



Insurance value of Ecosystems (IVE) survey

Key findings

New insights into the **role of the insurance industry** addressing **disaster risk reduction** and **climate change adaptation** goals

Led by IRSTEA (Marchal, R., Piton, G., [Tacet, J.-M.¹](#)), I-Catalist (Zorrilla-Miras, P., Lopez-Gunn, E.) and Deltares (Altamirano, M.) with the support of all NAIAD DEMOs partners, reviewed by CCR' reinsurance experts (Moncoulon, D., Benlolo, D., Quantin, A.)

¹ presented by...



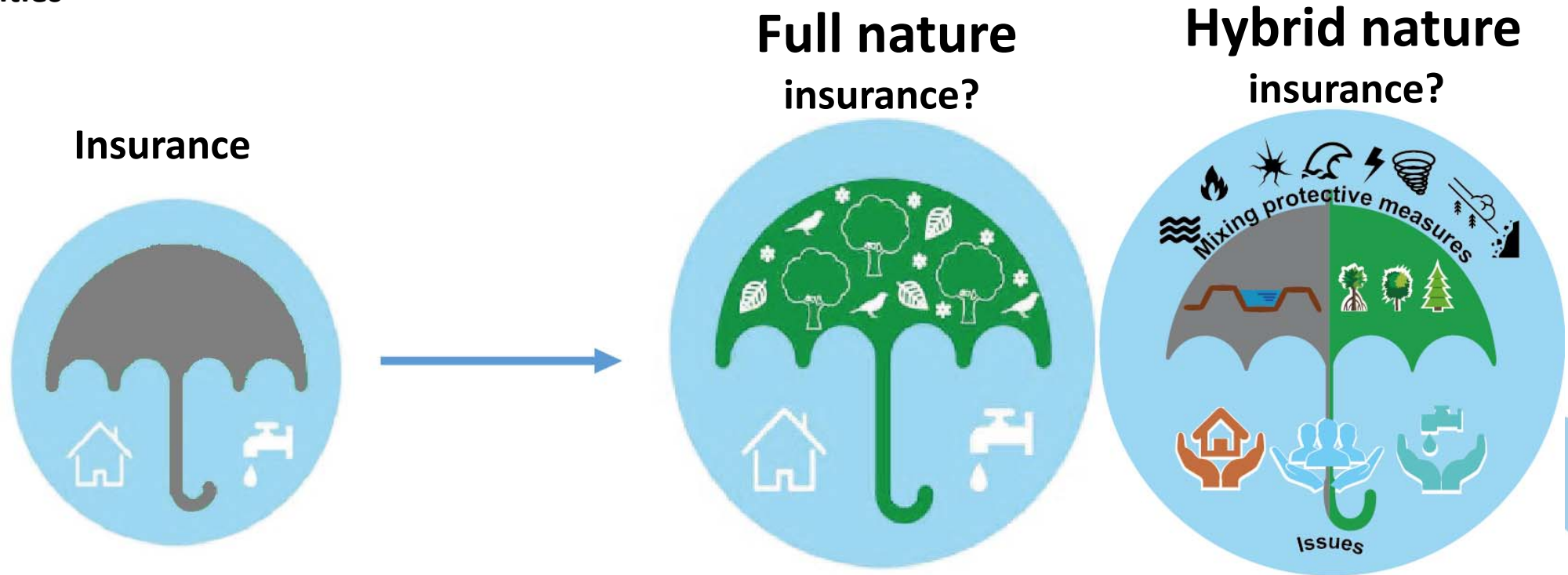
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Understanding insurance systems before considering ecosystems services insurance

NBS as “umbrella” term for **ecosystem-related approaches**

Objective is to **raise insurance industry knowledge on NBS**, increasing **risk perception** and **understanding of NBS capacities**



NOW

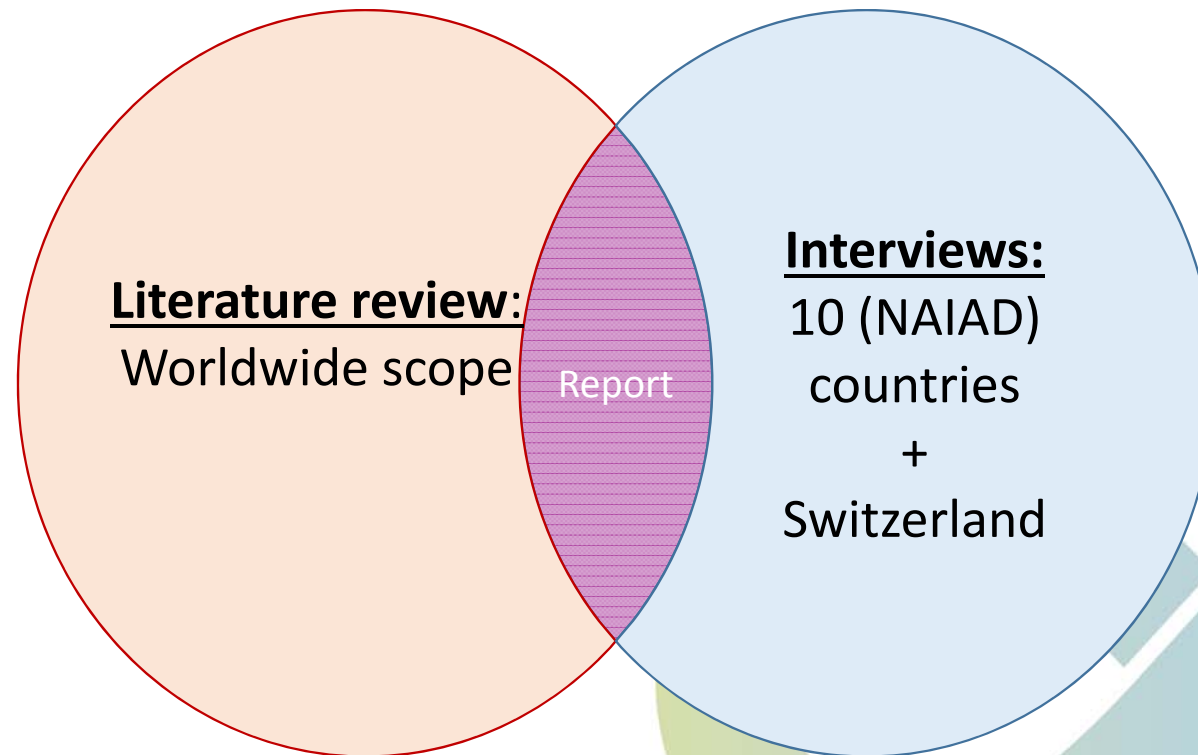
TOMORROW

Adapted from (EU, 2015, Final Report of the Horizon 2020 Expert Group on Nature-Based Solutions and Re-Naturing Cities

Funded by Horizon 2020 programme of the European Union (MARCHAL, R. et al., 2018)

➔ Insurance Value of Ecosystems survey's

A NAIAD (*Nature insurance value: assesment and demonstration*) contribution based on literature review and interviews with **61 executives' & actives' (re)insurance companies and linked stakeholders.**

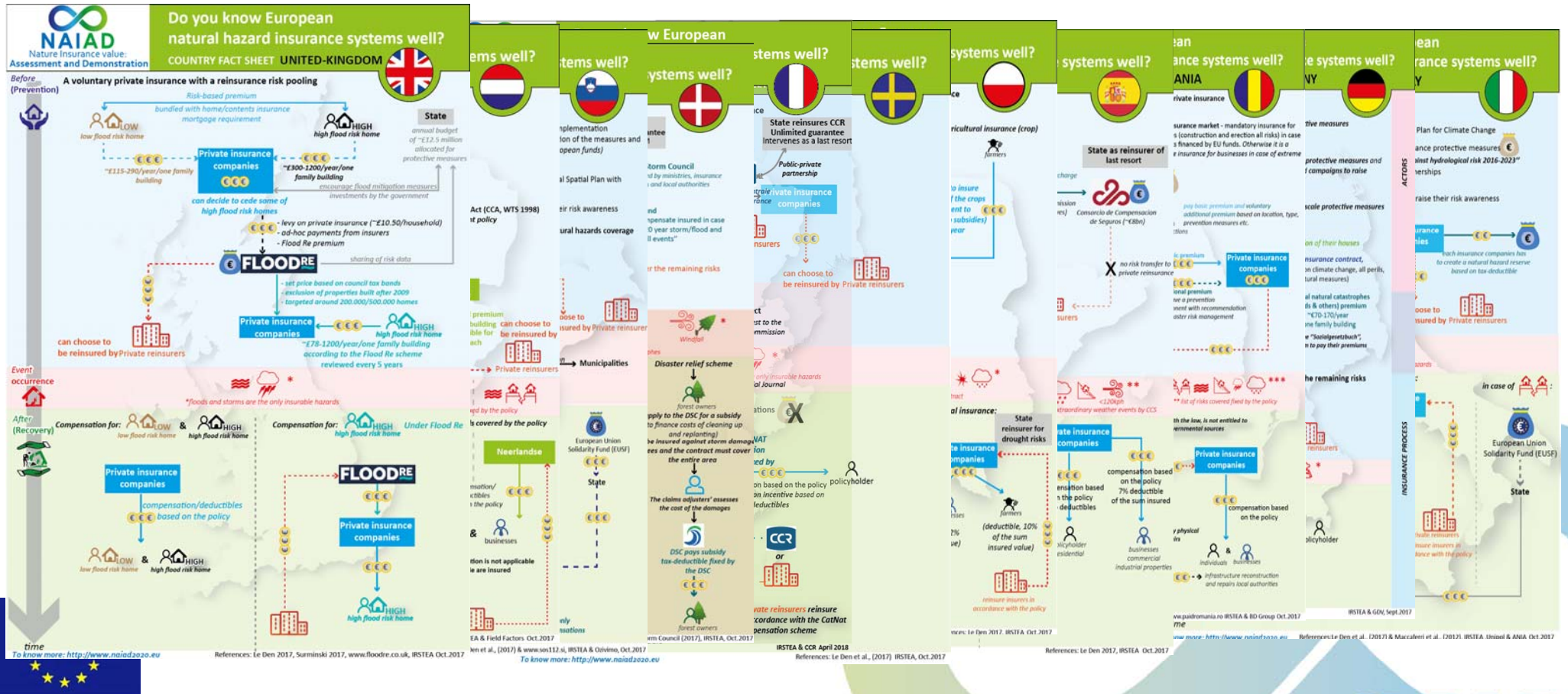


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Literature review, key points (1)

11 European natural hazards insurance business models have been analyzed

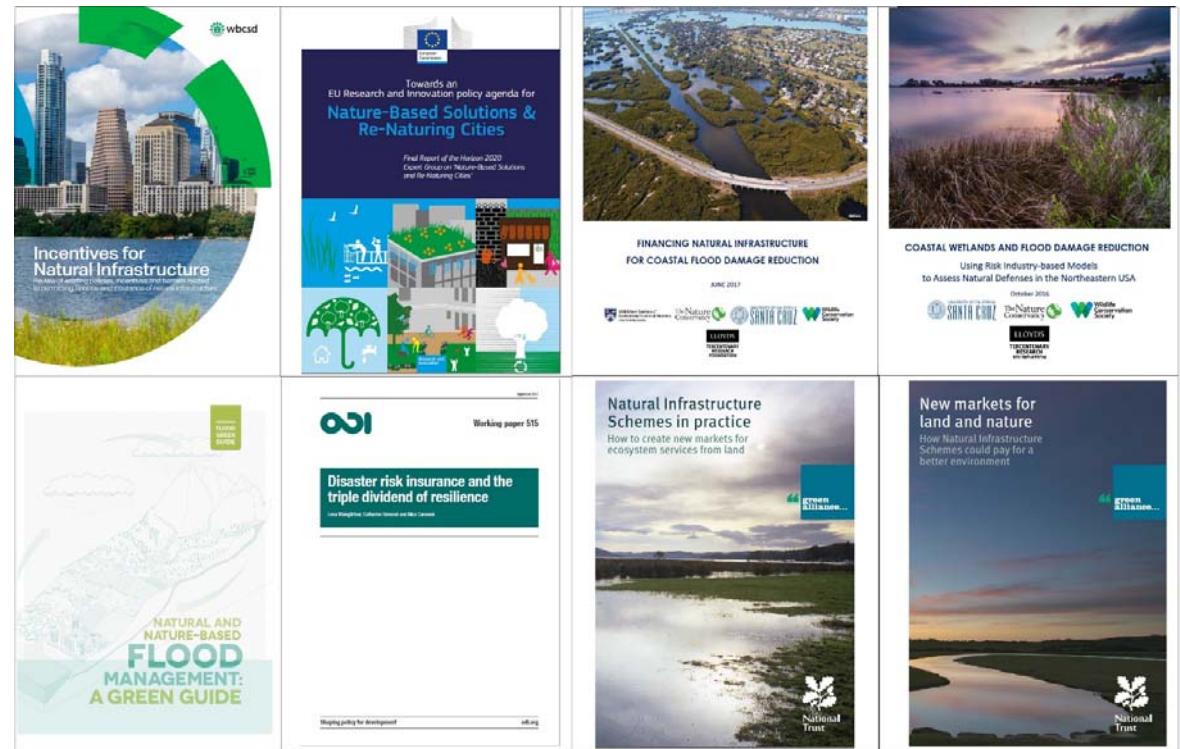


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Literature review, key points (2)

Insurers' views on disaster risk reduction

- Increasing natural disasters (€€€) → induce growing interest of insurers in DRR
- 1st report on CC by british insurers in 2014
 - **CC = threat and opportunity**
 - **“socially responsible”** = decrease protection gap and reduce negative impacts of disasters



Literature review, key points (3)

Insurance caused by disaster risk reduction. Insurers are challenged:

- to **reduce their exposure to risks**
- To move towards resilient risk management strategies → from **ex-post to ex-ante measures** using NBS
- To find **new sustainable investments**
- To **assess damage**



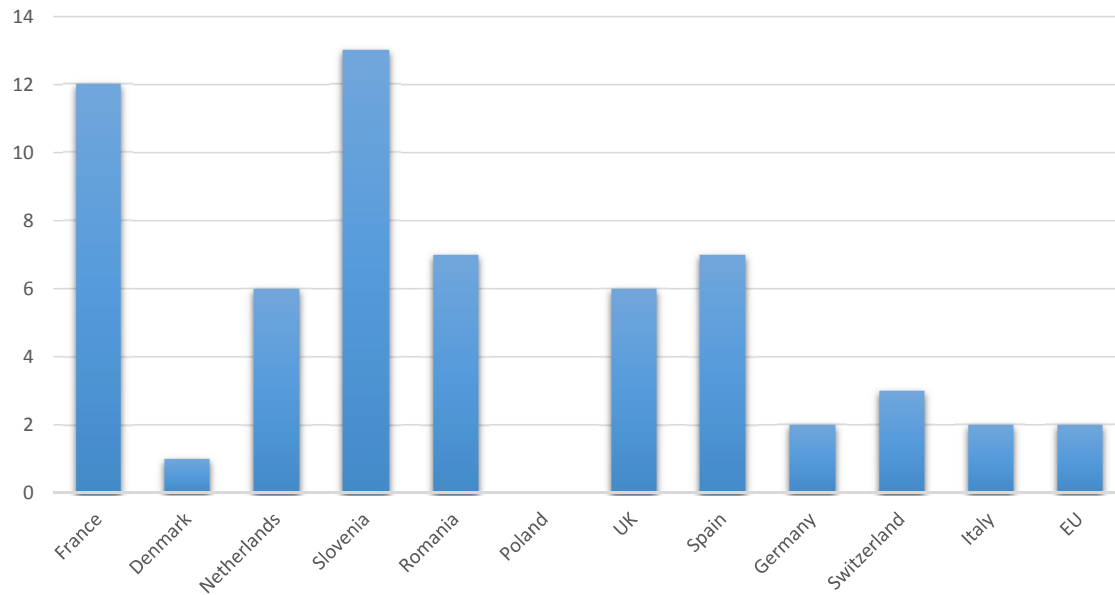
Literature review, key points (4)

Insurance addressing disaster risk reduction

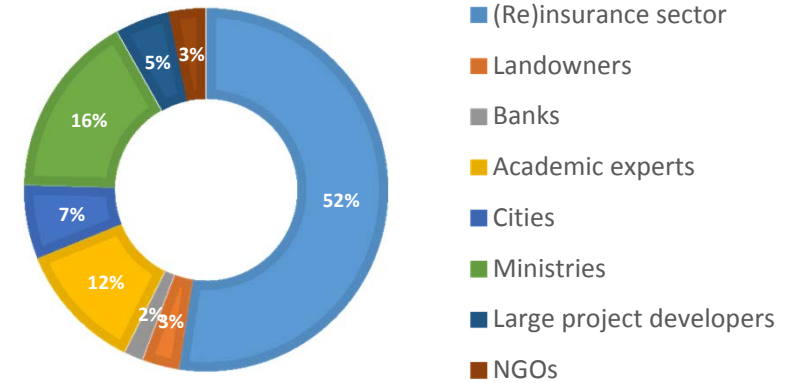
- New **partnerships** with **scientists** research on **NBS** and **IVE**
- **Insurance industry** works on **economic importance** of **ecosystems**, **decision-making process**, **damage assessment**, **sustainable financing**
(Cohn, 2017) “investment to conserve natural habitats also makes sense for insurers, a report written for Lloyd’s revealed, that it is around 30 times cheaper than building seawalls and “compared to expensive infrastructure, keeping ecosystems healthy prevents climate disasters, saves money and improves resiliency”.
- New **green investments**
 - **green/cat/resilience bonds** to finance NBS (i.e., measures or projects)
 - **Triple Dividend of Resilience** (Surminski, 2014, 2015) // Investment projects → CCA, DRR, preservation/restoration of environment
- New **insurance products**: parametric insurance (Mexico Coral Reef Insurance)

Interview results: key figures

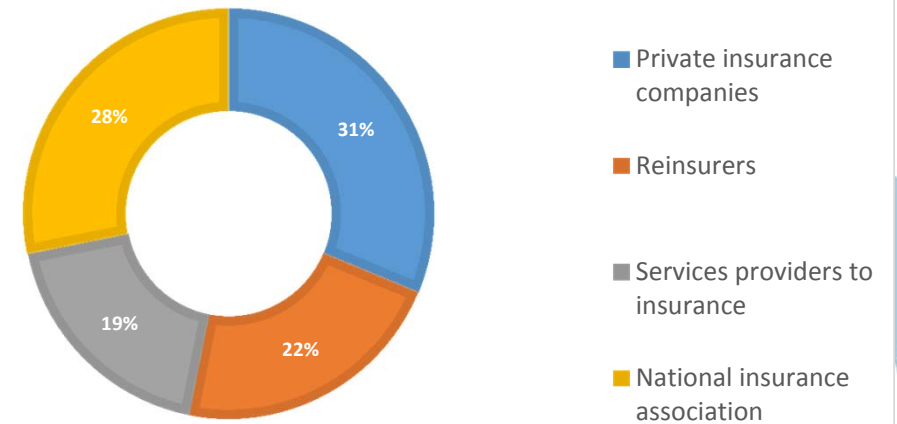
Number of interviews per NAIAD countries



THE PANEL OF INTERVIEWEES



INTERVIEWEES IN RELATION TO THE (RE) INSURANCE SECTOR



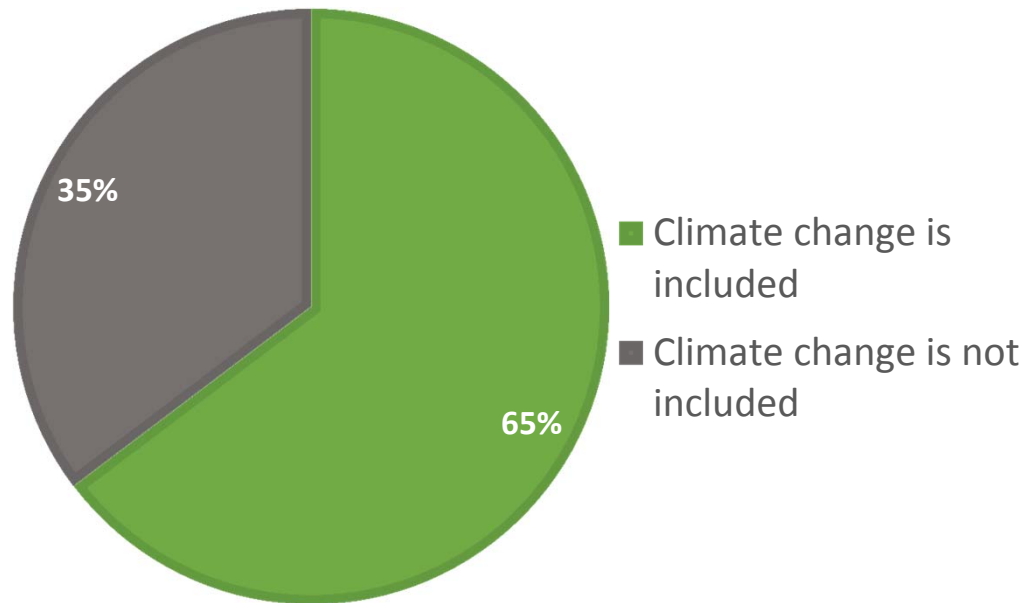
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NAIAD

Interview results (1)

The insurance industry vision of climate change

INSURERS' MODELS THAT INTEGRATE CLIMATE CHANGE

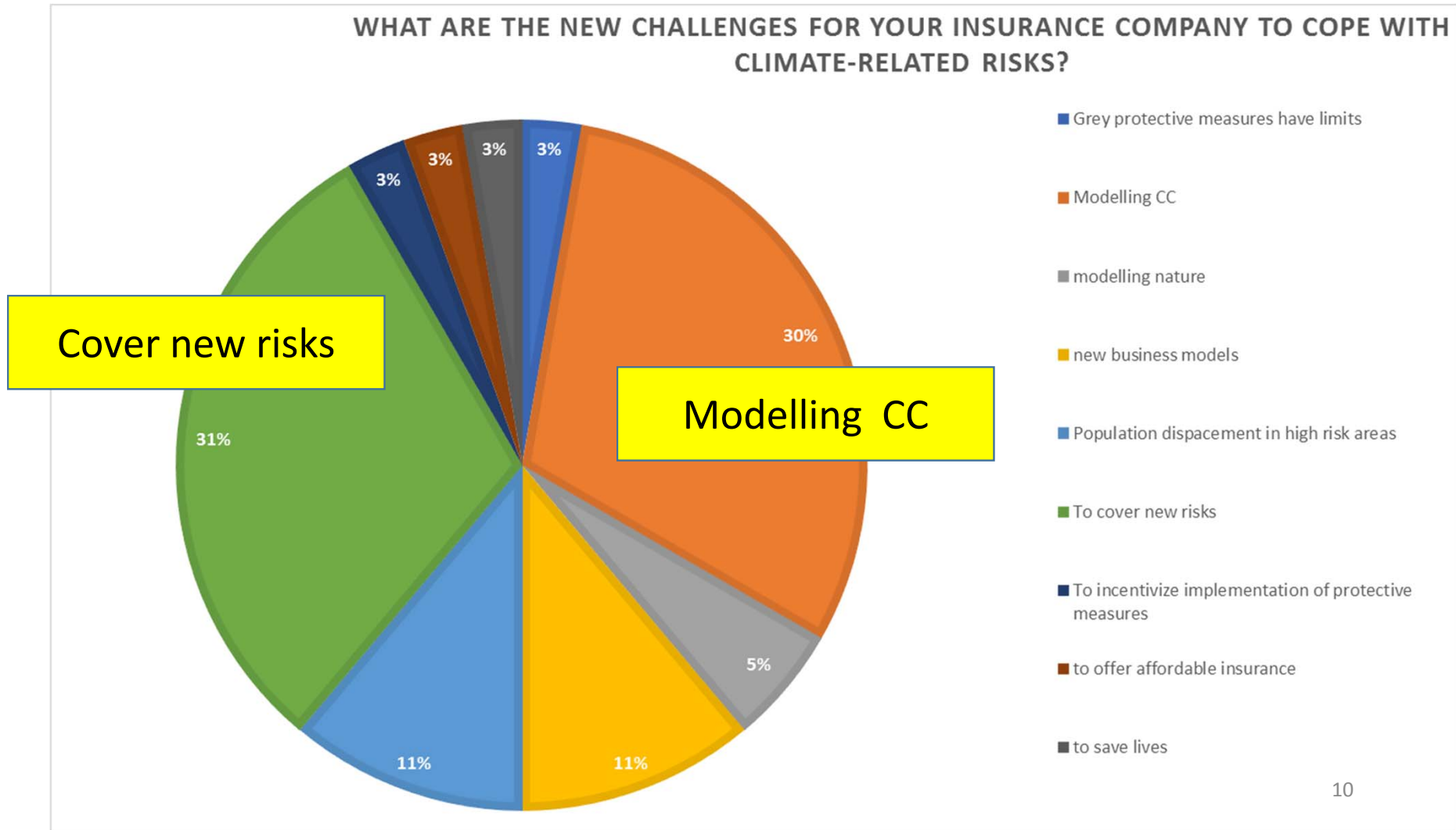


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NAIAD

Interview results (1)

The insurance industry vision of climate change



Interview results (1)

The insurance industry vision of climate change



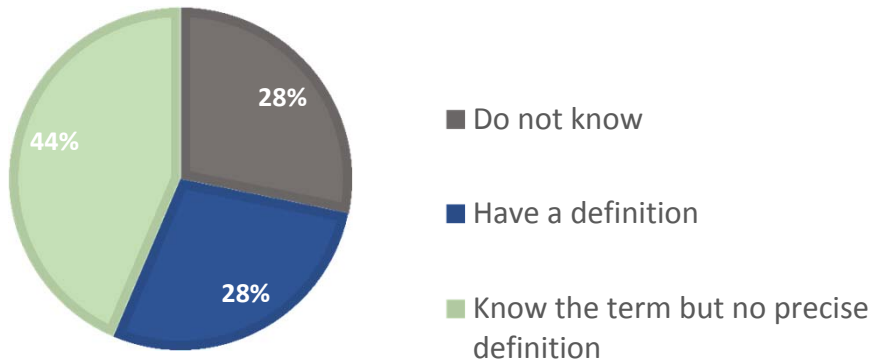
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Interview results (2)

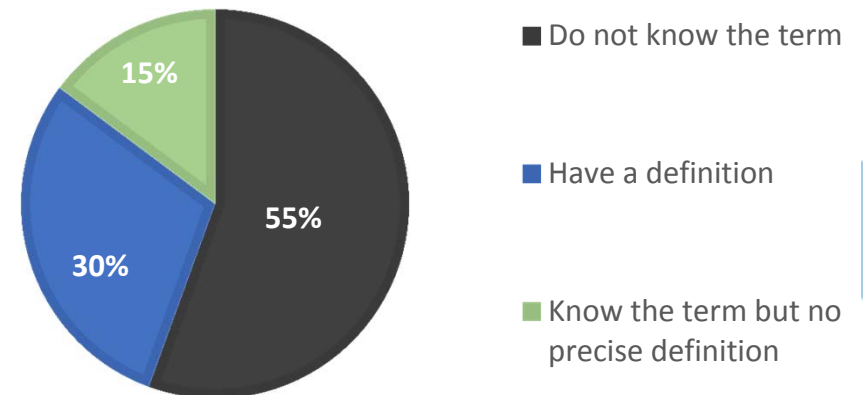
The insurance industry' understanding of nature-based solutions and insurance value of ecosystems (1)

Nature-based solutions and the insurance value of ecosystems are something new for the insurance industry with different emphasis

WHAT IS YOUR CONCEPTUAL UNDERSTANDING OF ECOSYSTEM-BASED DISASTER RISK REDUCTION?



WHAT IS YOUR CONCEPTUAL UNDERSTANDING OF INSURANCE VALUE OF ECOSYSTEM?

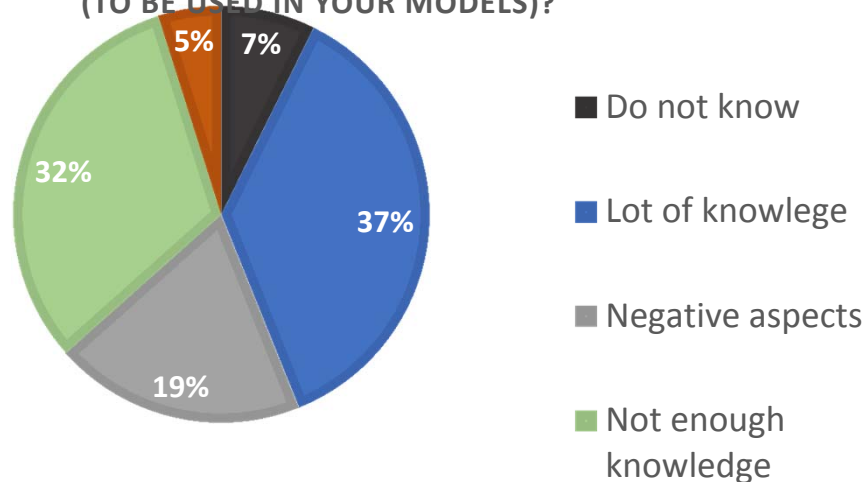


Interview results (2)

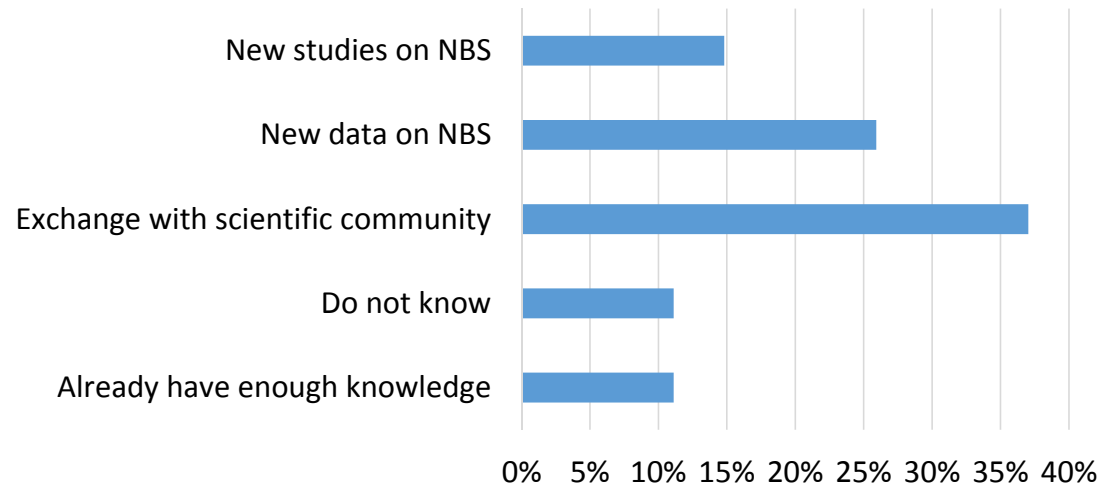
The insurance industry' understanding of nature-based solutions and insurance value of ecosystems (2)

(2) Our **interviews revealed that NBS/IVE challenge insurers' catastrophe modelling expertise is variably integrated into models**

WHAT IS YOUR CURRENT KNOWLEDGE OF THE EFFECTS OF ECOSYSTEMS IN RISK REDUCTION (TO BE USED IN YOUR MODELS)?



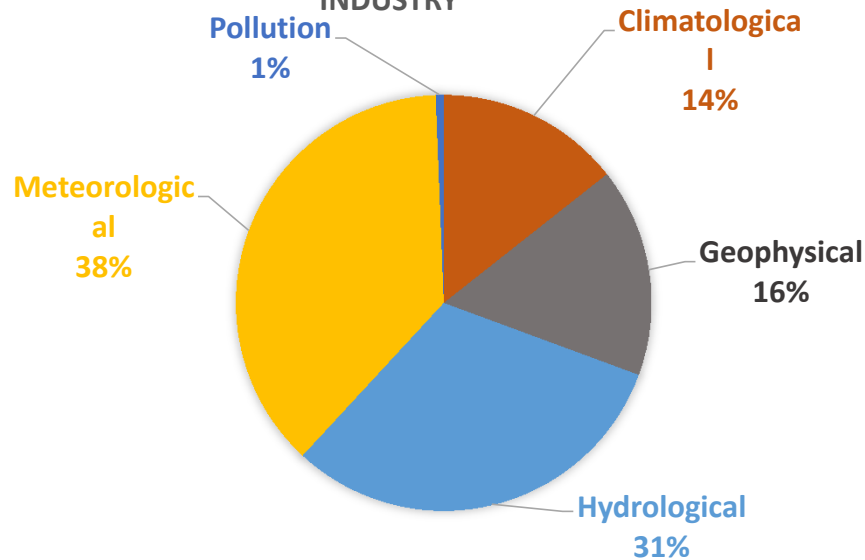
Which knowledge and tools would be required?



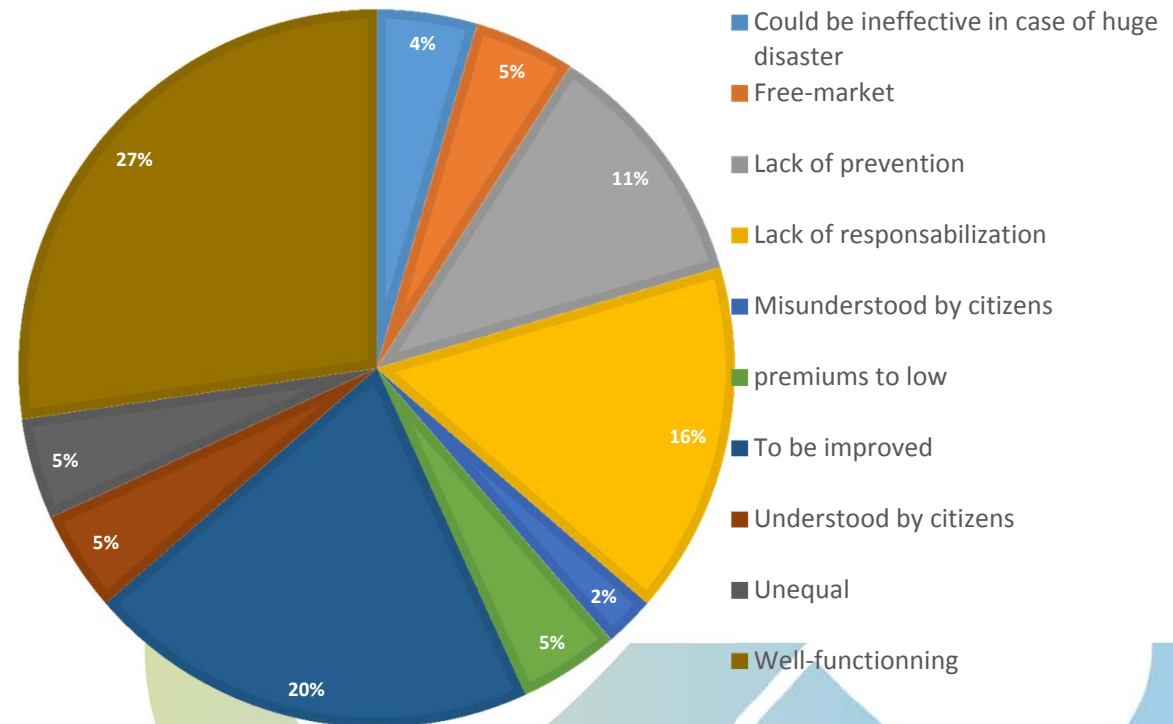
Interview results (3)

(Eco)-Disaster risk reduction is challenging the insurance industry

MAIN HAZARDS PERCEIVED AS RISKS BY THE INSURANCE INDUSTRY



HOW DO YOU EVALUATE YOUR OWN INSURANCE SYSTEM?



Interview results (3)

(Eco)-Disaster risk reduction is challenging the insurance industry

- A number of challenges exist to get insurers to participate in (eco)-disaster risk reduction. These challenges fall into four areas:
 - (1) afford **coverage** for weather-related hazards;
 - (2) increasingly **interest in DRR**;
 - (3) changing **business model**;
 - (4) changing **people perception of the insurance industry**.



Interview results (4)

Roles of the insurance industry in supporting (eco)-disaster risk reduction (1)

1. Insurers as **lobbyists**

2. Insurers as **providers**

→ Insurance of (green) protective structures is being considered by insurance companies in three ways, as: (i) a current liability and business interruption issues; (ii) a core business opportunity; (iii) a non-insurable asset.



Interview results (4)

Roles of the insurance industry in supporting (eco)-disaster risk reduction (2)

3. Insurer as investors

1. **Need for Sustainable and Responsible Investments (SRIs)** (i) to **decrease their own risks and costs**; (ii) to **diversify their investments** through **environmental governance**.
2. **Return on investments from non-life insurance is positive**
3. **Need for long-term investments** (i.e., natural infrastructure projects, monitoring of those projects, and raising awareness)
4. Intervention into the **bond markets**, with a strong willingness to issue green bonds, to participate into **sustainable finance** and **circular economy**

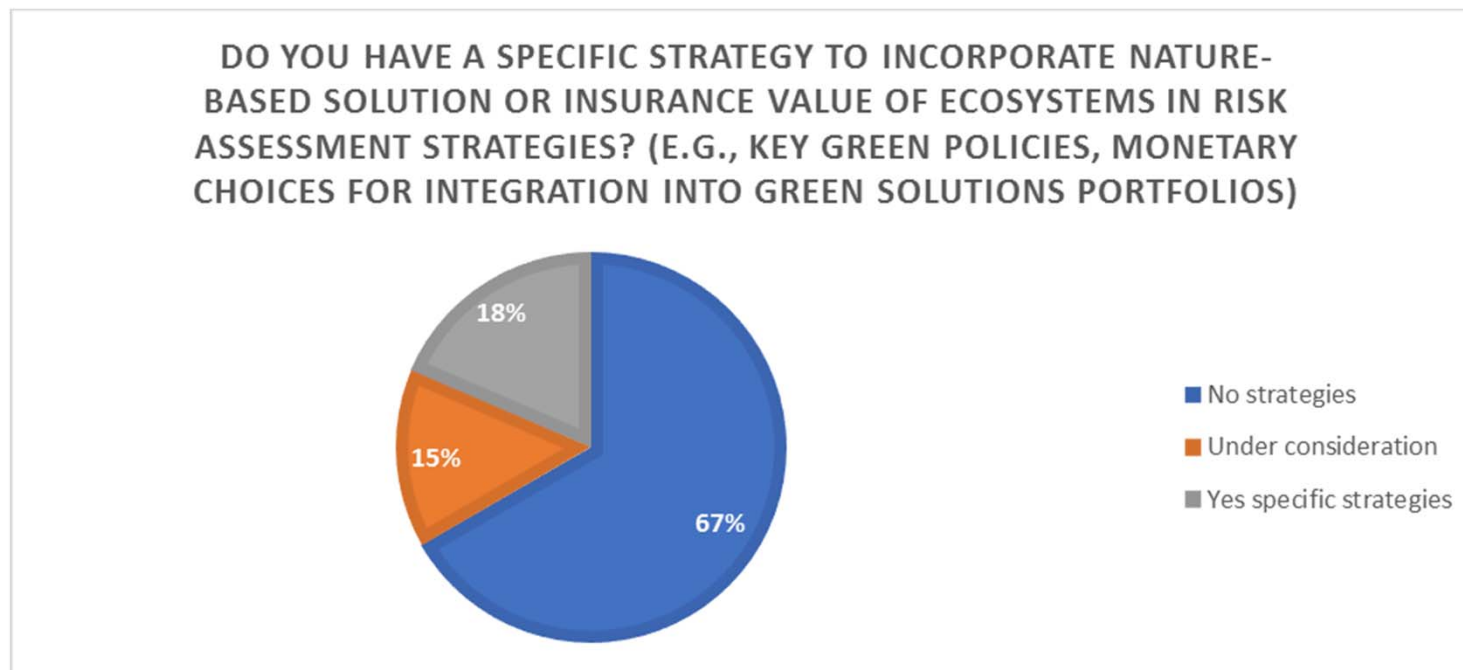
Some limits for the insurance industry to invest in disaster risk reduction measures.



Interview results (4)

Roles of the insurance industry in supporting (eco)-disaster risk reduction (3)

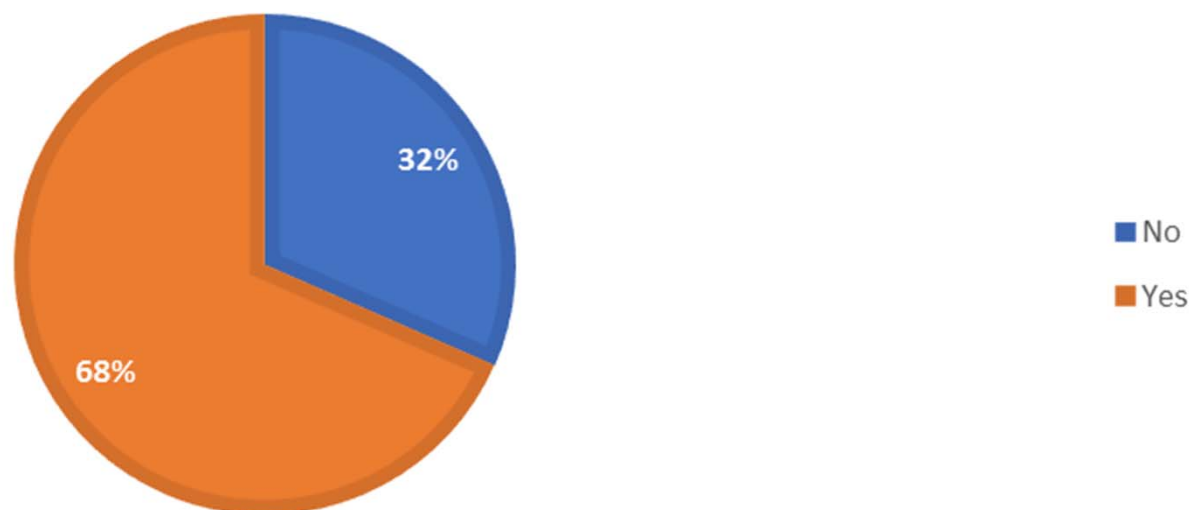
4. Insurance as partners, Insurers, as social actors, are also institutional partners for society's resilience



Interview results (5)

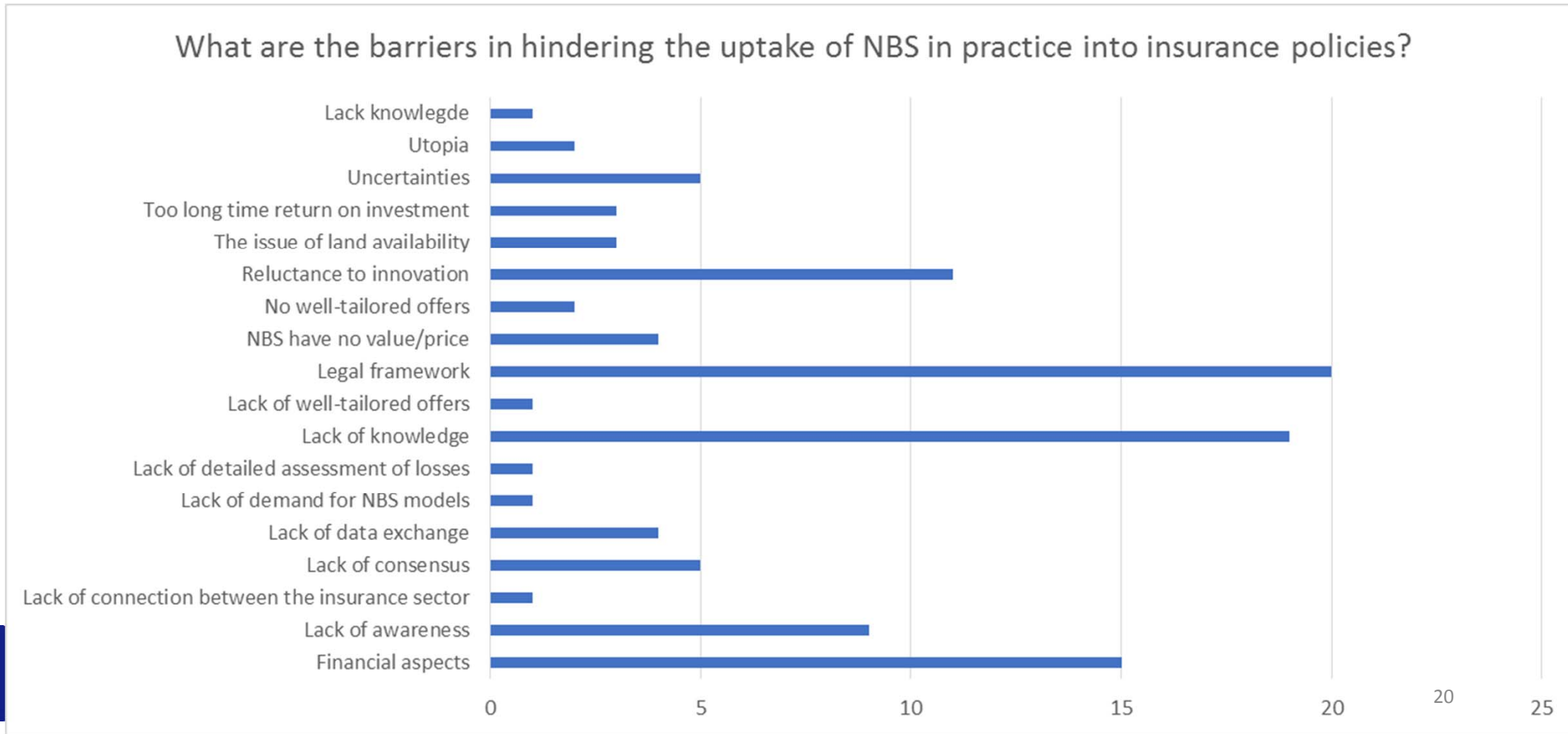
Relationships between the insurance industry and the European Union for DRR

DO YOU THINK THOSE NEW BUSINESS MODELS COULD BE CREATED BY COMPANIES OR SHOULD IT BE IMPOSED BY EUROPEAN REGULATIONS?



Interview results (5)

Relationships between the insurance industry and the European Union for DRR



Insurance Value of Ecosystems survey's conclusion

- Our interviews allows us to **discuss** one **NAIAD's objective** *“leading to **lower premiums for land and property insurance policies and decreased public costs for risk management and reduction**”*.
- **Insurance industry** is **increasingly involving** and **challenging** in climate change and **disaster risk reduction** issues as lobbyists, providers, investors and partners.
- **New** (or confirmed) **insights** into the **role of the insurance industry** addressing **disaster risk reduction (DRR)** and **climate change adaptation (CCA)** goals.
- It highlights the **insurance industry's value proposition** and **efforts to resilient society** and to **support the transitioning to ex-ante disaster risk management**.
- It proposes **key recommendations** for multiple stakeholders to tailor new business models.



(Possible) follow-ups

Linking with Climate change adaptation (CCA) / Disaster risk reduction (DDR) Directives, to study the opportunity of **harmonization linkages between DRR and insurance policies** should be considered

Mainstreaming eco-DRR measures could be done through **Private Public Partnerships to unlock insurers' contribution to CCA and DRR** : a way to promote risk awareness, risk reduction and to bridge the knowledge gap in the insurance industry on prevention measures.



Some (Possible) follow-ups

To think about **European** and **national roadmaps** for **sustainable insurance**...However there are divergent opinions on the opportunity of an unified (mandatory) EU process.

To keep on working on **NBS' effectiveness assessment**. Multifactorial testing projects, evaluation frameworks are still useful to characterize the applicability of NBS for NBS implementation **future policies** or **pre-standards**.

To keep on developping or adapting decision-making tools. Integrated, approaches are needed to consider all multiple benefits and consider resilience improvement in addition to (classical) risk reduction.





Thanks for your attention!

