# NAIAD WHITE PAPER

## CLOSING THE GAP IN

## PROTECTION, INVESTMENT, AND INFORMATION

## TO SUPPORT EU CLIMATE ADAPTATION

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*“An ounce of prevention is worth a pound of cure.”*
*— Benjamin Franklin*

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## EXECUTIVE SUMMARY

This White Paper presents new analysis and insights from the EC-funded research and innovation project, NAIAD (Natural Assurance Value Assessment and Demonstration - grant number 730497). NAIAD (2016-2020) aimed to operationalize the assurance (Denjean et al, 2017) and insurance value of ecosystems (Baumgärtner, S., & Strunz 2014) by means of nature-based solutions (NBS) (Gomez Martin et al, 2018) to reduce the human and economic cost of risks associated with water related hazards (floods and droughts) (Alfieri et al, 2017). During the spring of 2020, NAIAD worked with DG Clima, DG RTD, and EASME to facilitate a series of national roundtables in Spain, Slovakia, Romania, Sweden, France, Denmark and one at the EU level with the participation of more than 160 representatives from local authorities, the insurance industry, researchers, civil society as well as national and European Commission officials. Based upon the results of these roundtables and extensive learning made over the course of the NAIAD project, this White Paper highlights priority areas to strengthen adaptation planning in the new strategy and notes where NAIAD knowledge and tools can be applied to support their implementation in Europe.

### Key messages

**The insurability of the system is at stake if we fail to adapt to climate change.**

If no loss prevention measures are implemented, climate related risk could become uninsurable since risks would not be quantifiable since it would be very difficult if not impossible to define the frequency of events and thus to calculate the premiums. Maintaining affordable insurance products is necessary to provide a protection cover for people, businesses, and public authorities. The new vision is for a sustainable market that also includes new greener products and a more sustainable modus operandi, having a longer-term vision. In that respect, nature-based solutions are

attractive measures for risk prevention as they are often cheaper than traditional grey solutions and provide substantial co-benefits, often exceeding the value of prevention

### Promote joint action and engagement with insurers at multiple levels

The insurance sector is involved nationally and locally as a partner and supports decision makers at the local administrative level to help understand risk exposure. It is important to start thinking at the asset scale, considering that the building and land use sectors have strong responsibility regarding first level exposure, electricity, water, and ICT networks. At the city scales robust critical infrastructure and networks are required, resilient to disasters and working with nature for loss prevention.

### Find solutions for a diversity of insurance schemes

The application of insurance-based resources to increase resilience and improve adaptation strategies is currently unevenly applied across Europe, with different risk transfer schemes varying from country to country. Different ways to implement protection measures to adapt to climate change within each of the schemes must be found. The details on how to do this will differ but NAIAD has highlighted common key roles the insurance sector can play in the integration of NBS for protection in DRR (providers, investors, innovators and partners).

### Implementing real action to adapt is urgent and can help guide smarter and stronger regulations

Many identify the main issue for adaptation is to move from commitments on paper to action and implementation on the ground. Implementing actions can also help strengthen the required policy framework in a virtuous loop by helping to identify limitations and barriers to the implementation of actions. This can highlight where

weak or missing regulations may have important consequences for customer protection, insurer protection and overall resilience.

## NAIAD Insights

Following interviews and surveys with relevant authorities, experts and stakeholders in the insurance and re-insurance sector in Europe (Marchal et al, 2019), and dialogue with DG Climate Action, three priority challenge areas were identified to build climate resilience and ensure sustainability of insurance systems: the protection gap, investment gap and data sharing gap. Key findings on these topics are summarized below :

### NAIAD INSIGHTS ON PROTECTION GAP

**The climate change consequences on natural hazards are already clear for insurers.** It is necessary for the insurance sector to continue to understand risk exposure but also take a step further to also look at the role of preventive measures (e.g. collaboration with scientists) to ensure the insurability of the system in the long term. It could be performed through the availability of insurance options against climate change.

**The EU needs a climate strategy that works with its rich diversity of insurance models.** It is important for the EU and each country to assess the strengths and weaknesses of each insurance model to respond to impacts of climate change. In the solidarity schemes, for example, moral hazard must be considered, and in risk-based schemes affordability and diffusion rate are key issues to address.

**Public authorities have a critical responsibility in risk management and mitigation**. Municipalities have been defined as the one of the most critical players in this arena, including the insurability of public assets.

**The EU has strong regulatory opportunities to speed adaptation efforts across countries.** The role for the EU might be to harmonize linkages between CCA, DRR policies from national to local scales, to offer the opportunity for collaboration between different partners under adaptation efforts. Clearer coherence between policies and roadmaps for climate actions are needed, and could be inspired by the format of Flood Directive which has been effectively applied in all countries. A directive for adaptation actions considering pluvial flood and nature-based solutions should be considered.

## NAIAD INSIGHTS ON INVESTMENT GAP

**The EU is facing a large investment gap in ex-ante preventive measures.** Strengthened research, indicators, monitoring processes are required to measure against set targets, to assess effectiveness of prevention.

**The insurance industry should be better prepared to target adaptation-green investments, as well as maintaining the insurability of risks** while it is now increasingly looking to green its portfolios.

**There are some EU limitations for the insurance sector to invest around CCA/DRR or in long-term investments (Solvency II Directive) that should be considered**. The Solvency II Directive must be redefined to incorporate the demands of the insurance industry to be able to undertake long-term investments in CCA/DRR. EU recommendations and definitions on climate-proof green investments and the effectiveness of innovative financing that considers the nature of the risk have to be developed to encourage and foster investments in nature-based solutions (e.g. clarification of investments towards NBS projects or other green assets, cat and resilient bonds).

## NAIAD INSIGHTS ON INFORMATION GAP

**Data improves knowledge and but requires knowledge to collect and use it.** These are the two faces of the information gap. It requires clear actors to collect data in a structured manner; if possible on a EU standardized structured approach. Once the needs are defined, the issue of data collection, data sharing, access to data, in the area of risk assessment, have to be seen as a window of opportunity to structure the framework of exchanges between different actors through standardized methods, mechanisms, indicators and monitoring processes (e.g the Covadis standard under the Flood Directive has been effectively applied).

**There is a large diversity of data around climate risk and cities.** However, a clarification of what the end-users need and want is necessary and is important before collecting/sharing them. The construction sector should be better integrated in data sharing and risk prevention (e.g. information on building, making buildings climate proof, build back better measures). The multitude of studies on the consequences of climate change and used databases should also be publicly available.

**Data sharing must be in compliance with the General Data Protection Regulation, competition law, and the specificities of each insurance scheme.** Climate related data contains personal information and elements for loss accounting and compensation, and the regulations must be considered fully to enable data to be shared.

**Pioneering examples of data sharing (e.g. in Norway Denmark and Spain) might be replicated** and tested under proof of concept to check enhancement of capacity building and local decisions-making especially on planning

## Recommendations

- Promote a call for climate smart financial management and higher insurance penetration, supported by the dissemination of information on good practices across EU.
- Support continued dialogue between insurers, experts and authorities and leverage the "bargaining power" with the insurance sector through supervisors, taxonomy and disclosures.
- Advance programs to scale-up nature restoration initiatives as part of the implementation of measures for climate resilient-smart cities and regions.
- Consider actions to support and incentivize insurance companies to invest more in green assets through a gain and/or a reduction of cost of capital in case of debts by the EU.
- Determine a set of minimum required parameters at EU level that should be monitored in climate change strategies, especially in urban areas.

**About the NAIAD Project (www.naiad2020.eu)**

The NAIAD consortium, led by the Duero River Basin Authority and I-Catalist, includes 23 partners from universities, research centres, SMEs, public bodies, non-profits, and public insurers. The project is dedicated to assessing the effectiveness of nature-based solutions in damage loss prevention. It developed methodologies to assess the natural assurance value of ecosystems in disaster risk reduction and climate change adaptation, considering co-benefits analysis, avoided insured damage and social acceptance of NBS. It highlighted effective processes to engage the insurance industry in NBS, CCA and DRR.