

Results of studies of the European Commission and the European Environment Agency

Francisco Espejo Gil

Senior Expert

Consorcio de Compensación de Seguros

European Commission study of the insurance of weather and climate-related disaster risk

In August 2017, the European Commission published its report on “Insurance of weather and climate-related disaster risk: Inventory and analysis of mechanisms to support damage prevention in the EU”.

The European Commission contracted this report from the consultancy Ramboll and the Institute of Environmental Studies (IVM) at the Amsterdam Free University with the objective of advancing knowledge of the situation as regards the issue of this kind of insurance across the Member States, comparing the efficiency of the systems in operation for property insurance and agricultural insurance, and flagging up a set of recommendations and actions defined by identifying shortcomings and best practices, for both the Member States and the European Commission itself.

The report serves to feed into current discussion in Europe on the role of insurance in relation to disaster risk which is partly built around the [Green Paper on the insurance of natural and man-made disasters](#), published in 2013 and also closely allied with EU adaptation strategy. The study also falls within the context of the European Commission's plan of action to implement the Sendai Framework for Disaster Risk Reduction 2015-2030, the mechanisms of which include those directed at funding disaster risks, transferring risk and insurance.

The study examines the European systems that cover weather and climate-related disaster risk and uses multi-criteria analysis (MCA) to delve into the cost-effectiveness of such insurance systems. Finally it defines a set of next steps to take when it comes to the matter of insuring damage caused by disasters of this kind.

The systems assessed were those in twelve European countries which in some way or other provide insurance coverage for different sectors (residential property, business premises and the agricultural sector) against hazards such as flooding, drought or wind-storms. The countries involved are Germany, Austria, Bulgaria, Denmark, Spain, France, Italy, Hungary, Poland, the UK, Romania and Sweden.

The MCA weighs up five evaluation criteria: 1. Insurance penetration rates, 2. Risk signalling and risk reduction incentives, 3. The affordability and availability of insurance, 4. The swiftness of pay-outs and 5. The overall solvency of the insurance mechanism. Three weighting schemes were defined according to separate objectives for risk management. Scheme one emphasises the solidarity and depth of coverage, while scheme three stresses the ability of



The findings of the study begin by verifying that there is no clear correlation between the increase in loss experienced and any rise in hazards, but instead it appears that this increase is due to greater exposure of assets and infrastructure in hazard-prone areas. Subsequently there is discussion of the role of insurance beyond merely providing compensation for losses such that it might become a tool to managing risk and enhancing resilience.

insurance to act as an adaptation signal or risk management incentive, and scheme two is a half-way house between the other two, which encourages cooperation between the public and private sectors. The study later goes on to focus on the systems which throw up the best scores in each of the three weighting schemes in the MCA.

The findings of the study begin by verifying that there is no clear correlation between the increase in loss experienced and any rise in hazards, but instead it appears that this increase is due to greater exposure of assets and infrastructure in hazard-prone areas. Subsequently there is discussion of the role of insurance beyond merely providing compensation for losses such that it might become a tool to managing risk and enhancing resilience. In other words, the role insurance might come to have in signalling risk levels via its premiums, thereby incentivising insured parties to take steps to reduce their vulnerability. Even so, there is also mention of the problems of compatibility that exist between reflecting the risk level in the premium and affordability, and therefore in achieving a high degree of insurance penetration. In general among the countries studied there tends to be greater importance attached to favouring affordability and higher penetration rates than to signalling the risk level via the insurance premium. The most usual incentives in risk management are through using deductibles and awareness campaigns.

With respect to property insurance, the study pinpoints practices that have a high or a low score or performance in the analysis. Among those features that are high-performing are multiple extreme weather risks combined into a single policy, linking this kind of insurance with a common property insurance policy, collaboration between the public and private sectors to achieve a common goal, and the presence of a national pool for (re-)insuring disaster loss. In cases of extreme weather risks (flooding, wind, etc.) these have to be insured separately or else there is no legal obligation to insure against such risks. Generally speaking, where there is low insurance penetration or the population expects direct public compensation for disaster damage, the insurance systems do not work well.

In the case of agricultural insurance, details are also given of which system traits perform well or badly. Agricultural insurance shows good results when multi-risk insurance is used which focuses on farming yields, there is a requirement to insure all cultivated land, multi-risk policy premiums are directly subsidised, there are pooled insurance structures or public reinsurance schemes for systemic risks, such as, for example, droughts, and there is a tradition of collaboration among public and private sector risk managers. Nonetheless, systems perform badly when insurance products are only available for specific and partial risks, only a certain type of crop can be insured, and when government aid is not tied to a requirement to be insured.

With respect to the results of the multi-criteria analysis, according to weighting scheme one (where the emphasis is on solidarity and coverage), the systems which performed the best are those from France and Spain for property insurance and those of Austria and Sweden for agricultural insurance. Turning to weighting scheme two (a balance between objectives and private sector involvement) the systems which performed the best as regards property insurance are those in France and the UK (the Spanish one is third) and with respect to agricultural insurance the best are Austria and Spain. For weighting scheme three (insurance as a tool for adapting and incentivising to mitigate risks), the systems which performed the best are those in France and the UK for property insurance, and those in Spain and Austria for agricultural insurance. The study singles out the Spanish system for agricultural insurance as a “source of inspiration regarding reforms for crop insurance markets across Europe”.

The study makes a series of policy recommendations concerning:

Property insurance:

- 1a) Promote the bundling of a complete extreme weather event insurance package with fire insurance policies (or others that are similar and have a high demand for them).
- 1b) Ask the banking industry to make taking out insurance mandatory for mortgage loans to be granted.

- 2) Establish mechanisms (loans, subsidies or tax relief) for low-income households to be able to afford weather insurance coverage.

- 3a) Establish minimum building standards or build-back better requirements for damaged property, differentiated by risk levels when issuing insurance policies.
- 3b) Create a surcharge on insurance policies to provide direct funding for building infrastructure geared towards risk reduction or to subsidise risk reduction measures in households.
- 4a) Introduce a requirement for risk management plans as well as national strategies to adapt and apply loans of national or European funds so they include insurance mechanisms to manage risks that cannot be prevented in a cost-effective way for the purpose of building insurance into national discussion on adaptation.
- 4b) Create a national focal point or authority to develop and maintain a legal framework whereby extreme weather risks can be managed via a blend of risk management and transfer.
- 4c) Define roles and duties for all stakeholders within a national platform, focal point or authority in a clear and transparent way which can be treated as a "social contract" among all the sectors involved in risk management.

Agricultural insurance:

- 5) Redirect premium subsidies towards combined multi-peril agricultural insurance policies. Each individual risk can contribute to the overall premium in line with its specific level.
- 6) In order to reduce the presence of adverse selection in agricultural insurance and only insuring high-risk land, insured parties should be obliged to cover all arable land as part of the terms and conditions of the policy.
- 7a) Link access to wider agricultural subsidies (for example, those relating to the common agricultural policy, or CAP, or those offered nationally) to the purchase of insurance protection to develop a culture of being insured.
- 7b) Develop an agricultural risk management association with a focus on protecting producers against income variations due to crop yields (for example by supporting multi-risk yield insurance or taking risk reduction measures) within a mutual or not-for-profit organisation.



As part of the process of conducting the study, a series of consultations were made with numerous stakeholders from the insurance industry, academics and other types of associations and related organisations. For example, on the Spanish side, experts took part in these consultations from the State Agricultural Insurance Agency (ENESA), Consorcio de Compensación de Seguros (CCS), the Insurance Business Association (UNESPA) and the company Agroseguro. As a result of the round of consultations, another set of policy recommendations has emerged:

- 8) Promote research with the aim of defining and quantifying resilience to support risk awareness and reduction, and a focus on how insurance can enhance economic resilience.
- 9) Support the use of farm income insurance via pilot initiatives in various Member States.
- 10) Create a working group in the European Commission that enables cross-Directorate General collaboration as well as coordination with national bodies.
- 11) Recommend that cities assess their vulnerability with regard to insurance penetration rates, including for municipal infrastructure and extreme weather events covered, as well as reporting on how they use insurance as a risk management mechanism.

- 12a) Promote the use of data on insured loss to assess municipal risks.
- 12b) Promote the sharing of risk, hazard and damage data among the various stakeholders through the standardisation of the formats of both data and metadata.
- 13) Promote the use of community rating systems for setting premiums.
- 14) Promote risk transfer by allowing cities to set up pooled insurance schemes.
- 15) Increase capacity building with regard to insurance and climate resilience.

Besides these sector policy recommendations to be implemented fundamentally in national markets, the study makes another set of recommendations that are specifically aimed at the European Commission and can be summarised in the general recommendation that the European Union should take on the role of the facilitator of debate and provide platforms for collaboration among the various stakeholders, while promoting the use of insurance to heighten resilience to extreme weather events and, most importantly, to raise awareness and reduce risks. These recommendations are:

- 1) Increase the requirements or recommendations for Member States to assess their vulnerability with regard to insurance penetration rates and hazards covered, as well as for them to report on how they use insurance for managing risks.
- 2) Include an *ex ante* condition for access to European Structural and Investment Funds that is associated with assessing insurance vulnerability and the usage of insurance as a risk management tool.
- 3) Fund a study with the goal of defining and quantifying resilience at EU level with a focus on how insurance can enhance economic resilience.
- 4) Promote the use of insurance programmes that support damage prevention in the Member States.
- 5) Increase the proportion of funds for the second pillar of the CAP that focus on the risk management tool, including insurance schemes for crop and livestock production, as well as mutual funds and an income stabilisation tool.
- 6) Support and facilitate the creation of a national focal point or authority for developing and maintaining a legal and institutional framework for managing extreme weather events via a combination of risk management and transfer. Likewise, supporting and facilitating the creation of an agricultural risk management association.
- 7) Create a working group within the European Commission that enables cross DG (Directorate General) collaboration, the raising of awareness and stakeholder collaboration, as well as coordination with national bodies.
- 8) Fund projects intended to increase the capacity of cities to use insurance as a risk management tool and to insure infrastructures.
- 9) Create dialogue among the insurance industry, municipalities and national bodies on how to develop community rating systems and insurance pools for municipal risks.

To summarise, this study brings new and interesting elements into discussion of the role of disaster insurance in Europe and of integration of the various insurance programmes within the frameworks for disaster risk reduction and climate change adaptation at the various different levels of government.

European Environment Agency report on “Climate change adaptation and disaster risk reduction in Europe: enhancing coherence of the knowledge base, policies and practices.”

Working from the basic assumption that climate change adaptation is merely disaster risk reduction over a longer time horizon, the European Environment Agency embarked on a study with a team of numerous multi-disciplinary experts from all across the continent with the mission of enhancing coherence between both concepts, seeking out synergies among the various different stakeholders concerned and aligning knowledge, policies and practices. The study gave rise to a [report](#), published in October 2017.

Given the already confirmed significance of the impacts of climate change, the worrying forecasts and the diverse range of initiatives and solutions that exist on a national and Europe-wide level, for both disaster risk reduction (DRR) and climate change adaptation (CCA), this study would seem to be justified. It points out what the most substantial observed and expected impacts are, specifies the features of DRR and CCA policies and, above all, identifies actions and good practices where there is consistency between both concepts using a series of selected case-studies.

Such coherence between DRR and CCA is achievable through developing a high-level strategic vision and local-level engagement of key actors. This integrating strategic vision can be put into practice by developing national long-term programmes supported by adequate funding that includes innovative instruments to finance risk. The six cases presented refer to:

- 1) Development of long-term planning in the Netherlands, where the central government, water boards, provinces and municipalities are working together so that the Delta Programme can continue to allow effective water management which is resistant to climate impacts. In this case the DRR and CCA are working in parallel and sharing the same data.
- 2) The role of insurance in contributing to the enhancement of society's resilience and coherence between DRR and CCA, incentivising risk prevention, improving the level of its knowledge and fomenting understanding and the active engagement of everyone concerned. A little further on we shall flesh out what exactly this example involves, which is key to a publication such as this.
- 3) The combination of a national agenda with local implementation and integration, which leads to effective DRR and CCA strategies, as in the case of the decentralised system for natural risk management and civil protection in Switzerland. The federal authorities establish the general principles and the cantons and municipalities put them into practice at ground level.
- 4) National risk assessments as a base for both DRR and CCA given that they contribute to a better understanding of risks and provide information on tolerance thresholds.
- 5) City networks, which are important mechanisms for getting major cities involved and for supporting capacity building for DRR and CCA policies and sustained and sustainable action.
- 6) Financing nature-based solutions (NBSs) as an effective approach to adapt climate change and reduce disaster risks.

Expanding a bit on the second case in the study, about insurance, the report cites the example of combining risk transfer and mitigation policies in public private partnership under the Spanish extraordinary risks insurance scheme managed by Consorcio de Compensación de Seguros (CCS). Regarding this model, where the involvement of the private insurance sector is essential to its functioning, the study highlights the broad base of insured parties and the combination of risks covered, as well as the adaptability of the model. It likewise underlines the central position of the CCS in cooperation with agencies such as the Spanish Bureau for Climate Change, the Spanish State Meteorological

Agency, the Directorate General for Water and the Directorate General for Civil Protection and Emergencies, as well as other institutions within the academic and research sector, whereby there exists a joint cooperation strategy as regards matters of both climate change adaptation and disaster risk reduction. As regards the latter, data from the CCS shows that, despite the rising trend in hydro-meteorological damage in Spain, essentially as a result of increased insurance penetration and risk exposure value, the cost of claims ex the inflation effect has been reduced four-fold in the past 40 years, which bears witness to a significant reduction in risk and the effectiveness of early warning measures, emergency management, the raising of awareness in society, and territorial and infrastructure planning to reduce damage. It similarly shows that, although in the case of Spain extraordinary risk insurance premiums do not reflect the risk level in terms of individual exposure, and they are instead calculated overall, this fact has not stopped there being such a substantial reduction in risk.

Even though the report focuses on the case of Spain, it also refers to the French natural disaster insurance model and the recently established British model of flood insurance.