

# Robust governance for the long term and the heat of the moment: Temporal strategies for coping with dual crises

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## Abstract

Today the world is confronted with *dual crises*: creeping and acute threats unfolding *at the same time*—for example, the manifestation of extreme weather events such as drought and flooding and the creeping crisis of climate change. To cope with dual crises, this article develops a novel temporal perspective that offers policy actors a repertoire of interrelated strategies for enhancing the robustness of institutional efforts. The repertoire consists of five temporal strategies that policy actors can use to navigate the twin challenges of immediate and latent threats in conjunction: strategic coupling of short-term shocks and creeping crises, crafting time horizons, molding the pace of public problem-solving, mobilizing anticipatory capacity through futuring techniques, and adaptive iteration of policy decisions. We illustrate the practical application of these strategies in an exploratory case study of adaptive water management in the Netherlands.

**Samenvatting:** De wereld wordt geconfronteerd met duale crises: sluipende en acute dreigingen op hetzelfde moment, zoals extreme weersgebeurtenissen als droogte of watersnood tegelijkertijd met de sluipende crisis van klimaatverandering. Om te reageren op duale crises, ontwikkelt dit artikel een nieuw repertoire van vijf temporele strategieën voor beleidsmakers om de robuustheid van overheidssystemen te

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vergroten. Dit repertoire bestaat uit de volgende strategieën: strategische koppeling van onverwachte korte termijn schokken en sluipende crises, tijdshorizonten creëren, het tempo aanpassen van implementatie, het mobiliseren van anticiperende capaciteit door middel van scenariotechnieken, en de adaptieve iteratie van beleidsbeslissingen. We illustreren de werking van deze vijf strategieën aan de hand van een uitgewerkt voorbeeld van adaptief watermanagement in Nederland: de invoering van het programma Ruimte voor de Rivier.

## 1 | INTRODUCTION: COPING WITH DUAL CRISES

We live in highly turbulent times. In the context of this article, turbulence refers to the co-occurrence of numerous unexpected, inconsistent, unpredictable, and deeply uncertain events (Ansell et al., 2020). At the time of writing, the configuration of crises that, for example, European policymakers have to contend with include: the Ukraine-Russia war, accelerating climate change, energy supply and price challenges, and the ongoing COVID-19 pandemic. Such turbulence seems to have become an enduring characteristic of the environment in which public sector organizations will need to operate and safeguard key system functions (Ansell & Trondal, 2018).

Crises create turbulent conditions as they form periods of (extreme) disruption, create threats to existing functions of social and political systems, and are characterized by deep uncertainty and an urgency to act (Boin et al., 2016). Crises often force policymakers to make decisions while essential information about causes and consequences remains unavailable, uncertain, and contested, incoming information is unreliable or incomplete, and stakes are high. Crises are also becoming more and more interconnected (Head, 2022), as short-term acute crises co-occur with and/or present themselves as indicators of much bigger, yet slow-burning and as yet politically under-acknowledged creeping crises (Boin et al., 2021).

Acute and creeping crises unfold differently and evoke different policy responses. Policymakers typically experience *acute crises* as “rude surprises” (La Porte, 2005) in which circumstances force them to improvise: everybody looks at them to “do something, *nów*” to address the threat or reduce the damage already done. The pace is frenetic, the context often emotive—instant danger and manifest damage, casualties, graphic images of destruction or violence, ominous responses on financial markets—and the burdens of responsibility may feel grave. The speed of onset of *creeping crises*, in contrast, is slow rather than fast: both the actual threat and policy makers' attention develop over time. But they are not in sync: creeping crises involve incrementally escalating threats whose nature and seriousness are not agreed upon, and for that reason are often not widely perceived and treated as crises. In fact, as Boin et al. (2021) note, a key characteristic of the creeping crisis is a prolonged *absence* of attention and action, potentially forestalling timely mitigation and adaptation efforts and leading to action only when some undefinable threshold is passed or symbolically powerful symptoms of the underlying threat become impossible not to notice. Both the beginning and the ending of creeping crises are ambiguous and contested.

As acute and creeping crises are becoming increasingly interconnected and often co-occur—for example, extreme weather events and the underlying creeping crisis of climate change (Ray et al., 2017)—we can also speak of turbulence in the form of *dual crises*. And although there have always been dual crises—think of the 1960s riots in US cities (acute) and the underlying creeping crisis of institutional racism and entrenched disadvantage of Afro-Americans (e.g., Lipsky & Olson, 1976)—, in our contemporary “world risk society” the interconnections between different loci, levels and paces of threat and disturbance have become both more pervasive and more widely noticed (Beck, 1999).

Dual crises challenge the political robustness of governments: their ability to uphold public agendas, perform their vital functions, and allocate public value despite being confronted with a smattering of turbulent circumstances (Howlett et al., 2018; Sørensen & Ansell, 2021). Robust governance of dual crises involves aligning different temporal orders: fast and slow onset threats, sudden and creeping collective stress, immediate and long term consequences of policy interventions. Crisis researchers have long shown that acute crises can undermine robust governance when policymakers slide into fire-fighting mode, a form of “reactive presentism” in which consideration of the longer term (weeks and months, let alone years and decades) are wholly eclipsed by the perceived imperatives of a momentarily overwhelming present moment (Holsti, 1972; Lebow, 1981). Robust coping with dual crises means that governments are not only able to stage credible defensive responses to acute crises but at the same time are attuned to their signal value and able to develop more proactive mitigation policies to address the creeping threats eroding their societies (cf. Sørensen & Ansell, 2021). To consider the interconnectedness of dual crises and achieve robustness *over time*, it is therefore of importance that governments develop the capacity to *think in time* (Neustadt & May, 1986), so they can purposefully and strategically *work on and with time* (Scherpenisse, 2019).

In this paper, we explore how governments can enhance robustness to cope with dual crises through the strategic use of time. We mine diverse literatures to develop a novel temporal perspective on robust governance that comprises of five governance strategies. We then illustrate how these strategies can be detected in a heuristic case study: that of the Dutch Room for the River programme. We conclude by formulating challenges for future research on dual crises and robust governance.

## 2 | CIRCUMVENTING MYOPIA: WORKING ON AND WITH TIME

A system can only be termed robust if it continues to perform its vital functions over an extended period even in the face of nonroutine challenges (Howlett & Ramesh, 2022; Marchau et al., 2019). Robust governance requires both productive anticipation of adverse events, but also well-functioning mechanisms for delivering thoughtful responses and adapting these responses over time in the face of changing circumstances. The turbulence associated with dual crises challenges governments' capacities to do so. Their focus tends to be drawn toward only the most conspicuous risks and the most acute, in-your-face crises of the moment. This elicits two kinds of *policy myopia* that undermine robustness.

Studies of responses to acute crises have consistently demonstrated that the combination of felt threat, urgency and uncertainty can generate high levels of stress in policymakers and organizations alike. One effect of high levels of stress is to severely *constrict the time horizons* that policy actors take into account when making decisions. Janis (1989) notes the stress-induced risk of “hypervigilance”: unreflected in-the-moment actions whose longer-term consequences may be considerable but were not considered at the time they were initiated. Nations have even stumbled into wars nobody wanted in this manner (Levi & Tetlock, 1980).

By contrast, when facing creeping crises, another form of myopia can permeate the policymaking process. Janis and Mann (1976) referred to it as *unconflicted adherence* to the status quo: failing to properly assess the significance of slow-burning risks and latent vulnerabilities, and therefore not even considering the option of meaningfully changing current policy trajectories (McConnell & 't Hart, 2019). Studies of intelligence failures (e.g., Parker & Stern, 2005) and man-made disasters (e.g., Turner & Pidgeon, 1997) have provided a catalogue of sensemaking errors and inertia-inducing mechanisms. Boin et al. (2021) note that the fuzzy, ambiguous character of slow-building threats compromises their signal value, particularly in complex systems where it is notoriously difficult to “connect the dots” of disparate bits of information in a holistic manner, and for any problem definition to cut through the noise of the many other ones competing for policymakers' attention. From a transition management perspective, Loorbach (2007) notes that institutionalized policies tend to compete for survival, which limits the influence of long-term transition concerns and ambitions on short-term action and decisions. Moreover, a motivated irrationality—a form of collective self-deception (Pears, 1984)—may be at work in relation to creeping crises: those who benefit from current

economic and social arrangements exercise their influence to ensure that the not-seeing and not-acting upon creeping threats whose mitigation would come at significant cost to them continues for a little while longer, even though when those creeping threats do materialize on the long-term, everybody loses.

This is what policymakers facing dual crises are up against to achieve robustness. What interventions are available to them so that they do not fall into the trap of myopically overreacting to the fast-burning while underreacting to the slow-burning crisis? In the next section, we will conceptualize five temporal strategies by mining governance-related literature about time, starting from a more general understanding of time in governance.

### 3 | TOWARD ROBUST GOVERNANCE OF DUAL CRISES

Time is often regarded as a neutral variable, something that exists outside of ourselves. But in policy and politics, our sense of time is actively constructed and actors make strategic and politically consequential choices concerning time. The timing, sequence, speed, duration, and time horizons of governance efforts play an important role in shaping their impact (Bauer, 2018; Eshuis & van Buuren, 2014; Nair & Howlett, 2017; Vink et al., 2016; Voß et al., 2009). To use time in governance is to purposefully choose certain moments, rhythms and time horizons: timing, pacing and sequencing the work of governing (Goetz & Meyer-Sahling, 2009).

Through the strategic use of time, policymakers can influence the temporal dynamics of political institutions (Howlett & Goetz, 2014), policy agendas (Kingdon, 2011), public policies and programmes (Hogwood & Peters, 1983), and public organizations and networks (Termeer et al., 2010) in a way that helps achieving certain goals, public values and ambitions (Scherpenisse, 2019). For example, Goetz and Meyer-Sahling (2009) conceive of governance actors as having finite “time budgets,” and thus needing to choose what this scarce resource is “spent” on, and when. Policy makers may postpone or bring forward policy discussions, programme planning or implementation timelines, engage in the scheduling of negotiations and formal decision-making moments, seeking to align the pace of events to suit their purposes. Likewise, Adam (1998) has shown how components of what she calls the “time-escapes” in which governance takes place—such as pace, duration and timing—influence the realization of long-term goals in the field of sustainability and climate. She demonstrates how a linear conception of time that has dominated our conceptions and governance of the economy has led to short-time horizons in economic policy, and a tendency for economic steering to be disconnected from the actual economic rhythms.

Simple planning and linear conceptions of causes and effects are not sufficient in times of turbulence. The turbulence of dual crises creates sudden moments in which narratives profoundly shift, changes of pace that require different kind of policy tools, and images of the past and future that quickly spread and become dominant. In turbulent times, being on time or being too early, late, slow or fast, rigid or flexible makes the difference between improving or damaging robustness. This makes strategic choices concerning aspects like timing, pacing and time horizons crucial to be able to uphold and strengthen robustness in turbulent times.

Five key temporal strategies can be distilled from studies of social and political time in governance.

The first strategy concerns *timing*. Timing concerns purposefully choosing moments to undertake action. In the turbulence of dual crises, crucial moments arise during which the actions taken can considerably weaken or strengthen robustness. A timing strategy that enhances robustness is to construe linkages between acute crisis responses and strategic measures for creeping crises. For example, some governments have chosen to provide financial aid to companies during the COVID-19 crises under the condition of investing in sustainability. Especially with regard to creeping crises, it is essential for policy entrepreneurs to strut their policy proposals and weld coalitions at the right time: at those rare moment when events happen that allow them to draw attention to the slow-burning time bombs ticking away unheard and unaddressed (Kingdon, 2011). They need to persuasively frame the present-day event—for example, a quadruple murder in a family home—as symptomatic for the larger issue—the hidden social catastrophe of family violence—to gain traction for hitherto neglected policy interventions to address that creeping crisis.

A second strategy is *crafting time horizons*. Time horizons refer to the distances into the past and future that policy actors take into account when considering crises and the impact of crisis measures. On any given topic, or indeed as part of their broader governing style, policy actors can employ broad or narrow, widening or contracting time horizons. Institutional rhythms (i.e., election cycles) and broader socio-cultural temporal orientations can influence governance actors' choice of time horizons (Hansson et al., 2016). These can be fateful choices, because once particular time horizons are settled in a policy process they get embedded in legitimating discourse, strategic planning and resource allocations—but also in the expectations and standard with which accountability forums judge the performance of policy makers. Especially when high-stakes decisions are taken in response to acute manifestations of creeping crises, longer-term perspectives need to be considered to achieve robustness. One way to do so is to “lock-in” political commitments to longer time horizons into response and recovery measures to combat catastrophic “climate events.”

Third, there is the strategy of *pacing*. Pacing refers to modulating the speed of policy responses: when to push the accelerator, and when to put one's foot on the brake in ongoing processes of agenda-setting, policy (re)design, policy learning, innovation and termination (van Berkel et al., 2016). Acute crises are often framed as ideal occasion for acceleration of reform efforts, but empirical research of the crisis-reform linkages strongly suggests it is not so easy. Crises do not necessarily open up windows for just any reform agenda, and the pace at which they close again may exceed the pace at which reform coalitions can be welded if the groundwork has not been done beforehand (Boin & Otten, 1996; Boin & 't Hart, 2022). Crises do favor the prepared: reformers who have their proverbial bottom-drawers well stocked with “shovel-ready” initiatives waiting for the point of political ripeness are in a much better position to move swiftly, than those who have not ('t Hart, 2011). Creeping crises unfold at a slow pace, and offer anti-reform coalitions ample opportunities to derail adaptive responses and deny the urgency of needed transformations (Boin et al., 2021). In the context of dual crises, one of the best shots for breaking through the inertia with regard to creeping risks is to leverage the moments at which acute crises give rise to wide-ranging independent inquiries. These inquiries can be catalytic and influencing their agendas, diagnoses and recommendations may be the best shot that advocates for addressing creeping crises have for accelerating policymaking (Stark & Yates, 2021).

A fourth temporal strategy is *futureing*: preparing for the unknown ahead of time by exploring possible and preferable future scenarios for exploring impacts of alternative strategies (Granjou et al., 2017; Pot, 2020). The use of foresight techniques designed for ontologically more placid environments may induce a false sense of clarity and control (Kwakkel et al., 2010). To mitigate this risk, futureing techniques that are well-suited to conditions of deep uncertainty can be deployed. These mobilize adaptive capacity by broadening the range of contingencies, values and voices that are being entered into the policy conversation (Mangnus et al., 2019). Also, the method of exploring alternative histories can be employed to anticipate different types of risks (Krotov, 2019; Taleb, 2007). Policymakers can learn more about future risks, especially the type of events that are unlikely to occur but would have a major impact (i.e., “black swans” like a sudden crash of the stock market), by studying different possible chains of events that could have occurred.

The final temporal strategy highlighted here is about *cyclical adaptation*, which involves a process of making adjustments and changes to existing policies in response to new developments. Adaptation is fostered by designing alternative response strategies and allowing for flexibility to switch paths. Cyclical adaptation involves iterative and continuous cycles of trying, monitoring and adjusting or shifting between policies with the aim of leveraging temporary solutions, feedback cycles, and bricolage to work toward robust multi-functional solutions (Dewulf & Termeer, 2015). It is about being able to switch policy strategies or goals depending on what happens along the way, in order to stay on track toward long-term goals (Sørensen & Ansell, 2021). To achieve this, adaptation pathways need to be explored regularly and visualized powerfully, so as to arrive at a flexible sequence of policies (Haasnoot et al., 2013). Continuous monitoring and broad-based collaboration with extensive stakeholders are seen as pivotal enablers of iterative adaptation (Karpouzoglou et al., 2016).

Above we presented five temporal strategies for policymakers to employ for robustness during dual crises: timing, crafting time horizons, pacing, futureing and cyclical adaptation. All five strategies are always present, but by

no means always consciously and in a way that improves robustness. In fact, we argue that unconscious association with these five is more likely to be harmful. For example, wrong political timing or pacing causes years of delay in the implementation of necessary regulations (Pierson, 2000). And in many instances, futuring gives a false semblance of safety by projecting current beliefs and interests on the future, resulting in neglect of emerging risks (Hajer & Versteeg, 2019). Using these temporal strategies to increase robustness is therefore not a panacea. It requires a high degree of awareness, reflexivity and commitment.

To illustrate how this repertoire of temporal strategies is used to increase robustness, we now present a heuristic case study of flood prevention in the Netherlands. It is designed to show how working with and around time can be a pivotal strategic component of achieving robust governance in the face of dual crises.

## 4 | FROM CRISIS RESPONSE TO ROBUST WATER GOVERNANCE: A HEURISTIC CASE STUDY

Preparing for the risk of floods and responding to their occurrence has been an existential imperative in the history and present of the Netherlands. Since large parts of the country lie meters beneath current sea levels and since it is home to a vast delta of some of Western Europe biggest rivers, the prospect of flooding is not to be taken lightly. This has found expression in one of the world's oldest continuously functioning governance institutions—the system of regional water boards, founded in the 13th century, and one of the world's most respected civil engineering agencies, Rijkswaterstaat (Van den Brink, 2020) as well as research hubs with a global reach (e.g., the Waterloopkundig Laboratorium and Deltares). Thanks to a centuries-long effort to keep the water at bay, the frequency of major flood events has gone down drastically. But when the water rises, things can become quite critical very quickly.

For hundreds of years, the policy approach to that challenge in rivers has been to strengthen the system of dikes as much as possible. The occurrence of a major flood disaster in 1953 that claimed 1800 human and many more animal lives and covered 20% of the country's territory, served to reinforce the commitment to strengthening the elaborate system of dikes to prevent future catastrophic high-tide breaches. It gave rise to the 1955–2010 Delta Works project that extended the protective belt designed to keep the North Sea water out.

In the 1990's, two significant flood events occurred, not by the sea in the country's western coast but through swelling of the rivers Rhine and Meuse, that come in from the East and Southeast of the Netherlands. The double punch of two “once in a hundred years” flood events within the space of 15 months—with the 1995 event alone seeing the preventative evacuation of 250,000 people and millions of cattle as well as major damages to dwellings and public infrastructure—disrupted the sense of invulnerability that the country had acquired following the dramatic and ostensibly successful response to the 1953 floods. A post-mortem blue ribbon committee that was tasked with taking stock and thinking through the implications of the two acute water crises began to frame the connection with the global creeping crisis of climate change and its possible implications for weather patterns, extremes of precipitation and their implications for water safety in the Dutch delta, thus turning up the heat in the Dutch water governance sector by arguing it was in effect facing a dual crisis (*avant la lettre*) (Verduijn et al., 2012).

This agenda-setting policy entrepreneurship created a felt need to modify and complement the hitherto dominant and deeply institutionalized governance paradigm: of regulating and controlling the water by building, raising and strengthening dikes with innovative approaches better able to handle the noticeably more frequent instances of extreme volumes of water descending into the Dutch delta. In the 15 years that followed, a policy shift took shape in which water safety ambitions were combined with spatial ambitions (Warner & van Buuren, 2011). It involved *combining* the old solution of targeted dike strengthening measures with the breakthrough innovation to make more “room for the water” by widening and deepening the rivers in high-risk areas as well as by purposefully allowing them to flood pre-designated spill over basin areas, so that the water could be better collected and distributed.

The flagship effort for implementing Room for the River measures, was a 10-year programme aimed at creating “Room for the river,” spread across over 30 local and regional projects (Van Buuren, 2019). With hurricane Katrina in

the USA in 2005 and the launch of the Dutch Delta committee in 2008 paving the way to the adaption of a new and comprehensive second Dutch Delta programme, the emphasis within Room for the River shifted further from crisis recovery and water safety management to anticipation of climate-change driven extreme weather events (Zegwaard et al., 2015). Stewardship of the approach was located in the new Delta programme institution spear-headed by the national “Delta Commissioner”: an a-political figure whose sole purpose it is to ensure that the players in the Dutch water governance arena make progress toward the long-term goal of keeping the Dutch delta safe and ensuring that its water use needs continue to be met. This Delta Commissioner is appointed for 7 years, has a 50-year time horizon, a legal mandate in the Delta Act of 2012 and an annual investment budget of approximately 1 billion euros rooted in a Delta Fund (Bloemen et al., 2019).

Table 1 highlights the main events and decisions that took place and were relevant for the implementation of Room for the River (RR). We will now use this case to further illustrate the use and working of the five temporal strategies for strengthening robustness in practice in a dual crises context.

#### 4.1 | Timing: Exploiting crises to couple existing solutions to new-found problems

The first strategy concerns the timing of policy action. Crucial for the government to decide upon the RR programme were two large river discharges occurring in 1993 and 1995 (Van Alphen, 2020), triggering the largest evacuation since World War II (Scherpenisse et al., 2018). The crisis response to these events existed of a combination of policy continuity (strengthening dykes) and radical policy change (creating room for the river). First, strengthening dykes was needed because some of the dykes at the main rivers did not yet meet the existing water safety norms. To meet these norms, the national government started the programme “Delta plan main rivers.” Second, the river discharges also led to an adjustment of water safety norms in 2001 to deal with future floods. These new norms meant that many dykes would need to be further strengthened. This led to a discussion of the continuous need of dyke strengthening and a reconsideration of other possible measures to deal with future floods.

Creating room for the river would be such an alternative. This room for the river also aligned with increasing ecological critique to the Dutch engineering approach of water management. From the 1970s onwards ecological damages caused by new waterworks were no longer automatically accepted. This created strong pressures to develop water management measures that were responsive to both water safety and ecological conservation (Disco, 2002). The ecological turn played a crucial role in the discussion about the proposed fixed dam for the Oosterschelde, in the Province of Zeeland, at the heart of the 1953 flood. The severe ecological criticisms to this

**TABLE 1** Overview of key events and decisions in the Room for the River programme

| Year       | Event   |
|------------|---|
| 1953       | Dutch flood disaster in the South western Netherlands   |
| 1974       | Decision about Oosterschelde storm surge barrier put on hold because of ecological protests   |
| 1986       | Plan Ooievaar wins design contest for river management; finalization of Oosterschelde storm surge barrier   |
| 1993, 1995 | Rhine and Meuse river discharges  |
| 1996       | Policy guideline Room for the River: goal to create more river retention areas and protect people and animals against flooding                        |
| 2006       | Policy guideline Main Rivers: revision of policy guideline Room for the River, more options for diverse spatial developments in river retention areas |
| 2006       | Spatial Planning Key Decision: sets out the measures for implementing Room for the River between 2006 and 2015  |
| 2018       | Final evaluation of the Room for the River programme  |

fixed dam led to an innovative design of a semipermeable dam that would only be fully closed during storm surges (Disco, 2002).

After the controversy over this Oosterschelde storm surge barrier was settled, the attention of flood experts and the national water authority shifted to the main rivers (Zegwaard et al., 2015). The Dutch water authority Rijkswaterstaat was very responsive to the ecological turn, because it was looking for new legitimacy once the Delta Works would be finalized (Zegwaard et al., 2015). In 1986, a combination of Dutch engineers and architects with different backgrounds won the first prize in a competition hosted by the national spatial planning government agency (*Rijkspanologische Dienst*) about the future of design of the river landscape. They won that prize with a plan (*plan Ooievaar*) that tried to enhance both agriculture and nature by reinforcing agricultural land use on the land side of the dike while the river forelands on the river side of the dike would become nature reserves (De Bruijn et al., 1987).

The plan had little uptake in the years after, until the double-barred crises of 1993 and 1995 provided it advocates with a classic “policy window”: the initially shelved policy solution was resuscitated by policy actors who exploited the crisis of the hour to change the problem definition guiding Dutch riverine flood risk policies (Kingdon, 2011), paving the way for a paradigm shift within Dutch water management: from *controlling* the water toward *living with water* (Warner & Van Buuren, 2011).

## 4.2 | Expanding time horizons while setting strict deadlines

Second, crafting time horizons has been crucial during two phases within the policy process for Room for the River: the phase of alternative selection/exploration and the phase of implementation. First, during the alternative selection phase, exploring and scoping the issue to which measures needed to respond was crucial. To do so, several explorative expert studies were being executed by the national water authority for the Ministry of Transport and Water. In 1998, for example, an action plan for flooding (*Hoogwater Actieplan*) used a 2020 time horizon to explore how, with what measures, high water levels in the Rhine river could be decreased. Four years later, however, a national exploration of river widening measures of 2002 (*Spankrachtstudie*) extended that time horizon drastically, based on the middle-range climate change scenario of the Intergovernmental Panel on Climate Change (IPCC) that had become available. It was this expanded time horizon that was adopted in the central decision document on the implementation of Room for the River, the so-called Spatial Planning Key Decision (PKB).

At the same time, while adopting this expanded time horizon as the overall frame of reference, that very same document also set up a strict time frame of 10 years (2006–2015) for the implementation of Room for the River measures. This was presented as a nonnegotiable deadline (Scherpenisse et al., 2018; Van Buuren et al., 2013). The evaluation of the Room for the River programme observes that setting such a deadline for the programme was crucial: “Room for the River was driven by an ambitious time schedule and the (political) pressure to meet this schedule was huge [...]. The ambitious time schedule [...] had a positive influence on the project teams of the (decentral) realizing actors. This resulted in focus and drive” (Berenschot, 2018).

## 4.3 | Pacing to build support for long-term win-win measures

Third, to be able to implement long-term water safety measures with Room for the River, with a paradigm shift from fighting against water to living with water, the importance of pacing cannot be underestimated. With RR it meant that creating a “dual objective” of flood safety in combination with spatial quality, was crucial for finding the support for drastic water management measures and extending the floodplains of rivers for which, sometimes, houses and farms needed to move to other places (Berenschot, 2018). Within the strict time horizon of the programme for realizing measures between 2006 and 2015, there was still plenty of time to negotiate locally customized and acceptable measures. To allow for multi-stakeholder bargaining and environmental and social impact assessments, the central



government decided to use the PKB instead of a more top down spatial planning instrument (such as a project plan) because the PKB (Warner & van Buuren, 2011). In top-down implementation, pacing would be about choosing a realistic time schedule to carry out the planned interventions. But in the PKB, pacing was about achieving synchronization between the realization of national and local needs (van Popering-Verkerk, 2017). The focus was not on the realization of one interest as fast as possible, but on getting actors on board by realizing multiple interests at the same time. With the PKB, the way in which the water safety norm needed to be realized at the local level, was left for the regional and local governments to decide. As a result, implemented projects used creative combinations of ambitions that also for example included recreation or housing (Van Buuren et al., 2013). This room for pacing through synchronization and within the broader time horizon of the entire programme, was crucial for developing supported and creative water management solutions that created win-wins for people living or working close to the rivers.

#### 4.4 | Building anticipatory capacity through systematic futuring

Futuring is a fourth strategy used in the Room for the River programme to ensuring long-term water safety by using scenarios and modeling future discharge capacities. RR specified future discharge capacities of both the river Rhine (16,000 m<sup>3</sup>/s [cubic meters per second]) and Meuse (3800 m<sup>3</sup>/s) (Van Alphen, 2020). These discharge capacities were rooted in an evidence-informed process of anticipation spearheaded by an international research project that used the IPCC long-term climate change scenarios to explore how much room the rivers would need in the future based on projections of future climate change, including precipitation and sea level rise. At the time, the Dutch national government focused its efforts on the ICPP middle-range scenario of 2° temperature rise in 2100. Based on the ICPP's 2° scenario, the national water authority forecasted the expected sea level rise to be 60 cm in the year 2100, though it also commissioned calculation of the implications of the maximum scenario of 4° temperature rise for the Room for the River programme. The 2002 "*Spankrachtstudie*" explicitly adopted a long-term and integral approach to the water safety problems in the Dutch river delta. Besides clear and centrally imposed safety norms and water discharge capacities, the Room for the River programme distinguished a "residual risk" that was mitigated by implementing so-called "calamity polders": areas that would be used for river retention in cases of emergency (Zegwaard et al., 2015). In fact, as early as 1997, when the preparatory "policy guideline Room for the River" was issued, the policymakers had already looked beyond their recent riverine flood experiences and had explicitly anticipated scenarios for climate-change induced sea level rises.

#### 4.5 | Embedded flexibility through cyclical adaptation

The strategy of cyclical adaptation, as a way to allow for flexibility and alternative policy responses, was built into the design of RR's implementation programme (very inflexible) and on the type of measures implemented with Room for the River (flexible). RR's scope, budget, and timeframe were strict and did not change over the course of the implementation process. Emerging insights on water safety norms or climate change scenarios were not embedded within RR, which remained focused squarely on its original mission (Berenschot, 2018), but considerable flexibility was built into the implementation of river management measures so as to increase their robustness. As described, two complementary policy pathways were implemented: both dike-strengthening and river-widening projects were conducted under the RR banner. In other words, the tried and tested model of forward defense through a state-of-the-art dike system continued to be pursued, but in the implementation process space was created to *also* embrace the innovative, adaptive approach of "living with" water. Secondly and significantly, in 2006, just before the start of the execution phase, RR's central policy guideline (dating from 1997) was replaced. It was now judged to be too rigid to be able to accommodate the newly emerging desire to facilitate multifunctional use of designated river retention

areas. Under the new guideline, even building in floodplains was no longer impossible and gradually became accepted by the national water authority, although it had been anathema at the start of the programme (Warner & Van Buuren, 2011). The new guideline offered flexibility in terms of ambitions, water safety norms and functions to find novel land use solutions that would fit the local setting. Within the national legal framework of water safety norms, the various regions had a high degree of freedom in how they realized the required retention capacity (Van Buuren et al., 2013).

The robustness of the political system of Dutch water governance in absorbing the tensions of dual crises and different value sets and priorities of the many stakeholders is a work in progress. The margins of uncertainty remain great as the creeping crisis of climate change will continue to act as a game-changing producer of stark extreme river events both upstream and in the Dutch delta itself. So far, also with the recent intense rainfall and high water in July 2021 that did not cause casualties in the Netherlands, it has passed this test well, but for long-term robustness policymakers cannot lean back nor focus solely on the first new acute crisis to come. There is an ongoing balancing act between implementing high-investment measures now versus taking more time to learn about the evolving threat picture of climate change and to maintain the broad consensual approach that has stood the Dutch approach to water management in such good stead over the centuries.

## 5 | DISCUSSION: EMBEDDING THE *LONGUE DURÉE* IN COPING WITH CRISIS-INDUCED TURBULENCE

To further develop robust social and political systems that keep delivering critical functions (e.g., transportation, democracy, budgeting, education) under a high degree of turbulence, governments will need to be able to effectively anticipate, respond to, and learn from crises. Contemporary governments operate in highly turbulent contexts (Ansell & Trondal, 2018) in which both acute and creeping crises manifestations are present at the same time. Think of, for example, COVID-19 versus increasing pandemic risks, extreme droughts versus climate change, and terrorist attacks versus radicalization. This paper has introduced the “dual crisis” concept to understand the situation in which creeping and acute threats unfold and are felt at the same time and has distilled temporal strategies from the literature to deal with the interconnected nature of dual crises and specify how governments can strengthen their robustness.

In this discussion, we will first reflect on the connection between these five temporal strategies to achieve robustness and deal with different manifestations of crises. Table 2 provides an overview of these strategies.

When faced with dual crises, governments will need to connect the acute and creeping crises responses using the temporal strategies in a robust manner. The RR case also shows how acute crises are used to strengthen long-term robustness of the water system. First, by connecting the acute shock (e.g., flooding) to the underlying creeping threat (climate change) when relevant to create means and support for policy change (timing). Second, by extending time horizons contemplated by policymakers during crisis management and connecting time horizons for immediate crisis response, crisis recovery programmes (e.g., Room for the River programme), long-term policy goals, and the exploration of uncertain possible futures (crafting time horizons). Third, by structuring the time to prevent postponement strategies, think through alternative crisis mitigation strategies and consequences of crisis mitigation strategies for other domains and to build support for more transformative crisis responses (pacing). Fourth, by using stress-tests and broad ranges of future scenarios to preparing for possible short-term and highly disruptive shocks as well as for different ways that a creeping crises can unfold (futuring). Fifth, by developing alternative pathways of responding to a creeping crisis (e.g., dike strengthening and water retention areas) and possibly switching between pathways because of the changed circumstances (cyclical adaption).

Moreover, in the post-RR era, we also saw an important form of *temporal meta governance*: the creation of a long-term, well-funded Delta programme rooted in law (to ensure continuity of effort). Ten years since its

**TABLE 2** Five strategies for achieving robustness during crises

| Strategy               | Acute crisis   | Creeping crisis  | Dual crisis  |
|------------------------|--|--|--|
| Timing                 | Stepping in, responding in time to evolving crisis   | Awaiting and exploiting the opportunities for policy persistence or change   | Using the acute crisis momentum to benefit from the increased sense of urgency to break through deadlocks in policy paths  |
| Crafting time horizons | Focusing on the here and now, narrow time horizons for quick and firm crisis mitigation actions  | Creating long time horizons for policy goals and long-term scenarios to explore future crisis consequences   | Locking-in political commitments to longer time horizons to create and keep a momentum which is less dependent on the occurrence of acute crises                       |
| Pacing                 | Exploiting crisis-induced windows of opportunity for accelerated consideration of hitherto politically infeasible reforms & innovation proposals | Finding “accelerators” to push in overcoming institutional inertia and agenda denial   | Leveraging crisis-induced inquiries and reform packages to bring forward consideration of underlying risks and “creeping” vulnerabilities                              |
| Futuring               | Creating crisis evacuation and response plans and training   | Assessing different crisis response options against broad ranges of future scenarios   | Using both stress-tests and scenarios for exploring strategies in response to alternative histories as well as possible futures with acute and creeping crises impacts |
| Cyclical adaptation    | Adjusting or switching between crisis response strategies in response to the evolving crisis   | Creating alternative pathways of actions, monitoring creeping crisis manifestations and policy responses, creating multiple decision trajectories for adjustment of policies | Applying alternative pathways to the dual crises context to adjust policies based on an appraisal of changing circumstances and acute shocks                           |

creation, the Delta Commissioner stands out as a prime example of a government bent on sidestepping policy myopia on an existential issue of national scope and has bound itself to the mast by firmly embedded governance for the long term in its institutional architecture (cf. Elster, 1979). Setting up specific long-term institutions that have the capacity to use the different time strategies outlined in this paper, seems to be important for reducing governmental myopia and instead developing robust governmental systems (Boston, 2017; Nair & Howlett, 2017).

In the paper, we have illustrated these five temporal strategies with an exemplary study. A comparison of multiple cases to understand differences in the use of these strategies and how they enhance or decrease robustness will be useful. Furthermore, potentially the strategies could also be applied to *design* robust crisis-coping processes and policies (Howlett & Ramesh, 2022). Using these five elements as policy design heuristics or even just as a checklist draws attention to certain strategic choices for governance systems and practices that otherwise might well be overlooked or seen as neutral, like: what is the right timing to connect the overwhelming present of acute crises with the more elusive future of creeping crises? How can we actively shape time horizons or use delays or accelerations to make the urgency of anticipated creeping crises more widely felt? How open or closed should our planning strategies be, to be able to keep a coalition together and maintain momentum while at the same time be flexible to profit from new insights and possibilities?

## 6 | CONCLUSION

In this paper, we have developed a temporal perspective for robust governance of dual crises, turbulent contexts in which creeping and acute threats unfold and are felt *at the same time*. We argue that robustly navigating dual crises requires a strategic use of time. By mining governance literature on time, we have identified five key temporal strategies for achieving robustness. To illustrate how governments can enhance robustness to cope with dual crises through the strategic use of time, we used a transformational case of Dutch water management policy. It demonstrates how the different temporal strategies can enhance political robustness: using acute crises to develop long-term policy responses, connecting multiple time horizons, creating time to explore alternatives and build support for transformational change, imagining futures and stress-testing new policy solutions with scenarios to prepare for future crises, and developing cycles for the adaptation of implemented policies to be able to adjust policies in response to turbulence.

This paper constitutes but a first attempt to take a temporal lens to understanding political robustness. Future researchers may well see fit to expand and fine-tune this set of strategies, or to probe the connections between them more deeply. Especially in contexts of crisis-induced turbulence, we need to expand our understanding of time-sensitive governance. Governing for the long term and the heat of the moment can only work if the right timing, pacing, crafting of time horizons, forms of futuring and cyclical adaptation are employed, acting as an antidote against stress-induced myopia in the policymaking process. Developing this repertoire can help governments tackling turbulent dual crises strategically. The jarring experience that many societies have faced of keeping momentum on climate change mitigation and adaptation going while at the same time being faced with the epic “here and now” challenge of coping with COVID-19 highlights once again that this ought to be an urgent endeavor.

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### CONFLICT OF INTEREST

The authors certify that they do not have affiliations with, or involvement in, any organization or entity with any financial or nonfinancial interest in the subject matter or materials discussed in this manuscript.

### DATA AVAILABILITY STATEMENT

The data that support the findings of this study are derived from public domain resources and are referred to in the reference list of this article with URLs or DOIs when available.

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