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Greening the state? The framing of sustainability in Dutch infrastructure governance

Niki Frantzeskaki[a,*], Shivant Jhagroe[b], Michael Howlett[c]

[a] Dutch Research Institute For Transitions, Faculty of Social Sciences, Erasmus University Rotterdam, The Netherlands
[b] Faculty of Social Sciences, Erasmus University Rotterdam, The Netherlands
[c] Burnaby Mountain Chair, Department of Political Science at Simon Fraser University, Canada and Yong Pung How Chair Professor, Lee Kuan Yew School of Public Policy at the National University of Singapore, Singapore

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ABSTRACT

This paper investigates how the notion of 'sustainability' is strategically framed in the context of Dutch infrastructure governance in the Netherlands. By conducting a frame analysis (based on policy documents, websites and semi-structured interviews), the paper discerns six sustainability frames. These frames concern substantive (e.g., more focus on ecology), process (activating new networks) and organizational (e.g., new practices of work) aspects. The paper also illustrates how these sustainability frames relate to the changing institutional context of infrastructure policy and governance more broadly. The paper discusses some of the productive and challenging implications of the dynamics of sustainability in today's complex and multi-dimensional world of governance.

1. Introduction

Sustainability has entered policy discourse since the 1987 Brundtland Report (Brundtland, 1987) and has raised the attention of both policy researchers and practitioners. In the Brundtland report *Our Common Future* (Brundtland, 1987) sustainable development came to be defined as a redirection of the social development in ways that combine prosperity, social cohesion and environmental protection. The concept of sustainable development has steered debates between development proponents and environmentalists proposing either a divorce between development and environment (the main thesis of Tim Jackson's work of prosperity without growth) or a promising wedding with proponents of a new green deal (Dryzek, 2005; 146–147; UNEP, 2012; Victor and Jackson, 2012). Sustainability as a process and aspiration, has been debated and researched in different fields such as energy (Raven, 2006; Kemp and Rotmans, 2009), agriculture (Grin, 2012), water management (Pahl-Wostl, 2007; van der Brugge & Rotmans, 2007), housing (Vergragt and Brown, 2008) and mobility (Kohler et al., 2009; Ieromonachou et al., 2004) as well as in different disciplines: policy, planning, management, business (e.g., corporate environmental responsibility), and technology (e.g., Kemp et al., 2005; Frantzeskaki et al., 2012; Jaeger, 2009). Nowadays there seems to be a mutual acceptance among policy researchers and practitioners that sustainability is an important aspiration for different reasons in a various policy domains. The debates and insights from all those different research fields enter the policy domain in different ways such as via a policy advice narrative (e.g., Kemp and Rotmans, 2009; Meadowcroft, 2007; Smith and Kern, 2009), via the interaction of policy and science in adaptive policy cycles (Edelenbos et al., 2009) and/or via broader societal debates around sustainability and climate change (e.g scholarship on environmental justice, Schlosberg, 2007). In public administration scholarship there is a view that sustainability and sustainable development are magic concepts (Politt and Huppe, 2011) with normative elements and political flavor (Jordan, 2008; p.18) that need to encapsulate interests and desires of the location and generation they refer to (Meadowcroft, 2000; Loeber, 2004). In an earlier work, we propose that "sustainable development is therefore a normative orientation that provides a frame of reference to discuss and direct differences in perception, ambition and understanding between actors in light of desired changes in society" (Loorbach et al., 2011, p.76).

As has been often argued that sustainability always operates in a specific context in the way it is interpreted and acted upon. Even though the multiple semantics of sustainability have been studied in accountability (Dillard, 2011), supply chain management (Varsei et al., 2014), transportation (Banister, 2014), and research projects (Wuelser, 2014), the symbolic meaning and strategic uses of

* Corresponding author.
E-mail addresses: frantzeskaki@drift.eur.nl (N. Frantzeskaki), jhagroe@fsw.eur.nl (S. Jhagroe), howlett@sfu.ca (M. Howlett).

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sustainability in policy contexts are rarely discussed (Backstrand and Kronsell, 2015). Notwithstanding vast literature on sustainability programs and projects in governmental spheres, it often remains unclear how the discursive marker of 'sustainability' is actually employed in a context in which it is relatively new. This raises questions to what extent sustainability actually stabilizes existing forms of organization, triggers new structures, or is used strategically and instrumentally. In this paper we investigate the Dutch national infrastructure policy context where the newly introduced concept of sustainability has received different values, translations and has been employed in different ways.

The particular contribution of our article lies at the intersection of sustainability science and studies of policy, politics and governance. On the one hand studies on sustainability seem to address the policy dynamics of sustainability somewhat sketchy (Kates et al., 2005; Backstrand and Kronsell, 2015) due to either the focus on the clarity of meanings and definitions in isolation from policy and context dynamics (Christen and Schmidt, 2011) or to the focus on the equal attention to ecological, economic and social values within the definitions and meanings (Harlow et al., 2011; Redclift, 2005; McShane, 2007). On the other hand, in many governance, policy and planning studies, a comprehensive investigation of the substantive, process and organizational aspects of sustainability seems to be limited. The few research studies addressing the organizational aspects of sustainability policy either address the topic in a static way missing the process and learning components (e.g., Atkinson and Klausen, 2011; Fiorino, 2010) or address it at an international level such as the European Union level (e.g., Baker, 2007) or critically investigate its usefulness in policy (Seghezzo, 2009; Rozema et al., 2012). In planning studies there is a focus on operationalizing the concept of sustainability with an aversion to its contested nature (Davidson, 2010; Gunder and Hillier, 2009). As thus, it remains somewhat open how policy makers at a national level deal with sustainability in a dynamic context. We highlight how sustainability is operationalized in a context that is not quite familiar with it, namely national policy on infrastructure and in this way, we aim to contribute to the understanding of the contemporary greening of the state.

1.1. Research objective and methodology

We chose to focus on Dutch infrastructure governance to identify and understand the different definitions and uses of sustainability because the significance of sustainability for infrastructure relatively new in the Dutch context.[1] Given that the Netherlands has a multi-level governance system (horizontally and vertically), it is expected to come across different definitions and uses of sustainability. These employments are related to substantive, process and organizational aspects of policy and politics. The overarching research question that we will investigate is the following: *How is the sustainability framed in the Dutch national policy domain in the Netherlands, particularly in the field of infrastructure governance?*

This study is grounded in an interpretive epistemology and uses a qualitative method. Social reality is heterogeneous and rendered meaningful in local contexts and through meaning-making subjects. This starting point was is crucial to allow for inductive mapping of sustainability frames. Since the strategic framing of sustainability in a policy field often over looked (Wuelser, 2014), this empirics-driven approach was very instructive.

We started with an eight-month long scoping phase in which we participated in sixteen governmental meetings, one large-scale policy workshop with all the Ministry officers of infrastructure governance about the 'Sneller and Better' program and twenty-five smaller in time interviews with people who participated in the large-scale policy workshop (May to November 2010). During the scoping phase we identified the 'gatekeepers' from a large number of interviewees, meaning those actors that have three distinct qualities critical for introducing new concepts in the policy arena: (a) First, they are responsible for strategic planning for sustainability infrastructures, (b) they connect different policy networks in the state, and (b) have the experience and authority to frame policy issues and influence policy agendas. The respondents were mainly actors from the Ministry of Infrastructures and Environment holding positions at the level of strategic planning, project or program management, organizational leaders, responsible for policy implementation, policy enforcement and endorsement, planning advisors, as well as public–private partnerships advisors. We also used snowball-sampling as a means to gain new insights and voices. Data was derived from Dutch policy documents, websites and in-person semi-structured interviews with policy actors – the gatekeepers – (fifteen in total, see annex). The interviews period lasted for five months (January to May 2011). To validate our frames we participated and presented our findings in three policy workshops (November 2012 internal policy workshop in the Ministry of Infrastructures, May 2013 sustainability workshop organized by the municipality of Rotterdam including policy officers from the Ministry of Infrastructures and September 2014 green growth policy workshop with the Ministry of Internal Affairs as part of the agenda on green economy). The inputs from these workshops have been incorporated in the final frames as we present them in this paper. The reason for taking a long-term research scope is to identify the *dominant frames over time* on sustainability and the state's infrastructure governance.

We analyzed the documents, website and interviews through frame analysis. Frame analysis was particularly relevant to grasp how 'sustainability' was injected with symbolic meaning and rendered useful. Framing can be understood as a process through which complex realities are reduced and simplified in such a way that action becomes possible. As Entman puts it:

> "Framing essentially involves selection and salience. To frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described." (Entman, 1993)

Frame analysis in social sciences is traditionally used to better understand social movements, media dynamics and social psychology (cf. Goffman, 1974; Snow and Benford, 1988; Klandermans, 1997). In the last decades, it has been also untaken in many other disciplines. For our study, we used frame analysis to better understand how sustainability was observed and appropriated strategically in the context of policy-making and policy change (Roe, 1994; Stone, 2001; McBeth et al., 2007). Based on the empirical materials, we mapped and analyzed specific *sustainability frames* within the policy domain on infrastructure. More specifically, we identified sustainability frames that, within the policy context, refer to specific sustainability-related *values* (e.g., economic, environmental, mobility, clean air) and their relation to specific *problems, solutions, goals* or policy-related *means*. We reconstructed the frames narratives by highlighting the marker 'sustainability' in these data sources and situating its semantic position in broader discourses and narratives. Importantly,

[1] See e.g.,: http://www.changemagazine.nl/artikelen/duurzame_infrastructuur, http://www.rijkswaterstaat.nl/kenniscentrum/duurzaam/duurzame_gebiedsontwikkeling/

regarding the substantive meaning of sustainability, we avoided deductively defining 'sustainability' prior to exploring its narrative meaning and role in the Dutch policy context.

The paper is structured as follows. Section two introduces the policy context of Dutch infrastructure. It particular focuses on the context in which sustainability was introduced in this policy field. Section three zooms in on the sustainability frames that were taken up in the policy contexts after the emergence of the label 'sustainability'. After presenting six relatively distinct sustainability frames, section four reflects on the frames and their intersections. Section five articulates a number of conclusions regarding the multiple meanings of sustainability, its discursive strengths and weaknesses for governmental practice and policy-making.

2. The Dutch infrastructure policy context

In the Netherlands, the majority of the on-going policy programs (local, regional and national) and projects are designed with the aim to contribute to sustainability or incorporate (some of) the values of sustainable development in their objectives. In 2008 the Dutch government identified six general sustainability-themes: (1) water and climate adaptation; (2) sustainable energy; (3) bio-fuels and welfare development; (4) carbon-capture and storage; (5) biodiversity, food and meat; and (6) sustainable building and renovation (Ministerie van VROM, 2008, Letter for Parliament *Sustainable Development*). At the Province level, there are initiatives as well. For example, the Province of Zuid-Holland highlights sustainability by connecting the three P's (People, Profit and Planet), e.g., in the domains of energy and innovation. The Province supports sustainable 'thinking and doing'.[2] The big cities in the Netherlands have an explicit focus on sustainability. The Hague, Amsterdam, Rotterdam and Utrecht, all have a wide range of ideas and initiatives that relate to many topics. Some examples at the local level are the following. A 'Climate Initiate' in Rotterdam aims at a 50% reduction of CO_2 compared to 1990, by the year 2025.[3] The 'Platform Sustainable The Hague' aims at 'energy saving', 'applying sustainable energy' and 'sustainable mobility'.[4] A project in Utrecht (DuBo) aims at making buildings (such as schools, offices, houses, bridges, roads) sustainable. 'Sustainable Amsterdam', initiated by the local government, tries to combine sustainability initiatives and show how citizens themselves can help make Amsterdam sustainable.[5] Policy practice has shown that like every policy portfolio, a sustainability-led portfolio (e.g., including sustainability-led programs and projects) requires political commitment, resources and coordination to be implemented (van der Mandele et al., 2006; Steward, 2006; Wright, 1996).

The sustainability focus is especially evident in infrastructure development (WRR, 2008). Today, this can be found in many policy documents and government-led websites. At the national policy level, for instance, the Ministry of Infrastructure and Environment has introduced plans and initiatives 'do things sustainable' through 'cradle-to-cradle' pilot projects.[6] Van den Brink (2009) has shown that the Dutch agency that is occupied and responsible for planning, maintaining and developing infrastructure ('Rijkswaterstaat', linked to the Department of Infrastructure, abbreviated as RWS), over the last years has changed its course and organization into a more society-driven and network-oriented organization. Infrastructure traditionally, has provided services that relate to the national economy, prosperity and mobility. As such, it has a strong national and political character. Traditionally, the organization structure of infrastructure planning is hierarchical in which the Department of Infrastructure draws strategies and plans, as well as organize a bidding process for contractors and developers. Large-scale projects of national importance are planned, funded, managed and monitored by RWS.

3. Sustainability frames in the Dutch infrastructure governance context

Sustainability is a contested term both in definitional and in operational terms (related to the public policy domain) (Kenny and Meadowcroft, 1999; p.4). Albeit this may sound evident for sustainability researchers, it remains open how policy actors employ sustainability.[7] The frames that shape strategic governance of infrastructures impact the status quo of the sector and its communicated standpoints in terms of environmental performance. At the same time, these frames are (re) framed in time by the environmental practices and performance perceptions. We do argue that these frames are reflexive and central to the infrastructure governance discourse in its post-ecological modernization era.

With our research, we identified six context-related sustainability frames that differ significantly but are employed in a modular fashion by policy actors. We found that the RWS agency employs different sustainability frames with different implications.

The focus on sustainability is relatively new in infrastructure governance albeit not new in environmental governance in the Netherlands and as such fits recent developments. Van den Brink's recent study of RWS position and role in the domain of water illustrated that RWS should reinvent itself after their re-organization (which started in 2003) and the cooperation with other societal actors (Van den Brink, 2009). This reinvention of RWS goes hand in hand with the focus on 'sustainability', as it enables RWS to formulate new agenda's, new policies and new partnerships. Furthermore, the recent merge of infrastructure *and* environment into one department (*Ministerie van Infrastructuur en Milieu*) has enabled the reshuffling of policy themes, which in turn enabled RWS to focus on environmental issues more explicitly. This new policy configuration, in which various domains and aspects seem to be interrelated more and more, is expressed in the RWS Sustainability Programme, and in a diverse set of sustainability frames.

3.1. Sustainability frame I: sustainability as an environmental performance marker

Sustainability is perceived as an objective of a policy program or project. The green-aspect of sustainability is noted by policy actors as a value that is adopted in the daily practices of the Ministry of Environment and Infrastructures. Sustainability is the driver of transforming the way large-scale infrastructure projects are designed and implemented in order to achieve greater environmental performance of those projects (*Interviewees B, E*). In this

[2] http://www.zuid-holland.nl/overzicht_alle_themas/c_duurzame_ontwikkeling.htm
[3] http://www.rotterdamclimateinitiative.nl/top/home
[4] http://www.duurzaamdenhaag.nl/index.php? id = 23
[5] http://www.nieuwamsterdamsklimaat.nl/
[6] http://www.rijkswaterstaat.nl/actueel/nieuws_en_persberichten/2009/februari_2009/rijkswaterstaat_daagt_uit_tot_duurzaam_werken.aspx

[7] We define policy actors as the group of policy researchers, policy practitioners and policy makers. Policy makers are the administrators and/or politicians who make decisions about policy programs, projects and investments. Policy practitioners are those administrators who consult, advice and/or design policies that yet need to undergo evaluation toward approval (and enforcement). In this paper, we include street-level administrators as policy practitioners, as those who are responsible for the implementation of policy programs in the field.

vein, sustainability is linked to all environmental-related aspects and methods (e.g., Life Cycle Assessments, EMAS, ISO, reliability of infrasystems) and replaces to a certain extend, the concept 'environmental-friendly' from the policy discourse. One respondent reflected on how sustainability entered the field:

> "In the beginning there was very little on sustainability. Energy and carbon emissions suddenly became relevant issues. Sustainability is about reducing energy and producing energy." (Interviewee P).

At the RWS department website this is also embodied in the Sustainability Program:

> "The Rijkswaterstaat Sustainability Programme substantiates the ambition of RWS to contribute to a liveable, clear world, in which there is a balance between economy, ecology, quality of life and social relations. Preventing climate change is one of the most important drivers." (RWS, 2010).

Additionally, sustainability is a clear objective in the context of energy. The organization aims at "saving energy via carbon emissions' reduction regarding physical infrastructures and the activities of RWS personnel", and "producing sustainable energy (via wind, solar cells) by facilitating market-based ideas and practices".

3.2. Sustainability frame II: sustainability as a broker-concept

Sustainability comes as a broker-concept to create integration and cohesion between practices and views. When designing the project process, policy actors strategically employ an integrative definition of sustainability according to which sustainability connects environmental, social and economic interests (*Interviewee C*). Sustainability then as a broker-concept connects different actors (for example different experts while planning e.g., architects and economists) and different scales (local to regional) during design and operational activities (*Interviewees E and H*).

In this frame, sustainability serves as a concept that broadens the interest space of stakeholders related to a project. In this case, sustainability is employed to harbor even conflicting interests under the premise of a context-specific translation of sustainability (*Interviewee H*) and/or a new icon of sustainability e.g., 'our city to become a new icon of sustainability'.

Interviewee H added that "most of the general discussion on sustainability is on energy, but for me it is also about the interaction between different domains (area development and mobility)". Next to optimization, it is voiced that sustainability as a notion "is also about connecting people, if you talk about environment all the time, it's not very practical. It about connecting economy, liveability and accessibility" (*Interviewee I*). Sustainability is employed to market projects and processes even when its content values are not considered. Characteristically, referring to a sustainable project or process gives added value of being smart: "To work more sustainable is to work smarter." (*Interviewee N*) Smart often means being pragmatic and seek coalitions and support from a wide range of actors.

In this frame, sustainability is seen as the outcome of integration in both the policy space and in the physical space. Sustainability is employed to connect aspirations, desires and plans of local and regional authorities in one locality (*with a focus on 'urban sustainability'*) and to marry responsibilities and accountabilities of local and national public authorities under a common objective (*that again is 'urban sustainability' in different sectors every time*) (*Interviewees C, D, H*). On the website of the RWS department the 'broker-potential' of sustainability is expressed explicitly in the domain of 'sustainable area development'. Here, multiple social functions are integrated in specific geographical areas related to infrastructure.

3.3. Sustainability frame, III: sustainability as an optional objective

When the time length of decision-making process is stringently monitored, sustainability-led projects and alternatives are considered time-consuming. As thus, they are either not considered for implementation or are intentionally left out of the decision scope (*Interviewee A*). When resources are scarce, projects can be designed adhering sustainability criteria (values) but under the silent condition that the implementation of the sustainability-oriented options do not require additional to the initially estimated expenses. The same holds for sustainability-led programs and/or projects: If resources are needed but not available for sustainability-led programs and projects to be realized, then those projects are not (anymore) considered (*Interviewees C, E, H*). Interviewee C formulated it as follows:

> "Sustainability is not a key aspect in projects, sometimes it becomes relevant, but at the outset. We don't do it for sustainability, but if we do it, we do it sustainably."

3.4. Sustainability frame IV: sustainability as a 'network pass'

When sustainability is clearly stated as an objective in a policy program (always referring to policy for infrastructure), it has an impact on the market actors' behavior and practices. Private actors (e.g., engineering companies, construction companies) find that they need to highlight their sustainability profile and/or operations to be compatible for entering the bidding or project competition. Contractors feel the indirect pressure by the Ministry of Environment and Infrastructures to comply with new procedures, new standards on environmental performance, and projects that are striven for sustainability (*Interviewee A*). Especially for large-scale infrastructure projects (like mobility expansion projects), new guidelines and standards on materials use and handling set by the Ministry of Environment and Infrastructures deliberately oblige contractors to adopt new methods and materials (*Interviewee B*).

Sustainability from the point of view of the strategic planner and regulator (that is the Ministry of Environment and Infrastructures) is used as an entry point towards more environmental-friendly practices on the field. Sustainability also expresses a top-down pressure by the RWS upon private actors to change their practices to a more compatible mode and/or an opportunity of new market actors that bring in practices and expertise that can contribute to the designed operations (*Interviewee G*). In this way, the public sector uses sustainability as their mission statement and mission ticket towards more sustainable practices and infrastructures.

From the point of view of the contractors and/or corporate actors, sustainability is seen as the new desire of the public sector as well as the ticket to compete for consultancy projects and/or infrastructure implementation projects. In both cases, sustainability serves as the entry ticket to functional public-private networks for infrastructure development, and urban planning. In the domain of sustainable area development, 'multiple social functions', means multiple types of actors, with public and private interests.

3.5. Sustainability frame V: sustainability as a platform

Sustainability, in this frame, serves as a platform to create a vision and direction for what type of developments and investments are needed or can be legitimized to ensure future resilience of society and its infrastructures. In the Sustainability Program this is expressed by one of the most important drivers to "prevent climate change". This assumes a future-oriented approach that enables and legitimizes interventions and actions here and now.

This future-oriented frame is also reflected by the theme of electric driving. Electric driving is considered as a means to make the current car mobility more sustainable, to strengthen the energy position of the Netherlands and to give the economy a *structural* impetus. This implies that electric driving has clear future-oriented goals, in terms of mobility, energy and the economy. One of the respondents stated that:

> "Sustainability is very much about viability for the future" (Interviewee L).

3.6. Sustainability frame VI: sustainability as a basis for reform

Sustainability seems to be entrenched in many of RWS activities; in technical calculation (*DuboCalc*), in assigning projects to contractors (*CO_2-performance ladder*), flexible working conditions (video conferencing), substantial sustainability issues (e.g., environmental goals, sustainable mobility, economy, quality of air). This frame also finds its expressions in the organizational purchase policy, concerning e.g., road surfacing, silt clearance or land terracing. It also directly affects the organization, in terms of stimulating electric driving among employees. This 'giving the good example' mentality is also in the sustainability programme, which states that the organization *itself* aims at "contribution to a liveable world (. . .) in which there is a balance between economy, ecology, quality of life and social relations". There seem to be very few aspects of RWS activities that do not directly or indirectly relate to the idea of 'sustainability'. As one respondents expressed it: "Sustainability has been starting to play a role in different aspects of RWS, the organization, thematic policy, but also in the way people work". (*Interviewee N*)

4. A closer look at the multiple meanings of sustainability

It is clear that sustainability, in terms of policy dynamics, leads to diverging policy frames at different levels with different types of unfolding. These frames have a distinctive logic, even though some of them show overlap. The multiplicity of the meanings of sustainability as depicted in these frames is plausible and to an extent expected (Miller, 2012; Seghezzo, 2009). As Seghezzo (2009), p.552) also notes:

> "The concept of sustainability is highly continent to cultural and natural characteristics. Therefore, agreement on a single definition is not only impossible but also objectionable. (. . .) Different visions on what sustainability is and how it should be measured could coexist, not only for plurality but also because different frameworks of analysis could give a better idea of the sustainability (or unsustainability) of processes and regions."

We understand that infrastructure policy actors frame and reframe sustainability with these frames and as such, keep sustainability as a symbol rather than as a 'strong' and 'consensus-defined' operational measure to their planning and implementation activities. The symbolic status and employment of sustainability maintains an interest in environmental and social aspirations of infrastructure governance; those aspirations however remain 'softer' and seen as 'idealistic' in comparison to the 'hard' aspirations relating to economic benefits of infrastructures. At the same time the univocally agreed symbolism of sustainability creates a stickiness of its soft aspirations since no policy actor is willing to depower the value of sustainability (the symbol cannot be depowered). The restating of sustainability as a symbol can also be understood as an attempt of policy actors to integrate it in infrastructure governance and to make it relevant. A closer look at the sustainability frames reveals that the identified frames are *interrelated*, that some frames are *sticky to specific levels of governance*, and act as *polarizers*.

These sustainability frames do not exclude one another but are *interrelated*. Frames II and IV, for example, clearly show an overlap. Yet, they are not the same. Whereas frame II refers to a more abstract meaning of sustainably as a broker concept that invokes relationships, frame IV is much more operational and instrumental, concerning specific public-private-partnership-like networks. However, the frames are to be understood as distinctive storylines with a distinctive logic. If we put these frames in a temporal and more dynamic perspective, it becomes clear that some of the sustainability frames fit ongoing developments in which RWS reconsiders its role in society (frames II, IV), its core business (frames I and V), and itself as an organization (frame VI). The sustainability frames present the different ways in which sustainability is debated and deliberated in the policy arena pointing at a demand for new governance approaches and styles to incorporate sustainability more effectively.

Additionally, sustainability frames manifest the *complexity of meaning giving in different governance levels*. Policy advisors at the strategic governance level tend to highlight frames II and VI, whereas operational managers highlight frames I, III and IV. More specifically, policy advisors stress the importance of integration (frame II – sustainability as a broker-concept) and the silent urgency for changing governance practices (frame VI – sustainability as a basis for reform). Operational managers stress sustainability as a means to achieve and promote greater environmental performance (frame I), feasibility of infrastructure investments (frame III) and to mark an opportunity space (frame IV). This shows that different meanings of sustainability are employed to frame the debate for infrastructure planning at different governance levels. The sustainability frames in this context can serve as manifestations of the politics at a multi-level governance setting. The preferences of the different policy actors in employing different sets of frames show a divide between 'aligning governance for sustainability' (frames II and VI) and 'cherry-picking from sustainability basket for governance' (frames I, III and IV).

In line with this, we can identify that some sustainability frames *dominate over other*. Frames I and II dominate the debate and overall infrastructure governance discourse when referring to sustainability concerns and environmental governance issues. Frames I and II are also shared by many of the respondents. We explain the dominance of those environmental-oriented frames by the strife of RWS to further ecologically modernize its governance practices under the prism of sustainability.

Sustainability frames also *act as polarizers*. More specifically, in frames I and III and IV sustainability is employed as a policy metaphor (Larson, 2011, p.43): a concept to create consensus and to polarize actions. What was found under the umbrella of sustainability, a moral – being good – dimension provided whereas what was not there, was immediately labeled as 'bad' for action. This however remains an interactive exercise, of finding out which actions and which practices can be contained within the sustainability metaphor even when these actions may only remain as tagged but not realized. Larson (2011), p.47–48) also finds that "many people take sustainability as the measure of human activity: does an activity, ongoing or proposed, contribute to the likelihood that humans and other species will live fulfilled loves on earth in the future?"

What is actually the link between these frames and everyday real life infrastructure governance? It should be noted that our object of study mainly concerns policy making. Since policy making is very much a matter of structuring complex reality in which different values and logics play a role (e.g., Stone, 2001), frames play a key role in governance. Governance, then, is to a large

extent a 'frame activity'. What is more, given the fact that the link between sustainability and infrastructure governance and policy-making is not one-dimensional but at least multi-dimensional, it remains open how sustainability actually restructures and reshapes everyday practices of policymaking in the field of infrastructure.

4.1. A critical take on the multiplicity of sustainability frames

The acceptance of importance and value of sustainability shows that it is a known value to policy actors. Its contested nature is depicted in the multiplicity of definitions and applications that does not (seem to) function as a barrier to implement projects that (can) contribute to sustainability (without being under a principal sustainability-led policy program). We believe that the contested nature of sustainability in scientific terms partially causes its contested nature in operational terms due to the close interrelation and cooperation of the policy and science domains for infrastructure development in the Netherlands (inspired by *Interviewee D*). We understand that the open definition of sustainability allows policy actors to use it strategically so as to convey different messages and serve different agendas. This is evidenced by the finding that even in the same storyline; policy actors employ more than one definitions of sustainability so as to show its multiple character and complexity.

The function of the term 'sustainability' (and 'sustainable') in the policy discourse is nonetheless constructive. The contested nature of sustainability as a concept and most importantly as a magic concept[8] is that it survived changes in political fashion and electoral cycles (Pollit and Hupe, 2011). Its stickiness is partly a success and a failure element. Success because it makes explicit that it is an open-ended process to arrive to a sustainable society, and failure because it depicts that it is a container concept that continuously redefines itself in different contexts, contents and times making it not appreciated or valued as it remains unsubstantiated.

The opportunities of the multiplicity of sustainability frames for infrastructure planning are evident. First, the flexibility of multiple co-existing sustainability frames provides different frames to act to policy actors when adapting the concept of sustainability and its associated principles to a specific context and time. Second, the fact that sustainability replaced environmentally benefiting or responsive as performance concept it may show that existing approaches in assessment and monitoring of infrastructure projects were broader than just environmental. This however remains to be further investigated.

Yet, there are some risks as well. First, the perception that it is a no-content concept that can dress any ambition and any agenda is confronted with multiplicity of meanings. We can argue that the contested nature of sustainability concept allows for strategic pluralism of meanings. This can further allow for unsustainability practices and programs to continue getting legitimized or simply green-washed (Bluhdorn and Welsh, 2007). Second, the way sustainability operates as a symbol—can also indicate that can easily be replaced by another symbol or symbolic statue (e.g., green growth) without actually changing tactical and operational practices in infrastructure governance to adhere to the values that the symbol includes. In this way, its symbolic nature serves as a marketing label and its content is diminished.

4.2. Reflecting on the multiple meanings of sustainability

The multiplicity of translations comes to illustrate the fluidity of the conceptual and operational understandings of sustainability in the governance sphere. This manifests that the translation succeeds to diffuse in the strategic level of infrastructure planning and governance; this diffusion however comes with multiple meanings and agendas.

The frames about sustainability in infrastructure governance are structured mainly around the performance and assessment criteria and values that infrasystems need to acquire and fulfill rather than process-based sustainability of the design or planning of infrasystems. The frames are thus creating a selection orientation at a meta-level. Following Rogers-Hayden et al., 2011 p.135), we can also argue that the identified frames derive their strength from their capacity to 'naturalise' its meanings (since it "succeeds in making its own rules/systems/beliefs appear to be the 'natural' ones'). The frames positioned sustainability centrally into the sphere of environmental interests and values by reshaping and dressing it with multiple meanings.

The multiplicity of meanings manifests the variety of debates on coordination and directionality in infrastructure governance and planning and a plurality of substance and processes about sustainability. In the context of the variety of debates, giving 'one' meaning or even insisting on a universal meaning of sustainability can create frictions and exclusivity. In this context, an Janus faced situation arises: when sustainability remains colorful and playful it can allow for plurality and diversity of meanings and as such create space for creativity and innovation in planning and governance. The perception and signaling that sustainability is an 'empty-of-meaning' or 'naked-of-value' symbol, can also allow for its instrumentalisation as a 'green washing' and 'green marketing' label.

5. Conclusion

The aim of this paper was to understand how sustainability is employed in the Dutch context of national infrastructure governance. As we have seen, the open-ended character of sustainability makes it a good discursive concept in governance of large-scale infrastructures, because it can serve as a brokerage concept, as a symbolic concept and as a pull–push concept while at the same time maintaining a level of awareness in the public sector that interdisciplinary is an essential platform for achieving reliability and resilience. This holds for the substantial themes associated with infrastructure as a policy domain, its institutional processes and RWS as an organization. If infrastructure becomes inherently intertwined with environmental values, and connecting to new networks, how is the very notion of 'infrastructure' to be understood in the future? Why still making a *distinction* between infrastructure and other fields? Our age of uncertainty and complexity calls for modes of governance that are highly flexible and can stick, and leave productive traces, in different contexts and in various ways. Sustainability, then, can serve as a floating signifier (symbol), which gives us a new understanding how de-centred and non-linear forms of meta-governance take place (without a central actor steering the steering). Yet, it raises questions concerning the limits of creative interpretations. This touches upon a widely acknowledged tension in policy-making and governance, between top-down (creating order) and bottom-up (accepting complexity and variety).

[8] Sustainability can also be considered as a 'magic concept' following Pollitt and Hupe (2011), p.643) since (a) it covers huge domains (mobility, water, energy, agriculture etc), has multiple and sometimes conflicting definitions and connect with many other concepts (e.g., sustainability and quality of life appear interconnected if not coinciding in many policy agenda's and programs); (b) it has "an overwhelmingly positive connotation"; (c) it carries an implication of consensus and (d) it is "known by and used by many practitioners and academics".

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Appendix . List of respondents

Interviewee	Position/Organisation	Date of interview
Interviewee A	Senior Advisor and Planner Goudappel Coffeng Engineering Company	16 March 2011
Interviewee B	Senior Advisor International Affairs Ministry of Environment and Infrastructures	16 March 2011
Interviewee C	Senior Project Leader for Urban Planning Projects Ministry of Environment and Infrastructures	18 March 2011
Interviewee D	Policy Advisor Ministry of Environment and Infrastructures	23 March 2011
Interviewee E	Policy Advisor Ministry of Environment and Infrastructures	24 March 2011
Interviewee F	Senior Policy Advisor & Internal Organizational Advisor Ministry of Environment and Infrastructures	24 March 2011
Interviewee G	Advisor for Urban Planning and Policy Implementation Ministry of Economic Affairs	28 March 2011
Interviewee H	Policy Advisor for Participatory Processes of Infrastructure Projects Ministry of Environment and Infrastructures	29 March 2011
Interviewee I	Policy Advisor Ministry of Environment and Infrastructures	25 May 2011
Interviewee J	(Rijksbouwmeester) Policy Advisor Ministry of Environment and Infrastructures	17 May 2011
Interviewee K	Researchers Knowledge Institute Mobility	9 June 2011
Interviewee L	Advisor on sustainability Agentschap.nl	26 May 2011
Interviewee M	Programme manager Ministry of Environment and Infrastructures	23 May 2011
Interviewee N	Advisor Ministry of Environment and Infrastructures	17 May 2011
Interviewee O	Policy advisor Ministry of Environment and Infrastructures	25 May 2011
Interviewee P	Programme Director Ministry of Environment and Infrastructures	9 May 2011

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