



Working with coastal communities

Ms Hannelore Maelfait

Province of West Flanders, Belgium

Ms Maelfait started her presentation by asking what defines a coastal community and what makes them unique. She explained that it is a community that has been formed by the way the sea moves, a region that has learned to evolve with the sea and adapt to the changing coastline and seascape. She also noted that in Belgium, the coastal population is a grey population with more than 30% of people above 65 years. This demographic trend and its associated social impacts are also reflected in other European coastal areas such as in the Mediterranean. The coast is also an area with complex governance, where different policy levels and competencies need to be brought together.

“Given the fragmentation of competences, the integration and deliberation of sectoral visions and plans in the coastal area are crucial.”

– Hannelore Maelfait

She then stated that being a coastal community means being at the forefront of climate change impacts. She presented a study that had been carried out to gain an understanding of the awareness amongst coastal communities about climate change, which showed that they were aware of the risks and long-term implications. They are developing a roadmap for how to deal with sea-level rise along the Belgian coast. Acceptance of this roadmap required that this vision, information on its implementation and on Nature-based Solutions be brought to the impacted communities. It was supported by active engagement through storytelling based on scientific data and participative approaches. However, she noted that there were differences in acceptance to adaptations and feelings of ownership between residents and coastal tourists. There is still work to be done to share similar messages with tourists, and to foster stewardship amongst them. She closed by presenting some approaches they use to try to foster feelings of ownership amongst tourists, including using visitor centres, doing coastal safaris, and engaging in Ocean literacy initiatives for schools.

Panel Discussion

The panellists (**Dr Louis Celliers**, **Ms Hannelore Maelfait**, **Dr Soetkin Vervust**, and **Mr Richard Cronin**) were asked a series of questions by the moderator (**Prof. Sheila Heymans**), followed by a Q&A session with the audience.



Dr Louis Celliers

Climate Service Center Germany

Question: *Why is it so important to consider the whole socio-ecological system when dealing with coastal adaptation and resilience?*

Dr Celliers replied that if we look at the past, humanity has always been closely connected to nature and our societies developed as part of nature. However, at some point in our history humans thought it wise to separate ourselves from that understanding of what nature can offer. He explained that seeing ourselves as embedded in

ecological system gives us a buffering capacity against climate change. If we understand that, and if we can get back to the point where our socio-ecological system is functioning properly, then we have the potential to buffer against climate change and buy ourselves time to adapt, especially if we use Nature-based Solutions. Understanding the socio-ecological system gives us more options to deal with climate change and its impacts.

Sheila Heymans: *We have heard that tourists don't see themselves as part of the same socio-ecological system. How can we make tourists understand that they are also part of the system and have an impact on it?*

Dr Celliers explained that tourists stay at the coast short-term and there will always be issues with generating an understanding within that limitation. This challenge covers not only tourists, but also new coastal residents. There is an awareness and education problem. There are approaches we can use to address this, including educating school children about how nature works on the coast, but the question is how to broaden that awareness-raising to include all incoming communities and tourists. He noted that we have to think about monitoring and evaluation, enforcement, and driving "good" behaviour amongst people who are there for relaxation, but who should not be detracting from the functioning of the natural system while relaxing.

Ms Maelfait noted that a new principle of sustainable tourism supports the idea that tourism brings a positive impact to the area, leaving a positive footprint, and highlighted that there is already a drive to develop this concept, at least in Belgium.



Ms Hannelore Maelfait

Province of West Flanders, Belgium

Question: *Do coastal residents really understand the impacts of climate change better than tourists? How can we influence tourists more?*

Ms Maelfait felt that tourists did not necessarily have a strong attachment to the coast unless they return to the same area year after year. Residents see the coastal environment every day and hence are very aware of the changes taking place and of the need to take steps to address this. This provides a clear starting point for dialogue.



Dr Soetkin Vervust

Free University of Brussels, Belgium

Question: *Can you introduce the Testerep project to us?*

Dr Vervust explained that the Testerep Project¹⁸ is an interdisciplinary research project looking at the central part of the Belgian coast where there used to be an island during the Middle Ages called Testerep. The island no longer exists, and the project aims to understand why and when it disappeared, and to bring this historic narrative to local communities. She noted that the project engages historians and archaeologists alongside

coastal engineers and computer game designers to understand and share the narratives. They also aim to valorise the findings to generate societal impact by using the gained knowledge to inspire coastal management, improve heritage management and raise more public awareness of the natural processes that have shaped the coast.

Question: *Why must policymakers and the public today understand what has taken place in the past?*

Dr Vervust outlined two main reasons why it was important to understand what has happened in the past. Firstly, in terms of research and knowledge generation, their findings would give insights into the long-term processes that shape coastlines and their natural dynamics, using the past as a long-term evidence base. This knowledge could help to implement the most sustainable strategies and ensure that policies work with natural system dynamics to improve their efficiency. Secondly, telling stories about the past can help raise awareness about for example climate change impacts, because they can transform numbers into the lives of real people and provide perspective. It is possible to look at how people lived in these landscapes in the past and try to understand how choices made in the past have influenced the situation today.

¹⁸ <https://testerep-project.be/en>



Mr Richard Cronin

Department of Housing, Planning, Community and Local Government, Ireland

Question: *The European Ocean Pact is due to give clarity on how to integrate different Ocean policies. Do you think the MSP Directive, MSFD, WFD should be adapted and if so, how?*

Mr Cronin said that someone had quipped that at present the Ocean Pact was like the Loch Ness Monster: everyone is looking for it and hopes it will be there, but nobody knows what it looks like. He agreed that it should help to make policies and directives more coherent and implementable. They

should all be implemented at the same scale: the MSP needs to be implemented at sea-basin- instead of national scale, and needs to be supported by the other Directives. He commended the research that has already made it possible to make good science-based policy decisions through the MSFD. However, at present, the environmental targets are not binding which makes requiring economic and regulatory actors to implement them within MSP challenging. He called for MSP and MSFD to be more integrated, with binding targets at the right spatial scales. This would provide a mechanism to ensure human activities are regulated properly and fairly with a level playing field between Member States. The EU Ocean Pact will also be related to the new Water Resilience Strategy, which will be a source-to-sea strategy, and will link closely with the WFD. These strategies together should enable strong integration of Ocean-related directives and ensure the use of the environmental assessments we already have, to allow human activities to be carried out within ecosystem carrying capacity.



Audience Questions & Answers

Sheila Heymans: *Do you think that exhibitions help people to understand changes at the coast?*

Dr Vervust agreed that storytelling can be helpful in that respect. The Testerep exhibition tells a story about Ostend with visuals showing the storm that affected the island, and then in the next room the question is asked about what people would do if they were faced with a disaster like this - would they want to stay or move away? She noted that from the responses received, people already living on the coast want to stay even knowing it is not the safest place to be, while tourists have a different perspective.

Mr Cronin cautioned that we may be creating a false division between tourists and coastal communities. What they all have in common is enough of an interest in the coast to visit it or live by it. He noted that there are also many types of tourists, including those that do engage with the natural environment of the coastal zone. In terms of managing the impact of tourism, the first step is education, but we could do more to transfer a sense of ownership and stewardship to those at the coast. He gave examples of tools that Ireland has implemented including providing funding to citizen beach cleaning initiatives and biodiversity monitoring, and for green and eco school modules, to help change attitudes and values in society. He called for education before regulation.

Dr Celliers added that the tourism industry itself can also transform, and the value chain of tourism can be made sustainable.

Samantha Pellarini (Visual artist, The Netherlands): *Have you considered directly involving artists when developing narratives for climate adaptation to reach out to communities? Maybe this is a way you can influence the tourists, through artistic interventions and art exhibitions that create awareness and a sense of agency.*

Ms Maelfait agreed that this was important as it touches society directly. Imagination helps with storytelling and artistic impression can really help influence policy to break down a story and give it impact.

Dr Vervust explained that within the Testerep Project, they had collaborated with a theatre group who made a musical play to tell the story of the big storm that wiped away villages on the island. The actors portrayed historical people but were also holding up a mirror to the present day and how people react to climate change now. You can convey the same message but in an emotional way.

Juan Ronco Zapatero (KU Leuven, Belgium): *Firstly, we should not draw a hard line in distinguishing between coastal communities and tourists, because everyone pays taxes and those can be used to do good things for the coast. There was also an exercise done in the early 2010's that considered what the Belgian coast could look like in 2100 under different scenarios, including letting nature take its course. Should politicians be encouraged to consider alternatives like this?*

Ms Maelfait replied that as a society we must decide what price we want to pay to protect an area and consider how long we can hold it? We have to think strategically when planning at the coast and be aware of the risks. At present, the Flemish Government's policy is to hold the line.

Dr Vervust explained that if we look back in time, there have been two main strategies for managing how we live at the coast. Originally, there was a natural tidal environment that periodically flooded but did not prevent people from living there as they lived with the water and could retreat to higher ground in case of flooding. Then, around 1000 years ago, humans started trying to keep the water out as much as possible to enable more agriculture. At present, while we try to focus on Nature-based Solutions, we are still trying to keep the water out. She felt that we may be reaching the end of this strategy and will have to start thinking about working with the water again.

Mr Cronin highlighted that our coasts are not homogenous, both in terms of the natural landscape and the populations living there. Historically we have used hard solutions to hold back the sea, but our approaches tend to be very localised. We should consider the full spectrum of available strategies, from Nature-based Solutions to managed retreat and hard engineering and apply those most appropriate to the case in question.

Thorsten Kiefer (JPI Oceans): *We are experiencing sea-level rise denial in the same way as we are experiencing climate change denial, where communities do not want to hear about the risks or do not want to think about their houses being in peril, or are not even aware of the risks. Have you also experienced this perspective?*

Sheila Heymans added that she had read that in Belgium, the houses that are insured for the most are built on river flood plains.

Louis Celliers theorised that in general, those who will be affected by sea-level rise will be the very rich, who often have luxury seafront residences, and the very poor. However, the poor do not have any alternatives because they cannot afford to move, regardless of whether or not they agree with the science. People have the expectation that the government will keep them safe from the Ocean: this is where they live, and they should be able to stay there. He believed we need to make a fundamental shift because in the past, communities were always willing to move in response to the natural dynamics of the sea, whereas now, people are not yet serious about managed retreat options.

Mr Cronin felt that personal experience of recent extreme events has helped to change people's perspectives. These highlighted a lack of resilience in Ireland's infrastructure systems, and these are now being addressed. In policymaking, you cannot waste a crisis! There is a difference in the timings of political, economic and natural cycles, and within all of this, we need to enact social change, finding the right intervention point and the right intervention to ensure implementation. We need to make haste, but slowly.

Ms Maelfait noted that the 1953 storm which affected the North Sea caused the deaths of rich farmers in the Netherlands, and the reaction to this is still being seen in policy where they are very proactive in addressing coastal adaptation. By contrast, in Belgium, eight people from a poor community died and the reaction has been very different.

Adriana Constantinescu (GeoEcoMar, Romania): *In the Danube Delta, we work closely with local communities and have found a lot of traditional knowledge, but sometimes this is not considered enough. What is your experience of that?*

Mr Cronin replied with the example of Marine Protected Areas (MPAs). The science tells us that we need them, but there is no social buy-in in Ireland because we are not considering the knowledge of people in coastal areas who have connections with the Ocean, such as fishers. He felt that non-scientific knowledge needs to be incorporated for communities to feel that protection is meaningful to them.

Gilles Lericolais (IFREMER, France): *One of the speakers used the Intergovernmental Panel on Climate Change (IPCC) predictions for sea-level rise in their presentation. If we want to know what extreme events are coming, we need sustained in situ Ocean observations. However, today, 50% of observations come from ARGO floats managed by the USA, which may be at risk. How can we encourage coastal communities to lobby on the importance of Ocean observations?*

Mr Cronin felt that municipalities, small businesses and NGOs don't really have the ability to think about Ocean observations and what they need from those systems. They want to feel safe, do their business and have good lives. He did note however that they need to understand how to plan for extreme events. Coastal communities are becoming increasingly aware that there are things they should know but don't, but they don't really have the capacity to actively lobby for observations.

Ms Maelfait stated that we need science to influence the policy, and the science has to react to the needs of society. Often, communities' engagement with information arising from Ocean observations is via the weatherman.

Dr Vervust added that for communities which haven't yet faced the impact of storms we can use historical narratives to talk about how people prepared for storms in the past, and how we can take inspiration from that now.

Mr Cronin noted that marine observations are very expensive, but the time series they provide are very important. We should consider how to engage citizens in meaningful science to both support Ocean observing and give citizens a sense of ownership and stewardship.