Chiringuitos in the beach of Matalascañas

Opinion from all the Stakeholders Involved

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Apenas era abril y estabas en la playa,

ansiosa del calor que el sol suele dejarnos

cuando terminan las nubes de incordiar,

centrada en tu misión de amodorrarte

sobre la hamaca azul del chiringuito,

desoyendo los ruidos que cercaban

tus puntos cardinales ocupados por niños

lujuriosos de arena y revolcones, por madres

que gritaban en dos o tres idiomas

y, pese a los carteles de prohibiciones

varias, algún perro que otro jugaba

a la pelota. Yo, en tanto, te miraba

desde un sombrajo inmenso, diez metros más arriba,

con frío de jersey y una cerveza.

It was April but you were in the beach,

You were eager for the hot that sun gives us

When the clouds finish annoying,

Concentrated in your mission to drowsy

Over the blue hammock of the chiringuito,

Ignoring the noises that surround

Your cardinal points occupied by children

Lecherous of sand and tumbles, by mothers

Shouting in two our three languages,

And, despite the advertising posters,

Some dogs were playing with balls.

While, I looked at you,

From a big shadow, ten meters beyond,

Where I am cold and taking a beer.

Carlos Guerrero

(Original poem in Spanish)

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ABSTRACT

The restaurants and snack bars located in the andalusian beaches have been a controversial theme since a few years ago. From the National Government, according to the Spanish Coastal Act, the Ministry of Environment is trying to remove these bars out of the sand. Most of the Local Governments of coastal municipalities are against this measure because they feel afraid about financial losses. Matalascañas is a town where the "sun and beach" tourism is the main economic activity, so there are many bars located in the sand, well known as "chiringuitos".

In 2009, the Local Government, the Ministry of Environment and the Association of Chiringuitos from Matalascañas signed an agreement that included new measures for the management of these establishments. Local people and visitors of the beach were not consulted.

This research provides an efficient tool to bring out the opinion from the stakeholders that were not consulted, in order to guarantee a framework of Governance and public participation. A simple interview, compounded by open-ended questions, makes possible to know if the visitors of the beach want to maintain the chiringuitos where they are usually located and what is the information they received, mainly from Public Administrations, that supports their opinions.

INTRODUCTION

General context of the coastal issues in Matalascañas

The locality of Matalascañas belongs to the municipality of Almonte. It is the main touristic resort of the province of Huelva and its origins were the development of a touristic urbanization during the 60's of the 20th century. One of the main financial activities in the Spanish coasts was the mass tourism. Even today, coastal areas are normally associated with large scale construction and infrastructure, intensive land development and extensive urbanization. Under the protection of the "Ley sobre Centros y Zonas de Interés Turístico Nacional" (Law for Places and Zones of Touristic National Interest) from 1963, Matalascañas was declared as a Place of Touristic National Interest. The locality's morphology reflects a coastal management according to the mass tourism model. Matalascañas is a rectangular urban frame which dimensions are 1 km width and 4.5 km long, between the coastal line and the national road located in the north.

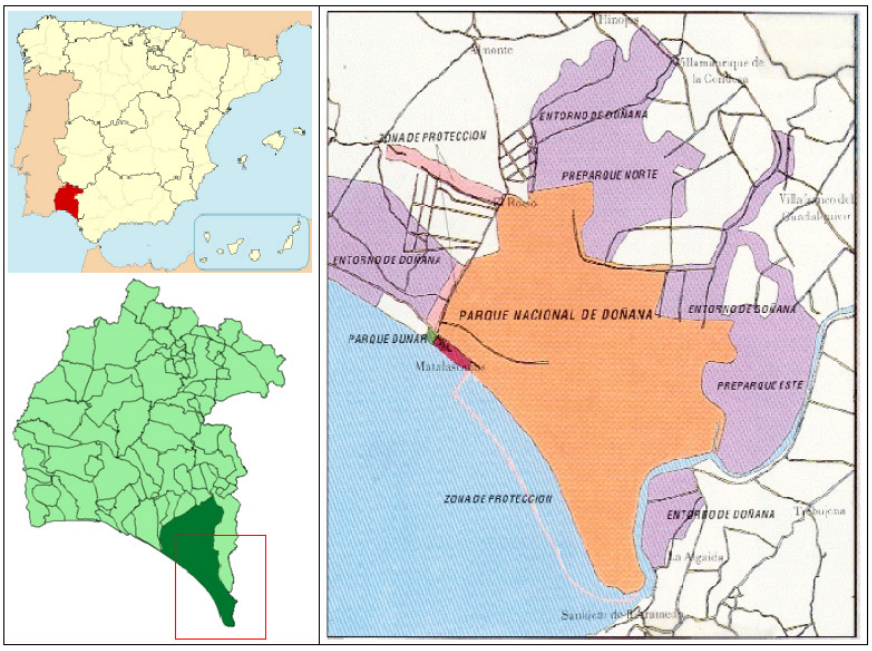

Figure 1: *Location of Matalascañas (36° 59' 36" N, 6° 32' 36" W). Matalascañas, which is in red in the map on the right side, is in the Natural Area of Doñana. Sources: Maps on the left side from wikipedia.org. Map on the right side from Spatial Urban Planing of Almote.*

Matalascañas' promotion was based on a touristic offer of "sun and beach" on an international scale. It did not achieve the expected objectives because it needed a business sector with high financial capacity which did not exist in the province of Huelva at that moment, among other reasons. Therefore, the situation tended to a strong decrease of hotel occupation due to, on one hand, low attraction capacity for foreign tourists, and on the other hand, an increase on secondary residences for people from nearby towns, especially from Seville. Since 1995, it is not possible to extend the urban space of Matalascañas because it is limited by the Natural and National Park of Doñana.

Nowadays, according to the last census of the "Instituto Nacional de Estadística" (National Institute for Statistics) in 2009, the permanent population of Matalascañas is about 2.900 inhabitants, but during the months of July and June the population rises to more of 80.000 inhabitants, even 100.000. The vacation character of the town is the reason of this large floating population. This phenomenon of intense seasonal tourism during summer, along with the intensive urbanization of the coast, favored the development of small secondary business related with tourism. Some of these small businesses are located in the seaside, e. g. sunshade and deck chair rent businesses and "chiringuitos". Chiringuitos are restaurants and snack bars usually located on the sand of the beach.

Figure 2: *One of the chiringuitos in Matalascañas. Source: Author*

Summarizing, the locality of Matalascañas is a built-up island in the heart of a space with high ecological value (Doñana) recognized on an international level. These days, the construction of secondary residences is not the financial driving force because since 1995 the urban area can not increase anymore. Furthermore, the profits of hotel industry do not replace the urban development as a driving force because there is not enough attraction capacity for foreign tourists, and hotel supplies are low. So, chiringuitos and, in general, leisure and entertainment options, especially those related with gastronomy, are the most important sources of revenue in the town of Matalascañas.

Impacts upon the chiringuitos: Legal, environmental, economic and social framework

The responsibilities and management of the chiringuitos are distributed among three administrative levels: national, regional and local.

It is the Spanish State, under the "Ley de Costas" (Coastal Act) from 1988, which has the responsibility in the management and upholding of the "Dominio Público Marítimo-Terrestre" (DPMT) that is the public (maritime) property or state territory. The zones that are included in the DPMT are the in-shore and territorial waters and the shore/beach (Fig.3)

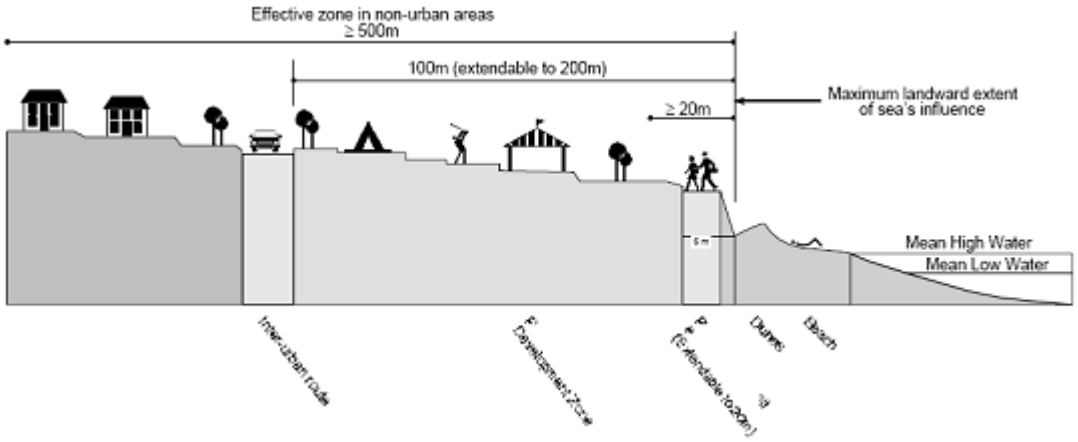

Figure 3: *Zones distinguished by the spanish Coastal Act. Source: (Malvárez, G. et al, 2002)*

The "public domain" of the beach extends from the sea up to the maximum landward extent of sea's influence, including the riversides influenced by sea tides, marshes, salt marshes, lagoons, coastal cliffs and islands in territorial waters. It is in the beach/shore where the restaurants and snack bars well known as chiringuitos are usually located. In Matalascañas, the "Dirección General de Costas" (DGC) (General Service of Management of Coasts), from the "Ministerio de Medio Ambiente, Medio Rural y Marino" (MARM) (Ministry of Environment, Rural and Marine Environment) marked the boundaries of DPMT up to the promenade, skirting around the urban zone. The DGC has to protect the DPMT, the public domain, as a free and common usage zone, but it can authorizes private business if they stick to the next requirements, which are defined by the "Reglamento de la Ley de Costas" from 1989 (Coastal Act Regulations):

- The trade usages have to guarantee the disposal of residual charges before obtaining the Public Domain occupation license.
- Establishments of beach services must be, preferably, out of the shore, and if it is not possible, they can be built as:
    - Fixed establishments, occupying less than 150 m^2 each one, with a separation of 200m between them.
    - Establishments that can be dismantled, occupying less than 20 m^2 each one, with a separation of 100m between them.

The General Management of Coasts, through its "Directrices para el tratamiento del borde costero" (Guidelines for the management of the seaside), wants to stimulate the relocation of chiringuitos in the development zone, which starts behind the promenade. This area is called "Zona de Servidumbre de Protección" (Fig. 4).

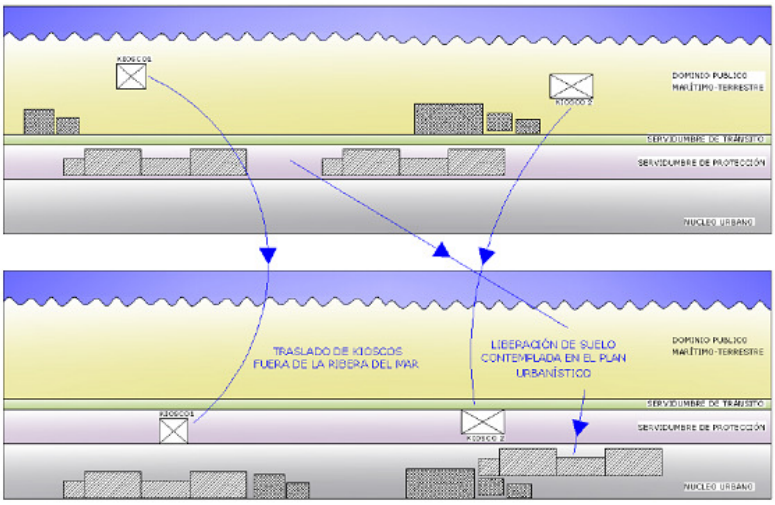

Figure 4: *Regulation of DPMT and recuperation of effectiveness of ZSP. Source: Guidelines for the management of the seaside, MARM*

The reason stated in the document *Guidelines for the management of the seaside* is that Atlantic beaches are in a delicate state of balance between sand supply and the natural forces of erosion. When the beach profile is exposed to high wave conditions, sediment near the shoreline will be transported offshore and typically be deposited in a bar (winter profile). However, the foreshore will get steeper and the shoreline will recede. During the following periods of lower wave conditions and swell, the bar will slowly move towards the shoreline and the profile will be rebuilt (summer profile) (Fig. 5)

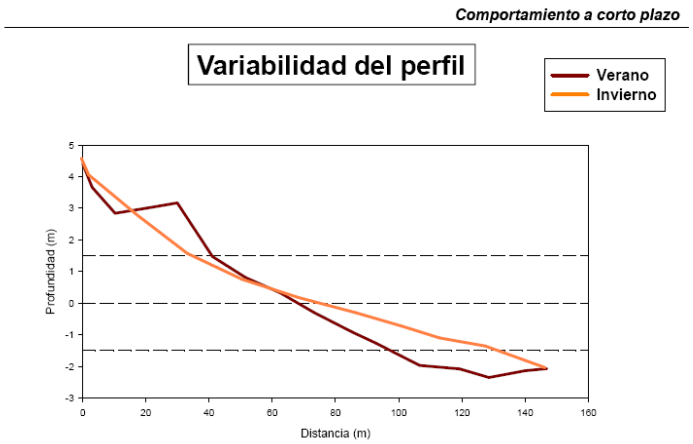

Figure 5: *Beach profile variability ("Verano" is summer profile; "Invierno" is winter profile. Horizontal axis represents the distance. Vertical axis represents the depth). Source: Guidelines for the management of the seaside, MARM*

Human intervention in the coastal zone may disrupt this balance by building in the shore. Thus, the dynamic nature of the beach profile must be taken into account. A sufficient setback is essential when designing any structures in the coastal area, because the occupation of the beach with such structures does not permit the free movement of the sediments. The coastal zone is highly dynamic and also very sensitive; any alteration on the shoreline itself may disrupt the land/water equilibrium and cause direct and indirect environmental, physical, biological, and socioeconomic effects, e. g.: Intensification of the erosion processes and increasing the effects of flood events (affecting and even destroying the establishments located on the sand, like the chiringuitos).

Figure 6: *Consequences of flood events. The sea level rose to the line formed by the sunshades. A chiringuito was destroyed in this zone. During spring and summer, a sandbar was formed in the beach front. Source: Author. Picture was took in September, 2010*

At a regional level, the "Junta de Andalucía" (Regional Government of Andalusia) is not directly in charge of chiringuitos but it has the responsibility in the spatial planning, in the good quality of maritime bathing zones, environmental health and noise pollution. It also plays an important role in the touristic sector.

In 1992, the Andalusian Ombudsman published the "Informe sobre el Estado Sanitario y Ambiental de las Playas Andaluzas" (Report of Health and Environmental

State of the Andalusian Beaches). One of the researches was assigned to evaluate the health conditions of chiringuitos. The most serious problems detected were about the disposal of residual charges. According to the Coastal Law, the trade usages have to guarantee the disposal of residual charges before obtaining the public domain occupation license. Nowadays, in Matalascañas, according to the information given by the Local Government of Almonte, there is a sewer along the coast that collects the sewage from chiringuitos and other establishments. This sewer was destroyed during the last flood events in 2009 but it was rebuilt before the Spring Break of 2010. More information about sewage and residuals treatment was impossible to obtain from the Local Government or the Local Association of Chiringuitos.

The beach of Matalascañas also has Blue Flag since 1994. The Blue Flag is an award and a system of certification of the environmental quality owned and run by the Foundation for Environmental Education (FEE). According to this Foundation, a Blue Flag Beach means that the water is clean for swimming, the beach is cleaned and inspected regularly, has a proper waste management program, has clean lavatories, is not polluted, has a first-aid kit, life-saving equipment and an emergency telephone nearby, normally has some facilities for disabled people, provides information about protected and vulnerable natural area nearby, offers environmental and nature activities organized by the local district and informs about any danger or pollution. The maritime waters of Matalascañas, since it has Blue Flag, were always qualified as “appropriate for bathing” by the “Consejería de Salud de la Junta de Andalucía” (Regional Ministry of Health of the Regional Government of Andalusia). However, the association “Ecologistas en Acción” (Ecologists in action) publishes each year the “Informe Banderas Negras” (Black Flags Report). Matalascañas is usually included in this report as an example of wrong spatial planning and water management that affect the Protected Nature Area (Doñana). This year, 2010, the report also says that the flood events showed that constructions in the shore are not sustainable. The destruction of the promenade is emphasized, but chiringuitos are not mentioned.

Figure 7*: Blue Flag's advertising poster in Matalascañas. Source: Author*

In the "Plan General de Turismo Sostenible de Andalucía (2008-2011)" (General Plan of Sustainable Tourism of Andalusia), the intensive urban development is recognized as one of the main problems in the touristic business. The construction of secondary residences makes fewer profits than hotel industry. Furthermore, due to this process that urbanized many kilometers along the coast, the attractiveness of the place decreased. However, this General Plan of Sustainable Tourism, without mentioning the chiringuitos, suggests some measures in order to promote small business in the coast. In many public events, politicians for the Regional Ministry of Tourism of Andalusia defend the chiringuitos as an emblem of the andalusian beaches, attractive for tourists, as well a source of income for the coastal towns.

At local level, Matalascañas belongs to the municipality of Almonte. The Local Government is the legal owner of the authorization that permits the installations in the DPMT. This authorization, which has to be renewed each year, is given by the MARM through DGC. That is why the Local Government grants the building, opening and operation licenses of chiringuitos. The Local Governement also has to guarantee the compliance of sanitary laws defined by the Regional Ministery of Health of Andalusia. According to the information given by the Local Government of Almonte, there are 23 chiringuitos in the DPMT in Matalascañas. On 22th of July of 2010, all

the chiringuitos obtained the local licenses. Two of them had the authorization from the MARM, while the rest were on pending decision.

Additionally, during the fall and winter seasons of 2009/10, the flood events seriously affected the chiringuitos. Even three of were totally destroyed. These establishments were rebuilt and located out of the DPMT, when it was possible, or rebuilt against the promenade. The Local Government of Almonte communicated that, due to the configuration of the urban area of Matalascañas, it is impossible to rebuild most of the chiringuitos behind the promenade, out of the DPMT. So, they are in a process of relocation, each one of them as close to the promenade as possible.

Figure 8: *Breakwaters were revealed during the floods of 2009/10, also most of the chiringuitos were affected. Source: huelvainformacion.es and diariodesevilla.es*

The National Government of Spain promised sand regeneration works in the beach of Matalascañas after the flood events, but the replenishment project is delayed until 2012. Nowadays, the promenade and the sewer of residual discharges are repaired. The Local Government is still waiting for the replenishment project and demands the regeneration of rubble mound breakwaters. This measure is supported, according to the information given by the Local Government, by the "Morphodinamic Study of Matalascañas" from the University of Huelva, where the scientific group of Coastal Geology explains that the zones which experimented lower erosion were those where rubble mound breakwaters were located.

On March of 2009, the "Servicio Provincial de Costas" (Coastal Service of the Province, which belongs to DGC), the "Asociación de Chiringuitos de Matalascañas" (Local Association of Chiringuitos of Matalascañas) and the Local Government reached an agreement and they elaborated a project for the management of the seaside. In this project, the legal and technical requirements of the establishments were expanded: The authorization can be given for 15 years, not just one year, and the fixed establishments which should not exceeded the 150 m^2 can have a basement of 50 m^2. Also a map with the new location of the chiringuitos is included. According to the information given by the Local Government of Almonte, chiringuitos will be located as close to the promenade as possible if they can not be rebuilt outside the DPMT.

Two different visions in the management of the coast: Are all the stakeholders involved in the decisions taken for the chiringuitos?

Regarding all the information already given, it is possible to separate two different visions of the coast from National and Local Public Administrations: What they understand about the beach as a planning entity influencing coastal management and, specifically, management of chiringuitos.

- Local vision: It is represented by the Local Government of Almonte and the Regional Ministry of Tourism of Andalusia. The beach is seen as a public domain and also as a leisure and free time area which attracts tourists. But the dynamic nature of the beach profile is not taking it into account or it is understood as a difficulty for the economical development. So, it is necessary to protect the establishments like chiringuitos, which special attractive is to be located in the sand, with nourishment works of the beach and the construction of breakwaters.
- National vision: It is represented by the MARM, which understand the beach as a dynamic entity and as a public domain. Coastal engineering means high costs in the construction of breakwaters, jetties and sand regeneration works in the beach.

Nowadays, it seems that the National Administration wants to reduce these costs by elimination of soft obstacles, like chiringuitos, of the DPMT.

These two visions are in opposition, but in both cases the "sand" is recognized as a natural resource with high value. On one hand, a beach with enough space of sand is less sensitive to erosion and flood events, and on the other hand, more people can stay in the sand and enjoy sunbathing, one of the main attractive for tourists in coastal towns. Probably, that was the reason why it was possible to reach the agreement between Local Government, DGC and the Local Association of Chiringuitos on March of 2009. But why the users of the beach of Matalascañas were not consulted? It could be due to a lack of experience in participatory governance process.

The research was performed because it is necessary to know the opinion from all the stakeholders, not only the Public Administrations or Local Associations of Small Business. After all, the users of the beach of Matalascañas are the ones demanding the services of the chiringuitos in the sand. For the execution of measures like relocation, or even elimination, of the chiringuitos outside the DPMT, it is necessary to know if it is coherent with what its users know, think, understand and want in the beach they choose as a holyday destination or place to live.

This research was realized to differentiate what is the predominant vision about the beach of Matalascañas in its users' opinion; whether they see the beach as an ecosystem or as a park, and depending on the predominant vision of the users, whether it is possible to eliminate the chiringuitos or relocate out of the DPMT? Finally, does the predominant vision go with enough information about environmental, social and economic consequences of the chiringuitos?

METHODOLOGY

The main purpose of the research was to find out whether it is possible, according with the opinion of the users, to take away the chiringuitos located in the DPMT of the beach of Matalascañas. In order to gather the necessary information, the next objectives were pursued:

1. To know what is the predominant vision about the beach of Matalascañas from its users.

a) To know if it is an "ecosystem vision": The dynamic nature of the profile is recognized; also, the beach is understood as a fragile and sensitive area to human intervention.

b) To know if it is a "park vision": The dynamic nature of the profile is not recognized or it is considered a problem for maintaining the establishments located in the shore; also, the beach is thought of as a park, so it is understood as a place where some services should be placed to make sure people enjoy their spare and leisure time.

2. To find out if the predominant vision goes with information about environmental problems in the coast and the legal and administrative framework related to this matter.

a) To find out whether the users have no information, or the information they have is false or inaccurate.

b) To find out if the users have any information, and if it is true.

According to the objectives explained, two hypotheses were set out. The data obtained during the research helped to confirm or refute these hypotheses:

1. The predominant vision in the users of Matalascañas is a "park vision", so chiringuitos are needed and must be maintained in the long run.

2. The users of Matalascañas have not enough information about environmental and economic impact from chiringuitos, and about their management neither.

The data collection system consisted of a structured interview. There are no precedents about the investigated matter, so it was impossible to determine an exhaustive list of answers to construct a postal questionnaire. So, the questionnaire is mainly composed by open-ended questions. The respondents were free to extend their answers, so it was possible to explore how they felt about particular topics, which gave qualitative data. Due to all respondents being asked the same questions in the same way, it was easy to replicate the interview. In other words, this method is easy to standardize, and it provided a reliable source of quantitative data.

The sample group was 55 (N=55). Due to the hybrid character of the research, with qualitative and quantitative recollection of data, it was necessary to begin with a small sample group whose answers could be coded and interpreted, and organized into a statistic analysis.

The inclusion criterion for the collection of data was “Being a visitor of the beach of Matalascañas”, including day trippers, weekend trippers and holidaymakers. Otherwise, inhabitants of Almonte and not residents in Almonte were distinguished for the inclusion criterion.

Almonte’s population is about 17.000 inhabitants. During the summer, the time when chiringuitos are open, Matalascañas can reach a population of 100.000 people. Then, residents in Almonte are 17% representative in the collection data (N=55). So, 9 interviewees were residents in Almonte, and 46 interviewees were not residents in this town.

Interviewees were found, especially, through the internet. Some messages were sent through social networks for a first contact. Later, appointments were arranged to make the interview by telephone, internet teleconferencing and videoconferencing, or face-to-face interviews. Furthermore, the interview was devised for people in the beach of Matalascañas. The interview was always made outside of the chiringuitos to avoid that an enjoyment situation of the establishment could influence their answers.

The instrument used to collect data was a questionnaire (see the attached documents "Questionnaire in Spanish" and "Questionnaire: sections and items"), which is composed by 12 sections. Each section contains open-ended questions and closed questions that collect the necessary information for 15 items.

In order to identify coherence mistakes in the interviewees' answers, two of the sections were used as control questions:

- Control 1: Sections 5 and 12
- Control 2: Sections 6 and 8

The control questions were effective because it was not necessary to eliminate any interview due to coherence mistakes that invalidated it as effective data.

Information on the positions of interviewed individuals within subgroups was also provided by collecting sociometric data: sex, age, educational level, profession or occupation, place of residence and frequency of visits to Matalascañas.

The results of the interviews were presented in two matrixes for the statistical analysis with the software program Microsoft Excel©. The matrixes were built with the numerical qualification obtain for each item. The numerical qualification was given by dummy coding to transform qualitative information into numerical variables ready for the statistical analysis. According with the information given by the respondents, a specific number was designated for each response of every item (See

the attached document "Data-Results Matrixes"). Subsequently, two variables of reference were constructed according with the items' results. The items 3, 4, 5, 7, 9 and 10 were used for the variable of reference "vision", while the items 6, 11, 12, 13 and 14 were used for the variable of reference "information". "Vision" variable coded the predominant vision in the users of Matalascañas about its beach (objective 1). The value of "vision" ranges between 0, for a total "ecosystem vision", and 1, for a total "park vision". "Information" coded the level of information of the users of Matalascañas (objective 2), so it ranges between 0, for a presence of false information or a total absence of information, and 1, for a total presence of true information.

So, the dependent variables (Y) are "vision" and "information", while the independent variables (X) are the items used for each one, which values are in the data-matrix for the dependent variables.

Variables of reference Dependent variables	**Items** Independent variables
Vision Rank value between 0 and 1 Ecosystem vision: 1 Park vision: 0 **Objective 1** To know what is the predominant vision about the beach of Matalascañas from its users	3. Being an user of chiringuitos 4. Chiringuito as a reason to visit Matalascañas 5. Knowledge and opinion about economic advantages and disadvantages of chiringuitos 7. Preferential location of chiringuitos 9. Would be an user of chiringuitos even if they are out of the DPMT 10. Would not be a visitor of Matalascañas if chiringuitos were

	eliminated
Information Rank value between 0 and 1 Absence/ false information: 0 Presence/ true information: 1 **Objective 2** To find out if the predominant vision goes with information about environmental problems in the coast and the legal and administrative framework related with this theme.	6. Knowledge about environmental impacts of chiringuitos 11. Knowledge about Public Administrations in charge of chiringuitos 12. Knowledge about Coastal Law 13. Knowledge about DPMT 14. Knowledge and opinion about negative/positive aspects from Coastal Law

Table 1: *Items for each dependent variables. Source: Author*

Analysis of variance (ANOVA) and multiple regression testing were performed to check the validity and potency of this model, which is based in the comparison of two variables of reference against different items in the data-matrix for the dependent variables.

The average values in "vision" and "information" were calculated according to the different sociometric data collected during the research. Moreover, the qualitative information collected in all the items, especially 1, 8 and 15, were used to complete the quantitative results. Their values are in the data-matrix for the independent variables.

Finally, all the information given by these results, quantitative and qualitative, allowed concluding if the hypothesis suggested can be confirmed or refuted. The results also gave new ideas that were not considered during the research.

RESSULTS AND DISCUSSION

Once the data-matrix for the dependent variables was built, analysis of variance (ANOVA) and multiple regression testing were executed.

ANOVA		
Dependent Variables	**F**	**F - Critical**
Vision	41.2291774	2.66321×10^{-17}
Information	25.0078178	1.99988×10^{-12}

Table 2: *Results from ANOVA. Source: Author*

F and Critical F are measures of the significance of the model. In both cases the F value exceeds by far the F-critical for this test when using an alpha of 0.05. This means that the chosen items (independent variables) can be used to calculate the values of "vision" and "information" (dependent variables). Correspondingly, the suggested model is significant.

REGRESSION STATISTICS				
Dependent Variables	Multiple R	R-square	Adjusted R-Square	Standard Error
Vision	0.915147389	0.837494745	0.817181588	0.063664175
Information	0.847616690	0.718454053	0.689724875	0.150634747

Table 3: *Results from Multiple Regression. Source: Author.*

Multiple R, R-square and adjusted R-square are measures of the correlation between the independent variables and the predicted value for the dependent variables. The adjusted R-square value gives the most useful measure of the success of the model. So, in the case of the "vision variable" the 82% of its value can be explained by the items 3, 4, 5, 7, 9 and 10. In the case of the "information variable" the 69% can be explained by the items 6, 11, 12, 13 and 14. The lower values for "information" probably is due to a small sample group or because it was calculated with the information from five items, and not six items as in the case of "vision". That is why

the standard error, which measures the precision of the adjusted R-square, is higher in the case of “information”.

In order to have a first approximation about the total of the results obtained, a graph which represents the average values of “vision” and “information” against the item 2 (marks, between 0 and 10, for Matalascañas) was constructed.

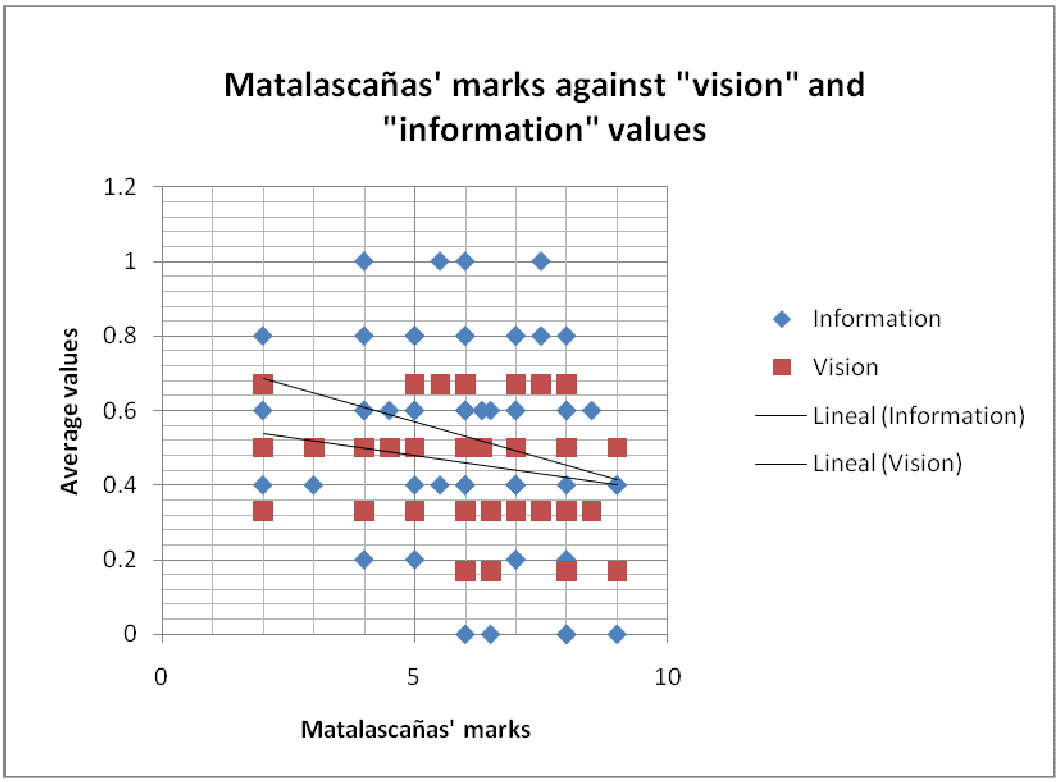

Figure 9: *Matalascañas marks against “vision” and “information” values. Source: Author*

The graph shows that the marks given to Matalascañas are higher when the values of “vision” and “information” are lower. So, in general, people well informed and with an “ecosystem vision” will mark the beach of Matalascañas with a low value. But data are dispersed in the graph. It could be because the sample group (N=55) is small, but it is better to calculate the average values for each sociometric group before accepting or rejecting the hypotheses. The results are represented in the next table.

Sociometric Groups		Independent Variables Values	
		Vision	**Information**
Age groups	**Young** (*younger than 30)*	0.48	0.62
	Adults (*older than 30)*	0.43	0.41
Sex	**Male**	0.45	0.57
	Female	0.46	0.46
Educational level	**Uneducated** *(it is only one interviewee)*	0.6	0.2
	Primary Studies	0.44	0.37
	Secondary Studies	0.45	0.45
	University Studies	0.46	0.61
Profession or Occupation	**Related with the coast and/or the environment**	0.44	0.62
	Not related	0.46	0.51
Place of residence	**Almonte**	0.5	0.49
	Others	0.45	0.53
Frequency of Visits to Matalascañas	**Daytrippers**	0.52	0.55
	Holiday makers	0.41	0.52
	Residents *(same group as "Almonte, place of residence")*	0.5	0.49

Table 4: *Average independent variables values for each sociometric group. Source: Author*

Results obtained for "vision" are mainly intermediated values for each sociometric group. It is significant that, according with the profession or occupation, even people whose job or occupation is related with the coast and/or the environment do give the same "vision" value as people whose job or occupation is unrelated.

Interestingly, the values obtained for vision are intermediate for an urban beach like Matalascañas. It was to be expected that the results would be approximate to 0 values, representing a park-predominant vision.

The qualitative data collected within items 1 and 15, which are in the data-matrix for the independent variables, will help to determine the predominant vision among the users of Matalascañas.

Respondents were asked about three characteristics that define a beach as a good-quality place to visit (item 1). Almost all interviewees (50 of them, when N=55) pointed out that "cleanliness" is the most important characteristic for a good quality of the beach. 33 respondents considered "access and infrastructures like roads into town, car parks, showers and a promenade" as another important characteristic. Also 18 people named "restaurants and chiringuitos" or "places to eat and drink or buy some food and drinks".

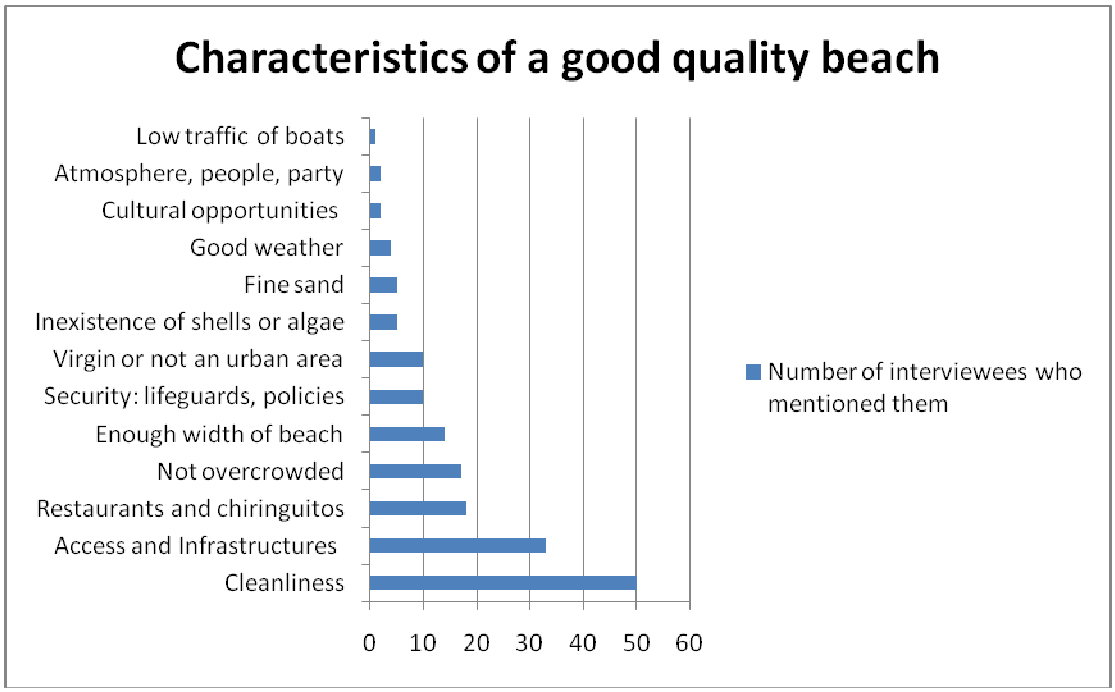

Figure 10: *Characteristics of a good quality beach. Source: Author*

When interviewees were asked about the impacts of tourism from Matalascañas in the Natural Park of Doñana (item 15), the most mentioned impact is the "rubbish", what is coherent with the results obtained with the item 1: "cleanliness" as the most important characteristic in a beach. Otherwise, the access road to Matalascañas is also mentioned by 14 people. This road is involved in a famous polemic between ecologists and the Local Government because it was constructed across the Natural Park. Finally, 13 people assure that the tourism in Matalascañas do not affect the Natural Area of Doñana.

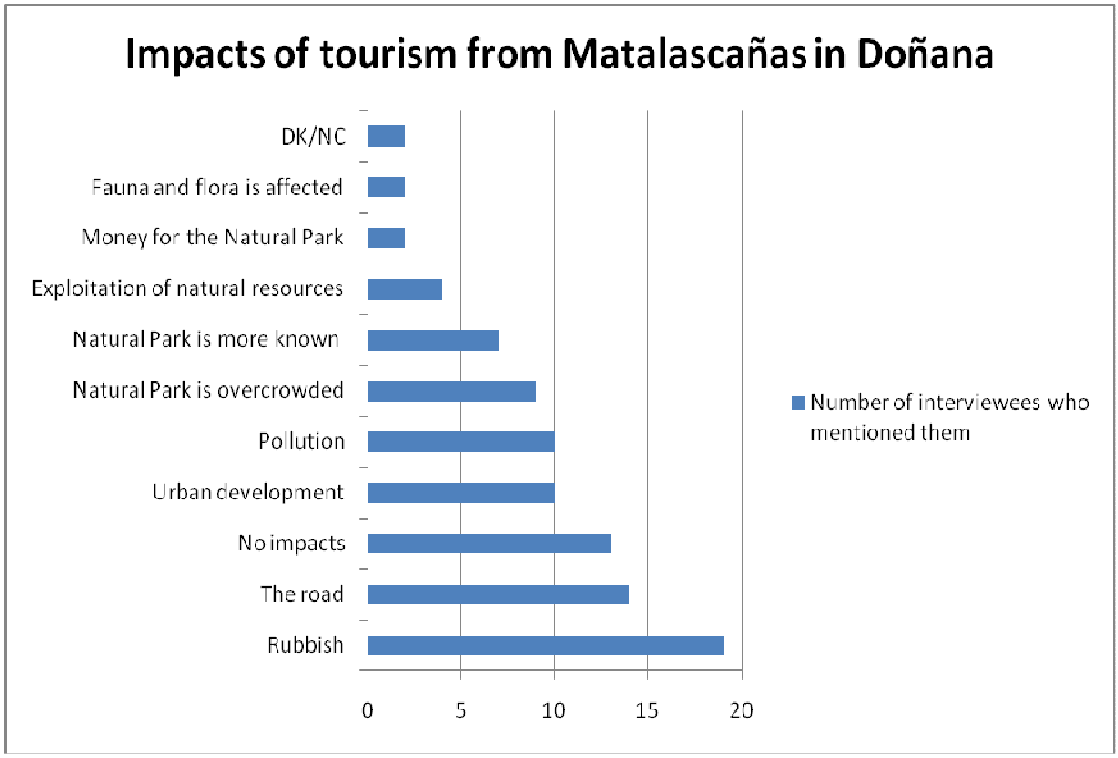

Figure 11: *Impacts of tourism from Matalascañas in Doñana. Source: Author*

In conclusion, due to the results obtained with items 1 and 15, in spite of the fact that "vision" gives intermediate values, it is visible that the predominant vision is a "park vision" in the users of Matalascañas. "Restaurants and chiringuitos" and "access and infrastructures" are mentioned by more people than other characteristics as "enough width beach", "not overcrowded" or "virgin or not an urban beach" in item 1. For item 15, it is very significant that "No impacts" is the

third majority answer. Anyway, it is necessary to say that some elements from "ecosystem vision" are also frequently mentioned by the interviewees. For example; "not an urban area" in item 1 as a characteristic for the good quality of a beach, and "urban development" and "pollution" in item 15 as impacts in Doñana by the tourism activity.

Once it is concluded that the predominant vision is a "park vision" of the beach, the items 7 (Preferential location of chiringuitos) and 8 (Reasons for the preferential location of chiringuitos) were analyzed. In this sense, the 50% of the interviewees would leave the chiringuitos where they are, in the sand, and 50% said that they should be out of the sand, behind the promenade. The reasons given for each preferential location of the chiringuitos are exposed in the next table.

Preferential location	**Reasons**	**Number of interviewees who mentioned them**
Move the chiringuitos out of the sand, behind the promenade	To reduce environmental impact	20
	To maintain jobs	13
	Beach would be more beautiful	7
Let the chiringuitos where they are	Chiringuitos can be in urban beaches, but not in virgin beaches	11
	Chiringuitos are typical things of the beach	9
	Comfort	5
	Chiringuitos can not be located behind the promenade due to the structural configuration of the urban area	4

	Chiringuitos give a public service	4
	If chiringuitos were relocated, profits will decrease	3
	Chiringuitos have no impacts on the environment (or not so much)	3
	Chiringuitos can be in the sand, except when there are many of them	2
	Chiringuitos can be in the sand if they are good quality establishments	2

Table 5*: Reasons given for a preferential location of chiringuitos. Source: Author*

It seems that there are more reasons to let the chiringuitos in the sand than to relocate them behind the promenade. Even the reasons given by the Local Government (that they can not be located behind the promenade due to the structural configuration of the urban area of Matalascañas) is also mentioned by 4 people as a reason to leave the chiringuitos in the sand. But the reason given by most people from the sample group is “to reduce environmental impact”, followed by the reason “to maintain jobs” in order to move the chiringuitos out of the sand.

Due to the predominance of a park vision, it would be expected that the preferential location of chiringuitos was to let them in the sand, but the sample group is strictly divided between the two options. In order to complete the information, it is necessary to add that among the 44 interviewed people who said that they are users of chiringuitos, 33 of them pointed out that chiringuitos are not the reason to visit Matalascañas, 29 said that they would still go to chiringuitos if they were relocated behind the promenade, 15 said that they would still go to them but not so many times, and 43 would never stop going to Matalascañas if chiringuitos were to be relocated.

Basically, chiringuitos in the sand are not really a necessity for those people, but the results shows that most of the interviewees needed a place that offers food and drinks in the beach of Matalascañas.

In conclusion, the first hypothesis of this research is accepted: *The predominant vision in the users of Matalascañas is a "park vision", so chiringuitos are needed and must be maintained in the long run.* But it is necessary to add one condition or specification: *The predominant vision in the users of Matalascañas is a "park vision", so chiringuitos are needed and must be maintained in the long run,* ***but not necessarily located in the sand"***

Coming back to the Table 4, the variable "information" also gave intermediate values. Even people who have a profession or occupation related with the coast and/or the environment gave the same results as people whose job is not related with the coast and/or the environment. Only in two cases the level of information changes significantly:

- The more educational level, the more information values.

- Young people results are higher than adults. This could be because, in the sample group, the higher educational levels are mainly found in young people.

However, it seems that the information does not influence the predominant vision about the beach, because "vision" values are always intermediate, even if "information" values are higher.

When item 6 was analyzed in the data-matrix for the independent variables, the results gave the next information:

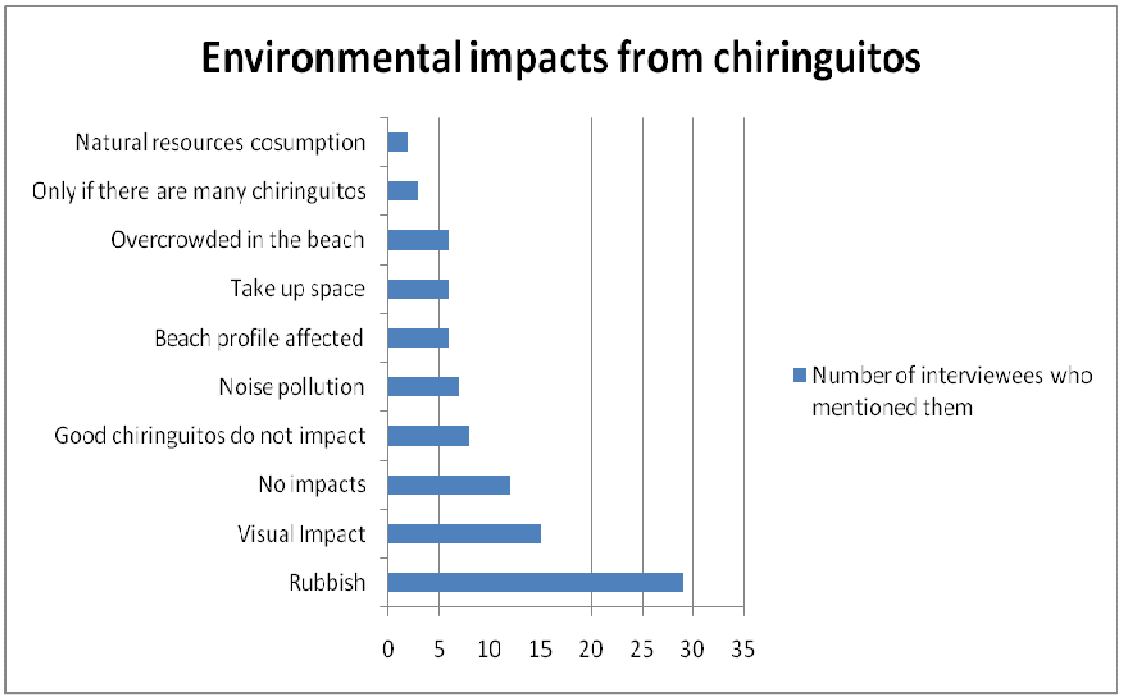

Figure 12: *Environmental impacts from chiringuitos. Source: Author*

The most mentioned environmental impact upon chiringuitos is "rubbish", which is coherent with the results obtained in the items 1 and 15, where "cleanliness" was the first characteristic for a good quality beach, and "rubbish" is the first impact from Matalascañas' tourism in Doñana. In the item 6, after "rubbish" as the main impact from chiringuitos, "visual impact" is mentioned on the second place. What stands out in the results is that 12 people said that chiringuitos have no responsibility in the environment impact. Finally, impact on beach profile dynamics is mentioned only by 6 respondents, and it is the main impact mentioned by the National Government and also the main reason to relocate chiringuitos behind the promenade.

Apart from that, items 12 and 13 yielded information about the knowledge that interviewees had about the Coastal Act of Spain. The statistical mode in item 12 is "I know something about the Coastal Act thanks to mass media", and the statistical mode in item 13 is "I do not know what DPMT (Terrestrial-Maritime Public Domain) is". In consideration that the DPMT is one of the most important concepts in the Coastal Act, and the knowledge about this law is based in what the media

broadcasts, the conclusion is that the media offers low quality information, even when the Coastal Act appears in the news many times. Additionally, results in item 11 showed that only 6 interviewees really knew what Public Administrations are in charge of chiringuitos.

In conclusion, and for the reasons explained above, the second hypothesis of this research is accepted: *The users of Matalascañas have not enough information about environmental and economic impact from chiringuitos, or about its management neither.*

CONCLUSSIONS

The objectives of the research have been achieved. Thanks to the methodology, which is based on the design of a good questionnaire mainly composed by open-ended questions, the results obtained from the interviewees' answers made possible to know the predominant vision about the beach of Matalascañas from its users and if this predominant vision goes with enough information about environmental problems in the coast and the legal and administrative framework related to this matter.

First of all, the predominant vision resulted in a "park vision" which means that the dynamic nature of the beach profile is not recognized, or it is, but as a problem for maintaining the establishments located in the shore; also the beach is like a park, so it is understood as a place where some services are installed to ensure people enjoy their spare and leisure time. Due to the results obtained, it is necessary to add that to locate chiringuitos in the sand is not really essential for the people, but the majority of the interviewees needed a place that offers food and drinks in the beach of Matalascañas. In addition, the most important concern for the users of Matalascañas is the cleanliness of the beach, a factor that is mentioned several times by the interviewees. In conclusion, the relocation of chiringuitos behind the promenade, or to substitute them with bars and restaurants out of the sand, is possible according with the opinion of the users of Matalascañas beach.

Secondly, it was possible too to find out whether the predominant vision is paired with enough information about environmental problems in the coast, and the legal and administrative framework related with chiringuitos. After the interpretation of the results, it can be said that the information is based on what is published by the mass media; moreover, quality levels of the information are low, even for people whose profession or occupation is related with the coast or the environment. This research detected that more access to the information is required by local people

and the users of the beach. Public Administrations are responsible for the information they want to give to the population. People only know what is published on the mass media, and this is biased information because the media mainly reflect the opinion of the Local Government and Local Associations of Chiringuitos. The objective must be to give enough and good quality of information to the people, and after that, they should be consulted about important decisions like the relocation of chiringuitos, where economical, and even political interests, are at stake.

Finally, in relation with the agreement signed by the Local Government, DGC and the Local Association of Chiringuitos on March of 2009, where a project related to new locations of chiringuitos and new technical requirements was elaborated, a proposal is given on this research: Users of the beach of Matalascañas can be consulted by interviews or opinion polls. In order to involve all the stakeholders in management and decision processes, inside a framework of governance, opinion polls are a good instrument to consult the local population and visitors, because they are the ones who decided to visit or not the beach of Matalascañas. With the information that results from this research, a questionnaire composed by closed questions or multiple choice questions can be built. An opinion poll model will give more quantitative data and will allow working with a bigger sample group, so data will be more representative. Furthermore, the model could be translated to other beaches with the same problems or polemics related with chiringuitos, but it is necessary to keep on mind that each municipality could be different, even when the Coastal Law is national. For example, chiringuitos in the Mediterranean coast of Andalusia come from a different conception, so a first contact with the people through a hybrid investigation, between qualitative and quantitative characteristics, like this research, must be considered.

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My lovely parents, because they supported everything without complaints.

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ATTACHED DOCUMENTS

QUESTIONNAIRE IN SPANISH

USO DEL DPMT EN LA PLAYA DE MATALASCAÑAS

Esta entrevista la realizamos desde la Universidad Pablo de Olavide de Sevilla. Estamos realizando una investigación sobre el ocio en la playa de Matalascañas, particularmente sobre los chiringuitos. Sólo le tomará unos diez minutos y es totalmente anónima.

Son preguntas abiertas, por lo que puede prolongarse en sus respuestas cuanto desee. Si desea completar, modificar o volver a preguntas anteriores durante el transcurso de la entrevista, no tenga inconveniente en hacerlo.

Esta entrevista no será grabada, simplemente iré tomando notas de lo que me vaya comentando.

Edad:

Sexo:

Nivel de estudios:

Trabajo o profesión:

Lugar de residencia:

Relación con Matalascañas:

1. ¿Podría señalar tres características que dan calidad a una playa? Teniendo en cuenta su respuesta, ¿qué puntuación le daría a Matalascañas (1 a 10)?

2. ¿Es usted usuario de los chiringuitos?

3. ¿Son los chiringuitos un motivo por el que visitar Matalascañas?

4. ¿Qué beneficios o desventajas económicas para la localidad suponen los chiringuitos?

5. C_1 ¿Qué impactos (ambientales) cree que pueden suponer los chiringuitos en la playa?

6. C_2 Cree que los chiringuitos deberían:

a. Dejarlos dónde están

b. Realojarlos detrás del paseo marítimo

c. Eliminarlos

7. ¿Por qué ha elegido esa opción?

8. C_2 ¿Seguiría demandando los servicios de los chiringuitos si estuvieran ubicados fuera de la arena?

9. ¿Dejaría de venir a Matalascañas si quitaran los chiringuitos de la arena?

10. ¿Qué Administración Pública cree que tiene la responsabilidad en la gestión de los chiringuitos?

11. ¿Conoce la Ley de Costas? ¿Y el concepto de Dominio Público Marítimo Terrestre (DPMT)? ¿Cree que la ley tiene efectos positivos o negativos para la playa y sus usuarios?

12. C_1 ¿Cree que el turismo de Matalascañas afecta al Parque Natural de Doñana? Si es que sí, ¿cómo cree que afecta?

QUESTIONNAIRE: SECTIONS AND ITEMS

USE OF THE PUBLIC MARITIME TERRESTRIAL DOMAIN IN THE BEACH OF MATALASCAÑAS

INTRODUCTION FOR THE INTERVIEWED

This interview is made by the University of Pablo de Olavide, Seville. We are doing a research about the leisure time in the beach of Matalascañas, especially about chiringuitos. It would take you only 10 minutes and it is totally anonymous.

They are open-ended questions, so you can extend your answer as you desire. If you want to complete, modify, or turn back to previous questions during the interview, feel free to do it.

The interview will not record, I will only taking notes about what you comment.

SOCIOMETRIC DATA

AGE:

SEX:

EDUCATIONAL LEVEL:

PROFESSION OR OCCUPATION:

PLACE OF RESIDENCE:

FREQUENCY OF VISITS TO MATALASCAÑAS:

LIST OF QUESTIONS AND ITEMS

1- May you say three characteristics for a good quality of a beach? Keeping on mind your answer, what score will you give to Matalascañas (1 to 10)?
This is the section that collected the information for:
Item 1: Three characteristics that define a beach as a good quality place to visit
Item 2: Marks for Matalascañas

2- Are you user of the chiringuitos?
This section collected the information for:
Item 3: Being a user of chiringuitos

3- Are chiringuitos a reason to visit Matalascañas?

This section collected information for:

Item 4: Chiringuito as a reason to visit Matalascañas

4- What economic advantages or disadvantages for the municipality have the chiringuitos?

This section collected information for:

Item 5: Knowledge and opinion about economic advantages and disadvantages of chiringuitos

5- C_1. What are the environmental impacts in the beach upon chiringuitos?[1]

This section collected information for:

Item 6: Knowledge about environmental impacts of chiringuitos

6- C_2. You think that chiringuitos must be: [2]

a. **Where they are**
b. **Located behind the promenade**
c. **Eliminated**

This section collected information for:

Item 7: Preferential location of chiringuitos

7- Why did you choose that option?

This section collected information for:

Item 8: Reasons for the preferential location of chiringuitos

8- C_2 Will you still go to chiringuitos if they are out of the sand?

This section collected information for:

Item 9: Would be a user of chiringuitos even if they are out of the DPMT

9- Will you stop coming to Matalascañas if chiringuitos were eliminated in the sand?

This section collected information for:

Item 10: Would not be a visitor of Matalascañas if chiringuitos were eliminated

10- What Public Administration/s you think is/are in charge of chiringuitos?

This section collected information for:

[1] Control one: Sections 5 and 12

[2] Control two: Sections 6 and 8

Item 11: Knowledge about Public Administrations in charge of chiringuitos

11- You know the Coastal Act? And the concept of Public Maritime Terrestrial Domain (DPMT) Do you think that this law has positive or negative effects?

This section collected information for:

Item 12: Knowledge about Coastal Act

Item 13: Knowledge about DPMT

Item 14: Knowledge and opinion about negative/positive aspects from Coastal Act

12- C_1 Do you think that tourism on Matalascañas affects the Natural Park of Doñana? If the answer is "yes", how do you think it affects?

This section collected information for:

Item 15: Impacts of tourism from Matalascañas in the Natural Park of Doñana

CODING

CODING OF SOCIOMETRIC DATA

Age:

0. Younger than 30
1. Older than 30

Sex:

0. Male
1. Female

Educational level

0. Uneducated
1. Primary studies
2. Secondary studies
3. University Studies

Profession or Occupation

0. Not related with the coast and/or the environment
1. Related with the coast and/or the environment

Place of residence

0. Almonte
1. Seville
2. Others

Frequency of visits to Matalascañas

0. Day trippers
1. Holiday trippers
2. Residents

CODING OF ITEMS (INDEPENDENT VARIABLES)

Item 1. Three characteristics that define a beach as a good quality place to visit

0. Cleanliness

1. Enough width of beach
2. Not overcrowded
3. Security: lifeguards, policies
4. Access and Infrastructures
5. Inexistence of shells or algae
6. Good weather
7. Fine sand
8. Restaurants and chiringuitos
9. Virgin or not an urban area
10. Cultural opportunities
11. Low traffic of boats
12. Atmosphere, people, party

Item 2. Marks for Matalascañas

Marks between 0 and 10

Item 3. Being a user of chiringuitos

0. No
1. Yes

Item 4. Chiringuito as a reason to visit Matalascañas

0. No
1. It is charm
2. Yes

Item 5. Knowledge and opinion about economic advantages and disadvantages of chiringuitos

0. Employment, money
1. Taxes
2. Attractive for tourists
3. Competition with other restaurants and bars in the urban area
4. Money spent in the rebuilt of the chiringuitos after the flood events
5. Money spent in the sand supply to the beach

6. Accumulation of rubbish, less space.
7. DK/DC

Item 6. Knowledge about environmental impacts of chiringuitos

0. No impacts

1. Rubbish

2. Visual Impact

3. Impacts on the dynamic of beach profile

4. Noise pollution

5. Impacts are produce when there are a lot of chiringuitos

6. A chiringuito of good quality do not impact on the environment

7. Consumption of resources: water, electricity...

8. Take up space

9. Overcrowded in the beach

Item 7. Preferential location of chiringuitos

0. In the sand
1. Behind the promenade
2. Eliminate them

Item 8. **Reasons for the preferential location of chiringuitos**

0. Beach would be more beautiful
1. To reduce environmental impacts
2. To maintain jobs
3. Chiringuitos have no impacts on the environment (or not so much)
4. Chiringuitos can not be located behind the promenade due to the structural configuration of the urban area
5. Chiringuitos are typical things of the beach
6. Chiringuitos can be in the sand, except when there are many of them
7. Chiringuitos can be in the sand if they are good quality establishments
8. If chiringuitos were relocated, profits will decrease
9. Chiringuitos give a public service

10. Chiringuitos can be in urban beaches, but not in virgin beaches

11. Comfort

Item 9. Would be a user of chiringuitos even if they are out of the DPMT

0. Yes
1. Yes, but not so many times
2. No
3. I will visit them more

Item 10. Would not be a visitor of Matalascañas if chiringuitos were eliminated

0. No
1. I will consider it
2. Yes
3. I will visit more

Item 11. Knowledge about Public Administrations in charge of chiringuitos

0. Local Government
1. Regional Government
2. National Government
3. The three of them
4. Government of the Province
5. The four of them
6. Environment
7. Coasts
8. I do not know
9. Others

Item 12. Knowledge about Coastal Act

0. Yes
1. No
2. I know something, because of the media

Item 13. Knowledge about DPMT

0. Yes

1. No
2. I know something, because of the media

Item 14. Knowledge and opinion about negative/positive aspects from Coastal Act

0. It protects the coast as an natural space
1. It protects the public domain
2. It is bad for the economic activities
3. It was applied too late
4. It is dangerous for people who have built in the beach: houses, commercial business
5. Economic profits prevail before the environmental issues
6. DK/DC

Item 15. Impacts of tourism from Matalascañas in the Natural Park of Doñana

0. The road
1. Rubbish
2. Natural Park is more known
3. Natural Park is overcrowded
4. Excessive exploitation of natural resources
5. No impacts
6. Urban development
7. Pollution
8. The more tourism, the more money to invest in the Natural Park
9. Fauna and flora is affected
10. DK/NC

CODING OF "VISION" AND "INFORMATION" (DEPENDENT VARIABLES)

Vision

Vision values are between 0 (park vision) and 1 (ecosystem vision). With the results of the items, the dependent variable value was constructed with the next equation:

Vision value for each interviewee = (Number of "ecosystem" answers) / (number of total items)

Item 3. Being a user of chiringuitos

No → *Ecosystem vision*

Yes → *Park vision*

Item 4. Chiringuito as a reason to visit Matalascañas

No → *Ecosystem vision*

It is charm → *Park vision*

Yes → *Park vision*

Item 5. Knowledge and opinion about economic advantages and disadvantages of chiringuitos

Employment, money → *Park vision*

Taxes → *Park vision*

Attractive for tourists → *Park vision*

Competition with other restaurants and bars in the urban area → *Park vision*

Money spent in the rebuilt of the chiringuitos after the flood events → *Ecosystem vision*

Money spent in the sand supply to the beach → *Ecosystem vision*

The answer is considered "ecosystem vision" when one of the last options is said by the interviewed, so the item is marked with 1

Item 7. Preferential location of chiringuitos

In the sand → *Park vision*

Behind the promenade → *Ecosystem vision*

Eliminate them → *Ecosystem vision*

Item 9. Would be a user of chiringuitos even if they are out of the DPMT

Yes → *Ecosystem vision*

Yes, but not so many times → *Park vision*

No → *Park vision*

I will visit them more → *Ecosystem vision*

Item 10. Would not be a visitor of Matalascañas if chiringuitos were eliminated

No → *Ecosystem vision*

I will consider it → *Park vision*

Yes → *Park vision*

I will visit more → *Ecosystem vision*

Information

Information values are between 0 (no/false information) and 1 (true information). With the results of the items, the dependent variable value was constructed with the next equation:

Information value for each interviewee = (Number of "true information" answers) / (number of total items)

Item 6. Knowledge about environmental impacts of chiringuitos

No impacts → *No/false information*

Rubbish → *True information*

Visual Impact → *True information*

Impacts on the dynamic of beach profile → *True information*

Noise pollution→ *True information*

Impacts are produce when there is a lot of chiringuitos → *No/false information*

A chiringuito of good quality do not impact on the environment → *No/false information*

Consumption of resources: water, electricity... → *True information*

Take up space → *True information*

Overcrowded in the beach → *True information*

When some of the answers considered as "no/false information" are given by the interviewed, this item is mark with 0

Item 11. Knowledge about Public Administrations in charge of chiringuitos

Local Government → *True information*

Regional Government → *No/false information*

National Government → *True information*

The three of them → *No/false information*

Government of the Province → *No/false information*

The four of them → *No/false information*

Environment → *It is "true information" if it goes with National Governement*

Coasts → *It is "true information" if it goes with National Governement*

I do not know → *No/false information*

Others → *No/false information*

Item 12. Knowledge about Coastal Act

Yes → *True information*

No → *No/false information*

I know something, because of the media → *True information*

Item 13. Knowledge about DPMT

Yes → *True information*

No → *No/false information*

I know something, because of the media → *True information*

Item 14. Knowledge and opinion about negative/positive aspects from Coastal Act

It protects the coast as natural space → *True information*

It protects the public domain → *True information*

It is bad for the economic activities → *True information, when it goes with the two previous answers, and the results in item 12 is "true information"*

It was applied too late → *True information, when it goes with the two previous answers, and the results in item 12 is "true information"*

It is dangerous for people who have built in the beach: houses, commercial business → *True information, when it goes with the two previous answers, and the results in item 12 is "true information"*

Economic profits prevail before the environmental issues → *No/false information*

DK/DC → No/false information

DATA-RESULTS MATRIXES

Numbers given with the coding were used to build two data-results matrixes:

- Data-matrix for the independent variables. This one permitted to obtain statistical results for qualitative data.
- Data-matrix for the dependent variables. This one permitted to do the ANOVA and the Multiple Regression Analysis and to obtain information for the “vision” and “information” values.

DATA-MATRIX (INDEPENDENT VARIABLES)

Number of intervie	Age	Age group	Sex	Educational level	Profession	Place of residence	Frequency of visits	item 1	item 2	item 3	item 4	item 5	item 6	item 7	item 8	item 9	item 10	item 11	item 12	item 13	item 14	item 15
1	26	0	0	3	0	2	1	0,1,5	6.5	1	0	2	0	1	0	1	0	0	2	2	0	5
2	30	1	0	3	0	1	0	0, 5, 8, 4, 6	7	1	0	0, 1	2, 1, 4	1	1,2	1	0	3	2	1	1	5
3	25	0	1	3	0	1	0	0, 2, 5	5	1	0	0, 3	1, 2, 4	1	1,2	1	0	7	2	2	5	1
4	20	0	0	2	0	1	1	4, 0, 8	5	0	0	0	6	0	6	2	0	6, 9	2	2	0	1, 3
5	53	1	0	2	0	1	1	0, 2, 4	4	1	0	0	0	0	6	0	0	2	2	2	1	0, 1
6	23	0	1	2	0	1	1	0, 2, 9	2	0	0	0	1, 3	2	3	2	3	5	2	2	0, 1	0, 1, 6
7	50	1	1	2	0	1	1	0, 5, 4	7	1	0	2	1	0	12	2	0	0, 1	2	1	1	0, 6
8	33	1	0	3	1	1	0	0, 4, 9	6	1	0	0, 2	2, 4, 1	0	4	0	0	2, 7	0	1	0, 4	6, 0, 1, 4
9	25	0	0	3	0	1	1	4, 8, 2	6	1	1	0, 2	1, 7	0	9	1	0	0	2	2	0, 2	7, 0
10	32	1	0	3	0	1	0	0, 3, 4, 8	7	1	0	0, 2	6	0	5	0	0	0, 1	2	0	1	0, 1, 6
11	25	0	0	3	1	1	0	0, 4	5	1	0	0	1, 2	1	0	0	0	0	2	2	0	5
12	27	0	0	3	1	1	1	0, 2, 4	5	0	0	0	1, 8	1	0	0	0	1	2	2	1	2
13	25	0	1	3	0	1	0	2, 1, 0	2	1	0	0	1	0	7	0	0	8	2	2	6	2, 3
14	26	0	1	3	0	2	1	0, 7, 4	9	1	1	0	2	0	4	2	0	0	2	1	3	0
15	27	0	0	1	0	1	0	0, 2, 9	6	1	0	0, 2	1	1	1,2	0	0	0	2	1	0	1
16	25	0	0	2	0	1	0	0, 4, 8	6	1	0	0, 4	3	1	1	0	0	9, 1	2	2	0	7, 6, 3
17	22	0	1	3	0	1	0	0, 1, 9, 4	5	0	0	0, 2	5, 1	1	1,2	0	0	0	2	1	6	10
18	28	0	0	3	1	1	1	2, 0, 4, 8	7.5	1	1	0	1, 2	1	1	0	0	0, 2, 7	0	0	0, 1	2, 3
19	56	1	1	3	0	1	1	0, 4, 8	7	1	0	0	6	0	7	0	0	0	2	1	0	5
20	35	1	0	3	0	1	1	0, 4, 10	4	1	0	0	1,2	0	10	2	0	3	0	0	1	7, 46
21	26	0	0	3	0	0	2	4,0,8	6	1	0	0	1	0	5	0	0	3	2	2	0, 3	0, 6, 5, 7
22	25	0	1	3	0	1	0	0, 6, 4	4	1	0	2, 6	1, 9	0	9, 12	1	0	9	2	0	6	1, 7
23	29	0	0	3	0	1	1	0, 3, 4	6	1	0	0, 1, 4	1, 5	1	0	0	0	0	1	1	6	1, 7
24	28	0	0	3	0	1	0	2, 0, 7	7	0	0	2	1, 9, 2,4	0	10	0	3	0, 1, 6	1	1	1	1
25	27	0	0	3	0	1	0	0, 2	5.5	0	0	1	1, 4, 3	1	1	0	3	3, 6	2	2	0, 3	1
26	26	0	1	3	0	1	1	7, 0, 2	7	1	0	2, 6	1, 3, 8, 9	1	1	0	0	9	2	2	0	0
27	28	0	0	3	0	1	1	0, 1, 8	6	1	1	1, 2	0	0	5	0	0	0	2	2	2	5
28	30	1	0	2	0	1	0	0, 2, 9	5	1	0	0	2, 1, 9	1	1,2	0	0	1, 6	2	1	0	0, 6
29	26	0	1	3	1	0	2	0, 4	9	1	2	0	6	0	6	2	0	7	2	2	2	8
30	32	1	1	3	0	1	1	0, 8, 10	4.5	1	1	0, 2	1, 8, 2	1	1,2	0	0	0	2	1	0	0, 3
31	28	0	0	2	1	1	0	0, 9,11	6	1	0	2	9	1	0	0	0	0, 1	1	2	6	1
32	27	0	1	3	1	1	0	0, 7, 1	5	1	0	0, 1, 5	7, 1, 3	1	1,2	3	3	1, 2, 6	2	2	0, 4	0, 4, 6, 9
33	26	0	0	3	0	1	0	0, 3, 4, 8	6	1	0	0, 2	1, 2	0	11	0	0	0	2	1	0	1, 7, 9, 3
34	24	0	0	3	0	0	0	5, 2, 9	5.5	0	0	3, 2	0	0	11	0	0	8	2	1	0	2, 0, 3
35	55	1	0	2	0	2	1	0, 1, 4, 8	8	1	1	0	6	0	8	2	0	1	2	2	0, 1	8
36	52	1	0	2	0	2	1	0, 4, 3	6	1	0	0, 1	0	0	6	1	0	0	2	2	3	2
37	38	1	0	2	0	2	1	0, 1, 4, 8	6.5	1	1	0	0	1	1,2	1	0	0, 1	1	1	6	7
38	34	1	0	2	0	2	1	0,2,3	7	1	0	0	0	0	6	0	0	0, 7	2	1	1	1
39	40	1	1	1	0	2	1	0, 3, 2	9	1	0	2	6	0	6	0	0	8	1	1	6	10
40	44	1	1	1	0	1	1	0, 3, 4	2	1	2	1, 4	8	0	6	1	0	0	2	1	2	1
41	66	1	1	0	0	0	2	0, 1, 2	8	0	0	0	2	0	12	0	0	1	1	1	6	5
42	54	1	1	1	0	2	1	0, 4, 12	7	1	1	0	0	1	0	0	0	8	2	1	6	5
43	48	1	0	2	0	2	1	1, 6	8.5	1	0	2, 0	0	0	4	1	0	0	0	0	0	5
44	43	1	0	2	0	2	1	0, 1, 12	8	1	0	7	0	0	6	0	0	8	2	1	1, 4	5
45	28	0	0	2	1	0	2	0, 4	4	1	0	2, 0	2, 3, 1	1	1	0	0	1, 2, 7	2	2	0	1
46	28	0	1	3	0	2	1	1, 7, 9, 8, 4	7	1	1	2	1, 8	1	1	0	0	0	1	0	6	2, 3
47	19	0	0	2	0	1	0	0, 3, 9	4	1	0	0, 2	1, 9,	1	2	0	0	6	1	1	3, 4	1, 3
48	53	1	1	1	0	1	0	0, 9	3	1	0	0	6	1	1	0	0	6	2	1	0, 2	7, 6
49	50	1	1	1	0	1	1	0, 4, 3	6.33	0	2	0	5	0	6	0	0	6	2	2	0, 2	0, 1
50	30	1	0	3	0	1	0	1, 2, 4, 6	8	1	0	0	1, 2, 6	0	5	0	1	9	2	2	0, 2	3
51	67	1	0	2	1	0	2	0, 4, 8	8	1	0	0	0	1	1,2	1	0	0, 1	1	1	6	5
52	63	1	1	2	0	0	2	0, 1, 4, 8	8	0	0	0	0	1	1,2	0	0	0	1	1	6	5
53	25	0	0	3	0	1	1	0, 4, 8	7.5	0	0	0	4, 2	1	1,2	0	0	1	0	0	0	5
54	25	0	1	3	0	0	2	0, 4, 3, 8	7	1	0	0	1, 4	1	1,2	0	0	0	0	0	0	7, 1
55	27	0	0	3	0	0	2	0, 1	8	1	0	0, 1, 2	8, 1	1	0	0	0	0, 1	0	0	0	2

DATA-MATRIX (DEPENDENT VARIABLES)

Number Interviewe	Item 3	Item 4	Item 5	Item 7	Item 9	Item 10	VISION	Item 6	Item 11	Item 12	Item 13	Item 14	INFORMATION
1	1	0	0	1	1	0	0.33	0	0	2	2	1	0.6
2	1	0	0	1	1	0	0.33	1	1	2	1	1	0.4
3	1	0	0	1	1	0	0.33	1	0	2	2	0	0.6
4	0	0	0	0	2	0	0.5	0	0	2	2	1	0.6
5	1	0	0	0	0	0	0.5	0	0	2	2	1	0.6
6	0	0	0	2	2	3	0.67	1	0	2	2	1	0.8
7	1	0	0	0	2	0	0.33	1	0	2	1	1	0.6
8	1	0	0	0	0	0	0.5	1	0	0	1	1	0.6
9	1	1	0	0	1	0	0.17	1	0	2	2	1	0.8
10	1	0	0	0	0	0	0.5	0	0	2	0	1	0.6
11	1	0	0	1	0	0	0.5	1	0	2	2	1	0.8
12	0	0	0	1	0	0	0.5	1	0	2	2	1	0.8
13	1	0	0	0	0	0	0.5	1	0	2	2	0	0.6
14	1	1	0	0	2	0	0.17	1	0	2	1	0	0.4
15	1	0	0	1	0	0	0.5	1	0	2	1	1	0.6
16	1	0	1	1	0	0	0.67	1	0	2	2	1	0.8
17	0	0	0	1	0	0	0.67	0	0	2	1	0	0.2
18	1	1	0	1	0	0	0.33	1	1	0	0	1	1
19	1	0	0	0	0	0	0.5	0	0	2	1	0	0.2
20	1	0	0	0	2	0	0.33	1	1	0	0	1	1
21	1	0	0	0	0	0	0.5	1	1	2	2	1	1
22	1	0	0	0	1	0	0.33	1	0	2	0	0	0.6
23	1	0	1	1	0	0	0.67	0	0	1	1	0	0
24	0	0	0	0	0	3	0.67	1	0	1	1	1	0.4
25	0	0	0	1	0	3	0.67	1	1	2	2	1	1
26	1	0	0	1	0	0	0.5	1	0	2	2	1	0.8
27	1	1	0	0	0	0	0.33	0	0	2	2	0	0.4
28	1	0	0	1	0	0	0.5	1	0	2	1	0	0.4
29	1	2	0	0	2	0	0.17	0	0	2	2	0	0.4
30	1	1	0	1	0	0	0.5	1	0	2	1	1	0.6
31	1	0	0	1	0	0	0.5	1	0	1	2	0	0.4
32	1	0	1	1	3	3	0.67	1	0	2	2	1	0.8
33	1	0	0	0	0	0	0.5	1	0	2	1	1	0.6
34	0	0	0	0	0	0	0.67	0	0	2	1	1	0.4
35	1	1	0	0	2	0	0.17	0	0	2	2	1	0.6
36	1	0	0	0	1	0	0.33	0	0	2	2	0	0.4
37	1	1	0	1	1	0	0.17	0	0	1	1	0	0
38	1	0	0	0	0	0	0.5	0	1	2	1	1	0.4
39	1	0	0	0	0	0	0.5	0	0	1	1	0	0
40	1	2	1	0	1	0	0.33	1	0	2	1	0	0.4
41	0	0	0	0	0	0	0.67	1	0	1	1	0	0.2
42	1	1	0	1	0	0	0.33	0	0	2	1	0	0.2
43	1	0	0	0	1	0	0.33	0	0	0	0	1	0.6
44	1	0	0	0	0	0	0.5	0	0	2	1	1	0.4
45	1	0	0	1	0	0	0.5	1	0	2	2	1	0.8
46	1	1	0	1	0	0	0.33	1	0	1	0	0	0.4
47	1	0	0	1	0	0	0.5	1	0	1	1	0	0.2
48	1	0	0	1	0	0	0.5	0	0	2	1	1	0.4
49	0	2	0	0	0	0	0.5	0	0	2	2	1	0.6
50	1	0	0	0	0	1	0.33	0	0	2	2	1	0.6
51	1	0	0	1	1	0	0.33	0	0	1	1	0	0
52	0	0	0	1	0	0	0.67	0	0	1	1	0	0
53	0	0	0	1	0	0	0.67	1	0	0	0	1	0.8
54	1	0	0	1	0	0	0.5	1	0	0	0	1	0.8
55	1	0	0	1	0	0	0.5	1	0	0	0	1	0.8

PICTURES GALLERY

This is a famous landscape of Matalascañas. The rock in the sea is well known as “el tapón” (the plug). If the plug is taken out, the ocean will be emptied

One of the fixed chiringuitos located in the sand, against the promenade

This is other of the fixed chiringuitos. The weed is *Carpobrotus edulis,* invasive specie

Information posters from MARM about regeneration works of the promenade (Budget: 2.000.000 €, Project deadline: 3.5 months)

A chiringuito that has fallen into neglect

A drink stand as a chiringuito's substitute

A chiringuito, behind the promenade, that can be dismantled

The house of a fisherman in the DPMT

The entrance to Doñana and a vigilance hut

All the pictures were taken in September 2010, in Matalascañas. Three of them are in the cover of this project. Source: Author

In Seville, 29th November, 2010