NAIAD

NAture **I**nsurance value: **A**ssessment and **D**emonstration

NEWSLETTER

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NAture Insurance value: Assessment and Demonstration

Natural Capital Market integration portrait: From Climate Finance to Insurance

Project NAIAD focuses on the **Insurance Value of Ecosystems (IVE),** which is: "the value of the sustained capacity of ecosystems to reduce risks to human society caused by e.g. climate change related excess precipitation, temperature or by natural disasters" (EC, 2015, page 19), specifically on benefits regarding **water-related disaster mitigation.** NAIAD aims to bring evidence of the protective roles of ecosystems, to provide **integrated hazard assessment methods,** to include **social risk perception** and **preferences,** and to tailor **innovative business models,** funding and financing strategies that allow the development of effective implementation strategies of **Natural Assurance Systems,** which embrace the **Insurance Value of Ecosystems.**

Funding and financing mechanisms for NBS

Both **funding** (payment for the investment made) and **financing** (mustering the up-front resources needed to be repaid over time by the funding) are necessary to implement Nature Based Solutions for increasing society's resilience against natural hazards. Many different mechanisms already exist, but the funding and financing sources for the implementation of NBS are lacking for various reasons: no clear beneficiary, no interest of beneficiary in funding them, lack of financing options, etc.

The objective of Project NAIAD is to propose **new ways** to **fund** and **finance Nature Based Solutions** (development of new business models). In this newsletter we present the existing mechanisms that could be used or adapted to develop NBS projects. The mechanisms detected with **higher potential for NBS implementation,** from the institutional nature of the source of money, can be **public, private** or **a combination of both**.

An additional source of financing can be available conditionally, e.g. after a catastrophic event, in the form of insurance. Find out more about the Insurance mechanisms in relation to NBS in our Newsletter #2.

Findings:

The implementation of Nature Based Solutions projects for increasing resilience against water related natural hazards need to clearly define the necessity of funding (who and how ultimately will pay for the investments made) and financing (the up-front resources needed to be paid over time by the funding). Financing can make use of a variety of instruments, such as grants, direct subsidies, tax incentives, loans (such as bonds), and others. Funding and financing mechanisms can be both public and private, with blended finance being a common option.

As **low potential mechanisms** we have detected:

- **Crowdfunding:** its major potential can be the same of microcredit (see below): relevant for financing small-scale Nature Based Solutions, e.g. on household level. Nevertheless, several limitations apply: loan size, maturity and risk aversion, risks for the crowd-lenders, the lack of guarantee about the quality of the investment or the ecosystem value.
- **Clean Development Mechanism:** high potential in developing countries, but not in Europe.
- **REDD+ (Reducing emissions from deforestation and forest degradation):** EU countries are not eligible to REDD funds for Nature Based Solutions.

As **medium potential mechanisms** we have detected:

- **Emission trading system:** NBS that capture a lot of CO2 could generate revenues by being able to sell more emission credits.
- **Microcredits:** could be particularly relevant for financing small-scale NBS, e.g. on household level.
- **Habitat banking** can be a useful mechanism to fund NBS projects to increase resilience against natural hazards, although they have limited flexibility in NBS design.

As **high potential mechanisms** we have detected:

- **Different public mechanisms:** they can be separated as public support mechanisms and public financing mechanisms.
  - **Public support mechanisms:** feed-in tariffs, tax credit programs, renewable energy quotas, standards, repealing support for "brown" sectors, grants, subsidies, project aggregation.
  - **Public financing mechanisms:** project lending, debt funds, bonds, concessional/flexible loan terms, direct capital investment, loan guarantees, insurance foreign exchange/liquidity facilities.

Concerning **public mechanisms,** particularly potential in the European Union needs to be paid to the **European Structural and Investment Funds** (ESIF), **European Regional Development Fund** (ERDF), **Cohesion Fund** (CF) and **European Social Fund** (ESF), the **European Agricultural Fund for Rural Development** (EAFRD) and the **European Maritime and Fisheries Fund** (EMFF). Of particular interest is European Commission commitment to mobilise EUR 500 billion in additional investments through the **European Fund for Strategic Investments** (EFSI) by 2020, targeted to several strategic sectors which include water, other infrastructure, agriculture, and the promotion of future-oriented initiatives, such as the circular economy and specifically climate mitigation and adaptation.

- **Public-Private Partnerships** and **Blended Finance** have a high potential of investment for projects providing public and private benefits, which is a typical characteristic of NBS projects, although business models need still to be defined and legally implementable.
- **Payments for Ecosystem/Watershed Services** and **Water Funds** are an existing business model that fit particularly well with NBS for DRR. The number of examples is growing worldwide, with water funds being a particular example that can be applied for NBS in DRR. In some cases, the particular social structure can determine the success of the instrument, and some legal or regulatory changes may be needed.
- **Environmental and social impact,** as well as **green and climate bonds** are particularly designed to finance, between other options NBS in DRR. There are as well existing working examples. They have a special potential to finance large scale projects or initiatives, usually developed by public institutions.
- **CatBonds (Catastrophe Bonds)** have special interest to implement NBS after a natural hazard has occurred, as preparation for future events. It can serve as well as incentive to the bond borrower to implement DRR measures, and therefore using NBS for it.
- **Resilience bonds:** There is a high potential, but there are legal and regulatory changes needed at an EU and/or national scale. They capture insurance value of Ecosystem Services by offering expected reduction in insurance claims. The size is too large for most common individual NBS projects.

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Key messages

1. The **European Commission** has the ability to reinforce and create harmonized linkages between **Climate Change Adaptation** (CCA) and **Disaster Risk Reduction** (DRR) policies and insurance businesses at the European scale. **New regulations** mainstreaming and facilitating ecosystem based-DRR measures are necessary both at European and national scale, to increase (re)insurers', public and private bodies involvement in the use of Nature Based Solutions for Disaster Risk Reduction and Climate Change Adaptation. This is an opportunity to promote risk awareness and risk reduction.

2. New **funding and financing schemes** are available to implement NBS for DRR, like **new public-private partnerships** (PPPs), **blended finance, payments for ecosystem/watershed services, environmental** and **social impact bonds, green and climate bonds, habitat banking** and **CatBonds.** Nevertheless, further investigation is needed to formalize these schemes into clear business models that can be used by the involved actors in the implementation of NBS.

3. 3. At EU level of particular interest is **European Commission commitment** to mobilise EUR 500 billion in additional investments through the **European Fund for Strategic Investments** by 2020 and the EU´s **Natural Capital Financial Facility.**

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About the NAIAD Project

'NAIAD' (Nature Insurance Value – Assessment and Demonstration) is an advanced, first of a kind, EU Horizon 2020 applied research programme focused on Nature Based Solutions (NBS) in risk management strategies, with a focus on water. NAIAD aims to operationalize the insurance value of ecosystems to reduce the human and economic cost of risks associated with water (floods and drought) by developing and testing - with key insurers and municipalities - the concepts, tools, applications and instruments (business models) necessary for its mainstreaming.

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