

Flooding the Policy Agenda: Democratic Accountability and Climate Adaptation Policy

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Abstract

Voters reward governments for disaster relief but not for routine spending on disaster prevention. Climate adaptation prevents harm from risks that are still rising, so it is even less likely to be rewarded. I argue that a severe disaster changes this calculus by making adaptation visible enough to claim credit for, especially for an executive who faces voters. I test the argument across 179 countries from 2000 to 2025, using a country's first severe flood in a staggered difference-in-differences design. In democracies, a severe flood raises the probability that the executive enacts an adaptation policy by 37 percentage points over the flood year and the following year. In non-democracies the estimated effect is close to zero. Consistent with the argument, the increase comes from the executive rather than the legislature, and it is larger when the flood falls shortly before an election. The post-flood policies are similar in design strength to those enacted before the flood. I find no significant effect on mitigation policy in either regime.

Keywords: climate policy; disasters; floods; adaptation; electoral accountability; regime type.

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1. Introduction

Voters reward politicians for relief after a disaster but not for the prevention that would have limited its consequences (Healy and Malhotra, 2009). Successful prevention averts a harm, so voters can never appreciate what it achieved (Gailmard and Patty, 2019). Climate policy is the largest prevention problem governments face. Its costs are immediate and concentrated, its benefits are delayed and diffuse, and much of it averts harms no one will observe (Jacobs, 2016; Stokes, 2020). In ordinary years, a politician facing re-election therefore has little reason to spend political capital on it. This paper asks whether a severe disaster changes that calculus. I analyze how severe floods affect the enactment of national climate policies across 179 countries, and whether the response differs between democracies and non-democracies.

Disasters may disrupt climate policy inertia by changing the political calculus. A flood is a focusing event: it raises attention to a problem, can join that problem to available solutions, and mobilizes groups that push for a response (Kingdon, 1995; Birkland, 1998). Under certain conditions, such events catalyze a “bounce-forward” scenario in which policy changes beyond mere recovery measures (Nohrstedt, 2022). Disasters can also make local the diffuse global risks of climate change, aligning immediate costs with visible local benefits, and compress the temporal dimension of climate policy by turning long-term investments into urgent needs. The window opening does not guarantee preventive policy. Many disasters prompt prioritization of recovery measures, with a focus on aid and reconstruction. A climate policy response will depend on how actors frame the event and on the entrepreneurs who link it to solutions (Boin et al., 2009), and the reaction will vary across institutional contexts and policy types.

My argument is that a severe disaster changes this calculus for a short period. After a lethal flood, the risk that adaptation addresses is salient to voters, and a new adaptation strategy or plan becomes something a politician can claim credit for. That credit is worth most to a leader who faces voters (List and Sturm, 2006), so I expect the increase in adaptation policy to appear in democracies rather than in non-democracies, whose leaders can

disregard the swing in public demand for climate action that follows a disaster ([Bergquist and Warshaw, 2019](#); [Konisky et al., 2016](#)). Within democracies, the increase should come from the executive, which is the visible office that voters hold responsible for managing a disaster, and which can act faster during an emergency, rather than from the legislature. It should also be larger when the flood falls shortly before the next election, when the credit is worth most. Mitigation is less likely to increase. Its benefits are global and long-term ([Stokes, 2016](#)), and claiming credit for it requires voters to attribute the flood to climate change, while the benefits of adaptation are local and visible ([Dolšák and Prakash, 2018](#)).

I evaluate these expectations with national data from 179 countries between 2000 and 2025. I treat a country’s first severe flood in the study period as a shock and estimate its effect on the enactment of climate policies with a staggered difference-in-differences design that compares countries that experience such a flood with countries that will experience it in a later period ([Callaway and Sant’Anna, 2021](#)). Policies come from the Climate Change Laws of the World database, and I estimate separate effects for executive, legislative, adaptation, and mitigation policies using the database’s own tags. I also estimate the effect separately for democracies and non-democracies, with regime type measured in the year of the flood.

In democratic countries, a severe flood raises the probability of enacting at least one executive adaptation policy by 37 percentage points over the flood year and the year after, against a pre-flood rate of 12 percent. The effect is largest in the flood year and remains positive over the following four years. In non-democracies, the estimated effect is close to zero. Mitigation policies do not increase in either regime type. Looking at more specific subsets of policy, those including Disaster risk management (DRM) measures rise in democracies, and so do comprehensive climate action plans, which include both mitigation and adaptation measures.

The pattern of the effects I show within democracies is consistent with the argument proposed. The increase comes from the executive: legislatures in neither regime type enact more climate laws after a flood. It is also larger when the flood falls within two years of the

next executive power election. In the six democracies experiencing a flood shortly before a national election, the effect on adaptation policy is more than twice as large as in the nine flooded earlier in the electoral cycle. The test relies on few countries, so I treat it as suggestive evidence for an electoral mechanism. I do not find differences in design strength between policies enacted before or after a flood. Post-flood adaptation policies are as likely as earlier ones to use a binding instrument, state a target, or provide dedicated funding. Finally, other hazards, such as storms, extreme temperatures, and earthquakes, do not produce a comparable climate adaptation policy reaction.

The paper makes two contributions. First, it moves the prevention question from votes to policy. A literature shows that voters under-reward prevention and that governments under-invest in it as a result (Healy and Malhotra, 2009; Cole et al., 2012; Gailmard and Patty, 2019), and that democracies prevent more disaster deaths than autocracies (Kahn, 2005; Keefer et al., 2011). I ask what governments enact in the period after a disaster, when the value of prevention is visible, and find that democratic executives answer with adaptation policy, and more so when an election is near.

Second, the paper contributes to research on regime type and crisis response, connecting the environmental politics literature with comparative work on democratic and autocratic governance. Democracies adopt more climate policy than autocracies (Bättig and Bernauer, 2009; Bernauer, 2013; Schaffer and Bernauer, 2022). Scholars have studied how extreme weather shapes support for climate action. Rising temperatures and exposure to climate impacts increase beliefs in global warming (Joireman et al., 2010; Egan and Mullin, 2012; Deryugina, 2013; Shao et al., 2016; Zaval et al., 2014) and public concern about climate change in the United States (Bergquist and Warshaw, 2019; Konisky et al., 2016). Exposure can also raise environmental concern and Green party voting in Europe (Hoffmann et al., 2022), and make members of the U.S. Congress more likely to vote for environmental measures (Herrnstadt and Muehlegger, 2014; Gagliarducci et al., 2019). A separate literature on focusing events and disaster policy studies when disasters produce policy change and when

they produce only recovery (Birkland, 1998, 2006; Nohrstedt, 2022), and finds that exposure to hazards does not by itself improve disaster risk reduction policy (Nohrstedt et al., 2021). Studies of adaptation measure how far national governments have moved from planning to action, and finds large differences across countries (Berrang-Ford et al., 2011, 2015).

Most closely related are studies of extreme weather and climate mitigation policy (Rowan, 2023; Peterson, 2021). One study finds that climate-related disasters shift expert opinion on mitigation policies, but only in high-income democracies (Peterson, 2021); another finds no significant effect of extreme weather on mitigation reforms, including national legislation (Rowan, 2023). Most prior work studies democracies, uses smaller samples, or pools policy types. I compare democracies and non-democracies across 179 countries and separate adaptation from mitigation policies, finding a response concentrated in executive adaptation policy in democracies. In a review of the political economy of adaptation, scholars ask whether “adaptation is the old wine of disaster management in the new bottle of climate policy” (Dolšák and Prakash, 2018). The usual government response to a disaster is reactive: relief, emergency assistance, and reconstruction, which voters can see and reward (Healy and Malhotra, 2009). Disaster risk management and adaptation policy instead prepare for the next event, through preparedness plans, early warning, risk mapping, and protective works.

The rest of the paper is organized as follows. Section 2 sets out the theoretical framework. Section 3 describes the data and Section 4 the empirical strategy. Section 5 presents the results, and Section 6 the robustness checks. Section 7 discusses the findings and Section 8 concludes.

2. Theoretical Framework

I develop the argument from the perspective of a politician deciding whether to enact policy following a disaster. Prevention is hard to enact because voters do not see what it achieves, and climate adaptation, which prevents harm from risks that are still rising, is harder still.

A severe disaster can change this calculus for a short period by making the risk visible and a preventive policy creditable. Here, I specify for whom should this calculus change: the credit is worth most to an executive accountable to voters and who can act in the timeline while the disaster is still salient. The subsections below explain why prevention is hard to enact, how a disaster changes that, and why regime type, the branch of government, and the electoral calendar should affect a government's response.

2.1 The Prevention Problem

The fight against climate change has largely been portrayed as a collective action problem (Victor, 2011). The costs of climate policies are concentrated among specific economic sectors and regions, while the benefits are diffuse and distant in time. This asymmetry gives organized opponents strong incentives and limits the formation of pro-climate coalitions (Bernauer, 2013). More recent research argues that the main obstacle is domestic coalitions that oppose climate action (Aklin and Mildenberger, 2020). This shifts the focus from collective action to distributive conflict, and to how organized interests mobilize to block policies that threaten their economic positions.

The temporal mismatch between policy costs and benefits compounds these problems (Jacobs, 2016; Finnegan, 2022; Hale, 2024). Climate policies require immediate, visible sacrifices in exchange for benefits that materialize over decades and may be hard to attribute to any specific policy. In democratic systems, electoral cycles can amplify this mismatch by rewarding immediate benefits over long-term investments (Kayser and Peress, 2012; Ashworth, 2012).

This mismatch is a general feature of prevention. A preventive policy that works produces a harm that does not occur, so voters cannot observe its benefit and cannot reward it (Gailmard and Patty, 2019). Healy and Malhotra (2009) show the consequence for disasters: voters reward relief spending, which they can see, and not preparedness spending, which they cannot, so governments spend on relief. Climate adaptation and disaster risk reduction are

preventive in this sense. Their benefits are more local than those of mitigation, so collective action and distributive conflict weigh less on them, but in ordinary years they still bring a politician little gains.

2.2 A Disaster Makes Prevention Salient

Disasters can disrupt these patterns by changing the political calculus of climate action. In Kingdon’s multiple streams framework, policy change follows when a problem, an available solution, and a favorable political moment coincide ([Kingdon, 1995](#)). A severe flood can supply the first and the third: it makes the problem of climate risk visible, and it creates a moment in which inaction is politically costly. Whether a solution is joined to that moment depends on whether policy entrepreneurs have one ready. Birkland’s work on focusing events makes this point concrete: a sudden, harmful event raises an issue on the agenda, but the agenda change produces policy only when groups and officials use it ([Birkland, 1998, 2006](#)).

The “bounce-forward” view holds that major disasters can move policy beyond recovery toward reducing underlying vulnerabilities ([Nohrstedt, 2022](#)). Disasters address two barriers to climate policy. First, they localize the consequences of climate change, making abstract global risks immediate and tangible, which aligns local costs with local benefits, particularly for adaptation. Second, they compress the time horizon of climate policy by creating immediate demands for protective action. This argument applies most clearly to sudden, one-off events. A shock with a clear onset creates a moment that a government can be seen to answer, while a slow-onset hazard such as a drought or a heat wave builds over months, recurs, and offers no single high salience moment.

Before the flood, an early-warning system or an adaptation plan protects against a harm voters cannot picture. After it, the same policy answers a harm they have just seen, and it becomes something a government can claim credit for, much like relief ([Mayhew, 1974](#)).¹ The window is short, since public concern after extreme weather fades within months ([Konisky](#)

¹Voters may still punish incumbents for the disaster itself, whatever the government does about it ([Achen and Bartels, 2016](#)).

et al., 2016), so a politician claiming credit has to act while the flood is still in the news. My central expectation is that a severe flood raises the enactment of preventive climate policy, adaptation in particular, where the government stands to gain politically from being seen to provide protection.

The response is not automatic. Work on crisis management shows that leaders, officials, and advocates compete to frame a disaster, assign blame, and define the right response, and that the outcome of this competition determines whether a crisis produces reform or a return to the status quo (Boin et al., 2009). The question for this paper is how institutions shape the incentives of the actors who decide. I focus mostly on the national executive, which typically issues the strategies, plans, and decrees that make up most national climate policy, and on the electoral incentives it faces.

2.3 Electoral Accountability and Regime Type

A severe flood creates demands for government action irrespective of the political regime. It exposes a visible failure of protection and gives leaders incentives to provide relief, restore services, and reconstruct damaged areas. These operational responses are immediate and observable, but they do not necessarily commit the government to reducing future climate risk. A government can also extend its response beyond the present emergency by adopting an adaptation strategy, a disaster risk reduction plan, or a broader climate plan. Such a policy creates a durable commitment that leaders can later claim as evidence that they acted to reduce risk. It also requires greater political and administrative effort, while many of its benefits arrive only in the future. The political regime matters for whether a flood would potentially increase the political value of adopting a durable climate-policy commitment.

Elections can increase that value. Extreme weather temporarily raises public concern about climate risk (Bergquist and Warshaw, 2019; Konisky et al., 2016), and voters evaluate incumbents on their handling of disasters (Gasper and Reeves, 2011). A policy adopted while the flood remains salient gives the government a response it can claim credit for beyond

immediate relief and invoke at the next election ([List and Sturm, 2006](#)). Opposition parties and the media can further increase the visibility of both government action and inaction. Electoral accountability should therefore raise the political return to adopting climate policy after a flood.

Autocratic leaders may also react to disasters and enact climate policy. They may seek performance legitimacy, international standing, or the support of relevant elites ([Gilley, 2012](#); [Alkon and Wang, 2018](#); [Bernauer, 2013](#)). However, these motives do not make leaders responsive to a temporary increase in concern among the broader public. Because an autocratic leader's tenure depends less directly on voters, a flood should produce a smaller change in the political value of a visible climate-policy commitment. I expect that a severe flood should increase climate-policy enactment more in democracies than in non-democracies.

Within democracies, the response should come mainly from the executive. Voters are more likely to reward an office whose responsibility they can identify ([Powell and Whitten, 1993](#); [Powell, 2000](#)), and national executives are the most visible officials responsible for managing disasters. Executives can also adopt strategies, plans, and other policy instruments within the short window of attention that a flood creates. Legislation generally requires agreement across more actors and veto points and therefore takes longer to enact ([Tsebelis, 2002](#)). I consequently expect the post-flood increase in climate policy to be concentrated in executive action rather than legislation.

2.4 Which Policies Provide Political Credit

A politician claiming credit will favor policies whose benefits voters can see and attribute to the government, and whose costs fall on no organized group. Disaster risk management and adaptation score high on both counts. A warning system, a risk map, or a flood-protection plan answers the failure the flood revealed, and it is funded from general revenue without threatening any industry; adaptation also wins support across party lines ([Dolšák and Prakash, 2018](#)). Mitigation scores low. Its benefit is global and distant, its costs fall

on industries that organize against it (Stokes, 2016; Aklin and Mildenberger, 2020), and it is a valid response to a flood only for voters who attribute the flood to climate change (Cologna et al., 2025), an attribution that is itself partisan (Hazlett and Mildenberger, 2020). Comprehensive climate action plans, which set adaptation and mitigation goals together, fall in between, since packaging emission reductions as part of a resilience strategy can broaden their support (Baumgartner and Jones, 2009).

2.5 Alternative Explanations

The chain from a flood to policy can break at several points. Opinion shifts after extreme weather are modest and short-lived (Konisky et al., 2016). Even when opinion moves, politicians may weigh organized interests above it (Gilens and Page, 2014; Stokes, 2020). Consistent with such breaks, Rowan (2023) finds no effect of extreme weather on mitigation reforms, and Nohrstedt et al. (2021) finds that hazard exposure does not by itself improve disaster risk reduction policy.

Other mechanisms could also produce a stronger democratic response. The first is state capacity: richer, better-administered states may respond because they can, and regime type would then stand in for development (Berrang-Ford et al., 2015). I test this by controlling for income and government effectiveness. The second is international pressure: democracies may face more peer pressure to enact climate policy, and policies on a regular international or national planning cycle could coincide with floods by chance. The policy data exclude submissions to the UNFCCC such as Nationally Determined Contributions, and I re-estimate the effect after dropping policies on a regular planning cycle. The third is learning: a flood gives officials information about the risk the country faces, and they may act on it regardless of voter pressure (Birkland, 2006). Learning implies a different pattern from credit-claiming: a government that learns about flood risk from a disaster should act on it through any branch, and it has no reason to act faster before an election.

3. Data

I analyze whether national governments are more likely to enact climate policies after a severe flood. I combine data on floods and national climate policies for 179 countries from 2000 to 2025. Climate policy data date back to 1947 but were sparse before 2000: by 1990 only 19 countries had any climate policy. Flood records also extend further back, but the main flood database cautions that reports before 2000 are especially prone to reporting bias. I therefore begin in 2000, and I use the earlier flood records only to check that a country's first flood in the panel is not preceded by another severe flood.

I analyze national governments because national executives hold the competences over the national adaptation strategies, disaster risk policies, and climate plans that the database records. Subnational governments also respond to floods, and in decentralized countries they may press the national level to act. I do not observe those responses, so the estimates describe the national response only.

3.1 Floods

I use the International Disaster Database (EM-DAT).² Following the disaster risk reduction community, I refer to floods as hazards and to their human consequences as disasters, since the losses reflect societal vulnerability as well as the hazard itself. I focus on floods for four reasons. First, a flood is a discrete event with a clear onset, so the window it opens can be located in time. This is important for the argument, since a government can more easily be judged by the public for their response to a sudden shock. Heatwaves and droughts usually extend over longer periods, recur, and their consequences depend more heavily on government preparedness. Second, floods are the most frequent weather-related disaster and occur across most geographies, unlike storms, which makes them suited to a cross-country study. Third, the role of climate change in increasing the frequency and severity of floods has been well understood since the early 2000s, whereas the link for wildfires, for example, was

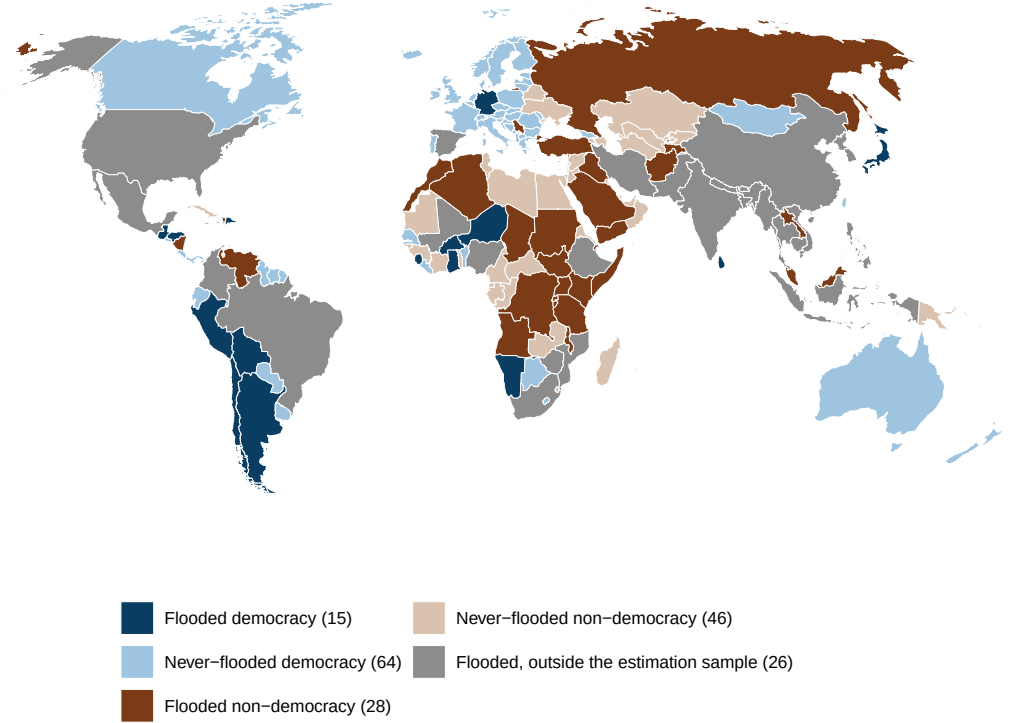
²EM-DAT, CRED / UCLouvain, Brussels, Belgium – www.emdat.be.

established only in 2015 ([Jolly et al., 2015](#)), and people who experience flooding connect it to a changing climate ([Spence et al., 2011](#); [Ogunbode et al., 2020](#)). Finally, there is substantial scope for adaptation to floods through policy.

EM-DAT records a disaster if it meets at least one of four criteria: 10 or more deaths, 100 or more people affected, a declared state of emergency, or a call for international assistance. I examine floods that kill at least 50 people. Table [A1](#) shows the distribution of recorded floods by deaths: of the 4,244 floods EM-DAT records worldwide between 2000 and 2025, 523 (12 percent) meet this threshold, and for 27 percent of floods no death count is reported. A death count is less sensitive to government discretion than an emergency declaration or a request for aid. The 523 severe floods occurred in 69 countries; 26 of these were democracies in the year of their first severe flood and 43 were non-democracies. The other 110 countries had no severe flood in the period (64 democracies and 46 non-democracies). Figure [1](#) maps the countries in the estimation sample by regime type and flood status.

Flooded countries are poorer and have less effective governments than never-flooded countries of the same regime type, and before their first severe flood they enact climate policy in fewer years (Table [A2](#)).

Figure 1: Flooded and Never-Flooded Countries by Regime Type



Notes: Flooded countries had their first flood with at least 50 deaths (EM-DAT) between 2001 and 2023, with no other such flood in the four years before. Regime type by the V-Dem Regimes of the World measure in the year of the flood, or the most common regime over 2000–2025 for never-flooded countries. “Outside the estimation sample” are countries whose first severe flood fell in 2000 or after 2023, or was preceded by another severe flood within four years. Number of countries in parentheses. Light gray: no data.

3.2 Climate Policy

I use the *Climate Change Laws of the World* database, downloaded from Climate Policy Radar in 2026.³ It covers national climate laws and policies for all UNFCCC parties in the areas of mitigation, adaptation, loss and damage, and disaster risk management. I keep executive and laws and exclude submissions to the UNFCCC, such as Nationally Determined Contributions, multilateral fund documents, and reports. This leaves 6,115 policies enacted between 2000 and 2025. I date each policy to the year of its first recorded event, which is usually its adoption.

My main outcome of interest is whether a country enacts at least one new executive policy

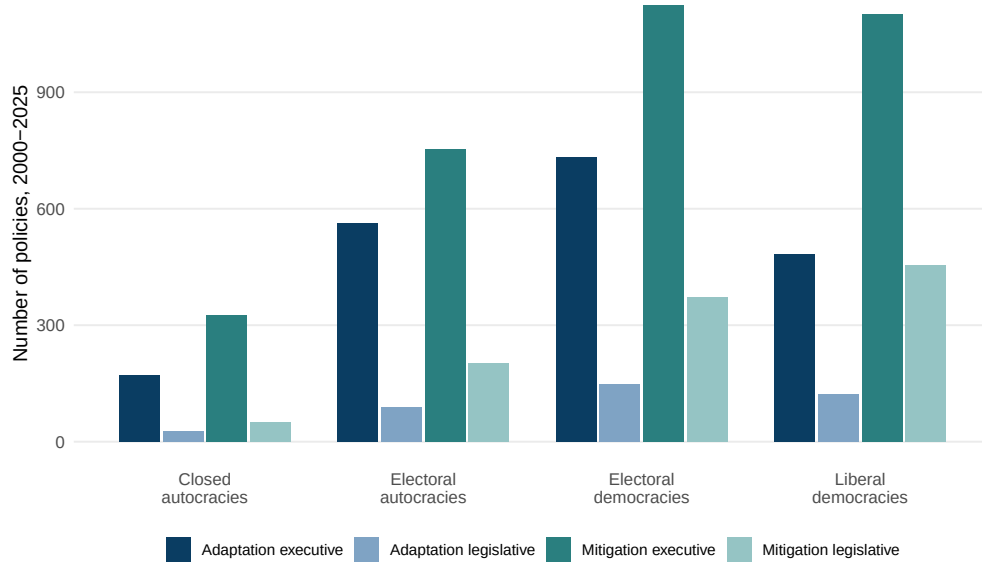
³Grantham Research Institute at the London School of Economics and Climate Policy Radar (2026), *Climate Change Laws of the World*. <https://climate-laws.org> and <https://app.climatepolicyradar.org>.

of a given type in a year. Executive policies allow a closer comparison between democracies and non-democracies, since legislatures play very different roles across regimes. Moreover, I only observe the date of enactment of a policy but not the process behind it, making it harder to pinpoint the timing of a legislative response, which is usually longer. I report the 1,446 laws as a separate outcome. Of the 4,669 executive policies, the database tags 2,081 as adaptation and 3,473 as mitigation; the tags are not mutually exclusive. The database also tags 720 executive policies as DRM. Figure 2 shows the policies by regime type. Both democracies and non-democracies enact climate policies, and the number rises with the level of democracy.

I further classify every policy with a large language model (Claude Sonnet), using its title and summary. I construct a category of comprehensive climate action plans (654 executive policies), which set adaptation and mitigation goals in one document. The model also codes four design features of each policy: whether its main instrument is binding, whether it states a quantified target, whether it provides dedicated funding, and its geographic scope. I sum these into a design-strength score from 1 to 7 and call a policy strong if it scores 5 or more. By this measure, 359 of the 2,081 executive adaptation policies are strong.

Figure A2 shows executive adaptation and mitigation policies over time. Table A3 lists every executive adaptation policy enacted by a flooded democracy in the flood year or the year after. Several are direct responses to floods, such as Germany’s Immediate Climate Adaptation Programme of 2022, which followed the 2021 floods, and Japan’s Fundamental Plan for National Resilience of 2018. Others are broader adaptation policies, such as sectoral adaptation plans and water and forestry policies, and some may have been in preparation before the flood.

Figure 2: Climate Policies Enacted by Regime Type, 2000–2025



Notes: Number of national climate policies by V-Dem Regimes of the World category in the year of enactment. Adaptation policies are in blue and mitigation policies in green, with darker shades for executive policies and lighter shades for legislation; a policy tagged as both is counted in both. Objectives follow the database’s own tags. 390 policies from countries without a V-Dem code are not shown. Source: own elaboration from the *Climate Change Laws of the World* database.

3.3 Regime Type

I classify countries as democracies or non-democracies with the Varieties of Democracy (V-Dem) Regimes of the World measure, which classifies regimes as closed or electoral autocracies and electoral or liberal democracies; I code the two democratic categories as democracies.⁴ For a flooded country, I measure regime type in the year of its first severe flood, so countries that democratized or backslid are classified by the regime that faced the flood. For a country with no severe flood, I use its most common regime over the period. In a robustness check I instead fix regime type in 2000. To measure the electoral calendar, I use the National Elections Database (Marx et al., 2025) and record, for each flooded country, the number of months between its first severe flood and its next election that selects the executive: the presidential election in presidential and semi-presidential systems, and the

⁴V-Dem, processed by Our World in Data.

legislative election otherwise.

4. Empirical Strategy

I estimate the effect of a country’s first severe flood on climate policy enactment with the staggered difference-in-differences estimator of [Callaway and Sant’Anna \(2021\)](#). Floods arrive at different times in different countries, and their effects may differ across countries and over time. Under these conditions, the two-way fixed-effects event study can weight cohorts incorrectly and compare newly flooded countries with countries flooded earlier ([de Chaisemartin and D’Haultfoe uille, 2020](#); [Sun and Abraham, 2021](#); [Roth et al., 2023](#)). The estimator I use avoids both problems: it compares each cohort of flooded countries only with countries that have not yet been flooded, and then averages these comparisons.

Let G_i be the year of country i ’s first severe flood. For each cohort g and year t , the estimator computes

$$ATT(g, t) = E[Y_{i,t} - Y_{i,g-1} \mid G_i = g] - E[Y_{i,t} - Y_{i,g-1} \mid G_i > t \text{ or never flooded}], \quad (1)$$

where $Y_{i,t}$ equals 1 if country i enacts at least one executive policy of a given type in year t . The year before the flood, $g - 1$, is the reference year for every comparison. I then average the cohort effects by years since the flood, $e = t - g$, weighting cohorts by size:

$$\theta(e) = \sum_g w_g ATT(g, g + e), \quad e = -4, \dots, 4. \quad (2)$$

The coefficients for $e < 0$ are placebo tests: they compare flooded and not-yet-flooded countries before the flood, and they should be close to zero if the two groups were on parallel paths. I report a joint test that the pre-flood coefficients are zero. The coefficients for $e \geq 0$ trace the response.

I expect the response to be concentrated in the first years after a flood, when attention

to the disaster is highest. I therefore summarize the response by the average of $\theta(0)$ and $\theta(1)$, the flood year and the year after, and report the flood year alone and the average over the first five years ($e = 0, \dots, 4$) beside it. Executive policies can be adopted within months, so I expect effects within this window.

The treatment is a country’s first severe flood in the period, after which the country stays treated. Many flooded countries experience further floods, and those floods are part of the post-flood period. I keep a flooded country only if the EM-DAT records, which I check back to 1980, show no other flood of at least 50 deaths in the four years before its first one. I also restrict the events to those with at least three observed years starting with the flood year, so I drop countries first flooded after 2023. Countries flooded in 2000 have no pre-flood year and drop out. The estimation sample has 153 countries, with 15 flooded democracies, 28 flooded non-democracies, and 110 countries never flooded. I estimate the model separately for democracies and non-democracies. Standard errors are clustered by country.

The identifying assumption is that, absent the flood, flooded countries would have enacted climate policy at the same rate as countries not yet flooded. The timing of a country’s first severe flood is plausibly unrelated to the timing of climate policy once country and year differences are removed. Floods are not randomly distributed across countries, however. They are more likely where flood-prone geography and dense settlement overlap, which correlates with development and institutional capacity. I use the pre-flood placebo coefficients to test whether flooded countries were on a different path before the flood, and I check capacity and contamination of the comparison group.

5. Results

5.1 The Flood Response by Regime Type

Figure 3 shows the event-study estimates by regime type, and Table A4 reports the window averages. In democracies, a severe flood raises the probability of enacting at least one

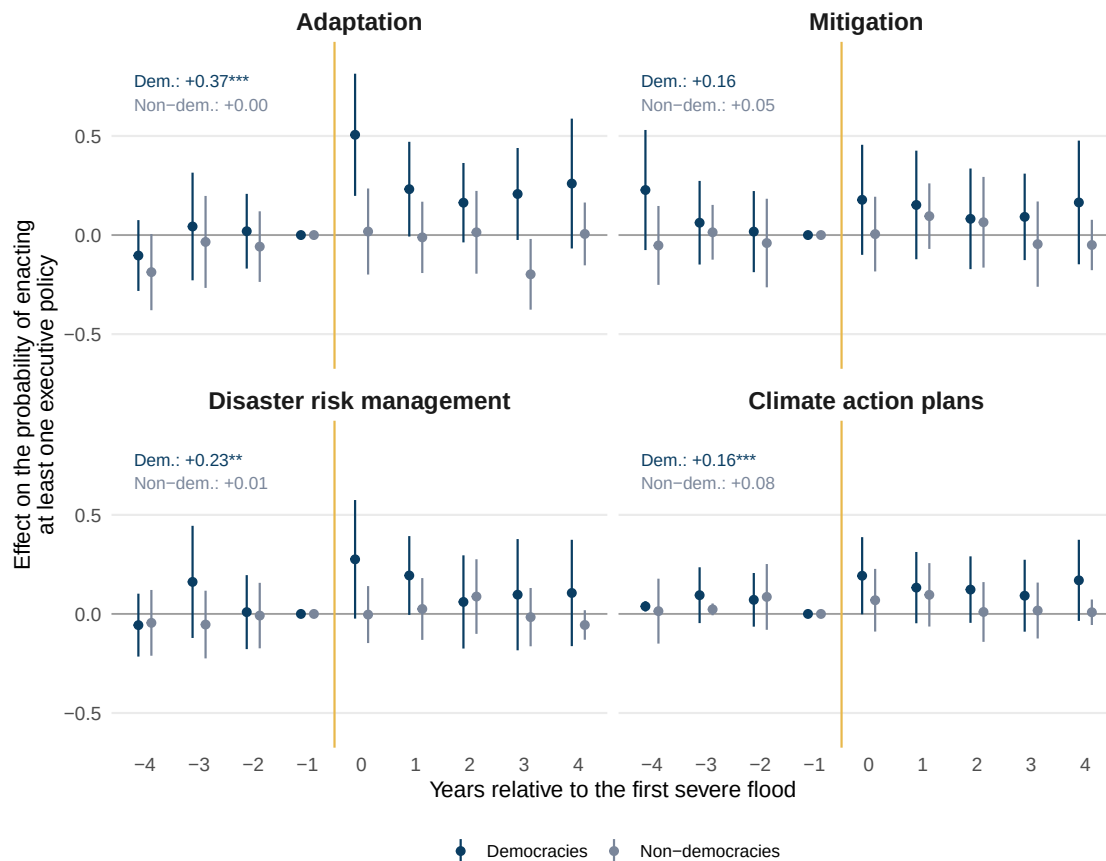
executive adaptation policy by 51 percentage points in the flood year and by 37 percentage points on average over the flood year and the year after, both significant at the 1% level. Before the flood, democracies enact an executive adaptation policy in 12 percent of years. The effect stays positive over the following years: the five-year average is 27 percentage points, also significant at the 1% level. The pre-flood coefficients are jointly insignificant ($p = 0.34$).

Executive DRM policies rise by 23 percentage points over the flood year and the year after in democracies, significant at the 5% level, against a pre-flood rate of 8 percent.⁵ I find no significant effect in non-democracies for either policy type.

While mitigation policies do not rise significantly when considered on their own, comprehensive climate action plans, which combine adaptation and mitigation goals, rise by 16 percentage points over the flood year and the year after, significant at the 1% level.

⁵Most of these policies are also tagged as adaptation (456 of 720), and the database records disaster risk management mainly where it is framed as climate policy, so the two estimates are not independent.

Figure 3: The Effect of a Severe Flood on National Executive Climate Policies, by Regime Type



Notes: Event-study estimates and 95 percent confidence intervals (clustered by country) from the Callaway and Sant’Anna estimator with not-yet-flooded countries as controls. The treatment is a country’s first flood with at least 50 deaths; year -1 is the reference year. Democracies are in dark blue and non-democracies in gray, by the V-Dem Regimes of the World measure in the year of the flood. Each panel’s outcome is whether at least one executive policy of that kind is enacted in the country-year: adaptation, mitigation, and DRM policies from the database’s tags, and climate action plans from the language-model classification. The text in each panel gives the average effect over the flood year and the year after. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. 153 countries, 2000–2025.

5.2 Executive and Legislative Enactment

Figure A1 compares executive and legislative enactment of adaptation and disaster risk management policies. I find no effect of floods on legislation in either regime type (Table A5). The flood response therefore comes from the executive, which can adopt a strategy or plan within months of a flood. Laws take longer to pass, and some laws enacted in response to a

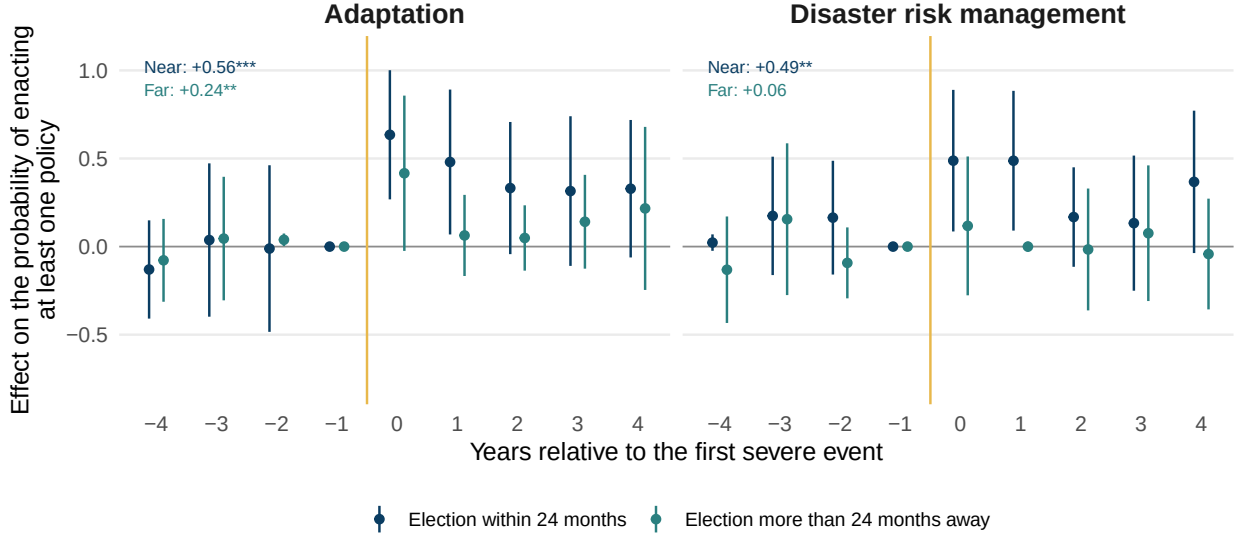
flood may fall outside the five-year window.

5.3 Electoral Timing

If electoral accountability drives the democratic response, the response should be larger when the flood falls shortly before an election. I split the 15 flooded democracies by whether their next election that selects the executive was held within 24 months of the flood, and estimate the model separately for each group against the same comparison countries. Six democracies were flooded shortly before an election: Ghana in 2007, Honduras in 2008, Namibia and Peru in 2009, Germany in 2021, and Guatemala in 2023. The other nine were flooded earlier in the electoral cycle.

Figure 4 shows the results. In democracies flooded shortly before an election, a severe flood raises the probability of enacting at least one executive adaptation policy by 56 percentage points over the flood year and the year after, significant at the 1% level. In democracies flooded earlier, the effect is 24 percentage points, significant at the 5% level. The gap is larger for disaster risk management policies, which rise by 49 percentage points in the first group and by 6 points, not significant, in the second. These results are similar with an 18-month cutoff and with a control for income (Table A6).

Figure 4: The Democratic Response by Time to the Next Election



Notes: Event-study estimates and 95 percent confidence intervals (clustered by country) for executive adaptation (left) and disaster risk management (right) policies in democracies, estimated separately for the six democracies whose first severe flood fell within 24 months of the next election that selects the executive (dark blue) and the nine whose flood fell earlier (teal), each against the same never- and not-yet-flooded democracies. Election dates from the National Elections Database. The text gives the average effect over the flood year and the year after. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

5.4 The Design of Post-Flood Policies

Floods raise the number of adaptation policies democracies enact. Whether this is a desirable response also depends on how those policies are designed. To examine this, I compare the executive adaptation policies that flooded countries enacted in the year or the year after the flood, with those the same countries enacted before their first severe flood (Table A7). In democracies, the 21 post-flood policies score 3.1 on the 1–7 design-strength index, against 3.3 for earlier policies, a difference that is not significant. They are as likely to use a binding instrument (10 percent in both periods), to provide dedicated funding, and to be national in scope. The one difference is that none of them states a quantified target, against 10 percent of earlier policies. In non-democracies, post-flood policies score somewhat lower, by 0.4 points (significant at the 5% level). The comparison relies on few policies, since only 5 of the 15 flooded democracies had enacted an adaptation policy before their flood, and

the features are coded from policy documents. Comparing post-flood policies with all other adaptation policies in the sample, with country and year fixed effects, gives the same picture (Table A8). With these limits, I find no evidence that post-flood policies differ in design from those enacted in ordinary years.

6. Robustness

Table A9 reports the democratic and non-democratic estimates for adaptation (Panel A) and disaster risk management (Panel B) under alternative specifications.

Capacity. Richer and better-governed states may respond to floods because they can. Controlling for log GDP per capita and government effectiveness leaves the democratic adaptation effect at 35 percentage points over the flood year and the year after, significant at the 1% level. The non-democratic estimate remains close to zero.

Regime coding. Fixing regime type in 2000 gives a democratic adaptation effect of 30 percentage points, significant at the 1% level. The difference between regime types is 21 percentage points and not significant ($p = 0.12$).

Comparison group. Countries that never had a severe flood may have experienced other major disasters, such as earthquakes, storms, or droughts, that also trigger policy. Dropping comparison countries with any non-flood disaster of at least 50 deaths raises the democratic adaptation effect to 39 percentage points.

Planning cycles and international drivers. Some policies are adopted on a regular national or international cycle, such as five-year plans, national development plans, and policies implementing Nationally Determined Contributions, and could coincide with floods by chance. Dropping these 163 executive policies leaves the democratic effect at 37 percentage points.

Classification. Replacing the database’s adaptation tag with the language model’s label gives a democratic effect of 23 percentage points over the flood year and the year after, significant at the 5% level, and a non-democratic effect of 9 percentage points that is not significant. The model’s label gives a smaller democratic effect than the database tag, and with it the difference between regime types is not significant ($p = 0.29$).

Severity threshold. With a threshold of 25 deaths, more countries count as flooded (32 democracies) and the democratic effect is 13 percentage points, significant at the 5% level. With a threshold of 100 deaths, only 8 democracies remain, and the estimate of 21 percentage points is not significant. Moving the threshold changes both the severity of the floods and the year in which a country is first treated, so these estimates are not a dose-response test.

Timing. Policies are dated to the year, so some policies counted in the flood year may predate the flood. Excluding the flood year and averaging the effect over the next four years gives a democratic adaptation effect of 22 percentage points, significant at the 1% level.

Other hazards. A country’s first severe storm, landslide, wildfire, or earthquake has no significant effect on executive adaptation policy in either regime type (Figure A3). This confirms the reasons for focusing on floods: heat waves and droughts build over time rather than striking at a clear moment, while storms are concentrated in fewer countries. Earthquakes are unrelated to climate risk, and, if anything, show a negative effect on climate policy enactment.

7. Discussion

The findings show that politicians respond differently to severe floods depending on the political system under which they act. In democracies, a flood increases the probability that the executive enacts an adaptation policy; in non-democracies, the estimated effect is

close to zero. The effect occurs in executive policies rather than legislation. This pattern is consistent with electoral accountability as a mechanism: a flood increases the value of a visible policy commitment most where leaders answer to voters and can act while the event remains salient. The larger effects among democracies flooded shortly before an election point in the same direction.

The differences across policy types are also in line with the argument. Adaptation offers local and comparatively visible benefits, and its enactment increases after floods in democracies. I find no significant effect on mitigation, whose benefits are more distant and whose costs generate greater distributive conflict. Disaster risk management policies also increase, although many of these policies are also classified as adaptation, so the two results are not independent. Comprehensive climate action plans appear to increase as well, which suggests mitigation may also advance when it is packaged with adaptation.

The estimated adaptation response is largest in the flood year and the following year, consistent with the short-lived attention that focusing events create ([Birkland, 1998](#); [Konisky et al., 2016](#)). Among the adaptation policies governments enact, I find no detectable shift toward either weaker or stronger designs after a flood. Post-flood policies are not significantly different from earlier policies in their use of binding instruments, quantified targets, dedicated funding, or national scope. However, the design measures only describe policies text, and I do not observe differences in implementation outcomes.

Several additional limitations apply. The outcomes capture formal national policies recorded in the database, not emergency spending, international assistance, disaster management outside a climate frame, or subnational action. These may be important channels of response, especially in countries where governments do not adopt national climate-policy documents after disasters. Disaster records also originate partly with governments, so differential under-reporting could affect which countries enter the treatment group. Finally, the analysis takes regime type as given. It estimates how countries with different regimes respond to floods, but it does not show that democratization would change a country's response.

8. Conclusion

This paper examines how severe floods affect climate-policy enactment using data from 179 countries between 2000 and 2025. In democracies, a severe flood during the study period increases the probability that the executive enacts an adaptation policy by 37 percentage points over the flood year and the following year. The estimated effect in non-democracies is close to zero. I find no significant effect on mitigation policy. The response appears in executive policies rather than legislation, and the point estimates are larger when a flood occurs shortly before an election. I also find no detectable difference between the design of adaptation policies enacted before and after a flood.

These results qualify the expectation that crises automatically create opportunities for policy change. A disaster may open a policy window, but political institutions shape whether governments use it to make a durable commitment. Severe floods appear to catalyze adaptation where executives answer to voters, while providing little impetus for mitigation in either regime type. Electoral accountability may therefore help convert a visible climate shock into policy intended to reduce future harm, but worsening disasters are not themselves a substitute for policies that address the causes of climate change.

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Appendix

Table A1: Recorded Floods by Number of Deaths, 2000–2025

Deaths	Events	Share (%)
1–5	820	19.3
5–10	499	11.8
10–25	849	20.0
25–50	415	9.8
50–100	257	6.1
100–250	179	4.2
250–500	48	1.1
500–1000	22	0.5
1,000 or more	17	0.4
Not reported	1,138	26.8
Total	4,244	100.0
50 or more (treatment)	523	12.3

Notes: All flood events recorded in EM-DAT, 2000–2025. “Not reported” are events with no recorded death count. The treatment in the main analysis is a country’s first flood with at least 50 deaths.

Table A2: Summary Statistics of the Estimation Sample

	Democracies		Non-democracies	
	Flooded	Never flooded	Flooded	Never flooded
Log GDP per capita	8.16 (1.37)	9.27 (1.30)	7.33 (1.17)	8.14 (1.35)
Government effectiveness	50.25 (17.13)	61.91 (17.87)	34.48 (13.33)	42.55 (15.94)
Share of country-years with an adaptation policy	0.12	0.24	0.13	0.18
Share of country-years with a mitigation policy	0.23	0.34	0.17	0.22
Share of country-years with a DRM policy	0.07	0.09	0.05	0.06
Deaths in the first severe flood (median)	92	–	72	–
Years with a severe flood, 2000–2025	2.87 (2.75)	–	3.43 (3.65)	–
Countries	15	64	28	46

Notes: Means across countries, standard deviations in parentheses. Log GDP per capita and government effectiveness (World Bank, percentile rank 0–100) are country averages over 2000–2025. Policy shares are the share of country-years with at least one executive policy with the database’s tag, over pre-flood years for flooded countries and over all years for never-flooded countries. Deaths are the median death toll of the first severe flood. Years with a severe flood count the years with at least one flood of 50 or more deaths.

Table A3: Executive Adaptation Policies Enacted by Flooded Democracies in the Flood Year or the Year After

Country	Flood	Enacted	Policy title
Bolivia	2002	2002	Supreme Decree No. 26.739 on General regulation of risk reduction and disaster and emergency care
Burkina Faso	2007	2007	Decree No. 2007-740 / PRES / PM / MECV / MEF adopting the National Adaptation and Climate Change Adaptation Program of Action
Chile	2015	2016	Climate Change Adaptation Plan for the Health Sector
Dominican Republic	2004	2004	Decree 786/04
Germany	2021	2021	Arable Farming Strategy 2035
Germany	2021	2022	Immediate Climate Adaptation Programme
Ghana	2007	2007	Food and Agricultural Sector Development Policy (FASDEP II)
Ghana	2007	2007	National Water Policy
Guatemala	2023	2023	National Policy for Disaster Risk Reduction of Guatemala -PNRRD2024-2034 implemented by the Governmental Agreement No. 267/2023
Guatemala	2023	2024	Guatemala's Gender and Climate Change Action Plan (PAGcc)
Guatemala	2023	2024	National Plan for Integrated Disaster Risk Reduction Management 2024-2034
Guatemala	2023	2024	Regulations of the Law for the Promotion of the Establishment, Recovery, Restoration, Management, Production, and Protection of Forests in Guatemala (Reglamento de la Ley de fomento al establecimiento, recuperación, restauración, manejo, producción y protección de bosques en Guatemala)
Japan	2018	2018	Basic Environment Plan
Japan	2018	2018	Fundamental Plan for National Resilience
Namibia	2009	2009	Disaster Risk Management Policy
Namibia	2009	2010	National Policy on Climate Change for Namibia
Niger	2012	2012	National Policy on Climate Change (PNCC)
Peru	2009	2009	Supreme Decree No. 006-2009-MINAM reactivated the National Commission on Climate Change (CNCC)
Peru	2009	2010	National Energy Policy (Política Energética Nacional)
Sierra Leone	2009	2010	Conservation and Wildlife Policy
Sierra Leone	2009	2010	Forestry Policy

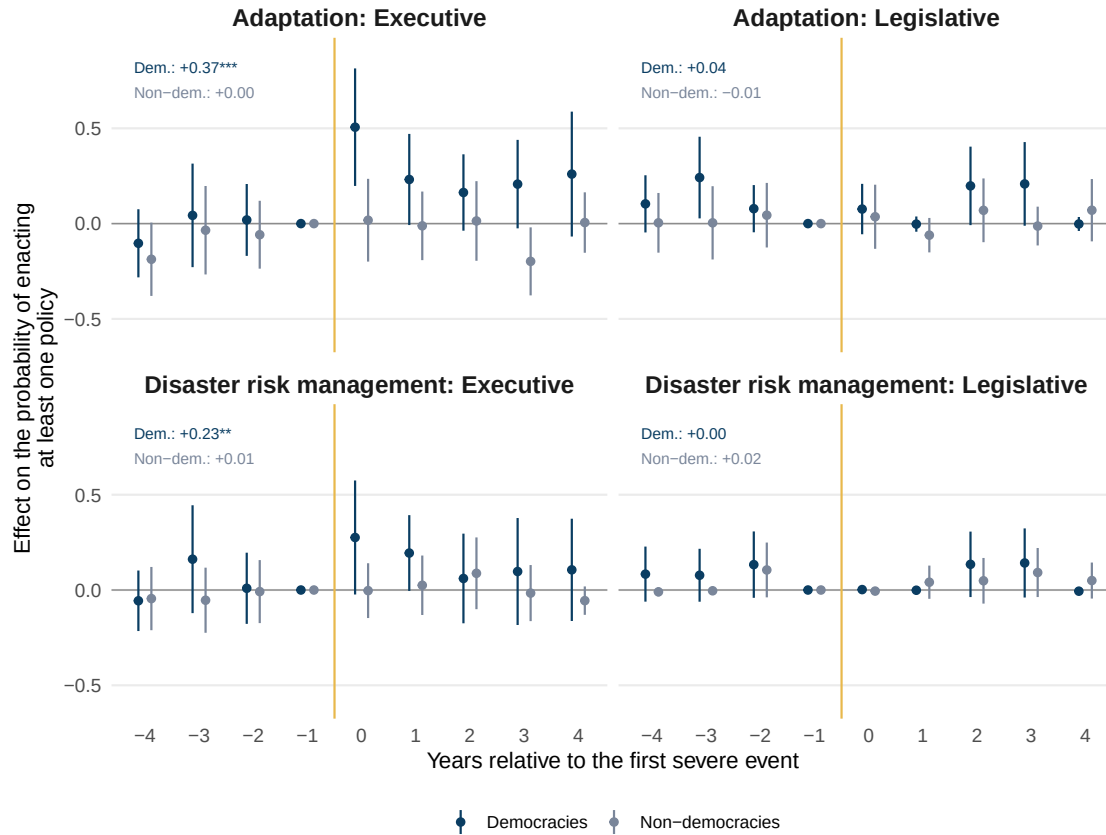
Notes: Every executive policy tagged as adaptation by the database and enacted in the flood year or the year after by one of the 15 flooded democracies in the estimation sample. 21 policies in 12 countries; the other three flooded democracies enacted none in this window. Titles as recorded in the database, in English.

Table A4: The Effect of a Severe Flood on Executive Climate Policy

	Democracies			Non-democracies			Difference
	Flood year	Years 0–1	Years 0–4	Flood year	Years 0–1	Years 0–4	Years 0–1
Adaptation	0.506*** (0.157)	0.369*** (0.107)	0.274*** (0.079)	0.018 (0.111)	0.003 (0.092)	-0.035 (0.070)	0.366*** (0.141)
Mitigation	0.178 (0.142)	0.165 (0.115)	0.134 (0.090)	0.005 (0.096)	0.050 (0.074)	0.014 (0.073)	0.115 (0.137)
Disaster risk management	0.276* (0.153)	0.235** (0.115)	0.147 (0.096)	-0.003 (0.073)	0.011 (0.065)	0.007 (0.056)	0.224* (0.132)
<i>Language-model classification</i>							
Climate action plans	0.193* (0.099)	0.163*** (0.063)	0.142*** (0.040)	0.069 (0.081)	0.083 (0.073)	0.040 (0.055)	0.080 (0.097)
Flooded countries	15			28			
Never-flooded countries	64			46			

Notes: Callaway and Sant’Anna estimates of the effect of a country’s first flood with at least 50 deaths on the probability of enacting at least one executive policy of each kind, averaged over the flood year, the flood year and the year after, and the first five years. Not-yet-flooded countries are the controls; year -1 is the reference year. Regime type by V-Dem in the flood year. The difference column is the democratic minus the non-democratic two-year estimate, with standard error $\sqrt{se_D^2 + se_N^2}$ since the groups share no country. Standard errors clustered by country in parentheses. The joint test that the pre-flood coefficients are zero has $p < 0.10$ for mitigation in democracies ($p = 0.03$) and climate action plans in democracies ($p = 0.03$), and $p > 0.10$ for every other outcome and regime. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Figure A1: Executive and Legislative Responses to a Severe Flood, by Regime Type



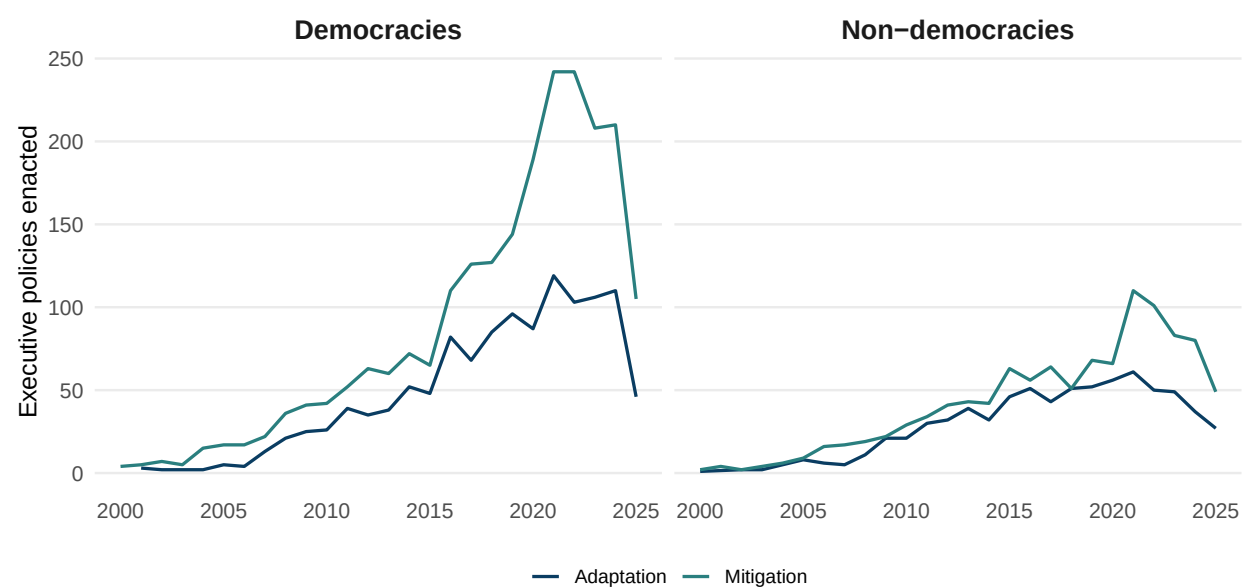
Notes: Event-study estimates and 95 percent confidence intervals (clustered by country), as in Figure 3. Each panel's outcome is whether at least one executive policy (left) or law (right) with the database's adaptation or disaster risk management tag is enacted in the country-year. The text in each panel gives the average effect over the flood year and the year after. 15 flooded democracies and 28 flooded non-democracies. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A5: Executive and Legislative Responses to a Severe Flood

	Democracies			Non-democracies		
	Years 0–1	Years 0–4	Flooded	Years 0–1	Years 0–4	Flooded
Executive: adaptation	0.369*** (0.107)	0.274*** (0.079)	15	0.003 (0.092)	-0.035 (0.070)	28
Executive: disaster risk management	0.235** (0.115)	0.147 (0.096)	15	0.011 (0.065)	0.007 (0.056)	28
Legislative: adaptation	0.037 (0.038)	0.096** (0.039)	15	-0.012 (0.061)	0.020 (0.055)	28
Legislative: mitigation	-0.137 (0.123)	-0.072 (0.109)	15	0.085 (0.054)	0.071 (0.049)	28
Legislative: disaster risk management	0.000 (0.006)	0.054** (0.023)	15	0.018 (0.022)	0.045** (0.021)	28
Legislative: any climate law	-0.139 (0.122)	-0.019 (0.118)	15	0.064 (0.069)	0.075 (0.059)	28
Both branches: disaster risk management	0.228** (0.113)	0.198** (0.100)	15	0.024 (0.072)	0.031 (0.060)	28

Notes: Callaway and Sant’Anna estimates as in Table A4, averaged over the flood year and the year after (years 0–1) and over the first five years (years 0–4). Each row’s outcome is whether at least one policy of that branch and database tag is enacted in the country-year; “both branches” counts executive policy and laws together. “Flooded” is the number of flooded countries. Standard errors clustered by country in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Figure A2: Executive Adaptation and Mitigation Policies by Regime Type, 2000–2025



Notes: Number of executive policies enacted each year with the database’s adaptation or mitigation tag, by V-Dem regime type in the year of enactment. A policy with both tags is counted in both lines.

Table A6: The Flood Response by Time to the Next Election

First flood before the next election	Adaptation			Disaster risk management		
	Years 0–1	Years 0–4	Flooded	Years 0–1	Years 0–4	Flooded
<i>Democracies</i>						
Within 24 months	0.557*** (0.181)	0.418*** (0.114)	6	0.487** (0.203)	0.329*** (0.110)	6
More than 24 months	0.240** (0.111)	0.177* (0.096)	9	0.059 (0.100)	0.027 (0.127)	9
Within 18 months	0.557*** (0.181)	0.418*** (0.114)	6	0.487** (0.203)	0.329*** (0.110)	6
More than 18 months	0.240** (0.111)	0.177* (0.096)	9	0.059 (0.100)	0.027 (0.127)	9
Within 24 months, income control	0.526*** (0.202)	0.383*** (0.129)	6	0.499** (0.208)	0.314*** (0.113)	6
More than 24 months, income control	0.230 (0.140)	0.163 (0.109)	9	0.060 (0.109)	-0.063 (0.119)	9
<i>Non-democracies (placebo)</i>						
Within 24 months	-0.075 (0.127)	-0.102 (0.115)	12	0.028 (0.112)	0.032 (0.085)	12
More than 24 months	0.196 (0.127)	0.121** (0.060)	13	0.106 (0.074)	0.078* (0.046)	13

Notes: Each row estimates the main specification separately for flooded countries whose first severe flood fell within (or beyond) the stated number of months before the next election that selects the executive, against the same never- and not-yet-flooded countries of that regime type. With an 18-month cutoff the groups contain the same democracies as with 24 months. “Income control” adds log GDP per capita. For non-democracies, the election is defined in the same way from the same database. “Flooded” is the number of flooded countries in each group. Standard errors clustered by country in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A7: Design of Adaptation Policies Before and After the First Severe Flood

	Democracies			Non-democracies		
	Pre-flood	Post-flood	Difference	Pre-flood	Post-flood	Difference
Design-strength score (1–7)	3.34	3.05	-0.30 (0.29)	3.37	2.95	-0.42** (0.19)
Strong (score ≥ 5)	0.17	0.14	-0.03 (0.11)	0.15	0.15	+0.00 (0.05)
Binding instrument	0.10	0.10	-0.01 (0.07)	0.07	0.00	-0.07** (0.03)
Quantified target	0.10	0.00	-0.10** (0.05)	0.17	0.15	-0.02 (0.08)
Dedicated funding	0.21	0.24	+0.03 (0.12)	0.20	0.10	-0.10 (0.08)
National scope	0.59	0.57	-0.01 (0.12)	0.56	0.50	-0.06 (0.16)
Policies	29	21		41	20	
Countries	5	12		9	8	

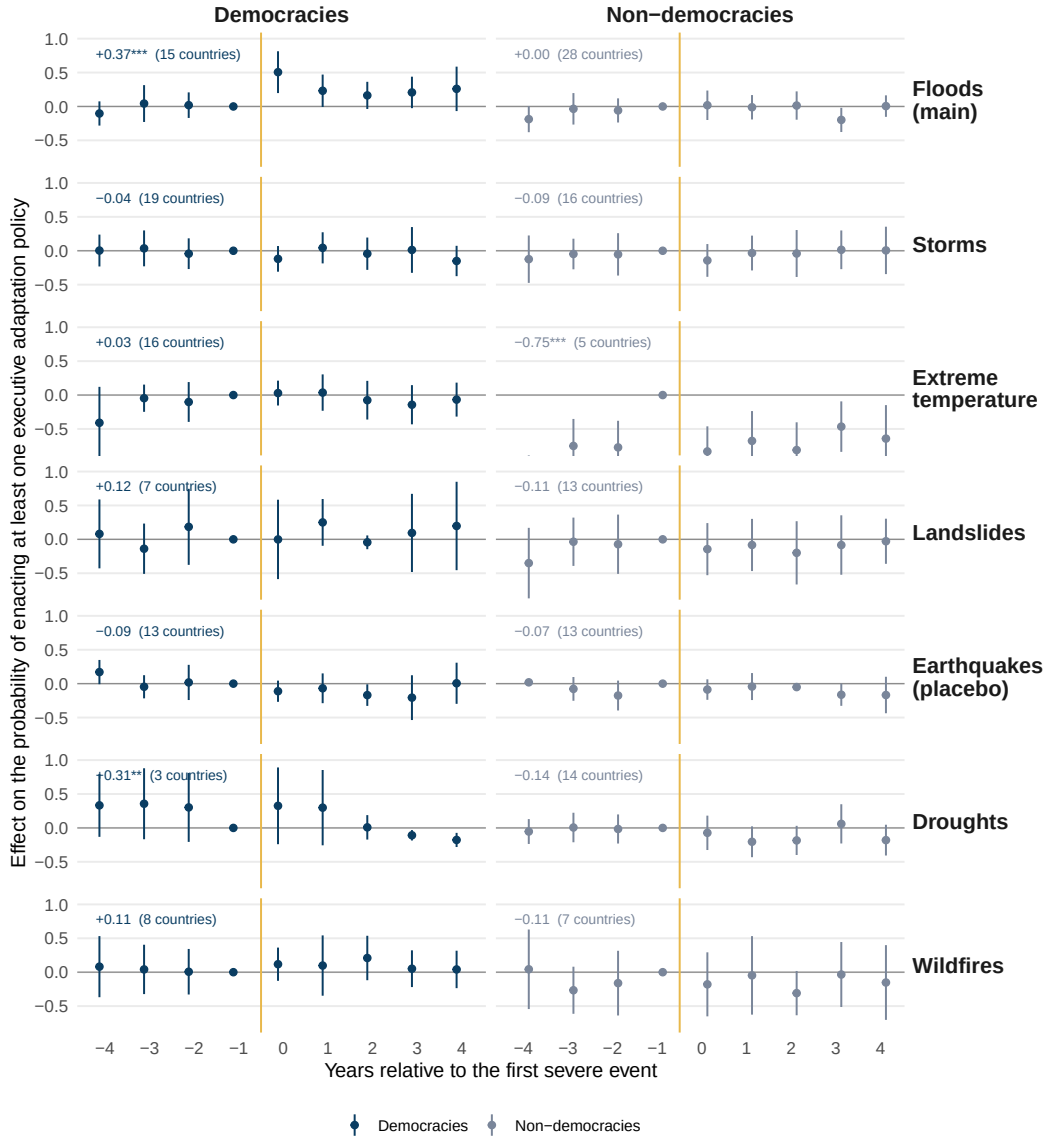
Notes: Executive policies with the database’s adaptation tag enacted by flooded countries in the estimation sample, before their first severe flood (pre-flood) or in the flood year and the year after (post-flood). Each row gives the share of policies with the feature (the mean score for the design-strength index) and the difference between the two periods, with standard errors clustered by country in parentheses. A strong policy scores 5 or more on the 1–7 index, which sums the language model’s codes for a binding instrument, a quantified target, dedicated funding, and geographic scope; a binding instrument is the highest of the model’s three levels of instrument strength. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A8: Design Features of Post-Flood Policies

	Democracies	Non-democracies
Design-strength score (1–7)	-0.419*	-0.286
	(0.226) [3.49]	(0.316) [3.20]
Strong policy (score ≥ 5)	-0.086	0.022
	(0.094) [0.23]	(0.094) [0.14]
Binding instrument	-0.046	-0.098**
	(0.074) [0.11]	(0.037) [0.04]
Quantified target	-0.057	0.045
	(0.087) [0.20]	(0.095) [0.14]
Dedicated funding	-0.111	-0.022
	(0.102) [0.21]	(0.070) [0.16]
National scope	0.001	0.023
	(0.093) [0.61]	(0.175) [0.57]
Symbolic	0.087	0.279*
	(0.087) [0.11]	(0.159) [0.15]
Post-flood policies (countries)	21 (12)	20 (8)
All policies	952	570

Notes: Policy-level regressions of each design feature on an indicator for policies enacted in the flood year or the year after, with a separate indicator for later post-flood years, country fixed effects, and year fixed effects. The sample is executive policies with the database’s adaptation tag in the estimation sample of Table A4. The coefficient on the post-flood indicator is reported; standard errors clustered by country in parentheses, and the mean among pre-flood and never-flooded policies in brackets. Features are coded by the language model from each policy’s title and summary. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Figure A3: Executive Adaptation Policy after Other Hazards



Notes: Event-study estimates and 95 percent confidence intervals (clustered by country) of a country's first severe storm, extreme-temperature event, landslide, earthquake, drought, or wildfire, 2000–2025, on whether it enacts at least one executive adaptation policy, by regime type in the year of the event. Same specification as Figure 3: verified clean pre-window, not-yet-treated controls, at least three observed post-event years. Each hazard's severity bar is set at the same percentile as the flood threshold (floods with at least 50 deaths are the deadliest 12.3 percent of recorded floods): the deadliest 12.3 percent of each hazard's recorded events, which means at least 31 deaths for storms, 573 for extreme temperature, 71 for earthquakes and landslides, and 14 for wildfires, and for droughts, whose deaths are rarely recorded, at least 5 million people affected. Earthquakes serve as a placebo.

Table A9: Robustness of the Flood Response

	Democracies		Non-democracies		Flooded
	Years 0–1	Years 0–4	Years 0–1	Years 0–4	(dem./non-dem.)
<i>Panel A. Adaptation</i>					
Main specification	0.369*** (0.107)	0.274*** (0.079)	0.003 (0.092)	-0.035 (0.070)	15 / 28
LLM adaptation label	0.232** (0.105)	0.205** (0.098)	0.090 (0.082)	0.052 (0.072)	15 / 28
Excluding planning-cycle documents	0.373*** (0.108)	0.277*** (0.079)	0.031 (0.096)	0.004 (0.073)	15 / 28
Regime fixed in 2000	0.300*** (0.106)	0.260*** (0.085)	0.088 (0.087)	0.012 (0.061)	15 / 27
Income and government effectiveness	0.352*** (0.130)	0.256*** (0.097)	0.004 (0.108)	-0.039 (0.083)	14 / 24
Controls without other major disasters	0.394*** (0.104)	0.295*** (0.080)	0.023 (0.092)	-0.016 (0.071)	15 / 28
Flood threshold: 25 deaths	0.126** (0.060)	0.150** (0.059)	-0.038 (0.097)	-0.013 (0.071)	32 / 29
Flood threshold: 100 deaths	0.214 (0.146)	0.060 (0.109)	0.126 (0.108)	0.064 (0.086)	8 / 13
<i>Panel B. Disaster risk management</i>					
Main specification	0.235** (0.115)	0.147 (0.096)	0.011 (0.065)	0.007 (0.056)	15 / 28
Regime fixed in 2000	0.301*** (0.116)	0.203** (0.095)	0.012 (0.054)	0.013 (0.042)	15 / 27
Income and government effectiveness	0.212* (0.124)	0.084 (0.102)	0.004 (0.106)	0.008 (0.077)	14 / 24
Controls without other major disasters	0.271** (0.120)	0.170* (0.103)	0.008 (0.065)	0.005 (0.057)	15 / 28
Flood threshold: 25 deaths	-0.009 (0.048)	0.005 (0.062)	0.016 (0.048)	0.018 (0.038)	32 / 29
Flood threshold: 100 deaths	0.176 (0.157)	0.013 (0.137)	0.006 (0.091)	0.011 (0.096)	8 / 13

Notes: Each row re-estimates the main specification of Table A4 with one change. *LLM adaptation label:* outcome classified by the language model instead of the database tag. *Excluding planning-cycle documents:* drops 163 executive policies on a regular planning cycle (five-year and national development plans, poverty-reduction strategies, and policies implementing Nationally Determined Contributions). *Regime fixed in 2000:* V-Dem regime in 2000 instead of the flood year. *Income and government effectiveness:* log GDP per capita and World Bank government effectiveness as covariates in the doubly robust estimator. *Controls without other major disasters:* drops never-flooded countries with any non-flood disaster of at least 50 deaths. *Flood thresholds:* first flood with at least 25 or 100 deaths. The last column gives the number of flooded democracies and non-democracies. Standard errors clustered by country in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.