WHY THE BEACH OCCUPANCY PLAN? DIFFERENT PERSPECTIVES ON COASTAL DEVELOPMENT IN TUNISIA

¿POR QUÉ EL PLAN DE OCUPACIÓN DE PLAYAS? DIFERENTES PERSPECTIVAS SOBRE EL DESARROLLO COSTERO EN TÚNEZ

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1. INTRODUCTION

Overturned by civic practice and institutionalization, the Tunisian coast is characterized by an evolution fueled by multiple factors of a natural and socio-economic nature. It is a fragile space whose development requires such a kind of combination between natural factors (environment, erosion, humans, etc.) and user factors. In this sense, Y. Veyret (2000) underlined the importance of interrelationships and feedbacks between nature and human activities. «If natural factors are present in the planning choices, these in turn act on the physical data, through accelerated erosion, climatic modifications of the urban space, those of the flow. rivers, coastal dynamics, or water quality (pollution)».

Any intervention to modify the image of the coastline through rational and equitable development must take into consideration five essential dimensions having a direct impact on the development of this interface space. The social

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in order to respect the perceived, the lived and the conceived and to integrate them in the process of spatial transformation of spaces. The spatial component in order to boost this space in relation to the development of the city.

The economic, since this territorial fringe has found itself as a space that creates wealth and employment. Environmental in order to protect areas degraded by erosion and to do a kind of anticipatory development and to implement a whole rescue and protection plan. And political, because the coast has converged since the 1980s the attention of various actors in the political world in order to acquire the most profitable places.

The situation of the Tunisian coast is very complicated. In addition to its attractive power which was exercised throughout the national territory, the beach in several regions has continued to experience a conflict of use between various actors. From the municipality trying to get its hands on this fragile space, to the CPDA which presents itself as the main actor who manages this space and categorically refuses the spontaneous intervention of other actors. All this through the intervention of the local population by some illegal constructions. This situation has fueled conflicting tensions within the Tunisian administration itself (Hagui A., 2012) between an environmental clan that foresaw the need to protect ecosystems because any anthropogenic modification causes extreme destruction of biodiversity and trivialization of landscapes. And another clan is with the idea of developing the beaches as this modification can positively influence the national economy.

This conflictual situation, following the appearance of new functionalities for building beaches, directly leads to considerable upheavals of spaces (Perrier-Cornet, 2002).

With a strategically positioned coastline opening onto the Mediterranean, a conflict of use will surely affect the nature of the achievements after development. It is here that Torre and Caron (2002) and Mollard and Torre (2004) have already focused attention on the effect of geographic proximity on the nutrition of conflicts and tensions. In this context Monroy and Fournier (1997) have shown that conflicts arise while proceeding from an event.

The adoption of the beach occupancy plan then requires a forward-looking vision based on the participation of the various stakeholders in order to bring out a development that meets the needs of the various stakeholders. Can we compare this resulting anthropogenic modification of bop to an opportunity that shows such a significant draining of investments (Hagui A., 2019) in order to carry out projects, or to a crisis (Hagui A., 2020) so well? that for developing countries, building projects in fragile areas at risk of flooding is still a difficult task to achieve (Hagui A., 2019)

2. THE ANTHROPOGENIC MODIFICATION OF THE TUNISIAN COASTLINE: A DIFFICULT EXERCISE TO CARRY OUT

The study of the relationship between man and wetlands is a necessary exercise that is generally old. It is an exercise that is anchored in the geography project and essentially comes down to the creation of geographical space and landscapes (Dardel, 1952; Sorre, 1943-1952; Pinchemel et al., 1988; Brunet 2001; Berque, 1990; Yann Raison, 2002; Fernand Verger, 1983). It is also a new exercise which echoes other disciplines such as town planning, anthropology (Lizet 2015; Roué, 2014, Dumez Richard, 2006), sociology (Kalaora, 2010; Picon, 2010; Jean MS. and Hervé M., 2014), history (Massard-Guilbaud G., 2014; Derex J.-M. 2001; C. Beck 2006).

The American school has continued to fuel this question from the beginning of the twentieth century and this through studies and research by various scientists such as Franz Boas (1858-1942) or Edward Sapir (1917-1938) for the the sole purpose of understanding the relationship between man and the environment. As a result, this school - culture and personality - to present the interest of the human and social sciences for understanding the relationship between nature and culture. The French school took the path of the American school to bring culture closer to nature in understanding the relationship between the environment and human institutions (Marcel Mauss, 1950). The development of wetlands is therefore a very important action in developed countries, also testifying to the early interest of the human and social sciences in defining the relationship between man and nature while respecting the ecological and landscape side.

For developing countries, it is a development that refers to occupying or investing places at different scales to transform them to the point of sometimes degrading them. Whether it is a residential, tourist or industrial development, whether it is an urban extension, the actors in the transformation of wetlands are various, ranging from State officials to inhabitants. «These humid areas are strongly affected by agricultural abandonment. At the same time, they are threatened by territorial, industrial or agricultural developments which compromise their existence».

For underdeveloped countries, it is a development that refers to occupying or investing places at different scales to transform them to the point of sometimes degrading them. Whether it is a residential, tourist or industrial development, whether it is an urban extension, the actors in the transformation of wetlands are various, ranging from State officials to inhabitants. These humid areas are strongly affected by agricultural abandonment. At the same time,

they are threatened by territorial, industrial or agricultural developments which compromise their existence.

For Tunisia, the development of the coast for the realization of urban projects in fragile areas is justified by a desire to promote coastal cities to the rank of large Mediterranean cities. In fact, the drainage of a large volume of investments from the outside world is a good illustration of the success of the commercialization of the desired image produced in its sensitive spaces. At the same time, the sudden concentration of projects on wetlands will surely reinforce the natural risks linked to flooding and erosion (Pottier, 1998; Meur-Férec et al., 2004; Morhange et al., 2007; Maret et al., 2008; Vinet, 2010; Chauveau et al., 2011; Douvinet et al., 2011; Mercier, 2012; Duvat et al., 2012; Moulin et al., 2013).

Development would come here to meet only land and financial needs defined as inevitable. It is true that globalization and the development of tools and experiences in the field of land use planning have made it possible, in developed countries, to overcome the conflict between risk management and construction in flood-prone areas. the introduction of a new concept namely resilience. Sylvain Dournel et al (2015) have already mentioned the importance of resilience when it comes to planning in flood-prone areas. They noted that this concept is intended to «qualify a gross use of defense works and absorption of the disturbance effects associated with flooding».

For underdeveloped countries, building projects in fragile and flood-prone areas remains a difficult task due to the absence of subject matter experts and the lack of necessary funding. The development of coastal areas, in addition to causing a destruction of biodiversity and a trivialization of landscapes, it can put the population at a danger and a huge risk in the absence of a prevention and resilience policy.

3. THE COASTLINE: A PLACE OF TENSION AND CONFLICT

The situation of the Tunisian coast is much more complicated compared to other coastal towns. In addition to its attractive power that was exercised throughout the national territory, the beach has continued to experience a conflict of use between various actors. From the municipality which tries to get its hands on this fragile space, to the CPDA which presents itself as the main actor who manages this space and categorically refuses the intervention of others actors. All this through the intervention of the local population by some illegal constructions. This situation has fueled conflic-

ting tensions within the Tunisian administration itself (Hagui A., 2012) between an environmental clan that foresaw the need to protect ecosystems because any anthropogenic modification causes extreme destruction of biodiversity and trivialization of landscapes. And another clan is with the idea of developing the beaches as this modification can positively influence the national economy.

This conflictual situation, following the appearance of new functionalities for building beaches, directly leads to considerable upheavals of spaces (Perrier-Cornet, 2002). With a strategically positioned coastline opening onto the Mediterranean, a conflict of use will surely affect the nature of the achievements after development. It is here that Torre and Caron (2002) and Mollard and Torre (2004) have already focused attention on the effect of geographic proximity on the nutrition of conflicts and tensions. In this context, Monroy and Fournier (1997) have already shown that conflicts arise when proceeding with an event.

After the 2011 revolution, wetland development projects faced multiple conflicts of use. These are strategically positioned areas where conflicts of use are multiple (Bruckmeier, 2005) and where the state has found itself overwhelmed by popular social tensions which seek to apprehend space according to their own needs. The experience already drawn from the brutal transformation of several repellent spaces to others of enormous multifunctionality with the development of new uses, feeds this type of conflict of use.

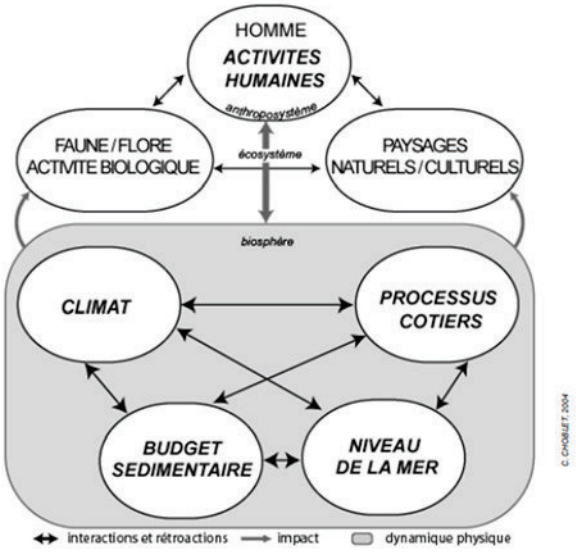
Coastal areas can be considered as areas of influence characterized by socio-economic enthusiasm, reflecting a high human concentration in relatively limited areas. In fact, the choice of an anthropogenic modification was dictated not only by a need to protect its ecosystems from any form of illegal extension, but also to find the food for economic and social development and this by the introduction of ‘a new tradition, in the field of regional planning, based on “territorial marketing” with a dual purpose, internal to change the vision of inhabitants vis-à-vis their city, and external to attract the outside world. It is an iconographic advertising production that provokes a whole game of glances on the city (Rosemberg, 2000). In addition, they are urban projects that try to produce the desired image of the city, they try to change the mental image of the city (Breux and Bherer, 2009) and especially when we include political action. (Rosemberg, 2000).

4. THE CHOICE OF THE BEACH OCCUPANCY PLAN (BOP) AND THE APPROACH ADOPTED

4.1 **The choice of BOP**

The planning of the Tunisian coast has been caught between citizen practice and institutionalization. In fact, this interface space between sea and land is characterized by an evolution fueled by multiple natural and socio-economic factors. As part of this reflection, Paskoff (1993) has already presented coasts as spaces which «constitute fragile environments in which multiple factors of evolution manifest themselves with complex actions, interactions and feedbacks».

In the same sense, F. Durand Dastes and P. Merlin (1989) have tried to define the coastal system in order to end up evoking a precise definition which presents it as «a set of physical, chemical, biological and social elements which characterize a space and influence the life of a human group; the environment is a system, that is, a coherent set of elements which act and react on each other. Any environment that can be defined as an entity is open: it receives external impulses and can transmit them in turn. A human group acts on its environment and each of these actions has chain effects, sometimes amplified by positive feedback».



Les composantes du système littoral : actions, interactions et rétroactions.
Source: Paskoff, 1993, d'après O. Pilkey et al, 1989

Figure 1. The components of the coastal system: actions, interactions and feedbacks.

The coast is therefore a fragile space, the development of which requires such a combination of natural factors (environment, erosion, humans, etc.) and user factors. In this sense, Y. Veyret underlined the importance of interrelationships and feedbacks between nature and human activities. If natural factors are present in the planning choices, these in turn act on the physical data, through accelerated erosion, climatic modifications of the urban space, those of the flow of rivers, coastal dynamics, or water quality (pollution). (Veyret, 2000).

Any intervention to modify the image of the coast through rational and equitable development must take into consideration five essential dimensions having a direct impact on the development of this interface space. The social in order to respect the perceived, the lived and the conceived and to integrate them in the process of spatial transformation of spaces. The space in order to energize this space in connection with the development of the city. The economic, since this territorial fringe has found itself as a space that creates wealth and employment. Environmental in order to protect areas degraded by erosion and to do a kind of anticipatory development and to implement a whole rescue and protection plan. And political since the coast has converged since the 1980s the attention of various actors in the political world in order to acquire the most profitable places.

Initially, the entire Tunisian coast remained faced with a need to remedy existing situations and to find a spatial organization of existing uses, thus making it possible to protect the environment through a balanced distribution of human activities. In view of the administrative difficulties in collecting information by the main actor of coastal areas in Tunisia (Coastal Protection and Development Agency CPDA), and the need to adopt regulatory procedures allowing the application of the law and the protection of the environment, the development of the coast then finds its raison d'être. It is a development that comes to build an entire space endowed with great physical (cliffs, sandy marshes, etc.) and human (land use, activities, etc.).

4.2 **The choice of Cap Bon in Tunisia**

The coastal areas of Cap Bon can be considered as zones of influence characterized by a socio-economic craze reflecting a high human concentration on relatively limited spaces.In fact, the choice of anthropogenic modification was dictated not only by the need to protect its ecosystems from any form of illegal extension, but also by the introduction of a new tradition of economic and social development, in the field of spatial planning, based on «territorial marketing»

with a dual internal destination to change the vision of the inhabitants towards their cities, and external to attract the outside world. It is an iconographic advertising production that provokes a whole set of glances on the city (Rosemberg, 2000). Moreover, they are urban projects that try to produce the desired image of the city, they try to change the mental image of the city (Breux and Bherer, 2009) and especially when political action is included (Rosemberg, 2000).

Originally, the entire coastline of Cape Bon remains faced with the need to remedy existing situations and to find a spatial organization of existing uses, thus protecting the environment by a balanced distribution of human activities. In view of the administrative difficulties in collecting information by the main actor of the coastal areas in Tunisia, and the need to adopt regulatory procedures allowing the enforcement of the law and the protection of the environment, The development of the Cape Bon coastline then found its raison d'être. It is a development that comes to build a whole space with a great physical diversity (cliffs, sandy marshes etc.) and human (land use, activities, etc.).

Our work, then, consists of limiting the development of the coastline of Cape Bon to seven sectors while going from the golf of prince of the delegation of Takilssa to the delegation of Nabeul. Between its two sectors we will go through El Haouaria, Mezil Temime, Menzil Horr, Korba and Tazarka.

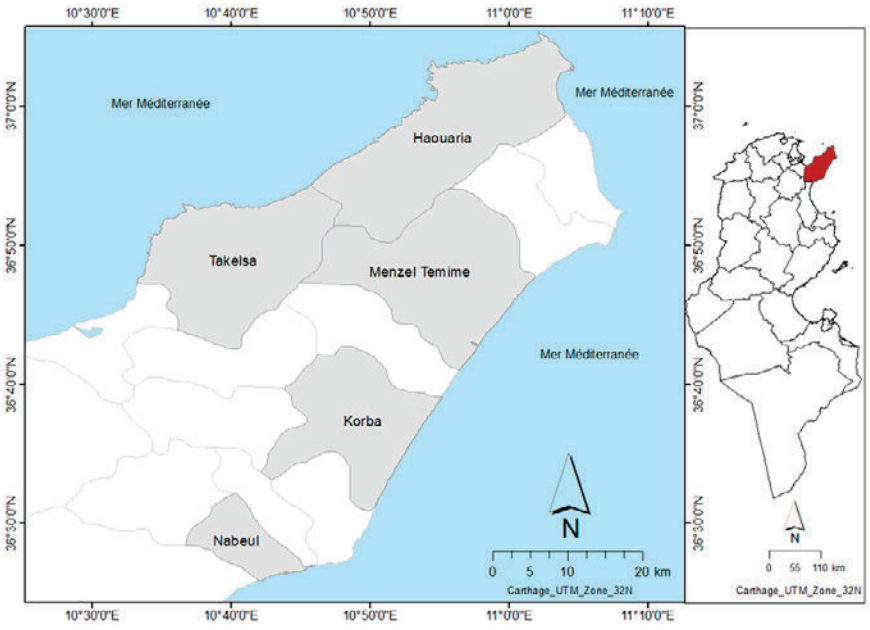


Figure 2. Study areas.

Figure 3. The pressure of the building on the beach of Menzil Temime. Photo: Hagui A., Najem D., 2020.

Figure 4. Despite the widening of the central part of Haouaria Beach, terrestrial vegetation begins to invade the beach. Photo: Hagui A., Najem D., 2020.

Figure 5. The narrowing of the beach of Nabeul in its northern part. Photo: Hagui A., Najem D., 2020.

Figure 6. The destruction of the dunes explains the narrowing of the width of Tazarka beach in its southern part. Photo: Hagui A., Najem D., 2020.

Figure 7. The invasion of the area behind the beach of Menzil Horr by the first constructions. Photo: Hagui A., Najem D., 2020.

Figure 8. The occupation of the dunes of the Korba beach by human constructions. Photo: Hagui A., Najem D., 2020.

4.3 **The approach adopted**

The study of the development of the Tunisian coast at the level of each chosen sector, confronts us with a methodological approach which consists in identifying the geomorphological balance of the chosen beaches in order to see the situation of the dunes and the sediment budget. This report will allow us to study the factors of the degradation of the beach and the vegetation. All this without forgetting to identify the immediate environment of the beach and the recommendations that can be useful in the development of a coherent and equitable development.

Arriving at this stage of reflection, our work remains linked to an increasingly participatory vision to bring out a balanced development with the intervention of different stakeholders. To do this, we have divided the work into two parts. The first is to compare the five dimensions that directly affect beach occupancy through a quantitative survey. The second is to identify the mental map of the arrangement «wanted» by the different parties involved in a direct or indirect way by this arrangement. It is the fact of working a qualitative survey.

The combination of these two types of survey with the geomorphological results obtained will allow us to see an optimal organization of the uses of each beach with such a kind of environmental protection.

The socio-spatial-economic, environmental and political analysis of beach development places us in front of a need to adopt a purely scientific approach to achieve such a sort of rational and fair occupation under the eyes of the various stakeholders (stakeholders public, associations, citizens). In fact, with the delimitation of the geomorphological and environmental framework of each spatial portion put to the test of the beach occupancy plan, our reflections have turned towards a need to work on two types of surveys in order to involve the large the different stakeholders as much as possible. First, we drew up a questionnaire of 121 questions directly related to the occupation and spread over five dimensions (social, spatial, economic, environmental and political). The objective was then in a desire to identify from a quantitative point of view the degree of impact of each dimension on the occupation of beaches.

For this quantitative survey, we performed the data analysis by the PCA principal component analysis method. This can only be done by releasing the reliability analysis through cronbach's alpha and the exploratory factor analysis through the KMO index, the total variance explained and the quality of representation. PCA therefore makes it possible to reduce the number of items and make the information less redundant.

Once the PCA is complete, the next step is based primarily on structural equation methods. It is a step made up of two elements, namely a structural model and a measurement model. The structural model also displays the relationships (paths) between the constructs. Measure models that show the relationships between dimensions and occupancy. In our work, we presented the measurement model which is divided into two parts namely: convergent validity and discriminant validity. This step is interesting because it allows to test the causal links between dimensions and occupation. It is the fact of validating the hyppthéses and retaining the dimensions that will be used in the coastal development project.

We have thus presented the convergent validity through first: the reliability of the internal consistency which should be greater than 0.70 (in exploratory research, a value of 0.60 to 0.70 is considered acceptable). Secondly through the reliability of the indicator: the external loads of the indicator must be greater than 0.70. The elimination of indicators with external loads between 0.40 and 0.70 should only be considered if the deletion results in an increase in the composite reliability and AVE above the suggested threshold value. And thirdly through convergent validity: the AVE should be greater than 0.50.

Second, we presented the discriminant validity while deducing the cross-loads and the Fornell-Larcker criterion. Indeed, the external load of an indicator on the associated construction must be greater than the entire cross loads (its correlation) on the other constructions. As for the Fornell-Larcker Criterion, it measures discriminant validity by comparing the square root of the mean variance of each extracted construction to its correlations with all the other constructions of the model.

At this point, we can therefore say that after the measurement model, we move on to the structure model to test the causal links between dimensions and occupancy.

The hypothesis test will allow us to identify the dimensions that have a direct relationship with the occupation of the beaches. To carry out our analysis of the occupation, our job is to base the analysis with consultation workshops on the arrangements proposed for each municipality in order to finalize the work on the occupation. In fact, a consultation workshop is a participatory technique that involves discussing the existing state of beaches and their immediate environments. They aim to supplement, on the one hand, the information collected within the framework of quantitative surveys, and on the other hand geomorphological studies, with the aim of proposing actions to be planned in the development variants. It is about bringing together all the actors

involved in the occupation and management of beaches (CPDA, municipalities, civil societies, seasonal users of the private sector, civil protection, etc.) to discuss and consult on the future of their occupation and protection.

Mind maps, as a technique for recording observations and suggestions, were used to facilitate the spatial expression of representations and perceptions of actors. The results of these techniques served as interesting materials to outline the «intended» layout of the beaches, the subject of the study.This article thus tries to present the results of the quantitative survey through the combination of built and dimensions that have a direct or indirect relation to the development of the Cap Bon coastline.

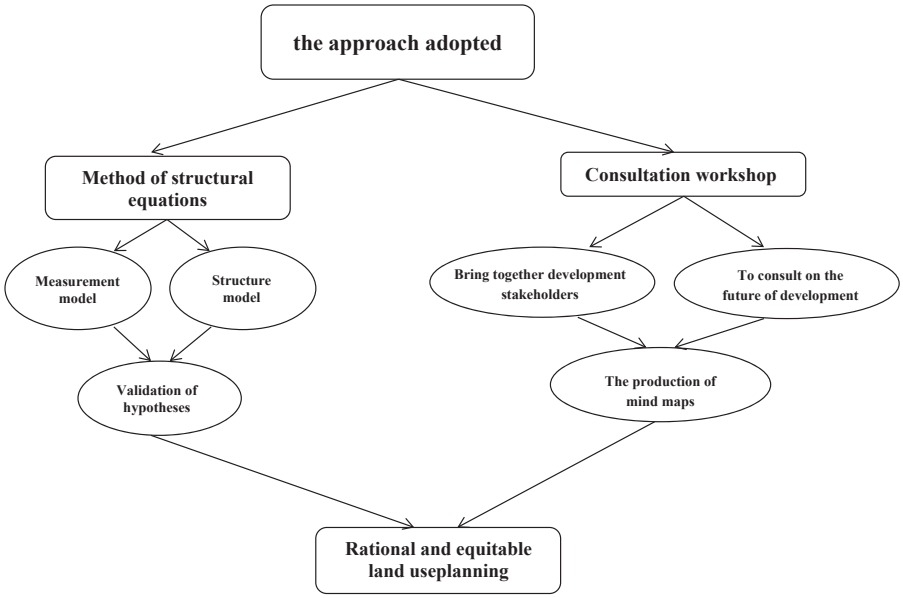


Figure 9. Synthetic summary of the survey

5. THE RESULTS OBTAINED AFTER APPLYING OUR APPROACH

After studying the shoreline and the coastline in order to define the areas subject to coastal erosion and the areas that are in permanent equilibrium. The multidimensional factorial analysis constitutes the next step which seeks to identify the dimensions which are directly related to the action to develop this fragile portion.

The application of the method of structural equations is only intended to validate the hypotheses of coastal development. This method is generally used to test either measurement models or structure models, or both. For measurement models, their roles are to specify the relationships between observable variables and latent variables which are not measurable but specified. For its measurement models, they form the set of tools used by researchers to materialize the concepts. As for the structural models, their role is to summarize the structural links which schematize the hypotheses that the researchers will have to confirm or refute them. Generally, its structural models try to identify the direct and indirect links between the variables arising from the central problematic.

The planning of fragile spaces is faced with the issue of sustainability between economic development and the protection of coveted spaces. For MES, the use of modeling often seems to be a crucial vector for the development of the planning of fragile areas, especially the coast. For Hoyle (1995), modeling by structural equations represents «a global statistical approach making it possible to test hypotheses dealing with the relationships between observed variables and latent variables».

We were able to apply our approach on seven beaches in the governorate of Cap Bon, namely: Nabeul, Haouaria, Menzil Temime, Mennzil Horr, Korba, Tazarka and Takelssa).

The KMO index is often linked to Bartlett's sphericity test which will need to be less than 0.05 for it to be meaningful. This test indicates whether the correlation matrix is an identity matrix within which all correlations are zero. For Claire Durand (2013) «this test verifies the null hypothesis according to which all the correlations would be equal to zero. We must therefore try to reject the null hypothesis and the probability of obtaining the value of the test must therefore be less than 0.05. However, the test is very sensitive to the number of cases; it is almost always significant when the number of cases is large. Its results are therefore interesting almost only when there are less than 5 cases per variable».

The study of the correlation between the independent variables and those dependent on our model of coastal development of Cap Bon, enabled us to draw up the table above. For the KMO index of the different dimensions of coastal development, it varies from 0.7 to 0.9, that is to say between good and excellent. Bartlett's test of sphericity is 0.000 for all dimensions at their construct level. All the data in our model is factorizable.

Table n.º 1. *The idiographic approach of the singularities of the independent variables*

(Hagui A., 2020)

Delegations	Dimensions of development	KMO index and Bartlett test			
		Kaiser-Meyer-Olkin index for measuring sampling quality.	Bartlett's sphericity test		
			Chi-square approx.	ddl	Meaning
Menzil Temime	the perceived social	,939	898,427	36	0,000
	the lived social	,875	367,197	10	0,000
	attractiveness	,916	1036,036	55	0,000
	Space production and reproduction	,909	932,806	45	0,000
	accessibility	,948	1341,909	66	0,000
	Space attendance	,923	492,202	15	0,000
	Economical profitability	,923	502,965	28	0,000
	Economic satisfaction	,880	1178,978	36	0,000
	Politics	,885	659,994	36	0,000
	Environmental	,895	675,734	55	0,000
	Existing development	,920	546,917	21	0,000
	Territorial performance	,922	1166,327	45	0,000
	Administrative performance	,919	547,936	21	0,000
Haouaria	the perceived social	,937	590,704	36	0,000
	the lived social	,785	374,686	10	0,000
	attractiveness	,938	872,101	55	0,000
	Space production and reproduction	,926	640,834	45	0,000
	accessibility	,942	594,167	66	0,000
	Space attendance	,702	502,579	15	0,000
	Economical profitability	,853	288,720	28	0,000
	Economic satisfaction	,879	647,084	36	0,000
	Politics	,849	431,404	36	0,000
	Environmental	,924	851,929	55	0,000
	Existing development	,914	460,298	21	0,000
	Territorial performance	,874	709,137	45	0,000
	Administrative performance	,878	392,875	21	0,000

Delegations	Dimensions of development	KMO index and Bartlett test			
		Kaiser-Meyer-Olkin index for measuring sampling quality.	Bartlett's sphericity test		
			Chi-square approx.	ddl	Meaning
Nabeul	the perceived social	,901	468,987	36	0,000
	the lived social	,719	306,152	10	0,000
	attractiveness	,632	666,243	66	0,000
	Space production and reproduction	,860	606,079	55	0,000
	accessibility	,900	685,586	66	0,000
	Space attendance	,882	229,201	15	0,000
	Economical profitability	,916	343,337	28	0,000
	Economic satisfaction	,805	647,364	36	0,000
	Politics	,903	527,069	36	0,000
	Environmental	,876	614,624	55	0,000
	Existing development	,808	303,126	21	0,000
	Territorial performance	,839	289,185	45	0,000
	Administrative performance	,848	252,768	21	0,000
Tazarka	the perceived social	,935	534,583	36	0,000
	the lived social	,802	192,392	10	0,000
	attractiveness	,921	738,128	55	0,000
	Space production and reproduction	,899	684,735	45	0,000
	accessibility	,941	512,146	10	0,000
	Space attendance	,800	398,141	15	0,000
	Economical profitability	,851	493,085	28	0,000
	Economic satisfaction	,875	390,723	36	0,000
	Politics	,868	306,513	36	0,000
	Environmental	,900	681,221	55	0,000
	Existing development	,870	340,695	21	0,000
	Territorial performance	,880	610,580	45	0,000
	Administrative performance	,816	416,583	21	0,000

Delegations	Dimensions of development	KMO index and Bartlett test			
		Kaiser-Meyer-Olkin index for measuring sampling quality.	Bartlett's sphericity test		
			Chi-square approx.	ddl	Meaning
Menzel Horr	the perceived social	,913	620,519	36	0,000
	the lived social	,870	375,837	10	0,000
	attractiveness	,935	945,629	55	0,000
	Space production and reproduction	,925	643,547	45	0,000
	accessibility	,947	705,043	66	0,000
	Space attendance	,814	322,180	15	0,000
	Economical profitability	,854	585,771	28	0,000
	Economic satisfaction	,818	472,219	36	0,000
	Politics	,872	334,738	36	0,000
	Environmental	,900	798,551	55	0,000
	Existing development	,892	478,575	51	0,000
	Territorial performance	,797	607,588	45	0,000
	Administrative performance	,805	149,497	21	0,000
Takelsa	the perceived social	,900	449,126	36	0,000
	the lived social	,738	295,068	10	0,000
	attractiveness	,910	710,134	55	0,000
	Space production and reproduction	,838	529,693	45	0,000
	accessibility	,901	580,565	66	0,000
	Space attendance	,656	374,306	15	0,000
	Economical profitability	,915	332,182	28	0,000
	Economic satisfaction	,865	462,632	36	0,000
	Politics	,808	623,927	36	0,000
	Environmental	,860	582,091	55	0,000
	Existing development	,920	294,569	21	0,000
	Territorial performance	,906	581,319	45	0,000
	Administrative performance	,845	233,410	21	0,000

Delegations	Dimensions of development	KMO index and Bartlett test			
		Kaiser-Meyer-Olkin index for measuring sampling quality.	Bartlett's sphericity test		
			Chi-square approx.	ddl	Meaning
Korba	the perceived social	,936	439,580	36	0,000
	the lived social	,856	435,618	10	0,000
	attractiveness	,905	1053,904	55	0,000
	Space production and reproduction	,904	1070,738	45	0,000
	accessibility	,881	514,701	66	0,000
	Space attendance	,838	292,206	15	0,000
	Economical profitability	,862	228,514	28	0,000
	Economic satisfaction	,892	558,369	36	0,000
	Politics	,884	452,388	36	0,000
	Environmental	,916	594,166	55	0,000
	Existing development	,835	291,824	21	0,000
	Territorial performance	,902	416,379	45	0,000
	Administrative performance	,921	288,638	21	0,000

Most researchers use P values to assess significance levels. A p-value is equal to the probability of obtaining a t-value at least as extreme as that actually observed, provided that the null hypothesis is corroborated. In other words, the p-value is the probability of wrongly rejecting an assumption of true null (that is, assuming a significant path coefficient when it is not significant). Assuming a 5% level of significance, the p-value must be less than 0.05 to conclude that the relationship under study is significant at the 5% level. For example, when we assume a significance level of 5% and the analysis gives a p-value of 0.03 for a certain coefficient, we conclude that the coefficient is significant at a level of 5%. Likewise, when researchers want to test their relationships more severely and therefore assume a significance level of 1%, the corresponding p-value should be less than 0.01 to indicate that a relationship is significant.

For our model, which addresses the issue of coastal development at Cap Bon, the validation of the hypotheses can be presented in the figure above.

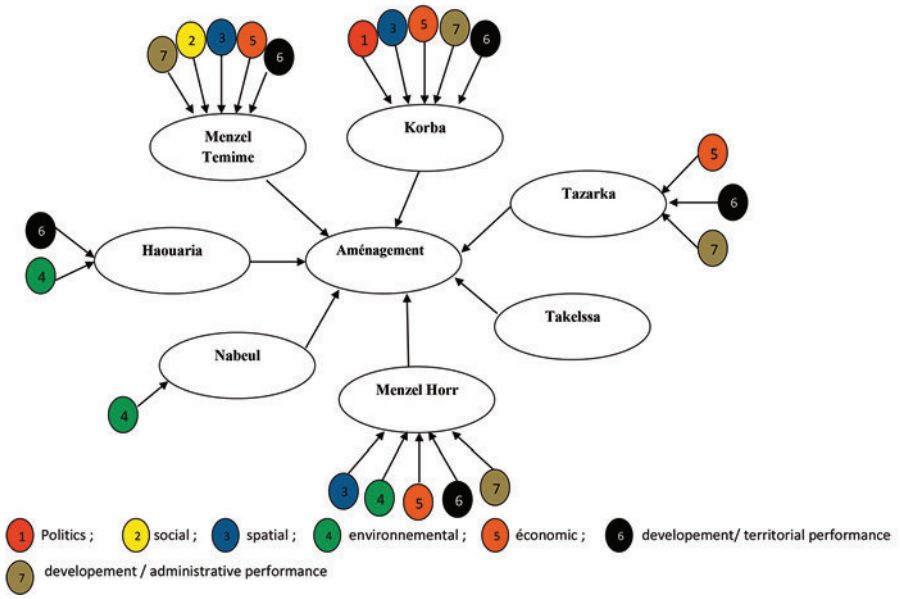


Figure 10. Les dimensions retenues pour aménager les secteurs d'étude (Hagui A., 2020).

6. CONCLUSION

The evolution of the relationship between man and his territory has made it possible to identify the natural processes that characterize the interactions between water and society. «Metaphorically, the time of nature is combined with the time of societies in complex and sometimes contradictory relationships» (Helga S. and Magalie F., 2005). These interactions with the permanent evolution of societies have made coastal areas need to develop them to preserve their natural appearance and to exploit it for the benefit of users.

In fact, coastal management has been dictated either by the risk of flooding, or by practices linked to the evolution of societies, thus placing an obligation to apprehend it through good management by various actors, whether scientists or managers. territories. However, the permanent and sometimes wild evolution of societies has put the future of the coast in question. The spatial consumption which was accentuated around large agglomerations made it possible to consider its spaces linked to the maritime public domain as a spatial side of the city which can be used to regulate the contrasts of urban development. These are spaces that can accommodate megaprojects, residential areas advanced on the water and even industrial areas.

During the 2000s, the content, practices and uses of beach occupancy evolved significantly. Focused on spatial issues in the 1990s, from the 2000s onwards, the procedures showed the ambition to coordinate different actors within extended perimeters. However, local dynamics are characterized by significant differences in the games of interests and institutional logics. The analysis of the ambitions of the various players clearly shows a tendency to rethink the links between the city and its beach.

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ABSTRACT

How can be broadened the scope of concepts for the study of occupation of beaches in Tunisia resulting from the most often illegal comprehensive use of its fragile spaces. Reflecting on the way to approach bop execution, we are faced with an approach that uses the lessons learned from previous failures to shape a new model based on a purely participatory approach.

Keywords: Planning, occupation, beaches, coast, fragile spaces.

RESUMEN

¿Cómo se puede ampliar el alcance de los conceptos para el estudio de la ocupación de playas en Túnez como consecuencia de un uso ilegal e intensivo de esos frágiles espacios? La reflexión sobre la forma de abordar la ejecución de los Planes de Ocupación de Playas (BOP), nos conduce a un enfoque que utiliza las lecciones aprendidas de errores anteriores para dar forma a un nuevo modelo de gestión basado en un tratamiento básicamente participativo.

Palabras clave: Planificación, ocupación, playas, costa, espacios frágiles.

The questionnaire survey

citizens	
associations	
public actors	

1. Are you

man	
woman	

2. How old are you?

[15-20[	
[20-30[	
[30-40[	
[40 et +	

3. What is your family situation?

Single	
Married	
Divorced	
Widowed	

4. What is your professional situation ?

Jobseeker	
Middle management	
Senior	
Employee	
Other specify	

5. Can you give us an estimate on the number of summer visitors?

Per day	
per week	
Per month	

For each of the following proposals, please indicate your level of approval by choosing from:

(1) Strongly disagree, (2) disagree, (3) Neutral, (4) Agree, (5) Strongly agree.

Pas

I. **Coastal planning/social dimension**

The purpose of this question is to describe the whole relationship of man at the beach to bring out the meanings and representations.

Q1 the beach a perceived space

The objective of this question is to highlight the place of the beach in the perception of individuals in order to integrate it as a basic component in the development of the beach.

The beach is a popular place	1	2	3	4	5
It is a space of daily and routine paths of individuals (leisure, travel, work)	1	2	3	4	5
It is a space for family life ……. oc_so_vie3	1	2	3	4	5
It is a space of individual experience resulting from practices ……. oc_so_vie4	1	2	3	4	5
It is a meeting place ……. oc_so_vie5					
The development of the beach will have to take over the social dimension in the definition of general ……. oc_so_vie6	1	2	3	4	5
It is a place of relaxation ……. oc_so_vie7	1	2	3	4	5
It is a space of social life ……. oc_so_vie8	1	2	3	4	5
It is a space that suffers from the absence of security (civil protection + police)…….. oc_so_vie9	1	2	3	4	5

Q2 La plage a living space

The beach is a place of strong representation ……. oc_so_vecu1	1	2	3	4	5
It is a space of psychological values ……..oc_so_vecu2	1	2	3	4	5
It acquires a symbolic dimension …….oc_so_vecu3	1	2	3	4	5
A place full of multiple meanings (custom, identity, etc.)……oc_so_vecu4	1	2	3	4	5
The execution of a development must take into account the "identity" in the development process …….oc_so_vecu5	1	2	3	4	5

II. **Coastal planning/spatial dimension**

The objective of this question is to highlight the impact of the organization of the occupation of beaches not only on the production and reproduction of spaces, but also on the territorial dynamisation.

Q3 the beach and the attractiveness

The beach has a strong ability to attract individuals …….oc_sp_attr1	1	2	3	4	5
It has a strong capacity to attract households …….oc_sp_attr2	1	2	3	4	5
It generates a leasing process and can fuel speculation …….oc_sp_attr3	1	2	3	4	5
The organization of the beach can accentuate speculation …….oc_sp_attr4	1	2	3	4	5
It has a strong ability to attract mobile production factors …….oc_sp_attr5	1	2	3	4	5
Attraction of the beach can be operated from investment point of view	1	2	3	4	5
Attraction can influence competition for a better location condition ……. oc_sp_attr6	1	2	3	4	5
Attraction can encourage investors to locate themselves …….oc_sp_attr7	1	2	3	4	5
Plays a prominent role in the financial resource conversion process ….oc_sp_attr8	1	2	3	4	5
She plays a prominent role in the process of converting human resources …….oc_sp_attr9	1	2	3	4	5
It also provides complementary resources to all individuals (help, recreation, etc.) …….oc_sp_attr10	1	2	3	4	5
She plays a prominent role in the process of converting relational resources	1	2	3	4	5

Q4 territoriale beach and territorial production/reproduction

Development can influence new residential mobility …….oc_sp_pro1	1	2	3	4	5
It can also induce a gradual change in the social occupation of the beach…….oc_sp_pro2	1	2	3	4	5
The development of the beach can generate an influx of investments not only at the beach level but also at the city level……. oc_sp_pro3	1	2	3	4	5
It may be the source of a new urban polarization……. oc_sp_pro4	1	2	3	4	5
The organization of beach development has an impact on the variation in the intensity of population dynamics…….oc_sp_pro5	1	2	3	4	5
It is a development that can be beneficial for the city in the mastery of urban evolution……. oc_sp_pro6	1	2	3	4	5
It helps the city in defining urban development guidelines…….oc_sp_pro7	1	2	3	4	5
It helps decision-makers in urban extension	1	2	3	4	5
It can be the source of the influx of a large number of summer visitors from outside…	1	2	3	4	5
It is an arrangement that can define new changes in the social structure of the population…….oc_sp_pro10	1	2	3	4	5
The execution of a development can generate a new urban dynamic……. oc_sp_pro10	1	2	3	4	5

Q5 accessibility

The beach is easily accessible……. oc_sp_acc1	1	2	3	4	5
The number of accesses to the beach is satisfactory……. oc_sp_acc2	1	2	3	4	5
Access to the beach requires other access……. oc_sp_acc3	1	2	3	4	5
Access to the beach requires a means of transport (car, motorcycle,..) …….oc_sp_acc4	1	2	3	4	5
the sulphur range of clutter during the summer season……. oc_sp_acc5	1	2	3	4	5
Access to the beach is completely over-concentrated during the summer season……. oc_sp_acc6	1	2	3	4	5
Parking spaces meet the needs of summer visitors……. oc_sp_acc7	1	2	3	4	5
Parking spaces are far from the beach……. oc_sp_acc8	1	2	3	4	5
Parking spaces are private spaces……. oc_sp_acc9	1	2	3	4	5
Parking spaces are secure……. oc_sp_acc10	1	2	3	4	5
With the creation of a layout, you want to open the access planned by the PAU……. oc_sp_acc11	1	2	3	4	5
The execution of a development must meet the needs in terms of intra-seasonal accessibility …….oc_sp_acc12	1	2	3	4	5

Q6 user mobility

The beach is frequented only by the citizens……. oc_sp_freq1	1	2	3	4	5
It is frequented by the citizens and the communities around it…….oc_sp_freq2	1	2	3	4	5
It has a regional (see even national) presence……. oc_sp_ereq3	1	2	3	4	5
Each portion of the range defines the type of attendance……. oc_sp_freq4	1	2	3	4	5
Frequency of attendance is significant daily (regular) ……..oc_sp_freq5	1	2	3	4	5
This frequency is important only on holidays (holidays) and weekends……..oc_sp_freq6	1	2	3	4	5

III. **Coastal planning/economic dimension**

Q7 beach is an economic space par excellence

The beach is a space that creates wealth……. oc_eco_exc1	1	2	3	4	5
It is a space for selective competition between activities……. oc_eco_exc2	1	2	3	4	5
It is a place that generates economic conflicts……. oc_eco_exc3	1	2	3	4	5
The beach is aware of the existence of places that are increasingly profitable (with access) …….oc_eco_exc4	1	2	3	4	5
It is experiencing the influx of investments……. oc_eco_exc5	1	2	3	4	5
The organisation and management of the range can increase the share of investments…….oc_eco_exc6	1	2	3	4	5
It is a place of seasonal job creation……. oc_eco_exc7	1	2	3	4	5
The economy of the beach has negative effects on the economic spaces of the rear beach……. oc_eco_exc8	1	2	3	4	5

Q8 range and satisfaction of needs

The existing occupations are satisfactory in terms of the needs of the summer visitors…….oc_eco_satis1	1	2	3	4	5
The number of occupations is satisfactory…….oc_eco_satis2	1	2	3	4	5
Location of occupations appears satisfactory……. oc_eco_satis3	1	2	3	4	5
The quality of services offered is in line with the financial capacity of the summer visitors…….oc_eco_satis4	1	2	3	4	5
Food needs are met at the beach site…….oc_eco_satis5	1	2	3	4	5
Food needs are met at the beach……. oc_eco_satis6	1	2	3	4	5
The beach suffers from an increased lack of animation activities…….oc_eco_satis8	1	2	3	4	5

The organization of the range offers the regulation of the supply/demand duality…….oc_eco_satis9	1	2	3	4	5
L'organisation de la plage offre la régulation de la dualité offre/ demande…….oc_eco_satis9	1	2	3	4	5

III. **Coastal planning / political dimension**

Q9 the beach as a political territory

The beach is a political territory par excellence……. oc_politi1	1	2	3	4	5
It is a place of hostility……. oc_politi2	1	2	3	4	5
Its structure and organization depend on political stability……. oc_politi3	1	2	3	4	5
It is a place of tension and debates of different temporalities…….oc_ politi4	1	2	3	4	5
Does the beach design reduce tension and conflict…….oc_politi5	1	2	3	4	5
Can it be defined as the enemy of hostility…….oc_politi6	1	2	3	4	5
Promotes transparency and equality…….oc_politi7	1	2	3	4	5
It can influence political peace……. oc_politi8	1	2	3	4	5
It can influence social peace…….oc_politi9	1	2	3	4	5

III. **Coastal planning/environmental dimension**

Q10 the beach and its immediate environment

The beach is clean……. oc_envi1	1	2	3	4	5
It knows polluted fragments…….oc_envi2	1	2	3	4	5
Pollution is caused by wastewater discharges…….. oc_envi3	1	2	3	4	5
It is due to industrial waste…….oc_envi4	1	2	3	4	5
It is due to extrinsic factors……. oc_envi5	1	2	3	4	5
Protection of the beach environment is a first-class occupation……. oc_envi6	1	2	3	4	5
Pollution has led to the degradation of ecosystems…….oc_enviment7	1	2	3	4	5
The beach is a feeding ground…….. oc_envi8	1	2	3	4	5
It is subject to erosion in some places……. oc_envi9	1	2	3	4	5
Erosion is related to human intervention (anthropogenic factors) ……. oc_envi10	1	2	3	4	5
Bathing activities are prohibited in certain areas affected by erosion …….oc_envi11	1	2	3	4	5

III. **Coastal planning**

Q11 fit-up and level of satisfaction

Are you satisfied with your beach occupancy……..oc_plage1	1	2	3	4	5
Is the beach organization satisfactory……. oc_plage2	1	2	3	4	5
I am pleased with the role of environmental associations in my region in organizing beaches…….oc_plage3	1	2	3	4	5
I am satisfied with the role of the Non-Governmental Organizations (NGOs) of my region in the organization of beaches…….oc_plage4	1	2	3	4	5
I am satisfied with the conscience of the citizen of my region in organizing the beaches…….oc_plage5	1	2	3	4	5
The animation of your beach is satisfactory……. oc_plage6					
The degree of involvement of the municipality in the management and organization of the beaches is satisfactory…….oc_plage7	1	2	3	4	5

III. **Performance resulting from the development**

Q12 Administrative performance

Development makes beach management easier……. oc_perf_adm1	1	2	3	4	5
It improves work performance……. oc_perf_adm2	1	2	3	4	5
It gives confidence to the various managers to carry out their work…….oc_perf_adm3	1	2	3	4	5
It increases the participation of managers in decisions……. oc_perf_adm4	1	2	3	4	5
It increases the knowledge of the managers concerned……. oc_perf_adm5	1	2	3	4	5
It improves the quality of work products……. oc_perf_adm6	1	2	3	4	5
It improves the ability of managers to resolve issues……. oc_perf_adm7	1	2	3	4	5

Q13 Territorial performance

The creation of a layout makes the space more organized……. oc_perf_ter1	1	2	3	4	5
Improves beach accessibility……. oc_perf_ter2	1	2	3	4	5
Increases space usage……. oc_perf_ter3	1	2	3	4	5
Increases summer inflow……. oc_perf_ter4	1	2	3	4	5
Improves space management……. oc_perf_ter5	1	2	3	4	5
Increases competition among investors……. oc_perf_ter6	1	2	3	4	5
Increases municipal resources……. oc_perf_ter7	1	2	3	4	5
Streamlines the use of space……. oc_perf_ter8	1	2	3	4	5
Reduces waste of resources……. oc_perf_ter9	1	2	3	4	5
Contributes to territorial innovation……. oc_perf_ter10	1	2	3	4	5