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Global adaptation governance: how intergovernmental organizations mainstream climate change adaptation

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ABSTRACT

Climate change adaptation is increasingly being mainstreamed into all types of organizations across the world. A large number of intergovernmental organizations (IGOs), such as the European Union, the World Bank, or Food and Agriculture Organization, have already started to mainstream adaptation. Yet, despite a surge in scholarly interest in climate policy integration over the past decade, adaptation is still predominantly studied as a local issue and mainstreaming in IGOs remains poorly understood. In this article, we develop and test an innovative framework for examining adaptation mainstreaming practices in IGOs. Using quantitative and qualitative data derived from extensive fieldwork conducted between 2017 and 2020, we examine mainstreaming practices in a large number of IGOs and arrive at two key findings. First, adaptation has been mainstreamed within the procedures and outputs of IGOs across ten (nonclimate) issue areas, while there is also evidence of important issue-specific variation. Second, there is variation across mainstreaming practices in the sense that discursive mainstreaming is most common, whereas more concrete collaboration, policy change affecting projects and programs, and budget allocations are less common. We conclude with a discussion of how our framework can inform the theory and practice of global adaptation governance.

KEY POLICY INSIGHTS

- IGOs have mainstreamed adaptation into a large array of issue areas, yet scholarly and practical debates remain siloed.
- Mainstreaming adaptation has advanced most in IGOs in the areas of food and development and least in the domain of migration and security.
- Discursive mainstreaming is more common than other types of adaptation mainstreaming in IGOs, regardless of the issue area.
- Global governance is a distinct setting in which powerful states, institutional complexity, and funding constraints strongly affect IGO practices to successfully mainstream adaptation.

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Introduction

How and to what extent do intergovernmental organizations (IGOs) mainstream adaptation policy? Today it is widely acknowledged among scholars and policy-makers that climate change and variability are global processes that have adverse effects on human livelihoods (Adger et al., 2014; IPCC, 2018). With increasing awareness of the wide-ranging consequences of climate change has come increasing recognition of the urgent need

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to mainstream adaptation into nonclimate issue areas (Urwin & Jordan, 2008). However, although a number of IGOs in areas, such as health, migration, and security, have addressed adaptation (Persson, 2019), we still know little about how and to what extent this mainstreaming has been put into practice.

Adaptation is defined as any adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects (IPCC, 2007). Scholarly research on adaptation comprises both the environmental and social sciences and has long concentrated on adaptation as a domestic issue (Dolšak & Prakash, 2018), with a particular focus on technical solutions, for example, flood defenses, seed selection, and irrigation systems, and how to mainstream adaptation into development planning (Kok & de Coninck, 2007). In practice, in the past decades, local and national governments have realized that they cannot adequately address climate risks on their own and this has helped bring increasing attention to adaptation in international climate negotiations (e.g. Benzie & Persson, 2019; Berrang-Ford et al., 2019; Persson & Dzebo, 2019; Smit & Wandel, 2006). Climate change adaptation and development have historically been dealt with in conjunction by IGOs that have mandates on climate change, such as the United Nations Framework Convention on Climate Change (UNFCCC), and development mandates, such as the United Nations Development Programme (UNDP). More recently, IGOs with core mandates in areas other than development and environmental affairs have integrated climate risks into their mandates as well (Dellmuth et al., 2020).

Despite broad and growing interest in global adaptation governance among scholars and policymakers (Persson, 2019), there is still little comparative research about how and to what extent IGOs mainstream adaptation. One main – perhaps *the* main – reason is that the adaptation literature is fragmented across research and policy traditions focusing on different issue areas, including energy (Dupont, 2016), health (Smith et al., 2014), migration (Hall, 2016), and security (Scott & Ku, 2018). By contrast, national-level studies of climate policy integration (CPI) have made significant advances in understanding how environmental issues have been integrated into a range of policy areas since the release of the Brundtland Report in 1987 (e.g. Adelle & Russel, 2013; Ahmad, 2009; Runhaar et al., 2018; Schmidt & Fleig, 2018; Van Asselt et al., 2015).

To date, very few contributions have focused on policy integration by IGOs, although IGOs play a major role in developing adequate approaches and assisting countries in adapting to a changing climate (Tosun & Peters, 2018). They can influence adaptation by promoting norms and rules, creating new regimes, generating information and knowledge, monitoring state compliance with international climate agreements, implementing adaptation programs, and promoting new collaborations and platforms to strengthen adaptation governance (e.g. Eckhard & Ege, 2016; Ege et al., 2019; Kok et al., 2008).

In this article, we examine the ways and extent to which IGOs have mainstreamed adaptation into other issue areas. Based on the insights from the literatures on mainstreaming (e.g. Dupont, 2016; Rietig, 2019; Van Asselt et al., 2015) and IGOs (e.g. Biermann & Siebenhüner, 2009; Dellmuth et al., 2020; Tosun & Peters, 2018), we develop an analytical framework of adaptation mainstreaming in IGOs, distinguishing among four different types of mainstreaming practices: discourse, collaboration, programs and projects, and budget allocation. In doing so, we seek to complement and advance existing mainstreaming frameworks at the national level (e.g. Biermann et al., 2009; Runhaar et al., 2018), discussing how actor constellations, funding limitations, and institutional complexity differ in the global realm.

We explore our framework by systematically mapping adaptation mainstreaming across 23 IGOs based on extensive fieldwork. This fieldwork includes a survey of nearly 300 policy experts, conducted to determine the ways and extent to which IGOs integrate adaptation in ten issue areas: development; development banking; disaster risk reduction (DRR); energy; food; health; humanitarian assistance; migration; regional multi-issue; and security. To contextualize our findings, we rely on 45 semi-structured and 44 standardized interviews with IGO bureaucrats and state and non-state representatives for two IGOs (i.e. the United Nations High Commissioner for Refugees (UNHCR) and the World Health Organization (WHO)).

This triangulation of quantitative and qualitative data provides a broad and nuanced perspective on adaptation mainstreaming in terms of procedures and outputs in IGOs.

Taken together, our analysis points to an increase in discursive mainstreaming of adaptation into the procedures and outputs of IGOs working in different issue areas, but the results for the other three mainstreaming practices (collaboration, programs and projects, and budget allocation) are more varied. Moreover, the evidence reveals important differences across issue areas.

Analytical framework of adaptation mainstreaming practices

Existing approaches to adaptation mainstreaming

We use 'mainstreaming' to refer to the degree to which adaptation is integrated into the procedures and outputs of a particular organization (see also Runhaar et al., 2018). The environmental policy integration (EPI) and CPI literatures provide useful insights for theorizing patterns of adaptation mainstreaming. While much of the literature conceptualizes CPI as a type of EPI (Runhaar et al., 2014), EPI has typically been defined as a governance process or policymaking principle (Jordan & Lenschow, 2010), while CPI is usefully conceptualized as the integration of climate into nonclimate areas (Rietig, 2013).

Moreover, the terms 'mainstreaming' and 'policy integration' are typically used interchangeably. Policy integration often describes a thorough incorporation of environmental issues into institutions and practices. By comparison, mainstreaming is seen as a subcategory of integration referring to specific practices, such as developing indicators for climate screening of all projects or programs of an organization, or the use of dedicated adaptation policies (cf. Runhaar et al., 2018).

To advance research on global adaptation mainstreaming, this section develops a framework for studying adaptation mainstreaming in the procedures and outputs of IGOs, enabling a descriptive analysis of adaptation mainstreaming. We build on the central premise that global governance is characterized by the actions of private and hybrid actors as well as agencies with regional and national remits (Andonova, 2010; Biermann et al., 2010). However, it is vital to recognize the agency of bureaucrats working in IGOs. These are in-house experts working in IGOs and political entrepreneurs that heavily influence the direction of global adaptation governance (Hall, 2016; Zwolski & Kaunert, 2011). From this vantage point, the actions of international bureaucrats are expected to crucially affect adaptation mainstreaming.

Practices in global adaptation mainstreaming

Based on prior research on mainstreaming and global adaptation governance, we identify four distinct principal and interrelated types of practices: discourse, collaboration, policy integration in programs and projects, and budget allocations. We expect IGOs to vary in the degree to which they engage in these mainstreaming practices. We describe each practice in turn and consider associated challenges and opportunities faced by IGOs.

First, adaptation can be integrated into nonclimate issue areas through *discourse*. Toward this end, IGOs need to interpret their mandates to include adaptation. Considerable scholarly attention has been paid to discursive practices, which, in global adaptation governance, typically deal with the framing of a problem and the appropriate response to it (e.g. Hall, 2015; Hardt, 2018; Mason, 2014; Zwolski & Kaunert, 2011; see Persson, 2019, for an overview). The CPI literature has stressed the importance of political commitment to adaptation and analysed the contested relationships that often dovetail with climate integration in domestic sectoral policies (Van Asselt et al., 2015). Adaptation integration is also highly contested within global adaptation governance, and the ambiguity of the adaptation term further fuels its strategic usage (Hall, 2017).

Framing is often strategic, as, for instance, when IGOs seek to depoliticize their engagement with climate change issues to circumvent opposition by powerful member states. While this can help IGOs get things done, it can also distract from the task of adequately framing political problems related to adaptation (Mason, 2014). Strategic framing can also take the form of 'climate bandwagoning' (Jinnah, 2011), which refers to the strategic linkage of one IGO's regime with another for the purpose of gaining the material or ideational resources IGOs strive for, such as donor funding, political alliances, or media attention. IGOs' adaptation framings are also known to be influenced by political entrepreneurs – often IGO officials – pushing for linking climate more strongly to IGOs' core mandates in different issue areas where adaptation governance is practiced, such as displacement (Hall, 2016) and security (Zwolski & Kaunert, 2011).

Second, *collaboration* is a frequently used practice to integrate adaptation. IGOs can promote adaptation policy integration by establishing or maintaining collaboration with other non-state and state actors in global governance. This is recognized as an important integration strategy in the EPI and CPI literatures (e.g. Van Asselt et al., 2015; Jordan & Lenschow, 2010; Urwin & Jordan, 2008). For example, collaborations with

private, other public or hybrid actors can reduce institutional fragmentation, sort out who should deal with specific adaptation problems, or change rules or practices to deal with adaptation. IGOs are interested in a myriad of different goals, including building knowledge or capacity, mobilizing resources, designing specific projects and programs, and implementing adaptation in a particular IGO procedure (Dzebo, 2019; Runhaar et al., 2018).

A central function of collaboration is institution building. Collaboration can lead to changes in formal institutional design, for example through the establishment of new units on adaptation, cross-departmental taskforces, and new employment positions that can be filled with new expertise (Runhaar et al., 2018). In this way, collaboration can reduce 'conflictive institutional fragmentation', a state in which procedures, principles, norms, and rules are barely connected or unrelated (cf. Biermann et al., 2010). For example, IGOs often purposefully develop collaborations within new organizations ('organizational progeny', Green, 2014; see also Nilsson & Persson, 2017) such as the Environment and Security Initiative, or seek to improve collaboration with minilateral initiatives such as the Asia-Pacific Partnership on Clean Development and Climate, both of which were initially created as rival forums to the UNFCCC and may increase institutional incoherence (van Asselt, 2007). This is useful especially under conditions of conflicted institutional fragmentation, when mainstreaming efforts will need to depend on high-level support (Tosun & Peters, 2018; see also Jordan & Lenschow, 2010).

A third mainstreaming practice commonly employed by IGOs addresses adaptation through *programs and projects*. The mainstreaming of climate adaptation has been studied extensively in different issue areas, particularly in development planning, both in general terms (e.g. Kok & de Coninck, 2007) and, to a lesser extent, in the IGO context (e.g. Tosun & Peters, 2018; see Runhaar et al., 2018, for an overview). A central variation demonstrates that this integration can span an entire organization in which actors aim for harmonization (Nilsson & Persson, 2017); alternatively, it may be limited to specific projects or programs, often preexisting and dedicated to adaptation (Jordan & Lenschow, 2010). Mainstreaming across an organization is often achieved by setting up specific tools and procedures, such as adaptation screening criteria, new organizational units, or indicators for climate impact assessment that become conditional for project approval. This often requires the appointment of climate experts and resources to monitor how risks are embedded in planning practices (Runhaar et al., 2018).

This variability across issue areas in the degree to which adaptation is harmonized in IGO projects and programs is important as it points to sources of compatibility of adaptation with existing working procedures and outputs. For instance, economic and regional multi-issue IGOs are more likely to commit to EPI than IGOs in other issue areas. Economic IGOs generally strive for sustainable development to achieve synergies between economic, ecological and social goals. Regional multi-issue IGOs, such as the Arctic Council, Economic Community of West African States, and Southern Common Market (Mercosur), are more likely to address a cross-cutting set of issues compared to single-issue IGOs (Tosun & Peters, 2018). This underlines the importance of establishing similar principles, norms, and time horizons across adaptation and target issue areas (Van Asselt et al., 2015). Consider the area of development, which is generally characterized by long time horizons, in contrast to humanitarian assistance, where the emphasis lies on short-term interventions. Long-term adaptation goals can be more easily integrated into projects and programs in development IGOs like the World Bank, as long-term adaptation goals typically integrate long-term development objectives, whereas it is more difficult to reconcile long-term adaptation goals and short-term humanitarian aid (cf. Schipper, 2009).

Finally, adaptation can be mainstreamed through budget allocations. Funding is known to be a critical issue for effective CPI (e.g. Runhaar et al., 2018). To ensure that tools and procedures for mainstreaming adaptation are effectively implemented, it is often necessary to recruit climate experts who can monitor if identified risks are appropriately addressed. Compared to states, at the global or intergovernmental level funding is of still greater importance, where organizations are tasked with solving enormous transboundary problems, such as climate change, and at the same time, they must contend with persistent fiscal pressure and dependence on state funding (Hall, 2017). The size and resources of IGOs are modest overall, and climate adaptation is a relatively new policy problem that IGOs have typically not dedicated budget lines for and need to allocate resources for (Persson, 2019).

What is more, core funding is generally declining, limiting IGOs' ability to engage in long-term planning. In the context of adaptation, even 30 years after climate finance was first discussed at international conferences,

Table 1. Overview of data collection.

	Scope & type of respondent or interviewee	Number of data points (responses)
Expert survey	All IGOs covered in this study (see Table 2); Experts working with IGOs but no IGO staff	294 completed questionnaires
Semi-structured interviews	IGO expert staff, member state representatives & non-state advisors to IGOs	45 interviewees
IGO bureaucrat survey	UNHCR & WHO only	44 completed questionnaires

the bulk of public and private climate funding remains dedicated to mitigation (Buchner et al., 2019; Climate Policy Initiative, 2018). Not only is adaptation funding very low given the scope of the adaptation challenge (Hall, 2017), it also remains primarily concentrated on a few sectors, such as agriculture and disaster risk reduction (Green Climate Fund, 2018; Pickering et al., 2017).

Research design

We operationalized the analytical framework set forth above in an expert survey and semi-structured interviews with global IGO, state and non-state representatives, as well as a survey among IGOs bureaucrats conducted between February 2016 and April 2018 (Table 1). Our analysis of IGO adaptation mainstreaming practices is therefore applicable to this time span. As interviewees in each category tended to have their own subjective view of reality and imperfect knowledge of IGOs' strategic self-descriptions or framing, we consider it an advantage to triangulate these different data sources.

Expert survey

We surveyed 294 experts regarding their views on 23 major IGOs in ten issue areas (Table 2) identified as critical for adaptation (Biermann & Boas, 2010). Compared to document analysis and elite interviews, expert surveys are a cost-efficient method of collecting a large number of assessments, the reliability and validity of which can be statistically evaluated (Marks et al., 2007). These experts were asked about IGOs in their area of expertise, and in no case was a person asked about more than three IGOs. The experts are natural and social scientists who conduct research on climate policies pursued by one or several of the IGOs targeted. They work mostly in universities (65 percent) and research institutes (about 19 percent). We also included a smaller number of researchers in think tanks (about 10 percent) and consultants for research units of IGOs who may be more politically biased (6 percent) but who typically have extensive first-hand insights and experiences with processes in

Table 2. Full list of IGOs by 10 issue areas covered by the expert survey.

Issue area	IGOs
Development	United Nations Development Programme (UNDP)
Development bank	African Development Bank (AFDB), Asian Development Bank (ADB), World Bank
Disaster risk reduction	United Nations Office for Disaster Risk Reduction (UNISDR)
Energy	International Energy Agency (IEA), International Renewable Energy Agency (IRENA)
Food	Food and Agriculture Organization (FAO)
Health	World Health Organization (WHO)
Humanitarian assistance	United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA)
Migration	International Organization for Migration (IOM), United Nations High Commissioner for Refugees (UNHCR)
Multi-issue, regional*	Andean Community of Nations (CAN), Arctic Council (AC), Association of Southeast Asian Nations (ASEAN), European Union (EU), Organization of American States (OAS), Pacific Islands Forum (PIF), South Asian Association for Regional Cooperation (SAARC), Union of South American Nations (UNASUR)
Security	North Atlantic Treaty Organization (NATO), Organization for Security and Defense and Cooperation in Europe (OSCE), United Nations Security Council (UNSC)

Note: Author's own data derived from expert survey. Completed questionnaires are defined as those 294 questionnaires with substantive answers to at least 75 percent of the questions. In some cases, experts provided information on several multi-issue IGOs (see Appendix D). Consequently, the number of observations is higher than the number of experts ($N_{observations} = 484$, $N_{experts} = 294$).

*In this issue area, 35 of 57 (61 percent) of respondents are EU experts.

IGOs. To complement the neutral expert perspective and to check for bias, we also surveyed in-house IGO experts separately, but only from WHO and UNHCR, due to resource constraints (see below).

In each issue area, we selected central IGOs based on insights derived from qualitative interviews and extensive desk research (e.g. Dellmuth et al., 2018). Again, most experts were familiar with only one IGO and were thus asked about that organization alone. To identify experts, we adopted a snowballing strategy starting from an initial list of possible subjects compiled from Google Scholar and programs from the annual meetings of the Earth System Governance network, European Consortium of Political Research, and International Studies Association. This strategy yielded information about the experts' specialties and informed which questionnaires they received. The experts selected come from all regions of the world, with over half having worked on climate change with one or more IGO for more than 10 years (Appendix A).

In designing the questionnaire, we also drew on our qualitative interviews and consultations with selected experts. We developed a total of 16 different questionnaires covering the ten selected issue areas. Some questionnaires covered an entire issue area pertaining to several IGOs, while others were limited to a single IGO (Appendix B). Coverage depended on the expertise of participants. To measure adaptation integration within our theoretical framework, we asked respondents a series of questions about IGOs adaptation mainstreaming practices (Table 3). In keeping with a common assumption in international relations scholarship, we specified in the survey's introduction that questions dealing with IGOs refer to the bureaucrats (and experts) working in these IGOs. The survey provided us with a unique opportunity to ask experts to estimate the degree to which they think bureaucrats supported or opposed specific mainstreaming practices (Appendices C and D). On average, the questionnaire took less than 10 min to complete.

The online survey was conducted from January to April 2018. We began by emailing the experts to explain the purpose of the project and the specific first-hand knowledge required. In a second email, we ensured respondents of their anonymity and asked them to click on a link to the questionnaire, then sent up to four reminders if they had not done so. The average completion rate (31%) was very good compared with previous expert surveys (e.g. Benoit & Laver, 2006; see Appendix Table B2 for more information). We subjected the data to several checks of statistical validity and reliability commonly applied in expert survey research (Appendix E).

Semi-structured interviews

In contrast to the expert survey, our semi-structured interviews were meant to ascertain the actual mainstreaming practices undertaken in selected IGOs over time. We were mainly interested in the years since 2007, when climate change became an increasingly salient topic globally in non-climate issue areas like security and migration (Dellmuth et al., 2020). We conducted 45 semi-structured interviews with non-state and state

Table 3. Operationalization of adaptation mainstreaming practices.

Category	Conceptualization	Survey item	*N*	Mean response	Standard deviation
Discourse	IGOs recognize or promote adaptation linkages through discourse, such as speeches or annual reports	The [IGO] opposes or favours interpreting its mandate in terms of including climate risks.	389	6.892	2.189
Collaboration	IGOs form new collaborations or strengthen existing ones to address adaptation	The [IGO] opposes or favours collaborating with other intergovernmental organizations or UN bodies on climate risks.	503	4.812	3.247
Programs and projects	IGOs mainstream or integrate adaptation into one or more other issue areas with which they are involved	The [IGO] opposes or favours integrating climate risks into existing programs and policy.	514	4.820	3.080
Budget allocation	IGOs allocate or earmark funding to address adaptation linkages, for example in the domain of policies, or projects and programs	The [IGO] opposes or favours allocating a larger share of its budget to climate risks.	496	2.059	2.438

Notes: This operationalization is based on answers to the question: 'In your opinion, how do policy-makers in the [IGO] view the following issue? Although this is a complex organization in which policy-makers can have different views, please estimate policy-makers' view on average on a scale from 0 to 10.' Answers are scaled from 0 ('Oppose') to 10 ('Favor'), with labelled end points. All questions include a 'Don't know' category. Summary statistics for each indicator for each IGO are provided in Appendix H. *Source:* Expert survey data.

representatives and IGO bureaucrats to better understand adaptation integration in IGOs. Our interviewees, selected through a snowballing strategy, mostly worked in IGOs; we also interviewed external experts from research institutions and think tanks (for an anonymized list of interviewees, see Appendix F).

We have sought to ensure that interviewees have detailed knowledge of the studied processes, thereby enhancing the validity of our results (cf. Alvesson, 2011, p. 29). Moreover, to identify potential biases, such as overstating the relevance and prioritization of adaptation within the IGOs, we carried out additional interviews with officials in some of the UN agencies (in particular UNHCR, WHO, and UN Environment) whose work is not focused on adaptation, as well as with experts from research institutions or think tanks. The interviews took about 50 min on average. They were analysed on the basis of a coding scheme with the support of MaxQDA (Appendix G).

IGO bureaucrat survey

The standardized component consists of evidence from an online survey with 44 IGO in-house bureaucrats (or experts) working within UNHCR and WHO. The surveys to UNHCR and WHO staff were fielded between March and April 2018. Conducting large-*n* surveys in a broader sample of IGOs would have been beyond the scope of this study, so we did not pursue this approach further. However, we do draw on results from those surveyed in this sample to identify potential biases in the expert responses in the broader sample of IGOs described earlier (which did not include IGO bureaucrats). We did not detect any systematic biases when comparing expert and IGO bureaucrat responses, which may be due to the fact that our expert population was large and diverse.

To identify bureaucrats or experts working on climate change in these IGOs, we first contacted the executive director of each organization who together provided us with the email addresses of 44 bureaucrats or in-house experts working with climate risks that were distributed nearly evenly across the two organizations. Of these climate experts, 26 were mid-level managers (67 percent), eight were technical staff or low-level managers (20 percent), three were consultants (8 percent), and two were top-level managers (5 percent).

The main purpose of the survey was to assess the degree to which the respondents themselves, i.e. the climate experts in these two organizations, supported mainstreaming adaptation and believed that opportunities and funding were both available to mainstream adaptation (Appendix H contains the entire questionnaire). This survey data reinforces our independent expert survey and qualitative interview evidence, increasing confidence in the validity of our results.

Patterns of adaptation mainstreaming in IGOs

We first examine how IGOs integrate adaptation. Figure 1 depicts the expert estimations for each of the four categories of adaptation integration averaged across IGOs. Our key finding is that the discursive dimension, which captures IGOs' communicative strategies to link climate risks to their mandate, is most widely supported, while budgetary change is least widely supported. This suggests that rhetorical action does not always translate into providing means to integrate adaptation by way of collaborations, programs or projects, or budget allocation. This supports previous assessments that adaptation is an emerging policy field at the international level in which actors face many barriers (Persson, 2019). We discuss each mainstreaming practice and existing barriers to more far-reaching action in turn.

Discourse

In issue areas that have only recently become associated with adaptation (e.g. health, migration, security), IGO bureaucrats described how discursive practices were used to disseminate knowledge, place the issue on the political agenda, attract resources, and circumvent political opposition from member states – all highly political endeavours (e.g. Interview 19, 2). In UNHCR, United Nations Security Council (UNSC), and to some extent Food and Agriculture Organization (FAO), adaptation-related statements were met with fervent opposition by member states that perceived adaptation to be outside the core mandates of these organizations (Interviews 1, 38, 41). In other cases, among them UNDP, World Food Programme (WFP), and WHO, such discourses

resonated with demands from member states to step up adaptation action (Interviews 22, 35, 39). Often, discursive practices require relatively little effort and commitment. They constitute a first step in which IGOs interpret the adaptation problems in relation to their mandates. In turn, this helps us to understand the evidence from the expert and standardized in-house expert surveys, suggesting that IGOs across the board have advanced discursive practices to mainstream adaptation.

Collaboration

Figure 1 shows that our experts estimate IGOs to be relatively indifferent to integrating adaptation by way of collaborations. In this light, the formation of new collaboration and platforms focused on adaptation, such as the Global Commission on Adaptation or sector-specific networks like the Environment and Security Initiative (cf. Hardt, 2018) might be specific instances rather than an emerging trend. However, the interviews of IGO bureaucrats emphasized that in today's highly fragmented global governance landscape, adaptation mainstreaming often requires some degree of policy coordination across issue areas through collaboration. Collaboration is known to promote policy coordination, close knowledge gaps, mobilize resources, and circumvent opposition from powerful member states (Interviews 22, 32; UNHCR, 2014). According to these interviewees, whether an IGO faced 'cooperative fragmentation' or 'conflictive fragmentation' has important implications for promoting inter-sectoral collaboration. For instance, the WHO faced cooperative fragmentation in its attempts to bridge the health and adaptation policy communities. In contrast, the UNSC and UNHCR were hampered by conflictive fragmentation, disconnected institutions and conflicting norms.

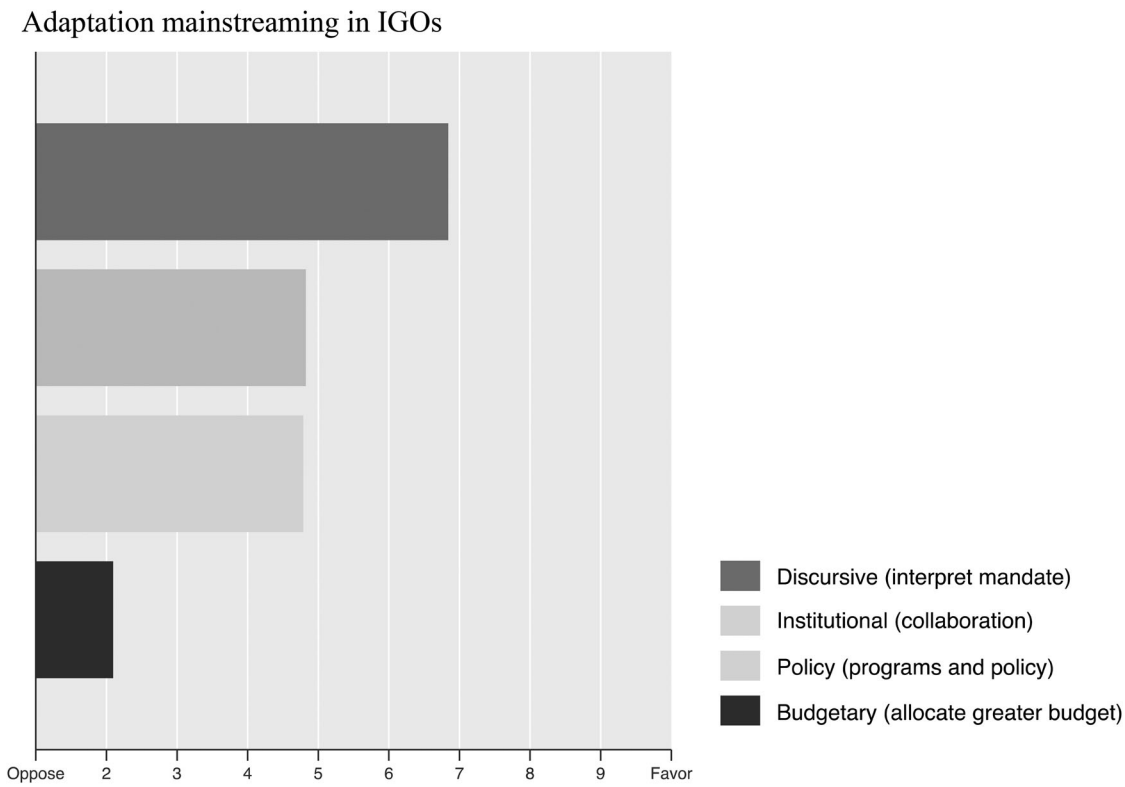

Figure 1. Adaptation mainstreaming in IGOs. *Note:* Bars show the mean value estimated by experts in each sector in response to the question: 'In your opinion, how do policy-makers in the [IGO] view the following issue? Although this is a complex organization in which policy-makers can have different views, please estimate policy-makers' view on average on a scale from 1 to 10.' The numerical mean values for each indicator are shown in Table 3. *Source*: Expert survey data. $N = 484$.

Projects and programs

Figure 1 shows that the experts estimated IGOs' favourability toward this mainstreaming practice to range between opposition and indifference. Our qualitative interviews also underline the large variation in mainstreaming in projects and programs across IGOs and issue areas. To develop new projects and to allocate sufficient resources to ensure that they are effectively implemented requires high-level political support in an IGO. Moreover, as we elaborate below, external funding is critical. A prime example for successful mainstreaming is the WB that has introduced climate screening for all projects. On the other end of the continuum is UNHCR, which has not developed any overarching framework to mainstream adaptation (Interview 40). By contrast, WHO put procedures in place but lacks the staff and monetary resources to integrate climate adaptation in projects (Interview 19, 22). Within the UN system, new voluntary Environmental and Social Standards were adopted in 2019 that included adaptation. These standards should enable UN agencies to assess climate risks in projects and programming (EMG, 2019). However, understaffed IGOs have suffered from a 'mainstreaming fatigue' (cf. Persson, 2009), and our evidence suggests that they often continue to address adaptation through dedicated projects, rather than comprehensively mainstreaming adaptation into projects and programs.

Budget allocations

Budget allocation to climate adaptation is generally opposed by bureaucrats in our broader sample of IGOs (Table 2), and this was clearly reflected in the responses in the survey among bureaucrats and in-house experts in WHO and UNHCR. In a context in which IGOs increasingly rely on voluntary and earmarked contributions from member states and other donors (Graham, 2015), reflecting powerful states' interests to retain control over budgetary allocations (Graham, 2016), this is hardly surprising. Indeed, our interviewees emphasized competition over scarce resources to address adaptation challenges (Interviews 19, 36, 38). FAO and UNDP, both of which work in issue areas that have traditionally been associated with adaptation (cf. Gupta, 2010), have received adaptation funding to facilitate advances in adaptation mainstreaming, especially in the areas of disaster risk reduction and agriculture (GCF, 2018; Interview 36). For IGOs in issue areas that have more recently been linked to climate, such as security and health, access to adaptation funding is a major barrier to mainstreaming adaptation (Interviews 19, 22). For example, interviewees in the WHO criticized the narrow environmental approach to adaptation taken by major adaptation funds, such as the Global Environment Facility (GEF); they described the necessity to engage in partnerships with organizations that are accredited to adaptation funds so as to access funding (Interviews 3, 22). Scarce adaptation funding helps us to understand that we might observe an 'implementation gap' not only at the national level (Runhaar et al., 2018), but also at the global level.

How does adaptation integration vary across issue areas? Figure 2 shows results from the expert survey and how expert estimates for each category averaged across the IGOs covered (Table 2) for each of the observed issue areas. The evidence suggests that there is great variation in terms of whether IGOs tend to oppose or favour addressing adaptation challenges. IGOs in the areas of food and development prefer to interpret their mandates discursively in terms that include adaptation. Migration and security IGOs are the most hesitant to discursively interpret their mandates as including adaptation. However, overall, IGOs in all observed issue areas are estimated to favour discursive mainstreaming to some extent – a finding which is underlined by the WHO and UNHCR bureaucrat survey data – while the evidence for the other mainstreaming practices is more mixed.

In the area of food, FAO prefers to interpret its mandate discursively in terms that include adaptation, which is seen as a cross-cutting theme to be integrated throughout the organization (FAO, 2017). In recent years, FAO has accelerated its work on adaptation by engaging in collaboration with the climate policy community. For instance, FAO has sought to strengthen the work on agriculture and food security under the UNFCCC through the Koronivia joint work on agriculture. With the support of the Green Climate Fund (GCF) and the GEF, FAO has also progressed in developing frameworks for mainstreaming climate risks in programming as well as technical tools to provide policy support for its member countries to mainstream agriculture in

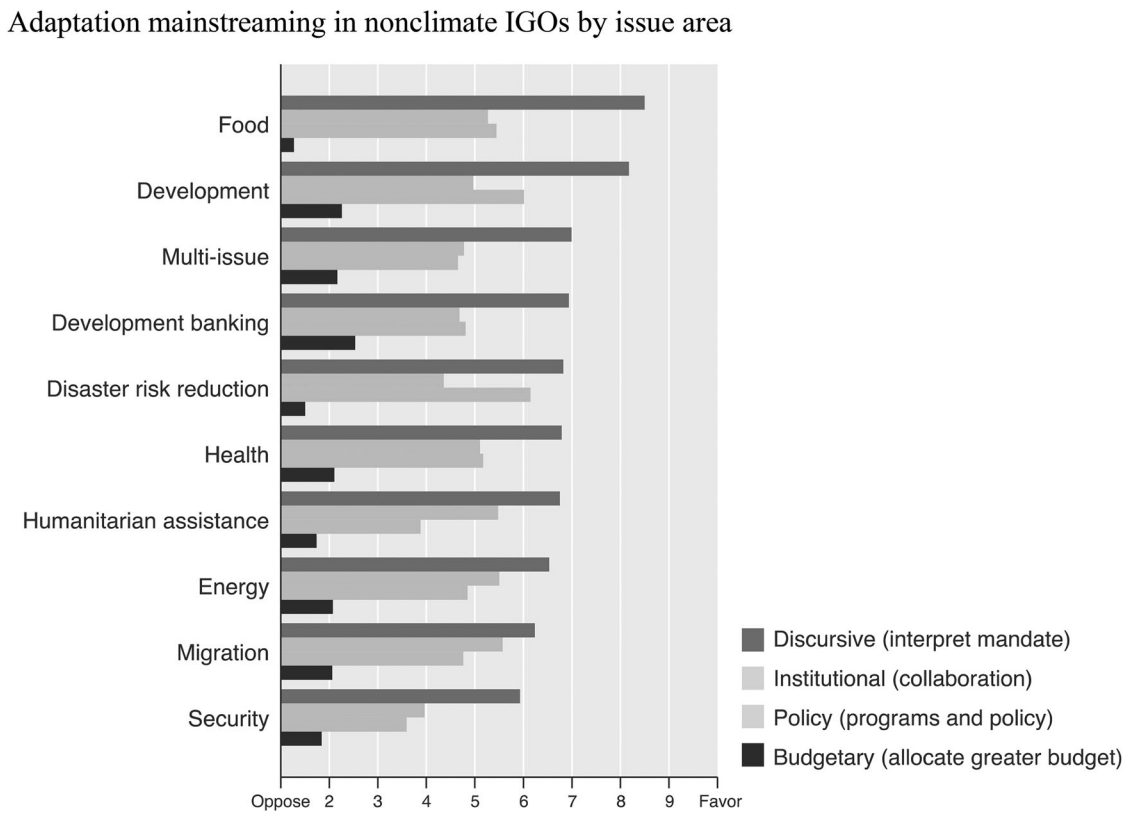

Figure 2. Adaptation mainstreaming in nonclimate IGOs by issue area. *Note:* Bars show the mean value estimated by experts in each sector in response to the question: 'In your opinion, how do policy-makers in the [IGO] view the following issue? Although this is a complex organization in which policy-makers can have different views, please estimate policy-makers' view on average on a scale from 0 to 10.' *Source*: Expert survey data. $N = 484$.

climate adaptation planning (Interview 36). Interestingly, Figure 2 shows that the experts estimate FAO nonetheless to be relatively opposed to the allocation of budgetary resources to adaptation, probably due the reluctance among member states to support mainstreaming adaptation in the organization. Indeed, access to external multilateral adaptation funding, rather than internal budget allocation, is a central factor explaining how FAO has been able to turn adaptation into a top priority since 2017 (Interview 36).

Turning to the area of development, UNDP has advanced adaptation mainstreaming at the level of discourse and projects as well. UNDP did not originally have a mandate to address environmental issues. However, the Human Development Report, Fighting Climate Change: Human Solidarity in a Divided World, where adaptation is framed as a significant development challenge, demonstrated a high-level of political will to expand its work in this area (UNDP, 2007). In 2010, UNDP's mandate was further broadened to include climate change. UNDP engages in collaboration and partnerships with IGOs in other sectors such as health in the implementation of adaptation projects. Rather than mainstreaming adaptation across projects and programs of UNDP, the organization has adopted a dedicated approach to implement specific adaptation projects, as the head of climate adaptation explained (Interview 35).

Over the years, UNDP's adaptation portfolio has been highly dependent on GEF funding (Hall, 2016). More recently, UNDP has captured a significant share of increasing finance for climate change adaptation (IEO, 2020). For example, UNDP is the IGO with the largest number of GCF-funded projects (UNDP, 2021). Expansion in the area of adaptation has been uncontroversial as a result of strong support from member states. As one of our interviewees put it, 'Adaptation action is seen as development action' (Interview 35). In the case of UNDP, some of the main barriers such as lack of funding and political support have thus been absent.

Figure 2 shows that development banks such as WB, the International Finance Corporation, the Inter-American Development Bank, and the Asian Development Bank have in recent years increasingly and forcefully advocated for adaptation. The official position of WB is now that its central goals on poverty reduction and development cannot be achieved without stronger adaptation action (World Bank Group, 2017). However, with the exception of the Global Facility of Disaster Risk Reduction and Recovery, collaborative action has not been a prominent mainstreaming practice (Interview 37). Instead, similar to FAO, WB has placed considerable emphasis on making the mainstreaming of adaptation in policies and programming mandatory through the development of specific tools to enable for screening projects to measure climate risks and risk mitigation (Interview 37; World Bank Group, 2018). With regard to budgetary mainstreaming, in 2019, WB announced its ambition to make adaptation a priority on par with climate mitigation, and committed to spending approximately $50 billion between 2021 and 2025 (World Bank Group, 2018). Compared to the World Bank Group's total climate investment of $200 billion over the same period (World Bank Group, 2018), this is a considerable share.

Figure 2 shows that IGOs in health and humanitarian assistance are somewhat less likely to mainstream adaptation. For example, adaptation was incorporated into WHO's official mandate in 2008 (WHO, 2008), and in 2015, it was identified as one of the top priorities in the WHO work plan (WHO, 2015). WHO has made a significant effort to mainstream adaptation, especially through collaboration, which experts participating in the survey for the broader sample of IGOs (Figure 2) estimated to be approximately as extensive as collaborative efforts of UNDP, but also since around 2010 through the integration of climate risks into its programs and projects. However, the unit responsible for mainstreaming remains understaffed and WHO is heavily dependent on external funding to implement the framework (Interviews 3, 19, 22). This is a huge challenge given that as much as 70% of WHO's funding is earmarked (UNCSD, 2017). Moreover, a recent GCF report analysed fund allocation through five large multilateral adaptation funds – among them the Adaptation Fund (AF), the Least Developed Countries' Fund (LDCF), and GCF itself – in 2018, suggesting that health received the smallest portion of funding when compared to other issue areas in 2018 (Green Climate Fund, 2018).

In contrast to WHO, in the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), experts estimated climate risks not to have been prioritized (Figure 2); senior management, donors, and influential member states tend to prefer focusing on its core mandate, i.e. humanitarian assistance, which requires shorter time frames than adaptation policies (Interview 44). Thus, OCHA collaborated with UN Environment to establish the Joint Environment Unit that should offer technical expertise on short notice and carry out rapid assessments that could help pertinent UN agencies and national authorities integrate climate risk considerations into their responses (Interview 39, 40). However, while mainstreaming tools are in place, there is no corresponding policy and only one person tasked with the responsibility of carrying out the assessment; the end result has been a stalemate of adaptation integration within OCHA (Interview 39). This is in sharp contrast to the WFP, which also has a core mandate on humanitarian assistance, but has a long history of providing aid in situations of climate shocks. Over the last decade, the WFP has developed a long-term developmental approach focused on strengthening countries' resilience and adaptive capacity (WFP, 2017; Interview 39). This requires new forms of measurement and a preventative approach that is fundamentally different from traditional humanitarian responses. Still, WFP remains primarily a humanitarian organization, and rather than mainstreaming adaptation across its activities, it has focused on implementing dedicated adaptation projects. Still, the ability to mobilize substantial bilateral and multilateral adaptation funding has enabled WFP to rapidly expand in this area. In 2017, WFP was the second largest multilateral entity implementing projects funded by the Adaptation Fund (WFP, 2017; Interview 38).

Finally, Figure 2 demonstrates that IGOs working in migration and security mainstream adaptation the least. In terms of migration, it is important to distinguish between the International Organization for Migration (IOM), which has emphasized climate-induced migration, and UNHCR, which has been reluctant to do so. The IOM has addressed climate adaptation and migration linkages discursively as well as through collaboration and the implementation of externally funded projects (Interviews 15, 16; see also Hall, 2016). UNHCR has been slow to integrate adaptation; it perceives mainstreaming as outside of its core mandate of providing protection and humanitarian assistance to refugees, and it has no framework in place to facilitate it (e.g. Interview 28). Still, its staff have actively attended and contributed to the development of collaborative platforms to

debate climate-induced migration and to develop new frameworks for understanding it as well as response mechanisms (Interview 39, 40).

Likewise, in the area of security, the political resistance to securitize climate change is widespread (Conca et al., 2017). The topic has been discussed several times within the United Nations Security Council, but it is mainly from within UN Environment that concrete frameworks for integrating climate adaptation and conflict risks have emerged (Interview 1). Similar to migration, this work has recently been initiated and our interviewees highlight the lack of adequate and reliable data as a major limitation on the development of practical responses (Interviews 2, 31, 32). Interestingly, security IGOs are estimated to be more favourable to allocate resources to adaptation, when compared to food and disaster risk reduction. This is likely due to the fact that IGOs working in food policy and disaster risk reduction have access to adaptation funding, whereas IGOs such as UNSC and the North Atlantic Treaty Organization (NATO) are compelled to dedicate their own funds to address climate risks.

Concluding discussion

Global adaptation governance is emerging as an important field of inquiry (Persson, 2019), yet we know little about the dynamics of adaptation mainstreaming within IGOs. Given that IGO mainstreaming practices are central to the theory and practice of global adaptation governance, more research is needed on this topic (see also Tosun & Peters, 2018). Prior studies have considered the benefits, inconsistencies, lacunae, redundancies, and trade-offs associated with CPI and EPI (e.g. Jordan & Lenschow, 2010; Van Asselt et al., 2015). To assess impacts, we need a better understanding of the ways and extent to which IGOs have mainstreamed adaptation.

With that in mind, this article has conceptualized adaptation mainstreaming in IGOs as a set of practices. We have developed an analytical framework to analyse adaptation mainstreaming in IGOs, distinguishing between four major types of mainstreaming practices: discursive, collaboration, programs and projects, and budget allocation. Our quantitative and qualitative evidence suggests two key findings.

First, adaptation has been mainstreamed into the procedures and outputs of many IGOs, but to varying degrees and typically without allocation of budgetary resources to ensure action. While IGOs are favourable to discursively interpret their mandates as including climate change adaptation, there is comparatively weaker mainstreaming through its concrete operations in the form of collaboration, and integration into projects and programs. We also find evidence for failure to follow through to action through the allocation of budgetary resources to enable the mainstreaming adaption in projects and programs.

This finding underlines previous studies arguing there is an implementation deficit in adaptation governance (see also Runhaar et al., 2018). As adaptation has only recently been formally recognized as a global issue in the 2015 Paris Agreement, discursive practices for many IGOs still appear to constitute a critical first step in which the relevance of adaptation is negotiated and contested. By contrast, other mainstreaming practices are comparatively rare, especially if they require explicit budgetary allocations. Indeed, funding flowing to IGOs is increasingly voluntary and earmarked, while adaptation funding is still scarce (Hall, 2017), implying that IGOs have little the fiscal capacity or wiggle room to address adaptation challenges.

Second, we find important variation in the extent of adaptation mainstreaming across the ten different issue areas studied here. Mainstreaming adaptation has advanced most in IGOs focused on food and development and least in those focused on migration and security. Despite this dynamic, the data has uncovered two central puzzles that are worth highlighting. The first is that FAO stands out as a leader in its discursive mainstreaming of adaptation, yet FAO is amongst the least advanced in the allocation of budgetary resources to adaptation. Second, regional multi-issue IGOs are shown to be the most advanced to allocation of budgetary resources to adaptation mainstreaming. As adaptation funds tend to privilege agricultural, development, and water projects, this is a surprising outcome, but may reflect the unequal access of IGOs to these funds. Explaining this is a topic for future research that might comparatively assess possible explanations for the variation in IGO adaptation mainstreaming, for example, across different types of organizations and different types of mainstreaming practices, issue areas, and time frames.

Based on our analysis, we identified key barriers to successful mainstreaming. Barriers include: opposition from powerful states; institutional fragmentation; scarce external funding available for IGOs working on

issue areas typically not associated with adaptation; and incompatibility between principles and time horizons for adaptation versus the target issue area for the IGO. Opposition to adaptation from powerful member states often leads to a reliance on discursive mainstreaming, which can in turn generate either support or resistance to mainstreaming in practice, and is thus consequential for other mainstreaming practices (see also Dellmuth et al., 2020). Institutional fragmentation constituted a significant barrier for collaborative practices, in particular in cases where IGOs faced 'conflictive fragmentation' characterized by relatively siloed institutions and conflicting norms. Finally, funding constraints and time horizons influence all mainstreaming practices.

Future research could fruitfully build on our exploratory analysis to explain the conditions under which these barriers affect variation in IGO mainstreaming practices. Notably, large-*n* studies or qualitative comparative case studies (cf. George & Bennett, 2005) could analyse the effects of intra-organizational processes on mainstreaming outcomes. For instance, two IGOs within the same issue area with varying degrees of mainstreaming, such as AFDB and WB, or IOM and UNHCR, could be studied in terms of how variation in intra-organizational dynamics through which international bureaucrats respond to structural barriers can explain mainstreaming outcomes in otherwise similar external contexts. Comparison could also be made across issues areas in which external factors vary strongly, to systematically analyse how and when external factors shape variation in global practices to mainstream adaptation. To paraphrase Van Asselt et al. (2015), actors must consider the functional relationship between adaptation and external factors, such as the target sector, political commitment, institutional contexts, and politicization or public engagement.

In summary, additional research is needed to evaluate the causes and consequences of different approaches to IGO mainstreaming and to understand how this affects outcomes in the context of global adaptation governance.

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Data availablity statement

Replication data are published here: https://doi.org/10.7910/DVN/22JKHP.

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