

SALTWORKS PROJECT

REPORT OF  
THE ENVIRONMENT AND TOURISM ANALYSIS  
OF STRUNJAN SALT PAN



2007-2013

cooperazione territoriale europea  
programma per la cooperazione  
transfrontaliera

**Italia-Slovenia**

evropsko teritorialno sodelovanje  
program čezmejnega sodelovanja

**Slovenija-Italija**



Investiamo nel  
vostro futuro!

Naložba v vašo  
prihodnost!

[www.ita-slo.eu](http://www.ita-slo.eu)

Progetto cofinanziato dal Fondo europeo di  
sviluppo regionale

Projekt sofinancira Evropski sklad  
za regionalni razvoj

Portorose, 9.7.2012

## ENVIRONMENT TOURISM ANALYSIS REPORT

1. TERRITORY FRAMEWORK .....	4
2. LOCATION OF THE SALT PAN .....	4
3. SITE AND ORGANISATION .....	7
3.1 Site and Organisation description .....	7
3.2 Nature protection supervision .....	8
4. HISTORICAL, CULTURAL AND NATURAL HERITAGE.....	9
4.1 History.....	9
4.2 Cultural heritage.....	9
4.2.1 <b>Natural heritage</b> .....	12
4.2.2 <i>Plantes</i> .....	12
4.2.3 <i>Animals</i> .....	13
5. PRESENT ACTIVITIES IN THE SALT PAN .....	15
5.1 Salt production .....	15
5.2 <b>Activities during the all year</b> .....	15
5.2.1 <i>The area of evaporation</i> .....	15
5.2.2 <i>The crystallization area</i> .....	15
5.3 Tourism .....	21
6. ENVIRONMENT REVIEW .....	23
6.1 <b>Environmental aspects of salt production</b> .....	15
6.1.1 <i>Energy consumption for water pumps and for salt harvest</i> .....	22
6.1.2 <i>Results of the analysis on entering waters or on salt</i> .....	23
6.1.3 <i>Types of means of transportation for salt to the salt factory</i> .....	23
6.1.4 <i>Type of salt packaging</i> .....	23
6.2 <b>Environmental aspects of tourism activities</b> .....	27
6.2.1 <i>Periods of visits and numbers of visitors divided by month three years</i> .....	24
6.2.2 <i>Carrying capacity</i> .....	24
6.2.3 <i>Visitors center</i> .....	25
6.2.4 <i>Main characteristics of salt pan tourists</i> .....	28
6.2.5 <i>Main characteristics of the tourists of the surroundings</i> .....	28
6.2.6 <i>Identification of all tourism and leisure services</i> .....	29

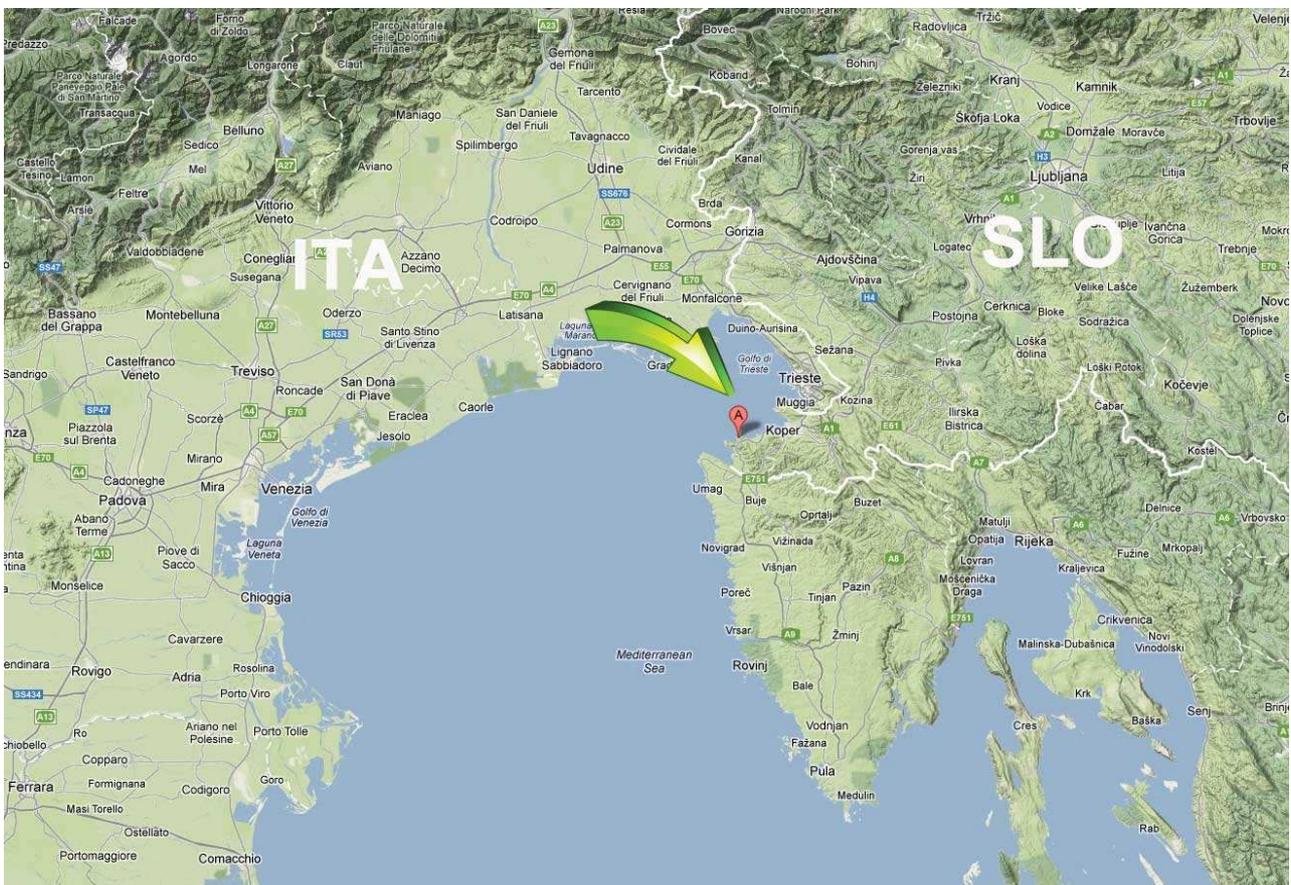
6.2.7 Identification and analysis of all the accesses and walking paths.....	30
6.2.8 Review of all the infrastructures/facilities, signals system, promotional material.....	32
6.2.9 Connection with other local initiatives and tourists sites.....	33
10. CONCLUSION.....	23

## 1. TERRITORY FRAMEWORK

## 2. LOCATION OF THE SALT PAN

Strunjan is a coastal village on Slovenian coast between Izola and Piran. It is situated in the Strunjan bay, in the Strunjan valley and on the sunny slopes of the hill Ronek (116 m) which on the north steeply drops to the sea and ends with a high flysch cliff. It consists of small villages Karbonar, Marčana, Pretski grič, Ronek and St.Spirit.

At the end of the bay are situated Strunjan salt pans, which were formed at a slightly raised flat land created by a stream Roja. Strunjan salt pans are the smallest and northernmost salt pans in Adriatic. Nature park Strunjan measures 429 ha. The Strunjan salt pans are covering 19 ha of the area.



Picture 1: Location 1



Picture 2: Location 2



Picture 3: The location of the borders of the Landscape park Strunjan



Picture 4: Strunjan salt pans

### 3. SITE AND ORGANISATION

#### 3.1 Site and Organisation description

Nature park Strunjan is an area with a pronounced high-quality and long-term interaction of human and nature, with a high ecological biodiversity and landscape value. Strunjan Landscape Park covers a large part of Strunjan Peninsula, protected since 1990 at the municipal level and on the state level since 2004.

In 2009 Slovenian government established an institution in order to protect the natural values and to preserve biodiversity and landscape diversity. For the Strunjan Peninsula area was established specific act which regulates the legal status and organizational issues related to its operation. Public institution Nature park Strunjan perform protection, technical control and management tasks.

Management of Public Institute Nature Park Strunjan is defined by the Statute of Nature park Strunjan and the rules of Council of Landscape.

Strunjan Salt pans are a part of the Nature Reserve Stjuža, which consists of a lagoon Stjuža, the old natural fish farm, which operated from 1912 until 1969.

Protection regime in Nature Reserve Stjuža provides;

In the Nature Reserve Stjuža is prohibited:

1. Changing the water regime, except for the protection of natural resources, biodiversity conservation, ecological or other justifiable reasons;
2. Destroy, damage or take out microbial cover of the bottom of the salt pan basins, facilities and equipment for the traditional salt production.
3. Carry out earthworks and construct facilities, except for activities as specified in the 11th and 12th point of this regulation;
4. Implementation of energy water;
5. Impose advertising or other signs or lighted signs, except for the designation and presentation of the park;
6. Modify existing structures of the lagoon bottom, except for the protection for the natural values and biodiversity conservation, ecological or other justifiable reasons;
7. Artificially lighten animals, their habitats, shelter or other important parts of the habitat;
8. An economic use of natural resources, except for traditional salt production
9. Fishing and cultivating marine animals (mar culture);
10. Taking the wild plants and animal species from nature;
11. Organize public meetings and public events which could endanger the condition of habitat types and species.
12. Staying in contrary to the prescribed conditions of visiting and staying in the park;
13. Camping

14. Anchor any type of vessel or sail by a motor-driven vessel, except at designated areas in accordance of the management plan;
15. Making fire

4/11

(2) Notwithstanding of the 10th point of the previous paragraph, plants and animals can be taken from the wild for scientific research and educational purposes only with previously agreement of the Institute of the Republic of Slovenia for Nature Conservation

(3) The opinion of the threat from the 11th point of the first paragraph of this regime can only be given by the Institute of the Republic of Slovenia for Nature Conservation

(4) In the Nature Reserve Stjuža is allowed to use vehicles and motor-powered vessels in accordance with the conditions set by the park management plan.

Public institution Nature park Strunjan is cooperating with Institute of the Republic of Slovenia, which provides professional guidance and opinions and help us protect nature.

### 3.2 Nature protection supervision

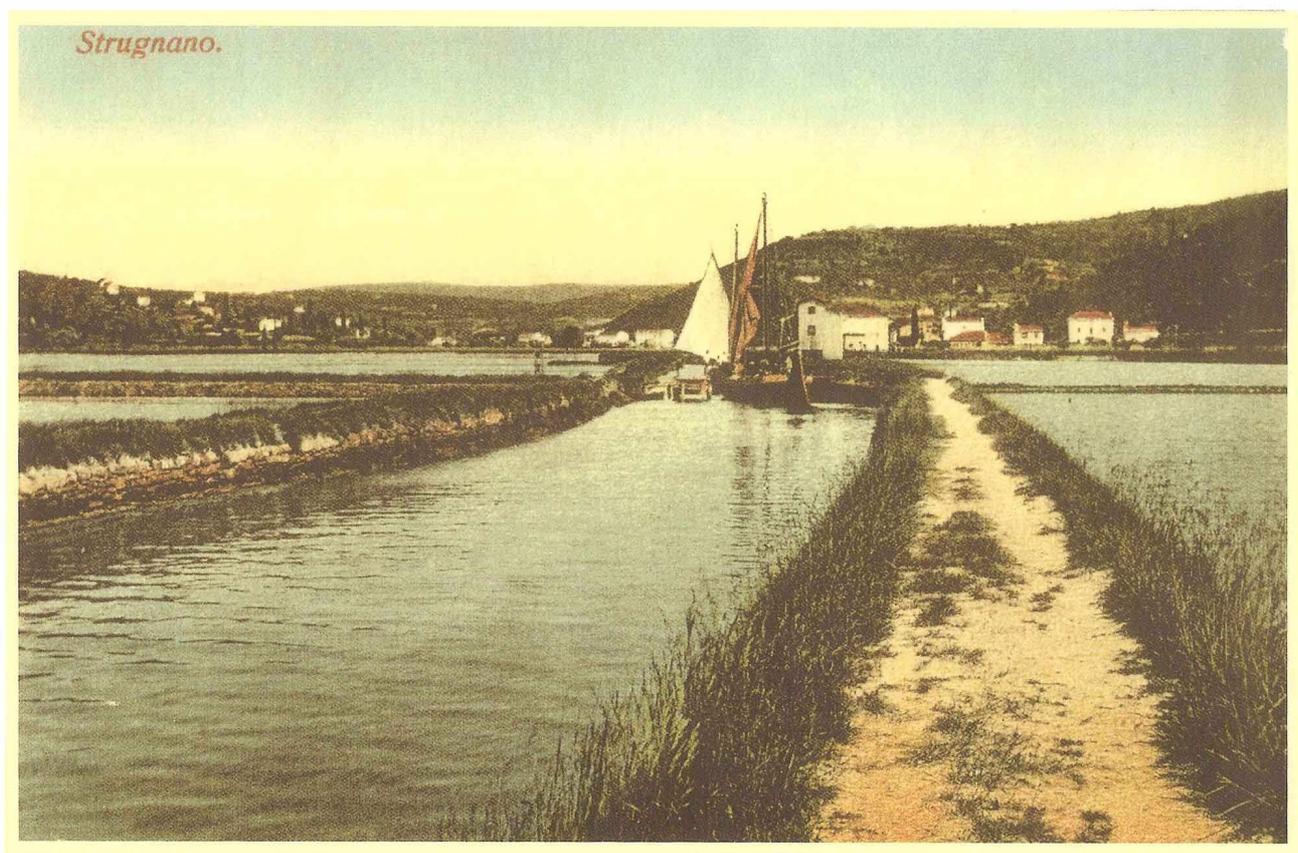
Nature protection control in the Nature park Strunjan is being performed by rangers. On Saturdays and Sundays they control 4 hours per day and from Monday to Friday there is 2 hours control. In Public Institute Landscape park Strunjan only one person has the conditions to issue penalties for violations.

## 4. HISTORICAL, CULTURAL AND NATURAL HERITAGE

### 4.1 History

It is not known when and how the Salt pans were formed on the northern shores of the Adriatic. Roman historians and geographers have never mentioned it. Although, there is a presumption that there were relatively good conditions for the formation of Salt pans already under Roman authority. We can not find any source to prove this from the period of the first century after the collapse of the Western Roman Empire.

First evidence of existence of salt pans in this area is the statute of the town of Piran from year 1274 where Strunjan, Sečovlje and the salt pans of Lucija are mentioned. Salt pans of Lucija have been abandoned in the 60's of the 20th century. City statute contained a few information about regulation of salt pans and the right of the municipality in the production and salt trade.



Picture 5: Old postcard of salt pans

### 4.2 Cultural Heritage

Long term exploitation of the area for the production of salt have left behind a rich cultural heritage. The preserved salt pans with salt production architecture are considered as a monument of human hands, technological skills and esthetic taste and as a monument of economic activity, which led to

the development of Piran, the most beautiful urban settlement on the Slovenian coast. According to archival data, there were still 15 owners of salt field and more than 15 salt-pan houses at the end of 18th Century. Even at the end of the last century there were more houses than today. According to a legend we know, that even on the beginning of 20<sup>th</sup> Century there were the ruins of buildings, from which material was used for the reconstruction works.

The Strunjan salt pans have strong connection with people with a strong identification with the environment in which they live. The locals know what distinguished and characterized their place and are proud to talk about the tradition of salt pans.

Strunjan salt pans are monumental complex, consisting of salt houses, barracks and salt basins. They are the most important ethnological monument in Strunjan.



Picture 6: Crystallization basin

According to oral tradition, the salt pans house number 152 dates in the 17<sup>th</sup> or 18<sup>th</sup> Century. Today is used for storing salt pans tool. It is an example of typical salt pans architecture. Sometimes the ground floor was used as warehouse of salt, first floor was a living place for salters family. There are still visible remains of wall paints and wall niches in which there were shelves once. The building was restored in 1979.



Picture 7: House number 152

Number 153 was, by the oral tradition, built between 1900 and 1910, probably formed on the foundations of older buildings. Is the most original type of salt-houses known for the area of salt pans. In the ground floor is a cellar, on the first floor are a living room, a bedroom and a kitchen. The entrance leads from external stone stairs which lead to Balladur.



Picture 8: House number 153

Salt house with no number was probably built at the beginning of the previous century during the reconstruction works in the salt pans, on the basis of an older building. Today there are two rooms for salt pans workers and in one room there is the water pump.



Picture 9: House with no number

In the salt pans are also small wooden salt barracks for daily rest for workers.

The salt pans were at the beginning of this century adapted to more modern method of salt production. In 1904 the Austrian government reconstructed Strunjan salt pans. Instead of the former salt fields where the salt was produced independently of one another, they built one salt pans of the same area as before. They have joined the crystallization basins in one place because with this change was possible to collect salt more economically. Wind pumps, which were invented in the second half of the last century by the Piran salt pans and were used to move the brine from lower to higher lying basins, was replaced by the gas pumps. In time of Italian authority the Strunjan pans were reconstructed in a way that the basins of crystallization where divided into two parts and introduced a daily harvest. This process has remained the same until today.

#### **4.2.1 Natural heritage**

Strunjan Peninsula is a great natural heritage pearl of the Slovenian coast. Climate in park is Sub-Mediterranean which is characterized by hot summers and mild winters. On this climate adapted different flora and fauna. Interesting are habitats of *Myrtus communis* (15 plants) and *Arbutus unedo* (12 plants).

Strunjan salt pans represent an important exceptional living environment with an interesting plant and animal species that have adapted to high level of salinity. Between sea and land we can found different areas with fresh, brackish, sea salt and even water saturated with salt.

#### **4.2.2 Plants**

Typical plant species of salt pans are Halophyte plants, which need large amounts of salt for their growth. Halophytes are divided into true and facultative halophytes, which means that facultative

halophytes transfer a certain amount of salt (egg. *Tamarix*), but true halophytes just need salty soil for their growth (egg. *Salicornia*).

Some halophytes contain the specified amount of salt in their tissue, which reduces the pressure in the structure of plants and the plant can easier pump water from the soil, because the soil is hydroscopic and bound moisture to the soli.

On Strunjan salt pans in different habitat types can be found 16 different halophytes such as *Sarcocornia fruticosa*, *Artemisia caerulescens*, *Atriplex prostrata*, *Spergularia marina*, *Suaeda maritima*, *Suaeda maritima*, *Crithmum maritimum*, *Salicornia europea*, *Aster tripolium*, *Inula crithmoides*, *Limonium angustifolium*, *Parapholis incurva*, *Puccinellia palustris*, *Juncus maritimus*, *Ruppia cirrhosa*, *Atriplex portulacoides*.



Picture 10: Halophyte plants

#### 4.2.3 Animals

Strunjan salt pans provide habitat for different interesting animals. On dikes can be found a great number of insects and reptiles such as *Podarcis sicula campestris* and *Podarcis muralis*.

Typical animal on salt pans is *Artemia parthenogenetica*, barely a centimeter-sized bright red species of plankton. To the high salinity of the water in the basins is also adapted fish *Aphanius fasciatus*. In the water are also common crabs like *Carcinus aestuarii* and *Upogebia pusilla*.

Water in basins and channels are rich of molluscs and other invertebrates. In the bigger channels are found different fish species. The most common are different species of *Mugilidae* as well as bass, bream, eels and other invertebrates.

In the all area in the Nature Park Strunjan we can often or occasionally see some 200 different bird

species. At the salt pans are the most common *Larus ridibundus* and *Larus cachinnans*, *Egretta garzetta*, *Ardea alba* and *Ardea cinerea*. Characteristic of Strunjan salt pans *Larus melanocephalus*, which populations counts around 300 and occurs every summer at the salt pans. There can also be found *Himantopus himantopus* or *Tringa nebularia*. Of the most colorful birds in the salt pans can be exposed the *Alcedo atthis*.

Natural Heritage of salt pans is not fully explored, while so far only habitat types have been identified.



Picture 11: Some salt pans animals

## 5. PRESENT ACTIVITIES IN THE SALT PAN

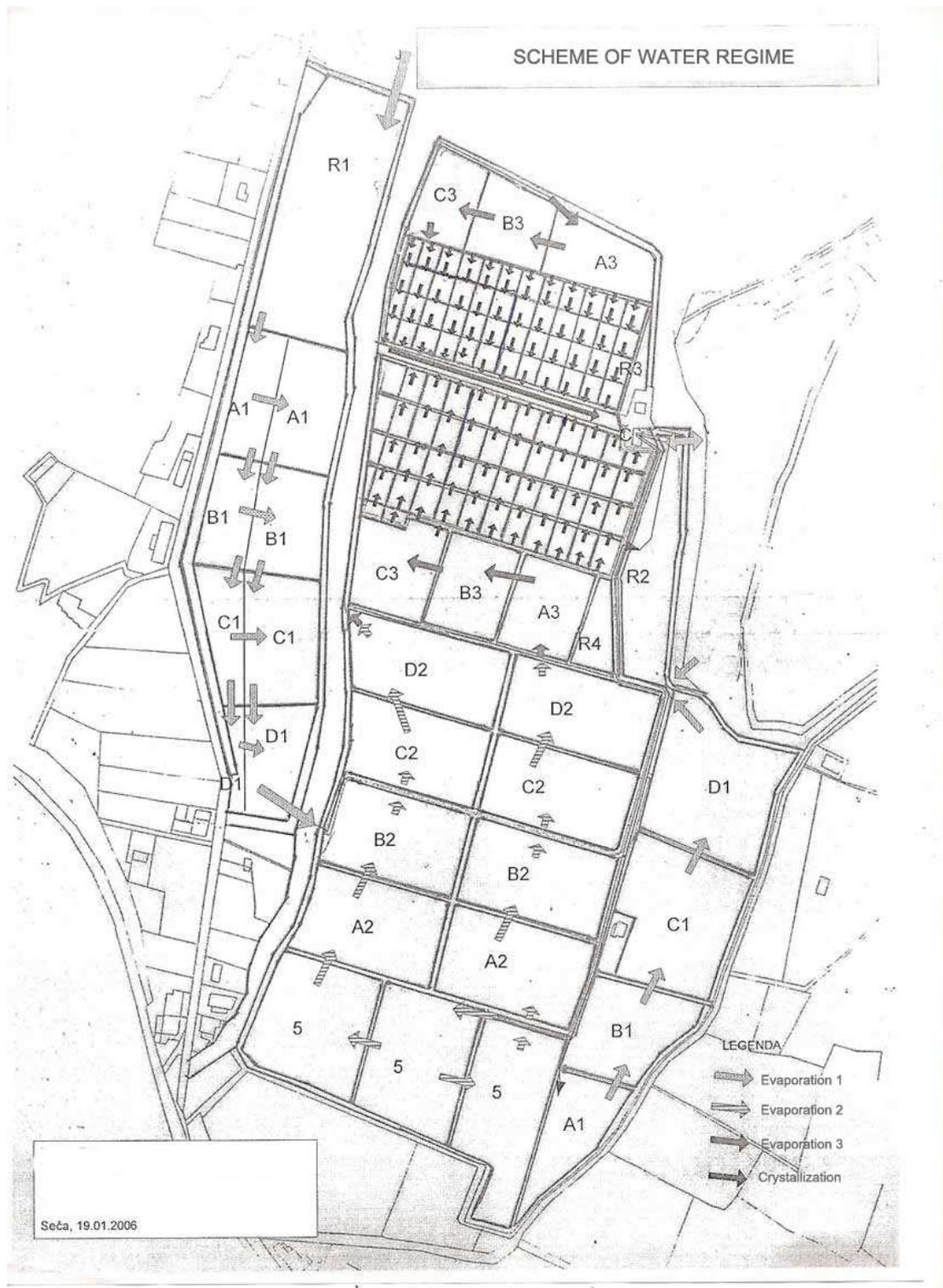
### 5.1 Salt production

#### *5.2 Activities during the all year*

Some saltworkers say, that the salt is harvested in winter. This is not true but they want to say that you have to work on salt pans throughout the year doing maintenance work and take care of water regime. The salt is harvested sometime from July to September, depending on weather conditions. The entire area consists of concentration and crystallization areas, water tank, large and small channels and water pump.

##### *5.2.1 The area of evaporation*

Sea water has a concentration of 2-4 baume. Through the main channel tide water fills the first reservoir. From there the water is pumped into the first area of concentration, where the sea water concentration increases up to 8 baume. After that the water is pumped into the higher second area where the water concentration increases to 14 baume. The water is pumped into the third area where the water concentration increases to 20 baume. After this process the deeper basins (reservoirs) are filed. From there the water is pumped to a crystallization area.



Slika 12: Scheme of water regime

### 5.2.2 The crystallization area

At the bottom of concentration basins is istrian clay but in crystallization basins is petola. Petola is a 2 cm thick layer where algae (cyan bacteria), gypsum and minerals is cultivated. It prevents mixing sea mud with salt. Process of salt harvesting is preserved only in Sečovlje and Strunjan salt pans and originates from 14<sup>th</sup> centuries and it was invented in Island Pag in Croatia.

It is necessary to maintain the entire salt pans area throughout the year. In april the crystallization basins have to be fertilized with salt-pan mud, derived from the Sečovlje salt pans. This process accelerate reforestation grow of cyan bacteria. In June, when the concentration of the salt water is 14 baume, calcium carbonate and at 20 baume gypsum are being extracted from sea water. The “winter” petola is green smooth and soft and because of that process convertes into the “summer” petola, which is black, coarse, rough and compact. So prepared petola is ready for harvesting salt.

On the end of the season of salt production the petola is a little bit damaged and the saltworkes have to sanitize the damage and bubbles caused by gas under the petola. In order to stabilize or homogenize petola the saltworkers have to digg a few centimeters into the bottom and prime the damage with a salt pan mud.

Over the winter the saltworkers have to maintain the dams, channels, locks and other wooden parts. Crystallization basins can be dry only a couple of days because algae (cyan bacteria) dries and dies.

At the pans are regularly employed 2 persons, but occasionally some of the saltworkers come to work from Sečovlje pans. In summer two people rent a salt field.

On the whole area there are 29 evaporation basins and 4 reservoirs. The crystallization area consists of 4 salt fields. Each salt field is composed by 24 crystallization basins.



Picture 13: Salt harvesting process 1



Picture 14: Salt harvesting process 2



Picture 15: Salt harvesting process 3



Picture 16: Tools



Picture 17: Salt from Strunjan salt pans

### 5.3 Tourism

Visitors of the salt pans are allowed to walk only around the salt pans. The area is very small and vulnerable in the meaning that it is possible that visitors can damage infrastructure. Moreover, this is an area of rare and endangered plant and animal species. Also due to the process of production unrefined table salt is not allowed to walk into the crystallization area.



Picture 18: Allowed walking paths for visitors

Visitors can also access the salt pans with the boat. The pier is only 200 meters away from the salt pans.

Public institute Landscape park Strunjan provides guiding tours to previously announced groups around the entire park. If the group decides to visit the entire two hour guiding tour they stop on salt pans only for 30 minutes. In that time visitors learn only the basic characteristics of the salt pans. Due to the nature protection regime and better interpretation of nature, one guide can guide up to 30 people. Exceptionally allowing up to 35 people.

If the group decides to visit only salt pans, guiding lasts 1 hour. The meeting point is on the main parking place or on the pier. The first stop is on the concentration area, where the visitors get to know water regime and they are informed about the history, flora and fauna. Later on, on the

crystallizing area they get the information about salt harvesting.

Pricelist for guiding

Service		Slovenian language	In foreign language
Two-hour guiding Nature park Strunjan (salt pans-lagoon-cliff)	adults	6 €	7,8 €
	young people to 18 years	5 €	6,50 €
	Students with confirmed student card	5 €	6,50 €
	seniors	5 €	6,50 €
One-hour guided tours on salt pans with a more detailed explanation of traditional salt production	Adults, young people to 18 years, students with confirmed student Card, seniors	3 €	3,90 €

## 6. ENVIRONMENT REVIEW

### 6.1 Environmental aspects of salt production

#### *6.1.1 Energy consumption for water pumps and for salt harvest*

We find only one electric pump on salt pans with power of 6KW. Mostly is used during the period from May to September and it works on average 8 hours per day. This calculates to 1200 hour.

From October to April, an average usage of water pump is one hour per day. This calculates to 1415 hours.

In three years the water pump was operating approximately 4245 hours.

Because the salt is harvested manually, the energy consumption for collecting the salt is void.

#### *6.2.2 Results of the analysis on entering waters or on salt*

The salt water control is carried annually when the water is being poured into the concentration area. In the sea water are reviewed mineral elements, pH and order elements which can determinate the adulteration of sea water, which would be harmful.

So far they have never found that sea water not be appropriate to obtain table salt.

Each saltworker collects salt on small storage before the salt pans. Based on organoleptic, physical and chemical characteristics of each collected salt is determinate for further use and stored separately by purpose.

Before the dispatch to the warehouse a review of the appropriateness and purity of the warehouse itself is done and also a review of the equipment that is intended to take away the salt. On stored table salt is performed an average sample and made the whole analysis of heavy metals.

The entire process of production and processing salt packaging is done in accordance with HACCP requirements. Quality control procedures and care of the salt is done by internal control by the Institute of Public Health of Koper. The Piran salt, the salt with the geographical origin, is specially controlled by the authorized certification body (Bureau Veritas), Ministry of Agriculture, Forestry and Food.

#### *6.1.3 Types of means of transportation for salt to the salt factory*

The salt is transported by transportation van which can impose 15 tones of salt at once. Main storage is 9.5 km away from the salt pans. The quantity of salt transported to the storage per year

depends on the quantity of produced salt. In the last three years, the total salt amount of produced salt was 512 tons, which means that the transporting vehicle has to drive the distance of approx. 665km.

#### 6.1.4 Type of salt packaging

The salt is transplanted, dried, milled, packed depending on the type of salt and for what purpose is used. To some they add potassium iodide. Salt flower is not processed and is checked and packaged by hand.

Types of salt are:

- The “First salt” is collected first and contains about 98% NaCl and at least Mg and Ca and other minerals
- “Traditional salt” is collected second and contains about 97% NaCl and little more Mg and Ca and other minerals.
- “Piran salt” has ccc 95% NaCl and a maximum of Mg and Ca and other minerals.
- Salt flower contains 97-98 NaCl and amount of Mg and Ca and other minerals somewhere between First and Traditional salt.
- Industrial salt is determined by a technologist and contains amount of impurities and is used for industrial purposes and not for consumption.

Table salt is not refined. The amount of table salt minerals depends on what the concentration of salt brine is collected. The first is collected Salt flower, then the First salt and after the Traditional salt. The Piran salt is collected the last.



Picture 19: Traditional salt



Picture 20: Salt flower

## 6.2 Environmental aspects of tourism activities

### 6.2.1 Periods of visits and numbers of visitors divided by month three years

Number of guided visitors from the 2010 - 2011 years:

Year	Numbers of visitors
2010	615
2011	423
2012 (from Jan – Jun)	665

This year we had already 665 guided visitors from January to June. We have detected a large increase of visitors in compared to the previous years.



Picture 21: Nature interpretation

### 6.2.2 Carrying capacity

In the previous section where presented only the guided visitors of the salt pans because other visitors cannot move freely inside the salt pans. There are also warning notices on informational signs.

Throughout the year are occurring some violations, mostly in the period from spring to autumn. We do not have data on the number of people moving in restricted areas so we can not identify negative effects on flora and fauna also because we do not have enumerated the flora and fauna yet. In the future we aim to start with regular monitoring.

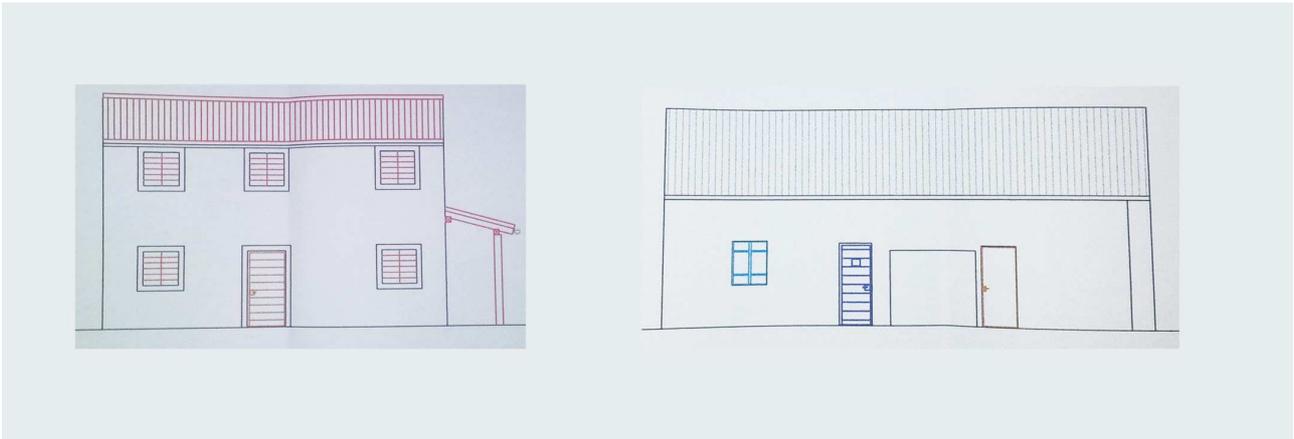
Visitors can leave their cars at a large parking place 200 meters from the salt pans. Saltworkers leave their cars at the entrance of the salt pans. The only noise is caused by loading and transporting the salt to the warehouse.

### *6.1.3 Visitors center*

At present moment we do not have a visitor center, but the Public Institute Landscape park Strunjan was successful at the Tourism Infrastructure Project - Raising the Competitiveness of the tourism economy. To the end of 2013 the Institute will renovate two old salt pan houses. In the ground floor of left house (picture number 21) will be visitors center and on the first floor office for Institute. In the right house will be a place for saltworkers. Work will begin this year after the season of collecting salt.



Picture 22: Saltpans house before the renovation



Picture 23: Sketch reconstruction of planned salt-pan houses

My basic proposal for the info center is that the interpretation contents can be distributed according by the main characteristics of the Landscape Park Strunjan. Sea, salt pans with lagoon Stjuža, cliff, countryside and Pine alley should be pointed out. Every wall and floor would be dedicated to the interpretation of certain area. On the ground can be a glass bottom for the sea interpretation. The upper wall would be sky. Longer wall on the south can interpret salt pans with lagoon Stjuža, wall on Nord can interpret cliff, and other two walls can interpret cultural landscape with history and a Pine-tree avenue. The walls can be covered with big pictures wallpaper.

On each wall can be a large touch screen with content of specific environment with the possibility to choose different languages. Multimedia presentations would be made with the images combined with video and interactive animations.

For guided group can be, on the west wall, place for the screen (which is specially designed for this purpose and it pulls down) for playing short film of the entire park. It would be interesting to cover also wall on the Nord and West site with rollup white screen for playing 3D animation of creation Strunjan Peninsula from 40 million years ago until today.

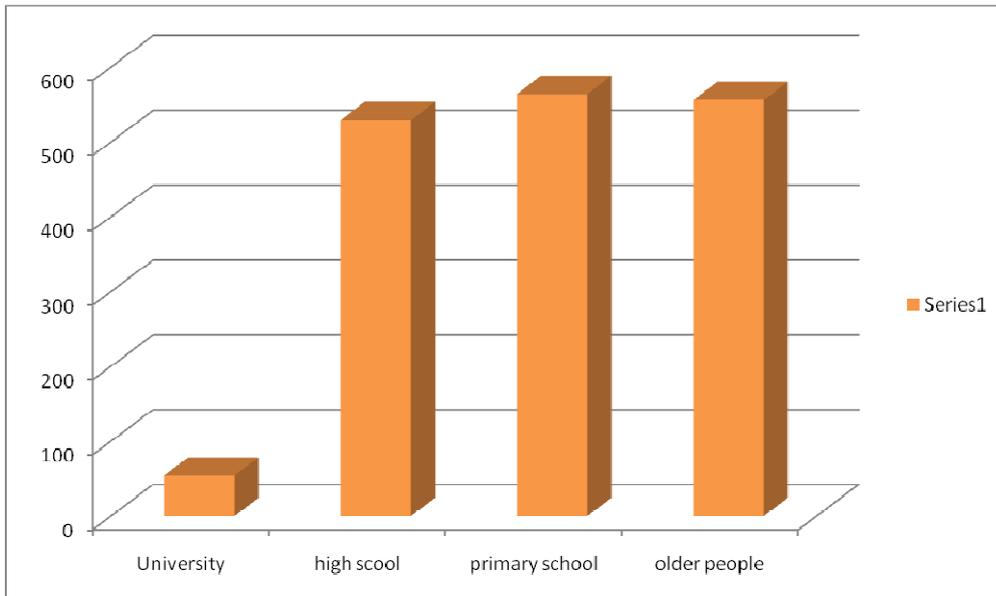
In the middle of info center can be an interactive 3D model of the entire Landscape park Strunjan and one smaller for the blind people.

In the info center can be an automat for beverages.

### 6.2.4 Main characteristics of salt pans tourists

According to the assessment guided group we can make a conclusion that the most interested are school groups, which learn about the special nature environment. From 2010 to 2012 (Jan – June) we had 54 persons from University, 529 from High School, 564 from Primary school and 556 older people.

Number of visitors by age from 2010 - 2012 (Jan - June)

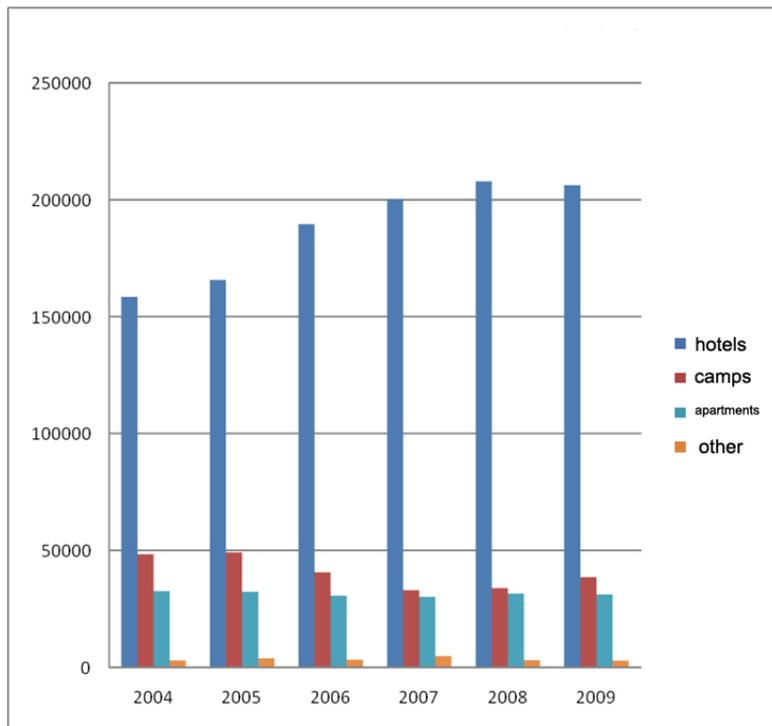


Picture 24: School group

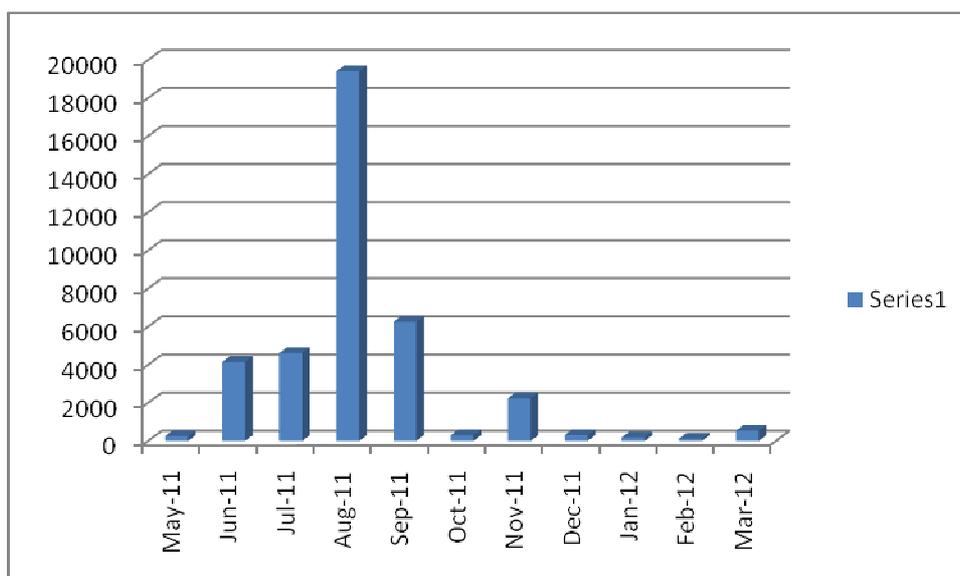
### 6.2.5 Main characteristics of the tourists of the surroundings

In the area of Strunjan Peninsula there are many accommodation facilities. Most of them are the hotels. In 2009 they had 278,679 overnight stays.

The number of overnight stays by accommodation



Number of visitors on the beach without a beach of hotel Thalasso Krka. Visitors have been counted on average 12 days per month.



### *6.2.6 Identification of all tourism and leisure services*

On salt pans there are no activities except for guided tours. The area is very small and because of that is extremely vulnerable. Accordingly to this fact it is necessary to determine activities in the terms of sustainable planning.

Potential area for some activities is only in the middle crystallization area because elsewhere there are no suitable large areas for activities. During the salt harvesting in the crystallization area only salt harvesting activity is possible but only for smaller groups up to 10 people. In this case should assist at least one saltworker and one ranger.

Wedding ceremonies can be performed only on crystallization area in the salt harvesting off-season. It would be appropriate to be present only the bride, groom, witnesses, registrar and photographer. The ritual is supposed to last only 30 minutes.

It would be interesting to develop Nature Interpretation Teambuilding but the teams should use only the paths that are allowed for visitors.

Activity “drawing workshop” can be performed where visitors draw salt pans. The artists can be positioned only outside the saline area for example on the agricultural terraces, but in this case, we should obtain the permission from the owner of the land.

The greatest potential for activities in the salt pans is in educational purposes such as “outdoor classroom”. For more interesting interpretation the guide may have some maps or tools like salinometer for the measurement of brine or small microscope for observing salt crystals.

There is a great opportunity to combine activities from salt pans with the activities that can be performed in relation with activities in the other interesting areas of nature park Strunjan. So the activities will be more interesting and will reduce negative impact on the sensitive salt pans area.

For all activities must be present at least one ranger according to the number of visitors.

House number 153 has great potential to be renovated in to museum of salt production, because in this house have been living saltworkers families over the summer months, and left a rich cultural heritage of salt production.



Picture 25: House number 153 would be appropriate for interpretation of history of salt pans.

### 6.2.7 Identification and analysis of all the accesses and walking paths

Visitors usually access to the park by car and leave it on the large macadam parking place. Parking place is distant from the pans about 200 meters.

If visitors come by foot from the south side, they can access salt pans on the west site and walk along the sea on the dike.

The Nature park Strunjan contain several routes which the visitors can use. Cycling is not allowed on the dike between the salt pans and lagune Stjuža and along nature reserve Strunjan.



Picture 24: Walking paths

Near the salt pans is the bus station. The nearest train station is in Koper.



Picture 26: The salt pans rules of behavior are also determine by the pictograms.



Picture 27: Visitors can walk only along the north dike between lagun Stjuža and west dike

#### *6.2.8 Review of all the infrastructures/facilities, signals system, promotional material*

So far on the salt pans there is no infrastructure for visitors. On two dikes there are warning signs with the rules of behavior and one information sign that interprets Nature reserve.

For now there is only one brochure of Nature park Strunjan with some information of salt pans. Considering that sometimes we are guiding only on salt pans, it would be appropriate to prepare brochure special for salt pans. There are no multimedia products but in the future the Institute is planing to produce a promotional / educational video which will be presenting salt pans.



Picture 28: Brochure of Nature park Strunjan

### 6.2.9 Connection with other local initiatives and tourists sites

On the salt pans and in the other parts of Nature park Strunjan there are currently no programs that emphasize sustainability, responsibility and eco-compatibility.

Throughout the park there is no provider of ecological housing.

Currently the Institute do not cooperate with any of the travel agencies. It may be appropriate to offer guided tours for groups to tour operators and travel agencies, hotels and other tourism operators. Up to now, the Public institute Landscape park Strunjan send offers for guiding tours only to primary and secondary schools.

Additional programs to experience the pans can also be included in the offer.

Until now, Public institute Landscape park Strunjan cooperates with the local community on organization of two events in the Nature park Strunjan. They have information stand on this events and they offer free guided tours throughout the park.

This year, Public institute Landscape park Strunjan together with the local community have organized info point. The informants are informing visitors about entire Nature park Strunjan. There are also 2 Pingo stands, posters, flyers and multimedia stand. Info center will be open from July until late August.

## 10. CONCLUSION

Strunjan salt pans are the smallest salt pans in the entire Adriatic Sea. They are 210 times smaller from the largest salt pans in the Mediterranean. In this area, the salt has been produced at least from 738 years ago and today represents a highly preserved cultural heritage. Salt pans are a part of the Natura 2000 network due to a rich biodiversity. Because of interesting cultural and natural heritage, Strunjan salt pans should be preserved for our future generations.

In a mix of commercial tourism activities in protected areas activities should be planned with a great care and considering contemporary aspects of sustainable development. Unnecessary risks of serious and irreparable damage should be avoided as much as possible.

Due to the fact that it is a very small environment where the traditional unrefined salt is produced, suitable activities are only those which are presenting no risk to the environment. To determine the negative impacts to the nature, plant and animal species must be examined first and perform regular monitoring and monitor the condition. Only so can we compare the situation before and after activities to discover the negative consequences.

Strunjan pans should represent an interesting area where every person can learn a great deal of interesting cultural and natural heritage and offers a great opportunity to raise the level of our awareness of environmental conservation.