



Property, Property Rights, Natural Hazards and Beyond

Willemijn van Doorn-Hoekveld and Marleen van Rijswick

3.1 INTRODUCTION

Climate change is happening and it will have severe effects on human wellbeing and prosperity. It is expected that climate-driven natural hazards will increase both in frequency and in magnitude in the near future (IPCC, 2021). These natural hazards will affect coastal, rural and urban areas. Besides effects on biodiversity and humans also property might be damaged or decrease in value. This requires disaster management, ranging from prevention to recovery. Protection of property and property rights are relevant nationwide at all scales and in all areas, although the discussion often focusses on property and property rights in urban areas.

The question arises of how can best be reacted to the threat of increasing natural hazards and their effects on humans and their property.

W. van Doorn-Hoekveld (✉) · M. van Rijswick
School of Law, Utrecht Centre for Water, Oceans and Sustainability Law,
Utrecht University, Utrecht, The Netherlands
e-mail: w.j.hoekveld@uu.nl

It goes without saying that mitigation and reducing CO₂ emissions are absolutely needed. At the same time adaptation to the effects of climate change is key in order to protect lives and property.

Another question is who should take action and what kind of action is needed. To answer this question the focus lies on the division of responsibilities between several layers and sectors of government and between public and private actors. It also refers to the measures that will or can be taken. It is often assumed that the government will protect its citizens, also when the threats are climate change and natural hazards (Hartmann et al., 2020; Hegger et al., 2016). Governments all over the world deal with this duty of care in different ways, based on the role of government in a specific society, depending on the institutional design and the political choices that are leading and the availability of means to do so (Wiering et al., 2015). In this respect several approaches to deal with the effects of climate change and natural hazards gained attention, varying from or combining prevention, protection to preparedness and recovery after a disaster. These will be discussed in this chapter. Increasing resilience of citizens and governments is one of rationales behind these approaches (see Chapter 1 to this book). Taking for example flood risk management measures to increase resilience can be stimulated or done by the government, or by citizens themselves. The role of government for addressing climate change by land use planning and the following amendments of the established social construction of this has been addressed by different scholars (van Straalen et al., 2017). However, the topic of property in relation to increasing resilience is rather new (Hartmann et al., 2020). It focusses on the protection of property or property rights, for example by taking flood defence measures, improved land use planning, mitigation measures that reduce damage in case of floods or natural hazards and building back after a flood, to be divided in ‘building back as it was’ or ‘building back better’, in order to increase resilience (Suykens et al., 2019).

A quite different approach is more critical and places the focus on property within the justice debate (Driessen & van Rijswick, 2011). This builds on the need to also address normative aspects of adaptation to climate change and disaster risk management. In the environmental justice debate there is already attention for the concept and role of property. Silva et al. (2021) refer to academics such as Lao et al. (2019) that argue ‘that projects are often designed mainly to increase property values and that they displace already marginalized inhabitants’. Silva et al.

(2021) ask attention for the ‘still-open fundamental questions concerning the Human–Nature relationship, the controversial notions of justice, in general, and environmental justice, in particular’ as they are crucial for developments in our living environment. Although the focus of this book is on climate-related natural hazards and property rights, the attention for the diverse aspects of justice should not be overseen. A just and safe society should be the backbone and overall aim of any adaptive and resilient society facing the effects of climate change. A just way of dealing with natural hazards should include distributional, procedural and recognitional justice (Lao et al., 2021). These are not only theoretical concepts, but should be applied at all levels of government from the global to the very local scale, and should be leading in all climate risk strategies to ensure a safe and just space for all (Raworth, 2012).

Keeping this in mind, this chapter first discusses what property rights actually are. The concept of property preoccupies many scholars over the years, not only legal scholars, but economists and social scientists as well, since it is a concept that affects many disciplines. In this contribution we will start with defining the concepts of property and (private) property rights. Then we will address the issue of infringing property rights, the required criteria for infringements and the remedies against infringements. In the last part of the contribution we will focus on the issue of a natural disaster as a force majeure (act of God) and the consequences of such a disaster, or: who will pay for damage if it is caused by a natural hazard.

3.2 DEFINING PROPERTY AND PROPERTY RIGHTS

3.2.1 *Property*

The definition of property is as well simple as complex. There is the common sense notion of property, and there is a—sometimes more theoretical—legal notion of property and also in (legal) philosophy property is a concept that is part of many different theories. For some ‘its function as a device for capturing and retaining certain kinds of value’.¹ In a more modern view one can consider property as ‘an institution uniquely qualified to protect certain kinds of value’ (Bell & Parchomovsky, 2005,

¹ For example Locke and Marx agreed on that, see: Bell, Theory of property, p. 536.

p. 537). In different theories of property, ‘value’ forms the core of this concept.

Property law is a specific branch of law, in which a stable relationship between persons and assets, allows owners to extract utility that is otherwise unavailable. It is important to distinguish the notion of property rights in a civil law system from the notion of property rights in a common law system, because they differ in terminology and also the scope of the protection of the property rights is different.

3.2.2 *Property Rights in Civil Law Systems*

Property rights are absolute or real rights. They pertain to a specific object, not to a particular person, in legal terms, they have effect erga omnes (or in English: against everyone). In this respect they differ from for example rights that follow from a contract between two parties. Property rights have different meanings in civil law and common law systems. In civil law systems, property rights can be divided into primary and secondary property rights. Ownership is a primary property right. Examples of secondary rights are the right to use property, or the right to acquire property (Akkermans, 2017).

The right of ownership must be distinguished from the right of possession and detentorship. Ownership is the most comprehensive right one can have. It implies the obligation that everyone must refrain from acts interfering with the owners’ control of a good (Bouckaert, 1990). There is no need of a physical element regarding ownership. This is different for possession; possession implies the element of physical control of a good. So, in many cases ownership and possession can coincide (Akkermans, 2017; Bouckaert, 1990). Detentorship encompasses the factual control of a good on behalf of someone else (Akkermans, 2017). Property rights are protected by law. Fields of law that are of relevance for this protection are property law, tort law criminal law and human rights law.

3.2.3 *Property Rights in Common Law Systems*

In common law systems, land (immovable objects) and moveable objects (chattels or goods) are divided. Land law—also known as ‘real property’ (Everards & Dupont, 2018)—stems from the time the King was owner of all land, and others could only hold it in tenure. This has developed over time from this feudal system to the rights to land (or ‘estates’) which

exists nowadays: a freehold or fee simple, which is the most extensive right, that entitles the holder to exclusive possession for an unlimited duration of time, while for a leasehold or a fee for term for years, the exclusive possession is, as the word says, granted for a limited duration of time (Akkermans, 2017). Personal property law applies to other goods, such as chattels and for example intellectual property. Entitlement or title is the most exclusive right to a movable good. A trust is also a familiar legal notion in common law systems. It is one of the most utilized tools in common law systems. It can be defined as ‘a legal entity to hold, manage, and transfer property’. It involves three parties: a settler, who creates the trust and appoints a trustee, who manages the trust for one or more beneficiaries (Devaux et al., 2014). The concept was developed in the English Courts of Equity.

3.2.4 *Equity in Common Law Systems*

Equity is very important notion in the common law legal system. Although we can trace the concept back to Aristotle in his famous *Nicomachean Ethics* we limit ourselves to the description of common law equity, which origins lie in the fourteenth century in England. It is nigh on impossible to find one widely shared definition of equity. When this notion of equity is mentioned, in many cases it is used to designate the law administered in the ‘Court of Equity’ (Yntema, 1966), also known as the Court of Chancery. Maitland defined it as ‘that body of rules administered by our English courts of justice which, were it not for the operation of the Judicature Acts, would be administered only by those courts which would be known as Courts of Equity’ (Maitland, 2011, p. 1). In these courts the Chancellor was expected to consider all interests and circumstances of the affected parties as well as larger moral issues and questions of fairness (Subrin, 1987). Originally it was created to mitigate a harsh outcome of the application of common law, but some legal branches developed only in equity, such as the law of trust (Akkermans, 2017). That equity is inextricably bound up with property is found by a remark in I Warren (*Introduction to Law Studies*, 1863, p. 582): ‘The student must bear in mind an important principle, that the Court of Chancery deals with property exclusively’ (Bordwell, 1934, p. 2). This system of rules and legal principles that originate in these courts can be distinguished from a more broad concept of the law of unjust enrichment, that also is part of the notion of ‘equity’ (Smith, 2011). Equity and common law are at

least slightly different and can coexist, although some argue to fuse both jurisdictions (Burrows, 2002).

In this chapter property is considered as the exclusive ownership of movable and immovable goods (so, ownership, as well as freehold or real and personal property rights) as well as the possession of goods (possession, leasehold or trust). In the following paragraph we will assess the possible infringements of these rights by a public authority in the public interest as part of a preventive natural hazard strategy.

It is a mistake to think that ownership only implies the right to exclude others and entails no obligations for the owner. Property owners have also responsibilities. A well-known example is the common law notion of nuisance (you may not use your land in a way that injures land of others; Alexander, 2013).

3.3 INFRINGEMENTS OF PROPERTY RIGHTS

3.3.1 *Disaster Management—Preventive Strategies*

Property can be infringed in multiple ways. It is important that the cause of the infringement is clear. It can be a—natural—disaster or hazard that causes loss, e.g. a flooding, a hurricane, wildfires or a lightning strike in a build-up area that causes damage to houses or other buildings. For these types of causes, it is not always possible to hold a legal entity liable for the damage caused, although there are systems for the—partial—compensation of these losses, which will be dealt with in Section 3.3.3.

In most states, the government has different strategies or even obligations to prevent these natural disasters to cause damage to its citizens or companies ranging from ‘as much as possible’ to ‘a limited extent’. These strategies can also cause damage and for that damage, there is an entity to hold responsible.

Flood risk management provides a good example of disaster risk management that can be categorized in different strategies. The European Floods Directive (2007/60/EC) distinguishes prevention, protection, preparedness, emergency response and recovery.² These strategies can be

² The Directive mentions prevention, protection and preparedness (art. 7 under 3 FD). In the accompanying letter of the European Commission (EU Commission, 2007) emergency control and recovery were added.

used in a slightly adapted form to prevent, mitigate or recover from other natural hazards as well.

- Prevention: preventing damage caused by floods by avoiding construction of houses and industries in present and future flood-prone areas; by adapting future developments to the risk of flooding; and by promoting appropriate land use, agricultural and forestry practices;
- Protection: taking measures, both structural and non-structural, to reduce the likelihood of floods and/or the impact of floods in a specific location³;
- Preparedness: informing the population about flood risks and what to do in the event of a flood;
- Emergency response: developing emergency response plans in the case of a flood;
- Recovery and lessons learned: returning to normal conditions as soon as possible and mitigating both the social and economic impacts on the affected population (EU Commission, 2004).

Decisions and actions taken by the government to address or mitigate the consequences of natural disasters, such as floods, can in general be placed under one of these categories. These decisions and actions differ in the degree to which these decisions and actions infringe property rights.

Decisions and actions taken by the government for the common good, such as the erection or strengthening of a dike to prevent flooding (and thus prevent flood damage), can be considered to be lawfully undertaken; there has been a balance of interests, all substantive and procedural rules have been applied correctly, and the decision is well motivated. Often, all interested parties consider the decision or action the right thing to do, even those who suffer the loss (van Doorn-Hoekveld et al., 2016). The damage that is caused can consist of devaluation of property, the loss of income or restrictions of the use of property and the most far-reaching infringement: deprivation of property or expropriation (van Doorn-Hoekveld, 2014, 2017).

³ Mitigation is mentioned in the Communication Letter of the European Commission as well. This concept would fall under the ‘protection strategy’.

Infringements can take different forms, just as the gravity of the infringements. If we stick to the example of flood risk management, we can use the instrument of retention (or inundation or storage) areas to show these differences. A retention or inundation area is a zone that is designated to temporarily store water. In the event of intense rainfall or high water levels in rivers these areas are intentionally inundated under controlled conditions to prevent unintentional and uncontrolled flooding of urbanized areas with a high damage potential (van Doorn-Hoekveld & Groothuijse, 2017). These kinds of areas can be found in many states.⁴

Another example of decisions and actions taken by the government are spatial planning measures, such as zoning with restrictions of land use or even the prohibition to build in specific dangerous areas. This can also lead to devaluation of property, loss of income or dispossession.

3.3.2 *Conditions for Infringements*

When a disaster or natural hazard is the cause of the damage, there is obviously no condition, in that case, the damage is caused by ‘an act of God’. This is different in the situation where the damage is caused by an act or decision of an authority to prevent or reduce the consequences of natural hazards. Even when there is no wrongful conduct, damage, in terms of devaluation of property and loss of income, can occur. In most cases civil or criminal law does not contain compensation clauses for this rightfully caused damage. The question arises whether these infringements are allowed, since property is, as we discussed above, the most comprehensive right anyone may have.

Because of the fact that property is considered as an exclusive right, it is protected by law and infringements are—in general—not tolerated. Article 1 of the First Protocol of the European Convention on Human Rights (hereafter: FP ECHR) states:

‘Every natural or legal person is entitled to the peaceful enjoyment of his possessions. No one shall be deprived of his possessions except in the public interest and subject to the conditions provided for by law and by the general principles of international law.

⁴ For example in Belgium, England, France, Sweden and Poland (Van Doorn-Hoekveld et al., 2016) and Germany (Albrecht & Hartmann, 2021) and China (Dai et al., 2019).

The preceding provisions shall not, however, in any way impair the right of a State to enforce such laws as it deems necessary to control the use of property in accordance with the general interest or to secure the payment of taxes or other contributions or penalties.’

The scope of ‘possessions’ as mentioned in Article 1 of the FP ECHR is very broad, it includes among others movable or immovable property, tangible or intangible interests, such as shares, patents, an arbitration award, a landlord’s entitlement to rent, the economic interests connected with the management of a business, the right to exercise a profession and a legitimate expectation that a certain state of affairs will apply (Carss-Frisk, 2001). However, most of the studied countries do have some provisions to compensate the persons in the case of lawfully caused harm. These provisions are based on general principles of law (van Doorn-Hoekveld et al., 2016).

If we follow the already mentioned example of retention areas, different types of losses can be identified. In case the designation of the area leads to restrictions of development or use of the land, this leads to devaluation of the property and sometimes expropriation is necessary. When the area is deliberately flooded—as is the purpose of the retention area—there will be damage to crops and the land itself. For these types of loss, different compensation mechanisms are in place, that will partially compensate these damages (van Doorn-Hoekveld et al., 2016).

In the United States of America for example, there are different solutions for preventive measures that affect existing property rights, such as the acquisition of the fee interest, acquisition of development rights, the transfer of development rights or ‘attrition’ or ‘amortization’ (Jacobson, 2019). When a governmental or nongovernmental organization acquires the development rights, ‘the landowner sells a limitation on the ability to develop property’ (Jacobson, 2019), but is still owner of the property. This is less expensive than acquiring the fee interest. An alternative is the transfer of these rights, in that case the development rights are transferred to a ‘receiving’ site that is owned by the owner of the site of which the development rights are taken away or ‘can be part of a market for transferable potential’ (Jacobson, 2019).

In case of ‘attrition’, the use of property that is not in line with the new zoning, is allowed, until an ‘act of God’, ends is (e.g., a flood), when the non-conforming development is destroyed, this non-conforming use is no longer allowed. In case of ‘amortization’, the non-conforming use is

allowed for a defined period of time. This period can be shortened by a buy-out (Jacobson, 2019).

3.3.3 *Coping with Disasters—Recovery Strategies*

After the disaster wreaked havoc on a specific area, the recovery phase starts. Four stages of recovery can be identified:

1. Emergency: during or right after the disaster searching, rescuing, providing for shelter and re-establishing the order.
2. Restoration: this stage revolves around the restoration of ‘repairable essentials of urban life’, including rudimentary communication systems, roads and shelter.
3. Reconstruction: this phase includes the reconstruction of infrastructure and housing for the post-disaster population. In this phase the society starts to function at a pre-disaster level.
4. Commemorative betterment reconstruction: normal activities function at pre-disaster levels, with development and improvements (Kates et al., 2006). Heber Dunning (2020) This stage includes the more common phrase ‘building back better’.

The length of these phases differ, can overlap and also differences in sequence and duration between social, economic and ethnic groups in one society can be observed after a disaster (National Research Council, Committee on Disaster Research in the Social Sciences: Future Challenges and Opportunities 2006 cited in Kates et al. [2006, p. 14655]). In the emergency and restoration phase (stages 1 and 2) often the government takes the lead and will provide in most cases the direct assistance and first aid for the stricken area. In these phases the damage must be assessed, the reconstruction undertaken and a system of financial compensation must be created or become effective.

Especially the third and fourth phases are of great interest regarding property rights. In these phases the responsibility does not only rest with the public sector/government, but, to a greater or lesser extent, to the private parties as well. The private responsibility can in some states be partially shifted to insurance companies, individuals will have to bear at least a part of the burden of reconstruction of their own possessions.

Many states have an insurance scheme at hand, some private,⁵ some public–private.⁶

As we can see in very recent examples of devastating disasters with the floods in Germany, Belgium and the Netherlands and hurricane Ida in the United States, is that in case a disaster of such enormous proportions causes damage, there will be different state-led and voluntary compensation schemes to help the people who suffer losses.⁷

Research has been done on the connection between different strategies. In this regard especially the connection between recovery (commemorative betterment reconstruction) and prevention, protection and mitigation are relevant. Often a disaster is the starting point for preventive or protective measures. That’s how the storm surge of 1953 that caused many casualties in the Netherlands is seen as the starting point for the creation of the famous Dutch Delta Works and flood risk management, just as Hurricane Katrina led to develop the Hurricane Storm Damage Risk Reduction System in New Orleans. These kinds of investments are often public and if so, also the responsibility and maintenance may rest on public authorities. The creation of these kinds of preventive or protective systems can infringe property rights, as discussed in Section 3.3.2. The reconstruction of a community itself can also be placed at the responsibility of private parties or property owners. In that phase of a disaster, compensation may be bound to specific criteria that should lead to build back better and build back in a resilient way. This fits into the mitigation strategy, that the new reconstruction property is less vulnerable to damage caused by a natural disaster. A more far-reaching approach can also be used, which includes prohibitions to build in too dangerous zones. This

⁵ Such as Sweden, Portugal and Ireland (see Surminski et al., 2015) and England, although the government enacted the so-called ‘Flood Re’ scheme, which helps to public to access affordable flood insurance cover or the most suitable insurance package in flood risk areas, by providing data and modelling; see Lo and Chan (2017).

⁶ Such as the French CAT-NAT scheme and the Belgium (see for example Suykens et al., 2016).

⁷ For example, except for the ‘normal’ insurances, a Disaster Fund (*Rampenfonds*) in Belgium, the Calamities Compensation Act and a *Disaster Fund* of the Government as well as private initiatives such as Giro 777 (a bank account that is enacted for help of different—mostly foreign—disasters) in the Netherlands, Financial support of the German federal government and the uninsured losses that were caused by hurricane Ida for inhabitants of parishes that are designated for Individual Assistance by the FEMA in the United States.

demands good argumentation and in some cases full compensation since this falls under deprivation of property and there are many catches, for example to estimate the value of the property, since it has been destroyed and help to find another place to live for the afflicted property owners.

3.4 DISCUSSION

People who are affected the most by natural hazards are not often the people with ‘haves’, as we can see for example in the recent disaster of Haiti. This was also visible in New Orleans, which was before Katrina a major-renter city, but the governmental assistance programs focussed mostly on homeowners (Whelan & Strong, 2009). Also the negative effects of climate change—resulting in natural hazards affect vulnerable groups more than those who can afford to protect themselves or recover after a disaster or natural hazard. The most vulnerable groups are hardly included in the scope of this book, but they do deserve attention although they are not the ones with—a lot of—property to protect (Khan, 2009; Schlosberg & Collins, 2014). Traditionally this discussion is placed in the research regarding climate or environmental justice in which the distribution of benefits for the most polluting countries and the burdens of others are assessed. It can also be placed in a wider discussion on justice. Who has a right to what? If one owns property, which right can be derived from that and who is responsible for keeping it the way it was? Focussing on property rights and natural hazards ignores a large part of the damage and tragedies that go with natural hazards. In the management of natural hazards, the questions regarding distribution of risks, burdens and benefits play an important role in all of the strategies to prevent, mitigate or recover from natural hazards.

When we place this discussion in the concept of corrective and distributive justice, we can conclude that compensation is a way of restoration of an unjust distribution or infringement of rights. For compensation mechanisms that are in place for preventive measures, the original—and assumably just—distribution is disrupted, because some have to bear a more severe burden (loss of income, devaluation of property—for the common good (prevention or mitigation of the consequences

of a disaster). Compensation schemes for damage caused by a disaster—recovery—can be seen as a correction of wrong although no one can be held liable for that wrong, since it is an ‘Act of God’.⁸

As compensation is a way of restoring the just distribution of—amongst others—property rights, the question raises how the less benefitted part of society—those without property—are being included in this. The discussion regarding the just distribution of rights and risks falls out of the scope of this book, although the discussion should at least start in the recovery phase after a disaster, since that is always an opportunity to redefine the just and equitable distribution.

3.5 CONCLUSION

In this chapter we introduced the concepts of property and property rights from a legal perspective to contribute to the discussion on the relationship between climate hazards and property rights which aims at increasing the resilience of society. It is clear that different legal systems use different concepts of property and property rights, which has consequences for the way states deal with natural hazards, focussing more on governmental responsibility, individual responsibility or a combination thereof. Besides the legal approach of course also political systems and policies influence the way states deal with natural hazards and the damage they may cause to property and people. States may take large responsibility or leave it to the market and private parties. In all political and policy situations different strategies to cope with natural hazards are related to property and property rights, ranging from prevention to recovery. Understanding the role of property and property rights and the way they can be infringed and under what conditions and with which aims is therefore crucial. Who should take responsibility for dealing with natural hazards and how property rights will be or must be protected is a topic that needs further research, with specific attention for national and regional differences. However, we do stress the need to look beyond the scope of property rights, in order not to overlook those who are most vulnerable for the effects of natural hazards and who might not even have property.

⁸ Although we do not know whether the non-fulfilment of the obligations of e.g. the Paris Agreement leads to a certain degree of ‘guilt’ of certain states.

In this context we can only conclude that even though property owners can be harmed by the prevention of or the strike of natural hazards, in the end they will always be better off than the ones who do not own property. Or, in the words of John Locke, ‘Where there is no property there is no injustice’.

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