

## ***Living with a Changing Coast - LiCCo INTERREG IVa***

### ***Workshop 1 - The Orne estuary***

***20th December 2012***

***A la Grange aux Dîmes - Ouistreham***

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#### **In attendance:**

Pauline Aubert (CERReV-UCBN), Sébastien Bernede (Environment department for Ouistreham local council), Claude Branellec (VSSU-SLM), Damien Burnel (Kite-surf school), Florent Clet (Basse-Normandie DREAL), Michèle Comor (Conservatoire du littoral), Guillaume Deniaud (Conservatoire du littoral), Gilles Devin (Agglomeration of Caen-la-Mer), Amadou Dickerson (CERReV-UCBN), Sylvain duhamel (CSLN), Sylvie Fleury (SMCLEN), Jean-Louis Glanville (Mayor of Sallenelles), Pascal Hacquebart (GEMEL-N), Philippe Hubert (Ports Norman Associates), Bernard Jean (Amfreville); Salvador Juan (CERReV-UCBN), Jean-Philippe Lacoste (Conservatoire du littoral), Alexander Langlois (SMCLEN), Bénédicte Lepetit (CABALOR), Lucie Martelin-Polder (SMCLEN), Claude Me (Assistant Bénouville), Hervé Niel (Conservatoire du littoral), Julie Pagny (Conservatoire du littoral), Isabelle Puchalski (Conseil régional de Basse-Normandie).

#### **Agenda:**

**Opening Session: Presentations on the LiCCo approach and re-establishing historical expertise.**

**Presented by Jean-Philippe Lacoste, Julie Pagny, Guillaume Deniaud (Conservatoire du littoral)**

- a. **The Conservatoire du littoral and Climate Change: The objectives of the Conservatoire du littoral presented by Jean-Philippe Lacoste.**
- b. **What is the LiCCo project? Presented by Julie Pagny.**
- c. **The Coastline Yesterday, Today, and Tomorrow? Re-establishing historical expertise. Presented by Guillaume Deniaud.**

## **Second Session: Group Discussion. The LiCCo project and challenges on the site.**

### **Presented by Salvador Juan (CERReV-UCBN)**

- a. **Challenges of the site. Expectations and questions from local stakeholders**
- b. **Dates of future meetings**

### **Documents provided in advance**

- Introductory notes on the LiCCo project

### **Key outcomes of the workshop**

#### **Opening Session: Presentations on the LiCCo approach and re-establishing historical expertise**

Mr Lacoste, delegate for the Conservatoire du littoral in Normandy, introduced the workshop.

a. **The Conservatoire du littoral and Climate Change by Jean-Philippe Lacoste:** the objective of the Conservatoire du littoral in participating on issues related to climate change is to share knowledge, to integrate within national strategies (following the Cousin report), and to engage in a process of developing climate change scenarios for this region between 2025-2050.

➤ ***No comments from the group following this presentation.***

b. **What is the LiCCo project? Presentation by Julie Pagny** (see 4 page document available at [www.licco.eu](http://www.licco.eu))

The focus for LiCCo is on climate change, the evolving coastline, biodiversity and how these areas are used in terms of economic, social and leisure activities. Part of the EU's Interreg IVa programme, the LiCCo project is led by the Environment Agency and coordinated by the Conservatoire du littoral in France. The project comprises of 7 sites for workshops, the Bay of Poole and the Exe estuary in England and 5 further sites in France; Havre de la Sienne, Val de Saire, Baie des Veys, the Orne estuary, and the Vallée de la Saône.

The unique nature of the LiCCo project is to bring together environmental expertise with socio-economic expertise through a number of partnerships. LiCCo's aim, through organising workshops, is to take decisions with local stakeholders in light of changes in the marine weather environment, particularly sea level rises. Several steps taken in the area of the estuary, currently underway or completed, link to the LiCCo approach and contribute to this line of thinking; the study of the hydro-sedimentary dynamics of the Orne estuary and the area around the mouth of the estuary, the sea surrender project for the area known as the terrains François, extending the Port de Plaisance marina and organising the outer

harbour at Ouistreham, along with the Conservatoire du littoral's management plan and the paper setting out the Natura 2000 objectives.

The UK partnership allows the integrated management approach in coastal areas to be put into perspective in the context of climate change in England. The example of Dawlish Warren on the Exe estuary was presented because of its many similarities with the Orne estuary, having a landscape between nature and culture with many challenges being evident. The Environment Agency owns much of the land on the Dawlish Warren site and is considering what will become of this area if the sand spit disappears. The sand spit protects the Exe estuary and has greatly evolved over time, as shown by the aerial photos from 1946 to the present day, and remains a location for many leisure activities. The Environment Agency has chosen a beach nourishment system, along with removing groynes and sea defence works parallel to the coastline, in order to let the sand spit evolve more naturally. Our English partners will be present at the next LiCCo workshop in the autumn of 2013 to explain their regulatory tools and with concrete examples of adaptation.

- ***Few comments from the group at the end of this presentation with the exception of the LiCCo links in to actions undertaken by the State (Risk Prevention Plans). Also, the environmental expertise must understand the changes in salt concentrations in the estuary as this would have significant consequences on biodiversity in the estuary.***

**c. The Coast Yesterday, Today, and Tomorrow? Re-establishing historical expertise. Presented by Guillaume Deniaud** (see attached documents and can be downloaded from [www.licco.eu](http://www.licco.eu))

**Objective: Assess the changing trends on the coast and on the estuary in this area.**

The margins for error and geographical scale of these documents do not allow the landscape changes to be quantified. This activity will be proposed at the next workshop using documents more adapted to this type of exercise.

- A presentation, including a poster, was delivered with documents from different eras; maps dating from the early 18<sup>th</sup> century; maps of Cassini from the end of 18<sup>th</sup> century, on ordnance survey map from the early 19<sup>th</sup> century, and old postcards were compared to current photos taken from a similar angle. The general change over time is clearly visible.
- A video presentation was made using aerial film dating from the post-war period to the present day and showing the site's development in terms of landscapes, urbanization, and how the area has been used.

- The interpretation of historical documents: erosion, submergence, and flooding hazards have not changed. It's the idea of being at risk and the exposure of people and their activities to these hazards that have changed and increased over time. We see a correlation between urban development and the construction of sea defences and prevention against inland flooding.

➤ ***There were no comments from the group at the end of this presentation***

## **Second Session: Group discussion on the LiCCo project and challenges of the site**

### **Presented by Salvador Juan (CERReV-UCBN)**

#### **a. Challenges of the site. Expectations and questions from local stakeholders**

**Objective: Consider the possible scenarios for the coastal area in a context of climate change.** By what means is our region able to adapt to the changes caused by climate change: economic; social and environmental feasibility. The ultimate goal is to draw up climate change scenarios, through our collective efforts, by the end of the 4th workshop in June 2014.

The discussion is opened with three questions;

- How do you think climate change will manifest itself in the Orne estuary?
- What are your questions and concerns about the effects of climate change in the Orne estuary?
- Which topics or questions could LiCCo respond to between now and 2014?

➤ ***Main comments resulting from discussions:***

#### **Movement of the coastline: a normal phenomenon**

- The Orne estuary provides a sense of security to coastal populations with its inland area being offered a sheltered position from the coast. The general trend is accretion (the build-up of sediment) however experiencing periodic erosion events throughout history. The estuary has a changing landscape by its very nature. In the past, people would settle on higher ground but in contemporary times they have tended to migrate to the coastal strip to meet economic and social expectations.

-Precautions to be taken in approaching the issue of climate change: this context leads us to believe that changes to the coastline would not be 'normal' and therefore uncertain for coastal populations, even though these changes in the coastal zone are normal. Local stakeholders have always had experience of this situation and populations have adapted. There have been significant changes in the last 50 years but it remains difficult to attribute these to climate change.

#### **What changes have become evident**

Workshop 2 Orne Estuary, 27th November 2013 Granges aux Dimes

-Climate change involves events becoming more frequent and more intense. There have always been differences but when certain thresholds are reached it will no longer be possible to go back.

-In our area the sea level has risen by 10 cm in the 20<sup>th</sup> century. This rise could be exponential in light of the projections from the IPCC, which have been revised upward. The sedimentary dynamics could change. At what threshold will accretion in our area no longer be sufficient to offset the changes in sea level? What threshold values can we rely on today, especially if we are witnessing an acceleration of this phenomenon (rising sea levels, salt concentration, etc.) and to what extent will biodiversity be able to adapt?

Concerns are largely turned towards these 'extreme' phenomena, particularly with conditions associated with a storm surge in the context of a rise in sea level. Furthermore, the car ferry terminal defences would be inadequate.

-Those who use the Merville-Franceville beach regularly have observed a sedimentary change over the last decade: a loss of sand but more shells and mud. The sand banks on and to the right of the beach have changed significantly.

#### Development decisions and management approaches for the estuary

-The future of the polder named the Gros Banc: this area of the estuary is prone to erosion and has received reinforcement and maintenance work to withstand this as much as possible. However, the objective is not to maintain this area at all costs in light of the issues on the site. To what extent can the efforts in management and monitoring be maintained as they are today, particularly with monitoring water levels? These lands have been taken from nature and nature has a tendency to take them back.

What objectives are being agreed for the next 5 years: do we need to anticipate and associate a defence plan against the sea? A defence that has flexibility because the solid defences used in the past have not withstood the conditions. Management choices must be taken with consideration to the issues on the site, such as the sewage works.

- In England, the coastal management tool is called the Shoreline Management Plan (SMP). The SMP integrates sedimentary changes on an appropriate geographical scale, based on the hydro-sedimentary cell rather than by administrative boundaries. Planning decisions are made using a cost-benefit analysis, which assesses the value of properties and activities currently on the site in comparison with the maintenance costs expected due to hydro-sedimentary changes.

The plan recommends a 3 scale management schedule for the coastline: 0 to 20 years (short-term), 20-50 years (medium-term) and 50 to 100 years (long term).

- A need to recreate buffer zones: At present, the Orne estuary no longer has areas of naturally occurring mudflats or designated floodplains. The estuary is an area at the limits of its resources, harnessed and occupied by people and their activities. Buffer zones on both sides of the Orne no longer exist. The estuary has the tendency to seal up and then develop outwards. The way the estuary is currently managed, the potential refuge for biodiversity upstream is lost.

Jean-Philippe Lacoste and Julie Pagny conclude the workshop.

**b. Dates for upcoming workshops :**

December 2012. Our Coastline Yesterday, re-establishing an historical approach and defining your concerns. Project Presentation.

Autumn 2013. Our Coastline Yesterday and Today, the coastline and activity in this area with a visual display of the changes. Coastal management strategies in France and in England.

February 2014. Our Coastline Today, bringing together all the technical expertise and defining your concerns.

June 2014. The Coastline of Tomorrow, forecasting change scenarios and adaptations for the coastline.

**All information on the LiCCo project is available at [www.licco.eu](http://www.licco.eu)**

*In the absence of further points the meeting was adjourned.*