Concept note - UNOC workshop n°3

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Spatial recomposition: a solution for adapting high-risk coastal areas

Climate change is causing and accelerating the occurrence of submersion and flooding phenomena. In this context, some areas are taking mitigation or adaptation measures to prevent the occurrence of these phenomena. In some cases, mitigation and adaptation will no longer be enough, and some areas will require more radical retreat solutions. How can we identify these high-risk areas and manage change?

This is the subject of this third workshop, dedicated to managing and overcoming extreme situations in areas that will eventually become uninhabitable and/or unusable.

The concomitance between the rise in sea levels, which is now unavoidable, and movements in ground levels, particularly subsidence (soil collapse), will have an existential impact on certain geographical areas in the more or less long term. Choices will have to be made to protect these areas, some of which may be returned to the sea.

Coastal areas are obviously the most vulnerable. The IUCN (**International Union for Conservation of Nature**) estimates that more than 60% of the world's **population** lives in coastal areas, meaning that 3.5 billion people live less than 150 kilometres from the shore. In 2017, **the number of people living less than 10 km from the coast on the Mediterranean coast was 3.7 million**[1].

Coastal towns, particularly low-lying coastlines, historic cities, fishing villages and entire islands are at risk of being submerged, resulting in inestimable human, cultural and economic losses. Other areas, such as agricultural lands, could also become unfit for use, leading to the loss of activities and resources.

The vulnerability of populations will depend essentially on the speed of adaptation measures, but also on a change in the long-term territorial vision. In the short term, adapting to the rapid rise in sea level requires a dynamic and flexible combination of

[1] Géolittoral

solutions over time and space. In the long term, responses to territorial reorganisation in the face of irremediable situations will involve individual retreat, collective reorganisation of submerged areas and the design of new host areas.

This workshop will look at how to plan ahead, manage the transition phases, support change and build a better future.

We therefore plan three sequences in this workshop.

1- Identifying high-risk areas

How can we identify high-risk areas that will be uninhabitable and/or unusable in the more or less long term?

Following on from our discussions on the issue of risk knowledge (see Alexandria Declaration), forecasting high-risk areas requires special consideration, between data, sharing and acceptance.

Identifying the areas most exposed to coastal change requires information and multidisciplinary territorial projections on hazards and vulnerabilities.

These data are essential to determine where 'managed retreat' will be unavoidable and to prioritise or phase policies accordingly. The state of knowledge will make it possible to highlight the main issues and themes of the territorial recomposition approaches, in order to design a comprehensive and coherent approach.

Regular monitoring and evaluation are also essential to ensure that adaptation policies continue to meet local needs and priorities under dynamic conditions (e.g. extreme events, social changes) and to trigger managed retreat operations at the appropriate time.

1.1. Knowledge

What levels of knowledge are needed in the Mediterranean for effective and dynamic planning and implementation of territorial restructuring processes?

The key issues are: an overview of the current state of knowledge, the identification of gaps in it, the implementation of a strategy to deal with them and move forward effectively in a global approach, and the enhancement of information to prioritise retreats.

The idea here is to discuss an assessment of the knowledge we have, and then to gather the main expectations and 'blockages', or gaps, on this issue.

This issue raises two questions:

- The production of data to assess risks and how it is disseminated (mapping and scenarios). What are the triggers that lead to the relocation of certain infrastructures, or the displacement of certain populations?
- Monitoring: on what scale(s) should we monitor?

1.2. Mediation, between sharing and acceptance

The key topics are: tools for displaying and popularising data to facilitate understanding, building trust and promoting dialogue between scientists, stakeholders (local authorities, residents, businesses and, especially, landowners), peer learning, exchange of experience and capacity building.

Data in all its forms will not suffice for diagnosis and sharing. Situations of refusal, denial and inability to take responsibility are generally observed. The ability to foresee the unacceptable and the different timeframes between that of the elected decision-maker and that of the phenomenon accentuate the difficulty of taking the diagnosis into account.

In addition to the data, then, there are the notions of acceptance and sharing, which involve words, exchanges and shared governance forums to find compromises. This is a democratic issue, which is the subject of this workshop.

Transparency is essential, but it must not mean disseminating all the information to the public without filtering it. Too much information, especially on sensitive subjects, can be alarming and hamper the process of territorial restructuring. The issue is therefore to determine to whom the risks should be communicated, in what way, and when.

2- Strategies

To be relevant and meet the sometimes-existential challenges, relocation strategies need to take account of a multitude of scales, both temporal and geographical. They must therefore be devised on the basis of different zones, which sometimes break away from the usual decision-making or project perimeters (for example, we can imagine moving from the local authority scale to that of the metropolis or even that of the region).

These complex processes also involve a certain amount of phasing, a multi-steps transition, to enable all the components to be addressed, between policy, spatial planning and support for local people (particularly with a view to social justice). It is a question of managing the areas that are going to be submerged over time.

2.1. Managing relocations fairly, to make them acceptable

The key topics are: regulating land use, land management, conditions for buying back exposed property, compensation, deconstruction.

Rising sea levels will lead to an increase in damage and more frequent – if not permanent – submersions. "The aim is [therefore] to ensure people's safety and to anticipate and reduce the damage caused by marine submersion and coastal erosion. More generally, it is also a question of avoiding a social crisis linked to a collapse in the property market or likely difficulties in insuring property [...]"[2]. The most exposed properties must be relocated.

In cases where relocation is unavoidable, the workshop will need to look at land regulations, new ways of managing land that are acceptable to those affected, and ways of funding public action.

The role of public stakeholders will be decisive in terms of their ability to inform and mobilise, and in the transition from an individual to a collective mode of retreat and territorial reorganisation. As guarantor of civil security, it can go as far as gradually buying back the most exposed assets, thereby increasing user acceptance (residents, businesses) while planning public funding requirements.

Several solutions will be presented and compared during the workshop, such as public land policy instruments (coastal public domain, pre-emption rights) or staggered forms of public acquisition of vulnerable assets (dismemberment of ownership rights, temporary leases under taxation policies or new tools such as the mobilisation of land trust associations, responsible for conserving ecosystems).

Innovation in these policies will be combined with innovation in financing along several axes: international solidarity, national solidarity and public-private financing.

2.2 Designing: the territorial reorganisation project and the prospects for alternative territorial projects

The key topics are: taking into account the interplay of scales (temporal, geographical/spatial) in relocation processes, designing the organisation of relocation by bringing together the various stakeholders who initiate and deal with it (government bodies, individuals, landowners, businesses), eco-neighbourhoods, bio-territories.

[2] "Acceptability of property relocations faced with rising sea levels: perceptions of new land governance arrangements", Hélène Rey-Valette, Marie-Laure Lambert, Gisèle Vianey, Bénédicte Rulleau, Camille André, Nicole Lautrédou-Audouya.

The risks in the Mediterranean are first and foremost the consequence of human planning and development practices. Inappropriate coastal development and unregulated urbanisation are the main causes of vulnerability.

The risk management project is therefore closely linked to the sustainable development and resilience project. The risk must be taken into account in all the components of the project. At the Alexandria workshop, we emphasised the importance of a complex project, with grey, defensive solutions (dykes, etc.), and nature-based solutions to capture sediments and thus resist rising water levels, or to make the city more permeable. This workshop will focus on the management of relocation. It will look at innovative experimental project practices.

Strategies for territorial recomposition are deployed at three levels, which are the three scales of resilience:

- Reclaiming areas that have become uninhabitable through renaturation projects or, on a block scale, new forms of adaptation, following the example of experiments in Amsterdam, Rotterdam and Hamburg's IBA to construct floating buildings;
- The creation of alternative accommodation for relocatees, either in urban contexts or in more specific contexts (relocation of coastal activities, for example). At neighbourhood level, population displacements based on urban renewal projects and/or the creation of new eco-territories;
- The resilient territorial project on a large scale - particularly the integrated metropolitan project - with risk management, resource frugality and the reduction of greenhouse gases as strategic axes, the relationship between open and urbanised spaces, between the coast and the back-coast, social and territorial cohesion and new forms of productivity.

This is an opportunity to design sensitive and qualitative re-territorialisation processes[3] and new forms of governance for sustainable cities and territories.

3- The Mediterranean tactic: priority project issues

The key issues are: the establishment of priorities, the question of atlases, risk prevention plans ("PPRI", etc.) and experimental approaches.

[3] *Murmures des villages engloutis*, Carolina E. Santo, collection La Fabrique de territoires.

In this chapter, the aim is to investigate, on the basis of the strategies developed, whether there may be Mediterranean convergences in terms of tactics, i.e. priority projects that are organised on a Mediterranean scale.

Some of these are already taking shape:

- Aggregating data on a Mediterranean scale, in particular by means of an interactive atlas that could incorporate monitoring and evaluation. The issue of the atlas, addressed at the Alexandria workshop, could be further developed in Nice. The visualisation of risks could be superimposed on a question of risk classification: geographically mapping risks according to their degree of urgency makes it possible to guide the implementation of actions and projects, while monitoring makes it possible to evaluate the policies implemented.
- The generalisation or transfer of certain approaches and/or tools: the generalisation of Mediterranean resilience projects at the level of metropolitan areas, the transfer of certain prevention tools ("PPRI", etc.) or individual relocation management tools.
- Finally, there could be an increase in the number of experimental approaches on a Mediterranean scale, to feed into existing projects and encourage the exchange of good practices.

Mediterranean cooperation has a fundamental role to play.

This new workshop will allow to suggest some guidelines and proposals for action to be included in the "Voice of the Mediterranean".

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