

# Bridging the natural disaster insurance gap: Between market failure and legal obligation. A comparative approach

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## *A. Introduction*

As climate change increases, the frequency and severity of natural catastrophes, the financial burden on individuals, businesses and governments are growing. There is still a significant protection gap in the natural disaster insurance market. The main purpose of this paper is to provide a comprehensive analysis of the effectiveness of currently existing legal frameworks and to identify universal principles that would allow to develop an insurance coverage model in the field of natural risks. First, it is necessary to consider whether the natural disaster insurance policies currently on offer provide adequate insurance coverage. This is important in the context of the distribution rules under the Insurance Distribution Directive. Residential property/household insurance plays a key role in this area nowadays.

The next question is whether to introduce compulsory natural disaster insurance. This raises not only legal questions, including the constitutionality of such solution, but also social and economic ones.

By adopting a comparative approach, this study examines how different jurisdictions address the natural disaster insurance gap. Additionally, this paper integrates an interdisciplinary perspective, drawing insights from law and economics, behavioural science and environmental policy to evaluate whether legal provisions incentivise risk mitigation or lead to moral hazard. In this way, the paper explores the role of sustainability in different legal systems. The presented topic shows an interplay between public and private enforcement.

Against this background, among others, the following research questions should be posed: 1) What are the legal, economic and social implications of a gap in natural disaster insurance? 2) How do the different insurance models (voluntary or compulsory) affect the availability of insurance for all? (idea of sustainable finance) 3) Does compulsory natural disaster insurance create a moral hazard or can it be an effective way of managing natural disaster risks? The study is based on case law analysis, doctrinal and regulatory interpretation of EU, Polish and German law. The analysis also includes solutions adopted in Switzerland, Spain and France.

### *B. Insurance gap and its consequences*

Insurance gap is defined as any financial losses suffered as a result of particular events that have not been covered by insurance, either under the private or public model.<sup>1</sup> For a couple of years, a worldwide increase has been noted in the number of extreme weather phenomena that are a consequence of global warming. As a result of climatic changes, also natural

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1 \* This research was funded in whole by the National Science Centre, Poland, project number: 2021/41/N/ HS5/02285. For the purpose of Open Access, the author has applied a CC-BY public copyright licence to any Author Accepted Manuscript (AAM) version arising from this submission. Article financed from funds available under a project of the National Science Centre, Poland, project number: 2021/41/N/HS5/02285.

Polska Izba Ubezpieczeń, 'Polacy i ryzyko – jak się ubezpieczamy? Luka ubezpieczeniowa w Polsce' (2024), [https://piu.org.pl/wp-content/uploads/2024/05/PIU\\_luka-ubezpieczeniowa\\_low\\_21\\_05\\_24.pdf](https://piu.org.pl/wp-content/uploads/2024/05/PIU_luka-ubezpieczeniowa_low_21_05_24.pdf) (last accessed: 31 August 2025), p. 6.

disasters strike with growing intensity, especially in the form of floods, flash floods, torrential rains or fires.<sup>2</sup>

## I. A growing insurance gap

Between 1980 and 2023, weather- and climate-related events caused total economic losses of more than EUR 790 billion across the 38 European Environment Agency member and partner countries. During this period, the gap in insurance coverage was significant. In most countries, more than half of the losses were not insured, and in many instances the share of uninsured losses was above 90 %.<sup>3</sup> In Germany, in 2020, only about 46 % residential buildings were insured against damages caused by natural forces.<sup>4</sup> This means that more than a half of all residential buildings in Germany are not insured against floods, torrential rains or landslides. According to data from the Polish Insurance Chamber, 73 % of single-family residential buildings are insured, while 63 % are covered against the risk of flooding. The figures are lower for multi-family buildings and dwellings, with only 41 % and 36 %, respectively, insured against flooding.<sup>5</sup>

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2 European Insurance and Occupational Pensions Authority, 'Dashboard on insurance protection gap for natural catastrophes in a nutshell', EIOPA-24/473, [https://www.eiopa.europa.eu/document/download/bbdc653b-e335-41f0-8293-0d8280a09855\\_en?filename=EIOPA-BoS-24-473\\_Dashboard%20on%20insurance%20protection%20gap%20for%20natural%20catastrophes%20in%20a%20nutshell%20-%202024%20version.pdf](https://www.eiopa.europa.eu/document/download/bbdc653b-e335-41f0-8293-0d8280a09855_en?filename=EIOPA-BoS-24-473_Dashboard%20on%20insurance%20protection%20gap%20for%20natural%20catastrophes%20in%20a%20nutshell%20-%202024%20version.pdf) (last accessed: 31 August 2025), p. 3.

3 'Economic losses and fatalities from weather- and climate-related extremes' (2025), <https://www.eea.europa.eu/en/analysis/publications/economic-losses-from-climate-extremes> (last accessed: 31 August 2025).

4 Gesamtverband der Versicherungswirtschaft, 'Serviceteil zum Naturgefahrenreport 2021' (2021), <https://www.gdv.de/resource/blob/71296/4682dd50c4ffdedb048e56020213f35e/download-serviceteil-naturgefahren-report-data.pdf> (last accessed: 31 August 2025), p. 45.

5 Polska Izba Ubezpieczeń, 'Klimat rosnących strat. Rola ubezpieczeń w ochronie klimatu i w transformacji energetycznej' (2023), [https://piu.org.pl/wp-content/uploads/2023/07/PIU-raport-klimatyczny-2023\\_27-lipca\\_premiera.pdf](https://piu.org.pl/wp-content/uploads/2023/07/PIU-raport-klimatyczny-2023_27-lipca_premiera.pdf) (last accessed: 31 August 2025), pp. 58–59.

## II. Consequences of the insurance gap

Residential building insurance plays a key role, especially in the face of the growing number of serious natural disasters. Events such as storms, heavy floods or hailstorms can give rise to severe damages to buildings and pose a significant financial burden to their owners. In the face of natural disasters, the injured parties are often left alone with considerable financial burdens. The insurance gap has a massive impact on the development of national insurance resilience and leads to a situation in which the economic risk of climatic disasters is shifted to the society as a whole, due to *ad hoc* public aid granted from the state budget. This may lead to higher costs for taxpayers and foster the phenomenon of ‘charity hazard’.<sup>6</sup>

### C. Regulation models of natural disaster insurance

In literature, four basic natural disaster insurance models are distinguished: public, private, mixed and international.<sup>7</sup> However, attention should be drawn to the fact that there are countries in which there are not only no legal solutions that could be assigned to the above models but also insurers, as such, do not offer products affording protection against the consequences of natural disasters. Such system can be referred to as a ‘zero’ model.<sup>8</sup>

#### I. The public model

The public model is based on the assumption that the state – carrying out its welfare function – takes up responsibility for the risk of occurrence

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6 Markus Roth, ‘Verpflichtende Elementarschadenversicherung – Ausländische Vorbilder und Zulässigkeit einer deutschen Regelung’ (2021), 41 NJW, p. 3000.

7 The presented division of models has been adopted after: Monika Wałachowska/Michał P. Ziemiak, ‘Ubezpieczenia od ryzyk katastroficznych w Polsce i na świecie’, in Eugeniusz Kowalewski (ed.), *Ubezpieczenie budynków od ryzyk katastroficznych: aspekty prawno-ekonomiczne* (2013), pp. 75 et seq.

8 Michał P. Ziemiak, ‘Ubezpieczenia od skutków ryzyk katastroficznych. Kilka uwag na tle raportu Polskiej Izby Ubezpieczeń Klimat Ryzyka oraz ubezpieczeń na wypadek suszy’ [Catastrophic risks insurance. Some comments on the Polish Chamber of Insurance report Climate of Risk and drought insurance], in Katarzyna Malinowska/Dorota Maśniak/Anna Tarsiuk (eds.), *Environmental risk and insurance* (2021), p. 199.

of natural disasters. In practice, this means that a state institution is established to pay out compensations within the framework of public aid. This model covers also solutions under which a state insurance institution offers, in the market, a coverage against climate risks – both on voluntary and compulsory basis. However, a disadvantage of the public model is its vulnerability to political changes, limited competitiveness and the risk of financial inefficiency.<sup>9</sup>

## II. The private model

On the other hand, the private model assumes that insurance coverage is afforded only by private insurance companies. Under this approach, customers are free to conclude contracts covering risks relating to natural disasters. However, in practice, this is the model that most frequently gives rise to an insurance gap. It is often the case that insurers do not have insurance products on offer that meet the needs of customers located in natural disasters risk zones. On the other hand, even if these products are available, it also does not mean that customers are interested in concluding contracts covering this risks. It may also happen that the offered solutions do not correspond to actual needs, and the amount of premium makes them inaccessible to an average customer. In addition, situations cannot be excluded in which insurance companies refuse to conclude an insurance contract on account of a high risk of occurrence of the insured event or the cost of this insurance is too expensive (e.g., location of the property in a floodplain or an area threatened by flooding).<sup>10</sup>

## III. The mixed model

The mixed model, adopted among others in France or Spain, offers a mix of public law and private law solutions, and combines the elements of both systems discussed above. It can be based on a distribution of risk between

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<sup>9</sup> Ziemiak (2021), p. 198.

<sup>10</sup> Schwarze, 'Institutionenökonomischer Vergleich der Risikotransfersysteme bezüglich Elementarschäden in Europa. Studien und Gutachten im Auftrag des Sachverständigenrats für Verbraucherfragen' (2019), p. 5.

private insurers and the state.<sup>11</sup> In practice, this could mean that the private insurance sector is supported by a public reinsurer. It enables protection costs to be spread out and insurance gaps to be eliminated. In the event of major catastrophes, reinsurance funds support claims payments, which can otherwise overwhelm insurers and threaten their solvency.

#### IV. The international model

Finally, in practice there are also international systems, based on cooperation of more than one country. They are adopted especially in locations where a common source of risk is at play – e.g., a border river – and requires supranational solutions in the area of insurance protection.<sup>12</sup>

#### *D. An overview of selected national jurisdictions*

##### I. Germany and Poland

At the time being, both in Poland and in Germany, it is not required to conclude an insurance contract against natural risks. The scope of every insurance contract covering a building can be individually negotiated with the insurer. The model applicable in the discussed jurisdictions – according to the classification presented above – corresponds to the private model, in which the market itself caters to the needs of the parties seeking insurance protection.

The requirement of compulsory insurance used to apply in Germany at the regional level of federal states (Lands), for example in Baden-Württemberg until 1994, however, it was lifted as a consequence of adopting so called “Third non-life insurance Directive”.<sup>13</sup> In this context, since the disastrous flood in July 2021, there has been a discussion about instruments that could reduce the insurance gap.<sup>14</sup> This includes also introduction of compulsory insurance against damages caused by natural forces. Most of-

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11 Ziemiak (2021), p. 199.

12 Ibid, p. 199.

13 See: Directive 92/49/EEG; Thorsten Kingreen, ‘Verfassungsfragen einer Versicherungspflicht gegen Elementarschäden an Wohngebäuden’ (2022), 9 NVwZ, p. 599.

14 Martin Notthoff, ‘Gebäude- und Elementarversicherungen’ (2024), 3 r+s, pp. 108.

ten, risks such as storm or hailstorm are covered by the standard insurance scope applicable to residential buildings. However, damages caused by other natural phenomena, such as flood, earthquake, landslide or avalanche – generally have to be covered by a separate natural disaster insurance.<sup>15</sup> Once natural disasters occur, legislators frequently decide to introduce *ad hoc* legislation and aid programmes, which in fact serve to compensate the losses suffered by the parties affected by the consequences of natural forces. By way of example, it can be pointed out that in Poland the Act of 16 September 2011 on special solutions relating to the removal of the effects of flood was adopted.<sup>16</sup> This referred to a specific natural disaster, that is flood. The injured parties were offered public aid, such as financial support assuming the form of targeted benefits, support for entrepreneurs, or support for employees in the form of additional leave, as well as other measures.

## II. Switzerland

In Switzerland, in the private insurance sector, there is a requirement of compulsory insurance against damages caused by natural forces, which has been attached to fire insurance. It has been provided for under Art. 33 VAG<sup>17</sup> and Art. 171–181 AVO<sup>18</sup>. The scope of insurance and premium rates in the insurance against natural disasters are uniform and binding on all insurance companies. The statutory requirements need to be followed by insurance companies irrespective of the type of products offered.<sup>19</sup> Under

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15 Reimund Schwarze, 'Institutionenökonomischer Vergleich der Risikotransfersysteme bezüglich Elementarschäden in Europa. Studien und Gutachten im Auftrag des Sachverständigenrats für Verbraucherfragen' (2019), [https://www.svr-verbraucherfragen.de/wp-content/uploads/2024/11/Schwarze\\_Institutionenoekonomischer\\_Vergleich.pdf](https://www.svr-verbraucherfragen.de/wp-content/uploads/2024/11/Schwarze_Institutionenoekonomischer_Vergleich.pdf) (last accessed: 31 August 2025), pp. 8, 21–22.

16 Ustawa o szczególnych rozwiązaniach związanych z usuwaniem skutków powodzi [Act of 16 September 2011 on special solutions relating to the removal of the effects of flood], Journal of Laws 2024, item 654, as amended.

17 Bundesgesetz betreffend die Aufsicht über Versicherungsunternehmen (Versicherungsaufsichtsgesetz, VAG) of 17. December 2004, <https://www.fedlex.admin.ch/eli/cc/2005/734/de> (last accessed: 31 August 2025).

18 Verordnung über die Beaufsichtigung von privaten Versicherungsunternehmen (Aufsichtsverordnung, AVO) of 9. November 2005, <https://www.fedlex.admin.ch/eli/cc/2005/735/de>, (last accessed: 31 August 2025).

19 Roth (2021), p. 3001.

Art. 33 VAG, insurance against damages caused by natural forces must be included in a fire insurance contract.

The reason for introducing compulsory insurance against damages caused by natural forces in the legal system is called double solidarity. This refers to, in the first place, solidarity among the insured parties demonstrated by paying a uniform premium. The purpose of such solidarity is to make insurance, for an affordable premium, available in all regions of Switzerland. Second, one can speak about solidarity among the insurers: because of a diversified burden depending on the region and a uniform premium, which is neutral in term of risk. Practically all insurers have associated in a special fund for the purposes of mutual risk compensation – reinsurance.<sup>20</sup>

### III. Spain

The Spanish system of natural disaster insurance is an example of the public model, in which an essential role is played by Consorcio de Compensación de Seguros (CCS).<sup>21</sup> This is a public institution in the form of an insurance company, operating in parallel to the private sector. The CCS's function is complementary in relation to the market. It guarantees insurance protection in the event of materialisation of extraordinary risks.<sup>22</sup> The system is financed through a mechanism of a compulsory surcharge added to insurance premiums. Particular insurance contracts concluded in the private sector must provide for an additional payment dedicated to the CCS fund.<sup>23</sup> In practice, this means that every insured person automatically obtains protection against extraordinary risks, regardless of the contents of the contract concluded with the insurance company. Compensations are

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20 Eidgenössische Finanzmarktaufsicht FINMA, 'Elementarschadenversicherung in der Schweiz (ES-Versicherung). Historie und Anwendungsbereich' (2022), [https://www.finma.ch/de/~media/finma/dokumente/dokumentencenter/myfinma/2ueberwachung/versicherungen/spartenspezifische-instrumente/elementarschaden-historie-anwendungsbereich.pdf?sc\\_lang=de&hash=5A4B383D38AEF29C2A43153D42CF6C33](https://www.finma.ch/de/~media/finma/dokumente/dokumentencenter/myfinma/2ueberwachung/versicherungen/spartenspezifische-instrumente/elementarschaden-historie-anwendungsbereich.pdf?sc_lang=de&hash=5A4B383D38AEF29C2A43153D42CF6C33), (last accessed: 31 August 2025), p. 9.

21 Sonia García/Joaquín Sempere, 'Two-Level System for Optimal Flood Risk Coverage in Spain' (2025), 17(13) *Water*, pp. 1–2.

22 *Ibid.*, p. 2.

23 Consorcio de Compensación de Seguros, 'Insurance Cover for Extraordinary Risks in Spain', [https://www.conorseguros.es/documents/10184/48069/RREE\\_ING\\_2016.pdf/f4fd891a-770c-494a-b8da-9f5e18cbb43e](https://www.conorseguros.es/documents/10184/48069/RREE_ING_2016.pdf/f4fd891a-770c-494a-b8da-9f5e18cbb43e) (last accessed: 31 August 2025), pp. 12–13.

paid directly by CCS, which is liable only for the liquidation of damages caused as a consequence of extraordinary events.

The Spanish solution allowed to reduce the insurance gap, which is hard to eliminate in systems based only on voluntary insurance. The construction of CCS ensures universal and equal access to insurance coverage, and spreads the burden of risk. At the same time, the model is based on the principle of social solidarity. This means that the insured parties participate in the insurance protection costs, which allows to compensate damages also in regions particularly vulnerable to natural disasters. The average insured residential property in Spain is 74 %, so the insurance protection gap for catastrophic hazards is significantly smaller in Spain than in similar countries.<sup>24</sup> With regard to the floods that occurred in Spain in 2024, the CCS, in a note published on 30 October 2024, confirmed that it would cover damage to properties and vehicles resulting from the flood, as this cause is included in the list of what are legally termed “extraordinary risks.”<sup>25</sup>

#### IV. France

The French system of natural disaster insurance does not provide for compulsory insurance. However, the legislator limits the freedom to determine the scope of insurance coverage by requiring that contracts covering residential buildings include provisions ensuring protection against the consequences of natural disasters.<sup>26</sup> Due to the above, as many as 98 % of French households are insured against losses caused by natural forces, which in practice reduces the insurance gap to a minimum.<sup>27</sup>

The CatNat system combines private property insurance with a reinsurance mechanism supervised by the state. Insurers can take advantage of reinsurance by Caisse Centrale de Réassurance (CCR) – a private company

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24 Francisco Espejo Gil, ‘Growing risks: the role of insurance’ (2024), 21 *Consort Seguros Revista Digital*, p. 3.

25 Consorcio de Compensación de Seguros, Note published on 30 October 2024, <https://webserver-ccsweb-prd.lfr.cloud/> (last accessed: 30 September 2025).

26 Roth (2021), pp. 3001–3002.

27 Deutscher Bundestag, ‘Einführung einer Pflichtversicherung gegen Elementarschäden. Unionsrechtliche Vorgaben’ (2024), EU 6 – 3000 – 029/24, <https://www.bundestag.de/resource/blob/1033378/EU-6-029-24-pdf.pdf> (last accessed: 31 August 2025), p. 18.

fully owned by the state.<sup>28</sup> In practice, insurance protection against consequences of natural disasters is afforded by the private insurance sector. Insurance companies are required to include appropriate clauses in all contracts having as subject residential buildings. Although there is no universal, statutory requirement imposed on citizens to take out insurance, in practice, insurance of a residential building is usually a necessary condition for concluding a tenancy contract or a contract for the sale of the property.<sup>29</sup> The system of determining the amount of insurance premium is based on the principle of solidarity: each and every household – irrespective of the extent of its exposure to risk – must pay a surcharge calculated in proportion to the total of the premium determined by the insurance company. The amount of such surcharge is specified by statutory law, under Art. A 125–2 Code des assurances.<sup>30</sup>

#### *E. Voluntary insurance and compulsory insurance*

Another criterion according to which the existing models can be additionally subdivided is whether a given jurisdiction allows for voluntariness in the conclusion of natural disaster insurance contracts. Accordingly, one can distinguish between models in which the conclusion of an insurance contract covering the discussed risks is voluntary and models in which the legislator has introduced a universal requirement to take out an insurance contract.

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28 Schwarze, ‘Institutionenökonomischer Vergleich der Risikotransfersysteme bezüglich Elementarschäden in Europa. Studien und Gutachten im Auftrag des Sachverständigenrats für Verbraucherfragen’ (2019), pp. 20–21.

29 Zentrum für Europäischen Verbraucherschutz e.V., ‘Studie: Das französische System der Elementarschadenversicherung – eine Kooperation von öffentlicher Hand und privater Wirtschaft’ (2023), [https://www.cec-zev.eu/fileadmin/Media/PDF/publications/Etudes-Rapports\\_DE/Studie\\_Elementarschadenversicherung\\_Frankreich\\_ZEV.pdf](https://www.cec-zev.eu/fileadmin/Media/PDF/publications/Etudes-Rapports_DE/Studie_Elementarschadenversicherung_Frankreich_ZEV.pdf), p. 6.

30 Code des assurances, [https://www.legifrance.gouv.fr/codes/texte\\_lc/LEGITEXT000006073984/](https://www.legifrance.gouv.fr/codes/texte_lc/LEGITEXT000006073984/) (last accessed: 31 August 2025).

## I. The voluntary model

Voluntary insurance is based on the principle of the freedom of contract. Such model does not impose a requirement to take out insurance, neither does it specify the scope of insurance coverage. It is that voluntary nature – especially with regard to the insurance of buildings – that often does not bring satisfactory results and leads to the emergence of an insurance gap, which can be clearly seen in the context of insurance against climate risks.<sup>31</sup>

However, one can also distinguish intermediary solutions in which insurance contracts are formally concluded on voluntary basis but their dissemination is promoted by specific economic stimuli. As an example, one can point to tax incentives or making the payment of public benefits of compensatory nature conditional on prior holding of an insurance policy. In practice, this can mean a reduction or even elimination of state aid in case of damages that could have been covered by insurance available on the market.

## II. The compulsory model

On the other hand, compulsory insurance is based on a statutory requirement to conclude an insurance contract, and strictly speaking, on the requirement to hold insurance coverage at a specific time and place. In such situations, the legislator should precisely specify the subjective scope of the requirement, its form, as well as review mechanisms and sanctions for con-compliance.<sup>32</sup>

However, this model should be distinguished from a situation in which the legislator inserts certain compulsory clauses in the contracts extending the scope of coverage – as is the case in Switzerland or in France. In such situations, we do not have to do with classical compulsory insurance but with a standardisation of the products available in the market. An introduction of the requirement to take out insurance, however, is not limited to legal aspects only. To an equal, or even greater extent, it is dependent on political decisions and economic conditions.

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31 Schwarze, ‘Institutionenökonomischer Vergleich der Risikotransfersysteme bezüglich Elementarschäden in Europa. Studien und Gutachten im Auftrag des Sachverständigenrats für Verbraucherfragen’ (2019), pp. 5.

32 *Ibid.*, pp. 3–5.

### III. Arguments for and against introducing a requirement to take out insurance

In the first place, it must be noted that the introduction of a requirement to take out insurance could significantly reduce the insurance gap. This is particularly important in the context of climate change and the growing risk of catastrophic damages. In the same way, such solution is supported predominantly by economic factors.

From the social perspective, a requirement to take out insurance would contribute to equal distribution of burdens among the owners of buildings, by affording protection to both properties situated in high-risk and low-risk areas.<sup>33</sup> Another argument deployed in the discussion is that we are jointly responsible for the climate change caused by human activities and, therefore, one should accept the fact that, as a society, we will jointly suffer the consequences of damages following from extreme weather phenomena.<sup>34</sup> Accordingly, the risk would shift to a wider range of persons, due to which the risk of extreme weather phenomena could be proportionately distributed. It is also argued that compulsory insurance against natural risks would provide an incentive to take many preventive measures. Certain role in that regard could be played by insurers themselves. They could play a significant role by seeking, in the case of buildings located in high-risk areas, to employ all available protective measures against extreme weather events (e.g., risk-mitigation clauses).<sup>35</sup> Investing in hydrological infrastructure and improving land use planning could significantly reduce the impact of future events. Introduction of compulsory insurance would also lead to a situation in which insurers react properly to a risk of serious weather disasters. This would include development of minimum standards for the insurance protection, corresponding to the needs of the customers, that is to needs of the entire society. Moreover, this solution would promote transparency and integrity in the context of insurance contracts, and policyholders would become more and more conscious of their rights.<sup>36</sup>

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33 Notthoff (2024), p. 109.

34 Hans-Peter Schwintowski, 'Pflichtversicherung für Elementarschäden – Pro und Contra' (2024), 9 VuR, p. 322.

35 Franziska Arnold-Dwyer, 'Using insurance for natural hazard loss prevention', in Douglas Kysar/Ernest Lim (eds.), *The Oxford Handbook of Climate Change and Private Law* (2025) [Preprint], [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=5250978](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5250978) (last accessed: 31 August 2025), p.

36 *Ibid.*, p. 8–9.

Finally, the requirement to take out insurance could also increase resilience of the society to serious weather disasters. Appropriate insurance protection and state regulations can reduce the impact of damages caused by natural forces and facilitate recovery after such events. Adoption of a model of compensating the sustained damages by insurers would also relieve the state budget and reduce to a minimum the need to grant *ad hoc* public aid. However, there are also arguments against introducing a requirement of compulsory insurance against catastrophe risks. First of all, one should point to potential public opposition following from the perception of an insurance premium as a specific quasi-tax. Another danger is the possibility of the phenomenon of moral hazard, consisting in the reduction of motivation to prevent damages in a situation of guaranteed insurance protection.<sup>37</sup>

An additional challenge before the insurance industry would be to develop appropriate methods of risk assessment and premium calculation so that the financial stability of the system could be maintained.<sup>38</sup> The state would also have to establish a system of review and sanctions for non-complying with the requirement. Critics of compulsory insurance also argue that the risk of natural disasters is not evenly distributed. Such solution would be unfavourable to those whose property is not located in an increased risk area, e.g., exposed to the danger of a flood.<sup>39</sup> In the same way, a uniform premium amount, in the opinion of such property owners, could be viewed as unfair.

## *F. Constitutional challenges and the EU perspective*

### *I. The constitutional aspects*

Introduction of a requirement to take out insurance always interferes with fundamental rights and freedoms of the individual. As a result, that solution inevitably gives rise to questions of constitutional nature, concerning its compatibility with higher-rank legislative acts, including especially constitutional norms. This problem is not solely theoretical – it poses a real challenge to the legislator who, aspiring to cut down the insurance gap,

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37 Michał Romanowski, 'Umowa ubezpieczenia w Kodeksie cywilnym fasadą umowy nazwanej' (2025), 1 *Wiadomości Ubezpieczeniowe*, pp. 11–16 and ref. therein.

38 Roth (2021), p. 3003.

39 Notthoff (2024), p. 109.

must at the same time take into account constitutional guarantees of protecting the rights of the individual.

This question was discussed, among others, in German academic literature, where it attracted much attention when it came to the admissible limits of state intervention.<sup>40</sup> It is worth noting that the Federal Constitutional Court in Germany has already addressed the issue of compulsory insurance against natural hazards and upheld it.<sup>41</sup>

## II. The EU law perspective

Legal solutions introducing an appropriate model of natural disaster insurance must be compatible with the system of UE law, both primary and secondary. Based on the case law of the CJEU, no fundamental objections under EU law can be identified with regard to the introduction of compulsory insurance<sup>42</sup>. It must be concluded that it is incorrect to assume that EU law stands in the way of introducing compulsory insurance.<sup>43</sup> In this context, one can only recall the Green Paper on the insurance against natural and man-made disasters of 2013.<sup>44</sup> The purpose of the Green Paper was to expand the knowledge of persons working in the insurance industry when it came to advantages of insurance against natural disasters and catastrophes. Its authors highlighted how the culture of safety measures and knowledge about market management should develop. Most importantly, the Green Paper contained recommendations concerning, among others, the introduction of compulsory natural disaster insurance.<sup>45</sup>

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40 Thorsten Kingreen, 'Verfassungsfragen einer Versicherungspflicht gegen Elementarschäden an Wohngebäuden' (2022), 9 NVwZ, p. 598 et seqq.

41 BVerfG, 14 January 1976 – 1 BvL 4 u. 5/72.

42 Deutscher Bundestag, 'Einführung einer Pflichtversicherung gegen Elementarschäden. Unionsrechtliche Vorgaben' (2024), p. 17.

43 Thorsten Kingreen, 'Vereinbarkeit einer Versicherungspflicht gegen Elementarschäden an Wohngebäuden mit europäischem Unionsrecht und deutschem Verfassungsrecht. Studien und Gutachten im Auftrag des Sachverständigenrats für Verbraucherfragen' (2022), <https://fragdenstaat.de/dokumente/238805-kingreen-studie-vereinbarkeit-versicherungspflicht-verfassungsrecht/> (last accessed: 31 August 2025), pp. 6 et seqq.

44 European Commission, 'GREEN PAPER on the insurance of natural and man-made disasters' (2013), COM(2013) 213 final, <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2013:0213:FIN:EN:PDF> (last accessed: 31 August 2025).

45 *Ibid.*, p. 8.

Notably, however, even without introducing compulsory insurance or standardising natural disaster insurance contracts, already at the time being all insurance distributors are obliged, under IDD<sup>46</sup> and national provisions, to assess the customer's demands and needs. The demands and needs test requires determining if the risk of natural disasters is considerable – and if so, verifying if the offered insurance contract covers such risk. In case of a negative answer to that question, the distributor must notify that fact to the customer and recommend the customer an additional or extended insurance. Disclosure obligations and the requirement of the demands and needs test are intended to ensure appropriate protection to customers in the light of the growing climate risks.<sup>47</sup>

Nevertheless, the EU legislator should aspire to establish a harmonised natural disaster insurance model. Introduction of a legal framework on the level of the European Union would contribute to the elimination of a gap in insurance coverage and ensure a consistent protection level in all member states.

### III. The hybrid model conception

Along with the increase of climate risks, the boundary between public liability and private law insurance is becoming less and less clear. Neither a fully market-based model (private model) nor full control of the state over the system of compensating natural disasters can guarantee the desired results. Therefore, one should consider developing a hybrid model, offering an approach that combines public law regulation and private law insurance instruments.

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46 Directive (EU) 2016/97 of the European Parliament and of the Council of 20 January 2016 on insurance distribution, Official Journal of the European Union L 26/19.

47 Oskar Zgonina/Aneta Paleczna, 'The idea of sustainable insurance as a trust-building tool in the insurance contract – comparative law analysis' (2024), in Margarida Lima Rego/Maria del Val Bolivar Oñoro/Maria Elisabete Ramos (eds.), 2nd International Conference of the Jean Monnet Module on EU Insurance Law: Challenges in the SDG Era. SDG 8: Decent Work and Economic Growth, pp. 128–133.

#### IV. The role of prevention and education

Traditionally, insurers are regarded as security providers – parties acting only once the insured loss arises. On the contrary, such an approach is insufficient in the face of intensification of natural disasters and the impact of climate change. It is necessary to put emphasis on action even prior to the event. This means a shift of the weight of responsibility in the insurance sector from damage liquidation to prevention.<sup>48</sup>

This conception expands the role of an insurer to preventive measures. One can point to the support of investments in infrastructure limiting the consequences of natural disasters (e.g., flood infrastructure), support of effective early warning systems, use of weather forecasts, promotion of public awareness or spatial planning.<sup>49</sup> The presented approach brings benefits not only to insurers, by actually cutting down losses, but also supports the availability and accessibility of protection to the society. In addition, it forces a change in the style of action: instead of focusing on indemnification, the insurer becomes an active player in the process of building social resilience.<sup>50</sup>

#### V. The significance of insurance in mitigating the consequences of natural disasters

The presented conception of a hybrid model assumes supplementation of the existing forms of protection against the consequences of natural forces by elements enhancing preventive action and by strict cooperation between the public and private sector.

In such model, insurers, apart from performing the traditional compensatory function, should actively participate in undertakings of preventive and educational nature, raising public awareness when it comes to catastrophe risks. Such an approach would also entail a reduction of the phenomenon of moral hazard, which arises in a situation when the missing

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48 Katarzyna Malinowska, 'Prevention in Environmental Insurance', in Katarzyna Malinowska/Dorota Maśniak (eds.), *Managing Environmental Risks through Insurance. Legal and Economic Aspects* (2024), pp. 284–287.

49 Zentrum für Europäischen Verbraucherschutz e.V., 'Studie: Das französische System der Elementarschadenversicherung – eine Kooperation von öffentlicher Hand und privater Wirtschaft' (2023), pp. 17–19.

50 Arnold-Dwyer (2025), p. 13.

liability of market operators leads to excessive reliance on financial aid after the damage.<sup>51</sup> The role of the state in this model should concentrate on establishing a stable legal framework, setting the standards of insurance coverage and – with regard to especially exposed areas -guaranteeing reinsurance mechanisms or instruments supporting financial robustness of the entire system.<sup>52</sup> The model so designed would enable fair distribution of costs between the society, insurers and the public sector. The centre of gravity would shift from simple financing of losses to a change of behaviours, systemic market management and development of long-term resilience to the consequences of climate change and appropriate social trust. In consequence, insurers would become not only security providers but an integral part of the infrastructure for climate risk management.

The EU legislator puts an increasing emphasis on questions relating to climate change, including sustainable development aspects. This is reflected through multiple legislative acts that affect the financial services sector, including the insurance services sector. The idea of “sustainable insurance” is becoming more and more popular, meaning insurance implementing so called sustainable development objectives, i.e. SDG.<sup>53</sup>

### *G. Conclusions and recommendations*

At present, there is no obligation to take out natural catastrophe insurance in Poland and Germany. The situation is different in Spain, France and Swiss cantons. On the one hand, compulsory insurance against natural disasters would lead to the implementation of many preventive measures that are currently not implemented or are only discussed in the event of a natural disaster. However, it could lead to “moral hazard.”

The adoption of appropriate legal regulation can ensure that insurers respond appropriately to the risk of natural disasters. This will establish minimum standards of insurance coverage that will compensate property owners for damages at an appropriate level. This approach promotes trans-

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51 Kati Kraehnert/Daniel Osberghaus et al., ‘Insurance Against Extreme Weather Events: An Overview’ (2021), 72(2) *Review of Economics*, p.76.

52 Kraehnert/Osberghaus (2021), p. 76.

53 Piotr Wrzesiński, ‘Uwzględnienie preferencji klienta w zakresie zrównoważonego rozwoju przy dystrybucji umów ubezpieczenia na życie o charakterze inwestycyjny’ (2022), 4(113) *Prawo Asekuracyjne*, pp. 24 et seqq.

parency and fairness in insurance contracts. In turn, policyholders will become aware of their rights and the insurance products available to them. In addition to damage caused to households and buildings, there is also damage to the supply chain (business interruption) and damage related to the death of relatives, which justifies the payment of compensation for the harm suffered. Insurers should also take indirect damage into account. This, in turn, is important for the creation of new insurance products and the amount of the insurance contribution.<sup>54</sup>

The publicization of private law and state intervention makes it possible to standardise the scope of insurance (model adopted in France and Spain) or to introduce a compulsory insurance system. At the same time, private law instruments such as the concept of protecting the weaker party, transparency of contracts and liability for breach of trust can be effective mechanisms in themselves. Combining private and public law may result in a hybrid model of protection. The examined issues require evaluation from the point of view of private and public insurance law, insurance distribution principles, civil liability and constitutional law. Taking into account European integration and the attempt to create a universal protection model, it is also necessary to analyse Union law and the available unification options.

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54 Aneta Paleczna, 'The concept of rationalising damage and the scope of insurer's liability' (2024), 1 *Wiadomości Ubezpieczeniowe*, pp. 33–44.