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Dutch national climate change adaptation policy through a securitization lens: Variations of securitization

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Climate change has been framed as a threat to human security and has therefore become securitized, scholars argue. But what about the securitization of climate change *adaptation* as a policy response to fight climate change? Adaptation has risen on political agendas worldwide, and a few scholars have found some early signs of the securitization of adaptation at UN/EU levels. This paper analyzes how and to what extent adaptation has become securitized at national level, studying The Netherlands as one of the frontrunners in adaptation. We compared the levels of securitization for different adaptation issues, based on content analysis of 19 general and sectoral national policy documents and 7 in-depth interviews with national policy makers and experts. Securitization is studied with respect to the discourses used to frame the climate as a risk or threat, and the actors and tools that are put forward to address the climate risk or threat. The results show that climate change has made Dutch adaptation to flood risks even more prominent: in the two most important national policy documents climate change is framed as a wake-up call to speed up the plans and actions of the longstanding Delta program to protect The Netherlands against flooding. We also see considerable differences between the levels of securitization for different adaptation issues. Water-related adaptation issues show signs of riskification, while the same cannot be said for adaptation to heat stress and drought. Furthermore, most attention goes to the governance of adaptation in the built environment, while neglecting the social and health care domains and the need to take account of the capabilities of at-risk citizen groups. By applying the securitization lens this research has yielded new insights into national adaptation policy development. Future research could develop a better understanding of how securitization tendencies travel across different governance scales; for instance, on how national level discourses influence securitization of adaptation at the local level.

KEYWORDS

climate change adaptation, securitization, riskification, national policy, Netherlands

1. Introduction

Climate change is commonly regarded as *the* sustainability challenge of our times, and has risen on international, national and local governance agendas. Climate change has been framed as a threat to human security and a "threat multiplier" (UN, 2009) to the extent that some scholars argue that it has become "securitized". This means that climate change should be regarded as a threat to the international, national and local security and as such extraordinary measures should be put in place to fight its consequences (e.g., Barnett, 2001; Barnett and Adger, 2007; Oels, 2012; Diez et al., 2016). Securitization is the process whereby a public issue is framed as an existential threat to the survival of a certain entity, thereby transporting the issue to security politics that legitimize the use of extraordinary and far-reaching measures instead of normal policy making (Buzan et al., 1998; Scott, 2012; Balzacq et al., 2016). In this regard, the Netherlands is no exception: climate change has become a prominent issue on the agendas of Dutch policy makers and politicians (NCA, 2017, 2022). Indeed, the current Dutch Cabinet has defined climate change as the challenge of our generation" (NCA, 2021), and it is regarded as

one of the main threats to the national security, linking it to natural disasters (NVS, 2019). For the first time ever, since 2022 there is a dedicated Dutch "Minister for Climate and Energy," who resides under the Ministry of Economic Affairs and Climate. This minister has a clear mandate to steer and oversee the progress of climate policies of other ministries and controls a specific climate and transition fund.

Along with the rise of the public issue of climate change, climate change *adaptation* - the policy domain that deals with the preparation for and adjustment to current and predicted effects of climate change, from now on referred to as adaptation (IPCC, 2001)—has climbed international and national policy agendas (European Commission, 2020, 2021a,b; IPCC, 2022). For instance, among its climate strategies the European Union (EU) has assigned a central role for adaptation to reduce the adverse impacts of climate risks (Mysiak et al., 2018). In 2021 the European Commission launched the mission "Adaptation to Climate Change" as part of the 2021-2030 Horizon Europe Missions that target major global societal challenges in health, climate and the environment (European Commission, 2021a). In the latest EU Climate Adaptation Strategy, the European Commission has expressed the need for adaptation to ensure the strategic autonomy and self-interest of the EU and its member states (European Commission, 2021b). The EU Adaptation mission is supported by the EU knowledge platform Climate ADAPT. Also in The Netherlands adaptation has been receiving increased policy attention, and the country is often regarded to be a frontrunner in adaptation planning. Dutch adaptation policy has been shaped by the National Adaptation Strategy and the Dutch Delta program, both calling for integrated action to manage the risks of climate change on society from all governmental organizations at all level of governance (NAS, 2016, 2018; DP, 2021). Also the Dutch government has developed a dedicated knowledge portal for adaptation.

However, while climate change as a public issue has become a securitized issue according to some scholars (Scott, 2012; Diez et al., 2016; Dupont, 2018; Sperling and Webber, 2019), we generally lack an understanding of how and to what extent *adaptation,* as an adequate response to climate insecurities, has been securitized (Rhinard et al., forthcoming). There are some early indications that some degree of securitization of adaptation has been taking place at the international level (Rhinard and Morsut, In Press), while the securitization of national adaptation has not yet been subject to investigation. We argue that such studies are crucial for understanding the specific ways in which this pressing policy issue is addressed and by whom (Rhinard et al., forthcoming), as securitization results in new power dynamics and shapes how an issue is governed. In The Netherlands, adaptation to flood risk has a long history that started well before climate change became a policy issue and before adaptation was born as a policy domain. The Dutch have always fought against water and, therefore, flooding has been framed as an issue of national security. This has resulted in far-reaching measures such as the longstanding Delta Program, a specific Delta Law, and a dedicated Delta Commissioner and Delta Fund to protect the Dutch Delta against flooding from the rivers and the sea regardless of climate change. This has led to a strong institutionalization of flood risk governance to protect the Dutch Delta against flooding from the rivers and the sea regardless of climate change (Van Buuren et al., 2016; Wiering et al., 2017). So, we argue here that flood risk governance in The Netherlands shows signs of securitization even before climate change was raised as an issue on the international and national agendas.

Nevertheless, adaptation entails more than dealing with increased flood risks from sea level rise, increased river discharge levels and heavy rainfall. Compared to water-related climate adaptation issues such as flooding, other adaptation issues such as heat stress and drought suffer from a low level of attention among policymakers in The Netherlands (Runhaar et al., 2012; Boezeman and Kooij, 2015; Mees et al., 2015). Consequently, the governance of adaptation issues other than flooding is still in its infancy and less institutionalized (Kiem and Austin, 2013; Araos et al., 2015; Mees et al., 2015; Mahlkow and Donner, 2017; Keith et al., 2019; Watts et al., 2021). Moreover, we lack an overview and understanding of the current governance of other than water-related adaptation issues (Araos et al., 2015; Keith et al., 2019).

In view of these knowledge gaps, this paper aims to analyze how and to what extent adaptation of water/flood risks issues has been securitized in Dutch national policy, and how this compares against other topical areas of adaptation, such as heat stress and drought. We do this by analyzing 19 national policy documents from different policy sectors relevant to adaptation, complemented with seven interviews with national policy makers and experts. Since securitization is often studied through discourses (Buzan et al., 1998), the analysis of national policy documents allowed us to study how security issues such as climate change and adaptation are constructed through discourses, and if and to what extent they are subjectively framed as risks and threats requiring specific responses (Balzacq, 2011). The interviews helped to refine and validate the results from the analysis of national policy documents, and to detect differences between written discourses and the actual dynamics of policy practices. This research is part of project RISKSEC2.0, which aims to uncover how adaptation at various governance levels is framed through risk governance thinking, with a focus on accommodating everyday risks, or through securitization dynamics by which extraordinary measures and particular actors are required.

We organized the paper as it follows: Section 2 discusses the theoretical underpinning of this study based on Diez et al. (2016) and presents the analytical framework for the analysis of two distinct levels of securitization. Section 3 presents the methods used, followed by section 4 with the results. We end with a discussion and conclusion.

2. Securitization theory and climate change

Like other major public issues such as terrorism and migration, climate change has been studied through the lens of securitization theory, which was first launched in the late 1990's by the Copenhagen School. The core of the theory centers around the argument that security matters are subjectively shaped through discourses. By framing issues as existential threats, a greater sense of emergency may arise, resulting in a wider acceptance of extraordinary measures (Buzan et al., 1998; Dupont, 2018). In the case of climate change this may lead to far-reaching and costly actions to decarbonize society that would normally encounter stiff opposition, or it may result in hypothetical military action against greenhouse gas emitters (Oels, 2013). However, the securitization of climate change is disputed because stringent climate policies have not yet been widely

implemented despite the growing awareness of the threat that climate change poses (Oels, 2013; von Lucke et al., 2014) or because such securitization attempts may actually backfire and result in loss of support (Warner and Boas, 2019). Diez et al. (2016) observed that climate security discourses have not yet been translated into extraordinary climate policies, let alone military responses, although recent studies show some indications of climate security threats being integrated into the decision-making of the U.S. department of Defense (Burnett and Mach, 2021; Garfin et al., 2021). They argue that the long term and uncertain character of climate change does not fit with the traditional securitization theory of the Copenhagen School that focuses on direct existential threats and direct (military) responses (Diez et al., 2016).

Instead, several scholars have proposed to use the "risk" concept rather than threat to address the long term dynamics of climate change (Corry, 2012; Diez et al., 2016), because risk implies the presence of a long-term potentially existential threat that is intrinsically uncertain. In their view, climate risks may result in "a less extreme but permanent or indefinite state of emergency" (Diez et al., 2016; p. 32). Policies to deal with risks are meant to make the risk or threat manageable and require technical expertise based on risk calculations and analyses (Diez et al., 2016; Aven, 2020; Karlson et al., 2021). To make the risk concept applicable in the context of the securitization of climate change, Diez et al. (2016) argue that a distinction should be made between "riskification" and "threatification." Both riskification and threatification are regarded as a form of securitization albeit to a different degree, and each with their own discourses (Diez et al., 2016). While threatification follows the classic interpretation of securitization in terms of discourses of immediate threat and danger that should be dealt with through immediate (military) action, riskification refers to discourses of risk that require careful management through expert knowledge and risk experts. Both are considered to be on a continuum of securitization.

Rhinard et al. (2021) have taken this distinction between riskification and threatification as a starting point when they developed a framework for analyzing how and to what extent adaptation has been securitized for the RISKSEC2.0 research project. Rhinard et al. (2021) have proposed to operationalize securitization dynamics through the dimensions of Discourses, Actors and Tools. *Discourse* analysis is a common research method in securitization studies (Buzan et al., 1998). Through the analysis of prevalent discourses, security utterances can be captured in terms of wordings used to frame the risk and/or threat (the referent subject, in this case climate change) as well as the object that is at risk or threatened (the referent object). A threat discourse of climate change would use phrases such as "climate change triggers and worsens armed conflict, undermining state security," "climate change endangers food and water supply," while a risk discourse would rather refer to climate change as for instance increasing the probability of floods (Diez et al., 2016). *Actors* are those decision-makers and/or organizations that are activated in the identified discourses, and that are legitimized and given responsibility to take adaptation actions. Actors may include mandated policymakers, government officials, civil society, and expert communities (Rhinard et al., 2021). Important questions arise in terms of which actors are deemed to be most relevant for adaptation; how accountable they are; whether the decision-makers are granted exceptional power that exceeds their power under normal circumstances? *Tools* are broadly defined in RISKSEC2.0 to include any human-derived instrument intended to shape our surroundings. This dimension consists of the array of policies, policy instruments, resources and technologies that are put forward in the identified discourse to address the risk or threat at hand (Rhinard et al., 2021). A tool that fits threatification discourse would for instance be an adaptation strategy that aims to control the flow of climate refugees by strengthening the border security, or that would focus on surveillance and preparedness for coming danger (Diez et al., 2016). A tool that would be activated by a riskification discourse would aim for carefully calculating the climate risk or for increasing the resilience of certain parts of society that are vulnerable to climate change (Diez et al., 2016). The analytical framework as portrayed in Table 1, adopted from Rhinard et al. (2021) has been used as a heuristic tool to analyse how and to what extent adaptation has been securitized in Dutch national policy.

3. Materials and methods

The prevalent discourses, actors and tools regarding climate change and adaptation were retrieved by analyzing the content of 19 Dutch national policy documents. Within RISKSEC2.0. three types of policy documents were agreed upon by project partners to cover different degrees of breadth and depth and a variety of policy sectors relevant for adaptation: (1) national, all-of-government strategies, e.g., security strategies or national policy priority documents such as coalition agreements and sector specific policy documents; (2) climate change-adaptation specific strategies, e.g., national adaptation strategies; (3) sectoral adaptation strategies, depending on what is prioritized and how it is linked to adaptation: e.g., water strategies, flood strategies, heat strategies, land use strategies, etc. Strategy documents include "strategies," "action plans," vision plans," "white papers," "framework policies" etc. Table 2 presents the overview of the 19 selected documents, which together are regarded to represent the main wordings and narratives used for adaptation in The Netherlands in formal policy documents. Coding reliability across research partners was ensured through an Excel coding sheet and database that was shared among the partners (see Appendix 1). This excel sheet contained the three dimensions of securitization (discourse, actors, tools) and 6 specific questions for each of these dimensions. Periodic project meetings were held to ensure intercoder reliability among the different research partners.

In-depth interviews with seven national policy makers and experts (see Table 3) were primarily meant to corroborate the results from the document analysis and to discern any discrepancies between discourses and policy practices, if any. The four selected policy makers represent the three most important Ministries relevant for adaptation as well as the national Institute of Physical Security. Their organizations are considered to be the main actors in The Netherlands responsible for adaptation and/or security policy. The three selected experts each have their own expertise in the area of adaptation, climate services and security matters and have a helicopter view of Dutch national adaptation and/or security policy.

TABLE 1 Analytical Framework (adopted from Rhinard et al., 2021).

	Questions to explore	Riskification	Threatification
Security framings/related discourses	How are climate change adaptation challenges discussed in the documents? How are they framed: more in line with risk or threat language? What is seen to be "at threat" or "at risk" (the referent object). How is the end goal articulated?	Risk, risk management, long-term, resilience, probability, risk groups, risk areas, uncertainty, contingency, statistics, unclear, indirect, scenario planning, tolerance of uncertainty, precautionary principle, precaution, risk reduction, preparedness, manageable (based on Diez et al., 2016) Also consider risk language in line with the International Risk Governance Council: "tolerable risks," early warning," screening," etc.	Threat, security, short-term, immediately, urgent, existential, extraordinary, danger, direct, certain, clear-cut, clear, inevitable, emergency, emergency measures, survival, defense, destruction, eradicate (based on Diez et al., 2016)
Actors and organization	What governmental groups are seen as responsible for action, at national, regional, local levels? Which actors are mentioned or prioritized? Civilian military, public, private, etc? Is there a mention of who should be involved, and how they should be organized?	Risk management officials, risk scientists, insurance companies, etc	Military officials, home army engagement, police officials, command-and-control organization, etc.
Tools: policies, technologies, and interventions	What is the perceived solution to the problem? What policies are seen as relevant to combating these risks? Examples of adaptation policies? What technologies are mentioned? What interventions are envisioned? What resources need to be mobilized for adaptation? Economic, military, human…?	Existing policies: existing sectoral policies, albeit given a "risk twist" Technologies: risk assessment techniques, risk matrices, risk models. Resources: crisis management budgets, etc. Consider risk-oriented tools: "routine-based; risk-informed/robustness-focussed; precaution-based/resilience-focussed"	Existing policies: military preparedness policies, home guard strategies, etc. Technologies: military surveillance tools, measurement techniques, etc. Resources: civil defense budgets, defense department grants, etc.

4. Results

4.1. Dutch context, a brief introduction

In the Netherlands discussions about adaptation originated in the early 2000's. The word adaptation was directly copied from the IPCC (IPCC, 2001) and adopted by policy makers. In those early days adaptation was heavily preoccupied by developments in flood risk governance in The Netherlands and thereby directed toward everything that is related to water. Being a country reclaimed from the sea The Netherlands has a history of fighting against water, and therefore flood risk governance has become highly institutionalized in the Netherlands. Two major river flooding events in 1993 and 1995 led to renewed and heightened attention for water safety, and resulted in a second wave of institutionalization after the first wave of the famous Dutch Delta works in the 1950's. A second Delta committee was created in 2006 with the aim to protect the Dutch Delta from flooding (Van Buuren et al., 2016). This eventually resulted in the creation of the Delta Law (DL, 2011), a dedicated Delta fund (securing ∼1.25 billion Euros per year until 2032), a dedicated Delta Commissioner (governmental official responsible for the development and execution of the Delta Program) and a Delta Program. The Delta Program is a formal agreement on climate resilience and water safety between the national government, the provinces, the municipalities and the regional water authorities and it is updated every year. Therefore, it could be argued that water safety has been "securitized" and eventually "depoliticized" in The Netherlands even before climate change appeared on the political agenda. Climate change has played a role in so far as that it was regarded as an issue that exacerbated existing flood risks due to sea level rise, increased river discharge levels and increased severity and intensity of rainfall. During that time in the late 90's the focus in water safety shifted from exclusively fighting against water to including the concept of living with water, which proclaims a more adaptive approach to flood risk governance. The Dutch "Room for the River" strategy is a case in point, in which nature based solutions are being promoted complementary to gray infrastructural engineering works.

It is important to note that the Delta Program has had the most influence on shaping Dutch national adaptation policy, which started to emerge around 2007 when the first National Adaptation Strategy was issued. Due to the considerable influence of the Delta Program, Dutch adaptation policy has had a rather narrow perspective, focused on water related issues. More recently, in 2016 the creation of the second National Adaptation Strategy (NCA, 2017) has opened up adaptation to encompass a wider perspective of various climate change impacts including heat, drought and health impacts. So there are two national strategies/programs that have shaped Dutch national adaptation policy: the yearly updated Delta Program and the NAS. The Delta Program focuses on water (water safety, fresh water supply) and more recently on "spatial adaptation," while the NAS takes a broader perspective on adaptation. Both reside under the Ministry of Infrastructure and Water State.

4.2. Discourses

The discourse analysis of the selected policy documents shows that *climate change* is framed as "the sustainability challenge of our generation" (NCA, 2017, 2021). With respect to the national security, climate change is mentioned as an important ecological megatrend that increases the chance of extreme weather, hotter and dryer summers, warmer winters, and of armed conflict in developing

TABLE 2 Selected national policy documents (19).

Type of document	Year	Reference	Dutch title
National, all-of-government strategies			
Coalition agreement (previous government)	2017	NCA, 2017	Regeerakkoord "Vertrouwen in de toekomst"
Coalition agreement (current government)	2021	NCA, 2021	Regeerakkoord "Omzien naar elkaar, vooruitkijken naar de toekomst"
National vision for the environment	2020	NOV, 2020	Nationale Omgevingsvisie
National security strategy	2019	NVS, 2019	Nationale veiligheid strategie
Horizonscan national security	2020	HNS, 2020	Horizonscan Nationale Veiligheid
Exploration of security risks of the energy transition	2019	ESR, 2019	Verkenning risico's van de energietransitie voor de nationale veiligheid
National program on infrastructure, spatial planning and transport	2021	MPI, 2021	Meerjarenprogramma Infrastructuur, Ruimte en Transport
National health policy plan	2020	LNG, 2020	Landelijke nota gezondsheidbeleid 2020–2024
Climate agreement	2019	CA, 2019	Klimaatakkoord
Climate change adaptation specific strategies			
National adaptation strategy	2016	NAS, 2016	Nationale adaptatiestrategie (NAS)
White paper on adaptation	2020	BMH, 2020	BMH Klaar voor klimaatverandering
Administrative agreement on climate adaptation	2018	BAK, 2018	Bestuursakkoord klimaatadaptatie
Implementation plan of the national adaptation strategy	2018	UNAS, 2018	Uitvoeringsagenda NAS
Sectoral adaptation strategies			
Delta law on water safety and fresh water supply	2011	DL, 2011	Deltawet waterveiligheid en zoetwatervoorziening
Delta program	2021	DP, 2021	Deltaprogramma
Strategic Agenda crisis management water	2016	WWMO, 2016	Strategische Agenda SWMO 2016–2020
Room for the River program	2006	RR, 2006	planologische kernbeslissing Ruimte voor de Rivier
Protection against high waters program	2020	HBP, 2020	Hoogwater beschermingsprogramma 2019–2023
National heat plan	2015	NHP, 2015	Nationaal hitteplan

TABLE 3 Selected respondents (7).

Organization	Position
Ministry of infrastructure and water state	Team leader Adaptation and Programme Manager on spatial adaptation
Ministry of public health, wellbeing and sports	Coordinator and policy advisor climate adaptation
Ministry of the interior and kingdom relations	Coordinator and policy advisor climate adaptation
Institute of physical security	General Director
Foundation climate adaptation services	Director
Dutch climate covenant	Project leader climate adaptation
Itineris health and safety consultancy	Disaster risk management expert

countries, which in turn may increase European instability, and as a "slumbering process that will only have effect in the long term" (HSNS, 2020, translated from Dutch). In general climate change is framed as posing manageable risks to the Dutch economy, health, environment and safety (NAS, 2016; BMH, 2020; DP, 2021), and it is not referred to as a threat. The negative consequences of climate change that are mentioned, are predominantly water safety-related: high waters and flooding are the risks for society and economy most often mentioned in the documents. Health risks are barely mentioned, with the exception of heat stress: heat stress is mentioned as a short-term risk for specific population groups (NHP, 2015) and as one of the risks to be tackled in spatial planning (LNG, 2020; NCA, 2021).

An official definition of *adaptation* is missing in the analyzed documents. Rather, adaptation is framed as a "task" to reduce the risks of climate change (BMH, 2020; NOV, 2020; MPI, 2021) and to make the Netherlands climate-resilient (NAS, 2016; BAK, 2018; DP, 2021). Adaptation is mentioned as a big and complex societal challenge for the Dutch living environment and in which the whole of society needs to cooperate (NOV, 2020; MPI, 2021). However, at the same time it is regarded as a challenge that is already adequately integrated and addressed in existing policies and programs, predominantly the Delta Program (NVS, 2019). Adaptation is even presented as an opportunity, for instance to make spatial planning more health oriented (LNG, 2020). Also several interviewees, both policy makers and policy experts, mention this positive mindset and refer to the Dutch being frontrunners with their expertise in water-related adaptation and its opportunities for creating jobs and economic growth.

Nevertheless, recently there are some signs that there is an increased sense of urgency for adaptation: several documents speak of the need to speed up and intensify adaptation to keep the risks posed by climate change manageable and to make Dutch society

climate-resilient by 2050 (BAK, 2018; DP, 2021). The 2021 Delta program speaks of an "existential task" (DP, 2021; p. 6) and the need to invest in "existential safety" (DP, 2021; p. 7). Still, the use of threat, crisis or security-related language is infrequent and mostly related to water safety. One policy expert spoke of a cultural reluctancy to speak of crisis but instead to use language that conveys rationality and strategy. The overall discourse conveys that existing (adaptation) policies and programs can adequately manage the risks posed by climate change. This is reconfirmed in the interviews, where the general attitude seems to be that The Netherlands has the knowledge and skills to adapt to climate change. Related to this, several policy makers and experts mention the limited sense of urgency and thereby limited financing for adaptation compared to mitigation, which is reconfirmed in the most recent 2021 Coalition Agreement (NCA, 2021). Interviewees also mention that the time span for adaptation action is more long term, in particular for behavioral adaptation, as this is only needed as and when climate impacts are felt. A policy expert expressed that the word "adaptation" is jargon and difficult to understand, which impedes progress on adaptation.

Spatial adaptation, i.e., adaptation to the effects of climate change through measures in the built environment, is quite prominent in the documents. For instance, the Administrative Agreement on Climate Change Adaptation mentions the aim of a "water robust and climate resilient spatial planning of the Netherlands," and therefore the parties that signed the agreement have agreed to take adaptation into account in their spatial planning from 2020 onwards (NOV, 2020; translated from Dutch). Also the Delta Program is explicit in the need for spatial adaptation: "only by integrating climate adaptation into every physical intervention, we can keep The Netherlands safe and livable in the long term" (DP, 2021, p. 19, translated from Dutch). Water safety, fresh water supply and spatial adaptation are the three corner stones of the Delta Program (DP, 2021). Furthermore, adaptation is mentioned as a significant spatial planning challenge in relation to public health (LNG, 2020). Also several interviewees stress the spatial dimension of adaptation, primarily in terms of the need to integrate adaptation concerns into spatial planning: "Spatial planning is expected to have a more steering role for adaptation in the near future", as one policy maker stated. However, one policy expert also stressed the growing divide between the increased attention for and financing of spatial adaptation and all other facets of adaptation that receive far less attention and financing, because the spatial and water domains continue to remain dominant in adaptation.

The results described above show that there is a solid framing of climate change as a risk, and (spatial) adaptation as a strategy to implement plans to deal with this risk. However, as mentioned before, water safety has been framed as an issue of national security regardless of climate change due to the floods history of the Netherlands. Climate change is framed to exacerbate this issue, and therefore (spatial) adaptation should be sped up and intensified. The discourse does not entail threat or urgency language, or a particular need for extraordinary measures. The discourse is strongly oriented toward tweaking the existing governance arrangements to make these apt to deal with the new or increased risks caused by climate change. The documents show that adaptation governance relies on integration (into all relevant sectoral policies) and cooperation with all levels and sectors in society. This decentralized approach seems to reflect the riskification approach to adaptation. The relative focus on spatial adaptation can be explained by the focus on water-related adaptation issues, which require physical/infrastructural measures. Health related issues, which require behavioral adaptation and health care measures, are hardly addressed in national policy documents. There is limited call to action from the national government on health related climate issues besides heat stress.

To conclude, in contrast to the specific issue of water safety that has been securitized before climate change became an important public issue, the Dutch discourse on adaptation can be described as a mild form of "riskification," in which the risks from climate change on Dutch society as a whole (the referent object that needs to be protected) are considered to be accurately measured based on scientific data, and these risks can therefore be managed through careful planning. The current governance system of the Netherlands is considered to be capable of dealing with these risks.

4.3. Actors

The national policy documents stress the cooperation of actors from different levels of government and from civil society and the business sectors as key to develop and implement adaptation plans. So the whole of society is supposed to be involved, and thereby held responsible. This is clearly demonstrated through this excerpt from the NAS (NAS, 2016; p. 31 translated from Dutch), which explicitly targets all sectors in society: "Climate-proofing the Netherlands is a joint undertaking for which every member of Dutch society is partially responsible. The government invites local and provincial authorities, private sector companies, water authorities and societal organizations to contribute. The National Climate Adaptation Strategy sets out the course. The government will initiate specific projects and programs." This all-of-government and all-of-society approach to adaptation, also frequently propagated among policy makers (IPCC, 2022) and scientists (e.g., Dewulf et al., 2015), is confirmed in the interviews. It reflects the typical collaborative and consensual approach to governance in The Netherlands - the famous Dutch polder model - making adaptation a matter of normal governance. So society as a whole is being held responsible, rather than specific actors such as risk experts or military officials.

Moreover, several policy documents state that adaptation should be integrated as much as possible into existing policy domains, referred to as the mainstreaming of adaptation (e.g., Runhaar et al., 2018), indicating that adaptation is not regarded as a policy domain in its own right. Reference is often made to combining adaptation with other societal transformations. While the ministry of Economics and Climate is responsible for climate *mitigation*, the Ministry of Infrastructure and Water State has a coordinating role for adaptation, and is responsible for enhancing the connections between different actors in different policy sectors that are needed to achieve the adaptation goals. The Directorate-General for Public Works and Water management - the national executive agency for Water works residing under the Ministry of Infrastructure and Water State - is responsible for the planning and implementation of water safety in The Netherlands, in close cooperation with the 21 regional water authorities. As was mentioned above, the governance of water safety issues has become highly institutionalized in the Netherlands, regardless of climate change (adaptation). Adaptation of non-water related risks resides with specific sectoral ministries such as for instance the Ministry for Public Health, Wellbeing and Sports (e.g. adaptation to heat) and the Ministry of the Interior and Kingdom

relations (e.g. adaptation of buildings). Nevertheless, both the documents and the interviews reveal the dominant coordinating role of the Ministry of Infrastructure and Water State for adaptation at the national level, certainly for adaptation of water-related climate issues. However, several interviewees mentioned that politicians recently voiced the need for more steering and regulation at the national level (e.g. through legal requirements) rather than coordination alone.

In terms of who is being held responsible by the national government, many national documents convey a call to action for adaptation implementation at the regional and local levels (NAS, 2016; BAK, 2018; LNG, 2020; NOV, 2020; DP, 2021; MPI, 2021). So, the actual planning and execution of adaptation seems to be delegated to the regional and local public authorities, who are expected to collaborate with societal partners. Regional and local public authorities in the Netherlands are responsible for spatial planning of the built environment, and given the focus on spatial adaptation (see discourses) the sub-national level is seen as the obvious level for carrying the responsibility for adaptation planning and execution. The provinces, regional water authorities and municipalities are expected to collaborate in so-called work regions for spatial adaptation (in Dutch: DPRA werkregio's). As these work regions focus on spatial adaptation and include the regional water authorities but not the public health authorities, they tend to focus their attention on water-related adaptation. The local authorities are expected to provide specialized knowledge - there is a strong focus on processes that will ensure that measures and goals will be defined based on local, specialized knowledge - and to draft and execute feasible local action plans based on that knowledge. In doing so, municipalities are required to perform stress tests to identify local risks and to organize risk dialogues with local stakeholders to plan adequate adaptation to those risks (BAK, 2018; NOV, 2020). In practice, such stress tests and risk dialogues are often performed by specialized consultancy firms that are hired by the municipalities because they lack the capacity to do this themselves.

To conclude, when looking at which actors are involved in adaptation, The Netherlands can be regarded as an example of "normal" governance in which all sectors and actors of society are called to action, and signs of threatification or riskification are absent (once again with the exception of the issue of water safety which is governed by a highly institutionalized sector of water experts and the Delta Commissioner). Adaptation is done through a decentralized, cross-sectoral and multi-level governance mode, since adaptation is regarded as a task in which the whole of society should be involved at all levels of governance.

4.4. Tools

In line with the analytical framework (Table 1) this section covers the analysis of existing policies, resources and technologies as three types of tools to support adaptation. As adaptation is not regarded as a policy domain in its own right in The Netherlands, the planning and implementation of adaptation action relies on other sectoral *policies* in which it is supposed to be integrated. This means that many different policies are relevant for getting adaptation off the ground, both at the national and local governance level, thereby making adaptation governance quite complex and fragmented. The most relevant domains that are often mentioned in the documents and the interviews are water management and spatial planning. Again the emphasis on spatial adaptation comes through; several respondents mention that many adaptation measures can be implemented as an integral part of (infrastructural) changes that will happen anyhow in the coming 20 to 30 years. Spatial and infrastructural adaptations are prominent in adaptation issue areas within the realm of water. Changes to buildings and urban greening are of increasing importance on the political agenda. The perception that these measures are given more importance than less tangible adaptation strategies (behavioral campaigns, information sharing, integrated plans) is shared by multiple respondents. Some respondents refer to the influence of the framing/branding of the Netherlands to the rest of the world as exporters of advanced spatial planning and infrastructural expertise as a potential explanation for this emphasis on the integration of adaptation concerns into spatial and infrastructural planning. Nevertheless, there is a wide variety of policy agreements, documents and laws that have integrated adaptation as can also be seen in the 19 policy documents that were selected for this analysis, albeit to different degrees. The two most prominent and influential in the data collection are the yearly updated Delta Program and the NAS. Furthermore, specific adaptation issue areas refer to different sectoral agreements and/or strategies. Heat stress, for instance, is addressed in the National Heat Plan.

The *resources* most often mentioned to promote adaptation, both in the documents and in the interviews, are knowledge, financing, research programs, and (awareness) campaigns. Knowledge is considered to be insufficiently available by several respondents despite the dedicated climate adaptation knowledge portal. Limited knowledge is regarded as a big obstacle to the employment of resources: knowledge about the best course of adaptation action is still insufficiently comprehensive. This is further complicated by the fact that climate change, and therefore also adaptation, is seen as a "moving target", according to one interviewee, making knowledge production an important point of ongoing concern.. With respect to financing, the Delta Program holds a large share of the financing that can be categorized as water-related adaptation. Water-related adaptation has attracted additional funding for research and for the implementation of new flood measures. Other adaptation issues, however, suffer from a lack of funding, which may be tied to their lack of perceived urgency as several respondents indicated. Lower levels of government expect to receive funding from the national government to build adaptation capacity and to implement costly adaptation measures, but funding from the national government has been haphazard and limited to funding pilot projects. Campaigns are mostly focused on enhancing awareness. Especially interviewees who are occupied with heat stress see the importance of these campaigns. On the Ministry level, it was mentioned that behavioral campaigns are not an urgent need yet and they are expected to become relevant only when the effects of climate change become more impactful.

In terms of *technologies* deployed, scenario building and risk calculations are often mentioned, and these are considered to be essential in deciding which adaptation measures are needed. Portals and databases with models and risk calculation tools have been developed by the national government and private parties for multiple different adaptation issue areas. The most well-known and comprehensive portal/database is the "Knowledge Portal Climate Adaptation" (in Dutch: Kennisportaal Klimaatadaptatie) that is governed by the Foundation Climate Adaptation Services on behalf

of the national government. The aim of this portal is to provide easy access to climate information and adaptation options. For private parties, the provision of certain specialized risk calculations (for example providing information to citizens about structural damage to the foundation of houses because of water infiltration in the ground) can be a revenue model.

To conclude, in terms of tools we see a "riskification" in the sense that spatial and infrastructural policies increasingly take adaptation concerns into account, albeit mostly for water-related adaptation issues; and that risk models and calculations are widely available and accessible to all concerned. However, there is limited political attention and political will for other, non-water (safety) related adaptation issues thereby limiting their resource availability.

5. Conclusion and discussion

In this paper we have analyzed to what extent and how climate change adaptation has been securitized in The Netherlands, to better understand how this issue is handled, by whom and with what tools. Based on the analysis of policy documents and interviews with policy makers and policy experts we see that there are several indications of riskification as a mild form of securitization of adaptation in The Netherlands, as manifested through certain discourses and tools for adaptation. Riskification is reflected in the dominant discourse in which climate change is framed as a risk that can be adequately governed. With respect to the tools employed for adaptation we also see a tendency of riskification in the form of considerable policy integration of water-related adaptation issues into spatial planning as well as the wide availability and use of risk modeling tools. It has also become clear that the issue of climate change has made Dutch flood risk governance even more prominent: in the two most important policy documents for adaptation (the Delta Program and the National Adaptation Strategy) climate change is framed as a wake-up call to speed up the plans and actions of the Delta Program.

These indications of riskification apply predominantly to water-related adaptation, while other adaptation issues such as heat stress and drought are just beginning to receive attention; they do not show clear signs of riskification (or threatification) whatsoever. Most attention goes to the governance of water-related adaptation issues in the built environment (physical domain) – also referred to as *spatial* adaptation - while neglecting other domains such as the social and health care domains, and the treatment of specific at-risk citizen groups. Thus, the analysis has revealed that there are notable differences in the levels of riskification between different adaptation issues, such as water and heat stress.

The Netherlands has quite a complex governance structure in place to adapt to the risks of climate change. Both the policy documents and the interviews show that adaptation is dealt with in a decentralized manner, based on the collaboration of various actors at different scales of governance, and in different governance sectors. On the one hand this enables a wide mainstreaming of adaptation in various policies. On the other hand, this fragmented governance approach and consequently, dispersed responsibility to the whole of society may be(come) problematic. The literature on climate change adaptation governance has highlighted the absence of clear responsibility allocations for adaptation to be a key governance barrier, resulting in a lack of ownership and stalemate for adaptation (e.g., Termeer et al., 2013; Williams et al., 2013; Wamsler and Brink, 2014; Nalau et al., 2015). This has been repeatedly shown to hinder adaptation planning and action on the ground, also in The Netherlands (Mees et al., 2012, 2015; Mees, 2017; Van den Ende et al., 2022).

Finally, we conclude that both climate change and adaptation as a policy response to climate change have not (yet) been highly securitized at the national level of The Netherlands. Despite clear indications of riskification it seems that a sense of urgent climate threats calling for short-term adaptation actions is rather absent. The analyzed national documents focus on research, planning and cooperation. And even if deadlines and timeframes are present in these documents, the narratives indicate that the authors of these policy documents expect to be able to safely manage the risks related to climate change without the need for radical changes of pace and direction in the normal governance of the country. So, the expectation is that the increased risks from climate change can be adequately governed through the existing governance system, and by integrating adaptation to these risks into spatial and infrastructural planning. This reconfirms a key finding in the adaptation governance literature that adaptation is, through its very nature, intrinsically a multi-sector and multi-actor issue (Termeer et al., 2013; Dewulf et al., 2015; GCA, 2021).

So, it seems that the support for and the planning of adaptation measures is mainly reached through coupling them with other important societal issues rather than framing climate change and its impacts as existential threats that need to be urgently addressed. It is an open question whether this approach will result in timely and sufficient adaptation measures in the longer term, and whether sufficient support for and legitimation of more stringent adaptation action can be reached if and when the shit hits the fan. On the other hand, there is the question of whether stronger forms of securitization in the form of threatification of adaptation (at this stage) could be considered legitimate and desirable. Even the mild form of securitization in the form of riskification of adaptation that we found in our study appears to be a reflection of the perspectives, preferences and values of dominant public officials and risk experts dealing with (water-related) adaptation who proclaim, rightly or wrongly, that adaptation policies can sufficiently address the climate risks that Dutch society is facing.

In the wake of the securitization of climate change, this study has filled an important knowledge gap related to the lack of understanding of whether and how adaptation as a policy to address the impacts of climate change has also been securitized. Furthermore, the securitization lens has not yet been applied to the issue of adaptation before. By having applied securitization theory to study adaptation policy and by having analyzed discourses at the national level, we have contributed to additional insights that explain how adaptation is being governed, how political debates around adaptation evolve, and how certain actors and resources are mobilized. Furthermore, the absence of significant securitization of adaptation may offer an alternative perspective to explain the low implementation rates of adaptation action on the ground (e.g., Mees, 2017; Runhaar et al., 2018; Berrang-Ford et al., 2021; Braunschweiger and Pütz, 2021; UNEP, 2021). Therefore, we encourage other researchers to apply securitization theory for the study of adaptation governance. The excel coding sheet in Appendix 1 is a tool that can be applied to several other national contexts. We also advise future research to be conducted to develop a better understanding of how securitization tendencies travel across different governance scales; for instance, on how the national level (securitization)

discourses influence securitization of adaptation at the local level. Municipalities often form the governance level where adaptation implementation happens; hence the local level presents another interesting governance level and avenue for further research on the securitization of climate change adaptation.

Data availability statement

The datasets presented in this article are not readily available because they are supporting on going work and will be made available in due time. Requests to access the datasets should be directed to the corresponding author.

Ethics statement

Written informed consent was obtained from the individual(s) for the publication of any potentially identifiable images or data included in this article.

Author contributions

HM is the first author of this paper and has led the writing process. HM and JS have equally contributed to the idea, data gathering, data analysis and synthesizing. Both authors have contributed to the article and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Supplementary material

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fclim.2023.1080754/full#supplementary-material

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