The curse of complacency –the scope for expert-led agenda setting during creeping crises

Abstract

The policy literature has generally conceptualised crises as urgent public threats with clearly demarcated 'focusing events'. Consequently, most studies have identified the main challenges faced by expert agencies involved in evidence-based policymaking as managing uncertainty, time pressure and communication. However, less focus has been devoted to analysing the concrete challenges faced by expert agencies during creeping crises. Creeping crises are characterised by spatial and temporal fragmentation and elusiveness, which create an additional challenge for expert agencies: placing the crises on the political agenda. Comparing two global creeping crises: climate change (CC) and antimicrobial resistance (AMR), this article highlights two distinct strategies for influencing policymaking. The analysis shows how two expert agencies, the World Health Organization (WHO) and the United Nations Framework Convention on Climate Change (UNFCCC), pursue different strategies when setting the global agenda and influencing policymaking. The findings show that the WHO's approach to policymaking regarding AMR has been mostly guided by top-down, science-led, formal engagements and strategies. This approach has successfully increased the salience of the global challenge of AMR, providing strong, evidence-based solutions, but it has been less successful in promoting the challenge onto the global political agenda. In contrast, the UNFCCC's approach to policymaking has relied more on horizontal, bottom-up, multidisciplinary, informal strategies. This approach has enabled a broader coalition of advocacy actors and placed CC persistently on the global political agenda. In this way, the article enhances our understanding of the role experts play in drawing attention to creeping crises.

Introduction

Many studies have analyzed expert involvement in policymaking during crises (Haas 1992; Pielke 2007; Satterfield et al. 2009; Van Kerkhove and Ferguson 2012; Topp et al. 2018; Bækkeskov and Rubin 2014; 2014; Oliver and Cairney, 2020). Less attention has been devoted to illuminating expert-led involvement in crises that are spatially and temporarily fragmented and elusive. These crises are often referred to as slow-onset or creeping crises and are associated with distinct conceptual and

operational challenges (Staupe-Delgado and Rubin, 2022; Boin et al., 2020 and 2021). Concrete examples of these types of crises include desertification, climate change, and antimicrobial resistance (AMR). Contemporary agenda-setting literature suggests that experts are not only neutral arbiters of scientific information to the policymaking process but that they can also actively broker knowledge across domains and spearhead advocacy coalitions to elevate pertinent issues on the political agenda. These expert activities appear especially merited during creeping crises. Creeping crises are often characterized by a lack of visible focusing events and a tendency for political complacency (Boin et al., 2020). Rather than urgency and uncertainty being the prime challenges for effective decision-making, experts face two other policymaking challenges: (i) placing the crisis on the political agenda in the first place, and (ii) maintaining it there for an extensive period, as interventions to curb these creeping and slow-onset crises often need to be implemented over decades.

In this article, we analyze two expert-advocacy dynamics for influencing global policymaking on two creeping and transboundary crises: climate change and AMR. Both crises are spatially and temporarily fragmented and elusive and share many similarities, yet global attention on them has been significantly different. Global surveys constantly rank climate change as one of the leading global challenges of our time (Raunio, 2002, Ipsos, 2020, UNESCO 2021, University of Oxford 2021). In contrast, AMR appears nowhere in these surveys despite killing more than 1.2 million people annually and causing billions of US dollars of losses to the global economy. United Nation (UN) projections warn of 10 million deaths by 2050, a cost to the global economy of $100 trillion dollars, and millions of people forced into extreme poverty (UN News, 2019). We ask *how* the two main expert agencies (the UNFCCC and the WHO) approach agenda-setting, and *whether* differences in these approaches can partly account for the observed differences in political attention between creeping crises and rapid-onset crises.

Our findings suggest the main expert organizations dealing with climate change have applied an *affective and inclusive advocacy strategy,* engaging with different types of stakeholders and maintaining an activist approach. Climate-change expert agencies have been open to opinions and political interests in their engagement with non-expert actors. On the other hand, AMR has been *expert driven by limited engagement with non-expert actors*, asserting the scientific foundation of the problem and leaving less room for opinions and political interest. We refer to the latter strategy as the "curse of complacency," because the main expert actors have based their recommendations and advice on a strong scientific basis but paid limited attention to broadening the collation of actors to engage more powerfully in agenda-setting activities. Thus, the strategy has not been effective in

consistently keeping the AMR problem on the global agenda (Overton 2021, Podolsky 2018). In contrast, organizations such as the UNFCCC, the United Nations Environment Programme (UNEP), and the Intergovernmental Panel on Climate Change (IPCC) have not only focused of the scientific evidence, but have focused much more on strategies to enhance political and public inclusion and engagement in shaping the global agenda regarding climate change.

The following sections initially present a literature review on expert-led decision-making in the context of creeping crises and agenda-setting, leading to the analytical framework employed in this paper. This framework introduces the concepts developed and applied in this paper. Then, the methods section reflects on case selection and the different types of data retrieved, generated, and used for this paper. The analysis section explains each aspect of the advocacy dynamics: organizational dynamics, strategy for political engagement, and experts' role as knowledge-shapers, which are decisive to the difference between climate change and AMR being on the global agenda. This section is followed by a discussion and conclusion on how the differences in expert-led advocacy dynamics between AMR and climate change have influenced their agenda-setting.

Expert-led decision-making in the context of creeping crises

One of the core arguments of this paper is that the temporal manifestations of crises shape the primary challenges faced by experts. In this paper, experts are understood as professionals with officially recognized qualifications regarding addressing a particular issue. This paper focuses on experts employed or commissioned by the WHO and the UNFCCC to address AMR and climate change, respectively. Regarding crisis temporalities, the crisis-management literature often distinguishes between slow-onset (creeping) and rapid-onset (acute) crises (Wisner et al., 2004; Olson, 2000; T'Hart and Boin, 2001). Importantly, all crises are slow-onset in the sense that their underlying vulnerabilities can often be traced to decades of exposure, marginalization, social exclusion, suboptimal organizational practices, and neglect (Kelman, 2020). However, there are substantial differences between the temporal *manifestations* of different types of crises, such as between a catastrophic earthquake (acute) and slowly rising AMR (creeping). Although temporal manifestations of various crises vary across a spectrum, (rapid-onset) crises as a concept usually refer to manifestations that occur in minutes or days, such as earthquakes, industrial accidents, and exponential pandemic peaks, whereas slow-onset crises unfold over years or even decades, such as deforestation, climate change, and AMR. Acute crises tend to unleash their destruction through

immediate physical impacts, whereas slow-onset crises impact mostly through a continuous deterioration of livelihoods. Crisis-management agencies and guidelines traditionally focus mostly on acute crises, in which the impact trajectories consist of abrupt, unexpected devastation followed by an effort to recover to how things were or to a more resilient state (Staupe-Delgado and Rubin, 2022). Recently, however, there has been increasing attention on how to manage creeping crises (Staupe-Delgado, 2019; Boin, Ekengren and Rhinard, 2020, 2021; Staupe-Delgado and Rubin, 2022). These crises evolve slowly over time and space; the pace of adverse impact accumulation is gradual. These effects are often foreshadowed by minor concentrated precursor events or by more dispersed adverse impacts. Such crises are subject to limited degrees of political and/or societal attention, and they are only partially or insufficiently addressed by authorities despite there being knowledge of their gradual manifestation over time (Boin, Ekengren and Rhinard, 2020).

We posit that gradually manifesting forms of destruction and adversity pose challenges to experts that differ from those faced under more acute forms of crises. Although experts primarily face the dual challenge of urgency and uncertainty during acute crises, they face a slightly different dual challenge during creeping crises: putting the crisis on the political agenda and ensuring it stays there for a prolonged period (see Table 1 for an overview).

As a case in point, 31 national health experts from health agencies across Europe were asked to rank the main challenges they faced during the first acute phase of the COVID-19 pandemic. Uncertainty and time pressure were ranked the two most important challenges by a wide margin; access to policymakers and financial resources were ranked at the bottom (Rubin and De Vries, 2021). For creeping crises, the ranking is often reversed: limited access to policymakers and a lack of resources constitute the most prominent constraining factors for experts addressing these crises. Regarding creeping crises, urgency is calculated in years or decades, and there is a substantial delay between policies and outcome. Uncertainty is chiefly related to projections and modeling, rather than to the nature of the threat itself; the scientific underpinnings of climate change and AMR, for example, have been understood for decades. Since creeping crises are suffered gradually, the initial problem is mainly one of "noticing" and "recognizing" for policymakers and the public.

Politically, the main challenge regarding mustering an effective response is that creeping disasters rarely create much of a commotion; rather than impacting suddenly in a way that is immediately felt and visible, they are easily ignored, and the response is often postponed until more acute impacts surface. Even if experts successfully raise awareness of creeping crises, policymakers often face a

multitude of seemingly more acute problems in the present (Table 1). Creeping crises are associated with lower political salience than unpredictable and concentrated disasters. Essentially, the political price of addressing the slow-onset disaster must be paid now, but the potential benefits are reaped in the future. This situation means there are few political advantages to implementing preventive measures despite the obvious humanitarian benefits (Birkland, 2016; DeLeo, 2015). Not only are politicians rarely rewarded electorally for a lack of crises, but they also need to defend what might seem like policy inefficiencies over many years to mitigate future harm (Rubin, 2020). This issue extends to the public, who are asked to make current sacrifices for the greater future good. Since creeping crises often stretch over longer periods than urgent and acute crises, multiple policy responses on many levels also need to persist over long periods. Long-term political commitment lasting decades is needed to address many creeping crises, such as climate change and AMR. Therefore, experts dealing with creeping crises are exposed to what we refer to as the *creeping crisis dilemma*: it is more difficult for experts to place and keep creeping crises on the political agenda than for acute crises (for the reasons sketched out above); however, solutions to creeping crises are particularly dependent on experts being successful at this political aspect because long-term political commitment is essential for combating creeping crises.

Therefore, the ideal for experts during both acute and creeping crises is to sustain evidence-based crisis-management regimes (WHO, 2022; UNFCCC, 2022). This situation means providing the best available evidence to policymakers. Gathering, interpreting, and translating evidence for policymakers are the core general functions of experts during crises. Creeping crises, however, present experts with an additional challenge regarding how to generate the necessary sustained political attention to the issue.

[Table 1 here]

Analytical framework for agenda-setting

Having established that the key challenge facing experts is not in placing a crisis on the political agenda is not limited to uncertainty and urgency, this section relies on agenda-setting theory to present the concept of expert-led advocacy. The section presents a theoretical understanding of the role of experts and expert-led advocacy from an agenda-setting perspective. The concepts developed in this paper are inspired by the agenda-setting literature and modified and developed through interaction with the science-policy literature and what is referred to as strategic agenda-setting.

In the traditional agenda-setting literature, experts are understood as neutral actors whose main role is to provide evidence-based information to policymakers and the public (Lasswell 1970; Raf De De Bont and Vanpaemel 2012;, Kingdon, 1995: 228). Experts and expert organizations, especially within the health sector, are often complacent regarding scientific evidence and providing neutral information (Christensen 2021). However, scholars have consistently questioned this perception. Agenda-setting scholars studying the climate change problem have not only challenged this role and understanding of experts and expert organizations, but also provided a broader understanding of the role of experts in agenda-setting and policymaking (Pralle 2009; Esguerra et al. 2017; Christensen 2021).

Climate-change experts have focused not only on providing scientific information, but also on strategically engaging with the public and policymakers to enhance mobilizations and to shape knowledge regarding climate change (Sprujit et al. 2014; Howart et al. 2020). In recent years, a broad body of agenda-setting experts has studied climate change by incorporating science, politics, and advocacy (Hoon and Jacobs 2014; Weingart, 1999; Nichols 2017; Christensen 2021; Dofman and Krasnow 2014). Through this understanding, experts are not only information-providers, but also are engaged actively and strategically to solve the issue via the process of knowledge provision, framing information, and communicating the problem (Christensen 2021, Rich 2001, Hoon and Jacobs 2014, Hordijk and Baud 2005). This can be done, for example, by calling upon crisis terminologies (McConnell, 2020). In other words, experts use different strategies to sustain the evidence-based crisis-management regimes depending on crisis type and dynamics.

Expert-led advocacy refers to a strategy led by either an expert institution or individual scientific experts. Although a strategy may be led by some individual and institutional experts, a coalition of actors might not be entirely constructed of them, as non-expert individuals and institutions could also form part of the strategy. One of the main arguments of this paper is that expert-led advocacy strategies influence the extent to which attention is devoted to creeping crises. Although other matters, such as structural issues, the historical paths of each crisis, and many others, can play a role, this paper does not focus on them, as they are beyond the scope of this research.

Based on multiple studies of agenda-setting in policymaking and our observation-driven understanding, the following three dimensions are important in expert-advocacy strategies, ensuring both bringing attention to an issue and maintaining it for a sustained period: organizational dynamics, political engagement strategy, and the knowledge-shaping role of experts. These dimensions differ

according to the crisis temporalities. For rapid onset-crisis, there is almost an automatic intrusion of the issue onto the political agenda due to high stakes, great urgency and pronounced media attention. However, complex creeping crises where the manifestations are often fragmented both temporally and spatially, are more difficult to bring and keep on the political agenda. Thus, agenda-setting strategies are often contingent on the temporal manifestation of crises.

These dimensions form the analytical model of this paper, which was developed iteratively. Concepts were borrowed from the agenda-setting and science-policy literature and then developed based on the data. Reverberations inside political institutions, issue framing and problem intrusion (Baumgartner and Jones 2005), and policy entrepreneurship (Kingdon 1993) are some of the main concepts that contributed to the development of the analytical model (see Table 1).

[Table 1 here]

Organizational dynamics refers to the structure of an organization and its willingness and ability to take on issues and achieve set aims. The concept also involves the processes and strategies regarding prioritizing the problem within a policy venue. The receptibility of an organization involves being both able and willing to take on a problem as a priority or as the only issue to deal with. Jones and Baumgartner (2005) highlight two important issues regarding the receptibility of a policy venue: issue intrusion and issue attribution. According to the researchers, an issue enters a policy venue after competing with many other issues and only when an organization acknowledges it as a problem that requires a policy response. The reverberations inside policy venues and within different sub-systems, such as committees, are important. Although organizational dynamics play a role in ensuring that emerging issues are noticed, we argue this is not enough for an issue to maintain attention. We propose that organizational dynamics, including existing issues of concern, shape the willingness of an organization to adopt a new issue of concern.

Organizational strategy for political engagement, based on advocacy studies and science-policy studies, refers to how politicians are included as actors inside political institutions or engaged with as external actors. These matters are decisive in the expert-led advocacy dynamics that influence whether the issue is noticed and maintained as a problem for a sustained period. The relationship between science and policy has been extensively studied in the literature (Dilling and Lemos 2011; Van den Hove 2007). One key insight is that the composition, development, and inclusivity of expert-led advocacy shapes concern for an issue.

The final dimension of experts as knowledge-shapers refers to how experts engage with knowledge at the policy interface. Many have argued that experts should hold an objective stance toward the subjects they study (Lederman et al. 2022, Druckman 2017). However, others have claimed experts should adopt a more active role than just being knowledge-producers, and instead become knowledge-shapers (Andresen and Rosendal 2009, Livingston 2018). Although both these strategies have their unique influence, experts as knowledge-shapers contribute not just to policy change, but also to the understanding of an issue among politicians and the public. This point is highly important for sustaining attention toward a problem. Since politicians not only need to understand the problem, but also how to utilize the problem according to their interests, and the public not only needs to understand a problem, but also how to adopt a more active role that is vital in keeping the issue alive outside the policy venues, the role of experts as knowledge-shapers requires further empirical investigation.

Experts know a given issue more comprehensively than the public or policymakers; therefore, since "they know the issue better, they are sometimes able to portray the issue in simplified and favorable terms to non-specialists" (Baumgartner and Jones, 1993, p. 25). Actors are interested only in some aspects of an issue, and because political actors within a policy venue most-often understand issues in symbolic and simplified terms, specialists need to communicate using such terms. These terms are used to explain an issue, to justify it, and to simplify it, and are mostly targeted strategically or purposefully toward a population. This approach changes the image of an issue to a problem (Baumgartner and Jones, 1993). International focusing events (IFEs) provide expert agencies with suitable platforms to engage with expert and non-expert actors. These events are "historical and highly publicized events that involve many countries and/or international institutions. These events often lead to creation of a treaty or agreement among actors or they are arranged to release a landmark scientific assessment or finding" (Liu, Lindquist and Vedlitz, 2011, p. 411).

Methods

This paper employs a case-comparison approach (Landman and Carvalho, 2017). Although climate change is an environmental issue and AMR is a public health issue, the two global threats share many commonalities regarding the challenges they pose as *policy issues*. First, both AMR and climate change are longue durée issues, with timespans that stretch beyond any policy system (Staupe-

Delgado et al., 2022; Viens and Littmann, 2015). Second, both issues are of a creeping or slow-onset nature, implying their impacts are ambiguous and not directly observable by the affected populations (Engström, 2021). Third, both issues are inherently transboundary issues (Bækkeskov et al., 2020); neither issue is confined to national borders or single sectors. Fourth, to complicate matters, local solutions must be coordinated as "common problems," because neither issue can be solved in any single place; both problems are driven by the sum of seemingly individual optimal human or national practices that result in worsening outcomes over a period (Rogers et al., 2020). Hence, both AMR and climate change responses rely on coordinated action. Thus, the two cases share many similarities (independent variables) but differ regarding how global expert agencies have approached the challenges (independent variable of interest) and the extent to which this results in different agenda-setting outcomes (dependent variable). Due to the similarities between the two global threats, many studies have explicitly relied on comparisons between the global governance of AMR and that of climate change (Padiyara, Inoue, and Sprenger, 2018; Rizvi and Hoffman, 2015; Rochford et al., 2018).

Regarding data collection, this paper examined three types of information to gauge agenda-setting: (i) newspaper reports pertaining to climate change or AMR; (ii) official agency documents, such as meeting minutes and conference reports from the WHO and the IPCC and UNFCCC archives; and (iii) four semi-structured interviews with communications practitioners at the UNFCCC and the WHO.

(i) Newspaper reports were collected from the start and end of each IFE the UNFCCC and the WHO organized. The IFEs in this paper are identified as Conference of the Parties (COP) held by the UNFCCC and each World Health Assembly (WHA) held by the WHO, from 2015 to 2021. The IFE's analyzed in this paper are presented in table 2. These IFE's range from COP 21 to COP 26 for climate change and for AMR, WHA 68 to 74 and UN general assembly 71.

[Table 2 here]

The newspaper material was found via a keyword search using ProQuest database: (" climate change" or "global warming") and ("antimicrobial resistance" or "antibiotic resistance"). The newspaper search was first conducted without any time limits. This search found that, from 1960 to 2020, approximately 20 million news articles were published on climate change, whereas only 45,000 news articles were published from 1980 to 2020 on AMR. The analysis focused on the subset of newspaper

articles that were published around IFE. Each IFE generated hundreds of thousands of newspaper articles, especially regarding climate change. Therefore, for each IFE, a maximum of 1000 papers was randomly selected for coding (see below).

(ii) Documents and recorded material (meeting minutes, conference, and major organizational reports) were collected for the period 2010–2021 from online archives of the UNFCCC and the WHO. Nearly 100 documents from both the UNFCCC and the WHO were analyzed. Regarding AMR, these documents included process and meeting documents for the development of the Global Action Plan (GAP) on AMR, as well as meeting minutes and final reports of WHAs since 2015. Regarding climate change, the documents included the meeting minutes and final conference reports for COP21–COP26 and the six IPCC assessment reports.

Both newspaper article and organizational documents were coded in Nvivo 12. Coding involved a process of going back and forth between the analytical framework and observations. Some initial codes were generated deductively from the analytical framework and used to identify and categorize key sections of text. These codes are, highlighted with a star in table 3. For the newspaper articles, manual coding was conducted using these codes on a sample of 200 newspapers. Subsequently, automatic coding was inductively generated by Nvivo on the remaining articles to include any overlooked or newly emerged themes from the texts. This abductive coding approach of starting out with manually coding a random subset of 200 newspaper articles deductively and then allowing for codes to be generated inductively on a larger corpus of text led to the final codes illustrated in table 3.

(iii) Four semi-structured interviews were conducted: two with members of the WHO's communications team in Europe and two with members of the UNFCCC's team in Europe. The interviewees are anonymized in this study. The interviews add the perspective of practitioners working in communications at the organizations. The interview guide focused on three aspects: information intrusion (how was the information prioritized and how did it enter) into the policy venue, the processes of information movement within the organization, and the organization's response to the information received.

[Table 3 here]

Analysis

The analysis presents a comparison between AMR and climate change. The aspects of expert advocacy in the two crises differ in the three main dimensions of *organizational dynamics, strategy for political engagement,* and *the role of experts as knowledge-shapers.*

Organizational dynamics

This section compares the organizational structures of the expert organizations dealing with AMR and climate change. The main consideration examines how each organization is structured regarding top-down or bottom-up structures, as well as the different types of expertise in the structure. The section largely focuses on the structures of the IPCC and the UNFCCC in relation to the WHO and its technical advisory groups. Regarding data, this section relies on documents from the three organizations.

The WHO is a UN organization that was established to connect nations and different actors to promote the highest level of health (WHO 2022). The WHO's Strategic and Technical Advisory Group (STAG) for AMR played an important role in developing the GAP in 2015 and is almost an equivalent setup to that of the IPCC within the UNFCCC setup. However, the UNFCCC's mandate is "to promote an informal exchange of information on climate change matters."

Compared to AMR actors, the organizations dealing with climate change are larger, exclusively deal with the climate change problem, and more inclusive and highly recipient of non-expert actors, such as politicians. Although the organizations dealing with AMR are smaller in structure, they deal with multiple global health problems. Furthermore, only small expert and technical teams are allocated for AMR, and the organizational structure is mainly limited to experts, so is less open to non-expert actors than climate change organizations.

Until 2015, five assessment reports had been published by the IPCC, all of which were written to assess scientific knowledge on climate change and to present it to policymakers. Assessment reports are often long, involve hundreds of scientists, and are based on thousands of scientific reports. The fifth IPCC assessment report was released in four parts, from September 2013 to November 2014, and is considered the most comprehensive assessment report on climate change. The fifth IPCC

assessment report was developed in three working groups (WGs): WG I assessed the contribution of physical sciences to climate change studies and was released September 2013; WG II discussed impacts, adaptation, and vulnerability and was released in March 2014; and WG III focused on the mitigation of climate change and was released on 15 April 2014. The synthesis report was released in November 2014. Over 830 authors prepared the report. In addition to the WGs, external advisors and experts also contributed to the report. The Task Force on National Greenhouse Gas Inventories also played an important role in drafting the report. The report includes approximately 9200 scientific peer-reviewed publications (IPCC, 2014b, 2014c, 2014d).

The IPCC's fifth assessment report was strategically and intentionally produced in time and with other actors to influence the Paris Climate Agreement (PCA) 2015. Although the WG reports include technical discussions and technical language, the summary for policymakers (SPM) of the report was simplified and presented in language that differs from the actual reports.

The examples above result from a long process of negotiation between experts and representatives of governments. The quotes below illustrate a shift from the use of terms such as "anthropogenic forcings" or "anthropogenic influences" to "human influence," representing similar changes to those resulting from negotiations between scientists and government representatives. Other examples include the use of terms such as "global warming" and even "climate change." Scientific papers within the natural sciences may use these terms in their titles, abstracts, or subtitles, but there is very little use of them when engaging in analysis and scientific research; instead, for instance, they prefer using the term "global climatic disruption" (Schneider et al., 2010). Such examples are evident in every part of the report. The scientific and technical language keeps changing to more simple and common language. The PCA has none of these technical terms, as there is little focus on scientific knowledge justifying the scientific arguments for climate change; the focus is on implementation. One issue directly transferred from the IPCC to the PCA is in Article 2, which states (UNFCCC, 2015):

> Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change

The agreement to keep the global average temperature rise to 1.5°C is an example of the direct transfer of an issue from scientific research to the agreement, thanks to the work of the IPCC and the UNFCCC. The first time the 1.5°C rise was discussed was in the Cancun Agreement, which was adopted at COP16 in 2010. After that, the IPCC and the UNFCCC discussed the issue with government representatives in several meetings that led to the PCA. The main concern for the majority of governments was how to achieve this goal; therefore, even after the PCA, the IPCC was assigned to produce a special report on it, which was released in 2018. However, what is interesting is how the IPCC and the UNFCCC succeeded in simplifying global goals to the 1.5°C rise and how they simplified the language of IPCC reports, especially the SPM, from being hardcore scientific and technical to commonly understood language.

Some of the scientists, during the meetings and even in reports before and after the publication of the IPCC's fifth assessment report, were not in total agreement regarding the use of specific terms. For instance, Schneider et al. (2010) argue the terms "climate change" and "global warming" are not accurate for this global matter. Nevertheless, the IPCC succeeded in keeping these terms and even made them the most common terms used in the general public debate of the issue. One possible reason the IPCC succeeded in promoting these terms to policymakers and the public is because they involved inclusive discussions between scientists, advocacy networks, and government representatives. Both the IPCC and the UNFCCC have balanced structures and engage horizontally with different actors. One example of such engagement is that of non-governmental organizations (NGOs) participating in the development of the IPCC reports and the UNFCCC-led agreements.

During the processes that led to the Stockholm agreement in 1972, only 250 NGOs participated. However, thanks to the work of the UNFCCC, the number of NGO engagements rose to 13,000 during COP 13. Non-expert actors help to develop IPCC reports, as the final reports are only published after negotiations and active feedback processes following "line-by-line discussion" (IPCC 2021). Overall, the structures of the UNFCCC and the IPCC facilitate bottom-up, horizontal, and multidisciplinary activities. In contrast, the WHO's technical advisory group composition, as well as the organization itself and the processes of developing the GAP, mainly comprise health experts and AMR experts only; NGOs and non-expert actors are largely absent.

Strategy for political engagement

Climate-change advocates have been open to embracing controversies, engaging the public more, and acting in an informal manner, which has made the issue attractive to politicians. The analysis show that climate change protests have been consistent and large in numbers, whereas AMR protests have been almost non-existent. Climate protests and demonstrations have increased in recent years. The newspaper analysis also revealed two polarized groups engaging in the climate debate – those who argue in favor and those against the climate agenda.

The interviews also demonstrated that communication workers at the UNFCCC and the WHO have different approaches, as can be inferred from the excerpts below, among others.

Interviewee 1 (WHO):

> If a well-known individual kind of puts out information that might be against what we would advise, or attack[s] us or maybe something like that, then we will definitely be kind of tracking to see what's going on and what kind of rumors are circulating. We might not necessarily reply to it on social media, but we will definitely be checking it internally.

Interviewee 2 (WHO):

> We use social media and media for information dissemination. If there is false information or rumors that are putting WHO's reputation at risk—and especially if it is coming from a popular figure—then we do take that into consideration and look at ways to approach it.

Interviewee 3 (UNFCCC):

> You saw how we embraced Gretha Thunberg and we also noticed how climate deniers acted when she spoke out. The more we talk about climate change, the more people will know about it. We only facilitate debates.

It seems thus that the WHO communication teams try to avoid controversy, whereas the UNFCCC embraces them. Similarly, AMR advocates do not deem public engagement necessary in the AMR debate, but instead focus on top-down engagement through information dissemination.

The IPCC engages politicians in knowledge development, knowledge-shaping, and policy development more than the WHO does. Three main UN organizations work on CC: the UNEP, the UNFCCC, and the IPCC. An analysis of the IPCC report documents found the following:

The IPCC has different levels of endorsement for its reports: "approval," "adoption," and "acceptance." All these processes need to be endorsed through dialogue between governments and scientists. The "approval" level includes line-by-line discussion between scientists, authors of reports, and politicians, with the aim being to ensure agreement among member countries and scientists and that the message is direct, clear, and unambiguous. This procedure serves two purposes: First, it brings the issue to the attention of politicians, so they invest politically to influence the reports both for the interest of science and to help save the planet, as well as for their own interests. Many politicians in these discussions are not forced to be independent and are not asked to consider the interests of the IPCC, but do have the freedom to discuss their own political interests. Second, this procedure shapes the knowledge presented to the public.

The "acceptance" process "is the process used for the full underlying report in a Working Group Assessment Report or a Special Report after its summary for policymakers (SPM) has been approved." (IPCC 2021). The aim is that the report has a comprehensive, objective, and balanced view of the subject. It is important to realize that, in the acceptance process, there is line-by-line debate between scientists and governments, and it is very interesting to consider the term "balanced" here. Balance in this context represents a political connotation for agreement, meaning the reports, despite being scientifically accurate, also need to be balanced by considering the interests of most of the stakeholders.

These processes exert pressure on scientists to find ways not only to communicate their findings to politicians and the public, but also to engage in political discussions with politicians, becoming more like politicians than scientists.

The role of experts as knowledge-shapers

The IPCC author-selection process incorporates political filters because the call is made to governments and IPCC observer organizations, who nominate scientists. This author-selection strategy involves actors from outside the UNFCCC and the IPCC in the initial stages of IPCC report writing. Regarding data, this section relies on documents from the relevant expert organizations. As

discussed below, the IPCC and the UNFCCC continue this strategy of including actors from outside their institutions until a policy is generated. In contrast, the WHO directly invites experts and scientists who work with AMR to be part of the STAG group, which is the only subsystem that facilitates knowledge intrusion during the drafting of the GAP. The members of the STAG "*will be selected and appointed by the Director-General on the basis of their technical expertise and scientific and public health experience"* (STAG1_Meeting_report, 2013).

The IPCC has brought together actors from outside and inside institutions and involved politicians and interest groups from the very beginning of the knowledge-generation phases. Experts invited to STAG must act autonomously as individuals separate from their designated institutions. In contrast, no such obligation was identified for the selection and appointment of experts who are part of IPCC report-drafting. Other than permanent staff members and permanent advisors of the UNFCCC and the IPCC, all other experts and government representatives are free to act either as individuals or as representatives of their institutions, and they do not have to consider the IPCC's or the UNFCCC's interests.

However, the WHO has selected the scientific knowledge available during STAG meetings and has presented it in its actual form in their meeting reports rather than simplifying it– mainly by relying on studies that STAG members are familiar with. Furthermore, the WHO has not involved any political or non-expert interest groups in the STAG committees, nor have STAG members questioned the scientific knowledge presented during their meetings. Such processes would play an important role in generating knowledge that is easy to understand for public or non-expert actors, as argued below. However, the WHO has had very little involvement in knowledge-shaping regarding AMR, but they have facilitated knowledge presentation and gathering via an internal process. Nevertheless, this process offers little opportunity for outsiders and government representatives to be involved extensively in the AMR debate.

Climate-change expert organizations communicate in a manner that aims to shape knowledge regarding the climate change problem by relying on multiple means to promote and encourage affective action. These organizations communicate with politicians as actors within political organizations rather than as outsiders. In contrast, AMR organizations rely mostly on scientific facts and mainly focus on increasing awareness of the AMR problem. These AMR organizations deal with non-expert actors outside political institutions who need to be informed, and thus the organizations assume action must be taken by actors, including political actors, based on scientific evidence.

Climate-change advocates utilize IFEs in a more intense and more productive manner than those dealing with AMR. The number of IFEs for climate change is more consistent and higher than for AMR, which constantly reminds non-expert actors of the climate change issue. They link the climate change problem with natural disasters, which are highly perceptible to the public, despite some of these events arguably not being directly connected to CC. However, AMR IFEs are not held consistently nor solely for the AMR problem. Most of these IFEs, such as the WHA, address multiple current global problems, and AMR is not consistently on the WHA's agenda. The data provided during these events mostly concern the number of lives lost because of AMR.

The STAG is an advisory group, not an organization as large as the IPCC. The way the STAG works differs from the IPCC, resembling more the Subsidiary Body for Scientific and Technological Advice (SBSTA). The STAG is a very small body compared with the UNFCCC, the IPCC, and their SBSTA setup in terms of resources, personnel, and budget. Although the WHO has continuously displayed concern about budget limitations during the GAP process, the UNFCCC and the IPCC have not raised these concerns in meetings to the same extent. In other words, the STAG's work has only focused on drafting the GAP and providing scientific advice to the WHO's headquarters. The STAG has not played a role in shaping knowledge about AMR, nor played an identifiable role in shaping public discourse about the issue.

The mentioned organizations working with climate change have been praised for their role as both "knowledge-producers" and "knowledge-shapers" (Andresen and Rosendal, 2009; Weiss, 1977; Livingston, 2018).

At the 68th WHA in May 2015, the GAP was endorsed by WHO member states. Drafting the GAP involved a series of STAG meetings, a meeting of the WHO Secretariat, executive board meetings, meetings between WHO member states, and one round of web-based consultation. However, the most influential and important group throughout the drafting process was the STAG. Although the task of writing and preparing the GAP first draft was the secretariat's, the STAG played an important role, which could be argued to be similar to the IPCC for climate change. However, the differences are drastic, since the STAG only includes members who are experts in AMR or medical science.

The WHO's process is highly expert driven, with little room for debate between the scientific community and politicians. The WHO STAG members dealing with AMR act not as partners to politicians but as a different actor who believe they need to convince politicians on their own terms

– not as partners. The members leave little room for politicians to capitalize on the reports and invest in them. In other words, there is nothing for politicians to gain politically from the WHO reports. The WHO acts as the sole leader and legitimate authority regarding health issues, treating politicians as external actors. Examples of this behavior are evident in STAG meeting reports, as we can see in the excerpt below.

*Significant efforts need to be made to describe the problem, its magnitude and consequences in an understandable way for different audiences and in different contexts from (*Second STAG meeting April 2014).

As seen in the above recommendation regarding awareness, experts are insisting more on reaching out and describing the issue than involving politicians in knowledge development. The WHO's reports at the STAG meeting also indicate that scientific knowledge from scientists – despite being selectively used – is mostly presented in its original form. The interests of the WHO and experts and, at times, some private companies are evident, but there is very little or no involvement of politicians during the process. The list of participants in STAG meetings contains no government representatives who are not AMR experts or medical scientists.

The STAG meetings appear to have no systematic method of including scientific knowledge in the GAP process. Most of the information discussed during STAG meetings is based on scientific findings that the individuals selected as part of the WHO or the STAG have worked on previously, indicating a selection bias in the scientific materials used during STAG meetings. Some reports referenced in the first AMR STAG meeting are ECDC and EMEA (2009), WHO (2011), and World Economic Forum (WEF; 2013). The ECDC and EMEA report, entitled Joint Technical Report: The Bacterial Challenge – Time To React, involved Otto Cars, a member of the STAG, who also participated in the WHO (2011) report entitled The World Medicine Situation 2011. This reveals a highly random selection of scientific material based on the individual selection of reports.

Although there is no direct indication that Otto Cars, for instance, suggested this, he did refer to it in his presentation, and it was then used in the final meeting report. This process is in comparison with climate change, for which 9200 peer-reviewed scientific publications were selected via a systematic selection process. Hundreds of scientific experts and government representatives in different WGs then assessed these publications. However, in the STAG, the scientific papers were randomly selected, and no systematic filtering of this information is apparent. Nevertheless, the main findings

and scientific matters regarding AMR were not challenged in any of the meetings examined. No disagreements regarding the scientific basis of AMR were discussed during STAG meetings. It seems there was a consensus about the dangers of AMR and the risks it poses to humans.

This shaping of knowledge has significant consequences for how the public perceives the issue. Although this process is combined with the political interests of the politicians involved in these debates, who are already aware of what triggers citizens, the knowledge in the reports garners more public attention than AMR related reports. The terminology used in the IPCC reports is designed to be simply understood by the public while retaining the factual basis of scientific findings.

[Table 4 here]

Conclusion

Creeping crises, such as AMR and climate change, appear to place an additional demand on scientific expert agencies. The complex, transboundary and protracted nature of these crises demand a robust and inclusive advocacy strategy. Rather than only providing the best evidence-based advice to manage the creeping crisis, expert agencies must also ensure the crisis is consistently placed on the political agenda. Unlike more rapid-onset crises (e.g., COVID-19, the 2023 Turkey/Syrian earthquake, or the European energy crisis of 2022–23), expert agencies cannot depend on having the attention of politicians, the media, or the public for creeping crises. They lack the focusing events that the agenda-setting literature has emphasized as key in bringing an issue to the fore.

Maintaining attention for long periods cannot be achieved solely by the scientific domain. The "curse of complacency" refers to expert agencies that appear to overlook important agenda-setting and advocacy strategies. Agenda setting theory has recently placed greater emphasis on the role of the experts in the policymaking process, not just as neutral arbiters of scientific information, but also as knowledge shapers and active participants in advocacy coalitions. During creeping crises, the paper argues, these expert roles become even more critical.

The findings indicate that expert organizations' active and strategic engagement can lead to changes in policy attention. The top-down approach of key organizations involved with AMR has primarily been complacent with producing scientific information and has not engaged in advocacy and outreaching activities to the public. The AMR issue only recently rose to the global agenda in 2015 but remains an issue belonging exclusively to the scientific domain. The issue may even be currently losing momentum. In contrast, climate change has maintained its position as one of the main problems at the global level. Even during COVID-19, CC still figured as one of the most important global issues, according to different surveys.

This paper ascribed part of climate change's resilient agenda-setting over the past 30 years (since the 1997 Kyoto Protocol) to a very early strategic recognition by the UNFCCC to lift climate change out of the scientific realm exclusively (for which they created a dedicated institution in the IPCC) and to embrace a more horizontal, inclusive, and multidisciplinary approach to maintain climate change on the global agenda. Climate-change advocates have succeeded in shaping new knowledge that ordinary people and politicians can understand and feel an urgency to act upon, which has maintained the status of the problem. In contrast, the WHO employs a more top-down, health-expert-led

organizational structure, and its strategy for political engagement is based on avoiding controversy. The WHO relies on scientific findings and arguments as an expert-advocacy strategy to place and keep AMR on the global agenda. However, this strategy has only succeeded in raising awareness of the AMR problem, but has not managed to keep the issue on the global agenda for long periods.

Based on these insights, we recommend that health advisory bodies and actors in global health governance, such as the WHO and national-level agencies engaged in the global AMR problem, to adjust their engagement strategy from a complacent science-centered domain to a more inclusive, multi-dimensional and bottom-up advocacy strategy. In this regard, health agencies can draw important lessons from other sectors and issues, such as environmental agencies and the climate change issue.

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