent to the market.



COMPONENTS OF A DAIRY PROCESSING PLANT



4.10 INVESTMENT IN PRODUCTION PLANT GOAT "MILK AND CHEESE"

INNOVATIVE MARKETING SYSTEM: 21ST CENTURY DAIRY



HARVEST



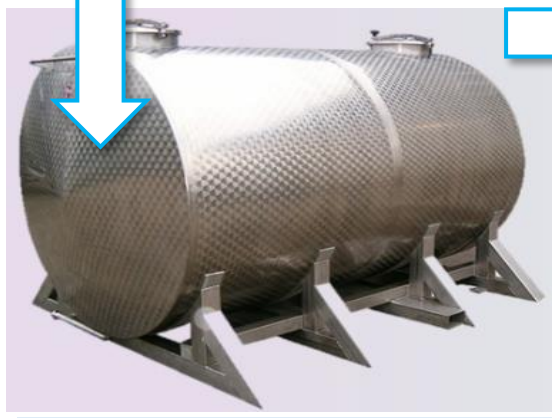
PASTEURIZED



SALES UNIT "VENDING"



ELECTRIC COLLECTION TRUCK 600 LT



TANK



MILK AT MARKET



4.11 INVESTMENT IN LABORATORY TO PRODUCE MAPUCHE MEDICINE



4.11 INVESTMENT IN MAPUCHE LABORATORY AND PHARMACY

Processing, Production and Marketing MAPUCHE MEDICINAL NATUROPATHY.





4.12 INVESTMENT HONEY INDUSTRY (Certification of origin)



4.12 HONEY INDUSTRY INVESTMENT





**caleta
milagro**
cawñalbuhe

San Juan de la Costa
Osorno / Chile

4.13
INVESTMENT
WOOD INDUSTRY
CHIPPER - PELLETIZER - AGLOMERATES



4.13 WOOD INDUSTRY INVESTMENT



PRESS FOR
AGLOMERATES





5
**INVESTMENTS FOR THE
GENERATION OF ENERGY**



5. INVESTMENTS FOR ENERGY GENERATION

- The capacity of wind turbines varies from one model to another.
- These types of mills can produce up to 6 megawatts per year, energy that could supply thousands of homes. Regardless of its size, the inside of the windmill is made up of different elements that serve to generate energy.
- Some of this equipment works with two nominal powers: 1,500 kW and 3,000 kW.
- The nominal power is what the machine generates when operating at maximum power.
- Consequently, an AW3000 type wind turbine that operates for about 2,500 hours a year (a wind potential considered average, although there are sites that exceed 4,000 hours), will produce 7,500 MWh of electricity, equivalent to the consumption of more than two thousand homes.
- Wind energy is stored with liquid air: In its charging phase, the energy extracted from renewable sources is used to liquefy atmospheric air, which is stored at 190°C in a thermally insulated tank. Then, upon discharge, the stored energy is recovered by evaporating the air that expands in turbines

GENERATION Y DISRIBUTION OF ENERGY



PANELES DE ENERGÍA SOLAR

- Each installation will have solar panels that will reduce electricity consumption.
- The project includes the construction of a plant to produce solar energy in support of wind energy.
- All facilities that operate in the project will have to promote the use of alternative energies





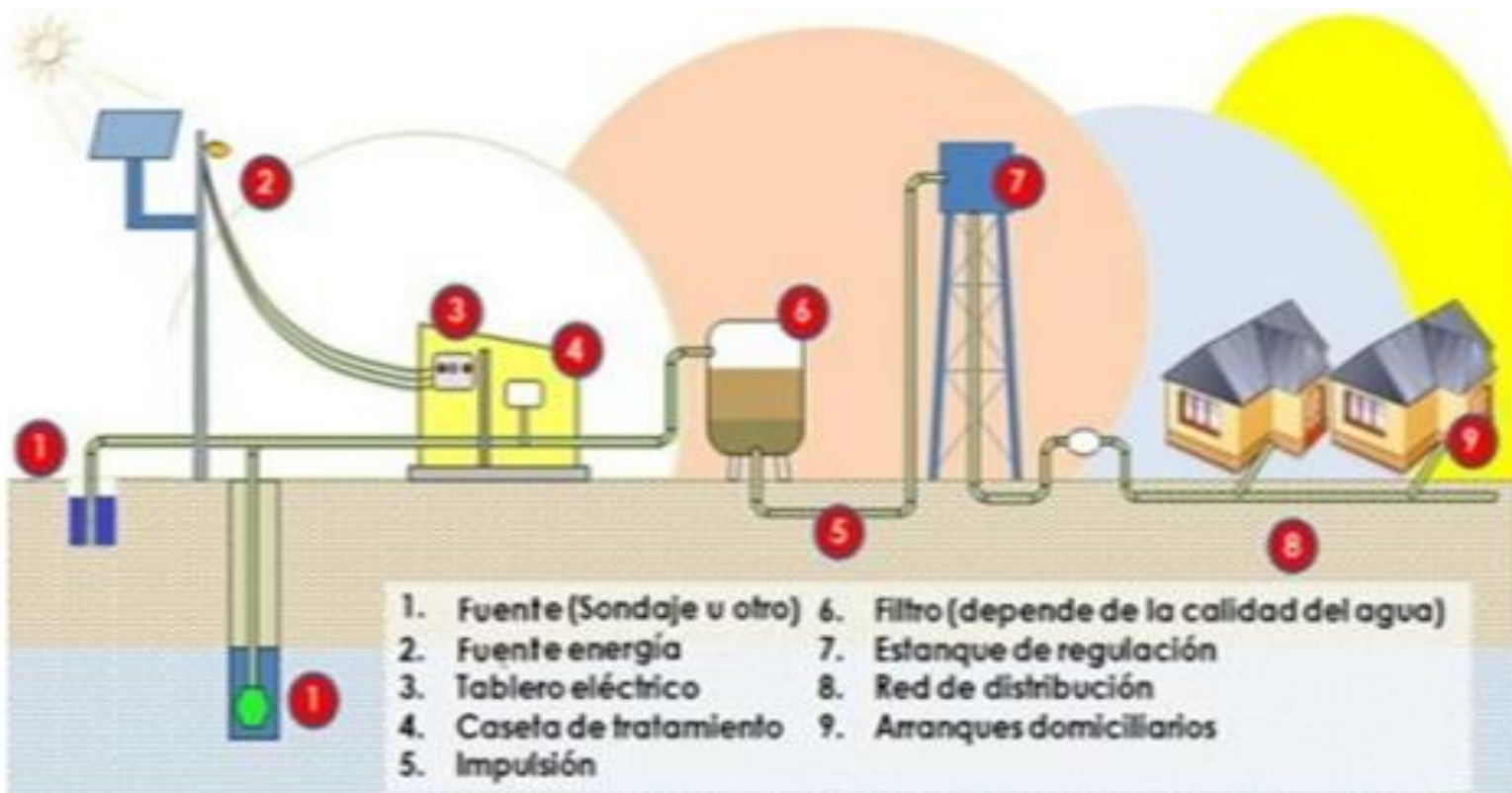
6 INVESTMENTS FOR THE GENERATION DRINKING WATER



6. INVESTMENTS FOR THE GENERATION OF DRINKING WATER

WATER SUPPLY

The construction of APR - Rural Potable Water is contemplated, which, strictly speaking, is a central collection, purification and distribution of water to the different departments of the project. It will seek to bring the water supply to the consumer in optimal hygienic conditions.



It will be sought that **ALL THE WATER CAPTURED AND POBILIZED WATER** used will be treated for its subsequent return to natural channels.

The technology is absolutely environmentally friendly and will allow the generation of value-added sludge and clean water for irrigation of green areas of the same project.



GENERAL SUMMARY INVESTMENTS IN INFRASTRUCTURE





¡ GRACIAS !

