

Natural heritage in a coastal area, the example of Bassin of Arcachon: various conventions and land-use conflicts.

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I. Introduction

Coastal zones are territories highly-coveted by some categories of actors with several perceptions, experiences, practices and purposes. The great diversity of natural resources is one of the reasons of this attractiveness and their management needs to take a lot of various users into account.

In this context, attractiveness of coastal areas could offers potential for substantial economic growth and development of competitiveness activities. However, it also can accentuate the degradation of natural resources. The challenge is to both manage development and conserve natural resources and to integrate the individual and collective concerns of all relevant sectors of society and of the economy. This management seeks to integrate or coordinate activities and existing users. By this way, it reveals heritage issues. The coordination of actors has significant legal, political and relational dimensions: it depends on formal and informal rules *i.e.* conventions and implies participative initiatives but also conflict situations.

In this way, the panel of natural and cultural resources uses on one coastal area can be just as well interpreted like so many conventions as regards the heritage. Currently, this approach reveals conflict dynamics linked to the issue of competitiveness and attractiveness of the coastal territory. Even if economic analysis has not focused on conflict, this is a main subject to take into account the instructional change in economics. What are the great changes on Bassin of Arcachon? Is there a necessity to mobilize a heterodox analytical approach? What relationships do conflicting situations have with the rise in territorial attractiveness? How do environmental conflicting situations imply the emergence of a new compromise between the manifold actors of coastal area?

By mobilizing the heritage approach and economic of conventions we study environmental conflicts to show the necessity of taking account natural resources to join the attractiveness to the competitiveness of a territory. It's also highlighting the "hot spots" of coordination on one territory implying local institutional changes in the medium term.

The rest of this article is set out as follow. Section 2 outlines the natural wealth of the Bassin of Arcachon and its impact in terms of attractiveness. Section 3 proposes an analytical crossings between economic of conventions and heritage approach. Finally, the last section is focused on the analysis of land conflict in terms of heritage conventions.

II. Attractiveness and diversity on the Pays "Bassin d'Arcachon Val de l'Eyre"

1. From territorial competitiveness to territorial attractiveness

Whereas globalization is considered to cause convergence in the economic development by neo-liberal transformations, for thirty years, it has been asserted that local resources and specificities can stimulate economic growth. Thus, different approaches have highlighted the weight of informal rules, networks, tacit knowledge by developing new theoretical concepts as industrial districts (BECATTINI, G., 1992), local productive systems (COURLET, C., 1994), local environment (MAILLAT, D., 1992). These approaches emphasized on the impacts of both uses and specificities of local resources on the competitiveness of firms. In this case, competitiveness of firm can be assessed by indicators like profitability or productivity allowing us to compare the firms between themselves. These analyses have lead to many approaches focused on proximity's virtues (PECQUEUR, B. et J. B. ZIMMERMANN, 2004). Nevertheless, as it was explained by Krugman the competitiveness of a nation can not be only measured by indicators of international competition like trade balance (KRUGMAN, P., 1994). The definition of competition at national scale "is much more problematic". By focusing on competitiveness public authorities are mistaken about the aims because they can not support economic field like health services or inventions etc. This perspective generates a large debate about cities competitiveness or territorial competitiveness. Thus, it appeared necessary that competitiveness of territories has to be examined from its different components.

Considering territory as a complex constructed system which is composed of actors in interaction, we developed an approach instead of attractiveness than competitiveness which provides a solid starting point to take into account the different constraints linked to the globalisation that territories have to manage.

Indeed, in this context where the territorial anchorage of a firm is variable (ZIMMERMANN, J. B., 2001), competition between territories encourages each of them to develop their attractiveness to improve their competitiveness rather than improve it by using local resources. The elements that contribute the territorial attractiveness are for instance high infrastructure level or high quality of life. But often, these factors also contribute to the competitiveness of firm (CAMAGNI, R., 2006). Nevertheless, the study of territorial attractiveness can not be limited to the analysis of enter and exit of firms. Currently a territory is attractive if it may attract firms, capital, labours to increase production but it also attracts residential population. Considered in this way, territorial attractiveness possesses three components: productive attractiveness, residential attractiveness, tourist attractiveness (FABRY, N., 2009). Furthermore, in the context of sustainable development, this attractiveness has to manage the conservation of natural resources. This is all the more relevant as we study a coastal area. Indeed, coastal areas are characterized by numerous an outstanding natural resources which support significant economic sectors such as fisheries, shipping and tourism.

However, human activities (e.g. urbanisation, waste disposal and habitat depletion) and climate change (e.g. increased storminess and flooding) are placing the coastline under increased pressure. Furthermore, conflict arises from demands for coastal space and resources from competing interest groups. This is why Integrated Coastal Zone Management (ICZM) aims to address these issues by promoting better integration between the different policies that have an effect on the coast. With planning and management this various sectors can be a positive force, but if these planning and management have failed this diversity can be a catalyst for environmental degradation and deterioration in the quality of life of coastal population and contribute to less attractiveness and competitiveness. The study of a specific coastal area, the "Bassin of Arcachon" allows us to highlight the diversity of actors and the potential of land use conflicts on this territory.

2. The attractiveness on the Pays "Bassin d'Arcachon Val de l'Eyre"

The Pays "Bassin d'Arcachon Val de l'Eyre (BARVAL)" is an institutional territory in the southern France, which associates urban with rural areas, coastal towns with forested inland. This coastal territory is characterized by the diversity of the natural resources, as well by the values associated to each of them.

In 2006, 78.8% of the territory is covered by forest (Database CORINE LAND COVER, 2006), sometimes by mixed timber forests of maritime pines and leafy species, in a large part by maritime pines in monoculture. Indeed, this forest is above all and historically a productive forest. Nevertheless, two types of spaces are enclosed in this productive forest: farms lands and natural protected sites localized essentially around the Eyre River and in the coastal forest. This widespread forest area faces to the Bassin of Arcachon, another atypical area. This coastal lagoon of 156 km² is composed for a large part by channels which the low water renewal rate creates optimized conditions for oyster farming and for a little part by foreshore beaches occupied by zosteres, some remarkable ecosystems (IFREMER, 2002).

This diversity of natural resources can be put in parallel with the multi functionality of the territory, which is the support of residential and leisure uses, agricultural productive uses, industrial productive uses and environmental protection use.

The forest area is mainly the support of a production of "paper wood", which 75% is consumed by a paper firm territorially anchored. Consequently to the last two storms, developing a supply of wood for construction is less and less possible. This forest area is weakened by the progressive urbanisation of forest plots: between 2000 and 2006, 0.9% of the forest has been converted in building plots (Database CORINE LAND COVER, 2000-2006). Farmlands represent a very few part of the territorial land, but are emblematic of a very intensive farming production which contrast in the landscape with the forest. In opposition to these productive representations of the forest, some forest natural sites have been classified as ZNIEFF (2.9% of the total surface in 1999) or ZICO (2.1% of the territory in 1994) and have recently entered in the Natura 2000 Network, i.e. 10.9% of the Pays in 2008.

The territorial multi functionality concerns the maritime area too. Historically, the Bassin of Arcachon is the support of oyster farming and fish, who exploit the maritime resources (oysters, mussels and fishes). These activities are still running but today, they must share the maritime area with other forms of navigation. Indeed, the natural configuration of the Bassin of Arcachon completed by the economical and political choices has progressively enabled the development of a recognized nautical field and of touristic activities such as yachting.

This high panel of uses on the territory has generated a heterogenic spatial organization and must make with the residential use. The south coast is urbanized and concentrates more 50% of the population and a very large part of the employment generated by the residential sphere.

Under the pressure of Bordeaux, the north coast and the Eyre valley are still composed of rural areas. DATAR's typology¹ of rural areas known as "Cantons SEGESA" is particularly interesting for summing up and qualifying the complexity of the Pays BARVAL through its four cantons. So, according to this typology, the north coast is composed of rural areas with a touristic and residential attractiveness; the Eyre valley by rural areas which get into periurbanisation.

This typology enables also us to introduce the notion of attractiveness on the Pays "Bassin d'Arcachon Val de l'Eyre". Indeed, it reveals two consequences of the attractiveness of the territory: the touristic attractiveness which is particularly high on the coasts and the residential attractiveness which sparks off a progressive urbanisation of the inland. As we saw in the previous section, assessing the attractiveness of a territory means taking account of three aspects: the residential attractiveness, the productive attractiveness and the touristic attractiveness. Each of them can be accessed through the territorial flows. To examine these components, we replace the Pays BARVAL in a larger scale, the employment area "Bordeaux-Arcachon".

The residential attractiveness can be assessed through numerous indicators. We retain two approaches: one in terms of populations input/output, another in terms of spatial dynamics. In 2006, 15% of the population settled on the employment area "Bordeaux-Arcachon" is entered after 1999 and by this way, intensify the residential use on the territory. But the residential use consumes spaces. Consequently, the evolution of the part of the urbanized spaces and the number of notified residential yards are good indicators to qualify both the residential attractiveness and its pressure. So, between 2000 and 2006, the urbanized surface of the Pays "Bassin d'Arcachon Val de l'Eyre" increased by 1.34% (Database CORINE LAND COVER 2000-2006), which can be put in parallel with the 12210 notified yards (Database SITADEL, 2000-2006), i.e. 16% of the yards of Gironde. This residential use is also in competition with the others uses consuming space. Actually, to preserve its competitiveness, the nautical field must resolve the lack of spaces around the Bassin by new productive orientations which will enable it to develop new infrastructures not on the overcrowded coast but in the territorial inland.

The productive attractiveness can be described by the number of "pure" creations of firms, which correspond to the creations of new productive resources. Between 2002 and 2006, its middling rate of pure creations is assessed to 9.4%. Considering that the French average is calculated to 8.1%, this indicator of economical attractiveness gives good results for the employment area "Bordeaux-Arcachon" (Database SIRENE, 2002-2006). This attractiveness has a positive impact of the economical dynamism of the territory. Indeed, the ratio input/output of firms, that-is-to-say the ratio "creations/ (cessations + failures)" shows that in 2008, for cent firms which stop its activity, 155 firms are created on the territory. To have a referential point, in France, for cent firms in cessation or failure, 149 have appeared. But to have an idea of the durability of this productive attractiveness, it would be interesting to observe an indicator of the five years survival rate of the firms created in 2000 on the territory. And the results are not so good anymore: the territory is placed in the last quarter of the French employment areas. In 2005, only 50.4% of the firms created in 2000 were still in activity (Database SIRENE, 2000-2005). The territorial challenge would be to preserve the

¹ The "Cantons SEGESA" typology was constructed from demographic indicators describing the demography (density, population change, aging, etc.), the economy (active migrants, agriculture and industry parts in the territorial economy, etc.), households (income, car equipment, single parents, etc.) and housing (percent of second homes, individual houses and recent buildings, etc.) (DATAR, 2009).

productive attractiveness: giving priorities cluster logics, developing business incubators, etc. are the solutions proposed in the Territorial Coherence Schema (SYBARVAL, 2009).

To conclude, we consider the touristic attractiveness of the Pays “Bassin d’Arcachon Val de l’Eyre”. Tourism is now an increasing sector which provides a lot of economic resources: 310 billions Euros have entered into the territorial economy between May and September 2007 (SIBA, 2008). This tourism activity represents more 30% of the visits in Gironde, i.e. 9% of the visits in France (SIBA, 2008). This increasing tourism is a result of combinations of original attractions like natural environment, oysters and their typical « oyster cabins », beaches and their infrastructures (camping ...), as well as the development of faster transport to the desired destinations. The yachting activity illustrates well the tourism attractiveness of the Bassin. Indeed, since few years, it must face to an overcrowding of the ports. Let us another example: the increasing of the touristic housing stock on the Pays BARVAL. Indeed, the second homes which building has begun between 2000 and 2005 constitute 12.9% of the housing stock, whereas in France, they represent only 5.4% (MEEDM-SOES, 2000-2005)! In this context, like industries or farming, the rapid growth of the coastal tourism and residential population are suspected to have some negative impacts on natural resources. In your last example, growing infrastructure may responsible for the loss of biodiversity and may exacerbate the problem of quality environment which is directly linked to the development of oysters

Thus, studying territorial attractiveness requires the development of an approach capable of simultaneously grasping the complexity of relationships between attractiveness and competitiveness and the diversity of point of views of actors of about their using of the Bassin of Arcachon. This study shows the potential divergence of interest between the different actors

III. Crossroads heritage approach and economic of conventions to analyse the land use conflicts which are due to the diversity of actors on this territory

1. Institutional economics heritage approach

In this paper we proposed to develop the concept of heritage from economic of conventions. In our view, studying a territorial attractiveness in terms of heritage conventions provides a solid starting point from which to generate studies which explicitly integrate the constructed and natural dimensions of resources.

The concept of heritage has been widely mobilized in different fields of economic. Neoclassical economists reduce heritage to capital from private property which can be subject of monetary assessment. The purpose of it management, guided by individual’s selfishness, is its increasing. But this heritage approach linked to the traditional framework of welfare economics and focused on the questions of utilities and inadequate information miss to take into account manifold values which shape economic behaviours. Furthermore, currently a wide range of goods or institutions can be describes as “heritage” and depends on collective action. Ostrom and Poteete underline in their analysis the variety and number of factors associated with successful collective action, especially about nature resource management (2004 p.217)(POTEETE, R. et E. OSTROM, 2004). So, some economists proposed an institutional economics approach enabling to distinguish heritage from capital that provides a good starting point to study the impacts of prevailing social conventions on economic behaviour. Indeed, institutional economics approach is hypothesized that social relations and uncertainty are crucial in determining economic behaviour. It considers various forms of coordination built around territorial and environmental problems. In this way heritage, is not

considered as given resources but as the outcome of a compromise between two mutually dependent and opposite logics: conservation and use of resources. The first reflects collective interests whereas the second meets economic and individual's selfishness. In this context, territorial heritage is constructed and depends on uncertain socio-economic process. Tensions and conflicts are unavoidable and characterize relationships between territorial actors before their agreement and their coordination about the conservation of local resources.

2. *Economic of conventions*

In the next stage, we have crossed the heritage approach that we set out above with Economic of conventions to develop an economic approach in terms of heritage conventions allowing us to take into account the diversity of actors and their manifold interests. These latter's can be explained by the plurality of environmental rules, technologies, territories, and the motivations of actors involved in environmental protection (PAAVOLA, J., 2007). In order to scrutinize the plurality of decisive factors of action (efficiency, social justice, ethics, etc.), we adopt the "economics of conventions" approach found in the French literature (SALAIS, R., 1989, ORLÉAN, A., 2004, EYMARD-DUVERNAY, F., 2006). This approach, which belongs to institutional economics, takes into account the impact of radical uncertainty² on the economic actors' behaviours, and views productive activity as a form of collective action (MURDOCH, J., MARSDEN, T., BANKS JO., 2000).

This approach therefore sees the coordination of economic actors as a critical problem, given the ambiguity and complexity characterizing such situations (EYMARD-DUVERNAY, F., 2006). Its objective has been to breakdown the process of coordination. By focusing on the whole process of coordination, this economics scholar has to take into account every components of this process from conflictive situation to coordination of actors. The specific form and content of coordination will vary according to the products, technologies, and market, as well as infinitely diverse sources of satisfaction that are impossible to inventory here. These economists consider that conventions serve to coordinate actors. An assumption made nearly three centuries ago by David Hume in the *Treatise on Human Nature* (1739) (LATSIS, J., 2005). According to Salais and Storper (1993: 171) (SALAIS, R. et M. STORPER, 1993), "Conventions are practices, routines, agreements and their associated informal or institutional forms which bind acts together through mutual expectations". In the development of this theory, which offers socio-economic perspectives, Batifoulier has proposed the distinction between regulative and constitutive rules, which has become fairly common (BATIFOULIER, P., 2001). The first type of convention, called strategic conventions, aims to regulate individual's behaviours. The second type of convention aims to give a meaning to economic action. It shapes the actors' representations and allows for new kinds of behaviour. This form of "interpretive convention" is like an institution because it refers to broad values and judgments, rules and enables explicitly to manage conflicting situations. By this way the seminal work of Boltanski and Thévenot (1991) introduced the concept of "cities" and identified six cities, each with its own convention and form of justification (inspirational, opinion-based, domestic, industrial, market, and civic) (BOLTANSKI, L. et L. THÉVENOT, 1991). In this conception of interpretive convention, separating the actor, the action and the goal is neither empirically nor ontologically justifiable. Conventions are related to the pragmatic and historic dimensions of action, which are in turn related to the ongoing tension between ends and means. This type of convention which regulates collective representations contributes to a collective identity (SEARLE, J., 1995). So, this approach appeared all the more relevant as we studied land use conflict and their lesson in terms of territorial heritage and

² Radical uncertainty is a situation in which actors cannot calculate the consequences of their acts.

especially natural heritage. In this field, economic situations are close to “L'économie des singularités”(KARPIK, L., 2007) that focusing on “singular” products and services or “debated universes” (GODARD, O., 1993) that insist on radical uncertainty linked to social and scientific controversies. Indeed, considering that heritage depends on social and historic dimensions, coordination of actors requires rules and plan that enables to judge and assess “quality”. In this context different values shape these rule and plan of judgment. Furthermore, according as the heritage has some individual or collective dimensions, propriety may be variable and determine form of development or support.

By taking inspiration from the conventional approach developed by Isla about the water access (BARON, C. et A. ISLA, 2006) we may distinguish four types of convention that we called ‘universal heritage’, ‘common heritage’, ‘interpersonal heritage’ and ‘market heritage’:

3. *Heritage conventions*

The *universal heritage convention* supposes that this heritage is a public good that needs to be protected for its outstanding universal value and the biodiversity or cultural diversity. Private propriety is unable. International initiatives like ICOMOS, define the formal criteria that cultural or natural heritage need to satisfy to qualify. For instance, Unesco convention depends on two major criteria: “authenticity and integrity. Nevertheless, in this context the description of outstanding resources as universal heritage contributes to the touristy attractiveness that may lead to territorial development thanks to national or international support and market development. The *common heritage convention* is linked to local heritage that is the cause of territorial identity. This heritage is usually managed by local collective action. It depends on criteria and knowledge that are determined and shared in a local network. For instance, the initiatives like “natura 2000, or “aire marine protégée”, economic do not lead to economic development as objective. However, the need of conservation can entail financing support. Thus, this form of protection system which is based on local participative management aims to regulate the territorial attractiveness. Nevertheless, such system can favour the development of sustainable tourism. In the *interpersonal heritage convention* the knowledge shared depends on informal network and domestic value. The propriety is collective and the economic development depends of choice management. In this case, the heritage is made up by traditional resources which contribute to local identity and that actors have to conserve. These resources do not constitute a factor of territorial attractiveness. So, the conservation of these resources represents a challenge for the local development. Unlike the others, the “*market heritage convention*” is characterized by the aim of economic development. The heritage is similar to private good and depends on private supports, so it is a mainstay of a wide process of attractiveness.

This different heritage convention which each one represent a coherent rules system, enable us to generate analytical knowledge about land use conflict on coastal area linked to various conception of territorial attractiveness. In one hand land use conflict may depends on the opposition between actors that refer to different conventions. In the other hand land use conflicts may reflect a calling into question of a component of a convention. Finally land use conflicts reflect a potential institutional change.

From the method exposed in Appendix n°1 we can set out the following results.

IV. Land use conflict and heritage conventions on Bassin of Arcachon

Previously, we have seen that the Pays “Bassin d’Arcachon Val de l’Eyre” (BARVAL) is a multifunctional and attractive territory. The natural resources of this territory cause apparently this attractiveness: they are highly coveted by numerous categories of actors.

And this will potentially create some divergence of interest between these different actors. PENNANGUER & al. (2008) have already proposed a general typology of conflicts on coastal areas: (1) the land use conflicts in a strict meaning. They result of the competition between two uses for the same resource, (2) the environmental conflicts which are caused by the revelation of an environmental degradation, (3) and 4) the conflicts caused by divergences about a project of territorial management or of territorial development. This global typology underlines the existence of environmental conflicts as a type of land use conflicts and proposes a definition of it. We could make reference to it later.

In order to reveal the underlying values which legitimate the position of each actor in environmental conflicts, we analyse here the results of the textual analysis of 576 Sud Ouest articles, all revealing land use conflicts on the Pays BARVAL between 2005 and 2009. We carry out a first textual analyse of the 576 sampled articles in order to obtain a first typology of the major land use **conflicts theme** on the Pays BARVAL. Then, by extracting articles revealing environmental land use conflicts from the initial corpus, we proceed to a second analysis in order to highlight the **natural heritage conventions**.

A. Tensions and land use conflicts revealed by regional newspapers

In coherence with the framework of the tensions and conflicts' analyse designed by the Proximity team and exposed in Appendix n°1, we identified four types of physical goods with a social and economical identity and which can support the uses of the Pays "Bassin d'Arcachon Val de l'Eyre" and consequently the land uses conflicts. They are the coastal lands, the maritime area, the forest area and the Eyre valley. Under the generic terms, four types of tensions and conflicts have been observed on the Pays.

1. Conflicts emerging with territorial management and environmental planning projects, or with the revision of town planning documents

The quality of life is one of the first required by the inhabitants of the Pays who want both to have a natural life environment and services without be too far from the employment areas. However, paradoxically, more a territory proposes such a life quality, more attractive it is, and more the arrival of new inhabitants disturbs the balance between landscapes, commercial and transport services. By changing the territorial organization, each development and management projects are liable to cause land use conflicts between the supporters of the current status quo and the supporters of the economical development of the Pays "Bassin d'Arcachon Val de l'Eyre" (BARVAL). These conflicts linked to the territorial development concerned one tierce of the conflict articles published in the Sud Ouest between 2005 and 2009.

As we said in the section n°2, the territorial attractiveness is unequal all over the territory and more intense on the coastal area. Nevertheless, the conflicts covered by the press reveal an increasing touristic and residential attractiveness of the inland areas. The touristic attractiveness - notably around the Eyre River - is promoted by public (the Regional Natural Park) and private (canoe clubs) organisms, while the residential attractiveness is motorized by public political choices affecting the spatial management.

2. Tensions linked to the negative externalities of the leisure use.

The current compromise between the economical activities seems very ephemeral because it generates numerous tensions. Indeed, on the Pays BARVAL, "stricto sensu" land use tensions have been revealed by the regional daily press on all the territory. Theses tensions result principally from the competition between the leisure use and the oyster and forest productive uses. They are intensified by the increase of the touristic frequentation of the maritime and forest areas. The leisure use requires a certain level of life quality, whereas the

productive uses need secured conditions. The oyster farmers and forest users want to have guarantees that the touristic frequentation will not damage their productive environment and thus, will not increase the economical incertitude, already high for these two activities dependent of the natural risks. But, on account of the economical weight of the tourism field, the divergence opposing the leisure use and the forest and oyster users did not really evolve in conflicts.

3. *Conflicts linked to the negative externalities generated by the elimination of waste water, municipal solid waste, and port sludge.*

An economical development of the Pays means an increase of the water consumption and of the waste production; which sparks off conflicts on the territory. The water distribution, the waste water treatment and cleaning up, the waste collect and treatment come under the competence of the local authorities which have made the choice to be associated in intercommunalities. Each time that a fault in the operations mentioned above is revealed, conflicts emerge between the users of the Bassin which receive the polluting effluents and the local authorities. The life quality is central in these conflicts because the challenge is consuming without be disturbed by the negative externalities of the waste elimination.

4. *Conflicts linked to the economical incertitude, caused by the prefectural suspensions of selling oysters, emblematic products of the Bassin of Arcachon.*

The water quality is particularly crucial in the four and last group of conflicts, which are caused by the sanitary oyster crisis. The results of the tests known as “Mouse tests” carried out by Ifremer laboratories on mice food with oyster fragments have implied several bans of selling oysters and mussels from the Bassin of Arcachon. Since 2005, the repetition of these bans associated with the increasing mortality of the little oysters have created a radical economical incertitude affecting the oyster field and nourishing a continuous tension sometimes broken by conflict events emerging after each prefectural decision of banning the oyster selling. A consensus has begun to emerge from territorial actors about an environmental degradation which affect at least the little oysters. But, the particularity of these conflicts is that the origin of the assumed degradation has been not identified yet.

So, the environmental quality is at stake whatever the type of conflicts. Each of these main types of conflicts includes environmental conflicts according to the definition given by PENNANGUER & al. (2008), that-is-to-say conflicts caused by the revelation of an environmental damage. It is not a surprise as regards the wealth of the ecosystems and natural resources of the territory. That is these resources themselves which take part in the construction and in the attractiveness of the Pays. That is these resources too which are coveted by the different uses of the territory. When a road must be built through the forest, when waste is accumulating on the Eyre rives, or when the waste water effluents are rejected in the sea, in each time, the environmental issue is tricky.

The aim of the following section is to identify the heritage conventions underlying the conflicts we have just analysed above. We need to build a new and more accurate corpus composed only of articles which revealing environmental conflict on the Pays BARVAL between 2005 and 2009, so that the ALCESTE output doesn't describe the conflicts themes but now reveal the heritage conventions which the actors refer to.

B. A plurality of natural heritage representations, responsible for rival natural resources uses, which get into conflicts.

Thus, we carry out a second analysis of a new corpus. 276 articles are analysed a second time. 70 percent of the UCE are integrated in the double descending hierarchical

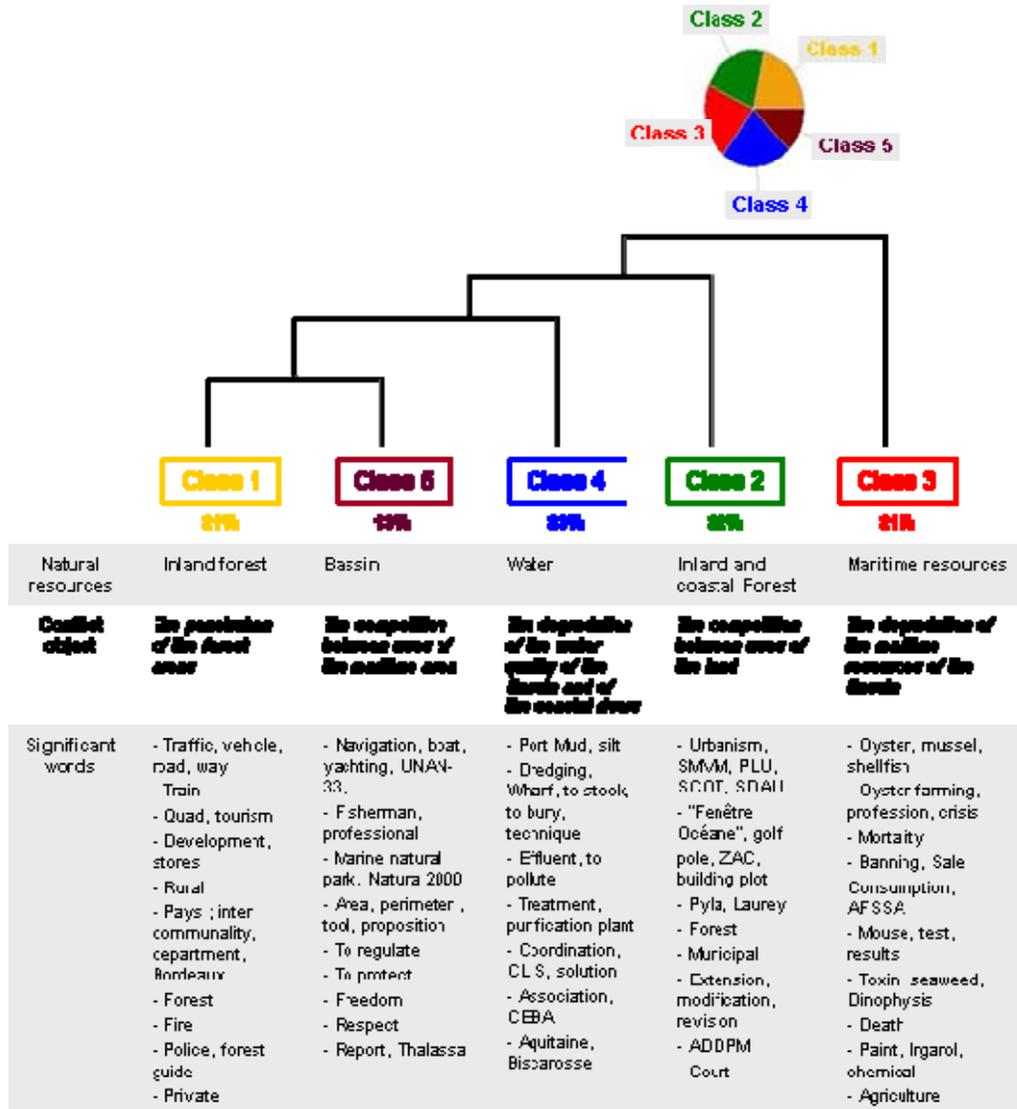
classification. This proves the coherence of this new corpus and the relevance of the results exposed here.

The graphic below illustrates the five classes in output of this second analyse. A first reading of the significant words and of the ECU shows that each class concern one environmental resource well identified. The first two classes identified on the Pays BARVAL affects the inland and/or coastal forest, whereas the three other types of conflicts affect the resources of the Bassin of Arcachon: water, the maritime food resources, or the ecosystem in general. The corpus has been designed with environmental conflicts. Then, it seems logic to observe that each class corresponds to a degradation of one of the environmental resources named above:

- 1) The penetration of the forest areas
- 2) The competition between uses of the land
- 3) The degradation of the maritime food resources of the Bassin
- 4) The degradation of the water quality of the Bassin and of the coastal rivers
- 5) The competition between uses of the maritime area.

The coverage by the regional daily press was the same for each environmental conflict, except for the conflicts generated by the competition between the maritime uses of the Bassin of Arcachon. We suppose this conflict may have potential negative consequences for the territorial economy, if it was too covered.

Illustration 1:



This first reading of the DHC underlines another fact. Indeed, it is remarkable that the conflicts which engage the same environmental resources are not necessarily close. For example, the classes 2 and 1 have few similarities in terms of associations of words, although both concern directly the forest resource. At this step of the analysis, we assume that the actors, their logic, their interests and their representation of the forest are different in these two types of conflicts. In other words, we assume that these conflicts do not reveal the same heritage conventions as regards the forest resource.

In order to verify it and after elucidating the content each of these environmental conflicts types (object, actors, environmental good in stake, uses), we examine the underlying "heritage conventions". For that, we refer to the previous theoretical thoughts: we search to identify for each actor the evaluating quality model, the superior principle, the propriety understanding, the State regulation level, the financing institution and the mode of valorisation, which legitimate the position defended. The association of these modalities should help us to reveal the heritage conventions underlying the environmental conflicts.

1. The penetration of the forest areas

The class n°1 combines the lexical field of traffic and transport - “train, vehicle and quad” with the lexical field of economical, notably residential and touristic, development – “development, tourism, stores, houses”. By opposing these lexical fields with the one of risk and “danger” of an environmental degradation, this association expresses the idea that the development of transport ways or the introduction of new motorized uses in the “rural” areas contains risks for the forest resource. As the significant ECU show it, the first “danger” identified is the “fire” risk. The presence and the speeches of “forester” presented as a forest policy corroborate the reality of such a danger.

So, this class raises the issue of the penetration of the inland forest areas of the Pays. If we consider and compare the conflict emerging after the presentation of the “scenarios” of the new line of High Speed train and the conflict between quad users, we conclude that there are two types of penetration of the forest area, which can be interpreted as a degradation of the forest resource: 1) a spectacular penetration by great public works which could affect a large part of the territory and which presented the transport development as a vector of the territorial economic development, 2) a more insidious penetration by new uses of the forest, notably leisure uses, which get in conflict with more traditional uses, particularly, the productive use.

The conflicts observed here can outcome on the scale of the territory as well as on much localized places. But the implication and the references to institutional organisms - the “Region”, the “Department” - and territorial collectivities the “Pays”, the presence of the “forester” show quite well the particularity of a resource such as the forest. More 90% of the forest is private but there is a relatively shared convention which makes it open for all people. As regards the forest resource, the notion of propriety is very tricky: the significant and repeated opposition of the words “open” and “private” in the press articles show it. The idea of an open forest is frequently associated in the ECU with the leisure uses, whereas as the idea of a private forest is carried by the productive uses. So, on the one hand, we have actors who considered the forest as a productive factor with a market value, that-is-to-say as a productive heritage, on the other hand, we have actors who see the forest resource as a common heritage which can be freely frequented notably in a leisure aim. In this configuration, the revelation of an environmental degradation sparks off conflicts between these two categories of users. But, if one of these parts gets into conflict against the other one because his work or leisure environment has been damaged, anyone defends exactly the inland forest in an exclusively environmental aim. Their goal is above all preserving their rights to frequent or exploit this space. So, these conflicts observed in this section reveal the opposition of their heritage conventions as regards the propriety of the forest resource.

This conventions analyse can be closed to the next one as regards the resource affected.

2. The competition between land uses

Indeed, the second class regroups environmental conflicts breaking on the forest area. But, the forest area considered here is more widespread because it put at stake the coastal forest too. This observation has two important consequences. Firstly, it makes us aware that the conflicts analysed in this class emerge in a context of very high competition between uses, and more exactly, between lands uses. Indeed, the lexical field describing the artificial areas - “golf, ZAC and building plots” - faces to the lexical field referencing to the natural areas - “Forest, classified spaces” -. Secondly, the presence of the heterogenic and old coastal forest strengthens the potential heritage character of the forest resource.

We have well to deal with environmental conflicts because in this context, all conversion of the forest in “golf, ZAC and building plots” is seen as an environmental degradation by the actors who want to preserve it in an environmental or landscaping aim. That’s why we have here principally conflicts between environmental actors who fight to preserve the forest and users with more various logics. The conflicts are particularly intense when the forest affected is in fact classified. The project called “Fenêtre Océane” is exemplar in terms of opposition between these two logics. This project which foresaw the building of a residential complex with golf on a part of the coastal forest causes a very intense conflict whom main theatres were the public reunions for designing the territorial development schemas “SMVM, SDAU, SCOT, PLU” and the “tribunal”.

In such places, the opponent parts don’t oppose two views of the forest heritage. Actually, the environmental actors must face to actors who don’t consider the forest as a natural heritage but as a land reserve which must of course be used with parsimony but which can quite be destroyed for economical development aims. In this context, the environmental associations try to impose the idea that the forest ecosystem has no market value and belong to the community, in other words, that the forest is a common heritage. The forest can be defended for its traditional value but in this case, the debates discriminate the inland and coastal forest. Indeed, whereas many actors present the coastal forest as a domestic heritage with a traditional value, very few actors defend the inland forest as a market heritage. This observation can be explained by the history of these two forests. Contrary to the mixed and old coastal forest on which a diversity of productive uses have been developed during many centuries, the very uniform inland forest (replanted in monoculture during the 1950’s following a serious fire) is too young and too exclusive in terms of productive practices to be recognized as a traditional heritage.

Intermediary conclusion: the forest as a natural heritage threatened by the territorial attractiveness

Finally, these two types of conflicts enable us to answer this question: in which extent can be the forest considered as a natural heritage? As we just said, according to its history on the territory, the forest presents a traditional value which results from the association of the forest as a natural resource and of local abilities and uses. We qualify this heritage convention “interpersonal heritage” because it is based on personal judgement systems linked to each other recognizing both market and non market values of the forest of the Pays “Bassin d’Arcachon Val de l’Eyre”. This convention can be potentially shared by various categories of actors (inhabitants, local authorities, environmental associations) but is not the one. Indeed, in the regional daily press, the forest presents a natural and exclusively non market value too. This heritage convention is carried by the environmental association. Materialized by the setting up of protected perimeters, it implies a localized participative management.

The environmental conflicts caused by the penetration of the forest by new uses and new transport ways, by the non respect of a protected forest site, and more generally by the urbanisation of forest plots are indicators of the intensification of the entering flows of firms and populations, and more largely of the impact of the territorial attractiveness on the natural resources. This phenomenon is materialized on the one hand by new infrastructures such as building plots, commercial zones and roads which destroyed the forest, and on the other hand by the arrival of new touristic and permanent populations who can damage the forest area by frequenting them for their leisure.

In the case of the forest, the responsible for the environmental degradation is physically identified and enables an obvious opposition between two parties. In the case of the maritime and fluvial area, the conflict schemas are much fuzzier. The environmental

degradation is a diffuse pollution, which would affect the water quality upstream and the sanitary quality of the maritime food resources downstream.

3. The degradation of the maritime resources of the Bassin

The third class concerns the degradation of the maritime food resources of the Bassin. It refers directly to the last conflict theme described in the previous section: “conflicts linked to the economical incertitude caused by the prefectural suspensions of selling oysters, emblematic products of the Bassin of Arcachon”.

These complex conflicts reveal the market and non market value of the maritime resources of the Bassin, the both carrying by the oyster farming. Indeed, the analyse of the ECU shows that the oyster farming constitutes both an economical activity which generates employment and positive externalities for the tourism, and a traditional activity which takes part to the territorial identity. As regards the oysters, the frontier between what we have already identified as “domestic heritage” and “market heritage” for the forest is fuzzier.

These forms of heritage conventions are compatible as we observe it in the press articles. Indeed, both are mobilized by the actors who protest against the repeated interdictions of oyster selling. On the contrary, they conflict with a third form of convention. We can deduce from the press reading that this third convention is based on an impersonal judgement which doesn't recognize the Bassin as a natural universal heritage which needs a specific conservation but as natural “private” good which have to satisfy their individual's selfishness. It regroup all categories of users whom activities have negative externalities damaging the Bassin. In a way, this third convention may be both carried and refused by all the territorial actors, who made the choice to move into the coastal area. Finally, we have here the manifestation of an uncontrolled territorial attractiveness.

4. The degradation of the water quality of the Bassin and of the coastal rivers

The food maritime resources depend among other things on the water quality. And the water resource is in the heart of the fourth type of conflicts which has a strong link with the previous conflict. The theme already described in the previous section concerns the conflicts caused by “the negative externalities generated by the elimination of waste water, municipal solid waste, and port sludge”. As regards the water resource, two representations of the Bassin and of the coastal rivers are opponent.

On the one hand, the Bassin constitutes an outlet area for the elimination of productive effluent of waste and waste water. Considering that waste is a negative externality of the consumption uses, this representation refers to market value. On the other hand, the Bassin and the coastal rivers are emblematic natural spaces which are collective propriety and which must be preserved. In this case, theses natural resources constitute a common heritage.

Anybody, neither the territorial collectivities in charge of the waste management, nor the productive users suspected of polluting, express clearly that the Bassin is an overflow. As we comment above, this representation is generated by impersonal judgments, whereas the representation of the Bassin as a natural resource to preserve is highly defended by identified and organized actors. It doesn't mean that these identified actors share the same convention, but the same aim. Indeed, whereas the oyster profession and its defenders underline the economical and traditional dimension of their activity which is threatened by the environmental degradation, the environmental associative organisms highlight the impact of a bad water quality on ecosystems, that-is-to-say on *all* the resources of the Bassin.

5. The competition between uses of the maritime area

There are also many potential uses of the maritime area. As we see in the section 2, yachting, oyster farming, fishing and swimming constitute the multiple possibilities of use of the Bassin of Arcachon. This geographical juxtaposition generates a high competition between some actors who get into conflicts revealed by the regional daily press. The significant word of this firth and least class highlight the conflicts caused by projects of classification of the Bassin as a protected site.

Covered by the media, the public reunions about the project of a “Maritime Natural Park” or about the delimitation of the “Natura 2000” sites crystallize the maritime use conflicts and consequently, are privileged places of confrontation and construction of the different representations of the Bassin of Arcachon. The stake of these maritime management projects is very high for the users because they will direct the future regulations on the Bassin. The aim of the users who take part in these reunions covered by the press is to impose their own representation of the environmental resources.

In this group of environmental conflicts, two representations of the Bassin contrast with each other. On the one hand, the Bassin is a resource to protect with an environmental zoning and a collective management. On the other hand, the Bassin is the support of productive economic activities, which fear to be under new pressures which could slow down their activities. Whereas in the previous conflicts, some categories of actors (like oyster farmers and environmental association) agree, in this one they are opponent. Indeed, the notion of propriety reveals the limits of compatibility between the convention of a market heritage and the convention of a natural common heritage. In the case where the idea of a collective propriety of the Bassin is pushed to its limits with the zoning of protected sites and a localized participative management, the productive users of the Bassin react obviously. By reading the ECU, we understand that their market logic can become incompatible with the non market logic of the environmental actors. According to them, a zoning of the maritime area means the lost of a productive freedom. They feel us deprived. This situation shows how important it is that the heritage conventions are taken account upstream the coordination of the territorial actors.

Intermediary conclusion: the Bassin of Arcachon, a composite natural heritage

The Bassin of Arcachon has been identified of one of the physical support of land use conflicts. But, the Bassin may be qualified of “composite environmental good”: water, oysters, mussels, zosteres, etc., all these natural resources are the components of the environmental good and multiply the heritage conventions associated to the Bassin of Arcachon.

Contrary to the others users who defend the resource required for their activity, it is the unity of theses natural resources, that-is-to-say, the Bassin of Arcachon which is defended by the environmental actors. This explains that the environmental associations are present on all the conflict scenes, whatever the natural resources damaged, and are overrepresented in the regional daily press. This multi engagement makes them coordinate and federate to defend the superior principle according to which the Bassin of Arcachon has a community value and thus requires a localized participative management.

V. Conclusion

Thanks to the manifold natural and cultural specificities which entail the territorial attractiveness, it's obvious that the Bassin of Arcachon is a territory of high quality. Nevertheless these specific resources have to be conserved. But their protection brings about conflictive situations which do not lead to an obvious resolution process. The studies of the

different conventions that shape the behaviours of actors involved in conflicts allow us to set out potential component of a resolution process.

The environmental conflicts caused by the penetration of the forest by new uses and new transport ways, by the non respect of a protected forest site, and more generally by the urbanisation of forest plots are indicators of the intensification of the entering flows of firms and populations, and more largely of the impact of the territorial attractiveness on the natural resources. This phenomenon is materialized on the one hand by new infrastructures such as building plots, commercial zones and roads which destroyed the forest, and on the other hand by the arrival of new touristic and permanent populations who can damage the forest area by frequenting them for their leisure.

In the case of the forest, the responsible for the environmental degradation is physically identified and enables an obvious opposition between two parties. In the case of the maritime and fluvial area, the conflict schemas are much fuzzier. The environmental degradation is a diffuse pollution, which would affect the water quality upstream and the sanitary quality of the maritime food resources downstream.

We have seen numerous examples showing that the representations of the Bassin/Forest as a common heritage or as market heritage are not necessarily opponent, notably because some categories of actors (touristic professionals, oyster farmers, etc.) depend – among other things - on the identity character of the Bassin/Forest in order to preserve the market value of this resource. Thus, the challenge for the actors is to agree about the practices and the institutional coordination tools which will enable the sustainability of the natural resources.

Heritage that focus on both cultural and natural territorial resources are expected to gain importance in the future. It will, to a large extent depend, on collective action basing on institutional innovation which leads to their efficient conservation. In the coastal areas, the success of this challenge depends on the management land use conflicts lead to the manifold actors of this kind of territories.

In order to develop an economic study, we set out an approach in terms of heritage convention. It allows us to explicitly take into account the diversity of relationship between representation and practices on a territory. Even if the solution of land use conflicts does not the heart of our analysis, the detailed study of conflicting situations constitutes an essential starting point to think efficient local governance

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Appendix n°1: Method

Our method is structured in two steps. First at all, in the previous section, we assess the attractiveness and the competitiveness of the studied territory by analysing the territorial flows concerning population and firms. Then, we analyse the land use conflicts, revealed by regional newspapers.

General approach of analysis of land use conflicts

To analyse land use conflicts, we work from the method created by the “Proximity” team of the UMR INRA SAD-APT. This complete method, which implies first a territorial diagnostic, aims at revealing the land-use conflicts by three complementary data sources: expert interviews, cases and regional daily press (TORRE & al., 2006). This very rich method enables to develop some interdisciplinary researches and has been already applied by geographers about coastal zones (CADORET, A., 2009) Even if we have not implemented all of the original method, the regional daily press analysis constitutes a relevant starting point to develop an institutionalist economics analysis.

2nd step: land use conflicts characterization: analysis of the regional newspapers

This paper develops the work carried on the regional daily press and the following section focuses on the method which we have chosen to analyse the sampled articles in terms of land use conflicts.

The articles extracted were published between 2005 and 2009 in two newspapers, “Sud Ouest” et “La Dépêche du Bassin”. Whereas the first is published all over the regions of Aquitaine and Midi-Pyrénées, the second is in print only on the ten communes of the Bassin of Arcachon. Between 2005 and 2009, 576 articles revealing land use conflicts in “Sud Ouest” were collected and then analysed according to a linguistic statistical method. The data collecting step is a tricky point in the land use conflict analyse because it means identifying all the conflicts covered by the daily press, that-is-to say looking for all opposition of interest or logic which is intense enough to cause the . At the end of this step, the articles are concatenated in one corpus, that-is-to say in one coherent and characterized group of texts, which can be understood by the software ALCESTE (REINERT, 1986).

This tool enable us to access to a global and synthetic vision of our corpus in terms of conflicts objects, actors and uses, without we interfere on the identification and definition of the words. In output of this textual statistical analysis, we obtain synthetic classes, themselves characterized by associations of words repeated all over the corpus. Each class represents a lexical world, that-is-to-say a group of words which are frequently associated in the discourse and which express significant ideas or facts. Theses classes result from a double descending hierarchical classification (DCH) carried out on equal segments of corpus. These segments, called “elementary context units” (ECU) are the result of a random cutting out of the corpus beforehand realized by ALCESTE. The two successive DHC increases the relevance and robustness of the results. We interpret the lexical classes with two indicators: the percentage of classified ECU and the Khi2 which assesses the degree of association of the ECU and words to the classes. A high percentage of classified ECU proves the coherence of the articles in the corpus and consequently of the results, whereas the Khi2 (which is not a statistical test) is an indicator of the high or low membership of a word to a class and by this way shows the more representative words.

In our study case, knowing that the corpus is only composed of articles revealing land use conflicts, we can interpret the classes in terms of conflict themes. And the classes’

description completed by a reading of the significant associated ECU enables us to identify the characteristics of the revealed conflicts (actors, uses, arguments, underlying values, etc.).

So, with these tools completed by our knowledge of the territory, we can propose an interpretation of the relations between the representations, the actions and the speakers through the press articles. This interpretation is enriched with our notes taken during the Agenda 21 sessions of the Pays BARVAL. Indeed, the Agenda 21 workshops are privileged places for observing the different natural heritage conventions underlying the environmental land use conflicts.