

**Resilience
and transformation
in the territories of low
demographic density II**

Integrated methodologies
of human and social sciences

EDITOR: LUIZ OOSTERBEEK

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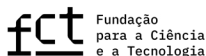
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Part I

INTRODUCTION

LUIZ OOSTERBEEK¹

In 2018 an International APHELEIA seminar on Low density territories was held in Mação, Portugal, coinciding with the presentation of the new UNESCO Chair in Humanities and Cultural Integrated Landscape Management.

A first volume with papers of lecturers in the seminar was published in the series ARKEOS (vol. 48), but the remaining papers, meant to publish in this series, had their publication delayed due to the pandemic crisis and its disruptive effects.

The volume is now out and includes 13 papers covering topics concerning landscape management in different peri-urban and so-called rural contexts, their interactions, the relations between management and planning, the role of cultural heritage in those processes, specific disciplinary approaches and contexts, from geoarchaeology to literature.

The first five chapters focus on low density territories and specific contributions of the humanities to assess environmental consequences, the integration of depopulation and migrations and landscape management. Education and heritage as levers for addressing the challenges of low-density territories are the core of the remaining chapters, covering contributions from archaeological and historical heritage, the impact of robbery and fakes on craftsmanship, the relevance of paleoecology as a major dimension of heritage and the dimensions of tourism and digitalization

These contributions are from former students at the Polytechnic Institute of Tomar in the Erasmus+ *Master Dyclam+ Dynamics of Cultural Landscape, Heritage, Memory and Conflictualities*, jointly coordinated with the Universities Jean Monet (France), Babes-Bolyai (Roumania) and Federico II (Italy), and the Erasmus+ *Master IMQP International Master in Quaternary and Prehistory*, jointly coordinated with the Universities of Ferrara (Italy), Tarragona (Spain) and the Muséum National d'Histoire Naturelle (France).

Mação, September 2022

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Part II

01:

Impact of Low Population Density Territories on the Environment

Impact of Low Population Density Territories on the Environment

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Abstract

The sustainable development of a place is one that meets the needs of today's generations without compromising the ability of future generations to meet their own (World Commission on Environment and Development, 1987). Population density and the evolution of the ways of occupying the land have a major impact on the latter. The Organization for Economic Co-operation and Development (OCDE, 2001) reports that the effects on the environment due to the evolution of population size and its geographical distribution are sources of concern for sustainable development. The purpose of this article is to establish a relative critical analysis between spaces of low and high demographic densities as a way of informing the choice that the countries, which are urbanizing now, and which will urbanize later, should have to make. The reflections and arguments developed in this paper are based on research conducted in Australia and published in an article titled "Changes in Urban Density: Implications for the Sustainable Development of Australian Cities" (State of Australian Cities Conference, 2007) with the aim of developing an understanding of the phenomena of population density and its consequences on the environment. Furthermore, research has been conducted by different authors who criticize low densities and others who defend densification. After reading and analyzing, we gathered some arguments in favor of high densities and concluded that it is necessary to find a way to determine the best urban population density for each city.

Keywords: Population ; Density ; Environment ; Sustainable development.

Resume

Le développement durable d'un lieu est celui qui répond aux besoins des générations présentes sans compromettre la capacité des générations futures à répondre aux leurs (Commission mondiale sur l'environnement et le développement, 1987). La densité de population et l'évolution des modes d'occupation des terres ont un impact majeur sur ce dernier. L'Organisation de coopération et de développement économiques (OCDE, 2001) rapporte que les effets exercés sur l'environnement par l'évolution de la taille de la population et de sa répartition géographique sont des sources de préoccupation pour un développement durable. L'objectif de cet article est d'établir une analyse critique relative entre les espaces de faible et de forte densité démographique comme forme d'alerte dans le choix que devraient faire les pays qui s'urbanisent aujourd'hui et qui s'urbaniseront plus tard. Les réflexions et arguments développés dans cet article sont basés sur des recherches menées en Australie et publiées dans un article intitulé "Changes in Urban Density : Implications for the Sustainable Development of Australian Cities" (State of Australian Cities Conference, 2007) dans le but de développer une compréhension des phénomènes de densité de population et de ses conséquences sur l'environnement. De plus, des recherches ont été menées par différents auteurs qui critiquent les faibles densités et d'autres qui défendent la densification. Après lecture et analyse, nous avons rassemblé quelques arguments en faveur des fortes densités et avons conclu de la nécessité de trouver une manière de décider la meilleur densité démographique urbaine pour chaque ville.

Keywords: Population ; Densité ; Environnement ; Développement durable.

Introduction

Population density and the evolution of the ways of occupying the land have a major impact on the environment. Human population influences these factors through what they produce and consume, and how they do it. The effects of these factors are associated with the level of production in various sectors of the economy, the ways of occupying the land, the use of natural resources, as well as the production of waste and the pollution generated. They differ according to demographic variables such as the size of the population, its structure and density, and the activity rate (OECD, 2001). Urban sprawl is one of the most important sustainability issues for the development of Australian cities. This type of land use is generally characteristic of low-density suburban residential development, but it also affects cities (Robert, 2007). The predominance of individual houses is responsible for the waste of water, energy and land, as well as the time spent in transit.

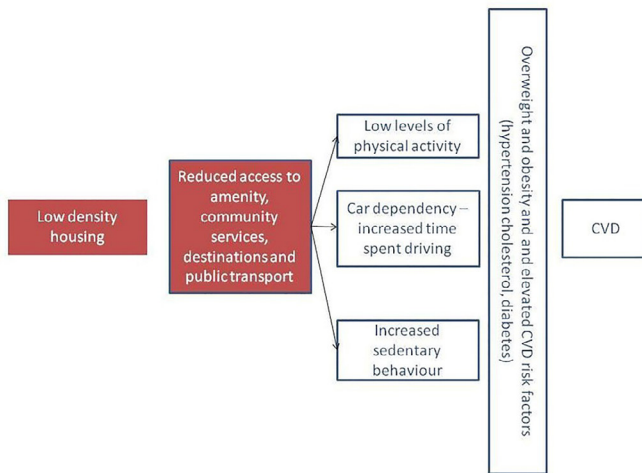
The way in which the population is divided between urban and rural, the exhaustion of natural resources, the destruction of landscapes and natural habitats, are, among other factors, the concern for the environment.

Many scientists disapprove or criticize the low-density urban solution as a form of reducing carbon emissions from energy used in transportation, cleaning, heating and cooling. Without any doubt its spaces characterized by their rural environment and their demographic decline are more ecologically expensive than densely populated areas.

In the 1970s, Jane Jacobs was already saying that we could minimize our environmental damage by banding together in skyscrapers and walking to work, and David Owen in his book *Green Metropolis* (Owen, 2009) talked about it with eloquence. We maximize our damage when we insist on living surrounded by greenery. Lower densities inevitably mean more displacements that, therefore, require more energy (Glaeser, 2011). Although its large spaces certainly have their advantages, large rural houses consume much more energy. Anyone who believes that global warming is a real danger should see dense urban living as part of the solution, because the areas of low population density have been associated with increased air and water pollution, greenhouse effect gas emissions, loss and degradation of landscapes, open spaces and the exponential increase in the cost of installing new infrastructure.

Haughton and Hunter (1994) argue that higher urban densities were considered important for achieving sustainable development because: the high concentration of people maximizes the use of the installed infrastructure, reducing the relative cost of its implantation and reducing the need for its expansion to peripheral and rural areas, mainly because it requires public subsidies. In addition, high densities also reduce the need for displacement, as the concentration of the population favors economic activities such as local commerce and service, and lastly, they encourage walkability and allow the implementation of a public transport system. The low-density cities are at the origin or responsible for the destruction of cultural and natural landscapes, the loss of water, energy and land, and the time spent in traffic. The problems of obesity, car addiction, social problems related to lack of diversity, among others, are also attributed to its spaces. If we can make a connection with peri-urbanization, rurbanization or urban sprawl, studies indicate that its forms of occupation are undermining or harming the physical and social health of people, their isolation in remote places, where they are deprived not only of the physiological benefits of walkability but also of typical natural human interactions of dense communities (Tachieva, 2010). Indeed, evidence seems to consistently indicate that people living in high density neighborhoods practice more walking and physical activity than those living in low-density neighborhoods (Gile-Corti et al, 2014).

Diagram 1 Hypothesized relationships between low density housing and health outcomes



Source: Low density development, 2014

Glaeser, a specialist in urban economics and health, explains in his book “The Triumph of the City” the importance of the human density offered by cities, which proves a capital attribute for innovation and, consequently, for the economy of knowledge, engine of globalization and development. He says that despite lower transportation costs that allow any individual or houses to be far from their workplace, there is a demand for the city and for the urbanity. By urbanity, we mean the urban animation provided by cafes, restaurants and small businesses that allow strolling and meeting.

He added that if New York is known as the capital of financial innovation, this reputation does not come from specific knowledge, but from the face-to-face meeting of individuals. Spatial proximity is thus more and more sought even if the transport costs continue to decrease (Glaeser, 2011). Every compact city offers density, diversity and a certain form of spatial proximity for its inhabitants, three elements at the base of all innovation.

Problem

Perspectives on urban density and sustainability of cities thus vary significantly from country to country and even between cities within countries. The relationship between urban density and sustainability of urban development is, therefore, complex and embraces many physical, environmental, social and behavioural factors, many of which are poorly understood (SOAC, 2007).

However, it is wise to remember that the knowledge, study and information of high or low population density is important for the evolution, development and management of our cities. Moreover:

The measurement of different attributes of urban density provides useful information for planning, developing and managing cities. Measurements of urban density also provide important baseline information for monitoring and evaluating the performance of urban plans, sustainability targets and impacts of development on environmental, social and economic systems. Urban density has many dimensions. These can be measured and provide useful insights into the intensity of land-use activities in urban space and time (SOAC, 2007).

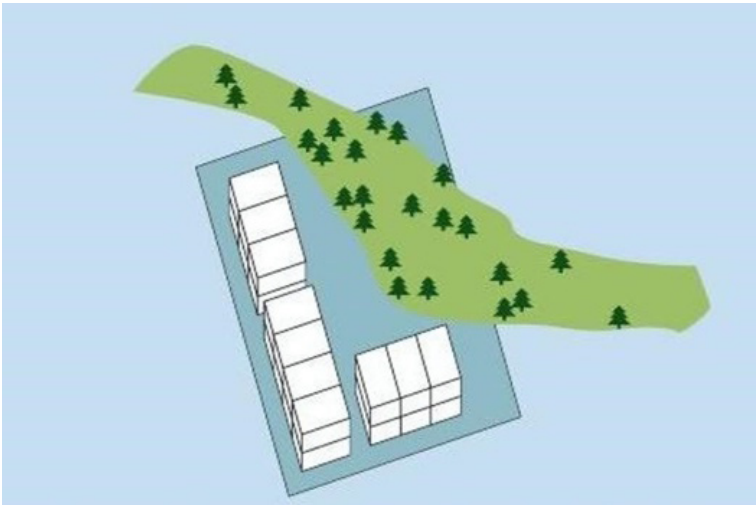
With the traveled distance, for example, they are both associated with the use of gasoline and, therefore, highly responsible for pollution. In densely populated cities, most car trips are not made, however, in low-density ones, people drive millions of miles to shop, eat and pick up their children at school. The installation of certain equipment such as schools, nursery, universities, shops and hospitals determine the average trip distance. In a densely a low-density city eating out can take a 25-minute ride in any direction (Glaeser, 2011). So, if people lived in denser areas, they would travel shorter distances and use a lot less gas, even if they still drove to work. The lower population density a city has, the more long-distance travel by private vehicle is required and thus the higher the carbon emissions.

In the case of low-density areas and its impacts on physical activity and health associated with them, sixteen studies were conducted, two in Australia, one in New Zealand, eight in the United States and Canada, two in Europe and one each in Japan, China and Ireland. Eleven of these studies involved adults, two involved older adults, one involved child (aged 9 to 10 years), one involved adolescent (aged 13 to 15), and the other was mixed. The result consistently indicates that people living in high-density neighborhoods

practice more walking and physical activity than those living in low-density neighborhoods (Giles-Corti et al, 2014).

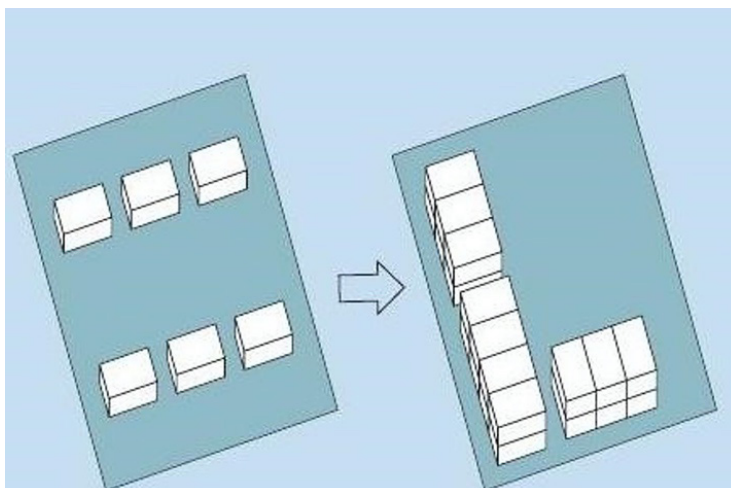
In order to limit urban pollution and the degradation or destruction of the natural and cultural landscapes affected by its areas of low population density, it might be wise to encourage population density because certainly in almost all regions with high densities, the population consumes much less space than rural people. In other words, it means that high density cities house the same number of people on a smaller area or house more people on the same area as shown in the diagrams below.

Diagram 2. (a) Same number of people spread over a smaller area



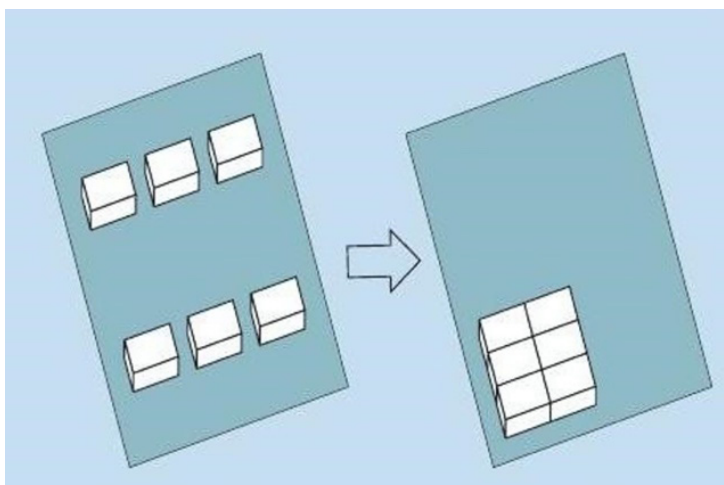
Source: A citizen's guide to density, 2012

Diagram 2. (b) Several people spread over the same area.



Source: A citizen's guide to density, 2012

Diagram 2. (c) Open Spaces and Landscape Preservation and Cultural / Natural Heritage.



Source: A citizen's guide to density, 2012

This relationship between housing and land use clearly indicates that these communities with low population densities consume more land than those with high population densities. The following table, drawn from a research paper, clearly indicates how this difference in terms of land consumption in the two cases is considerable.

As can be seen in the table above, studies show that these low-density habitats result indeed in a high consumption of space. But also, today, with the opposite process of urban exodus, there is a transformation of its rural spaces causing a considerable change or modification in the landscape and the nature. Existing buildings have been reused, and new buildings are in rupture with traditional housing. In addition, the houses are in the middle of the gardens, scattered in the rural space or grouped in housing allotments, whereas the habitat was often constituted of dividing houses at the edge of the street, with garden at the back causing a considerable transformation in the landscape and nature as the demographer Pierre Merlin asserts. In addition, it is also important to point out that local materials are sparsely used, and there is a rupture in the way of constructing buildings, all of which leads to an alteration of the landscapes of the rural area without assessing the damage caused to the environment.

Table 01. Relationship between housing by habitat versus land consumption

Type	Habitat individuel isolé	Habitat individuel groupé	Habitat individuel en bande	Habitat collectif peu dense	Ensemble d'habitat collectif	Ensemble d'habitat collectif dense
Schéma						
Logts/ha	Moins de 5	Environ 10	De 15 à 60	De 40 à 80	De 50 à 150	Plus de 150
Consommation foncière/ha	3 300 m ²	1 250 m ²	550 m ²	166 m ²	100 m ²	67 m ²
Hab./ha	Moins de 7	Moins de 20	De 30 à 140	De 90 à 180	De 115 à 345	Plus de 345

Source: Densité et formes urbaines : Vers une meilleure qualité de vie, 2013

For this reason, it is relevant to mention that the choice of density has a clear and direct implication on the environment. The high densities clearly mean the preservation of open spaces and the base resources: natural and cultural

heritage preservation areas, environmentally sensitive areas and primary agricultural lands. Another important consideration related to these low-density spaces, as Douglas tells us in his book “Urbanismo Sustentável: desenho urbano com a natureza”, is the relationship between population density and the movement of people. A low-density area strongly leads to long travel distances as already mentioned in the previous paragraph. The table below shows this relationship.

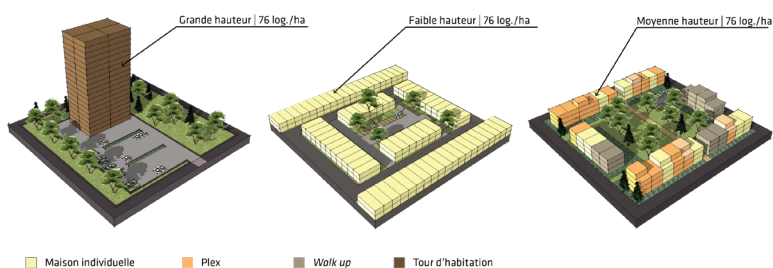
Table 02. Relationship between population density and distance traveled

Local	Densité Populationnelle	Déplacement par personne (par jour)
Healdsburg	12,5 habitants/ hectare	48 km/personne
Berkeley, California	75,0 habitants / hectare	16 km/personne
Centre de San Francisco	625,0 habitants / hectare	6,4 km/personne

Source: URBANISMO SUSTENTÁVEL: desenho urbano com a natureza

It is also possible to affirm that with the same space many modes of occupation can be chosen, and, consequently, create different forms of density which therefore have a major or direct influence on the environment. The following diagram shows this relationship.

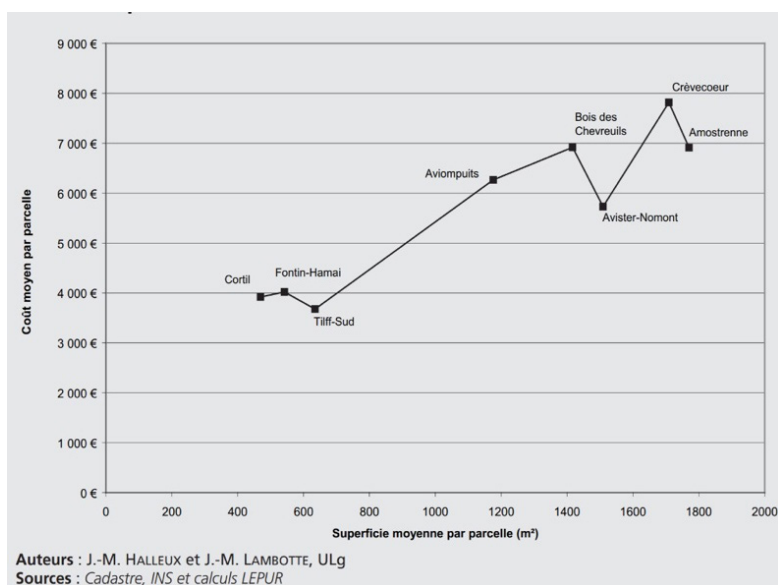
Diagram 3. Building space versus different forms of density



Source: Compacité/Densité, 2013

However, it is equally wise to assess the relationship between density and infrastructure cost. A local case study conducted in Belgium on “Urban sprawl and collective services: The overcasts for water infrastructures” (Halleux, Lambotte and Brück, 2008), comparing eight districts in the French-speaking town of Esneux located in the Walloon Region in the province of Liège has shown that peri-urbanization and habitat forms associated with it generate additional costs. In all, subdivision areas on large plots appear to be twice as expensive as densification operations.

Figure 01. Relationship between average installation cost of water distribution equipment per plot and the average area in eight districts of Esneux



Source: Halleux, Lambotte and Brück, 2008

As can be seen, the analysis confirms that low density and associated habitat forms generate additional costs. Regarding the eight districts studied:

Calculations result in an average of 3 700 € per dwelling for “dense” urbanizations, while for low-density developments, the charges fall within a range of 6 200 to 7 500 €. For sanitation, we find the same order of magnitude of 3,700 € for dense urbanizations, but the range widens for subdivision areas,

where the data are broken down between 6,200 and 8,700 € per dwelling unit. These differences in average costs between compact neighborhoods and subdivision neighborhoods are due to both factors of neighborhood density and dispersion (Halleux, Lambotte and Brück, 2008).

Table 03. Relationship between density versus infrastructure cost



Logts/ha	3	6	8	18	60	100	150
Conso foncière/ U.H.*	3 300 m ²	1 600 m ²	1 250 m ²	550 m ²	166 m ²	100 m ²	67 m ²
Habs/ Ha.	7	14	19	41	138	230	345
Coûts réseaux par logts**	66 660 €	33 330 €	25 000 €	22 000 €	6 660 €	4 000 €	4 000 €

Source: Habitat Forms and Urban Densities, 2013

* The land consumption per hectare includes: the surface of the plot (garden, outdoor spaces ...), the surface of the building as well as the road surface

** The breakdown of networks by housing includes: the structure of roads, networks and lighting, .

As seen in the two previous examples, the lower the density, the higher the cost of installing basic infrastructure. On the other hand, in high density cities, this reduced since the same cost of infrastructure (streets, squares, drainage, etc.) is shared by a larger number of people. For example:

At the neighborhood level, the residential density is directly linked with the monetary expenditure on neighborhood infrastructure: the higher the density, the lower the *per capita* length of collector roads, water distribution lines, or sewer collection lines. Below a density of 35 to 40 units per hectare net urban land, or a floor-space ratio of 0.5, network related per-capita costs

increase exponentially. Given the same number of dwelling units, capital costs can vary enormously (Siedentop and Fina, 2010).

Conclusion

It has become clear today that density has become an issue of extreme importance regarding the sustainable management of cities, the environment and urban planning in a broad sense. Several authors have emphasized the importance of promoting high densities to the detriment of the low ones in order to make more dynamic, sustainable and economical cities, to reduce infrastructure costs, to favor public transport and to bring vitality to public spaces.

However, the way of approaching and understanding the subject is still ambiguous since there is no parameter capable of measuring all the variables involved, nor of strictly characterizing a space or a city as low density, average or high density. In general, I think of the city as a cost that must be paid. Thus, less dense cities have a certain combination of costs: land, time, energy, pollution, etc. On the other hand, a very dense city has other types of costs: buildings and, their infrastructure, especially those occupying large spaces in the city. Adding to that, mobility and security among other costs becomes more expensive and more complicated when density increases. Choosing the density therefore means deciding what costs we want and can afford. But it is also appropriate to go further and analyze other costs, such as natural land consumption, landscape destruction, and pollution that cannot be evaluated only in monetary terms. The right question is what density a given socioenvironmental and economic situation should have. If low density is bad, how much would be good?

Thus, we can conclude by saying that low densities are contraindicated for the achievement of development and a sustainable environment and that high densities are more desirable. That is, it is possible to add a value judgment to the various combinations of density and cost, and these are more than monetary.

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02:

**Can refugees play a
role in countering the
risk of depopulation of
small villages?
The case of Petruro
Irpino in Italy**

Can refugees play a role in countering the risk of depopulation of small villages?

The case of Petruro Irpino in Italy

CHIARA INFANTINO, DYCLAM

Abstract

The risk of depopulation of small villages could be countered by reception projects for migrants. A specific case will be analysed, a village called Petruro Irpino, which has a population of 200 in the South of Italy. Since 2016, the village has hosted a SPRAR project (Protection System for Asylum Seekers and Refugees) and a network of 13 municipalities run by Caritas for a refugee reception project. In Petruro Irpino, 20 asylum seekers have arrived, revitalizing the community. The purpose of the project is to foster migrants' integration and modernize social-welfare politics creating a coworking system. New professional profiles have begun to emerge in the "Welcome Municipality", and local citizens have profited: the managers in the reception system are local youth. In addition, various cooperatives are emerging composed of local citizens, in collaboration with refugees. Social cohesion is possible.

Keywords: Population decline; abandonment; depopulation; sustainability; reception of migrants; Italian reception system; social cohesion; inclusion; SPRAR; integrated reception; cooperative; social development.

Spopolamento, abbandono, sostenibilità, accoglienza migranti, sistemi di accoglienza in Italia, coesione sociale, SPRAR, inclusione, cooperative, sviluppo sociale.

Introduction

This essay will aim to deal with the risk of depopulation of small villages in Italy, in particular with regards to the problem of immigration, which has been a controversial issue in the country in recent years. The relationship between demography and international migration is strong. Europe is experiencing rapid aging of its population, a decline of its native workforces and a consistent reduction of birth rates. In some regions and countries, population growth has already come to an end. Over the coming decades, a growing number of countries will experience a stagnation or decline of their “natural” growth¹ because mortality is decreasing, and longevity is increasing. As a result, the impact of international migration from high to low birth-rate countries has become a component of demographic transition. There have been suggestions in recent years that European countries should encourage immigration to offset the ageing of their populations, hypothesising that international migration is among the factors that could help the recent demographic transition².

It is extremely interesting to note how much demography and migration are intrinsically linked if we analyse the local case of Petruro Irpino. It is a village located in the province of Avellino in Campania, Southern Italy, where population has sharply declined, the current population now standing at 200 inhabitants. Petruro Irpino arises on the tops of towering cliffs, carved into the sides of a mountain, in a panoramic view over the valley. The name Petruro comes from the Latin word “petra”, that means cliff or rock. This village has become a “Welcome Municipality” since 2016 by joining a SPRAR project, the Protection System for Asylum Seekers and Refugees. Petruro Irpino has opened his doors to host migrants coming from Afghanistan, Nigeria, Syria and Ghana, beginning a new stage in its history.

Methods and materials

The choice to devote an essay analysing the role of Petruro Irpino in the inclusion policy for migrants, emerged because it combines two crucial topics in Italy

1 MÜNZ, 2013, pp.1-5.

2 FARGUES, 2006, pp. 593-597.

today. Materials consulted are the most recent population census made by Instat³ relating to migration flow, population distribution and the phenomenon of urbanisation (depopulation of rural and mountainous areas and small inhabited areas); research on Italian reception system, Minister of Interior's plans for immigration and analysis of SPRAR project; hamlets at risk of depopulation census recently made by Legambiente; national and international newspaper articles like *La Repubblica*, *Il Corriere della Sera*, *New York Times* and *The Telegraph*.

The key information came from the phone interviews with Marco Milano, manager of SPRAR project in Petruro Irpino and with Angelo Moretti, general coordinator of Benevento's Caritas. Both of them provided important clarifications and made clearer certain ambiguities.

Presentation of the case study

During the 20th century Petruro Irpino has undergone a population decline which has accelerated since the 1950s, when the village lost about 80 citizens every 10 years. This decline becomes evident when comparing the 760 inhabitants in 1901 with the 200-people living there in 2016. Establishing the core reasons might be a complex task, but it is eye-opening to point out the presence of a sulphur mine in the valley of the river *Sabato*, discovered in 1866. Only three kilometres away from Petruro Irpino, this mine produced the development of a modern extractive industry and brought many mine workers to this area, which was previously defined by an agricultural economy. Rural culture started to mingle with the mining working class, making a new and hybrid type of worker. Following a prosperous period, after the Second World War, competition significantly increased and since 1966 a crisis has slowly started, production decreased, and the number of workers gradually reduced. The mine closed in 1983. The closure caused a shock in the neighbouring villages, because they lost their middle-class and a significant number of inhabitants, as well as their way to avoid social isolation. Moreover, the situation became even worse after November 1980, when a major earthquake⁴ shocked Irpinia (the district of the Apennine Mountains

3 INSTAT is the Italian National Institute of Statistics. INSTAT is a public research organisation and the main producer of official statistics in the service of citizens and policy-makers.

4 A magnitude 6.9 earthquake with a maximum Mercalli intensity of X (Extreme). The epicenter was 60 km far away from Petruro Irpino.

around Avellino, in Campania), killing more than 2,700 and causing 280,000 people to lose their home.

Risk of depopulation and abandonment of low-density villages in Italy

In Petruro Irpino, depopulation became unstoppable and inexorable, following the same fate as a third of Italy's villages, namely risk of abandonment. The collision of poverty, mass emigration, urbanization and natural disasters devastated many small towns. This phenomenon is happening across the country, from the villages at the base of snow-capped mountains in the Alps and Apennines, to the terracotta-roofed hamlets in sunny inland areas in the South. In fact, in the past 25 years, one in seven inhabitants has left a small village, preferring larger towns and cities. In 2016, a report by Legambiente, a national environmental association, identified 2,400 municipalities that were perilously depopulated, with the dreadful scenery of two million abandoned homes. The growth of urban population has, indeed, proceeded relentlessly since the Second World War and the population density in towns simultaneously caused hamlet and countryside depopulation. In fact, the economic development model adopted after the Second World War discouraged the growth of the traditional agricultural sector. The most visible consequence was the internal migration flow from countryside to bigger cities and the migration from the South to the North of Italy.

Nevertheless, it must be made clear that the main reason that led the inhabitants of small villages to leave their home is, above all, the lack of jobs and opportunities for youth. The people left behind are increasingly aging, residents aged 65 or more has increased by 80% in the last quarter century. In municipalities with less than 2,000 inhabitants there are 3 older people for every child. Consequently, schools are now closed, shops are unattended, houses are empty. In small municipalities, one empty house is counted for every two occupied ones: this existing housing problem may represent an opportunity of social re-use that could be a tool to relieve the demographic decline. A positive example of this can be found in the village of Gangi in Sicily, where the mayor put up for sale a collection of 20 homes for the symbolic sum of one euro each (the cost of an espresso) in order to attract new investment to the area. In fact, potential buyers must ensure that they

will refurbish the homes within three years, with an estimated cost of €35,000 worth of improvements.

Furthermore, these rural villages are intricately tied to the countryside around them, their inhabitants work (or used to work) as farmers, craftsmen, shepherds or merchants. These small towns represent the essence of the Italian rural soul and the country's artisanal craftsmanship. Losing this rural population means losing Italy's unique traditions and skills, associated with each place. It means to risk being deprived of their culture and identity, their oral history and rituals, their recipes and their handiwork. There is a tangible and intangible heritage in these villages that should be saved from extinction. That is why Italy introduced "The Year of the Villages" in 2017, with the aim of promoting cultural heritage and fostering tourism in hamlets through several cultural initiatives. Faced with the extinction of left-behind hamlets, a new law was passed in September 2017, sponsored by Ermete Realacci, the left-wing parliamentarian and president of Legambiente. This law puts in place concrete strategies to reduce socio-economic inequality. It provides for measures to promote sustainable tourism and encourage high-quality local production, by a shorter distribution chain in agricultural production or agri-food.

Sprar and migration policy in Italy

It must be stressed that another way to revitalise these communities is about to spread. Some villages are pinning their hopes for regeneration, on attracting some of the tens of thousands of migrants and refugees that have arrived in Italy from war-torn or poverty-stricken countries by adhering to SPRAR project (Protection System for Asylum Seekers and Refugees). SPRAR is an Italian publicly funded network of local authorities and NGOs which accommodates asylum seekers and beneficiaries for international protection. This migrant inclusion program was founded in 2002 by the Italian Ministry of the Interior (National Fund for Asylum Policies and Services), ANCI⁵ and the UNHCR⁶, leading an "integrated reception". This is formed by small

5 ANCI stands for *Associazione Nazionale dei Comuni Italiani* (National Association of Italian Municipalities).

6 UNHCR stands for United Nations High Commissioner for Refugees. It is a United Nations programme with the mandate to protect refugees.

reception structures where assistance and integration services are provided. Refugees are hosted in smaller-scale urban communities, whose members voluntarily choose to participate in the program. Local institutions cooperate with organisations, providing complementary services such as legal and social guidance, support and development of individual programmes to promote socioeconomic inclusion and integration. The primary objective of SPRAR is to provide support for each individual refugee in the reception system. The implementation of a personally adapted programme is designed to enable that each person regains their sense of independence, to enable an effective involvement in Italy, in terms of employment, housing integration, access to local services, social interaction and scholastic integration for minors. Furthermore, SPRAR uses a proportionate method which takes into account the population size in each municipality, in order to create a sustainable and equitable inclusion system. The project aims to build a strong coexistence and social cohesion between locals and new citizens. At the moment, 876 projects have been carried out in 1,200 Italian municipalities, hosting more than 35,000 people.

Unfortunately, the majority of migrants who arrive in Italy are not assigned to the SPRAR project. The reception of migrants follows a strict and complicated pattern, codified in the Reception Decree 142/2015. According to this law, the system is articulated in phases. At the beginning, the First Aid and Reception Centre (CPSA⁷) takes place: it is composed of governmental accommodation centres, set up in the principal places of disembarkation, in order to carry out the necessary operations to define the legal position of the migrant concerned. Then, the law distinguishes two different types of Reception: a First-Line Reception and a Second-line Reception. In the First Reception phase, migrants can be transferred to two kinds of accommodation centres: the CDA⁸ and the CARA⁹, the latter is destined for asylum seekers who ask for international protection. In case of a lack of places in the first accommodation centre the refugee is transferred to the, recently implemented, Temporary Reception Centre (CAS¹⁰). The law does not specify any

7 CPSA stands for *Centri di primo soccorso e accoglienza*. They are located in Agrigento, Lampedusa; Cagliari, Elmas; Lecce, Otranto and Ragusa, Pozzallo.

8 CDA stands for *Centri di accoglienza*.

9 CARA stands for *Centri accoglienza per richiedenti asilo*.

10 CAS stands for *Centri di Accoglienza Straordinaria*.

time limit for the stay of asylum seekers in these centres, and only mentions that the applicants stay “as long as necessary”. These accommodation centres fall under the responsibility of private cooperatives, entities or associations, who won a competitive tender¹¹. These private entities take charge of asylum seekers, using underutilised properties such as hotels or unoccupied apartments to house migrants. The owners receive €35 a day for each migrant they accommodate, to cover the fees. More than 70% of immigrants are sent to these structures, so, the accommodations inevitably become overcrowded. In addition, once arrived in these accommodations, no further activity is organised to occupy the newcomers or to help them integrate into society. Migrants spend their days “resting” in these reception centres.

The fortunate refugees, the remaining 30%, are destined for the Second-Line reception, which concerns the publicly funded network SPRAR. But, only 1,200 of 8,000 municipalities in Italy have become SPRAR “Welcome Municipalities” and they host only 20% of migrants, even if SPRAR is characterized by a high level of services and good results in terms of integration and interaction with the hosting community. In fact, as for the SPRAR projects, one of the drawbacks is the principle of voluntary participation. As a consequence, the Italian reception system remains based on CAS (temporary reception centre), as evidenced by the 285% increase in CAS structures between 2014 and 2016. SPRAR, by contrast, grew by 50% in the same period.

The main Italian weakness in the field of reception is the extensive arrival of refugees and the lack of places. This has often pushed Italian authorities to extemporaneous or “emergency” solutions with very poor level of services and no coordination with the other existing systems of reception. To give an example, more than 5 million foreign people live in Italy and 337,000 migrants arrived in 2017¹². This crucial reality is difficult to deal with and has therefore led to visible consequences. In March 2018, the legislative election was strongly marked by inflammatory statements and violent terms about this issue, turning the debate into xenophobic opinions. The result of the election has created a worrying scenario with regard to the issue of migration policies. The two political parties that received the most votes were the

11 Competitive tender is a general process where a company acquires goods or services by extending to suppliers an invitation to tender a proposal. In general, the tender with the lowest price wins the order, although factors related to quality, shipping, timeliness, and efficiency, may also be a consideration.

12 +12% compared to 2016 (INSTAT).

Centre Right (37%) and the Five Star Movement (32%). On the one hand, the Centre Right (Forza Italia-Lega-Fratelli d'Italia) converges with one clear voice on anti-immigration policy proposals, such as blocking boats carrying migrants from landing, rejections, repatriations, treaties and agreements with countries of origin in order to prevent the arrival of migrants. On the other hand, the Five Star Movement hopes for asylum seekers' obligatory placement throughout all European States, calling for greater transparency and monitoring, even though it is not clear what reception system could replace the current one. Nevertheless, in January 2017 funding sources for SPRAR projects were obtained for the three-year cycle from 2017-2019, thus ensuring the necessary funds for at least this period.

Analysis of a "Welcome municipality"

It is interesting to note the effects in a municipality who participated in a SPRAR project where reception and integration are seen as stages of the same process.

Petraro Irpinio has hosted a SPRAR project intended for 20 asylum seekers, mainly families (14 of them are family units and 6 are single-parent families), since 2016. At the same time, the village joined a network of 13 municipalities run by Caritas¹³ to foster migrants' integration by modernizing their social-welfare politics and creating a coworking system based on "zero exclusion". The Caritas project is addressed to all municipalities with less than 70,000 inhabitants who wish to take part. The *Welcome small municipalities* network deals with the following objectives: implement local welfare; take charge of people in difficulty; establish social cohesion in the local economy; encourage social security able to give future certainty to the municipalities currently at risk of depopulation and to the towns with a high rate of aging; promote the use of renewable energy sources and protect local sites; stimulate the quality of life of migrants and local citizens. Considering the available resources, associations, NGOs and cooperatives constitute synergies, playing an essential role in the various interventions.

13 Caritas is the charitable arm of the Italian Bishops Conference. Its purpose is to promote "the testimony of charity in the Italian ecclesiastical community, in forms that are appropriate to the times and needs, for integral human development, social justice and peace, with special attention to the poor and primary pedagogical functions»» (art.1 of the Statute). The "welcoming" network has been organized by the Caritas of the city of Benevento (Campania).

But, how can we persuade a small municipality to join this kind of project? In Petruro Irpino, no municipal assembly was convened, and no referendum was held. The mayor Giuseppe Lombardi convinced every single community member, by speaking directly with the inhabitants. In the beginning the inhabitants were very hostile, during preparatory meetings the proposal even stirred up heated debates. This shows that Petruro Irpino was not born as a “Welcome Municipality”: inhabitants were not open to any hosting project, because of their fear of strangers. However, their attitude and state of mind gradually changed thanks to mediation of SPRAR and Caritas managers, who worked jointly. Inhabitants began to understand that these projects could bring local jobs and that it could develop their untapped resource namely, the agricultural land.

The project in a municipality once it becomes member of the Caritas network, works as follows. First, an internal training starts to prepare individuals who want to participate in the SPRAR project. These operators are mostly unemployed local youth; often with a university background, but unemployed. By putting their knowledge into practice, new professional profiles start to emerge, and benefitting local citizens. In Petruro Irpino, operators’ training started in February 2016, just a few months before the arrival of the migrants in July 2016. Social assistants, psychologists, lawyers started to work in their own villages. Their main task is to link old residents to newly arrived migrants. It is important to consider that they are capable of establishing a direct dialogue among them thanks to their personal knowledge of the territory (and its inhabitants). So, difficulties linked to the early stage of integration can be successfully overcome by operators, who are acting as cultural mediators.

When migrants arrive, the main aim is to include them in the most active way. To accomplish that, various cooperatives started to emerge. They are composed by local citizens in collaboration with refugees. For example, locals freely contribute their uncultivated and unused lands to be used by the agricultural cooperative. These lands are an enormous resource because they are well suited to produce wines like *Greco di Tufo*, *Taurasi* and *Fiano di Avellino*, which are DOCG wines¹⁴. By using these available assets, wine

14 DOCG (*Denominazione a origine controllata e garantita*) is the highest classification Italian wines can be awarded. It means that there are controlled (*controllata*) production methods and guaranteed (*garantita*) wine quality with each bottle.

related professions have started to emerge. Due to the financial support that Caritas provides, other cooperatives began exploiting the abandoned fields. Some of these cooperatives even stated a collaboration with local distributors to ensure the sale of products in coming years. Furthermore, current cooperatives have many fields of action: some, composed of psychologists, provide assistance to the refugees and the local inhabitants to elaborate therapeutic pathways and personalised recovery projects. Others have undertaken activities in the fields of, social craftsmanship, tourism and the management public spaces, with projects aimed at recovering unused resources. Today, already ten cooperatives have been created in the Caritas “Welcome municipality” of Petruro Irpino, Chianchi and Rocca Bascerana. The creation of these kinds of cooperatives creates sustainable possibilities by employing migrants and local people, simultaneously building social cohesion. In fact, locals became aware of this wealth of possibilities since SPRAR and Caritas projects started the reception of migrants. In addition, migrants stimulate local economy through their pocket money (€35 for shopping and €17 euro for personal needs per week); this amount is spent in local shops that are building a new clientele.

Another interesting element is linked to housing. In fact, refugees find their accommodations in the rental sector, in which the rent is paid by social cooperatives related to Caritas. Home owners begin to have a sudden profit in a village where only 30% of houses are occupied. Then, each municipality is part of a network, this implies that they support each other in a concrete manner. In the case of a family of refugees that faces certain problems with integration in a village, there is the possibility to start over in another municipality. Even if, in the majority of cases, integration appears to be successful. For example, Rajvir Singh is a 31-year-old Petruro Irpino inhabitant from Khost, Afghanistan. Rajvir and his family have been the victims of religious persecution, and therefore escaped to Italy. Now, he is a member of an agricultural cooperative, he works in the fields and sells fruit and vegetables of the cooperative. Rajvir lives on the top of Petruro in a house with his 10-year-old son Shiv. He said: I just want to be where my family is happy¹⁵. Zio Ubaldo is an 80-years-old inhabitant of Petruro, a former pitman, who still remembers the prosperous times of the village and how the streets and the squares started to empty. Today, he is a volunteer of the SPRAR project. He spends a

15 Reportage: La7, *PropagandaLive*, 26 January 2018.

lot of time taking care of Victory, an 18-months-old Nigerian child. He said that he has found some close friends in the Ghanaian, Nigerian and Afghan families who arrived in Petruro Irpinio.

Conclusion

The purpose of this analysis is to demonstrate that a possible solution can be found both to the problem of depopulation in villages, and to the reception of migrants. There is a migrant reception programme that is working in Italy and that is giving a second life to small villages that were doomed to disappear. SPRAR is reversing the trend in 1,200 municipalities, providing real help to 35,869 people. The *modus operandi* is characterized by a gradual “integrated reception”, constantly monitored by local operators. A long-term vision is planned, designed to develop stagnant or declining regions. Cooperatives managed by SPRAR and Caritas are offering employment opportunities to local Italian youth and new migrants, giving them both a reason to stay. Unfortunately, this change will not be possible if the majority of migrants remain in the First-Line Reception centres, and if other Italian municipalities do not decide to become “Welcome Municipalities” by adhering to SPRAR projects. At the same time, SPRAR should make some information clearer. In fact, it is not currently made public what criteria SPRAR uses to choose which migrants are destined to take part in a SPRAR project.

In conclusion, there is clear evidence that this programme is leading to social inclusion between old and new Italian citizens, eradicating xenophobia and racism. For these reasons, SPRAR project should be encouraged and increased in Italy. This approach should be considered as a role model in terms of reception system for migrants and it could be adopted also in other European countries.

Note

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management, attending the second semester of the JMD Erasmus Mundus DYCLAM (Dynamics of Cultural Landscape and Heritage Management). Dr. Luiz Oosterbeeck has been the supervisor. During drafting, the author contacted Marco Milano, manager of SPRAR project in Petruro Irpino and Angelo Moretti, general coordinator of Benevento's Caritas.

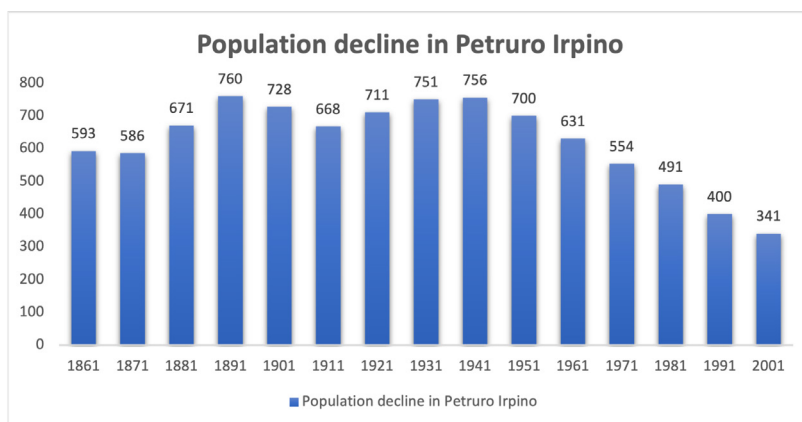


Figure 1 Population decline in Petruro Irpino

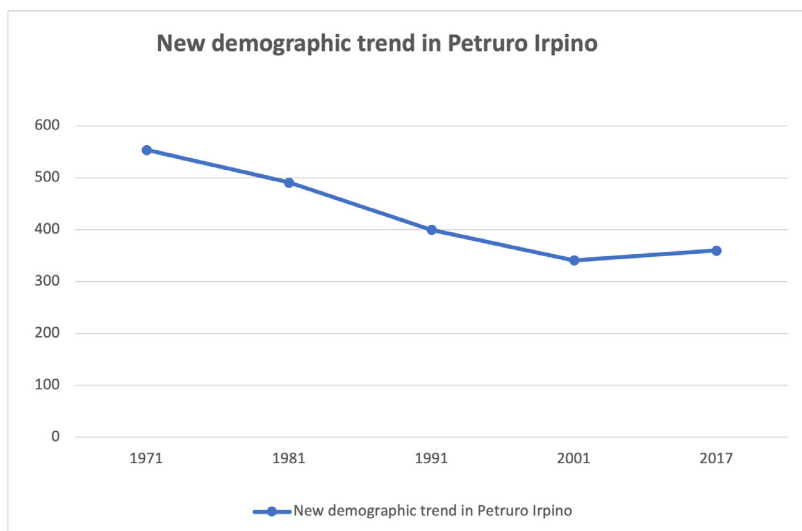


Figure 2 New demographic trend in Petruro Irpino (Infantino 2018)

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03:

**Rethinking
of landscape
management of
shibpur:
some observations
and proposal by using
methodologies of
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sciences**

Rethinking of landscape management of shibpur: some observations and proposal by using methodologies of human and social sciences

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Abstract

Bangladesh is one of the highly density populated countries in the world. Our area of study will be Shibpur Upazila under narshingdi district, Bangladesh. This region is 206.98 sq km area, located in between 23°56' and 24°07' north latitudes and in between 90°38' and 90°50' east longitudes. The Population of this area is about 265 177 (according to Bangladesh Population Census 2001, Bangladesh Bureau of Statistics). With this study we will try to follow up the present condition of this area and our main focus will be make some proposal development of landscape management by using methodologies of Human and Social Sciences.

Keywords: Integration, social disruptions, cultural landscape management and sustainability

Résumé

Le Bangladesh est l'un des pays les plus densément peuplés du monde. Notre zone d'étude sera Shibpur Upazila sous le district de Narshingdi, au Bangladesh. Cette région a une superficie de 206,98 km², située entre 23°56' et 24°07' de latitude nord et entre 90°38' et 90°50' de longitude est. La

population de cette région est d'environ 265 177 habitants (selon le recensement de la population du Bangladesh de 2001, Bureau des statistiques du Bangladesh). Avec cette étude, nous allons essayer de suivre l'état actuel de cette zone et notre objectif principal sera de faire des propositions de développement de la gestion du paysage en utilisant les méthodologies des sciences humaines et sociales

Mots clés: Intégration, perturbations sociales, gestion du paysage culturel et durabilité

Rethinking of landscape management of shibpur: some observations and proposal by using methodologies of human and social sciences

The study area of Shibpur Upazila (Narsingdi district) 206.98 sq km, located in between 23°56' and 24°07' north latitudes and in between 90°38' and 90°50' east longitudes. It is bounded by Monohardi upazila on the north, Raipura, Narsingdi sadar and Palash upazilas on the south, Belabo and Raipura upazilas on the east, Palash and Kapasia upazilas on the west. Total population of this area is 265177. Shibpur Thana, now an upazila, was formed on 12 January 1918. The distance of Shibpur from the capital of Bangladesh, Dhaka is 58.9 Kilometer north-east. Most of the people from this area are economically not well developed. So, they are leaving this area to the other city to lead better life. Majority of the population of this area live on agriculture. Why this area is low density? Shibpur is area have 265177 population. And the area is 206.98 Square Kilometre. So the population density per square Kilometre is 1281. Compare to the Capital of Bangladesh, Dhaka the area is 1463.60 Square Kilometre and the population is 12043977. The population density per square Kilometre is 8229. Comparing this statistics, it is easy to understand that, Shibpur is low density populated area. Archaeological heritage and relics in this area are Three domed Mosque (Ashrafpur, 1524), single domed mosque (Kumardi), Tomb of Shah Mansur, Two copperplate inscriptions (seventeenth century) discovered at village Ashrafpur, A gold coin (Gupta period) discovered at village Baghaba. Landscape and Geology of Shibpur region is included in Madhupur tract. The Madhupur Tract is a region of complex relief and soils developed over the Madhupur Clay geological formation this tract differs markedly in its physical characteristics from the other uplifted blocks formed in the Madhupur Clay: i.e., the Barind Tract, Akhaura Terrace and Lalmai Hills. The nine subtracts recognized on the Madhupur Tract are too intricately disturbed to be shown satisfactorily on the scale of the Physiographic Map of Bangladesh. The Madhupur Tracts is developed over the Madhupur Clay, which seems most probably to be early Pleistocene in age (Mansur, 1995) Historical Backround of this area is very glorious.

From Devakhadga's Ashrafpur Copperplate I (RY 13) together with another one and a bronze stupa model was discovered under earth near a tank at Chakbari of Bara Ashrafpur village within Chakradha Union in

Sibpur Upazila now Narsingdi district in 1884-85 by Mia Baksha Khan. The site situated on the bank of a tank with a mosque in a homestead of the descendants of Mia Baksha Khan. The whole homestead is a big archaeological site where a portion of an ancient brick wall is exposed. It is edited by Laskar (1905-07: 85-91), Sircar (1983: 41-43) and its date was ascertained by Ganguli (1941-42: 125-26). However, the plate is preserved in RASB, Kolkata (Sen 1942: xvii). Devakhadga's Ashrafpur Copperplate II (RY 13) was found associated with plate I in the Bara Ashrafpur village mentioned above. It is also preserved in RASB, Kolkata (Sen 1942: xvii). Buddhism and Hinduism flourished and directly amalgamated in the Khadga period (7th century AD). Devakhadga's Ashrafpur copperplates and Balabhatta Khadga's Salban Vihara copperplate record the information of religious establishments and priests. Devakhadga donated lands through his Ashrafpur plates to his preceptor Acharya Sangharmitra who was the chief of Vihara-Viharika-Chatustaya (Zakariah 1997: 210-21). Vihara means monastery. Viharika means small monastery. Mahaviharika means large or great monastery. Vihara-Viharika-Chatustaya means a cluster of four small and normal sized monasteries. Donated lands were situated in the vicinity of Lalmai-Mainamati region (Zakariah 1997: 211). Therefore, the Vihara-Viharika-Chatustaya was presumably situated in LaImai Mainamati area where the remains of some Buddhist monasteries are exposed. Vihara Viharika-Chatustaya was a cluster and situated close by. Dr Harunur Rashid (1998: 11) comments its inclusion within the same boundary. A Viharika at Rupbanmura, a Vihara at Itakhola mura and a Vihara at Latikotmura in Lalmai-Mainamati are exposed and these three small monasteries is a cluster. Rupbanmura Viharika was the smallest monastery in Bangladesh. It was a Viharika in the true sense of the term. Itakhola mura and Latikotmura monasteries were not large like Ananda Vihara, Salban Vihara and Bhoja Vihara. Mahavihara should have a large temple or stupa in the middle of the courtyard. Bhoja Vihara was built near the cluster probably in the later period and it was not a normal Vihara, It was a Mahavihara with central shrine. Itkhola mura and Latikotmura Viharas had no central shrine due to its small courtyards. If Vihara-Viharika-Chatustaya is identified with the cluster of Rupbanmura Viharika, Itakhola mura Vihara and Latikotmura Vihara, the fourth Vihara or Viharika is missing or waiting for future discovery in the nearby. Recent Archaeological Discoveries: From 2010 to 2015

some excavations are conducted in this Shibpur area. And it is not wondered that two Buddhist site have been discovered in this area. The names of the sites are: 1. Jankhartect Viharica and 2. Tangirteck Buddhist Temple. Some Initiative to promote this area is taken already. Public interest is the main factor to save the heritage. In addition, the people concern can protect the heritage and stop illegal trafficking of the artifacts. The main initiatives are: Open air Museum (During the excavation) During excavation in each year, an Open-air museum is established. Artifacts, found during excavation, their descriptions, photographs of the objects and different phase of excavation process, features published in various print medias early historic city site data, information boards describing historical and archaeological importance of the sites. All these are displayed in the museum from morning to evening. A multimedia presentation is also screened during this period. Students, participating in the excavation, subsequently guide the visitors and explain the importance of the displayed objects that are related to the site and deliver the answers. This process helps the visitors to get a clear concept of the site.

Facilities during the Excavation: People think that archaeologists unearth the precious teasers like gold or coin hoard etc. This myth allures the treasure hunters. To avoid any loss or destruction inside the excavation site, the excavation trances are kept fenced and the visitors are permitted to see different phases of excavation outside the fence. Visitors observe the careful works of the excavations and learn about different methods. Guide Lecturer: Guide lecturers, a combined team of teachers and students, explain different phases of the excavation process and expose structures to the visitors. They also share the views of the archaeologists with the visitors. During this lecture session, the guide lecture also collected the visitor's opinions. Leaflets, Brochures, Replicas and Souvenirs: Leaflets and brochures, containing information of the site, description of the artifacts, T-shirt and artifacts are distributed among the visitors. This is an effective way to make the visitors conscious about the archaeological sites. Comments and notes: As part of the public archaeology, comments from the visitors are collected. These visitors' comments reflect their opinion and experiences that help the archaeologist to understand the public expectations. Submitting a comment in the comment note book makes a person to involved with the glorious past of the as we give lot of attention to their arguments. An example is very much relevant in this regard. After visiting the museum and having been observed

the displayed photographs of the objects, once, a 6- year little boy wrote in the comment note that he wanted to see the real objects in the museum. Following the comment, some of the unearthed objects in the display were decided to display, which made the display even more interesting. Uses of Media: It is very important that how many people are interested about our work. Media is a strongest way to reach mass people easily. Other media like electronic media, internet etc should also use properly. Some important observation about Shibpur area is to highlight that there are 1 Upazila health complex 1, satellite clinic and family welfare center 4. The active NGO's are BRAC, ASA. The health security system is not very developed in this area. So, this sector should be focused and developed, this is one of the main goals of this study. Other alarming statistics about road accident in Bangladesh, according to a study conducted by the Accident Research Centre (ARC) of BUET (Bangladesh University of Engineering & Technology) , road accidents lead to on average about 35,000 injuries annually. This statistic is really alarming. The reality of this accidents are more trouble making than imagine. Most of the case victim cannot get back to normal life. They become the burden of the society.

This study is focused to help the disable people to get back in normal life. The facilities of the treatment and health center for accidental disable people are very few in Bangladesh. Most of the centers are situated in Capital. So, this study aims to decentralize this kind of facilities also in low density area. Taking account this circumstances this research study have some proposal. The proposals are Establish a Paralysed/ Handicapped Rehabilitation Center. Include Paralysed/ Handicapped people to get them back in normal life. Launch some project workshop which is suitable for Paralysed/Handicapped people. Like: Metal Workshop, Wood Workshop, Tailoring, Handicrafts, Gardening etc. A museum will maintain by Rehabilitation Center. People from the Center will produce different Replica, Paintings etc. to promote the area. The Paralysed/Handicapped people can work as a Museum Guide and Museum administration. The study area Shibpur have two recent discover archaeological site. Tangirteck and Jankharteck. Both sites have aesthetic beauty. So, people can attract easily to visit this area. These two sites situated within 2 Kilometer. Between these two sites there are empty spaces. Establish a rehabilitation center in between these two sites can be bringing more people to this area. With establish this rehabilitation center there

will be major contribution of this area's financial and development. On the other hand accidental disable people will be benefited from the rehabilitation center and they will find some way to live a better life. The other aspect of establish a rehabilitation center is develop the communication and transportation system presently which is not well structured. The local people also benefited to get different types of jobs in rehabilitation center and they can develop some business with the new visitors. This will help the local people to attach with new cultural knowledge. As Shibpur is not very far from the Capital, so it is very easy for tourist to visit this area. Tourist from abroad and form Bangladesh can visit these two Archaeological sites at the same time. In Conclusion it could be mention that, a new dimension of Tourism will be developed in Bangladesh. By accumulating the Paralysed/Handicapped people the local people will be benefited from every aspect where there will be no bad effect like establish other typical organization. This organization could play a good role to promote the Archaeological Site.

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04:

**Managing Abandoned
Territories:
The Ghost Town of Val-
Jalbert (Canada)**

Managing Abandoned Territories: The Ghost Town of Val-Jalbert (Canada)

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Abstract

As indicated in the title, this essay addresses the question of the management of abandoned territories and takes as an example the historic site of the ghost town of Val-Jalbert, Canada. Good management of this type of site makes it possible in the long term to make it a source of income, to constitute an interesting development tool for the surrounding populations and the local environment, as well as to prevent the creation of dark tourism in these cities, which were often victims of tragic events. To achieve this, the research focuses on three elements: social implication, sustainable and environmental development, and valorization of heritage and history. The question of the future of those territories is also discussed.

Keywords: Abandoned territories – Social implication – Development – Heritage – Tourism

Résumé

Comme son titre l'indique, ce texte se penche sur la question de la gestion des territoires abandonnés et prend pour exemple le site historique du village fantôme de Val-Jalbert, Canada. Une bonne gestion de ce type de site permet sur le long terme d'en faire une source de revenus, de constituer un outil de développement intéressant pour les populations environnantes et l'environnement local ainsi que d'empêcher la création de *dark tourism* dans ces villes

ayant été victimes d'événements souvent tragiques. La recherche fait ressortir trois éléments permettant cela : l'implication sociale, le développement durable et environnemental et la valorisation du patrimoine et de l'histoire. La question du futur de ces territoires est également abordée.

Mots-clés: Territoires abandonnés – Implication sociale – Développement – Patrimoine – Tourisme

Introduction

There are numerous ghost towns all over the world. Ironically, those cities, which are technically uninhabited, are major tourist destinations. Often, those cities are exploited for the reason that made them ghost towns in the first place. Take for example Pompeii in Italy where tourists go to see the petrified corpses or Chernobyl in Ukraine which is nowadays an important site of dark tourism based on the sensation of risk and excitement to be so close to a nuclear catastrophe. This is why good management of abandoned territories is essential. It can help prevent sites from becoming a source of dark tourism and, when well managed, it can be a very effective tool for the development of the surrounding populations and local environment. What makes great management in the case of ghost towns where the territory was abandoned by its former population? This research showed three main factors contributing to the management of these territories: social implication, sustainable and environmental development, and valorization of heritage and history. This will be the focus of this essay, referencing and analyzing the site of Val-Jalbert, a Canadian ghost town. This debate is even more important in light of the current situation where there are always fewer and fewer people in territories of low population density and overpopulation in cities. Therefore, in the final discussion, the subject of possible future utilization of ghost towns as inhabited territories.

Identification and definition of the studied context

1. Ghost Town

According to the Oxford dictionary, a ghost town is “a deserted town with few or no remaining inhabitants.” (Oxford University Press, 2018) Thus, it can qualify as a territory with low, even very low or nonexistent, population density. For people to desert those cities, some kind of event happened, for example a natural catastrophe, an environmental issue or a human cause. The towns are then abandoned and left to the effects of time and nature.

2. Val-Jalbert

Val-Jalbert was a small town in the province of Quebec, Canada. It was officially founded in 1901 and was what is called a “company town,” which means the town was developed around an industrial activity, a paper mill in this case. Unfortunately, Val-Jalbert experienced some events that led it to its status of ghost town in 1930, only 29 years after its foundation. In 1918, the Spanish flu epidemic decimated a part of the already small population. Also, the town’s paper mill was not a success. It changed owners frequently due to the economic context and the large amount of debts that were constantly accumulating and it finally closed in 1927. The remaining 950 citizens of Val-Jalbert gradually left the town until it was completely abandoned around 1930. In 1960, the Government of Quebec decided to give the administration of the site to the *Office du tourisme de la province de Québec*. Between 1960 and 1986, they restored the few remaining constructions of Val-Jalbert to adapt them to the reality of tourism. Nowadays, the site is one of the most popular in Quebec. (Village historique de Val-Jalbert, 2018)

Content description

As mentioned earlier, this essay is about finding ways and elements to create good management of abandoned territories such as ghost towns. We will also discuss how we can apply these constituents to an actual ghost town, the historical site of Val-Jalbert. The choice of Val-Jalbert as a case study was motivated by some relatively new developments in the cultural landscape of the site and the administration and work that has been done since its opening.

Social implication

Social implication is a very important value amongst the community in which the historical town of Val-Jalbert is located. This statement came out strongly from the short interviews analyzed for this work as well as participant observation and personal experiences. By creating a touristic site from an abandoned territory, the town of Val-Jalbert created 40 permanent jobs and twice that number of temporary jobs in the summer. (Village historique de Val-Jalbert, 2018) These numbers exclude the workers who helped with

the restoration of the buildings, the adaptation and modernization of the installations, the landscaping and urbanism, etc. required for the opening of the site and for the major renovations of 2008-2009. (Néron, 2008) It has created jobs for a lot of people. As a direct effect, it helps to keep people from the region in the region, instead of seeing them leave for the big cities, as well as attracting people from other regions into the area. Thus, it brings money into the area that can be reinvested in the local economy through the sponsoring of activities and events, amongst other community pursuits. In other words, this ghost town created employment, is good for the local economy, the local touristic development and allowed the area to revitalize itself.

Moreover, there is another important social aspect to discuss. In the early 2010s, there was a project to add a mini hydroelectric power station on the river Ouiatchouan. This river is located on both the site of Val-Jalbert and the territory of the indigenous community of Pekuakamiulnuatsh Takuhikan. In Canada, indigenous communities have, technically speaking, rights on certain territories and their contents that goes back to before colonization. But the reality is very different. These rights are often contested, forgotten, and even sometimes ignored. Instead of excluding the community of Mashteuiasth, the administration of the project involved them in the process. The river is important to them and the maintenance of their culture and traditions linked to the river, the navigation and their fishing activities. The choice made by the promoters of the project, *Hydro-Québec* and *Société de l'énergie communautaire du Lac-Saint-Jean*, is a very respectable one, especially considering that the challenges awaiting the indigenous communities all throughout Canada for the reappropriation of their territories is colossal. (Desbiens et Richard, 2012) It is another example of the importance of social implication in the administration of abandoned territories. Having the support of the surrounding communities and including them in the project is necessary, whether it is by employing them or consulting them.

Environmental and sustainable development

In the last section, the project of the mini hydroelectric power station on the river Ouiatchouan was briefly discussed. Canada, and mainly Quebec, is recognized for its knowledge and use of hydroelectricity which is its principal source of energy. Hydroelectricity is considered a renewable energy and needs either

rivers with a huge volume of water to turn them into a dam reservoir (power plant with a tank) or rivers with a good force and a rapid and powerful flow (power plant run-of-river). The Ouiatchouan was already recognized in the early 1900s for its force. The first inhabitants of Val-Jalbert constructed their paper mill on this river to assure a constant and strong flow to spin the wheel of the mill. The beginning of the project was born in the 2000s, but was not inaugurated until 2015, because the site of Val-Jalbert was not stable enough, economically speaking, to respect the obligations concerning the maintenance of the installations and infrastructures due to its qualification as a heritage area. They saw the importance of a development plan to upgrade the site's quality and profitability. This is why they planned to install a power station "run-of-river." (Société de l'énergie communautaire du Lac-Saint-Jean, 2011)

This power station, in addition to creating jobs, benefited Val-Jalbert economically by bringing a new kind of visitor (many people like to visit hydroelectric installations and industrial sites), fitting principles of environmental and sustainable development. To propose the most integrated project possible on the site of Val-Jalbert, the promoters and experts responsible for the environmental impacts study analyzed different options of development. The criteria of selection observed were the viability, the maximization of the visual integration and the touristic vocation. (Société de l'énergie communautaire du Lac-Saint-Jean, 2011)

Since they decided to go with a run-of-river kind of power station, there was no need to modify the landscape or the flow of the river. Plus, they installed the actual station partially underground and the visible part was constructed according to the style and architecture of the existing buildings to fit in perfectly. It minimizes the visual impact and adds to the touristic offer instead of reducing it. There were some other criteria, not necessarily involved in the decision process, but that were respected such as the protection of the aquatic wildlife, the respect of the aesthetic and ecologic surroundings, the sound pollution, the visual integration, the social involvement of the citizens, and the interpretation of the hydroelectric production in the museum part of Val-Jalbert. (Société de l'énergie communautaire du Lac-Saint-Jean, 2011) Even though the main objective was probably an economic one, they had at heart the respect of the environment, the sustainable development, and the conservation of the patrimonial aspect of the ghost town. There were several environmental reports and

investigations done before construction began. These are all aspects that need to be considered in the landscaping of this kind of territory.

Valorization of history and cultural heritage

What makes the ghost town of Val-Jalbert special, unique, and popular is the fact that visitors have the impression of being in an actual village at the beginning of the last century. The former director of the site, Danny Bouchard, explained in an interview that the visitors cross a timeline to wake up to the rhythm of a village of the 1900s and to feel the thrill of being in a ghost town. (Fournier, 2011) The reason for this authenticity resides partly in the architecture. When they restored the site in the 1960s, the entrepreneurs were told to respect the historic cachet of the town. They added elements of modernity and comfort and transformed the function of some buildings to avoid losing space and allow the visitor to live an immersive experience that is even more real because they will actually use these spaces instead of just visiting them. For example, tourists can now have dinner in the old paper mill, sleep in what was the general store, and have a lesson given by one of the historic characters playing a Catholic nun in the restored school. Or they can focus on enjoying the landscaped trails going through the village with its houses, restored or in ruins, directly to the adjacent forest.

This way of managing space is important and serves a purpose. It is an area out of time and everything is made to fulfill that purpose, respectful of the history of the town. In fact, it could be said that Val-Jalbert traded one industry for another. The paper pulp was short-lived, but the touristic industry seems to have settled for good because this village is a true symbol of the industrialization of Quebec. (Trépanier, 1987) Plus, as mentioned earlier, Val-Jalbert was abandoned due to the epidemic of Spanish flu and the poverty following the closure of the paper mill. Instead of using these tragic events to advertise the site, they decided to make it both entertaining and educational and to celebrate the good moments of the town instead of the bad, even though these are not forgotten. This is done mostly through the exhibitions and the museum branch of the town. By doing this, the administration of Val-Jalbert adds value to the site, makes it special, and prevents it from becoming a place of dark tourism. It is also a great way to enhance the natural beauty of the site and its history as well as its cultural heritage.

Final discussion

Having determined what makes good management of an abandoned territory, it's possible to discuss future possible uses of the town. Many ghost towns or abandoned territories were attributed heritage value. Today, a lot of them can be found on the list of the World heritage of UNESCO like the historical town of Ayutthaya in Thailand, the ruins of Leon Viejo in Nicaragua, or the pre-Hispanic city of Palenque in Mexico. These are all very different cities in different countries, but in each case, they were abandoned and transformed into archeological or touristic sites. The reason behind this phenomenon is that they all constitute a testimony of a different time and population that modern cultures judged to be worth preserving. They are each a piece of protected history that were restored and opened to the public for the world to see. As for Val-Jalbert, these kinds of sites may need to be adjusted to the comfort of modern life (by installing functioning electricity, running and clean water, etc.) and add touristic infrastructures but their purpose is not to be inhabited again someday. They serve a different objective, the one of being a trace of something bigger so the public can learn from them, about history and ancient society but also so the same mistakes are not repeated.

On the other hand, other ghost towns and abandoned territories exist and are not invested with the same heritage value. These territories were often deserted due to economic bankruptcy or rural exodus. In other words, people just left those cities to live in bigger ones where they could find jobs and resources. Towns like Labrieville (Canada) or Augès (France) are examples of this phenomenon. The interesting part is that they are still in a relatively good state of conservation because they were not destroyed by humans or nature. With money, time and work, it opens possibilities for the future. It may be feasible to use those low-density territories to make them inhabited again someday. The reasons that caused their "death" may not be a problem anymore since the economic context has evolved world-wide. And when considering a big part of today's population lives in large urban centers and metropolises, and that, according to history, they will probably disappear or collapse someday, it is interesting to have possibilities such as ghost towns and inhabited territories as a potential solution for the future.

Conclusion

In conclusion, it has been demonstrated that it is possible to have a good management process for ghost towns and other abandoned territories. It is necessary to bring together some elements to make them work. Presently, it is more essential and appreciated than ever to involve populations by creating local jobs or simply talk with them to receive their opinion and ideas. It is also clear that adding a new project, while diversifying interests and economic activities, can be very rewarding both financially and qualitatively. When integrating sustainable development and caring about environmental issues, plus-value is added to the management process and with today's environmental and climate situation, it is even more important. In the case of a ghost town with a heritage value, it is a necessity to deal with its history and cultural heritage and to respect it. Of course, this is harder than it sounds, but it is a possible solution for the utilization of ghost towns, whether it is by turning them into historical and touristic sites or by planning to repopulate them someday.

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05:

Landscaping the night.

The starry dark sky:

**A collective tool of
action for the low-
density territories?**

The starry dark sky: A collective tool of action for the low- density territories?

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Abstract

This is a proven fact; artificial light has negative impacts on our environment. However, the perception of an environmental problem does not necessarily rhyme with its political consideration: if this problem is largely addressed in urban areas, in low-density areas, it is another matter. Those territories need another way to empower themselves and the mobilization of nocturnal landscapes as touristic and territorial resources may be a solution. Indeed, the recognition of the night and its resources as identity elements is an opportunity for development. Multiple protection plans are beginning to emerge, the night is now a framework of action at the local level.

This work will focus on how the labeling of a territory, based on its nocturnal resources, could be a lever for territorial development. It will be organized around the example of the Pic du Midi, a model often quoted as a territory of low density having used the nocturnal resources successfully.

Keywords : heritage, landscape, dark sky reserve, Pic du Midi, territorial development

Resume

C'est un fait avéré, la lumière artificielle a des impacts négatifs sur notre environnement. Cependant, la perception d'un problème environnemental ne rime pas forcément avec sa prise en compte politique : si ce problème est largement traité en milieu urbain, dans les zones à faible densité, c'est une autre affaire. Ces territoires ont besoin d'une autre façon de s'autonomiser

et la mobilisation des paysages nocturnes comme ressources touristiques et territoriales peut être une solution. En effet, la reconnaissance de la nuit et de ses ressources comme éléments identitaires est une opportunité de développement. De multiples plans de protection commencent à émerger, la nuit étant désormais un cadre d'action à l'échelle locale.

Ce travail s'intéressera à la manière dont la labellisation d'un territoire, à partir de ses ressources nocturnes, pourrait être un levier de développement territorial. Il sera organisé autour de l'exemple du Pic du Midi, un modèle souvent cité comme un territoire de faible densité ayant utilisé avec succès les ressources nocturnes.

Mots-clés : patrimonialisation, paysage, réserve de ciel étoilé, Pic du Midi, développement territorial

The starry dark sky: A collective tool of action for the low-density territories?

This is a proven fact; the artificial light has a lot of negative impacts on our environment. However, the perception of an environmental problem does not necessarily rhyme with its political consideration: if this problem is largely addressed in urban areas, in low-density areas, it is another matter. Those territories need another way to empower themselves and, as a result, the mobilization of nocturnal landscapes as touristic and territorial resources is increasingly realized by low-density territories. For these territories, the recognition of the night and its resources as identity elements is an opportunity for development. Multiple protection plans are beginning to emerge, especially in the touristic sector. The night is now a framework of action at the local level.

This work will focus on how the labeling of a territory, based on its nocturnal resources, could be a lever for territorial development. It will be organized around the example of the Pic du Midi, model often quoted as a territory of low density having used the nocturnal resources successfully.

To begin with, the first part will be a global presentation of the Pic du Midi reserve and its touristic offer (part I) and then, the second part will mention initiatives born as a result of touristic development in the region (part II).

Part I

Case study: The Pic du Midi reserve

The Pic du Midi is in the department of Hautes-Pyrénées, in the south of France. This mountain is a touristic and scientific hotspot (Bénos and Milian, 2013). Before being a touristic destination, the Pic du Midi had a scientific vocation. In 1882, an Observatory was created there, carried only by the learned society of the time. However, due to a lack of financial resources, managers are obliged to donate it to the state (Sanchez, 1999 cited in Bénos *and al.*, 2016). Therefore, with the decline of scientific activities, a threat hovers over the Peak which threatens to close definitively. It is thanks to the mobilization of the local communities and tourism that the site revives. These new dynamic paves

the way for the labeling of the site as an International Starry Sky Reserve (Bénos *and al.*, 2016).

On December 19, 2013, the International Darksky Association (IDA) classifies the Pic du Midi as an International Starry Sky Reserve (RICE), either as a “private or public space offering a night environment and starry nights of exceptional quality and subject to explicit protection as a scientific, natural, educational and cultural heritage and / or because of its mission to offer the public the enjoyment of a vast territory “ (IDA). This RICE is the first and the largest in continental Europe and was created to counter the light pollution of the large surrounding urban centers (Pau, Tarbes, Toulouse) and to initiate a dynamic of sustainable development in the territory to revitalize it.

The Pic du Midi RICE is divided between a core zone (600km² covering the Pyrenees National Park, the natural reserves of Néouvielle and Aulon, the Pic du Midi, but also the valleys of Aure and Louron) and a buffer zone (3300km² surrounding the heart zone and integrating more populated areas: the Gaves valleys, the Pays des Nestes and Lannemezan, as well as the community of communes of Haute Bigorre, for a total of 251 communes and 87,500 inhabitants). It's about 65% of the Hautes-Pyrénées department, 3000km² and now 247 municipalities have engaged to improve the quality of the night these last years.

The core zone of the RICE follows the route of natural areas already protected to avoid new development constraints. This area is free of residents and contains no permanent lighting. The buffer zone is inhabited but is committed to improving its lighting to minimize its light pollution.

In this discussion between protection and development, the labeling of the territory can appear as an interesting initiative since it places the question of the protection of the starry sky and therefore the territories concerned, at the heart of the new territorial considerations.

The creation of these labels has naturally led to the development of tourism in these territories (Challéat and Lapostolle, 2015 and Hirczak *and al.*, 2004). For example, the Pic du Midi offers theme nights with the name “night at the top” or “starry nights”. The RICE label is considered here as a touristic promotion tool. The territories of low population density find in this protection a wealth of infinite possibilities for tourism: by creating new touristic products based on the observation of the stars or nocturnal phenomena,

these territories are positioned as important actors in the sector of tourism (Meier *and al.*, 2014; Girard *and al.*, 2015; Bourgeois, 2016).

Thanks to the certification, the touristic development of the low-density area of the Pic du Midi has been possible. However, the label has allowed it to go further and to link previously separate worlds.

Part II

Make the protection of darkness a global project

Indeed, it is relevant for the low-density territories to develop a joint strategy with the other surrounding actors, namely the urban centers. Cooperation between these two territories is essential: the potential touristic windfall comes mainly from the cities but also, and this is the main problem, the cities are great dangers for the quality of the touristic offer proposed because of light pollution. As an example, the RICE of Pic du Midi is built based on several proximities (Pecqueur and Zimmermann, 2004), which entails the combination of different institutional and spatial scales.

Today, the state no longer has the same power over local public actions while the powers of small communities are growing. The idea of institutional coordination without hierarchy can then be raised (Duran and Thoenig, 1996). It is, in this perspective, that the processes of labeling, conservation and enhancement of territories with low population density are part of (Bénos and Milian, 2013). Of course, all these initiatives are under global state control, but their implementation and design are in the hands of local communities. With this mastery, these territories can expand their fields of action and thus their interventions. A dialectic between territories is created.

For a good integrated territorial management, managers must reverse the existing competitive logic and replace it with a logic of cooperation. By creating an active partnership with the surrounding territories, both urban and rural, and involving local communities, the RICEs will be able to plan for the long term and develop more sustainably.

In the words of the collective RENOIR, "The RICE brings to the territories, as much as it depends on it". For labeling and development to work, it must be appropriated at the local level (Chaléat, Lapostolle *and al.*, 2015). Once the project is fully integrated by all actors, this is where the

dynamization of the territory begins. The protection of the nocturnal environmental resources makes it possible to widen the sites concerned and thus, to create a link where it did not exist before. The relationship between the core area of the RICE and its buffer zone creates cooperation, in a relationship where each actor derives a personal benefit (Challéat, Lapostolle *and al.*, 2016).

But there is a need to consider this protected area as a system and realize that it is then, inseparable from its environment.

The creation of a network of territories protecting nocturnal resources makes it possible to consider the territory in a more global way, since this labeling requires cooperation between territories, particularly on the issue of energy transition (Challéat, Bénos *and al.*, 2016). Many actions have been put in place following a partnership with surrounding territories, including major cities.

As such, multiple surveys have been carried out on the subject: volunteer towns and villages have lent themselves to the game of modulation of their public lighting. The replacement of municipal lamps with some Diode Electroluminescent Lights with a low color temperature was made, the DEL intensity is reduced by 60% during the night and they are connected to a computer which manages lighting, considering weather conditions, situations, frequentation etc. Thanks to these initiatives, the territory now owns the label 'Territoires à Énergie Positive pour la Croissance Verte' or Positive Energy Territories for Green Growth.

Numerous researches on nocturnal biodiversity has also been carried out in partnership with national research centers, notably for the development of a night ecological corridor.

Through these and many other activities, the Pic du Midi has succeeded in raising awareness in a much larger area than just its borders. By creating a space for reflection and common action, the low-density territories and the urban centers can reverse the usual power relations system to challenge government policies on the environment and territory planning from a local level (Challéat, Lapostolle *and al.*, 2016). To federate territories and put them into dialogue, an effective mediation is needed between scientists, heritage experts, politicians, the state, villages, and cities, and to do this, a common interest must be found (Bénos *and al.*, 2016).

With the example of the Pic du Midi in France, the low-density territories use nocturnal resources and landscape the night to reinvent their spaces, to appropriate a new identity and thus to make a new night territoriality, full of attraction for tourism.

If tourism seems at first glance the main activity for this new dynamic, it has only a federating role. The protection of the starry sky, via the creation of the RICE, renews in depth the organization of territories. Tourism is only the tip of the iceberg since it is the consequence that is put forward by politicians and territorial development managers (Bénos *and al.*, 2016). The labeling of the zone does not disturb the local system but for a profound change and especially a lasting change, it is the public action that should be recomposed around this new added value. Finally, the use of nocturnal resources by a territory of low density leads to territorial and economic development on a larger scale. The awareness of the importance of nocturnal resources starts from a low-density territory to reach a wider territory and even urban centers.

If the Little Prince of Saint Exupéry wondered about the possibility of owning the stars, the conclusion that should be made is the following: the sky and the stars belong to everyone. They are universal. However, it is humanity's duty to protect our celestial heavens because stars know no borders...

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06:

**Preventive Archaeology
and Cultural Heritage
Education Programs in
a Context of Extractive
Economies**

Preventive Archaeology and Cultural Heritage Education Programs in a Context of Extractive Economies

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Abstract

Populations living in one of Colombia's most productive oil fields are dealing with an extractive cycle, which was preceded by extensive livestock farming and intensive rice and palm oil agrobusiness. These have been the main cause of deforestation in the region, which constitutes a complex environment in the interface between the Andes and the Amazonian lowlands. Furthermore, southeast Colombia was also inhabited by indigenous communities in pre-Columbian times, which can be traced in the archeological record. Current legislation demands the design and execution of management strategies that aim to the conservation of cultural heritage in projects that exploit natural resources. Within this context, preventive archaeology management programs for oil projects deal with challenges such as that the role of cultural heritage for these communities, and the possible cultural heritage education strategies that could lead to an appropriation of archaeological heritage and a valorization of cultural landscapes.

Keywords: Cultural heritage education - Social appropriation of archaeological heritage - Cultural landscape valorization - Preventive archaeology - Extractive economies.

Resumen

Las comunidades que viven en uno de los campos petroleros más productivos de Colombia se enfrentan a un ciclo económico extractivo que ha sido precedido por ciclos de ganadería extensiva y producción intensiva de arroz

y aceite de palma. Estos han sido la causa principal de la deforestación en la región de los Llanos Orientales, ambiente en la interfaz entre los Andes y las tierras bajas amazónicas. Este fue el territorio de un gran número de comunidades indígenas durante el periodo prehispánico, y cuyos vestigios se encuentran en el registro arqueológico. La legislación actual exige la conservación del patrimonio cultural en los proyectos de explotación de los recursos naturales. En este contexto, los planes de manejo arqueológico para proyectos de hidrocarburos enfrentan varios retos que conllevan a cuestionar el papel del patrimonio cultural para estas comunidades, y a considerar las posibles estrategias educativas que puedan conducir a la apropiación del patrimonio arqueológico y a la valorización de los paisajes culturales.

Palabras clave: Educación patrimonial - Apropiación social del patrimonio arqueológico - Valorización de paisajes culturales- Arqueología preventiva - Economías extractivas.

Introduction

The communities living in one of Colombia's most productive oil fields are dealing with the impacts of this extractive economy, which was preceded by cycles of extensive livestock farming and intensive rice and palm oil agrobusiness. These activities have been the main cause of deforestation in the region, the foothills of *Los Llanos Orientales*, which constitute a complex environment between the Andean *paramos* and the Amazonian lowlands.

Environmental and Cultural Heritage current legislation demand the design and execution of management plans that aim to the conservation of nature and cultural heritage in projects that exploit natural resources (Law 99 of 1993; Law 1185 of 2008; Decree 763 of 2009). Within this context, preventive archeology projects deal with several challenges which lead anthropologists and archeologists to interrogate the role of cultural heritage for these communities, and to consider the possible education strategies that could lead to an appropriation of archaeological heritage and a valorization of cultural landscapes.

Throughout this paper we are going to evoke the concept of frontier to understand the complexity of processes that have marked the history of settlement and extractive economies in this region. This concept refers not to the idea of frontier as a border line but that of frontier as a territory, of regions that remain distant from decision-making centers. The distance is often more symbolic than geographical: a frontier territory can be adjacent to the center and nevertheless, have been neglected or appropriated throughout time. As is the case of the oil field that we address in this paper, its area of influence and its stakeholders.

***Los Llanos* and the extractive economies in the frontier**

The concept of frontier raises the discussion of a social imaginary which is present in most Latin-American countries since their configuration as nations in the XIX century: that of the periphery as being modeled from the political center of the Nation-State throughout a process of appropriation of the territories and its inhabitants. A process that is marked by the political, economic, and cultural incorporation of a region, into the practices and

discourses dictated by the institutions and actors of the center. As a result, it creates social and environmental inequalities:

“The history of Colombia is that of colonization, of the incorporation of new territories into the dominant economic system, firstly during the Colonial Period and subsequently in Republican times. It is the history of the dispersed occupation of the territory, largely by indigenous peoples, then by the Spanish and soon enough by mestizos, black peoples and surviving autochthonous peoples, displaced from their original territories, and forced to look for new lands”
(translated by the author from Leal, 1995, p.11)

Frontiers are perceived as marginal regions that through time and space have been characterized under five parameters: firstly, for their low population density, and the weak presence of the State and its institutions. Then, by the difficulty of access and communication as well as the imaginary which presents a richness of nature, one which is idyllic - but dangerous - and that has not yet been exploited for economic purposes. Finally, the saddening imaginary of its population as lacking a civilized way of life because they live in harmony with nature and possess useful knowledge that they have not been able to exploit.

The idea of nature's bounty as a never-ending source of richness results in the institution of extractive economies, which become the main economic boosting factor of frontier regions. Its condition of possibility is the richness offered by nature, which is extracted by a predominantly local workforce. It is headed by businessmen, commercial houses, and international corporations, whose actions transform the ecosystems and the cultures of the frontier. The State can intervene in a direct or indirect way, through its presence in institutions, incentives or by its absence. These processes are legitimized by the idea that the frontier is helpless in the process of its own development. As a result, it is subjected to several successive cycles of extractive economies, that frequently leave the regions with the impacts of ferocious extraction, and the degradation of culture and nature (Molano *et al*, 1989; Serje, 2005).

This can be examined through the historical process of configuration of Los Llanos. Ethnohistoric sources and archaeological record have demonstrated that the pre-Columbian communities inhabiting the Llanos

exchanged goods with the Muisca of the high plateau, the current location of modern-day Bogotá. During the Hispanic conquest, the armies and new settlers encountered two ethnic groups in the current area of the oil field: the Guayupes, that inhabited the areas close to the rivers, and the Guahibos, that inhabited the interfluvial savannas in a semi-nomadic way. The frontier dynamics were instituted by colonization, which dislocated the dynamics of exchange between the Amazonian and the Andean peoples, the traditional ways of inhabiting the lands and using their resources were disarticulated, leading them to their extinction (Díaz Moreno, 2012).

The macro-region of *Los Llanos* is naturally demarcated by the Orinoco River and the Amazonian River. The geological formation corresponds to the occidental prolongation of the Guyanese Shield, a pre-Cambrian formation covered by a thin sedimentary layer of fluvial-lacustrine origin deposited during the Quaternary (ANLA, 2016). They are characterized by having specific conditions such as a warm-humid climate and being covered by natural forests or natural herbaceous savannas. These landscapes have historically been both the setting and the first casualties of a large process of expansion of both the colonization front and savage extractivism. Further south, the Amazonian Frontier continues to retreat as deforestation and colonization advances to the point that in February 2018 almost 20,000 hectares of forests were ravaged by intentional and deliberate fires.

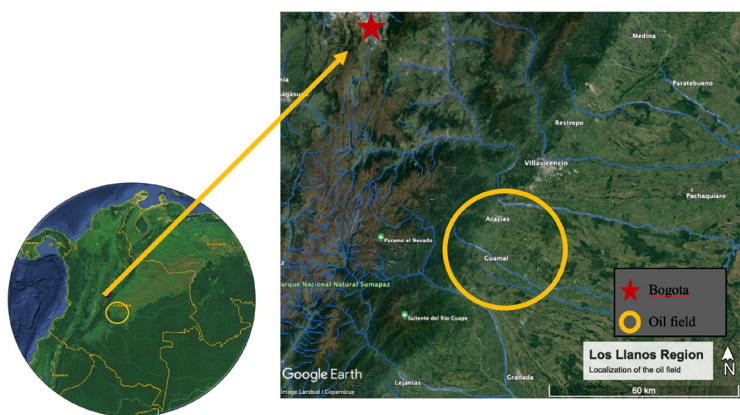


Image 1. Eastern lowlands and oil field influence area. Google Earth Pro 2018

Responsibility

The decade of the 1990s marked the inauguration of the process of exploration and exploitation of oil in Los Llanos, which led to the demarcation of several oil fields. As in 2018, Colombia had 450 active oil fields throughout its territory, but with 66% of the oil production coming from the largest 20 sites. Of these 20, 11 are in *Los Llanos* (Image 1).

The *Los Llanos* oil field that we address here is distant only 95 km south-east from Bogotá, it covers approximately 23,500 ha and falls in the jurisdiction of three municipalities: Castilla-la-Nueva, Guamal and Acacías in the department of Meta. Is part of the sub-region of the Llanos south of River Meta, and is traversed by three main rivers: Acacías, Orottoy, and Guamal (ANLA, 2016). The people living in the areas immediately next are over 3600. They have a disperse distribution, possess small holdings of the land, and cultivate or have some cattle for their self-subsistence. The presence of the oil field has changed their perceptions of landscape and impacted job and food security. This has also been the case for the 70,284 people of the three municipalities where the oil field is established (ANLA, 2016).

In the most recent report about the reduction of inequalities issued by the National Department of Planification (DNP), Castilla-la-Nueva was identified as one of the three municipalities of *Los Llanos* that has the best development indicators in the region (DNP, 2016, p.1). The inhabitants of Castilla-la-Nueva take pride in the new sporting and cultural centers and the hospital infrastructure that the municipality has inaugurated in recent years, but frequently complain about the increasing living costs and the lack of incentives for local agricultural production.

Most of the oil fields in Colombia, which require environmental licenses, are managed by the National Company of Petroleum, while some are run by private corporations from India, Canada, or China. The establishment of the Ministry of the Environment by Law 99 of 1993 regulated the exploitation of natural resources in Colombia, stating in Article 68 that integral planning is necessary for the management and exploitation of natural resources, which guarantees their “sustainable development, conservation, restoration or substitution”. These management plans should be designed with the advice local environmental authorities, the licenses are given by the ANLA

(National Authority of Environmental Licenses), and its execution is often by private consultants.

Operating under similar guidelines, the requirement of archeological licenses was established by the Law 1185 of 2008 and the Article 763 of 2009, which state that any intervention to the subsoil greater than one hectare should have an archeological management plan that can protect the archeological heritage present in that area, which according to the General Law of Culture (317 of 1997) belongs to the Nation and thus to the Colombian population as a whole (Castellanos, 2011).

Archeological Management Plans are designed by an archeologist or anthropologist registered in the National Record of Archaeologists, and the authorization of intervention is given by the Colombian Institute of Anthropology and History (ICANH). Archaeologists often work for private consultants, which have had been developing environmental management plans since the 1990s and have the operational and financial capacity to develop the archeological management plans. Both the Environmental and the Archeological Management Plans are financed by the company extracting the resource.

Furthermore, the ICANH requires the development of a program of public archaeology whose objective is to valorize archeological heritage within the populations inhabiting the influence areas of the extractive projects. It is required that the main workforce of the oil field and of the environmental and archaeological plans includes members of the communities living in the influence areas of the project.

For both private and national companies, the environmental and archaeological management plans are perceived as obstacles for development. But these management plans have become a way to improve their image among the local population and to achieve the standards of Corporate Social Responsibility, which are required during the process of applying for licenses and are well perceived by multilateral organizations.

Preventive Archaeology and Cultural Heritage Education for the Oil field

Preventive Archaeology Projects often have three phases: the “exploration phase”, surveys the proposed area of intervention and allows experts

to determine the archaeological potential of the area. The proper “excavation phase”, which rescues the archaeological contexts identified in the exploration phase. And finally, the “monitoring phase”, that consists on accompanying the machinery in constructing the infrastructure with the objective to assure the conservation of archaeological heritage in case of incidental finding. The archeological management projects for the oil field involve several fronts of intervention, between areas of exploration, areas of archaeological excavation and areas of monitoring: finally, the program of cultural heritage education.

The archaeological management plan’s objectives state the duty to raise awareness amongst the diverse stakeholders about archaeological heritage and to communicate about preventive archaeology. This task is assigned to the archeologists working in the monitoring phase, because their work demands them to establish a cooperative relationship with the contracting company intervening in the field. The timings and areas of intervention must be concerted between the field professionals and the archeologists. Furthermore, monitoring fronts permit the exchange with workers of the oil field, those building the infrastructure. Thus, the monitoring archeologists are in the situation to execute cultural heritage education strategies.

Trying to involve stakeholders: limitations and advantages

There are generally four groups of stakeholders with different combinations of influence and interest (Table 1), which should lead to at least four different strategies of cultural heritage education. Nevertheless, the methodology often establishes only one strategy, giving weekly talks to one group, the workers of the oil field. We will describe the types of stakeholders and explain how we could widen the methodology.

Stakeholders	Influence/interest
1. The oil field workers	Direct influence/high interest
2. The <i>baquianos</i> assisting the archaeologists	Indirect influence/high interest
3. Engineers and executives of oil company/contracting company	Direct influence / low interest
4. Inhabitants of direct influence area districts	Indirect influence/ low interest

Table 1. Stakeholders of the hydrocarbon project

The first group of stakeholders are the workers of the oil field, that are mostly inhabitants of the influence area municipalities. Archaeologists carefully set a list of topics and contents to address during weekly talks, displayed in a clear and didactic way, with photographs and other materials used to exemplify the themes. These aim to encourage the social appropriation of archaeological heritage, as well as to aid to the smooth development of the preventive archeology activities. But cultural heritage education exceeds the weekly talks and takes place also in the monitoring areas when workers interrogate the archeologist or are curious about their findings. It is then important to establish dialog with the workers, examine their ideas on cultural heritage and identify topics of interest.

Another group of stakeholders are the *baquianos* that are also inhabitants of the influence area municipalities. They are generally experienced assistants in preventive archaeology because they have been participating in these projects for some years. But before the archaeological project initiates, archaeologists meet with leaders of the communities to inform them about the project and invite them to apply to the job as *baquianos*, assisting the archeologists, so that new ones might join or come back. The *baquiano* work leads them to master several archaeological concepts and techniques. Daily work raises discussions and questions about history and the archeological work.

In these cases, it is interesting to develop landscape exploration activities in these areas because they encourage a reflection about the processes of extractivism and history from a situated perspective. For example, discuss about how the Guayupes might have crossed that same landscape, and what could have been the resources important for them. The consumption of non-domesticated animals such as wild pigs, deer, and iguanas, and wonder if the laboratory analysis of the lithic material that baquianos have been excavating would show that it was used to cut meat. A methodology such as cultural landscape appropriation through exploration activities is a great tool think about the temporality of the landscape and recognize the validity of other ways of life.

The third group present in the field are the engineers and executives of the oil company. They usually come from urban centers, such as Bogotá, Medellín, Bucaramanga. The program's objectives are to keep them informed of the advance of the archeological activities, and so to stablish a good communicating strategy with the client. It would be recommendable to involve them

in the cultural heritage education activities. Firstly, by participating in the weekly talks with the oil workers, and eventually invite them to visit the areas of intervention of the archaeological program and their findings. This could lead to a better comprehension of the archeological work and so to a harmonic development of the activities. They often find trouble in concerting with the archeologists and perceive their work as an obstacle to theirs and for the development of the region and the country.

The fourth group of stakeholders are the families living in the nearby rural districts. As we already mentioned, most of them search for jobs directly with the oil company, which are both better paid and provide greater job security, so they have been abandoning farming. Others work in providing services for the oil field workers, selling food and coffee. But if they don't get involved with the oil company or the archeological program, the community doesn't have a place to learn about the cultural heritage that is being excavated. It is thus recommendable to design and execute workshops about cultural and archaeological heritage with them. For instance, exposing archaeological artifacts issued from the nearby excavations in the rural schools. Local media is also advisable to get involved in cultural heritage education strategies. These could hopefully help to an appropriation of the communities' local history.

Final Considerations

Cultural Heritage Education literature often refers to empowerment as the justification as well as the methodology to implement teaching programs. This is problematic in two ways. Firstly, because to empower someone or a community has the connotation of "giving power to somebody", implying that they didn't have power beforehand. It would be preferable to establish a horizontal relationship to allow the experience of education to reach its full potential, having the greatest possible impact on the transformation of realities. This encourages critical thought amongst both parties involved (González-Ruibal, González and Criado-Boado, 2018).

Secondly, because it often does not specify concrete methodologies of teaching and communicating. Thus, it becomes difficult to begin to problematize some monolithic concepts such as Heritage and Nation (Cantón, 2013). Deconstructing those discourses has become imperative for cultural heritage scholars and practitioners particularly in the Latin American context. The

traditional discourses of history that we have in our countries are rife with connotations of hierarchization, domination and vertical dynamics. They have worked as cultural strategies for the domination of the frontier regions and the legitimation of extractivism.

One of the lessons learnt from the experience presented above is that social appropriation of archaeological heritage is a concrete useful methodology to begin to deconstruct those monolithic discourses of past and history. It is important to build an interdisciplinary team to work in preventive archaeology projects and its duty of cultural heritage education.

The last lesson learnt is the necessity of the continuity of public policies and of these processes of cultural education (Díaz Moreno, 2012; Pessis & Guidon 2007). It is necessary to demand a real commitment from the institutions regarding those aspects by demanding the extractive enterprises and the public institutions to engage with these processes in the long-term. The cultural authorities should in turn demand better programs of public archaeology and accountability of the processes of cultural heritage education and the long-term efficacy of those interventions. Archaeologists in the field have the potential to create a proper environment for dialogue and the valorization of cultural heritage.

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07:

**Um ensaio sobre
Fordlândia:
Patrimônio Histórico
e Arqueológico
Amazônico, Aveiro –
PA, Brasil**

Um ensaio sobre Fordlândia: Patrimônio Histórico e Arqueológico Amazônico, Aveiro – PA, Brasil

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Resumo

Este ensaio foi construído a partir de um breve levantamento não intrusivo, realizado no município de Aveiro, especificamente em Fordlândia, vila industrial criada em 1929, no Pará, Brasil. O levantamento teve como objetivo a coleta de informações relevantes e observadas pela equipe na realização de sua primeira visita ao distrito de Fordlândia, bem como verificar o grau de conservação ou mesmo, de depredação em que as estruturas construídas na época, mas precisamente no final da década de 20 pela Companhia Ford.

Palavras-Chave: Fordlândia. Patrimônio Arqueológico. Pará. Brasil

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Abstract

This essay was constructed from a brief non-intrusive survey carried out in the municipality of Aveiro, specifically in Fordlandia, an industrial village created in 1929 in Pará, Brazil. The survey aimed at collecting relevant and observed information by the team in the realization of their first visit to the district of Fordlandia, as well as verify the degree of conservation or even of depredation in which structures built at the time but precisely at the end of the decade of 20 by Ford Company.

Keywords: Fordlandia. Archaeological Heritage. Pará. Brazil

1. Histórico do distrito de Fordlândia

O Distrito de Fordlândia foi construído com ao objetivo de ser uma cidade americana no meio da floresta amazônica, tendo sua fundação no início do século XX, mais especificamente no final da década de 20, com o objetivo de produção em larga escala do látex para beneficiar a indústria de Henry Ford nos Estados Unidos, produzido a partir da exploração das seringueiras (*Hevea brasiliensis*).

Para Henry Ford (1863 - 1947) a Amazônia era propícia para o início de um novo empreendimento, ele recebeu diversos apoios de diplomatas naquela época, pois julgavam importante o investimento do empresário na economia regional, pois o país havia perdido o monopólio da borracha para a Ásia (pg.88 GRANDIN).

Antes de iniciar sua grande empreitada, Henry Ford enviou para o Brasil Carl D. LaRue, botânico que teve como missão procurar uma boa área para o plantio de seringueira, o mesmo, não só revelou aspectos ambientais, como também sociais e econômicos da região as margens do rio Tapajós, em seus relatos apontou pobreza e falta de perspectivas dos trabalhadores da região (pg.98 GRANDIN).

A pequena vila denominada de Boa Vista localizada à margem direita do rio Tapajós próximo aos municípios de Aveiro e Itaituba no estado do Pará, com cerca de 160 km de Santarém foi escolhida para sediar Fordlândia com suas poucas dezenas de famílias, e posterior limpeza e plantio de cerca de 400 hectares da árvore de seringueira para a produção o látex (GRANDIN, 2010; SENA, 2008).

A grande ideia de criar uma cidade americana no meio da floresta amazônica foi implantada por meio de uma sucessão de erros, tanto no que diz respeito ao próprio cultivo das *Hevea brasiliensis* (seringueiras), quanto no que se refere as relações entre os trabalhadores braçais, muitos tiveram suas vidas ceifadas nos primeiros anos de implantação da vila, ocasionadas por doenças comuns na época e mesmo a picada de cobras na floresta (GRANDIN, 2010).

Em 1928 chegando os navios Lake Ormoc e Lake Farg com todos os equipamentos necessários para a construção da cidade de Fordlândia, os empregados começaram a trabalhar no que seria a terceira cidade mais importante da região Norte, com ruas pavimentadas, cinemas, restaurantes, escolas,

luz elétrica, hospitais entre outras estruturas consideradas importantes para a cidade de Ford. A cidade foi idealizada como uma “cidade empresa” com a finalidade de atender a grande indústria da borracha, gerando assim uma grande transformação na realidade e o modo de vida do trabalhador local (SENA, 2008).

Fordlândia foi fundada com o intuito de fornecer o látex para a Ford Motor Company, mas teve muitos problemas com a própria topografia da região que apresentava solo arenoso, dificultando o cultivo mecanizado das seringueiras, as mesmas não podiam ser plantadas muito próximas, pois havia uma praga chamada de “Mal das folhas” causada pelo fungo *Microcyclus ulei*, que atingia suas folhas, sua proximidade as levou ao colapso total da plantação. (GRANDIN, 2010; SENA, 2008).

Com tantos problemas relacionados à falta de conhecimento e um maior planejamento da cidade, ocasionou assim a ruína de Fordlândia, segundo Sena, “A presença da Ford Motor Company na Amazônia durou 18 anos (1927-1945). Em 1945, o neto de Henry Ford que estava à frente do projeto resolveu desistir do empreendimento, imputando ao fungo e a problemas com trabalhadores” (SENA: p.96, 2008).

Depois da retirada do empreendimento da Companhia Ford no Brasil e entregue para o governo brasileiro, aos poucos o patrimônio de Fordlândia foi sendo lapidado, segundo Sena, 2008, “Ficaram alguns prédios em ruínas que ainda servem de atrativos, e poucos turistas e pesquisadores que procuram constatar e compreender a presença americana na Amazônia” (p.97).

Hoje restam poucos moradores na vila com pouca estrutura, sem hospital e sem toda a comodidade que a cidade americana de Fordlândia um dia proporcionou a esta localidade hoje esquecida por seus idealizadores da Companhia Ford e principalmente pelos governos Brasileiros de modo geral. Hoje falam em cidade fantasma, há apenas algumas memórias de alguns moradores e ruínas do que foi um dia programado para ser uma das cidades mais desenvolvidas e com qualidade de vida na Amazônia (SENA, 2008; JACKSON, 2011; GRANDIN, 2010).

2. Metodologia

Nossa visita contou com entrevista, coleta de pontos de GPS e fotografias dos locais visitados, fizemos levantamentos não invasivos, anotações e medimos

algumas estruturas, comprimentos e largura dos prédios maiores que compõe o espaço histórico de Fordlândia.

3. Pontos observados in loco de estruturas arquitetônica

A Primeira estrutura visitada é o galpão de força e luz onde funcionou também o escritório da companhia, almoxarifado e o setor de eletricidade, o mesmo era responsável de fornecer energia elétrica para o galpão da serraria, casas da vila americana e vila operária. Observamos que a estrutura está bastante degradada tanto na parte externa quanto interna do galpão, na parte interior a maioria das máquinas foram retiradas, resta apenas uma caldeira, um gerador da época bastante deteriorado e outro do gerador pertencente ao Ministério da Agricultura (1945), vale ressaltar que Fordlândia foi entregue para o governo brasileiro, no qual a doação ficou sob a responsabilidade do Ministério da Agricultura, que assumiu a vila em 1945.

A medida do galpão é de 28 metros de comprimento e 28 metros de largura, atualmente ele é usado como oficina e garagem de veículos ligados a prefeitura de Aveiro, é possível observar que a atual utilização deste espaço com finalidade de garagem implica ainda mais na degradação do espaço interno.

Observamos através das imagens a seguir a estrutura das janelas e portas deterioradas pela ação do tempo e falta de conservação da estrutura do prédio. No interior a caldeira também apresenta descaso com a sua manutenção.

Outra estrutura arquitetônica bem significativa no contexto da paisagem de Fordlândia é o galpão da serraria que apresenta um prédio de aproximadamente 60 metros de comprimento por 20 de largura é o maior galpão construído no contexto da cidade americana. A construção em si está bem comprometida, diversos equipamentos da serraria foram levados do local e outros foram introduzidos dentro galpão.

Observamos a presença de dois pisos, porém, extremamente danificados com a ação do tempo, e por serem de madeira sofrem a ação de cupins de madeira seca *Cryptotermes brevis* e da umidade comprometendo toda a sua estrutura e impossibilitando até mesmo uma maior averiguação in loco por nossa equipe nos dois pisos acima. O único local que se apresenta preservado é a área onde encontram-se as máquinas utilizadas na época pelos trabalhadores no beneficiamento da madeira, cerca de 8 máquinas estão

dentro da serraria, acredita-se que o peso das mesmas e o fato de estarem parafusadas ao piso de concreto as impossibilitou de serem retirada do local.

Outro fator relevante observado dentro deste prédio é a grande quantidade de objetos introduzidos dentro do galpão, como por exemplo, há e existência de veículos sucateados, macas do antigo hospital, incubadora e até a presença de caixa (urna), onde segundo relatos de alguns moradores, os americanos que morriam na vila eram levados de avião para os Estados Unidos, os mesmos não eram sepultados em Fordlândia.

Nossa visita continuou pela estação de tratamento de água que segundo informações os dois filtros responsáveis pela purificação da água que vem diretamente do rio Tapajós através da captação da bomba d'água que está localizada dentro do rio Tapajós não funcionam. A água fornecida para as residências de Fordlândia não podem ser consumidas pelos moradores locais os mesmos precisam se dirigir às fontes de água potável distribuídas por diferentes pontos de captação dentro do distrito. As dimensões da estrutura da estação de tratamento possuem 22 metros de comprimento e 8 metros de largura. Outra estrutura que é considerada o cartão postal de Fordlândia é a imponente caixa d'água como podemos observar nas imagens abaixo, pois, a mesma pode ser vista a quilômetros de distâncias, a estrutura ainda funciona nos dias atuais juntamente com a bomba que faz a captação de água do rio e envia para a estação de tratamento que por sua vez a direciona para a caixa d'água.

Nossa vistoria se direcionou as estruturas que correspondem a antiga estufa e a garagem, externamente tanto a estufa quanto a garagem encontram-se bem conservadas, aparentemente não houve modificação na arquitetura externa dos dois prédios, porém, observamos que no interior da estufa houve aterramento para que o mesmo funcione como garagem de veículos da prefeitura de Aveiro-PA o qual o distrito de Fordlândia pertence. As medidas da garagem são de aproximadamente 38 metros de comprimento por 19 de largura, as medidas da estufa são de 39 metros de comprimentos por 18 metros de largura.

Nossa equipe visitou uma comunidade cerca de 3 quilômetros de distância do centro da vila, trata-se de Cauassú-ê-pá onde observamos algumas casas com poucas características das residências americanas, conversamos com uma antiga moradora que nos informou que seu pai foi funcionário da Companhia Ford Industrial do Brasil.

A filha do ex-funcionário chama-se Dona Maria do Socorro Pereira, seu pai atendia pelo nome de Levindo da Silva Porto, falecido em 27 de setembro de 1971. Ela nos relatou que seu pai trabalhou na função de roçador - o que fazia a derrubada da floresta —, a mesma destaca também as inúmeras transformações em que o distrito sofreu e vem sofrendo ao longo desses anos, principalmente no que se refere aos prédios de Fordlândia, que já não são como antes e estão cada vez mais depredados.

Nossa equipe visitou as ruínas do antigo hospital, esta estrutura de fato ficou muito comprometida com a ação do tempo e do homem, não existe o teto, ou seja, a cobertura, há sinal de incêndio, o forro desabou, não há mobília hospitalar, de fato este prédio é o que mais está deteriorado com relação aos outros prédios e estruturas de Fordlândia.

O jornalista Jarbas Peixoto em 1934 em uma passagem pela vila de Fordlândia fez referência ao hospital afirmando que o mesmo possuía a capacidade para mais de 100 leitos e foi um dos mais modernos do país, continha uma moderna e eficiente aparelhagem dos gabinetes de clínica e cirurgia, bem como uma moderna secção de bacteriologia entre outras capacidades (Peixoto, 1934).

O antigo prédio do hospital possui mais de 100 metros de comprimento por 14 metros de largura.

O distrito de Fordlândia apresenta outros lugares que conservam a estrutura da época de sua construção como: o antigo almoxarifado ou mesmo o galpão do porto como é mais conhecido a estrutura, porém apresenta-se bem conservada nos aspectos originais relacionados a estrutura externa, porta frontal e vidros, no entanto, em seu interior foi observado a ausência de mobiliário ou mesmo outros materiais, existe apenas um grande vazio, nas laterais do galpão as portas deslizantes estão danificadas. Fizemos a medida de suas dimensões seu comprimento é de 50 metros por 21 metros de largura.

Próximo ao galpão do porto está o antigo Píer, segundo informações locais, a atual é a terceira já construída. Ao percorrer o local observamos existência de estruturas antigas de madeira que poderiam ser resquícios do antigo píer da década de 1930.

A visita continuou na antiga vila operaria localizada na Avenida Boa Vista, onde constatamos a grande modificação nas estruturas das casas, a maioria apenas mantém o telhado de zinco e fundação original da época de implantação da vila. Seguindo a avenida até onde ocorre a mudança de

direção avistamos a escola Princesa Izabel fundada em 1931, a mesma apresenta estrutura externa conservada, mas ao longo do tempo ela foi ampliada como podemos observar nas imagens a seguir, o educandário ainda é referência para de educação no pequeno distrito de Fordlândia.

Muitos prédios que serviam de alojamento para os trabalhadores ainda resistem ao tempo, porém, a maioria está deteriorada e abandonada; outros possuem famílias que residem dentro do prédio e fizeram algumas modificações na construção original, como exemplo o antigo restaurante que possui sua fachada original e postes da época de sua construção ainda preservados, no entanto, observamos pelo menos três famílias residindo em seu interior.

Um pouco próximo do prédio do restaurante estão as ruínas de um alojamento destinado para os trabalhadores solteiros da Companhia Ford, chamado de Paz e Amor. Houve relatos que o alojamento há alguns anos sofreu um incêndio e teve suas estruturas comprometidas, pelo chão observamos resto dos telhados, pisos e carvões. Na mesma rua há alguns prédios que compõem a antiga rua dos comércios que também tiveram suas estruturas modificadas com reformas na parte interna e externa, assim, perdendo características da sua construção inicial.

Nossa última visita ocorreu a Vila Americana onde moravam os engenheiros e profissionais especializados do alto escalão da companhia Ford, as casas ainda conservam aspectos da construção americana, quase não houve mudanças estruturais nas residências. São cerca de cinco (5) casas que possuem moradores e uma (1) construção demolida.

A vila americana fica distante cerca de 1 quilômetro do centro, mais precisamente no sentido oeste de Fordlândia, antes de chegarmos a vila, passamos pelo antigo campo de golfe, observamos também a presença próximo ao antigo hotel Zebu de uma grande e sucateada piscina e outros equipamentos usados para a prática de esportes e lazer na época de grande fluxo de funcionários americanos da Ford.

4. Sítios arqueológicos identificados

Sítio 1

O distrito de Fordlândia carrega um grande legado histórico de diferentes vertentes principalmente com relação à arquitetura, no entanto, podemos

constatar que a mesma foi implantada sobre parte de um sítio pré-colonial lito-cerâmico, foram observadas cerâmicas arqueológicas, em superfície, próximas aos dois galpões o de força e luz e o da serraria. O solo apresenta coloração escura indicando atividade antrópica no passado, o mesmo encontra-se danificado pela implantação dos galpões e abertura de estrada. (Imagem 1).



Imagem 1: fragmentos de cerâmicas arqueológicas. Foto: Manoel Fabiano (2017)

Sítio 2

Outro sítio identificado está localizado na área da vila americana, mas afastado da área central, o mesmo está próximo ao antigo hotel Zebu. O morador da residência o Sr. Elizeu Couto Nogueira (72 anos), natural de Belterra, nos informou que encontrou dois fragmentos de lâmina de machado em seu quintal, esta informação nos chamou atenção; e fomos levados ao local, onde ele nos mostrou a área em que foram encontrados os materiais arqueológicos. Ao observar o local, foi possível encontrar fragmentos de cerâmica e um artefato de lítico que pelas características pode corresponder a um núcleo, provável sílex. Este sítio encontra-se na parte oeste do distrito de Fordlândia. (Imagem 2 e 3).



Imagem 2: lâminas de machado encontradas pelo Sr. Elizeu Couto.

Foto: Simone Carvalho (2017)



Imagem 3: artefato lítico de provável núcleo encontrado no local. Foto: Manoel Fabiano

(2017)

5. Diagnóstico de Fordlândia: Contributo para o Patrimônio Histórico Cultural e Arqueológico

O levantamento possibilitou a elaboração de um diagnóstico preliminar sobre pontos importantes sobre o distrito. Foi possível identificar o estado de conservação de algumas instalações arquitetônicas, além disso, observar o mobiliário existente e as máquinas que ainda estão no local, e como esses estabelecimentos estão sendo utilizados, se estão auxiliando na preservação ou degradação do espaço. Para além desses elementos foi possível diagnosticar que Fordlândia trata-se de um complexo do patrimônio industrial da Amazônia, instalado em 1929 e que permaneceu ativo por poucas décadas.

Durante o campo não intrusivo e apenas de observação, foi diagnosticado que além do Complexo Industrial, há um campo vasto a ser investigado pela arqueologia. Pois há evidências de vestígios de artefatos arqueológicos do período de pré-contato, indicando assim, uma necessidade urgente de pesquisa arqueológica na região e posteriormente ações de preservação e conservação de todo esse patrimônio amazônico. Diante desse diagnóstico prévio, destacaremos alguns pontos positivos e negativos percebidos no Distrito.

Pontos positivos

- Através da conversa com moradores da cidade foi possível identificar fragmentos de materiais arqueológicos de contextos anterior a instalação de Fordlândia, vestígios ligados a cultura regional - cerâmica e lítico - em superfície, provenientes do solo onde hoje encontra-se o distrito de Fordlândia. Essas informações podem indicar previamente um potencial arqueológico para momentos distintos de ocupação do espaço;
- Fácil acesso ao distrito, principalmente por meio fluvial;
- Possui características arquitetônicas do seu projeto inicial;
- Sítio arqueológico multicomponencial histórico e de pré-contato;

- Apoio essencial do pároco do distrito de Fordlândia em nos fornecer apoio com transporte e acomodação, além de nos fornecer a maior parte das informações históricas, pois o mesmo é historiador (Pe. Sidney Canto);
- Acolhimento por parte dos moradores do Distrito e de comunidades próximas;
- Reconhecimento por parte dos moradores do distrito sobre o estado de má conservação do local e necessidade de melhorias;
- Memórias coletivas e individuais propícias a serem compartilhadas pelos moradores;
- Acervo individual dos trabalhadores e que são guardados pelos familiares;
- Presença de algumas mobílias da década de 1930, quando foi instalada Fordlândia;
- Existência de documentação histórica sobre o Distrito e Fábrica;
- Área que pode ser tombada pelo IPHAN e reconhecida por seu potencial histórico-cultural, arqueológico e paisagístico.

Pontos negativos

- Constatamos que a maior parte dos prédios visitados possuem suas estruturas comprometidas pela falta de conservação;
- Muitas mobílias e até mesmo parte de estruturas estão sendo saqueadas ao longo do tempo;
- O pouco tempo no distrito nos impossibilitou de realizarmos mais entrevistas com moradores locais, contudo, as conversas realizadas reportam muitas informações relevantes;
- Os galpões da serraria e o de força e luz estão bastante degradados, o nível de preservação é crítico tanto na parte interna quanto externa, sendo

necessárias intervenções e restaurações, pois sua arquitetura chama atenção e atrai olhares de diversas formas.

6. Considerações finais

A partir do primeiro levantamento foi possível identificar algumas das construções que inauguraram a vila de Fordlândia (galpões, casas, pontos comerciais, colégio e sedes), essas estruturas do século XX representam explicitamente um valor histórico da cidade para seus habitantes. Nessa perspectiva de estudo, este ensaio possibilita o entendimento do caráter de ocupação das edificações da empresa de Ford no decorrer da sua existência e as histórias vinculadas a sua construção.

Ressaltamos ainda, que de acordo com a legislação brasileira, sítios arqueológicos são reconhecidos como patrimônio nacional, sendo assim necessárias sua investigação e salvaguarda. Neste contexto, Fordlândia se torna um sítio arqueológico ímpar por seu contexto pré-colonial e histórico, sendo caracterizado como sítio multicomponencial, ou seja, aquele que traz elementos, vestígios arqueológicos de ocupações humanas de períodos e contextos diferentes, que ao ser analisado, pode nos informar sobre como se deu seu processo de ocupação ao longo de séculos, quicá até de milênios, pois o Rio Tapajós citado desde período do século XVI pelos cronistas e viajantes europeus que percorreram a região relataram a presença de nativos na região. Bem como estudos arqueológicos tem comprovado a ocupação humana milenar ao longo dos rios da região de toda Amazônia, sendo estes os locais mais propícios a ocupações mais remotas, e, como já afirmamos comprovados em estudos arqueológicos. No intuito de propiciar um entendimento mais apurado da área em questão, a partir da coleta de pontos georeferenciados, com a utilização de GPS, elaboramos um mapa de interesse arqueológico de Fordlândia.

Analisando a situação patrimonial e territorial de Fordlândia, percebemos a necessidade inerente a sua gestão. É de suma importância estabelecer linhas de atuações que visem a preservação desse território, que a cada dia está sucumbindo ao esquecimento. Segundo Oosterbeek (2015), “O conceito de gestão do território surgiu do reconhecimento das limitações do planejamento centralizado e técnico enquanto instrumento operacional de ordenamento do território, apresentando um forte carácter administrativo”

(Oosterbeek et al, 2015). Sendo neste sentido, imprescindível um plano de gestão para Fordlândia.

Os inventários arqueológicos são instrumentos essenciais para o entendimento da memória coletiva, das identidades construídas e refletidas na paisagem e no território, percebemos que estes elementos estão intimamente associados ao contexto de Fordlândia. Alguns moradores ainda guardam consigo memórias de um tempo vivido, em que a relação socioeconômica influenciava no seu cotidiano, e como lembranças/ fragmentos desse tempo encontramos vestígios arqueológicos diversos (artefatos e supeartefatos), tais como restos construtivos, ruínas, casarões, *bottons*, e alguns outros elementos materiais que começaram a fazer parte da vida dessas pessoas após a implantação da vila de Fordlândia, como identificamos nos relatos e podem ser observados nas imagens. Esperamos que este ensaio seja um contributo na busca para preservação do território e memória dos moradores de Fordlândia.

Área de estudo no município de Aveiro - PA

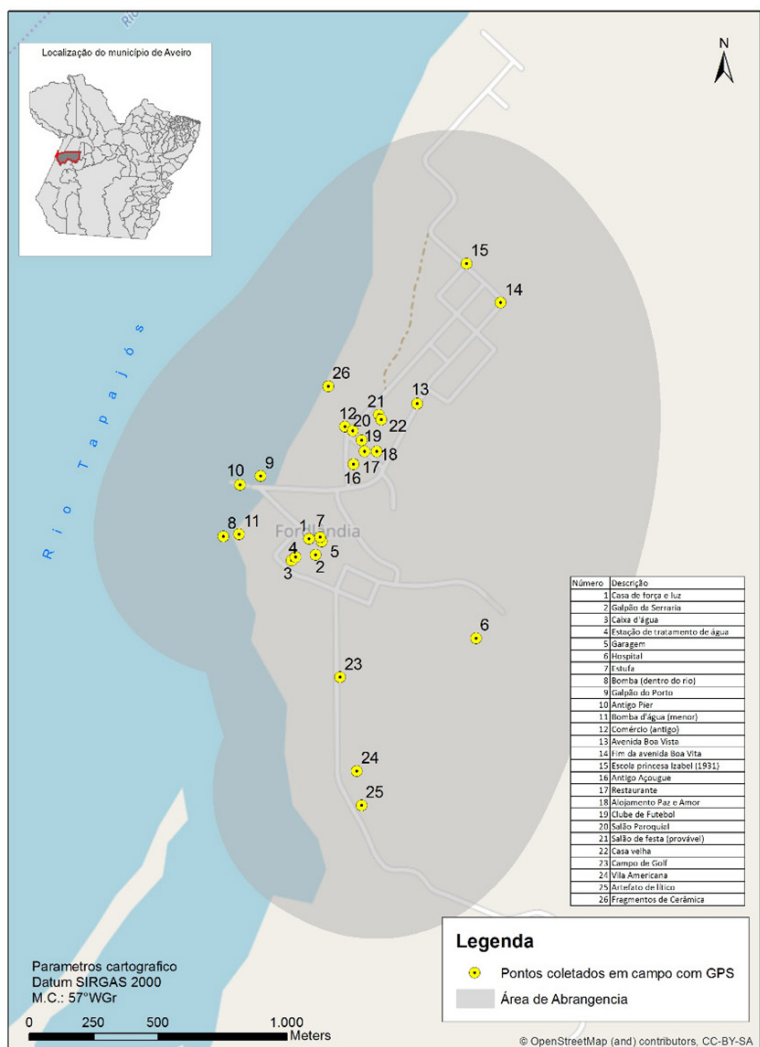


Figura 1: mapa referente aos pontos dos locais visitados no distrito de Fordlândia. Mapa: Ney Rafael Monteiro (2017)

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08:

**À propos de *huaquería*,
copies et artisanat :
réflexions à partir de La
Pila (Équateur)**

À propos de *huaquería*, copies et artisanat : réflexions à partir de La Pila (Équateur)

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Résumé

Cet article est une réflexion construite à partir d'un dialogue avec l'artiste et anthropologue équatorienne Pamela Cevallos autour de son projet de recherche et de création artistique qui porte sur les notions de collection et de classification des biens archéologiques, qu'elle mène en collaboration avec les autorités locales et des artisans de La Pila (province de Manabí, Équateur). L'artisanat de La Pila est spécialisé dans la production de céramique, la zone étant très riche en sols argileux. Ils sont connus notamment pour les reproductions des biens archéologiques, en particulier ceux des cultures précolombiennes qui habitaient la zone. Il y a une relation complexe entre le marché légal des reproductions et les marchés illégaux des faux et des biens archéologiques issus des fouilles illégales (*huaquería*).

Mots-clés: Patrimonialisation, colecciones arqueológicas, *huaquería*, artisanat, reproduction.

Abstract

This article is a reflection based on a dialogue with Ecuadorian artist and anthropologist Pamela Cevallos about her research and artistic creation project around archaeological collection and classification concepts in collaboration with local authorities and artisans in La Pila (Manabí Province, Ecuador). La Pila's crafts are specialized in the production of ceramics, the area being very rich in clay soils. The residents of La Pila are known especially for the reproductions of archaeological goods, in particular those of the pre-Columbian cultures which inhabited the region. There is a complex relationship between

the legal market of reproductions and the illegal markets of forgeries and archaeological artefacts gathered from illegal excavations (*huaquería*).

Keywords: Patrimonialization, archaeological collections, handicrafts, reproduction.

Resumen

Este artículo es una reflexión que parte del diálogo con la artista y antropóloga ecuatoriana Pamela Cevallos sobre su trabajo de investigación y creación artística en torno a los conceptos de colección arqueológica y de clasificación, que lleva a cabo en colaboración con las autoridades locales y los artesanos de La Pila (provincia de Manabí, Ecuador). La artesanía de La Pila se especializa en la producción de cerámica, siendo la zona muy rica en suelos arcillosos. Los residentes de La Pila son conocidos especialmente por las reproducciones de bienes arqueológicos, en particular los de las culturas precolombinas que habitaron la región. Existe una relación compleja entre el mercado legal de reproducciones y los mercados ilegales de falsificaciones y artefactos arqueológicos recolectados de excavaciones ilegales (*huaquería*).

Palabras clave: Patrimonialización, colecciones arqueológicas, huaquería, artesanía, reproducción.

À propos de *huaquería*, copies et artisanat : réflexions à partir de La Pila (Équateur)

Cet article est une réflexion autour du statut d'objets patrimoniales ou artisanales à partir du travail de l'anthropologue et artiste équatorienne Pamela Cevallos et de mes échanges avec elle entre 2017 et 2018. Le travail de Cevallos a depuis considérablement évolué mais ses rebondissements plus actuels ne feront pas l'objet de cet article.

Pour commencer, nous devons connaître un peu sur la communauté de La Pila, localité située dans la région côtière équatorienne, paroisse rurale de la province de Manabí. C'est le lieu de vie d'environ deux mille cinq cent personnes qui se dédient principalement à la production agricole et à l'artisanat. Cette dernière activité est née dans un contexte géographique particulier : situé près de plusieurs sites archéologiques majeurs de la côte et à équidistance des villes de Montecristi et Portoviejo (capitale de la province), c'est un lieu propice au commerce. Une partie des habitants du village se sont tournés progressivement vers des occupations économiques en lien avec les objets archéologiques, négociant constamment ce qui est permis et ce qui est illégal, entre commerce et modelage de céramiques. C'est ainsi que le village est devenu célèbre comme un haut lieu de l'artisanat où les meilleures répliques d'objets archéologiques sont élaborées, mais aussi comme une étape du commerce illégal, tant des pièces authentiques, que des pièces fausses de qualité. Autrement dit, l'économie de ce territoire de basse densité démographique est liée de manière intime au débat culturel et aux décisions de l'État central sur les questions patrimoniales.

Il est avisé de prendre appui sur le travail de Pamela Cevallos car elle entretient un lien particulier avec les artisans de La Pila, patiemment construit depuis une première prise de contact en 2015 et qui a abouti dans divers projets artistiques et de recherche. Parmi les fruits de ce lien se trouve le projet artistique *Advertencias para buscar, coleccionar y clasificar objetos arqueológicos...* (2018), autour duquel nous avons plus particulièrement échangé. Pour cette création, en collaboration avec les autorités locales et des artisans, elle a proposé un nouveau plan d'exposition permanente pour le Musée de La Pila. Ouvert en 2015 autour des reproductions artisanales aussi bien que des pièces originales, ce musée a vu nombreuses pièces détruites ou abîmées

par le tremblement de terre d'avril 2016 qui a terrassé une grande partie de la côte nord de l'Équateur.

Cevallos et moi avons entretenu de nombreuses discussions autour de son travail entre 2011 et 2017. Pour la construction de l'argument de cet article, en plus des échanges de vive voix, l'accès à de la documentation inédite sur sa recherche a été fondamental. Notamment à une série de collages élaborés par des habitants de La Pila comme réponse à des interrogations posées par l'artiste pendant un atelier préparé en collaboration directe avec des autorités locales et des artisans de La Pila. Une quinzaine de participants ont réfléchi pendant l'atelier sur ce qui fait l'identité de la communauté de La Pila et des gens qui y vivent, ainsi que ce qu'ils aimeraient voir mis en valeur au sein du musée. Douze collages ont ainsi été produits et ont fait l'objet d'une valorisation au sein d'une exposition au Centre d'Art Contemporain de la ville de Quito (2018). Ces productions visuelles sont une partie du processus d'expression d'une communauté dans la conception d'un musée local et permettront de vérifier la construction du discours collectif que l'artiste provoque et facilite.

Pour écrire ce texte, il a fallu assumer la distance géographique me séparant de La Pila comme un espace propice pour la construction d'une réflexion qui porte sur la gestion du territoire et sur le rôle joué par l'artiste. Ce texte n'est donc pas issu d'une enquête directement effectuée sur le terrain mais d'une inquiétude née de la confrontation avec un processus artistique de longue haleine et des multiples axes que ce dernier contient de par sa force conceptuelle.

«Lo ancestral con toque moderno»

« L'ancestral avec une pointe de modernité. » Cette phrase se trouve dans un des collages élaborés par les habitants. Comme il a déjà été dit, le travail des gens de La Pila qui manipulent ces objets archéologiques se meut entre l'archéologie non scientifique, connue populairement comme *huaquería*, le commerce ou le courtage (rôle d'intermédiaires avec commission) des pièces et l'artisanat. Les mêmes personnes peuvent revêtir l'une ou plusieurs de ces fonctions, qui oscillent justement entre l'ancestral et une réactualisation de l'usage et du sens des vestiges. À continuation nous verrons un peu plus en détail les manières dont ces différentes fonctions ont été tenues depuis que l'État a manifesté un intérêt dans la collecte et la conservation des biens culturels, en particulier, d'objets archéologiques pour bâtir un patrimoine national.

Le premier office est celui de *huaquero*, figure fascinante et controversée dont la complexité a été mieux comprise depuis des travaux qui prennent en compte non seulement leur rôle dans le trafic illicite international des biens culturels mais leurs motivations diverses, leurs rôles locaux et leurs liens aux autorités culturelles locales (Canghiari, 2016). Il est important de percevoir les nuances des différents niveaux d'implication et le sens que donnent les acteurs aux fonctions qu'ils assument¹. De plus, condamner l'illégalité ne suffit pas pour bloquer l'action des *huaqueros*, comme le constatait l'UNESCO (19 octobre 2011) pendant le quarantième anniversaire de la Convention de 1970² : il s'agit d'un problème persistant et « *il reste très difficile de déterminer l'origine d'un bien fouillé illicitement et à quel moment il a été extrait du sol et exporté (...)* [et ce bien que certains États comme l'Équateur] *considèrent que la propriété d'un bien culturel non encore découvert ou déjà issu de fouilles archéologiques est celle des autorités publiques (...)* » (UNESCO, 19 octobre 2011). Bien que dans La Pila il n'existe pas un site archéologique majeur identifié, sa proximité avec des sites importants, notamment ceux qui ont été mis à jour par l'archéologie non scientifique, a fait de quelques habitants des archéologues improvisés. Il a pu arriver aussi que des personnes retrouvent des vestiges archéologiques dans leurs terrains dans les communautés alentour par hasard. Cevallos souligne le poids de la dimension économique que conservent les objets dans le contexte des fouilles illégales, relativisant le discours purement culturel que préfèrent les musées (Cevallos, 2-4 juin 2016).

En rapport direct avec l'extraction illégale de vestiges, la commercialisation de ces derniers a pu conduire dans le passé certains à devenir marchands ou courtiers d'objets authentiques et, pour quelques-uns, à écouler dans le marché illicite des pièces fausses. Aujourd'hui ces échanges ont encore cours mais ils ont été rendus bien plus rares et difficiles par l'alourdissement du contrôle des autorités douanières et patrimoniales. Nonobstant, il est indispensable de souligner le fait que, historiquement, parmi les clients de ces marchands se trouvaient les musées et les collections publics, et ce, au moins, jusqu'aux années 1980. Des fonctionnaires ont donc encouragé les fouilles illégales en feignant d'ignorer leur origine et en utilisant de l'argent

1 Écouter le témoignage d'un *huaquero* de San Isidro qui est disponible en ligne (Museo de América, 14 janvier 2015).

2 La Convention concernant les mesures à prendre pour interdire et empêcher l'importation, l'exportation et le transfert de propriété illicites des biens culturels.

public pour rémunérer le vendeur des pièces qui, selon la loi, appartenaient déjà à l'État. Les commerçants ne sont pas timides quand il s'agit d'affirmer leur rôle dans cette circulation ou les stratégies qu'ils mobilisent pour cela. L'illégalité de cet acte ne leur échappe évidemment pas mais l'attitude des fonctionnaires publics a été tellement contradictoire par rapport à eux, variant de connivence à persécution, qu'ils peuvent – et nous le pouvons aussi – légitimement se considérer comme des acteurs à part entière du monde du patrimoine. De plus leur rôle est vraiment clef dans le choix même des pièces et le choix des collections où finalement elles seront intégrées.

Finalement, la production artisanale de répliques de qualité et de « objets pour touristes » est sans doute le plus complexe et important car il relie les deux antérieurs, celui des *buaqueros* et des commerçants. Il s'agit d'un travail fait parfois sur la base des originaux, parfois réalisés avec des moules archéologiques originels ou en créant des moules contemporains sur la base de pièces authentiques. Il y a deux types principaux de travail de l'argile : la technique de barbotine³ et celui du modelage, qui est le plus intéressant du point de vue de la qualité et du rendu esthétique des pièces et, en même temps, c'est le type le moins répandu parmi les artisans actuellement, car elle demande plus de temps et de travail pour sa réalisation.

La tradition artisanale en céramique a commencé pendant les années 1960 comme une alternative économique à l'agriculture qui était l'activité traditionnelle. D'une certaine manière la sécheresse est à l'origine de la céramique. (...) Parmi ce qui était trouvé [dans les fouilles illégales] se trouvaient les moules, appelés "*cuños*" avec lesquels ils ont commencé à réaliser des répliques en argile, qui étaient alors vendues comme authentiques. Au début, l'activité artisanale était clandestine (Cevallos, 2-4 juin 2016⁴).

3 Technique de production de céramique à partir d'un mélange de poudre d'argile dilué dans une abondante quantité d'eau. Elle sert comme colle ou pour faire des pièces en la coulant dans des moules. Il s'agit d'une fabrication semi-industrielle qui demande moins d'habileté de la part de l'artisan.

4 Toutes les sources originellement en espagnol ont été traduites au français par moi.

Le musée comme lieu d'expression collective

Dans les collages, nous voyons que les artisans veulent avoir un endroit où montrer l'histoire de leur activité et de leur localité. Suite à la destruction du musée en 2016, l'idée de l'artiste a été d'investir cet espace comme un lieu d'expression artistique en réfléchissant avec des membres de la communauté aux discours qui vont s'y retrouver pour le transformer en un lieu d'expression collective. Comme il a déjà été dit, une partie des interlocuteurs clés de Pamela Cevallos, sont des autorités et des artisans. Parmi les autorités, les personnes en charge du tourisme ont un rôle véritablement fondamental car ce sont elles qui assurent le fonctionnement du musée et lui donneront finalement une forme à long terme. Car Cevallos anime seulement les discussions mais la possibilité de l'existence même du musée dépend des négociations internes à la communauté. C'est d'ailleurs une question que l'on peut soulever devant le développement de ce musée : celle de sa pérennité dans le temps.

L'intérêt de la réflexion de cette communauté sur le discours et le fonctionnement de leur musée est important dans la mesure où ce paysage culturel est étroitement lié au passé précolombien, avec un sentiment d'être des héritiers de ce passé et, d'une certaine façon, de le célébrer à travers l'artisanat. Si nous analysons le discours des collages produits pendant l'atelier avec les artisans que Cevallos a animé, nous constatons une très haute récurrence des mots et expressions liés au monde de la culture, l'art et le patrimoine. C'est bien dans ce monde là qu'ils semblent se placer ou, du moins, qu'ils semblent placer une partie de leurs aspirations pour l'avenir de leur village. En établissant la liste de ce qu'ils aiment dans La Pila, l'artisanat est la réponse la plus récurrente ; dans ce qu'ils aiment le moins, c'est le manque d'accès aux services de base, et surtout le manque d'eau potable qui revient le plus.

Dans La Pila, le maigre accès aux services de base atteste d'un état de pauvreté et de marginalité, qui nous met constamment face au fait paradoxale que les trésors nationaux qui s'exposent dans les musées des grandes villes sortent d'endroits comme celui-ci
(Cevallos, 2-4 juin 2016).

Les réponses recueillies dans cet atelier sont exprimées par des personnes qui tiennent au projet du musée. Ces personnes, et l'artiste elle-même, participent à sa conception et croient à sa pertinence. Ces artisans participent d'une volonté pour se placer dans le monde de l'art, de la culture et du patrimoine, démontrée également à travers la collaboration que ceux-ci entretiennent avec l'Institut National du Patrimoine Culturel (INPC) et avec les autorités municipales de Montecristi. Le discours de plusieurs artisans que nous pouvons trouver en ligne (Universidad Técnica Particular de Loja, 24 juillet 2007 ; Manavisión, 17 décembre 2009) va dans ce sens et tend à confirmer leur volonté de revendiquer leur métier comme « traditionnel », dans l'acception de patrimoine immatériel inhérente à ce terme, et donc comme une forme d'expression culturelle digne d'avoir son propre musée dédié.

Il importe de souligner que revendiquer une activité comme étant une tradition, indépendamment de l'ancienneté réelle de cette pratique, signifie s'inscrire dans une lignée historique. La portée symbolique du musée et du discours qui peut s'y matérialiser n'est nullement négligeable pour cette communauté qui est marquée métaphoriquement par les stéréotypes qui qualifient les activités des *huaqueros* et des artisans-fausseurs ; et marquée réellement par la pauvreté et le manque de services publics. Le projet ne résout pas les problèmes concrets dans les conditions de vie dans la communauté mais permet à une partie importante de la population (assez importante du moins pour que leur activité identifie dans l'imaginaire national à tout le village) de définir les termes dans lesquels elle souhaite être perçue.

À ce titre, l'expérience que Pamela Cevallos a fait en 2015, en exposant au musée de La Pila des facsimilés des documents d'archive sur les origines des collections publiques, est très intéressante. Elle a été surprise de voir que de nombreux habitants de La Pila y reconnaissaient des membres de leurs familles, des amis ou des connaissances qui étaient mentionnés dans les documents, souvent comme vendeurs de biens culturels aux musées nationaux. Ils ont reconnu cette histoire comme étant la leur, celle de leur communauté et de leur activité économique. Le rôle de l'archéologie non scientifique, dans la constitution du corpus patrimoniale en Équateur est un sujet largement ignoré par les musées nationaux, malgré l'importance évidente de celui-ci. Ce débat doit aller au-delà du caractère illégal de cette activité et prendre en compte son existence et sa continuité dans notre époque. Il est important de comprendre le rôle essentiel joué par les habitants de ce territoire dans

l'établissement d'un certain corpus patrimonial national équatorien dont la préservation et la mise en valeur se passent uniquement dans des centres urbains éloignés, le plus souvent sans rendre du tout compte de la biographie culturelle des objets (Kopytoff, 2006 [1986]) et des personnes ayant participé à leurs histoires contemporaines.

Il semble urgent que les institutions muséales reconnaissent et interrogent leur propre histoire et celles de leurs collections. Le fait que ces pièces aient intégré les collections nationales, le canon qu'elles incarnent, leur existence même, est le résultat d'un effort collectif qui inclut les gens des territoires les plus marginalisés au sein de la nation. C'est seulement après avoir interrogé cette histoire que des nouvelles pratiques institutionnelles et sociales pourront s'inventer autour d'une plus vaste compréhension de ce qu'est le patrimoine, au sein de laquelle la dimension symbolique et immatérielle de l'expérience des personnes qui s'occupent des objets pourra être intégrée. Cette possible redéfinition du patrimoine à partir d'un contexte local aussi particulier est sans doute une démonstration de la puissance des questions qui peuvent naître dans les zones périphériques que les centres urbanisés ont tendance à ignorer et où, pourtant, se joue aussi leur propre histoire et leur devenir.

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09:

**Palaeoecological
studies in overview:
north-central and
south-eastern Nigeria**

Palaeoecological studies in overview: north-central and south-eastern Nigeria

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Abstract

Palaeoecology or Ecology of the past provides data studies on changes in vegetation and other aspects of the environment through time. Palaeoecological records from around the world have demonstrated that climate and associated vegetation has changed, often dramatically, since the last glacial maximum (LGM). Such changes are usually attributed to factors, such as climatic change, volcanic eruptions, fire, or human activity. Archaeology and Palaeoecology cooperate in providing a context for understanding earlier and existent interactions between humans and the environment, and human community structure. Research in this area is diverse but a major focus is the global impact of culture.

Despite the global scope of Palaeoecology, many researchers focus their work on a geographical area or in a specific archaeological field. Following the need to provide a broader view, we decided to analyse the state of the art in the field of Palaeoecology for South Eastern Nigeria, comparing data records with North Central Nigeria.

This Overview engages with methodological and empirical research related to the origin, nature and rate of long-term environmental and climate change and its general or specific links to human behaviour and activity.

Keywords: Palaeoecology, Environment, Human Interactions, Nigeria

Resumo

Palaeoecologia ou Ecologia do passado fornece estudos de dados sobre alterações na vegetação e outros aspectos do ambiente ao longo do tempo. Os registos paleo-ecológicos de todo o mundo têm demonstrado que o clima e a vegetação associada mudaram, muitas vezes dramaticamente, desde o último máximo glacial (LGM). Tais mudanças são geralmente atribuídas a factores, tais como, alterações climáticas, erupções vulcânicas, fogo, ou actividade humana. A Arqueologia e a Paleo-ecologia cooperam no sentido de fornecer um contexto para a compreensão antecipada e as interacções existentes entre os seres humanos e o ambiente, e a estrutura da comunidade humana. A investigação nesta área é diversa mas um dos principais focos é o impacto global da cultura.

Apesar do âmbito global da Paleoeecologia, muitos investigadores concentram o seu trabalho numa área geográfica ou num campo arqueológico específico. Na sequência da necessidade de fornecer uma visão mais ampla, decidimos analisar o estado da arte no campo da Paleoeecologia para o Sudeste da Nigéria, comparando os registos de dados com o Centro-Norte da Nigéria.

Esta Visão Global envolve investigação metodológica e empírica relacionada com a origem, natureza e taxa de alterações ambientais e climáticas a longo prazo e as suas ligações gerais ou específicas ao comportamento e actividade humana.

Palavras-chave: Palaeoecologia, Ambiente, Interacções Humanas, Nigéria

1. Introduction

Palaeoecology is the study of the composition and distribution of past ecosystems and their changes in vegetation and biota of the environment through temporal and spatial scales. Palaeoecologists are concerned with reconstructing past biota, populations, communities, landscapes, environments, and ecosystems from both geological and biological (fossil) records (Birks, 2008).

Bibliography, in general, points to two main types of paleoecology; Quaternary paleoecology, which sets emphasis on the last 2.8 million years of evolution, and deep-time palaeoecology, based on fossil records from pre-Quaternary Eras. Certainly, when studying such data, climate plays a major role in the planet's history. Palaeoecological records from around the world have demonstrated that climate and associated vegetation has changed, often dramatically, since the last glacial maximum (LGM). Such changes are usually attributed to factors, such as climatic change, volcanic eruptions, fire, or human activity (Walker and Lowe, 2007; Birks, 2008).

Archaeology and Paleocology cooperate in providing a context for understanding earlier and existent interactions between humans and the environment, and human community structure. Research in this area is diverse but a major focus is the global impact of culture. Over the past 50 years, the field of paleoecology has offered important insights into ecological determinants for survival across mass extinctions, intrinsic environmental controls on the distributions and abundance of species, and how ecosystems form and change, where human influence comes as an important modelling factor (Dearing *et al.* 2006).

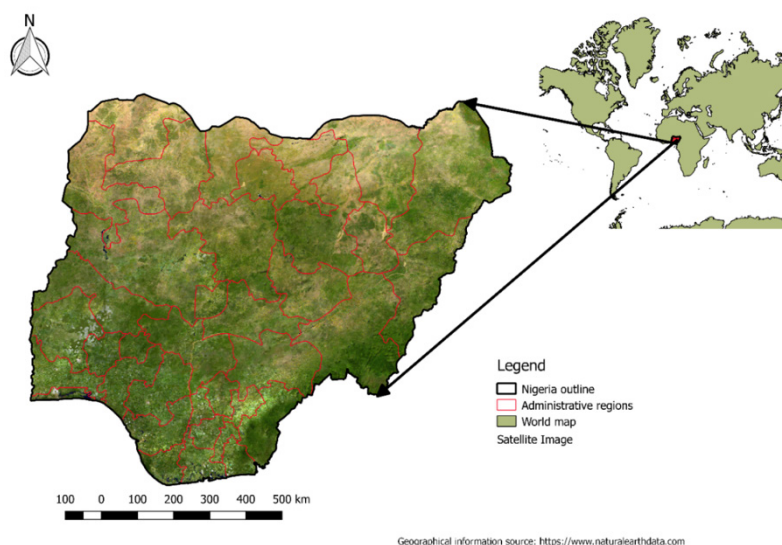


Figure 1. Nigeria location map.

Despite the global scope of Palaeoecology, many researchers focus their work on a geographical area or in a specific archaeological field. Following the need to provide a broader view, we decided to analyse the state of the art in the field of Paleoeology in Nigeria (Fig. 1) with emphasis on South Eastern Nigeria, comparing data records with North Central Nigeria (Fig. 2).

South-eastern Nigeria (Fig. 2) is bordered by various rivers and land-forms: River Benue to the north, the Niger to the west, the Oban Hills and Obudu plateau to the east and the Atlantic Ocean to the south. There is a prominent feature which is an S-shaped cuesta, running from the confluence of the Niger and Benue rivers south and eastwards terminating beneath the coastal plains. It forms the centripetal watershed of streams draining into the Benue, Niger, Cross River and the Atlantic Ocean. (Obianuju *et al.* 2013).

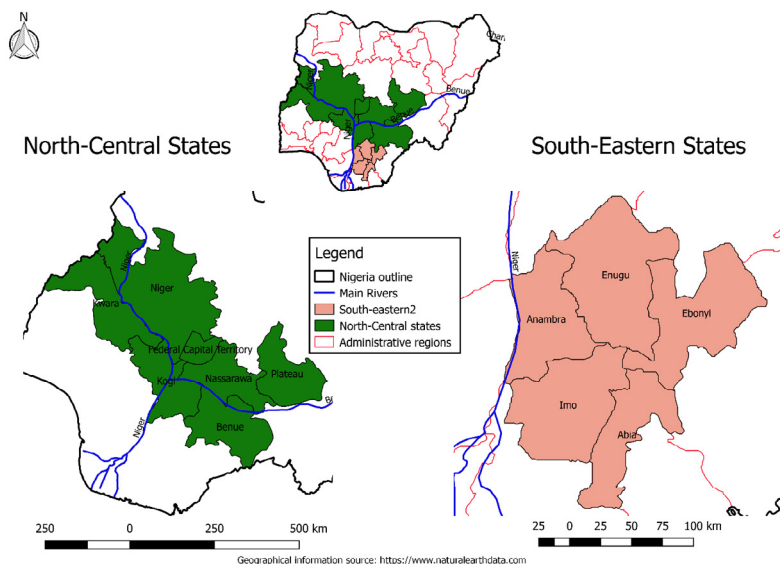


Figure 2. Nigeria's North-Central and South-Eastern states.

The climate of south-eastern Nigeria is tropical humid which indicates marked rainy and dry seasons. There is annual variation in the rainfall from north to south in amount and distribution from 968 mm to 2098 mm and up to four dry months between November and February (Obianuju *et al.* 2013).

The natural vegetation varies from tropical rainforest in the south to guinea savannah in the north. The ground retains moderate moisture to sustain tropical rainforests despite the sandy nature of the soil in most parts. Within the area of rainforest vegetation, the activities of man have given rise to “Derived Savannah”, i.e., secondary climax vegetation. The secondary rainforest vegetation is also called the “Oil palm bush” because of the ubiquity of *Elaeis guineensis* (Obianuju *et al.* 2013).

Three sedimentary basins occupy eastern Nigeria comprising the Aptian-Santonian Benue Trough, the Campanian- Maastrichtian Anambra and Afikpo basins and the Cenozoic Niger Delta, from the oldest to the youngest respectively.

The sediments of Benue Trough overlie the granitic basement of the late Proterozoic age and have undergone folding igneous intrusion and slight metamorphism in some places during the Santonian tectonic episode. The overlying beds of Anambra and Afikpo Basins on the western and eastern boundaries of

the Trough respectively were not folded. The two basins, the Benue Trough and Anambra-Afikpo are overlain by the sediments of the Palaeocene to the recent Niger Delta on their southern borders (Umeji and Nwajide, 2007).

2.Geological evolution setting

The southern Nigeria sedimentary basin comprises the Benue Trough, the Niger Delta (which now includes the Anambra Basin); (Nwajide, 2013), the Benin Embayment, Abakaliki fold Belt, Afikpo syncline and the Calabar flank. The depositional and tectonic histories of the basin are associated with the tectonic stages and epeirogenic movements associated with the separation of the African and South American continents during the Early Cretaceous (Murat, 1972; Burke, 1996).

There are several variations in the tectonic and structural framework of these Basins. For instance, the northern Niger Delta basin (Anambra basin) is controlled by a larger and older tectonic feature, the Benue Trough (Late Jurassic to early Cretaceous); which is a northeast-southwest fold rift basin was a failed arm that runs diagonally across Nigeria. The Benue Trough formed simultaneously with the opening of the Gulf of Guinea and the Equatorial Atlantic in Aptian-Albian times when the Equatorial part of Africa and South America began to separate (Reijers *et al.* 1997).

Murat (1972) therefore as a result of these variations in the sedimentary tectonic basins proposed three tectonic phases in the stratigraphic evolution of the region with a shift in the axis of the main basin and gave rise to three successive basins. These three phases were: the Abakaliki-Benue phase (Aptian-Santonian), the Anambra-Benin phase (Campanian-mid Eocene), and the southern Niger Delta phase (late Eocene-Pliocene).

Phase 1 (Abakaliki-Benue) began during the middle Albian after major northeast-southwest movements caused by faulting which resulted in the rift-like Abakaliki-Benue Trough. Shelf deposits were laid down on the Anambra platform between the Calabar and Benin hinge lines and the trough (Francisca *et al.* 2017).

Phase 2 (Anambra-Benin) was characterised by compressional movements along the established northwest-southwest trend, which resulted in the folding and uplifting of Abakaliki-Benue Trough during the late Santonian to early Campanian (Francisca *et al.* 2017).

Phase 3 (southern Niger Delta) was initiated by a regression during the middle and late Eocene. There was the vertical movement of blocks bounded by northeast-southwest and northwest-southwest trending faults which resulted in the deposition of a large deltaic complex in the down-dip Anambra basin. These however preceded the subsidence of the Oligocene to the recent Niger Delta basin along the northwest-southeast fault trend (Francisca *et al.* 2017).

3.Stratigraphy and sedimentology

The more than 3000 meters of rocks comprising the Asu River Group and the Ezeaku and Awgu formations, were deposited during the first phase in the Abakaliki-Benue Basin, the Benue Valley and the Calabar Flank. The second sedimentary phase resulted from the Santonian folding and uplift of the Abakaliki region and the dislocation of the depocenter into the Anambra Platform and Afikpo region. The resulting succession comprises the Nkporo Group, Mamu formation, Ajali sandstone, Nsukka formation, Imo formation and Ameki Group. The third sedimentary phase credited for the formation of the petroliferous Niger Delta commenced in the late Eocene as a result of a major earth movement that structurally inverted the Abakaliki region and displaced the depositional axis further to the south of the Anambra basin (Obi *et al.* 2001).

Reyment (1965) undertook the first detailed study of the stratigraphy of the Southern Nigerian sedimentary basin, and he proposed many of the lithostratigraphic units in the region.

The Paleogene time in south-eastern Nigeria is represented by a sedimentary succession that is thicker than 3500m. The south-eastern deposits are divided into the Nsukka formation, Imo formation, Ameki group and Ogwashi-Asaba formation. (Oboh-Ikuenobe *et al.* 2005). The Imo, Ameki and Ogwashi-Asaba are assigned to the Niger Delta territory (Nwajide, 2013).

The Nsukka Formation, which overlies the Ajali Sandstone, begins with coarse- to medium-grained sandstones and passes upward into well-bedded blue clays, fine-grained sandstones and carbonaceous shales with thin bands of limestone (Oboh-Ikuenobe *et al.* 2005). According to Obi *et al.* (2001), the deposition of the Nsukka formation represented a phase of fluvial-deltaic sequence that evolved close to the end of the Maastrichtian and continued during the Palaeocene.

The Imo formation consists of blue-grey clays and shales and black shales with bands of calcareous sandstone, marl and limestone. The sediments shallow to marine shelf conditions in which foreshore and shoreface sands formed occasionally, (Nwajide, 2013). Ostracode and foraminiferal biostratigraphy (Reyment, 1965), and microfauna recovered from the basal limestone unit (Adegoke et al. 1980; Arua, 1980) indicate a Palaeocene age for the formation. Lithology and trace fossils of the basal sandstone unit reflect foreshore and shoreface (Reijers *et al.* 1997) or delta front sedimentation (Anyanwu and Arua, 1990).

The Ameki group consists of the Nanka sand, Nsugbe formation, and Ameki formation (Nwajide, 1979), which are laterally equivalent. The Ameki group is represented by an alternation of sands, silts and clays in various proportions and thicknesses. The age of the formation has been considered to be either early Eocene (Reyment, 1965) or early middle Eocene (Berggren, 1960; Adegoke, 1969). These sediments have been interpreted as continental, deltaic, estuarine, lagoonal and open marine based on the successive faunal contents, (Reijers *et al.* 1997; Nwajide, 2013), whereas Fayose and Ola (1990) suggested that the sediments were deposited in marine waters between the depths of 10 m and 100 m.

The Ogwashi-Asaba formation comprises alternating coarse-grained sandstones, lignite seams, and light-coloured clays of continental origin. It was deposited in an alluvial or upper coastal plain environment following a southward shift of deltaic deposition advancing into a new depocenter (Reijers, 2011). Although Reyment (1965) suggested an Oligocene-Miocene age for the formation, a palynological study by Jan du Chene *et al.* (1978) yielded a middle Eocene age for the basal part. If this palynological interpretation is correct, then the Ameki group is early to middle Eocene in age. The Ameki group and the Ogwashi-Asaba formation are correlative with the Agbada formation in the Niger Delta.

4. Discussion

Various palaeoecological studies had been carried out in the South-eastern region and other regions in Nigeria; such study encompasses soil, animals, vegetation, and climate.

In this overview, the main focus will be on the sediment aspects and slightly the plant by comparing the views of the researchers within the region and outside the region.

Kingsley and Obianuju, Department of Geology, University of Nigeria, Nsukka, (2016) investigated some outcrop sections along the Onitsha-Awka transect in the Niger Delta basin of south-eastern Nigeria to assess the palynological composition, palynofacies and palaeoenvironment of the sediment deposition.

The beds of the Niger Delta basin which was grouped within the Anambra Basin discussed by these authors are the Imo, Nanka and Ogwashi formations. Having previously described the palaeoenvironmental settings in South-eastern Nigeria, the study area also falls within the Anambra basin (Kingsley and Obianuju, 2016).

The lithostratigraphy of the Niger Delta Basin consists of the Imo, Ameki, Ogwashi and Benin formations inland. In Basin ward, the lateral equivalent of these outcropping formations in the subsurface is the Akata, Agbada, and Benin formations while the top of the Agbada and the base of the Benin formations correlate to the Ogwashi formation (Kingsley and Obianuju, 2016).

The oldest unit of the Niger Delta basin is the Imo formation which consists of the Ebenebe, Umunna and Igbakwu sandstone members. The Imo formation is composed of grey sandy shale, siltstone and sandstone with lenses of coal and limestone in some places (Kingsley and Obianuju, 2016).

The Ameki formation overlies the Imo formation unconformably. It is predominantly of sandy lithology, with the Nsugbe and Nanka sandstones (Nwajide, 1980) as equivalents. At times referred to as a group, Ameki formation is correlatable to the subsurface Agbada formation. Nanka formation consists of fluvial friable cross-bedded sandstones with abundant ichnofossils, micaceous grey shale and kaolinitic clays, siltstone, lenses of coal and fossiliferous limestone. The Ameki formation is conformably overlain by the Ogwashi formation. The formation also extends laterally westwards where it is correlatable with the Oshoshun formation (Kingsley and Obianuju, 2016).

The Ogwashi formation consists of cross-bedded sandstones, carbonaceous black shales, lignite, and coal. It extends eastwards beyond the river Niger to the east of Calabar and Cameroon frontiers. It does not outcrop,

because it is covered by the Benin formation. Its exposures are only along stream sections and quarries (Kingsley and Obianuju, 2016).

The Benin formation is the uppermost unit in the Niger Delta. It consists of the late Miocene to recent alluvial and upper coastal plain deposits that are up to 2000m (6600 feet) thick (Avbovbo, 1978). It overlies the Ogwashi formation whose topmost unit is regarded as the base of the formation. In the onshore and some coastal regions, the Benin formation overlies the Agbada formation. Short and Stauble (1976) defined the contact between the Agbada and Benin formations as the highest shale, bearing marine fauna in the Agbada formation.

The authors used the palynological method in explaining the palynostratigraphy, palynofacies, and the depositional environment of the study area. And the interpretation presented for each formation was largely based on the presence of sporomorphs and dinoflagellate cysts.

The palynofacies analysis with changes in palynomorph and palynofacies assemblages are linked to environmental changes associated with progradation and retrogradation (Kingsley and Obianuju, 2016).

The organic matter in the Niger Delta is mainly a mixture of types II and III kerogens (Bustin, 1988). The main palynofacies are structured woody materials, opaque organic matter, cuticles, pollen and spores and minor amorphous organic matter, (Batten, 1982; Bustin, 1988). For instance, from the study of the organic component of the Imo formation made up of amorphous organic matter (64%), opaque particles (28%) and marine species (0.8%), a few structured phytoclasts (1%) and terrestrial micro floes (2%) suggested the formation was deposited in the transgressive systems tract (Kingsley and Obianuju, 2016).

In the Nanka formation was increase in pollen (11%), spores (9%), cuticle (7%) and degraded wood (4%), opaque debris (32%), dinoflagellate cysts (4%). Amorphous organic matter (24%) reflects late high stand systems tract deposition.

In the Ogwashi formation were an increase in structured phytoclasts (21%), amorphous organic matter (21%), and opaque debris associated with deposits of lowland system tracts.

The conclusion of the investigation, therefore, is that the sediments were deposited in various environmental conditions. The Imo formation was deposited under reduced salinity middle to the outer neritic environment that experienced terrestrial input. The Nanka formation was accumulated

in the middle to the inner neritic coastal environment and fluvial deltaic setting associated with shales and sandstones, and; the Ogwashi formation was deposited in a fluvial-deltaic setting that alternated between the upper deltaic plain (Freshwater) and brackish conditions of the lower plain (Kingsley and Obianuju, 2016) and these depositions were confirmed by the palynofacies assemblages.

In sum, palynomorph and palynofacies interpretations suggest that the Imo formation represents a transgressive systems tract, the Nanka formation reflects high stand systems tracts, while the Ogwashi formation has a Low stand systems tracts mark (Kingsley and Obianuju, 2016).

Obianuju and Nwajide (2013), Department of Geology, University of Nigeria, Nsukka, Enugu state, Nigeria also researched the record of temperate pollen from the Palaeogene-Neogene lignite of southeast Nigeria, using the site of Mpu Hills as a case study.

The sedimentary basin of south-eastern Nigeria was described as “tiered”, with a superposition of one upon the other, (Nwajide, 2005). Has reported by Kingsley and Obianuju written above in regards to the sedimentation succession in this region, the sedimentation in the Benue Trough was succeeded by subsidence and deposition of sediments in the Anambra and Afikpo basins and which in turn were succeeded by the Palaeocene –Recent Niger Delta Basin. The demarcation of the basin is based on age and structure.

The Niger Delta Cenozoic formations comprising the Imo, Ameki and Ogwashi formations are correlatable down-dip to the formations underlying the recent Niger Delta and consequently, have been appropriately included within the Niger Delta sedimentary Basin, (Nwajide, 2006) following the principle of lateral continuity of strata, one of such formations is the Mpu hills.

The pattern of sedimentation deposition in the South-eastern region which is superposition in nature with sediment of Benue Trough overlain by those of the Anambra Basin and succeeded by the Niger Delta which is not different from the sediment succession in the Mpu syncline.

The sediments of Mpu have been grouped as sediments overlying the folded beds into Mpu formations, (Simpson, 1954; Umeji, 2010). The Mpu formations are scattered in various hills and valleys.

According to Umeji, (2003), the palynomorph content of Mpu hill is similar to those of the contemporaneous Ogwashi formation exposed near Onitsha.

The carbonaceous black shale underlying the Mpu formation is older than the Cenozoic, for it contains spores, pollen and dinoflagellate cysts which are characteristics of the Maastrichtian age (Ojoh, 1992).

Most of the work on quaternary paleoclimate change in southern Nigeria considered the northward and southward movements of the rainforest and savannah or mangrove swamp and grass pollen with changing rainfall (Sowunmi, 1981; Ige, 2000; Durugbo *et al.* 2010).

Umeji (2000) correlated the sediments of the Mpu hills to the other Late Eocene-Early deposits in Nigeria and the west African continent Terminal group, including the top of Agbada and base of Benin formations (Late Eocene-Pleistocene) based on *Retibrevitricolporites ibadanensis*, *Retibrevitricolporites protrudens* and *Retibrevitricolporites obodoensis*, from Obodo-1 well in the Niger Delta (Legoux, 1978).

4.1 Comparison with the north-central region

Akande *et al.* (2005) in collaboration with the Department of Geology and Mineral sciences, University of Ilorin, Nigeria, Technische Universitat Berlin, Germany and Institute of Mineralogy, Geochemistry and Petrology, University of Szeged, Hungary carried out organic petrography and Rock-Eval pyrolysis on the different formations in the Southern Bida Basin, Nigeria.

In this paper, the interest is about the understanding of the successive sediment deposition formations of this region in comparison with the region above.

The Bida Basin is a Northwest-Southeast trending embayment, perpendicular to the main axis of the Benue Trough and the Niger delta basin of Nigeria. It is frequently regarded as the north-western extension of the Anambra basin, both of which major depocenters were during the third major transgressive cycle of southern Nigeria in the Late Cretaceous times (Murat, 1972).

The stratigraphic succession of the Middle Niger basin has been collectively referred to as the Nupe group (Adeleye, 1973, 1989) comprising two folds northern Bida and southern Bida or Lokoja sub-basins. The study area forms a part of the southern Bida basin, a north-westerly extension of the Anambra basin which extends into the northern Bida basin area.

Based on Murat's (1972) classification; the southern Bida basin in North-central Nigeria forms a part of the larger Bida or Middle Niger basin, which

is contiguous with the South East Anambra basin. These basins were major depocenters for Campanian–Maastrichtian sediments in southern and central Nigeria before the build-up of the Tertiary Niger delta.

The succession in the southern Bida basin consists of the basal Lokoja formation, overlain by the Patti formation and capped by the Agbaja formation (Akande *et al.* 2005).

About the depositional succession, first was the exposures of sandstones and conglomerates of the Lokoja formation (ca. 300 m thick) directly over the Pre-Cambrian to lower Palaeozoic basement gneiss and schist. Lithologic units in this formation range from conglomerates, coarse to fine-grained sandstones, siltstones and clay stones in the Lokoja area. Subangular to subrounded cobbles, pebbles and granule-sized quartz grains in the units are frequently distributed in a clay matrix. The general characteristics of this sequence especially the fining upward character, compositional and textural immaturity and unidirectional paleocurrent trends, suggest a fluvial depositional environment dominated by braided streams with sands deposited as channel bars consequent to fluctuating flow velocity. Fine-grained sandstones, siltstones and clays represent flood plain over bank deposits (Akande *et al.* 2005).

Followed by the alternating shales, siltstones, clay stones and sandstone of the Patti formation (ca 70–100 m thick) and this is overlain by the clay stones, concretionary siltstones and ironstones of the Agbaja formations. The Patti formation appears to have been deposited in marginal shallow marine to brackish water conditions identical to the depositional environments of similar lithologic units of the Mamu and Ajali formations in the Anambra basin (Ladipo, 1986, 1988; Adeniran, 1991; Nwajide and Reijers, 1996). The more marine influences in the adjacent Anambra basin are probably related to the nearness of that basin to the Cretaceous Atlantic Ocean before the growth of the Niger delta (Akande *et al.* 2005).

The sediment in this part of the region was deposited in a wide range of environments ranging from fluvial to flood plain, swamps of a marginal marine depositional setting.

Initially, the Lokoja sediment formation formed the flood plain surface over which the Patti formation mudstones and shales were deposited. In this formation, there was an abundance of woody and plant materials comprising mostly land-derived organic matter, which suggests the presence of freshwater conditions. The Patti formation was subsequently succeeded

by the Agbaja formations, it forms a persistent cap for the Campanian—Maastrichtian sediments in the southern Bida Basin which also consist of sandstones and clay stones interbedded with oolitic and massive iron stone beds and these were interpreted as abandoned channel sands and overbank deposit influenced by a marine (Ladipo *et al.* 1994).

The miner marine factor was also repeated in the flooded initial continental environment of the upper parts of the Lokoja sandstones and the Patti formations (Adeleye, 1989; Braide, 1992a, b, c; Olaniyan and Olobaniyi, 1996) and this flooding continued throughout deposition of the Agbaja formation.

Olusola *et al.* (2009) later researched one of the three Cretaceous lithostratigraphic formations of the south-eastern Bida Basin in central Nigeria titled the “Sedimentology and depositional environments of the Maastrichtian Patti formation, southern Bida Basin, Nigeria”.

According to Olusola *et al.* (2009), the Patti formation was deposited in a wide range of environments. The depositional environment recognised includes shoreface, tidal channels, and tidal marsh to the coastal swamp, fluvial channels, over banks, and freshwater swamp which is the characteristic of the depositional environment in the two other lithostratigraphic formations.

The sedimentary succession was explained in terms of three successions from the shoreface facies association which has fine to medium and well-sorted sediments succeeded by tidal channel facies consisting of well sorted to moderately sorted sandstone and overlain by the tidal marsh to coastal swamp facies which consists of fossiliferous, dark grey to black siltstone and iron stone.

Remarkably, sandstones of the Patti and Ajali Formations share common textural attributes, that is, they are both moderate to well sorted. The textural and mineralogical maturity of these tidal and shoreface sandstone facies of the Patti formation indicate that some of the particles could have passed through the second cycle of transportation and probably derived from the adjacent Anambra Basin (Olusola *et al.* 2009).

The physical and the biogenic features of these lithofacies suggest a deposition process dominated by suspension settling mode in quiet low energy, nearshore marine swamps. (Olusola *et al.* 2009).

This lithofacies assemblage is similar in part also to the Mamu formation in the Anambra Basin. The biostratigraphic studies by the authors (Ojo and Akande, 2006) have revealed the occurrence of shallow marine dinoflagellate cysts similar to assemblages described by Salami (1990) from the Mamu

formation. This further support the idea of regional correlation, that part of the Patti formation was deposited in a marginal marine to brackish water conditions similar to the depositional environments of the Maastrichtian Mamu and Ajali formations. The above inferences point to the fact that perhaps there was at least marginal marine connection between the Bida and Anambra basins during the Maastrichtian time and this could be the link between the Trans Saharan Sea and the Gulf of Guinea in the late cretaceous (Olusola et al. 2009).

Therefore, the depositional process in the lithofacies association of the Patti Formation ranges from regressive (Fluvial) to transgressive (Marine) process. And this lithofacies assemblage is similar to other southern Bida formations.

Olusola *et al.* (2009) therefore concluded that the Patti formation consists of sandstone and shale-claystone deposition in an environment from fluvial to marine with three sedimentary depositional facies.

5. Conclusion

The various studies and investigations in this region in its numbers as cited in this paper provide clear-cut information into the palaeoecological setting understanding of the south-eastern region of Nigeria because various areas in the region have been under one form of academic research or the other parts in terms of this subject matter (palaeoecological studies) and of course identifying the different sedimentary basins.

Generally, the sediments in this region after comparing all areas within and outside the region were deposited in a varying range of environments, from the fluvial environment to flood plain swamps of marginal marine and continental fluvial deposits to continental shelf marine.

In comparing the two regions discussed in this paper, there seem to be some connections between the two regions as referenced above based on the available inferences pointing to the fact that perhaps there was at least a marginal marine connection between the Bida and Anambra basins during the Maastrichtian time. Although such cannot be said of other regions because they are not studied as far as this context is concerned.

In the southern region, the major basins are the Imo, Ameki and Ogwashi formations, the stratigraphic ranges of the palynomorphs were grouped in Selandian to Aquitanian based on palynological evidence and the

paleoenvironments in the formation depict a succession of retrogradation followed by progradation of the delta.

Also, there were rapid changes in facies up-dip than down-dip in this region. Up-dip, the Ameki, Nanka, Nsugbe and Ogwashi formations were deposited under the marine, tidal and fluvial environment of a regressive, sea-ward building delta. At the same time, the down-dip of the Agbada formation was deposited under marine brackish water.

Therefore, there has been a continuous shift in the palaeoecological succession in this region based on several pieces of evidence among which some are stated above.

In the central region, the major basins are the Lokoja, Patti and Agbaja formations, the palaeoenvironment can be interpreted as ranging from continental to marginal marine and marsh environment. The stratigraphic ranges in this region were grouped into Campanian to Maastrichtian ages.

However, in contrast to the south-eastern region, the sediment deposition in this region was also characterised by flooding all through the period of deposition, an occurrence is absent in the south-eastern region.

Therefore, a holistic age range of description should be worked on to have a complete overview of the palaeoecological investigation of each region in Nigeria and this would help in placing each site either based on the data available or by using correlation in the right context.

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10:

**Vicissitudes of history
and environment:
Management of
underwater heritage
such as generator of
wealth in rural areas of
Mexico**

Vicissitudes of history and environment: Management of underwater heritage such as generator of wealth in rural areas of Mexico

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Abstract

The aim of this report is to show how the rural area of Jalapa del Marques (Mexico) has modified its economy because of the building of Benito Juárez's Dam and subsequently, when there is lack of water. Due to its geographical position, Jalapa was one of the main cores of farmers in Mexico, who had to become fishers ahead of flooding of their lands. Nowadays, when there are droughts and fishers cannot fish, dwellers turn their heritage resource (submerged so far) into a product that attract great numbers of tourists and continue generating wealth. This is an example of how a rural area is combatting depopulation. Countries such as Spain or Portugal should consider such kind of approaches. So far, despite having many similar cases, the current legislation does not allow working with them to generate wealth.

Keywords: Management, Cultural Underwater Heritage, rural area, depopulation, México.

Resumen

El objetivo de este estudio es mostrar cómo el área rural de Jalapa del Marqués (México) ha modificado su economía debido a la construcción de la presa de Benito Juárez y consecuentemente, cuando hay escasez de agua. A partir de su posición geográfica, Jalapa fue uno de los principales núcleos de agricultores en México, quienes tuvieron que convertirse en pescadores ante

la inundación de sus tierras. Actualmente, cuando hay sequías y los pescadores no pueden pescar, los habitantes convierten su recurso patrimonial (sumergido hasta el momento) en un producto que atrae a un gran número de turistas y continúan generando riqueza. Este es un ejemplo de cómo un área rural está combatiendo la despoblación. Países como España o Portugal deberían considerar este tipo de enfoques. Hasta ahora, a pesar de tener muchos casos similares, la legislación actual no permite trabajar con ellos para generar riquezas.

Palabras Clave: Gestión, Patrimonio Cultural Sumergido, área rural, despoblación, México

Santa María Jalapa del Marqués: Origins, building of the dam of Benito Juárez and new emplacements

Santa María Jalapa del Marqués: Origins

Santa Maria Jalapa del Marques is a village situated in the Isthmus of Tehuantepec, in the Mexican state of Oaxaca. It's located to the southeast of the state. Jalapa was a village of about 2000 inhabitants. Initially in a prehispanic period, this village didn't exist, and its inhabitants lived in small villages in the main hills. But due to 1532, when the first Spaniards arrived in Mexican lands, one of the main functions was to evangelizes the maximum territory possible.

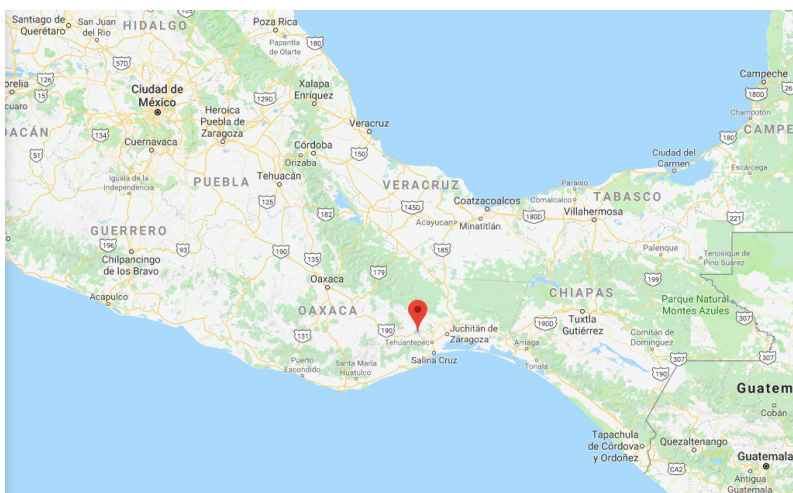


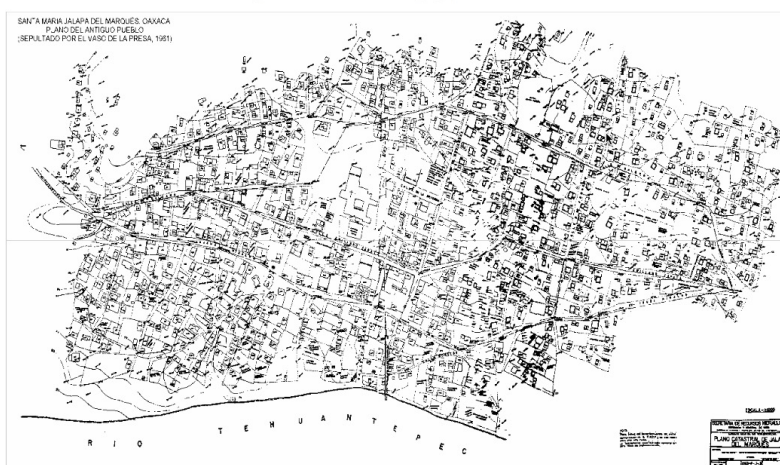
Figure 1. Location of the Municipality of Santa María Jalapa del Marqués.

Source: google map.

Both building shaped the main square where started the main streets of the village. It comprised a large area inhabited by a large population that was included in the Riverside perimeter, successively occupied by tribes of heave descent, chontal partially Mixe and finally by Zapotec, which extended from the present town of San Cristobal to repair and caves, from the Guelavichi

hill to the outskirts of Magdalena Guelance, Monte Rico area. When they arrived to Jalapa, they joined all of Mexican people and started to build the temple and the church, after, this building was known as the temple and church of Santa Maria Jalapa del Marquis, collocated at the point where the city of Jalapa is located (known as three peaks) as witnessed by the temple building, government house, public houses and hamlets that made the very important population of the human nucleus that was of capital importance. Jalapa was known as “Barn of the Isthmus” because it was situated between two rivers: Tehuantepec and Tequisistlan. Their lands were very good for planting seeds, mainly sesame, beans, and corns.

**TERRENOS DEL PUEBLO DE SANTA MARÍA JALAPA DEL MARQUÉS,
ANTES DE SER INUNDADO POR EL VASO DE LA PRESA
“PRESIDENTE BENITO JUÁREZ”.**



Fuente: Memoria de la Construcción de la Presa Presidente Benito Juárez.
Secretaría de Recursos Hidráulicos, 1961 Ciudad de México, D.F.

Figure 2. Lands of the town of Santa María Jalapa del Marqués before being flooded by the glass of the “President Benito Juárez” dam. Source: Memory of the Construction of the President Benito Juárez Dam. Secretariat of Hydraulic Resources, 1961. Mexico City, D. F. In Maldonado, P.; Mendoza, Rosa. “Santa María Jalapa del Marqués: Town buried by the glass of the dam” President Benito Juárez “

Building of the dam of Benito Juárez and relocated of Santa María Jalapa del Marqués

At the end of the decade of the 60's, the Secretariat of Hydraulic Resources initiated the construction of the dam "President Benito Juárez. Initially, the villagers believed that they could control the Tehuantepec and Tequisistlán rivers, so they decided not to leave their homes until, in 1961, they received an order from the competing agencies to leave because of the danger that the flood waters. Little by little they were seeing how their homes, like the best lands of the Isthmus of Tehuantepec, would be flooded forever. Uncertainty took over the New Town. Some restitution houses were already finished, all grey, but certain public buildings were still to be concluded, such as the conference room that would later be used to worship, since there would be no new church to go to. The streets lacked pavement and lighting. There were no trees and not even water. During the relocation process many affected were left homeless, only 694 houses were built, catalogued as type 1 for having: a room, kitchen, and bathroom; 117 type two houses with: two rooms, kitchen, and bathroom; and 40 type 3 houses: with 3 rooms, kitchen and bathroom. Those people who did not obtain a home, were generously compensated and, those who did receive a new home, obtained it at random, that is, the houses were distributed at random, which led to numerous neighbourhood conflicts. At present, the municipality has approximately 13,000 inhabitants.

titles like “The dam is concluded but the inhabitants suffered from hunger” This was because the new lands were worse than underwater lands of Jalapa. Indeed, people had to start to cultivate in irrigation areas, because the new lands didn’t allow for planting grains. it was de first change in the economy of the inhabitants. Consequently, people had to wait for 2 years for starting to work the new lands. However, the change of cultivars did not solve the problem because the new cropping areas representing only a 15,8% of the previous plants. Initially, barn of the isthmus had 7,794.20 hectares, but in 1961, Government restored only 529 has, and a year later, 701 more. It is supposed only a 15,8% of the initial lands. Because of this, people could not cultivate so much as before. A lot of families did not get lands, so they had to migrate to other areas such as Salina Cruz’s Port, Coatzacoalcos or Veracruz, and the economy in the areas started to diversify. But those families who did not migrate, used the dam as a new resource for earning money and started to fish as a complement of wealth. When fisherman start to see the stones of the old convent during dry seasons, they start to consider the convent as a resource of money.

The Ex Convent of Jalapa del Marqués

Although it is not known with certainty when this convent was built, there are some documents that date it in 1558, and that mention that in the town of Xalapa resided several religious of the order of Santo Domingo (Archivo General de la Nación, 2010). Ten years later, in 1568, when Fray Alonso Ponce passed through the place, (Ponce, 1982) affirmed that at least the convent was already built of “lime and stone, low rooms and vault ...” (Ponce, 1982) The architectonic set was constructed mainly in stone, brick and lime work; it was characterized for being robust, consisting of a single plant, and complying with the peculiarities of most of the Dominican temples of the Mexican terms. The vault is of cannon and consists of arches fajones and ribs in the corners. As described by Garrido Cardona (Garrido, 2010):

The imposing rectangular nave church oriented from east to west following the custom, had a simple, mannerist front facade, nested by a large niche that encompasses the entrance arch, flanked by outdated pilasters, and joined by a flat frieze of outstanding cornice, it holds a small central niche of the same design of the cover, escorted by pinnacles. Above is the choir window

in the form of a semi-circular arch. A lateral facade, which is what is seen in the photos, is equally simple. It just consists of a frame for the entrance opening. The church has no towers. It only has a few small battlements finishing off the front wall. The construction is supported by large lateral buttresses. The vaulted barrel vault of the church has two saucer domes with lanterns, one at the height of the presbytery and another at the height of the choir. The convent cloister is attached to the northeast side of the church, like that of Tehuantepec. On the left side of the facade of the church is a large arch through which there is access to an enclosure, which communicated at the same time with the convent. This space would most likely be the open chapel for the natives. It was accessed to the cloister, quadrangular in the style of the convents of these early times of conquest, by two small arcs of medium point, next to the open chapel. The cloister consists of a single floor with a series of rooms around it. These rooms gave way to corridors roofed by vaults of running cannon, that at the same time communicated with the central patio by means of five arches of half a point by side. The semi hexagonal buttresses project towards the centre of the patio and adorn majestically and imposingly the arcade. At the intersection of each side of the corridor, there is a decorated niche where we can suppose there was an image of devotion. The one in Jalapa is one of the few convents of a single floor in the Oaxacan region. Perhaps it was because few friars lived there or remained unfinished, due to the loss of population and importance. The vaults were paired at the top to receive another floor, with no battlements to indicate the end of its construction. Apparently, the single level space was adapted to the needs of the convent life. Thus, on the east side were the cells of the friars; the south side had two doors: the first one led to the prefunds room, and the second to the sacristy back of the main temple. On the north and west sides were the rooms dedicated to refectory, library, kitchen, garden, and other facilities.

Touristic management such as economical solution

In April 1961, when the dam was completed, the residents of Jalapa del Marqués were ordered to leave the town. The changes were reflected in addition to the location of their new place of residence, in the trades: many farmers changed their trade and dedicated themselves to the fishing trade. When fishers observe that start the drought and the fishing activity in ending, they

look for solutions, such as the tourism. Initially, when Government knows about the over flood of the Ex-convent, they realized some strategies. But, in other cases, the inhabitant/fishers prepare their own strategies.

Emergency actions to safeguard particular elements of the temple

A few years before, in 1957, the photographer Frans Blom, sent 27 negative films from Oaxaca of 1945 to Colonial Monuments of INAH, suggesting that the work that was about to be submerged be studied. In 1961, inventories of images, objects, sculptural paintings, and sculptures of the building were carried out and were taken to other spaces such as the school of the new town or the Cathedral of Tehuantepec. In 1964, the National Heritage Secretariat required all the elements to be moved to the Tehuantepec Convent, where they would remain until 1966, when the Monuments Commission of INAH ruled that this patrimony was returned to Oaxaca and were restored and placed in the Museum. from Santo Domingo. Nowadays, the pieces are found in the relics of the church of the new population thanks to the management carried out during the previous years. (Archivo General del INAH, 2010). On the other hand, the mural painting received a different treatment in terms of the safeguard procedure. Manuel del Castillo Negrete, in charge of the Mural Conservation Department, had the purpose of studying, restoring, and preserving the pre-Hispanic and colonial wall paintings, taking charge of the work of moving them. In May of 1961, six people moved to the temple to save the mural paintings and take photographs. After carrying out a thorough study of the entire construction, the detachment of 16 fragments of mural paintings was carried out. After its study and restoration, the fragments were taken to the INAH Regional Centre of Oaxaca and other fragments to the Museum of Cultures of Oaxaca, where it is exposed in room 6 where they can be visited today. (Garrido, 2010).

Touristic strategies in-situ such as generator of wealth in Jalapa del Marques's dam

Since its flood last century, the convent of Jalapa del Marques has been seen on very few occasions. However, the local population is waiting for the first stones of this construction to be outside of the level of flood to start the

development of small tourism strategies, with which to increase tourism in the area. It cannot be forgotten that, in addition to the former convent under study, the Jalapa del Marques dam flooded a town completely. As it has happened in the periods when the drought has exposed this territory, the number of people that has arrived there has been considerable. One of the main reasons is that, at present, a new current known as nostalgic tourism is emerging, which constitutes the influx of migrants who periodically return from their hometowns to their community of origin for short periods (circular migrants). (Reyes et al., 2009)



Figure 4. Tourists visiting the center during the period of drought.

Fuente: <http://www.eluniversal.com.mx/articulo/2017/03/29/>

iglesia-que-emerge-oportunidad-para-impulsar-el-turismo#imagen-3

This type of tourism is constituted by the influx of people who periodically return from their places of residence to their place of origin for short periods. (Reyes et al., 2009) Therefore, this area, in addition to receiving those visitors who one day had to leave their municipality, also receives all those who love cultural, religious and pilgrimage tourism; In 1978, when the church was completely seen, the Diocese of Tehuantepec allowed a Mass to be held inside (Hernández, 2017) and, underwater or drought heritage; as it

is already being spoken in some world areas, where it is expected that the deposit will be uncovered to realize certain tourist routes in the own site. The last time the ex-convent could be visited completely was during the year 2017. Quickly, several residents of the area waited for the site to begin receiving visitors at the time of maximum drought, because although in smaller quantity, it was already happening in previous months, when the fishing inhabitants of Jalapa del Marques, began to serve as tour guides of the area before the impossibility of generating wealth directly from fishing. The tourist route had an approximate price of 150 pesos. The boatmen, mounted the tourists in their small boats and paddled to the lower part of the dam Benito Juárez from where you could enjoy the resurgence of the lands surrounding the former convent, belonging to Yudxi, the town of the arenal. In a contradictory way, the drought gives the fishermen and inhabitants of Jalapa del Marques the possibility of exploiting the spectacle of this construction, so, considering that the drought affects hundreds of families, those who live directly from fishing in the dam, they developed, with very few resources, humble bars, and restaurants in which the tourist could shelter from the summer heat and enjoy the cuisine of the area. As it is well known, for a tourism resource to become a product, in addition to the raw material, in this case the ex-convention, it is necessary that the place consist of infrastructures and services. Therefore, it could be said that, in very short periods of time from very separate times, the inhabitants of Jalapa del Marques manage to make an architectural resource a tourist product that manages to achieve a remarkable level of visitors. Indirectly, the economy that is generated in this rural area serves as an engine of development. In response to the demand that the place receives, it would be convenient to implement certain tourism strategies to make the resource more visible and accessible. In the case of submerged resources, due to the strong seasonality they face, they need a patrimonial management that, based on the general objectives (Knowledge, planning, control, and dissemination), places special emphasis on the latter. The dissemination is one of the main pillars on which the management of heritage is based, and its mission lies in establishing links between Heritage and Society. (Martín, 2007).

Conclusion

To conclude, it is worth highlighting the adaptation process in which the inhabitants of the primitive town of Jalapa del Marques were immersed. Initially, farmers planted seeds on their land, that is, they were rain-fed farmers. The cause of the flooding of the town, the individuals who decided not to emigrate and who settled in the new town, became irrigated farmers, because the new lands were less fertile. Others, however, decided to dedicate themselves to fishing in the new dam and, in times of lack of water, take advantage of their boats to act as a tour guide and show the convent of Jalapa del Marques.

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11:

**Giving a future to
Val di Rabbi.
Preserving rabbiere
identity by encouraging
youth activities and
redeveloping tourist
facilities and the
territory of the National
Natural Park of Stelvio**

Giving a future to Val di Rabbi. Preserving rabbiense identity by encouraging youth activities and redeveloping tourist facilities and the territory of the National Natural Park of Stelvio

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Abstract

This research analyzes the tourism policies of Val di Rabbi, located in the N-W part of Trentino (IT) and included in the Stelvio National Park. Geographically, the Comune di Rabbi's area (133 km²) corresponds to the homonym valley. The population (1372 inhabitants) is spread along the valley in numerous small agglomerates. This paper aims to clarify if local policies undertaken since the 1980s can be considered positive to reduce the dispersion of local youth and encourage the continuation of traditional trades. Along with this, actions regarding tourism have been taken. Enhancing the value of the thermal facility goes on par with encouraging owners of infrastructures that can foster tourism. By comparing the current situation with the one before the 1980s, it can be seen which choices were farsighted and which were not, what could have been done better and what might be done in the present, in order to invest for the future.

Questa ricerca analizza le politiche turistiche della Val di Rabbi, inserita nel Parco Nazionale dello Stelvio, nella parte N-O del Trentino. L'area del comune di Rabbi corrisponde all'omonima valle. La popolazione di 1372 abitanti è spalmata lungo vallata in molte località. Si vuole chiarire se le politiche intraprese dagli anni '80, al fine di ridurre la dispersione dei

giovani locali ed incentivare la prosecuzione dei mestieri tradizionali della valle, possono essere considerate positive. Si sono volute intraprendere inoltre azioni riguardo al turismo. La valorizzazione dell'impianto termale va al pari con un'incentivata attenzione da parte dei proprietari delle strutture che possono favorire la permanenza di turisti in loco. Comparando la situazione della valle con quella precedente gli anni '80 si può constatare quali scelte furono lungimiranti e quali invece no, cosa meglio si sarebbe potuto fare e cosa fare nel presente, investendo per il futuro.

Keywords: low-density, environment, tourism, sustainability
bassa densità, ambiente, turismo, sostenibilità

Introduction

Val di Rabbi is located in the N-E part of Italy, in the Alps. This valley is administratively included in Comune di Rabbi, part of Provincia Autonoma di Trento (PAT).

From 16 June 2006 the valley has been included as part of the Comunità della Valle di Sole, which is a bigger bordering valley. The two valleys are linked together on the southern side.

Most part of the territory is part of the Stelvio National Park, which was established in 1935.

The valley is only 10km long with an area of 132,79 km² and it has 1372 residents. The population is spread out all over the valley, generally in San Bernardo which is the main town (323 inhabitants).



Figure 1: Val di Rabbi in winter (trentino.com)

Thanks to surveys conducted, it is possible to notice a negative development in terms of population size. Indeed, the census shows that there were 2114 residents registered in 1951 then 2139 in 1961, 1856 in 1971, 1638 in 1981, 1478 in 1991, 1456 in 2001 and finally 1400 in 2011. The last conspicuous result in terms of increase in population dates back to 1951, when there was an increment of 2,8% compared to 1941. In the following years: -7,6% in 1961, -13,2% in 1971, -9,8% in 1991, -1,5% in 2001 and -3,8% in 2011 (dati Istat 1921-2011).

In terms of tourism there is no accurate information regarding Val di Rabbi itself as the Tourist Agency of Val di Sole (Agenzia di Promozione Turistica — ATP) provides general information for three valleys altogether: Val di Sole, Val di Pejo and Val di Rabbi.

In 1981 hotels registered a number of 115.939 arrivals. In 2014 the number increased to 225.804 (according to 'Annuario del turismo online')

With no doubt Val di Sole is the most magnetic for tourism, in summer and even more in the winter season thanks to its popular ski-resorts. Val di Rabbi instead seems to be more like a "daytrip" destination. The biggest tourist attractions are the hot springs, a traditional landmark of the valley for centuries and the national park, ideal for hiking and excursions.

The economy of the valley is mainly based on the exploitation of natural resources. The main occupations are associated to logging, farming (pastoral farming) and dairy farming (cheese production).

During the last decades, particularly starting from the 80s, PAT has tried to take action on the current situation of the valley, in order to control the drop in population and to increase tourism.

Interventions

Primary sector

Surveys show that in 2011 the number of workers in the age group between 15 and 64 was 65,9%, whilst in 1981 it was only 47,4% of the population. A very important data is also that the percentage of students over 15, which in 2011 was 5,4% while in 1981 it was 4,9% (Servizio statistica PAT).

The percentage of workers employed in the primary sector out of the total population employed (50.7%) (agriculture and breeding) in the valley is instead 13.7%. Certainly, it is less than the 45.8% recorded in 1961 (dropped to 22.8% in 1981) but the figure is clearly positive if compared to the whole Italian territory: 3.7% (dati Istat 1921-2011)

However, it is quite remarkable to observe the increase in occupation in the primary sector during the decade 2001-2011 which goes from 10.4% to 13.7%, in clear disagreement with the statistics of the rest of the country (servizio statistica PAT).



Figure 2: Example of structure with alpine pasture in Val di Rabbi (malgamontesole.it)

Because of the general tendency of giving up jobs related to the primary sector, starting from the 1980's, the PAT, cooperating with the current government and the European Union, has been granting funding in order to increment the occupations in this sector, and it is thanks to these financial contributions that the presence of agriculture, milk and meat production and farming are still largely present and solid in Val di Rabbi, employing a large number of workers nowadays as mentioned before.

The financial contributions have increased in the last few years and are now part of the Rural Development Plan for a duration of 6 years.

The last PSR (2014/2020) was definitely approved on the 30th November 2017 by the European Commission. It consists of a funding of 297 million of euro to be invested. Of these, 127 million come from Italy, 50 from PAT and the rest from the European Agricultural Fund for Rural Development (EAFRD). The aim of this project is to increment the number of young people occupied in the primary sector, to innovate and diversify the farming activities already initiate, to promote new organic production methods, to encourage and improve energy efficiency and, last but not least, to preserve the environment.

The priorities are to promote social inclusion within the community, to reduce poverty and to develop rural areas. The PRS institutions are therefore paying particular attention to the condition of the areas with low-density population and serious difficulties in interacting with and connecting to the major areas of production and consume.

Through the PRS the Province of Trento is trying to facilitate the creation of small businesses and to increase the number of young entrepreneurs in the activities already established.

Further financial contributions are designed to preserve biodiversity. There is a large number of endangered species, both regarding agriculture and breeding, therefore these contributions are meant as an endeavour to protect and maintain these species.

In the specific case of Val di Rabbi, they are trying to protect breeds of cattle as endangered the last thirty years, the pastures have not only been preserved, despite the loss of workforce in the sector, but a part of them has even been recovered.

The average number of cattle on livestock breeding farms also increased significantly: from 9.31 in 1981 to 18.92 in 2010 (servizio statistica PAT).

Tourism

The Stelvio National Park, established in 1935, covers an area of 130.734 hectares. This area includes parts of lands belonging to two regions, Lombardia and Trentino-Alto Adige and four provinces: Trentino, Alto Adige, Sondrio, and Brescia. The park was created to preserve the local flora and fauna and promotes eco-sustainable tourism.

However, as a matter of fact, the presence of the park has hindered the valley economy for a long time, discouraging investments in construction and causing the depopulation of the valley.

The legislation concerning the regulation of the National Park, with which the Provincial Urban Plan (Piano Urbanistico Provinciale - PUP) and the Piano Regolatore Generale (PRG) of Comune di Rabbi have to comply, has the purpose of strictly controlling the conservation of the territory and the landscape of the park. Such strictness has stopped landowners (both locals and non) from renovating properties included in the protected area. The properties in question are places like old barns, woodsheds, and stables. All the bureaucratic barriers have blocked the capital investment in construction, with a negative impact in terms of profit related to tourism and of local depopulation.

The municipality's administration, after understanding the issues related to the legislation, intervened together with the Park itself and the Province, changing the planning laws. The National Park deliberated far more lenient legislation in terms of interventions on already existing properties. The Province instead took action by modifying some rules of the Provincial Urban Plan (PUP) and the Municipality of Rabbi by modifying rules of PRG.

Thanks to this ability of understanding how all the legislation concerning the regulation of the National Park was negatively affecting the economy and the population of the valley, by intervening they brought benefits without causing any type of harm to the protected landscape and environment of the park.

In 1985 the 80% of the infrastructures under revision underwent a change in terms of what their initial use was supposed to be. In 1996 25%, in 2006 17,6% and in 2016 0%. These figures show the conclusion of the restructuring period of old properties all over the territory (servizio statistica PAT).

Therefore, it can be claimed that some kind of economic development (construction, tourism, commercial activities) coincides with the same interests as the National Park. However, it has to be remembered that the landscape regulation is compulsory and necessary in order to preserve the environment and the ecosystem.

In the LP 7/2002 we can find a benefit that is valid for both parts (Park and owners/investors). Owners could commit to maintaining the surrounding landscape in return for urban derogations planned by the provincial legislation and speed up bureaucratic procedures for private projects, as an agreement between owners and authorities. In this way the landowner is able to obtain the approval for renovation and/or property change of use shortly, while the authorities can save money regarding maintenance costs of the landscape (mowing, road maintenance) for at least 10 years and, at the same time, environment is preserved.

The local population has totally understood the opportunities linked to the tourisms that the park can produce, something that can surely benefit hospitality centres too, such as ski-resorts and hotels where people can stay overnight. So, tourist rates have doubled in the last 30 years: in 1987 it was 42,9%, whilst in 2016 it was 95% (indicatori strutturali 2018).

Anyway, the population looks like they do not want to transform the valley into a mass tourism destination. This would disrupt the quietness that characterise the place.

In the valley there are only two hotel facilities. One of them was built in 1994 and it was included in the “hot springs project”. In the past 30 years the accommodation rate has grown by about only 6 points (from 8,9 in 1986 to 14,9 in 2016). This gain is all to be ascribed to the construction of the second hotel (Grand Hotel).

	Rate of tourist accommodation Val di Sole	Rate of tourist hotels accommodation Val di Sole	Rate of tourist accommodation extra hotels Val di Sole
1986 (1987 per IRT)	156,5 (42,9 Val di Rabbi)	48,9 (8,9 Val di Rabbi)	29,8 (35,6 Val di Rabbi)
2016	186,8 (95 Val di Rabbi)	72,4 (14,9 Val di Rabbi)	52 (41 Val di Rabbi)

Tab 1: datas of Val di Rabbi and Val di Sole, the seconds doubtlessly more indicated and fitted for tourism (Annuario del turismo online PAT).

In terms of overnight stay offers, Val di Rabbi is indicated for a non-hotel choice. Because of this, there was no need to invest in big private facilities and this incremented the necessity of renovating old or abandoned buildings.

Hot springs

In the Municipality of Rabbi, there are thermal springs rich in iron and carbon dioxide.

The source was probably discovered in the fourteenth century, during the excavation of some ferrous deposits. From 1464 the valley became part of the jurisdiction of the aristocratic Thun family, who understood the beneficial effects of the water so well as to transport it to their residences in Caldes, in Val di Sole, and San Bernardo, as shown in a letter written by Giovanni Arbogasto Thun in 1620 (Mosca, 2007a; Mosca 2007b). Thus, he arrived in Rabbi to take of care himself with thermal waters, as his personal doctor suggested.

Between 1600 and 1700 there are evidences concerning the presence of thermal waters and their use by the regional and Bavarian aristocracy.



Figure 3: Rabbi's thermal structure (termedirabbi.it)

The source became an important economic activity and the Thun family, owner of the valley until 1824, contracted to local families the exploitation of the precious resource, thus there was a proliferation of hotels and places of social, cultural and sports entertainment for the guests. In 1869 the new plant was built, and the export of bottled water began, with a production that at the end of the nineteenth century reached 400.000 bottles per year.

The gradual disappearance of this elite tourism went hand in hand with the total absence of investments in the thermal and hotel infrastructures, which were closed around the middle of the last century.

In the '80s the administration of Rabbi decided to invest again in the thermal sector and, also with provincial funds, opened a new wellness centre in 1991, followed by the inauguration of the Grand Hotel in 1994.

Only since the '90s thermalism started to be strongly connected with health and prevention and to be subject to the attention of public entities and scientific research. Now there are many investments in the medical sector in the formation of a "thermal culture".

Proofs of these are a new national and local legislation about the reorganization of the thermal sector (L. 323/2000; L.P.21/1983; L.P. 6/2011) and new hydrogeological studies, chemical, clinical, and pharmacological analysis to better understand the nature and effects of these waters, and then exploit them in terms of clinical and tourist offer (Coccheri et al., 2006).

In 2017, the Rabbi thermal complex offered courses and cures with a medical supervision for circulatory, respiratory, and gastro-intestinal problems.



Figure 4: Grand Hotel Rabbi (termedirabbi.com)

Conclusions

Still nowadays Val di Rabbi is suffering from a depopulation process, already started more than a century ago. As mentioned before, the causes of this process are:

- Major activities in terms of tourism both in the winter and in summer season;
- Higher job opportunities that the larger nearby town or valleys offer as well as the low birth rate which affects not only the region but the whole European scenario.

The needs of the valley have been properly understood: it is not interested in being open to massive tourism and also it is geographically disadvantaged because it is located far from the main route of communication among the other valleys. There is no kind of economy and tourism of transit.

The main tourist activities are related to these factors: hot springs, which are open in summer, the presence of the National Park and the numerous resorts.

The activities that have mostly been promoted by the administration and the local population are not bringing as many tourists as there are in other valleys of the region, like for example Val di Fassa, Val di Sole and Val di Fiemme. The hot springs and the excursions in the Park are all what the valley really needs. In this way they can increment the tourist rate maintaining the local traditions and respecting the natural environment with a low-cost social impact.

The demands designed for more job opportunities for local people had a good response. The contributions and benefits meant to support the small land properties, have helped to stop the lack of work in this sector and that actually had an increment in the last 10 years.

The changes in the Urban Plan have allowed many landowners to renovate their own private farm or to create new buildings designed to welcome tourists. This explains the presence of the numerous facilities that are not hotels.

Undoubtedly, investments in the thermal sector have led to profits for the locals, hired as workers in thermal facilities or in the Grand Hotel, or in any case beneficiaries of the presence of tourists.

In addition to those employed in the primary sector, the number of workers in the tourism-related services sector has also increased (spas, hotels and similar facilities, reception points). The total number of workers grew from 17.5% in 1981 to 39.7% in 2011.

The unemployment rate for the working population was 5.2 in 2011, decreased by 0.3 points since 2001 and 10.7 since 1981, when it was 15.9 (Annuario del turismo online PAT).

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**Post-Oil Economy:
Geotourism as a
Means of Sustainable
Development in the
Shetland Islands**

The Post-Oil Economy: Geotourism as a Means of Sustainable Development in the Shetland Islands

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Abstract

Scholars and UNESCO have promoted the use of geotourism as a means of sustainable economic development for rural communities. This paper explores how geotourism and cultural tourism can be used to help the Shetland Islands to develop sustainably after the transition away from its oil-dependent economy. It will examine the Shetland Geopark and other programmes created by the Shetland Amenity Trust to promote tourism and local sustainable development. Ultimately, it will interrogate the suitability of geotourism and cultural tourism for lasting sustainable development for low-density territories.

Keywords: Sustainable Development, Geotourism, Geoparks, Technology, Natural Heritage, Landscape Management

Zusammenfassung

Wissenschaftler und die UNESCO haben die Nutzung des Geotourismus als Mittel zur nachhaltigen wirtschaftlichen Entwicklung ländlicher Gemeinden gefördert. In diesem Beitrag wird untersucht, wie Geotourismus und Kulturtourismus genutzt werden können um den Shetland-Inseln, nach ihrer Abkehr von einer Erdöl abhängigen Wirtschaft, zu einer nachhaltigen Entwicklung zu verhelfen. Untersucht werden der Shetland Geopark und andere Programme, die vom Shetland Amenity Trust zur Förderung des Tourismus und der lokalen nachhaltigen Entwicklung ins Leben gerufen

wurden. Schließlich wird untersucht, inwieweit sich Geotourismus und Kulturtourismus für eine dauerhafte nachhaltige Entwicklung von Gebieten mit geringer Bevölkerungsdichte eignen.

Stichworte: Nachhaltige Entwicklung, Geotourismus, Geoparks, Technologie, Naturerbe, Landschaftspflege

The Post-Oil Economy: Geotourism as a Means of Sustainable Development in the Shetland Islands

In 2015, 196 countries ratified to the Paris Climate Accord to reduce greenhouse gas emissions, representing for the first time since the industrial era a worldwide shift away from oil. Even though this transition towards more sustainable economies is in its infancy, it will strongly affect rural territories in the near future that currently rely on the oil and gas industries. This will be the case with the Shetland Islands, a Scottish island chain located north of mainland Britain in the North Sea. Economic prosperity has spread throughout Shetland since the discovery of major offshore oil fields in the 1970s. In recent years, like other isolated rural areas, the population of Shetland has been shrinking and aging. Using the example of the UNESCO Global Geopark in the Shetland Islands, this paper will examine the theory that geotourism and cultural tourism can be used as a means of sustainable development for rural communities and discuss potential challenges that may arise.

Since 2004, UNESCO has supported the development of a global geopark network and advocated their use and geotourism as a means of sustainable development for rural areas. In 2015, UNESCO formally adopted the label of “UNESCO Global Geopark.” They define geoparks as “single, unified geographical areas where sites and landscapes of international geological significance are managed with a holistic concept of protection, education and sustainable development [...] while involving local communities...” (UNESCO, no date). The general landscape management plan must adhere to UNESCO sustainable development goals and promote sustainable development in the local community as a key prerequisite for the Global Geopark program (ibid.). “Sustainable tourism” is mentioned directly as a focus area such as “the development of walking or cycling trails, training of local people to act as guides...” (ibid.).

There have been numerous studies about the use of tourism for rural sustainable development. Jenny Briedenhann and Eugenia Wickens argued that tourism and rural tourism routes can be used as an “alternative development strategy for the economic and social regeneration of rural areas” (Briedenhann and Wickens, 2004, p.71). Notably, Neda Torabi Farsani,

Celeste Coelho, and Carlos Costa found in their 2010 study of 25 global geoparks that geotourism development created employment for the local community and reduced the rate of migration (Farsani *et al.*, 2010, p. 12). They concluded that the promotion of local products and heritage in Geopark management plans helped tourism revenue remain in the local community (Ibid., p. 6). In another study, Sofia Ehsan, Mohd ShafeeaLeman, and Rawshan AraBegum affirmed that geotourists, “spend for the well-being of local people in terms of purchasing goods and services to support the protection through usage concept” (Ehsan, ShafeeaLeman and AraBegum, 2013, p. 1714). That is that those who engage in geotourism are bound to respect both the natural environment and to invest more in the local community more than traditional tourists. They also concluded that sustainable development through geotourism provides an answer for the conflict “between economic growth and environmental quality” by using geological heritage resources for “preservation through usage...with destruction” (Ibid., p. 1713). Through the application of these theories, Shetland’s UNESCO Global Geopark and the development of geo- and cultural-tourism should provide a pathway for future sustainable development after the decline of the oil industry.

Shetland or the Shetland Islands are located in the North Sea between the United Kingdom and Norway. Today a part of Scotland, the islands have had a long history of human settlement from prehistoric times to Celtic and Viking settlement. The Shetland Islands are facing two major problems in the present era. The first major problem is that the population is both aging and shrinking. In 2015 the population of the islands was 23,200 (National Records of Scotland, 2016). Population growth is low and there is with a faster rate of aging in comparison to the rest of Scotland

(Shetland Islands Council, 2017, p.10). Currently, 18% of the population is 65 years or older, a 4% increase in the last decade, while 35% population is under the age of 30, a 3 % decrease over the same period (Ibid., p.10). By 2037, the population is projected to increase slightly, with the largest demographic growth in the 75+ age range (National Records of Scotland, 2016). This aging and shrinking population will have profound negative effects on the islands’ economy in the future as the workforce declines and an older population strains the services sector. The preservation and transmission of immaterial cultural heritage will also be threatened as more young people leave the islands for opportunities elsewhere.

The second and most pressing problem is that Shetland's economy is overly reliant on the oil industry. The Brent oilfield northeast of the Shetland Islands represents one-fifth of the United Kingdom's oil and gas reserves (Shetland Islands Council, 2017, p. 10). The Sullom Voe Oil Terminal is one of the largest in Europe (Dawnson, 2017). In a future without oil, the oil revenue and high-paying jobs in this industry will disappear. Therefore, it is necessary today to put into place policies that will diversify the local economy and create alternate industries of employment to maintain and grow the current population of the Shetland Islands. Geotourism and cultural tourism may provide a pathway as will be discussed below.

Despite being a centre of British off-shore oil production, Shetland has long been famous for its rugged natural landscapes, diverse flora and fauna, and unique culture which is a blend of Viking, Scottish-Gaelic traditions. The most internationally recognised attraction is its UNESCO Global Geopark which is administered by the Shetland Amenity Trust - the main organisation tasked with managing and promoting the natural and cultural heritage of the islands. To aid the economic transition away from oil, the Shetland Amenity Trust has created an integrated approach to harness geotourism and cultural tourism for sustainable economic development by developing international networks, harnessing new technologies, and promoting local industries part of the islands' heritage as a "niche tourism" destination.

The Shetland Amenity Trust has long used international networks and partnerships to promote sustainable geotourism and to develop innovative projects in Shetland. The organisation was a founding member of the Global Geoparks Network (GGN) in 2004 (UNESCO, no date). It is also an important member of the European Geoparks Network (EGN) (Shetland Amenity Trust, "European Geoparks Network", no date). Its most important partnerships have been with the other geoparks in the northern and Arctic regions. The Shetland Amenity Trust has been leading a multi-year "Drifting Apart" programme as part of the EU's Northern Periphery & Arctic Programme. "Drifting Apart" is a partnership of various geoparks in Scotland, Ireland, Canada, Iceland, Russia, and Norway that are working together to develop to "realise the potential of our common geological heritage to provide sustainable economic opportunities for tourism businesses, education organisations and community groups in the Northern Periphery and Arctic Programme area" (Northern Periphery and Arctic Programme

– European Union, no date). This has included a tourism support toolkit and training for local businesses to promote their involvement in geotourism (Causeway Coast & Glens Heritage Trust, no date).

The Shetland Amenity Trust has been the major player in the development of the “Destination Viking” Cultural Route of the Council of Europe which was established in 1993 (Council of Europe, no date). The focus of the project has been to develop “a borderless tourism destination focusing on the Viking world” (Destination Viking Association, no date). One of their more recent projects is “Following the Vikings” which seeks “...to develop audiences through a variety of new technologies, build business models through sharing best practices...” (Shetland Amenity Trust, 2016, p.2).

The third and most important programme is “Northern Georoutes.” This is a partnership program between the Shetland Global Geopark, the Magma Global Geopark (Norway), Katla Global Geopark (Iceland), the Stonehammer Global Geopark (Canada), Tara Tourist Traffic (Faroe Island), and Blue Ice Explorer (a tourism operator in Greenland) (Northern Geoparks, no date). The aim of the project is “to create tools to support tourism development... [and the] promotion of the NORA region as the ‘destination of choice’ for a niche tourism market” (Shetland Amenity Trust, 2016, p.5). The organisation’s website offers several organised tours as well as travel tools and tips for tourists travelling to any of the region’s parks. In addition, they have developed two mobile applications, the “Global Georoutes” and “Geoparks App”, that feature images, maps, interactive audio guides, and “treasure hunt” games that can be played with other tourists visiting the geoparks (Northern Geoparks, no date). Each of these international networks and their respective programmes targets a different “niche” tourism audience that ranges from individuals interested in the sub-Arctic landscape or Viking heritage. These international networks have a great impact on the promotion of the individual geoparks and their smooth management by pooling resources and exchanging ideas as well as promoting local businesses and development in local communities (Farsani, Coelho and Costa, 2013, p. 3).

The use of new technologies, such as these aforementioned Northern Georoutes mobile applications, is the second approach the Shetland Amenity Trust has used to promote sustainable geotourism. The Trust has been working on their HINT project to develop a mobile application that would provide interactive information about the various sites that make up the geopark

and other heritage sites in the islands (Shetland Amenity Trust, “The HINT Project”, no date). The use of mobile applications has the potential to provide high quality interpretation, which can help lesser-known sights, such as those in Shetland, attract tourists and build an economy around geotourism (Newsome, Dowling and Leung, 2012, p.26). These mobile apps could also increase visitors’ support for conservation through interpretation of geological sites and the natural environment (Robinson, 2008, p.2).

Another use of technology employed by the Shetland Amenity Trust is the concept of “connected festivals.” Up Helly Aa, the famous Gaelic winter fire festival in Lerwick, has been broadcast on local television and online to audiences throughout the world including the UK, the United States, Australian, and Canada (Shetland Amenity Trust, 2016, p.15). Other festivals such as the Shetland Reel or the Heavy Metal Buffet were also made available online. In addition to festivals, the organisation has developed an online pay-per-view service for popular talks held in the Shetland Islands, including two talks from Kate Davies and Ella Gordon in 2015 which proved to be a success with viewers from nine different countries (Ibid., p. 17). By webcasting these festivals, developing online pay-per-view events, and using mobile applications for interpretation the Trust is expanding the recognition of Shetland as a tourism destination and earning advertising revenue that benefits the sustainable development of the economy.

The promotion of local industries and the islands’ heritage is the last major approach the Shetland Amenity Trust has used to develop sustainable tourism. They have used programs such as the “Destination Viking” European cultural route or the live streaming of the Up Helly Aa festival to showcase what makes Shetland’s culture unique. One of the more interesting initiatives has been the promotion of tourism to experience Shetland’s traditional textile and wool industry. The production of textile products such as tweed has been a part of the islands’ heritage for centuries. The annual wool week held in September has attracted tourists from around the world. In 2015, it was estimated that the event contributed an additional £316,000 to the local economy (Ibid., p. 16). In past years, a local organisation known as “Shetland Wool Holidays” has created organised trips to Shetland for international visitors from the United States, Germany, Denmark, and Canada to visit Shetland and to learn more about its wool tradition (Ibid., p. 17). This focus on local industries is one of the most important parts of the Trust’s approach

because these textile industries provide employment and tourism revenue flows directly into the local population's hands. The geopark, Destination Viking tours, and wool holidays are examples of "high value" tourism activities that bring sustainable economic development to Shetland as a "niche tourism" destination (Robinson, 2008, p.1). This kind of geo- and cultural-tourism targeted to affluent "over 45 y.o professionals" has the greatest potential for sustainable economic development as they are likely to spend more money seeing sights and in local businesses than the average tourist (Robinson and Roots, 2008, p.14). Together, the Trust's the promotion of local industries, the harnessing of new technologies, and the development of international networks to attract geotourism is creating local economic opportunities that will sustain and hopefully grow the local population in future through the transition away from oil.

Though geotourism can offer many advantages for sustainable development, it is important to recognise the limitations of a tourism-based economy, especially regarding the Shetland Islands. In comparison to other parts of Scotland, Shetland is one of the least visited regions in the Scotland owing to its isolated location in the North Sea. In 2015 it was estimated that only 1,400 Shetlanders were employed in the sustainable tourism industry, representing 6% of the total population (Visit Scotland, 2017, p.4). If geotourism is to become a more central part of Shetland's economy, the Shetland Amenity Trust will have to do more to increase this number. Additionally, there is the danger that mass tourism that could negatively affect the Shetland Islands. Venice has experienced immense strain under the huge influx of tourists that have put their infrastructure at its limit, reducing the housing stock for local citizens and increasing prices. The decreased availability of housing and inflation from tourism would further negatively impact the demographic situation in Shetland, increasing further the current youth exodus from the islands. Shetland's infrastructure could not handle the same influx of tourists as Venice.

Paradoxically an increase in geotourists might also have the opposite effect on transportation, providing an impetus for better infrastructure development and transport connections as seen in some areas in the Arctic (Hall and Briedenhann, 2010, p.82). At the same time, more tourists in Shetland driving traditional oil-dependent vehicles, would increase traffic and greenhouse emissions, mitigating the effects of sustainable development built on

geotourism. Similarly, tourism related transportation has been major source of emissions in other polar and sub-polar regions and have adverse effects on fragile ecosystems (Ibid., p.84). Nonetheless is it important to note that the Shetland Amenity Trust is not seeking to appeal the mass tourism market. Instead, there is a focus on “niche tourism” built around the natural landscape, Viking heritage, and the wool industry.

Another potential danger concerning the development of a tourism-based economy is the impact of future technological change. Currently, the global middle classes are the drivers of the tourism economy. New technologies such as virtual reality have the potential to give individuals the same experience of travelling without ever leaving their homes. In spite of this, the Shetland Amenity Trust has already shown a willingness to embrace new technologies for the profit of the local economy through their use of mobile applications, the internet, and web-broadcasting. It is certain that the Shetland Amenity Trust has the ability to adapt to new technologies and use them for the benefit of the local economy.

In the end, geotourism, as in the case of Shetland, can provide a pathway for sustainable economic development after oil but it cannot be used alone. There is a need for holistic sustainable development to create a diverse local economy that can respond easily to global trends such as a decline in tourism. Traditional industries in the Shetlands already provide pathways for future growth such as the local wool industry and the ever-important fishing industry, which when combined with geotourism and cultural tourism will provide a bright future for the Shetland Islands in a world after oil.

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13:

**L'influence des
nouvelles technologies
numériques dans
la valorisation du
patrimoine.
Le cas du Transmédia
Storytelling**

L'influence des nouvelles technologies numériques dans la valorisation du patrimoine.

Le cas du Transmédia Storytelling

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Résumé

« Numérique », mot qui ponctue notre quotidien depuis une vingtaine d'années. Cette révolution technologique a bouleversé nos habitudes. De plus en plus intégré dans les projets culturels, le numérique n'est pas toujours utilisé de manière optimale. Décrié pour son usage abusif, il demeure un instrument de promotion et de valorisation de sites patrimoniaux lorsque qu'une étude de son utilisation est intégrée au travail des équipes. Comment le secteur culturel s'adapte à cette révolution sociétale ? Et comment les publics réagissent-ils ? Nous avons voulu lancer ce questionnement à travers l'enjeu que représente le *Transmédia*. Il se définit comme une narration faite autour d'un sujet et portée par différents supports de médiation. L'objectif du *Transmédia storytelling* est d'inviter le visiteur à plonger dans un univers narratif complexe qui mêle à la fois le récit et le patrimoine. Également, il autorise des approches expérientielles et participatives dans des lieux éloignés ou hors d'accès.

Mots-clés : Numérique, Patrimoine, Transmédia, Storytelling

Abstract

"Digital", this word has punctuated our daily lives for twenty years. This technological revolution has changed our habits. Increasingly integrated into cultural projects, digital technology is not always used optimally. Criticized for its misuse, it remains an instrument for the promotion and the valorization of heritage

sites when properly studied internally. How is the cultural sector adapting to this societal revolution? And how do audiences react? We wanted to launch this questioning through the issue of Transmedia. It is defined as a narration made around a subject and carried by different media of mediation. The objective of Transmedia storytelling is to invite the visitor to dive into a complex narrative universe that combines both narrative and heritage. Also, it allows experiential and participatory approaches in remote or inaccessible places.

Keywords: Digital, Heritage, Transmedia, Storytelling

Du visiteur contemplatif au visiteur actif

Les pratiques culturelles évoluent et avec elles le public. Tous ces changements amènent à repenser l'approche muséale et patrimoniale dans son ensemble. Désormais le visiteur veut expérimenter l'information qu'il reçoit afin de mieux l'intégrer et de devenir co-acteur d'une expérience. Les modèles de médiations culturelles tendent à se renouveler pour rompre avec la visite type qui invite à une simple et unique contemplation. Il est certain que cette forme reste d'actualité pour de nombreuses institutions culturelles mais devient parfois obsolète dans la valorisation de certains patrimoines. Ainsi deux tendances apparaissent : l'expérimentation et la ludification (Ducrot *et al.*, 2015). La première amène le visiteur à comprendre l'information reçue en l'essayant et la vivant par lui-même ; la seconde reprend les principes de la première en y ajoutant un aspect amusant autour du jeu sous forme de serious game, ces jeux dont la finalité n'est pas seulement liée à l'amusement mais peut avoir objectif dit « sérieux » de type pédagogique ou informative. Ces deux approches deviennent alors interconnectées et permettent de voir apparaître une nouvelle forme de visite. Associée aux changements sociétaux, la visite se place dorénavant du point de vue du public et non plus de l'exposition. Cette prise de conscience invite alors les musées en règle générale, à repenser et à mettre en place de nouvelles solutions tout en intégrant les nouvelles technologies. Par ailleurs, le tourisme de masse apparu depuis maintenant quelques décennies, a eu un impact sur les sites patrimoniaux, vendus comme un produit de consommation. Le patrimoine correspond de moins en moins à un lieu de mémoire qui se doit d'être protégé et sanctuarisé, mais plutôt comme un bien qui divertit et doit répondre à des tendances souvent liées à un intérêt majoritairement financier. Un dilemme apparaît ainsi entre protection du patrimoine et l'intérêt du public. Pour répondre en partie à ce problème, il est nécessaire de proposer une médiation adaptée aux souhaits du visiteur, mais en l'accompagnant pour provoquer en lui une prise de conscience de la valeur et des enjeux patrimoniaux. Pour cela, le public doit se sentir émotionnellement attaché à ce qu'il visite, afin de créer un intérêt à la protection et la transmission de ces patrimoines tangibles et immatériels.

Le concept de transmédia appliqué au patrimoine

La notion de Transmedia storytelling (TS) apparaît dans le livre d'Henri Jenkins (Jenkins, Jaquet and Maigret, 2013) publié en 2006 où il explique que le mouvement de la société est dû à la convergence des médias dans notre système de communication. Il définit le TS comme la création et la diffusion d'un univers narratif grâce à différents médias dont les messages diffèrent mais restent interconnectés. Ainsi deux termes ressortent, d'un côté transmédia et de l'autre storytelling. Dans le premier cas, il est nécessaire de bien le différencier de certaines expressions comportant également le mot média dont l'étymologie d'origine latine, signifie moyen (un moyen de diffuser une information sur différents supports). Ainsi le terme multimédia indique que l'on retrouve divers médias sur un support principal. Par exemple: un site web ayant à la fois du contenu audio, visuel ou textuel. Dans le vocabulaire courant, cross-média s'impose en force, en particulier grâce au développement des techniques de marketing qui utilisent ce principe dans les campagnes de commercialisation. Le cross-média consiste à partir d'un seul et même contenu de le diffuser sur différents supports. Par conséquent, comme vu précédemment, le transmédia propose des caractéristiques qui lui sont propres et offre une vision plus étendue dans la diffusion d'information grâce à une utilisation transversale du contenu. Le deuxième terme storytelling, traduit littéralement en français par « art de la narration », indique que le message diffusé sera créé autour d'un récit (fictionnel ou non). Présent dans de nombreux projets sous son nom anglais, le storytelling apparaît dans notre quotidien grâce aux plans de communication de nos entreprises qui ont compris l'intérêt de vendre leurs produits en racontant son histoire. Cependant, le principe de la narration existe depuis toujours; la mythologie, les légendes en sont un parfait exemple. Le storytelling se caractérise donc à la fois par son pouvoir de conviction et sa capacité à transmettre, ainsi il est primordial de construire un univers narratif solide¹ basé sur une action, un lieu, une époque et un personnage central.

Dans le secteur du patrimoine culturel, la recherche de la meilleure méthode de préservation et de valorisation est constante. Les crises financières de ces dernières décennies ont eu un impact sur le budget de l'État, des

1 (Pélissier, 2012)

collectivités territoriales ou des municipalités, dédié à la culture. Par conséquent, certains chercheurs de l'université Bordeaux Montaigne comme Mélanie Bourdaa et Jessica Fèvres de Bideran

L'intérêt et les limites de cet outil dans les zones à faible densité démographique

Les zones à faible densité démographique (ou aussi appelées zones rurales) se caractérisent souvent par du bâti regroupé en petits villages ou dispersé à travers des fermes. La nature y est très présente et articule le territoire de par ses spécificités géographiques. Dans ce type d'espace, le patrimoine (Vincent, 2007) reste difficile à appréhender, contrairement aux grandes villes, il ne jouit de grands monuments ou de sites luxueux, on le définit comme ordinaire et du quotidien. Ainsi sa valorisation et son intérêt auprès du public deviennent plus difficiles pour les institutions locales à mettre en place. Ce patrimoine rural est alors à étudier et à promouvoir dans sa globalité, car c'est l'ensemble de toutes ses caractéristiques qui en font sa singularité et le font basculer ainsi de site ordinaire à site exceptionnel.

Pour répondre à ses problématiques, le transmédia storytelling peut apporter des éléments de solutions. Concernant l'isolement qu'il soit physique ou économique, le média à travers internet permet une porte ouverte sur le reste du monde. Un lieu, auparavant difficile d'accès par les transports en commun ou peu attractif pour les touristes, peut désormais l'être virtuellement depuis le monde entier. De plus, prenant le patrimoine rural dans sa globalité, le site ne se limite plus à un espace défini mais à tout un territoire, le projet de transmédia invite donc à la création d'un réseau local où tous les acteurs qu'ils soient du secteur privé ou public interagissent pour le bien commun. Par ailleurs, l'un des objectifs du transmédia storytelling est de fédérer une communauté qui se compose des visiteurs participants mais également de locaux dont les décisions se doivent d'être intégrées au processus ainsi que des médias qui leur sont le plus adaptés. L'implication des habitants nous amène à notre troisième point, celui du manque de promotion de ce territoire, en effet, si les locaux participent, ils légitiment ainsi leur patrimoine et se l'approprient. La communication bottom-up indique une certaine qualité et authenticité du territoire. Enfin, les contenus réalisés pour

les différents patrimoines et intégrés dans un circuit interconnecté, offrent des canaux de communications supplémentaires.

Cependant, le transmédia storytelling, du fait de son développement récent, en est encore à la phase d'expérimentation et déjà plusieurs limites apparaissent. Dans le cas de l'intégration de contenus et de supports liés au numérique, il est nécessaire de vérifier que cela soit accessible et facilement utilisable de tous, dans les zones rurales, on retrouve parfois ce que l'on appelle un désert numérique où les réseaux téléphoniques fonctionnent peu ou mal. De plus, les projets en cours concernent souvent un public très jeune, ce qui limite le lien intergénérationnel dans des zones où la population est de plus en plus vieillissante. Le discours et les moyens de le diffuser doivent donc être attentivement étudiés et bien relayés par tous les acteurs du projet. Tel un château de cartes, les projets transmédiatiques réussissent grâce à un réseau solide où chacun participe, afin de garder une interconnexion et une logique dans le récit. Le rôle du coordinateur est alors primordial, il ne se limite pas seulement à faire le lien entre les institutions mais aussi à effectuer un travail en amont autour de la communication du projet. Malgré une synergie interne efficace, une action de ce type fonctionne seulement si elle profite d'une visibilité sur l'extérieur, beaucoup de projets échouent car peu connus des personnes extérieures. Par conséquent, il faut être attentif aux erreurs commises dans le passé et bien étudier son environnement afin de proposer un support adapté socialement, culturellement et générationnellement. Le numérique utilisé à bon escient, peut être un outil très efficace et économique dans la valorisation du patrimoine.

« La Creuse de la résistance » l'allégorie d'une valorisation d'un patrimoine rural grâce au transmédia storytelling

Afin de mieux comprendre le concept de transmédia storytelling, j'ai pris la liberté d'imaginer un exemple applicable à une zone rurale en France. De par mon expérience personnelle, mon choix s'est porté sur le département de la Creuse, dans le centre de la France ou encore dans ce que l'on appelle en géographie : *La diagonale du vide*. Ce territoire parvient difficilement à mettre son patrimoine en valeur et se démarquer de ses voisins, mais les acteurs locaux sont motivés et très réactifs en termes de nouveaux projets. Ainsi, le transmédia storytelling serait un outil approprié dans cet espace, la partie

mise en réseau et participation des collaborateurs serait alors facilitée par les politiques publiques et territoriales. Concernant l'univers narratif, il serait basé sur un personnage emblématique : Pierre Maillaud alias Pierre Bourdan (Personnage principal), pseudonyme provenant du village creusois (lieu) Bourg d'Hem où il avait l'habitude de passer les étés. Figure de la résistance extérieure, ce personnage essentiellement connu pour ces actions depuis l'étranger, sert seulement de point d'ancrage et de figure marquante de cette époque, cependant son rôle en Creuse reste succinct, il est donc important de noter que Pierre Bourdan n'a pas eu de lien direct avec la résistance creusoise mais il introduit le sujet de par ses actions à l'étranger (action), il s'illustre durant la Seconde Guerre Mondiale (époque). Dans notre cas, afin d'attirer l'attention du visiteur, on le plonge dans une époque bien connue, celle de la guerre 1939-1945 où la France et ses alliés gagnent face à l'Allemagne nazie. Durant les combats, le département de la Creuse et plus précisément les maquis plus au sud, ont joué un rôle important dans cette victoire. Partant de cet univers fort, on voit apparaître des histoires secondaires mais liées entre elles; par exemple, l'oncle de Pierre Bourdan était le célèbre peintre Fernand Maillaud, il est connu pour ses toiles sur le paysage creusois et particulièrement celui de Crozant, village réputé pour « la vallée des Peintres » où il s'illustre au côté de grands noms comme Claude Monet. On retrouve ici l'art mais également la nature, cette nature si spécifique qui a su être un atout dans les actions des résistants face à l'invasion nazie. Les possibilités sont diverses et offrent une toile très fournie de patrimoines et de sites, le récit réalisé, il reste à le diffuser grâce à différents médias. Comme dit précédemment, l'implication de la population locale est importante, concernant la Creuse, elle est principalement constituée de personnes âgées et souvent attachées à la nature, on peut imaginer ainsi un journal intime de Pierre Bourdan publié chaque semaine dans la presse locale qui invite à visiter un lieu, il est possible également de créer des rallyes pédestres ou à vélo où chaque participant doit résoudre un maximum d'énigmes. Pour le public extérieur, une accroche pourrait être faite dans les musées où sont exposées les toiles des artistes de la « Vallée des peintres » et si l'on pense plus large, on pourrait être tenter de développer un itinéraire culturel autour de la Résistance en Europe.

Conclusion

Malgré une certaine méfiance qui apparaît envers les nouvelles technologies, ces dernières peuvent être un outil très efficace dans la valorisation du patrimoine. Le renouvellement permanent du numérique oblige cependant les professionnels à rester en alerte afin de proposer au public un support qui se renouvelle pour s'adapter aux évolutions numériques. Ainsi pour réussir avec le transmédia storytelling, il est nécessaire de respecter certains principes, comme la veille de nouvelles technologies, la mise à jour des récits qui peuvent évoluer en fonction des saisons, des actualités... mais ce qu'il est important de retenir, c'est que le monde virtuel ne doit pas être dissocié de l'être humain, créé par l'Homme, il est à l'origine un vecteur de communication et de réseaux. Pour fonctionner efficacement, le transmédia doit allier le numérique et l'imbrication des populations locales, professionnels et visiteurs.

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**Resilience
and transformation
in the territories of low
demographic density II**

Integrated methodologies
of human and social sciences

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