

The Paradox of Dutch Sustainability

Claudia Rot

Abstract

Sustainability in the Netherlands embodies an enormous paradox. On the one hand, the Netherlands has an international reputation as an environmentally friendly country, while on the other hand, the country perpetuates fossil fuel capitalism. This research uses a discourse analysis to draw up the context of this paradox. It expands upon the notion of Dutch sustainability, using the concept of ecological modernization and a critique on the Protestant ethic. Second, the history of land reclamation in the Netherlands is framed in the context of sacrifice zones, relating it to the contemporary practice of sea level rise adaptation and flood prevention on a global scale. This contextual approach begins to explain why this paradox of sustainability exists, and why Dutch sustainability currently does not include a notion of environmental justice.

Affiliation:
Wageningen
University &
Research,
Landscape
Architecture
and Spatial
Planning Group

Contacts:
claudia [dot] rot [at]
wur [dot] nl

Received:
16 February 2021

Accepted:
14 May 2021

DOI:
10.17454/ARDETH08.12

ARDETH #08

This technocratic approach finds its roots in the perceived malleability of the Dutch physical environment, in which top-down technological measures were used to repeatedly radically change the surface and the use of the Dutch landscape.

Introduction

The anthropogenic amplification of global climate change and the direct consequences of environmental risks of all kinds are two of the biggest integral and interrelated challenges facing urbanists, designers, policymakers, and scientists across the world. Everybody and all institutions carry the shared responsibility to prevent the worst climate change scenarios from happening. Industrialized countries have the means and the economic carrying capacity to be at the forefront of a systemic change that is necessary to ensure a stable living environment for current and future generations.

One of these industrialized countries is the Netherlands. This country of 17 million people is situated on the delta of multiple major European rivers, with approximately 25% of its land lying below sea level. The country has always been threatened by water from multiple directions, which has resulted in a multi-century legacy of water management and infrastructure knowledge (van Veen, 1955). This legacy has been an export product for centuries, and it continues to be one of the most highly appreciated sea level rise adaptation industries on a global level (Lintsen, 2002). However, the Dutch State and the Dutch general public have a limited view of what sustainability entails. More specifically, sustainability challenges and environmental problems are mostly approached as technological challenges that can be fixed by implementing the right emission standards and inventing new technologies (Verbong, Geels, 2007). This technocratic approach finds its roots in the perceived malleability of the Dutch physical environment, in which top-down technological measures were used to repeatedly radically change the surface and the use of the Dutch landscape (van der Ham, 1999; Van der Woud, 2020). Historically, the national government has neglected to take into account possible *social* impacts of sustainability challenges such as energy poverty (Mashhoodi et al., 2019), as well as environmental problems such as unequal exposure to a variety of environmental indicators, both positive and negative (Kruize et al., 2007a). This predominantly technocratic approach has contributed to a paradox around Dutch sustainability. In this paradox, the Netherlands has an international reputation as an environmentally

friendly and sustainable country, while the country at the same time perpetuates and exacerbates fossil fuel capitalism (Verschuuren, 2019).

This article uses a discourse analysis, which is increasingly being used as a qualitative method in the fields of spatial planning and environmental policy (Sharp, Richardson, 2001; Hajer, Versteeg, 2005). This approach is especially useful to contextualize the history and cultural specifics of ideological, as well as policy and planning, matters (Sharp, Richardson, 2001). By contextualizing the Dutch notion of sustainability, this article aims to answer the following question: why is there a lack of societal sustainability in the Dutch notion of sustainability? This article serves as an explorative study into the absence of the discourse of environmental justice in the Dutch sustainability discussion.

Notions of Dutch sustainability

The push towards sustainability and a circular economy in the Netherlands, which is reflected in the national spatial vision for the country (BZK, 2020) is a clear example of a national economy that has adopted the concept of ecological modernization. The theory of ecological modernization states that economic growth and moving towards sustainability are not mutually exclusive (Buttel, 2000). This view opposes the ‘standard view’ of environmental management which assumes a zero-sum relation between environmental benefits and economic benefits (Harvey, 1996). More recently, the ideas of ecological modernization have been adopted into the ecomodernist manifesto, which was published in 2015 by a group of scholars, scientists, campaigners, and citizens (Asafu-Adjaye et al., 2015). The main mission of the manifesto is to “use humanity’s extraordinary powers in service of creating a good anthropocene” (ibid.). This ecological modernist approach towards environmental management frames environmental problems and climate change as technical problems that can be fixed, and that can be economically profitable.

Recently, the ecological modernist movement has been largely appropriated by neoliberalist market forces, allowing companies to improve their reputation by greenwashing their policies, as to mislead consumers about their environmental performance (Delmas, Burbano, 2011). However, making profits with

This ecological modernist approach towards environmental management frames environmental problems and climate change as technical problems that can be fixed, and that can be economically profitable.

Both environmental problems and sustainability measures disproportionately burden low-income communities and minority communities.

Max Weber observed how capitalism was first gaining traction in countries with many practicing protestant Calvinists.

practices that benefit the environment, or harm it less than conventional practices only addresses symptoms of the problem, rather than also addressing the cause. An example of this partial approach is illustrated in an examination of the waste recycling system in Chicago (Pellow, 2000). The recycling process itself was beneficial because it decreased disposal streams to landfills. However, a number of externalities occurred in which communities and natural environments continued to be harmed. This exemplifies the need for a thorough system analysis for environmental impact before implementing new measures.

The emphasis on ecological modernization by the Dutch national government has resulted in a notion in which technocratic sustainability is considered to be most effective to decrease emissions. However, this technocratic sustainability does not include the social aspect of sustainability. It does not take into account how technological fixes or consumer behaviour changes are not equally accessible for everyone, nor does it acknowledge that both environmental problems and sustainability measures disproportionately burden low-income communities and minority communities (Kruize, 2007b; Brisman, 2009; Mashhoodi et al., 2019).

Calvinist sustainability

Another observation entails similarities between what is seen as ‘environmentally friendly behaviour’ and what is historically considered as ‘virtuous behaviour’ in the Dutch protestant culture. Up until the late 20th century, the Dutch population was quite religious, with a large number of Protestant Calvinists (van Miert, 1992; Van der Bie, 2009). Traits that are seen as virtuous in Calvinism include being humble, not consuming a lot, not spending a lot of money, and working hard (Otten, Lok, 2009). Max Weber observed how capitalism was first gaining traction in countries with many practicing protestant Calvinists (Weber, 1930). Calvinism fed into individualistic behaviour which encouraged working for an industrious calling and not lingering on unnecessary luxuries.

Waste of time is thus the first and in principle the deadliest of sins. [...] Loss of time through sociability, idle talk, luxury, even more sleep than is necessary for health, six to at most eight hours, is worthy of absolute moral condemnation. (Weber, 1930: 104).

Even though Dutch society has recently become more secular during the last decades (Van der Bie, 2009), these virtuous values are still culturally important today (Schama, 1988). Therefore, embedding environmentally friendly behaviour that relates to reducing consumption might come as a ‘second nature’ for Dutch people with a protestant background. It can be seen as an extension of the virtuous behaviour under Calvinism. However, this similarity between Calvinist virtuous behaviour and environmentally friendly behaviour is not yet acknowledged in Dutch society. Therefore, it may also be difficult for communities with a protestant cultural background to recognize difficulties that people with a different cultural background might have with adopting environmentally friendly behaviour (Lagunas et al., 2017).

Thus, not acknowledging the Calvinist roots of environmentally friendly behaviour in the Netherlands puts up barriers for the people for whom this behaviour is not a ‘second nature’. These barriers can be amplified when the different cultural background coincides with being part of a low-income community, as these communities often have other priorities aside from pursuing environmentally friendly behaviour (Lagunas et al., 2017). Not only is it more challenging to adopt this behaviour because of their differing cultural context, but their challenge in this respect is also not being acknowledged.

Slow violence

In the United States, the evidence of the disproportionate burdens of environmental problems on marginalized communities, including both low-income communities and ethnic minorities, is often painfully clear and relatively easy to measure: hazards such as open landfills, sewage treatment plants, or deteriorating water quality (Martinez-Alier, 2003; Bullard, 2008; Mohai et al., 2009). However, aside from these visible problems are a number of disproportionate burdens that are less apparent. In the Netherlands, most of the environmental problems fall into this latter category. The lower visibility of these burdens is partially due to many environmental problems manifesting themselves not as immediate dangers, but as slow violence – deteriorating a community and the envi-

Not acknowledging the Calvinist roots of environmentally friendly behaviour in the Netherlands puts up barriers for the people for whom this behaviour is not a ‘second nature’.

Slow violence is made even less visible when the burden only occurs when multiple sources of environmental degradation cumulatively form a threat but are not necessarily dangerous individually.

ronment over a longer period of time (Nixon, 2013). This concept of slow violence, coined by Rob Nixon in his book with the same title, entails:

[...] violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all (Nixon, 2013: 2).

Furthermore, slow violence is made even less visible when the burden only occurs as a result of multiple sources of environmental degradation cumulatively form a threat but are not necessarily dangerous individually (Clougherty, Kubzansky, 2009). In this situation, when multiple individual environmental and social threats can *combine forces* and amplify their risks on communities, is referred to as cumulative impact by Morello-Frosch et al. (2011).

What can be observed in the Netherlands today is many environmental thresholds being surpassed after having slowly deteriorated for decades. This can be seen in the agricultural industry, where a nitrogen surplus is now seriously threatening the biodiversity in proximity of livestock farms (Vink, van Hinsberg, 2019). The increased air pollution leading to health hazards in towns around the IJ river industry is another example of slow violence (Weijers, Vonk, 2020). When comparing instances of slow violence in the United States to the Netherlands it is important to take the different institutional and cultural contexts into consideration. As has been examined by Coenen and Halfacre (2000), contrary to the United States, the strong history of consensus building in local politics in the Netherlands has led to lower thresholds for exposure to environmental hazards. Similarly, while Kruize et al. (2007a) show that some communities are more burdened than others in the Netherlands, these do not fall below the health thresholds set by the national government. However, while Coenen and Halfacre (2000) write that the distribution of environmental burdens is not problematic in the Netherlands, procedural justice – being included in decision making processes regarding environmental benefits and burdens (Schlosberg, 2004) – is being neglected in the Netherlands. In their conclusions Kruize et al. (2007a) write that while the Netherlands regulates the

presence and distribution of environmental burdens through policies, the distribution of environmental benefits is mostly left to market forces. These results are in line with Pulido's study in which she examined the distribution of environmental benefits between neighbourhoods of different demographics and found that predominantly white communities have more access to environmental benefits, such as access to green space and clean air (Pulido, 2000).

Landmaking

Approaching environmental problems as technocratic or rational problems is in line with the historical relationship that the Netherlands has with its physical environment: the land and the water. The malleability of the physical environment, of which about 17% has been reclaimed from bodies of water (van Veen, 1955), has contributed to the belief that the Netherlands itself is a human-made country. Being one of the most densely populated countries in the world (World Bank, 2021), the national planning bureau meticulously manages every square meter of land to ensure its most efficient use (PBL, 2021). Therefore, one can imagine that facing contemporary environmental problems evokes a similar response in which efficient use of resources and precise management solve problems from a top-down perspective.

This history of landmaking shows that the Dutch have been successful in manipulating land and water with technological advancements to prevent them from being flooded too often (Van der Woud, 2020). A part of the Dutch identity is built around the notion that "they created their own country" (van Veen, 1955). The aforementioned examples show that national or regional governments have historically made drastic changes to the landscape, despite the tremendous effects these changes have on the livelihood of some people (Wilson, 1968; Van der Woud, 2020). This tradition of sacrifice has contributed to the contemporary approach towards issues of sustainability that are highly technocratic without taking societal implications into consideration (Kruize, 2007b).

4 - Con il termine "destrutturare" si considera, in genere, «scomporre una struttura negli elementi che la costituiscono, sia al fine di smantellarla, sia per avviarne una riorganizzazione» (Dizionario Treccani), o anche «rompere la struttura classica di un genere consolidato ai fini di una nuova strutturazione».

While the Netherlands regulates the presence and distribution of environmental burdens through policies, the distribution of environmental benefits is mostly left to market forces.

The concept of *sacrifice zones* has been introduced to cover geographic areas or communities that have been permanently impaired by environmental damage, industrial pollution, or economic disinvestment.

Sacrifice zones

Absent collective and egalitarian efforts toward massive decarbonization and resource restraint, the Dutch, despite their great ingenuity and grit, will remain prisoners lashed to a sinking ship (Dawson, 2017: 230).

The term ‘national sacrifice zone’ was first coined in the United States during the Cold War to designate areas that were permanently contaminated as a result of the mining and processing of uranium into nuclear weapons (Lerner, 2012). More recently, however, the concept of *sacrifice zones* has been introduced to cover geographic areas or communities that have been permanently impaired by environmental damage, industrial pollution, or economic disinvestment (ibid.). These sacrifice zones are most often found in minority or low-income communities (e.g. Pastor et al., 2001; Mohai et al., 2009; Collins et al., 2016).

Applying Lerner’s definition of sacrifice zones to the Netherlands, one can identify a sequence of sacrifice zones throughout the history of the country. One could argue that when a country has a centuries-long experience of reclaiming land from bodies of water – with the growing notion that land is malleable – existing land becomes easier to replace.

An example of sacrifice zones in the Netherlands can be found in *Extreme Cities*, by Ashley Dawson. He uses the national *Ruimte voor de Rivier* (Room for the River) plan that was initialized after heavy fluvial floods in the 1990s to show how rural life in the Netherlands is being valued less than urban life. The controversy that he highlights is that one of the measures in this plan was to allow water to inundate agricultural land periodically during high river levels (Dawson, 2017: 226). Much of this land was owned by families for multiple generations, amplifying the strong relationship between culture and the rural landscape.

While the Dutch possess a strong orientation toward the collective good, the policy’s uneven way of distributing benefits and losses became particularly apparent as urban developments such as IJburg [a neighbourhood on an artificial island in Amsterdam] steamed forward at the same time as agricultural land was being sacrificed. For rural people, the idea that climate change made the evacuation of their

ancestral lands inevitable was seen as opportunistic. Why should only farmers be asked to make sacrifices, they asked? (Dawson, 2017: 226).

Dawson continues by bringing in the transitioning away from Dutch welfare state to a more neoliberal economy in the last few decades, in which real estate development is becoming an increasingly important driving force of the Dutch economy (Koomen et al., 2008). Because land and real estate in urban centers are valued higher than their rural counterparts, there is an incentive to build in the urban environment, even when that means that new islands have to be created to increase the housing stock. At the same time, the lower-valued rural landscape that does not have the same high flood risk is being sacrificed as a floodplain to protect the real estate in urban areas. The unequal distribution of the burden of these flood policies is an example of environmental injustice related to sacrifice zones (Kaufmann et al., 2018). When looking at population density, it seems more reasonable to use agricultural land instead of urban areas as a flood buffer. However, the city of Amsterdam is expanding onto newly built artificial islands that take up space that would otherwise be used by rivers (Gemeente Amsterdam, 2014). This process can narrow the bottleneck downstream, while increasing the pressure on the upstream agricultural land. It appears that farmers are asked to sacrifice parts of their land for climate adaptation to secure the growing demand for new real estate in low-lying cities (Dawson, 2017).

Dutch land as a brand

Whereas the Netherlands sometimes promotes the notion of sacrifice zones within its own borders and in other parts of the world where it facilitates resource extraction, one of the country's biggest export products is the art of land reclamation. A centuries-long experience with reclaiming land and protecting sinking land from rising water levels has put Dutch engineers on the forefront of the sea level rise adaptation industry (Klein et al., 1998). "In the waterlogged Netherlands, climate change is considered neither a hypothetical nor a drag on the economy. Instead, it's an opportunity" (Kimmelman, 2017).

It is quite paradoxical that the Netherlands, historically a country that has been almost continuously threat-

The unequal distribution of the burden of these flood policies is an example of environmental injustice related to sacrifice zones.

Farmers are asked to sacrifice parts of their land for climate adaptation to secure the growing demand for new real estate in low-lying cities.

Dutch engineers have historically profited off of draining the wetlands and today they are building dikes or restoring the wetlands their ancestors might have destroyed or altered.

ened by the sea, profits off of sea level rise. Moreover, selling this water management knowledge is not a new practice either. Ever since the heyday of the imperialist East and West India Companies, the Dutch have been using their far reach to drain and dredge bodies of water and marshlands globally (Van Veen, 1955; Moore, 2010). Especially the dredging of marshlands in the last few centuries is problematic from an ecological perspective. Wetlands and marshlands are now widely recognized as ecosystems that function as buffers that protect their hinterlands against fluctuations in sea level (Costanza et al., 2008), even by the Netherlands (KNMI, 2014; Ecorys, 2019).

400-year Investment Cycle

Dutch engineers have historically profited off of draining the wetlands and today they are building dikes or restoring the wetlands their ancestors might have destroyed or altered. In this 400-year investment cycle, the Dutch are making profits by selling a fix to a problem they themselves helped to create. Moreover, the creation of this problem at the time was seen as fixing another problem: that of transforming “unusable” swamplands and marshes into arable and buildable land (Wilson, 1968). Dutch engineers and merchants were hired to transform these landscapes into more useful land, which was a lucrative business. Today, Dutch engineers are paid again, but this time it is to fix the mistakes their ancestors made. Somehow, the Dutch are hailed internationally as innovators who have excellent adaptation strategies for sea level rise, but somewhere in the narrative the fact that the Dutch also played a significant role in making landscapes less resilient to sea level rise got lost (Dawson, 2017). Thus, the Dutch are receiving credit for coming up with solutions, but they barely get any of the blame for significantly contributing to the problem.

Wherever Dutch capitalists went in the north they were to be found draining swamps, clearing forests, building canals, opening mines, building ships, mills, factories for gunpowder, glass, textiles. Thus, Amsterdam capital reached out into Europe’s backward areas, fertilising and fructifying as it went (Wilson, 1968: 78).

It is generally acknowledged that the imperialism of the Dutch Republic and the East and West India

Companies did have widespread global social and economic consequences. However, exploited communities and countries also had to deal with environmental and ecological degradation as a result of the land management strategies of the Dutch (Wilson, 1968). This ecological dimension of the practices of the Dutch Republic and East and West India Companies therefore implies that the Dutch capitalism that was practiced and spread at that time was not only based on social and economic alterations of society, but also environmental alterations (Moore, 2010). It is very important to take this into consideration when looking at sustainability practices in the Netherlands, because this is the legacy that the current practice is built on. With its centuries of experience in water management and land alteration, the Netherlands continues to make money from environmental alterations and sea level rise on a global level.

Not only is the Netherlands selling the knowledge from over 400 years of practice, but the Dutch State is also affiliated with some of the most polluting and environmentally harmful companies in the world, including Shell (Mommers, 2018). Consequently, whilst the Netherlands has appointed a “Special Envoy for International Water Affairs for the Kingdom of the Netherlands” to help vulnerable communities adapt to sea level rise, the country is only selectively eager to mitigate its own role in causing sea level rise (Bregman, 2020).

The Netherlands has been using its reputation in sea level rise adaptation to make the country in its entirety look like a frontrunner of sustainability. However, when one looks at the numbers, it becomes very clear that this reputation is nothing more than a veil that conveniently hides the polluting practices of the Dutch economy. The energy mix of the Netherlands had a share of 7,4% in renewable energy as of 2018 (Eurostat, 2020). This was the lowest share of all EU member states (ibid.).

The technocratic approach towards sustainability has resulted in a policy practice that upholds the ecomodernist notion that sustainability shall only be implemented if it is profitable. This notion of sustainability has failed to make the Netherlands reach its own renewable energy goals, while also making environmentally friendly behaviour and climate adaptation

With its centuries of experience in water management and land alteration, the Netherlands continues to make money from environmental alterations and sea level rise on a global level.

The remains of that history have to be recognized if the Netherlands wants to move into a *fair* and *just* climate-neutral society.

expensive and elitist. This leaves vulnerable communities in the Netherlands and countries that cannot afford the Dutch climate adaptation techniques underserved.

Conclusion

Climate change mitigation and adaptation are not mutually exclusive. Rather, the two should be practiced alongside each other in a climate-neutral society. Similarly, including environmental justice in the climate change debate does not mean that the 500-year history of land reclamation and water management should be left behind. Environmental justice can be incorporated into the current sustainability practice of the Netherlands. However, in order to do that, there needs to be a systemic reflection on how the notions of Dutch sustainability and water management are rooted in a history of sacrifice, exploitation, and unequal burdens and profits. The remains of that history have to be recognized if the Netherlands wants to move into a *fair* and *just* climate-neutral society. A large step towards this recognition process is to listen to the oppressed and marginalized and to open up decision-making processes for them. Gaining an understanding of the historical and societal context of the Dutch notion of sustainability is an important step towards creating a sustainability that is more inclusive. Similar to how the concept of environmental justice cannot be understood without the historical and societal context of the origins of the discourse in the United States. In the case of the Netherlands, the results of this discourse analysis show that multiple historical and societal strands have led to a country that appears to be more environmentally friendly on the outside than it is in reality. However, to create a more inclusive sustainability, it will not suffice to simply adopt the American environmental justice discourse, because it is just as embedded in local context as the notion of Dutch sustainability. Therefore, questions that remain include: what types of societal narratives should be woven into the current discourse of Dutch sustainability to make it more inclusive in the future?

References

- Asafu-Adjaye, J., Brook, B., Blomqvist, L., Defries, R., Brand, S., Ellis, E., Foreman, C. et al. (2015), *An Ecomodernist Manifesto*, pp. 1-32 [Online]. Available at: <http://www.ecomodernism.org/manifesto-english> [Accessed: 8 May 2021].
- Bregman, R. (2020), *Het Water Komt*, Amsterdam, De Correspondent.
- Brisman, A. (2009), *It Takes Green to Be Green: Environmental Elitism, Ritual Displays, and Conspicuous Non-consumption*, "NDL Rev.", n. 85, p. 329.
- Bullard, R. D. (2008), *Dumping in Dixie: Race, Class, and Environmental Quality*, New York, Avalon.
- Buttel, F. H. (2000), *Ecological Modernization as Social Theory*, "Geoforum", n. 31, pp. 57-65.
- BZK (2020), Nationale Omgevingsvisie. Duurzaam perspectief voor onze leefomgeving. Den Haag: Ministerie van Binnenlandse Zaken en Koninkrijksrelaties [Online]. Available at: <https://www.rijksoverheid.nl/documenten/rapporten/2020/09/11/nationale-omgevingsvisie> [Accessed: 8 May 2021].
- Clougherty, J. E., Kubzansky, L. D. (2009), *A Framework for Examining Social Stress and Susceptibility to Air Pollution in Respiratory Health*, "Environmental health perspectives", n. 117, pp. 1351-1358.
- Coenen, F. H. J. M., Halfacre, A. C. (2000), *De verdeling van milieueffecten en milieurisico's over de Nederlandse bevolking als beleidsprobleem: 'Environmental Justice' in Nederland*, "Beleidswetenschap", n. 14, pp. 316-339.
- Collins, M. B., Munoz, I., Jaja, J. (2016), *Linking 'Toxic Outliers' to Environmental Justice Communities*, "Environmental Research Letters", n. 11, DOI 015004.
- Costanza, R., Pérez-Maqueo, O., Martinez, L. M., Sutton, P., Anderson, S. J., Mulder, K. (2008), *The Value of Coastal Wetlands for Hurricane Protection*, "Ambio", n. 37, pp. 241-248.
- Dawson, A. (2017), *Extreme Cities*, London, Verso.
- Delmas, M. A., Burbano, V. C. (2011), *The Drivers of Greenwashing*, "California Management Review", n. 54, pp. 64-87.
- Ecorys (2019), *Economische schade door droogte in 2018*, Rotterdam, Ecorys.
- Eurostat (2020), *Renewable Energy in the EU in 2018* [Online]. Available at: <https://ec.europa.eu/eurostat/documents/2995521/10335438/8-23012020-AP-EN.pdf/f292cf2e5-8870-4525-7ad7-188864ba0c29> [Accessed: May 9 2020].
- Gemeente Amsterdam (2014), *Hoe IJburg begon* [Online]. Available at: <https://www.amsterdam.nl/projecten/ijburg/hoe-ijburg-begon/> [Accessed: 8 May 2021].
- Hajer, M., & Versteeg, W. (2005), *A Decade of Discourse Analysis of Environmental Politics: Achievements, Challenges, Perspectives*, "Journal of environmental policy & planning", n. 7, pp. 175-184.
- Harvey, D. (1996), *The Environment of Justice*, "Justice, Nature & the Geography of Difference", Cambridge (MA), Blackwell, pp. 366-402.
- Kaufmann, M., Priest, S.J., Leroy, P. (2018), *The Undebated Issue of Justice: Silent Discourses in Dutch Flood Risk Management*, "Regional Environmental Change", n. 18, pp. 325-337.
- Kimmelman, M. (2017), *The Dutch Have Solutions to Rising Seas. The World is Watching*, "New York Times" [Online]. Available at: <https://www.nytimes.com/interactive/2017/06/15/world/europe/climate-change-rotterdam.html> [Accessed: 6 March 2019].

- Klein, R. J., Smit, M. J., Goosen, H., & Hulsbergen, C. H. (1998), *Resilience and Vulnerability: Coastal Dynamics or Dutch Dikes?*, "Geographical Journal", n. 164, pp. 259-268.
- KNMI (2014), *Klimaatscenario's* [Online]. Available at: <http://www.klimaatscenario.nl/> [Accessed: 9 May 2021].
- Koomen, E., Dekkers, J., Van Dijk, T. (2008), *Open-space Preservation in the Netherlands: Planning, Practice and Prospects*, "Land use policy", n. 25, pp. 361-377.
- Kruize, H., Driessen, P. P., Glasbergen, P., & van Egmond, K. N. (2007a), *Environmental Equity and the Role of Public Policy: Experiences in the Rijnmond Region*, *Environmental management*, n. 40, pp. 578-595.
- Kruize, H. (2007b), *On Environmental Equity: Exploring the Distribution of Environmental Quality Among Socio-economic Categories in the Netherlands*, Doctoral dissertation, Utrecht, Utrecht University.
- Lagunas, D., Lobbrecht, C., Heilbron, T. (2017), *Inclusieve Duurzaamheid: Een Verkenning naar Duurzaam Gedrag bij Nederlands met en zonder Migratieachtergrond*, "Fawaka Nederland" [Online]. Available at: <http://www.fawakanederland.nl/wp-content/uploads/2017/10/Fawaka-Nederland-Inclusieve-Duurzaamheid.pdf> [Accessed: 7 January 2021].
- Lerner, S. (2012), *Sacrifice Zones: The Front Lines of Toxic Chemical Exposure in the United States*, Cambridge (MA), MIT Press.
- Lintsen, H. (2002), *Two Centuries of Central Water Management in the Netherlands*, "Technology and culture", n. 43, pp. 549-568.
- Martinez-Alier, J. (2003), *The Environmentalism of the Poor: A Study of Ecological Conflicts and Valuation*, Cheltenham, Edward Elgar Publishing.
- Mashhoodi, B., Stead, D., van Timmeren, A. (2019), *Spatial Homogeneity and Heterogeneity of Energy Poverty: A Neglected Dimension*, "Annals of GIS", n. 25, pp. 19-31.
- Mohai, P., Pellow, D., Roberts, J. T. (2009), *Environmental Justice*, "Annual review of environment and resources", n. 34, pp. 405-430.
- Mommers, J. (2018), *#ShellKnew. In deze interne documenten kun je zelf lezen wat Shell sinds 1986 weet over klimaatverandering*, "De Correspondent" [Online]. Available at: <https://decorrespondent.nl/5563/shellknew-in-deze-interne-documenten-kun-je-zelf-lezen-wat-shell-sinds-1986-weet-over-klimaatverandering/613092667-fad068b1> [Accessed: 5 March 2019].
- Moore, J.W. (2010), *Amsterdam is Standing on Norway Part II: The Global North Atlantic in the Ecological Revolution of the Long Seventeenth Century*, "Journal of Agrarian Change", n. 10, pp. 188-227.
- Morello-Frosch, R., Zuk, M., Jerrett, M., Shamasunder, B., Kyle, A.D. (2011), *Understanding the Cumulative Impacts of Inequalities in Environmental Health: Implications for Policy*, "Health Affairs", n. 30, pp. 879-87.
- Nixon, R. (2013), *Slow Violence and the Environmentalism of the Poor*, Cambridge (MA), Harvard University Press.
- Otten, F., Lok, R. (2009), *Religie en verschillen in leefstijl, arbeid en inkomen*, in CBS, *Religie aan het begin van de 21ste eeuw*, Den Haag, Centraal Bureau voor de Statistiek, pp. 65-81.
- Pastor, M., Sadd, J., & Hipp, J. (2001), *Which Came First? Toxic Facilities, Minority Move'in, and Environmental Justice*, "Journal of urban affairs", n. 23, pp. 1-21.

- PBL (2021), *Grote opgaven in een beperkte ruimte. Ruimtelijke keuzes voor en toekomstbestendige leefomgeving*, Den Haag, Planbureau voor de Leefomgeving.
- Pellow, D. N. (2000), *Environmental Inequality Formation: Toward a Theory of Environmental Injustice*, "American Behavioral Scientist", n. 43, pp. 581-601.
- Pulido, L. (2000), *Rethinking Environmental Racism: White Privilege and Urban Development in Southern California*, "Annals of the Association of American Geographers", n. 90, pp. 12-40.
- Schama, S. (1988), *The Embarrassment of Riches: An Interpretation of Dutch Culture in the Golden Age*, Berkeley, University of California Press.
- Schlosberg, D. (2004), *Reconceiving Environmental Justice: Global Movements and Political Theories*, "Environmental politics", n. 13, pp. 517-540.
- Sharp, L., Richardson, T. (2001), *Reflections on Foucauldian Discourse Analysis in Planning and Environmental Policy Research*, "Journal of Environmental Policy and Planning", n. 3, pp. 193-209.
- Van der Ham, W. (1999), *Heersen en beheersen: Rijkswaterstaat in de twintigste eeuw*, Zaltbommel, Europese Bibliotheek.
- Van der Bie, R. (2009), *Kerkelijkheid en kerkelijke diversiteit 1889-2008*, in CBS, *Religie aan het begin van de 21ste eeuw*, Den Haag, Centraal Bureau voor de Statistiek, pp. 65-81.
- Van der Woud, A. (2020), *Het Landschap de Mensen*, Amsterdam, Prometheus.
- Van Miert, J. (1992), *Verdeeldheid en binding: over lokale, verzuilde, en nationale loyaliteiten*, "BGMN Low Countries Historical Review", n. 4, pp. 670-689.
- Van Veen, J. (1955), *Dredge, Drain, Reclaim: The Art of a Nation*, The Hague, Martinus Nijhoff.
- Verbong, G., & Geels, F. (2007), *The Ongoing Energy Transition: Lessons from a Socio-technical, Multi-level Analysis of the Dutch Electricity System (1960-2004)*, "Energy policy", n. 35, pp. 1025-1037.
- Verschuuren, J. (2019), *The State of the Netherlands v Urgenda Foundation: The Hague Court of Appeal Upholds Judgment Requiring the Netherlands to Further Reduce its Greenhouse Gas Emissions*, "Review of European, Comparative & International Environmental Law", n. 28, pp. 94-98.
- Vink, M., Van Hinsberg, A. (2019), *Stikstof in Perspectief*, Den Haag, Planbureau voor de Leefomgeving.
- Weber, M. (1930), *The Protestant Ethic and the Spirit of Capitalism*, London, Routledge.
- Weijers, E.P., Vonk, J. (2020), *Verkennde metingen aan ultrafijn stof in het IJmondgebied*, Den Haag, Rijksinstituut voor Volksgezondheid en Milieu.
- Wilson, C. (1968), *The Dutch Republic*, New York, McGraw-Hill.
- World Bank. (2021), *Population Density (People per sq. km of Land Area)*, "World Bank" [Online]. Available at: <https://data.worldbank.org/indicator/EN.POP.DNST> [Accessed: 5 January 2021].