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by:

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Abstract: How can the echo of the Global Stocktake be leveraged for enhanced climate action?

This paper discusses strategies to enhance the impact of the Global Stocktake (GST) under the Paris Agreement on climate change. Analyzing previous international and national policy processes, the study offers key recommendations for leveraging the GST's outcomes for future climate policies, especially in the context of Nationally Determined Contributions (NDCs). The paper emphasizes the need for coordinated efforts to ensure that the results of the GST influence national political discourse. It proposes differentiated communication strategies tailored to various stages of the NDC policy process and diverse target audiences. These recommendations include forming messaging coalitions, simplifying messages for the agenda-setting stage, and employing more comprehensive approaches to the policy formulation and decision-making stages. The study draws from examples like the UNFCCC First Periodic Review and national efforts like the French Citizens Climate Assemblies. These examples offer insights into successful and unsuccessful approaches of transferring scientific results into political action. The paper advocates for a nuanced and strategic approach to communication and emphasizes the importance of legitimacy and complexity in engaging stakeholders at different levels of decision-making.

Kurzbeschreibung: Wie kann das Echo des Global Stocktake für mehr Klimaschutz genutzt werden?

In diesem Papier werden Strategien erörtert, um die Wirkung der Globalen Bestandsaufnahme (Global Stocktake – GST) im Rahmen des Pariser Abkommens zum Klimawandel zu erhöhen. Zu diesem Zweck werden vorherige internationale und nationale Politikprozesse analysiert und Empfehlungen abgeleitet, wie die Ergebnisse des GST für künftige Klimapolitik genutzt werden können, insbesondere im Kontext der Nationally Determined Contributions (NDCs). Eine zentrale Empfehlung ist die Notwendigkeit koordinierter Anstrengungen, um sicherzustellen, dass die Ergebnisse des GST den nationalen politischen Diskurs beeinflussen. Außerdem sollte die Kommunikation rund um den GST auf die verschiedenen Phasen des NDC-Politikprozesses sowie die unterschiedlichen Zielgruppen eingehen. Die Bildung von Kommunikationskoalitionen, die Vereinfachung von Botschaften für die Agenda-Setting-Phase und die Verwendung umfassenderer Ansätze für die Phasen der Politikformulierung und Entscheidungsfindung sind hierbei die zentralen Elemente einer gelungenen Kommunikationsstrategie. In der Analyse vorheriger Prozesse stützt sich das Papier auf Beispiele wie den First Periodic Review des UNFCCC und nationale Bemühungen wie den französischen Klima-Bürgerrat. Diese Beispiele geben Einblicke in erfolgreiche und erfolglose Ansätze bei der Umsetzung wissenschaftlicher Ergebnisse in politisches Handeln und flossen in die Empfehlungen mit ein. Insgesamt wird für einen nuancierten und strategischen Kommunikationsansatz plädiert und die Bedeutung von Legitimität und Komplexität bei der Einbindung von Interessengruppen auf verschiedenen Entscheidungsebenen herausgestellt.

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List of abbreviations

Abbreviation	Explanation
Art.	Article
CO ₂	Carbon dioxide
COP	Conference of the Parties
GHG	Greenhouse gas
GST	Global Stocktake
HRC	Human Rights Council
LTGG	Long-term global goal
NDC	Nationally Determined Contributions (in Paris Agreement)
NGO	Non-governmental organisation
PA	Paris Agreement
PR	Periodic review
SED	Structured expert dialogue
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
UPR	Universal Periodic Review

Summary

The Global Stocktake is a key pillar of the Paris Agreement and assesses the collective progress in terms of mitigating global warming since 2015. At COP28, the first Global Stocktake will come to an end and a window of opportunity to leverage its results for more ambitious climate action will open. This paper provides an overview of possible actions to maximize the outreach of the first GST for future climate policy and especially for the next round of NDCs starting in early 2025.

The NDC cycle can be understood as a policy process with different stages. To this end, this paper provides specific recommendations for those stages, specifically agenda-setting, policy formulation and decision-making. Since the GST is a unique international process which has not been conducted before, the recommendations rely on the examination of other processes in which an attempt was made to transfer scientific knowledge into political action. To this end, an analysis of the relevant literature of previous processes, a focus group discussion and expert interviews were conducted.

Furthermore, since aspects such as the complexity of the information might vary with the specific audience targeted for communication of the GST and the stages of the NDC cycle, in which communication should take place, a communication model is used which distinguishes between the role of the sender and recipient as well as the tone, channel and content of the message.

Based on the experiences gathered in previous policy processes at the science-policy interface, the following three key recommendations for leveraging the response to the Global Stocktake for enhanced climate action are suggested:

- ▶ Do not take for granted that the outcomes of the Global Stocktake will trickle down into national level political discourse. It will require considerable coordination and communicative efforts from a number of stakeholders to achieve. And this, in turn, requires substantial resources committed and capacities invested early in the process.
- ▶ Design differentiated strategies to affect and influence different stages of the NDC policy process, taking into account the different audiences, channels, messages and tone to achieve effective communication for each phase.
- ▶ Coordinate your messaging coalition of like-minded parties in policy-making, NGOs, private sector entities and research and focus on positive messages, highlighting the opportunities arising from ambitious climate action and taking inspiration from other countries.

In addition to these key recommendations, specific examples of the transfer of scientific knowledge into political action are provided. Firstly, there are international processes which might provide further guidance, such as the UNFCCC First Periodic Review and the Structured Expert Dialogue which led to the 1.5-degree goal, the Talanoa Dialogue as part of the UN climate negotiations and the Universal Periodic Review by the Human Rights Council of the United Nations. Secondly, there are two examples of processes on the national level, namely the French Citizens Climate Assemblies and the efforts in Switzerland for a net-zero target in 2050. These examples can provide lessons on the dos and don'ts when communicating the results of the Global Stocktake with a view to informing the next NDCs.

In conclusion, a successful leverage of the Global Stocktake would include forming a large like-minded messaging coalition including national partners to carry the messages into the respective countries. Furthermore, the communication should be specifically tailored for each stage of the NDC cycle:

- ▶ **Agenda-setting:** This stage aims to benefit from the initial public attention the GST generated at the global level. The media and the public in general are therefore the key recipients for the communication on the national level. At this stage messages should be kept simple in order to reduce complexity. To contextualize the exclusively collective information generated by the Global Stocktake, external sources for robust country-specific information corresponding to the standard of 'best available science' should be used.
- ▶ **Policy formulation:** In this stage, the communication should address the competent authority – depending on the country line ministries or legislative bodies – and key individuals within these authorities. More comprehensive and complex messages are needed at this stage and good practice examples collated during the technical phase of the Global Stocktake could prove particularly useful.
- ▶ **Decision-making:** To ensure that ambitious policies are adopted, the decision-makers should be targeted. The degree of complexity of the message varies with the decision-maker, i.e. whether they are part of ministerial bureaucracy or whether citizens vote on a plebiscite. At this stage, it is also vital that the communication comes from stakeholders within the country to maximize the legitimacy of the message.

Zusammenfassung

Der Global Stocktake (globale Bestandsaufnahme) ist eine wichtige Säule des Übereinkommens von Paris und bewertet den kollektiven globalen Fortschritt bei der Bekämpfung des Klimawandels. Auf der 28. Vertragsstaatenkonferenz der VN-Klimarahmenkonvention (COP28) wird der erste Global Stocktake abgeschlossen werden. Dies eröffnet die Möglichkeit, die Ergebnisse für ambitioniertere Klimaschutzmaßnahmen zu nutzen. In diesem Zusammenhang wird hier ein Überblick über mögliche Maßnahmen zur Maximierung der Reichweite des ersten GST für die künftige Klimapolitik und insbesondere für die nächste Runde der Nationalen Klimaschutzziele (Nationally Determined Contributions – NDCs) bereitgestellt.

Der NDC-Zyklus kann als ein politischer Prozess mit verschiedenen Phasen verstanden werden. Zu diesem Zweck werden in diesem Papier spezifische Empfehlungen für die Phasen des Agenda-Settings, der Politikformulierung sowie der Entscheidungsfindung gegeben. Da es sich bei dem GST um einen einzigartigen und neuen internationalen Prozess handelt, stützen sich die Empfehlungen auf die Untersuchung anderer Prozesse, bei denen versucht wurde, wissenschaftliche Erkenntnisse in politisches Handeln umzusetzen. Daher wurde eine Analyse der einschlägigen Literatur zu früheren Prozessen, eine Fokusgruppendifkussion sowie Interviews mit Expert*innen durchgeführt.

Aspekte wie die Komplexität der Informationen variieren je nach Zielgruppe und Phase des NDC-Zyklus, in denen die Kommunikation stattfinden sollte. Um dem Rechnung zu tragen, verwenden wir ein Kommunikationsmodell, das zwischen der Rolle des Senders und des Empfängers sowie dem Ton, dem Kanal und dem Inhalt der Botschaft unterscheidet.

Auf der Grundlage der Erfahrungen aus früheren politischen Prozessen an der Schnittstelle zwischen Wissenschaft und Politik werden die folgenden drei Schlüsselempfehlungen ausgesprochen, um das Resultat des GST bestmöglich für verstärkte Klimaschutzmaßnahmen nutzen zu können:

- ▶ Es ist nicht davon auszugehen, dass die Ergebnisse der Globalen Bestandsaufnahme von allein in den politischen Diskurs auf nationaler Ebene einfließen werden. Um dies zu erreichen, bedarf es eines hohen Maßes an Koordination und Kommunikation seitens einer Vielzahl von Akteuren. Dazu müssen frühzeitig entsprechende Ressourcen bereitgestellt und in den Aufbau von Kapazitäten investiert werden.
- ▶ Differenzierte Kommunikationsstrategien können dabei helfen, die verschiedenen Phasen des NDC-Politikprozesses zu beeinflussen. Dabei sollten unterschiedlichen Zielgruppen, Kanäle und die Art der Botschaften berücksichtigt werden, um eine effektive Kommunikation für jede Phase zu erreichen.
- ▶ Verschiedene gleichgesinnte Akteure sollten ihre Kommunikation bezüglich des GST abstimmen und als Allianz auftreten. Dazu gehören insbesondere politische Entscheidungsträger*innen, Nichtregierungsorganisationen, Unternehmen des Privatsektors und Wissenschaftler*innen. Außerdem sollten vornehmlich positive Botschaften kommuniziert werden, da diese Chancen hervorheben können, die sich aus ehrgeizigen Klimaschutzmaßnahmen ergeben, und inspirierende Beispiele aus anderen Ländern in den Vordergrund stellen.

Zusätzlich zu diesen Schlüsselempfehlungen werden konkrete Beispiele für den Transfer von wissenschaftlichen Erkenntnissen in politisches Handeln genannt. Erstens gibt es internationale Prozesse, die weitere Anhaltspunkte liefern könnten, wie der First Periodic Review der UNFCCC und der strukturierte Expertendialog (SED), die zum 1,5-Grad-Ziel führten, der Talanoa-Dialog sowie die Universal Periodic Review durch den Menschenrechtsrat der Vereinten Nationen.

Außerdem werden Beispiele für Prozesse auf nationaler Ebene angeführt. Besonders hervorzuheben sind dabei der französische Klima-Bürgerrat und die Volksabstimmung in der Schweiz zum Netto-Null-Ziel im Jahr 2050. Diese Beispiele liefern Hinweise, welche Aspekte der Kommunikation der Ergebnisse des GST mehr oder weniger hilfreich sein könnten, um die Entwicklung der nächsten NDCs zu beeinflussen.

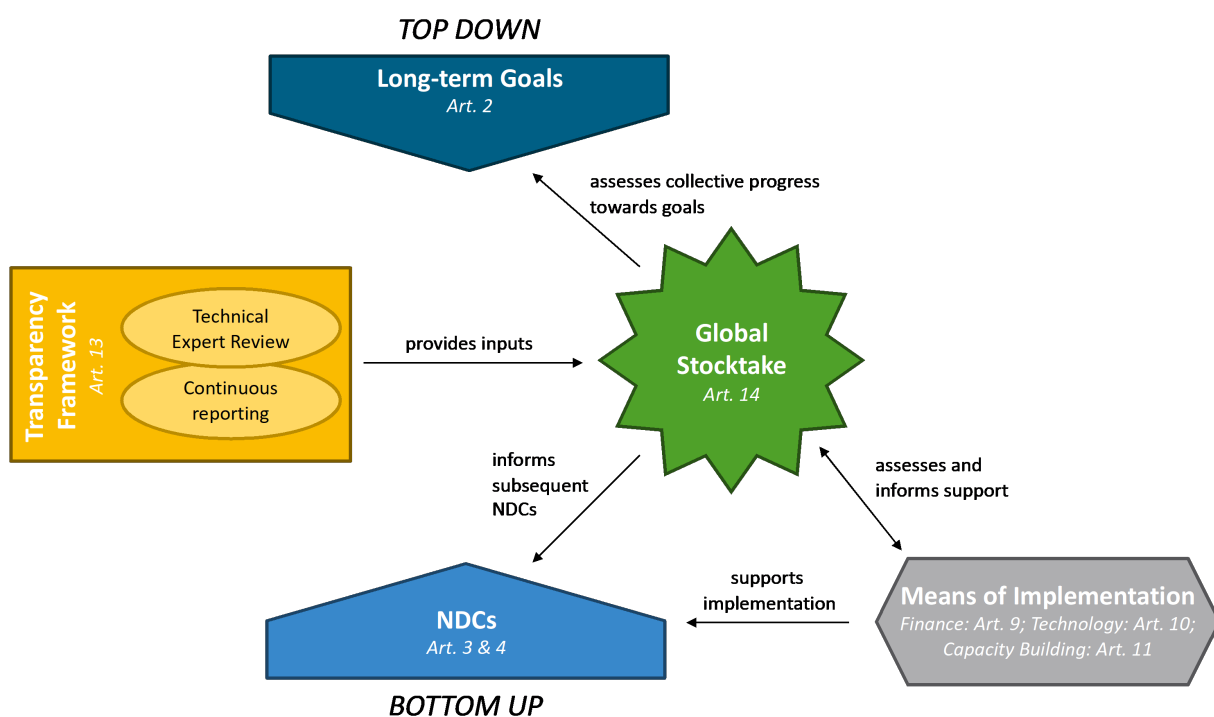
Zusammenfassend lässt sich sagen, dass eine erfolgreiche Nutzung des GST die Bildung einer Koalition inklusive nationaler Akteure voraussetzt, die die Botschaften in die jeweiligen Länder tragen. Darüber hinaus geben die Phasen des NDC-Zyklus den Rahmen für die Art der Kommunikation vor:

- ▶ **Agenda-Setting:** In dieser Phase geht es darum, von der öffentlichen Aufmerksamkeit zu profitieren, die der GST auf globaler Ebene erzeugt hat. Die Medien und die Öffentlichkeit sind deshalb die wichtigsten Adressaten der Kommunikation auf nationaler Ebene. Die Botschaften sollten dabei einfach gehalten werden, um die Nachricht verständlich und eingängig zu kommunizieren. Da der GST ausschließlich Informationen über den kollektiven Fortschritt generiert, müssen diese auf Länderebene kontextualisiert werden. Dafür sollten externe Quellen für robuste und dem besten verfügbaren Stand der Wissenschaft entsprechenden länderspezifische Informationen genutzt werden.
- ▶ **Politikformulierung:** In dieser Phase sollte die Kommunikation die politischen Entscheidungsträger*innen, vor allem in den nationalen Fachministerien oder gesetzgebenden Körperschaften, als Hauptzielgruppe adressieren. Es werden deshalb umfassendere und komplexere Botschaften benötigt. Darüber hinaus könnten sich Beispiele aus anderen Ländern für bewährte Verfahren, die in der technischen Phase des GST gesammelt wurden, als besonders nützlich erweisen.
- ▶ **Entscheidungsfindung:** Um sicherzustellen, dass ambitionierte Maßnahmen beschlossen werden, sollten die verschiedenen Entscheidungsträger*innen angesprochen werden. Der Grad der Komplexität der Botschaft hängt davon ab, ob sie zum Beispiel Teil der Ministerialbürokratie sind oder ob die Bürger*innen in einer Volksabstimmung abstimmen. In dieser Phase ist es auch von entscheidender Bedeutung, dass die Kommunikation von Akteuren innerhalb des Landes kommt, um die Legitimität der Botschaft zu erhöhen.

1 Introduction

The Global Stocktake is a central cog in the ambition cycle of the Paris Agreement (see figure). It provides feedback and connects the national-level implementation of NDCs with the overarching objectives of the Paris Agreement with a view to influencing and inspiring national agendas towards more ambitious subsequent NDCs. It builds on the inputs from the enhanced transparency framework and also takes into account the means of implementation provided to support and facilitate the implementation of NDCs. This paper focuses specifically on leveraging the results of the GST for more ambitious climate change mitigation in the next round of NDCs. It should be noted that the GST and its mandate in Article 14 of the Paris Agreement are much broader in scope and lessons from previous policy processes regarding successful communication might be similarly useful for other thematic discussions such as adaptation or finance.

Figure 1 The Global Stocktake in relation to key elements of the Paris Agreement



Source: Authors' own illustration, Wuppertal Institute

The first full assessment cycle of the Global Stocktake is about to conclude at COP28 in Dubai. In the final political consideration of outputs, Parties are mandated to “summarize opportunities and challenges for enhancing action and support in the light of equity and the best available science, as well as lessons learned and good practices” (UNFCCC 2018b, para. 13) to provide information to Parties on updating and enhancing their NDCs and on enhancing international cooperation for climate action (UNFCCC 2016, Art. 14.3). Parties can draw on an extremely broad range of inputs and contributions collected and assessed during the technical phase of the GST (see UNFCCC 2023; Climate Policy Radar 2023).

While the intent of the political messaging from the Global Stocktake has been expressed quite clearly, it is far less clear how this messaging is supposed to be received and translated into tangible outcomes at the national level. The purpose of this discussion paper is to develop a theory of change for how the message of the Global Stocktake could resonate with the upcoming

development of the new NDCs, which Parties are to communicate in 2025. Our starting assumption is that an effective uptake of GST outcomes at the national level cannot be taken for granted. It requires a major effort to feed the GST results into the national level public discourse and connect them to the political and socio-economic context. To this end, we make recommendations for policy-makers and stakeholders to fully leverage the GST for a constructive NDC development process.

Specifically, we address the following questions in relation to the upcoming NDC policy process (see next section):

1. What interventions and activities can maximize the immediate political perception of the results of the GST in the national political discourse and media as a means for political **agenda setting**?
2. What interventions and activities can be utilized to inform the political agenda for the development of the NDC, here termed “**policy formulation**”?
3. How can the results of the GST be employed to appraise the first drafts of the new NDCs with a view to ensuring consistency with global ambition requirements during the **decision-making** phase of the next NDC?

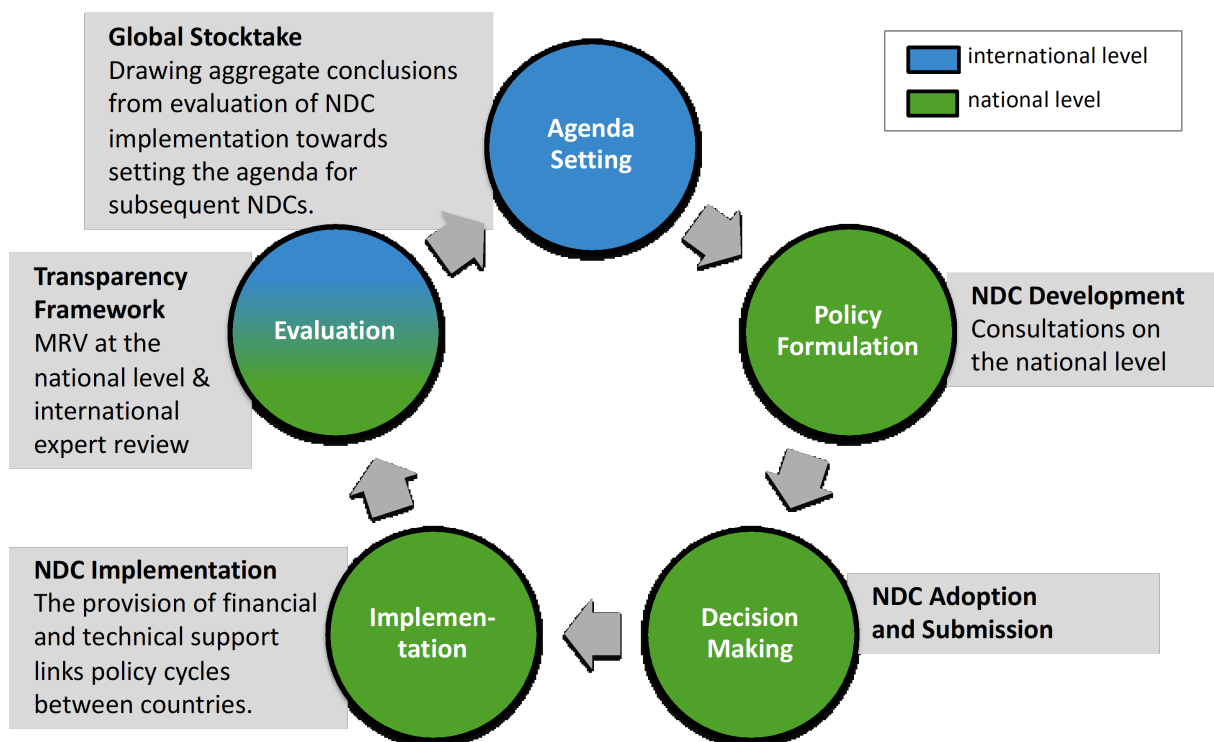
2 A theory of change

Our theory of change for the Global Stocktake requires two key components. Firstly, we need to develop a conception of the NDC development process and identify entry points in which information from the GST can make a difference. Secondly, we need a theoretical foundation of how that information is communicated into the political discourse. We will develop both of these elements in the remainder of this chapter.

2.1 The NDC cycle as a policy process.

The Paris Agreement has established a 5-year cycle of NDCs that stimulates and synchronizes policy processes at the national level. NDCs are mandatory policy documents in which countries specify their climate action targets and the policies and measures to achieve them. Once adopted, Parties are legally required to implement “domestic mitigation measures, with the aim of achieving the objectives of such contributions” (UNFCCC 2016, Art. 4.2). Parties monitor and report on the implementation of their NDCs and the resulting emission reductions by way of the enhanced transparency framework (Art. 13, Paris Agreement). The Global Stocktake aggregates the individual country-level evaluations in order to formulate conclusions in relation to collective progress at the global level. As stated above, these conclusions in turn will inform national climate policy agendas for the next round of NDCs, thus completing a prototypical policy cycle (see Figure 2).

Figure 2 The NDC cycle as a policy process



Source: Hermwille et al. (2019)

In our view, the Global Stocktake can potentially affect and influence three stages of the NDC cycle, each of them requiring differentiated communication in relation to the audience, contents, and means of communication.

The first and perhaps most obvious stage is the **agenda-setting stage**. As a major political event, COP28 and the conclusion of the Global Stocktake will attract major public attention and media coverage. Whether or not this will suffice to set national-level political agendas towards the development of the subsequent NDC will be a matter of how effective and persistent the media coverage is. But it is also a matter of timing. It might well be the case that other major events supersede the GST quickly as major attractors of mainstream public attention.

The second stage requires a more quiet and targeted form of communication. Especially the lessons learned and good practice examples identified during the technical phase of the GST may **inspire national level policy-makers during the policy formulation stage** to further develop their portfolio of climate policies and include technical improvements in their NDCs leading to higher ambition and more credible prospects for implementation.

Finally, stakeholders may utilize the results of the GST as a yardstick to assess whether the emerging drafts of the new NDC of their respective countries are in line with the global requirements to meet the objectives of the Paris Agreement. In that way, **the results of the GST may play a role as tools for informed decision-making**.

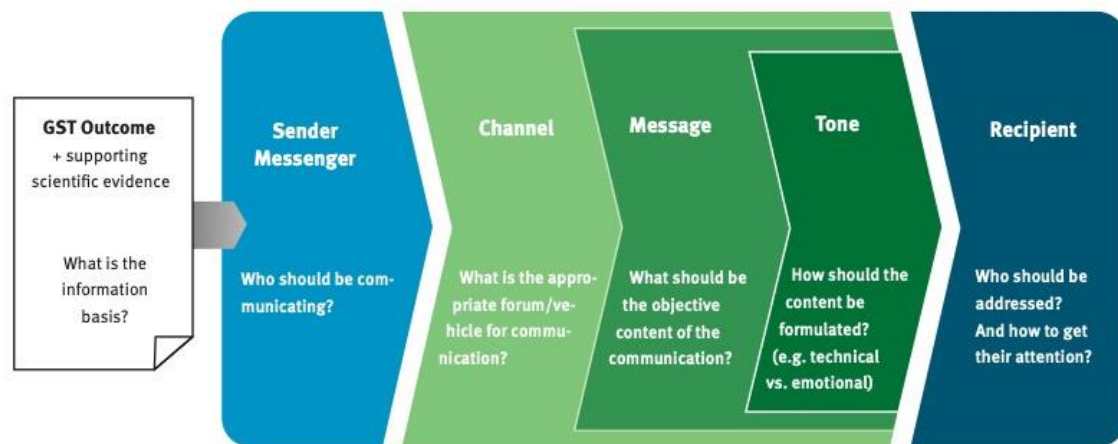
As of 2023 and every five years thereafter, Parties will hold the Global Stocktake to assess collective progress towards the goals of the Paris Agreement. In that, it bridges the evaluation stage and the agenda-setting stage for subsequent NDC cycles. It aggregates the individual country-level evaluations in order to formulate conclusions at the global level. These conclusions in turn will inform national climate policy agendas for the next round of NDCs.

For instance, focusing on the state of GHG emissions and (the lack of) emission reductions alone will hardly suffice. Another call for urgency will not spark ambition. Focusing on transformational learning, on opportunities and good practices, however, could help to foster ambition. Renewable energy success stories can make an important contribution. The technical phase of the Global Stocktake provided an opportunity for experts to discuss and evaluate such experiences and to synthesize them in a way that resonates positively with national political discourses (UNFCCC 2023, Climate Policy Radar 2023).

2.2 A simple communication model

There is no mechanism in place to ensure that the results of the GST will automatically be considered in the subsequent NDC policy process. It will inevitably require a dedicated form of political communication. In order to support stakeholders and policy-makers in developing strategic communication strategies, we present a simple communication model that will guide the subsequent analysis.

Communication is usually defined as the exchange of information. For our specific case, this relates to the information collected during the first GST. The purpose of the communication is clearly defined in our case: to inform the development of enhanced NDCs representing a Party's "highest possible ambition, reflecting its common but differentiated responsibilities and respective capabilities, in the light of different national circumstances" (UNFCCC 2016, Art. 4.3). In other words, the recipients of the information communicated ought to act in a way that can affect the desired result. However, more is required for effective communication than just an information basis and a recipient. It also needs a sender or messenger and it needs a communication channel or means of communication, and this channel will transmit information via a tailored message, which is embedded in the context of evoking a certain tone. Figure 3 provides an overview of this simple model of communication.

Figure 3 Schematic illustration of the communication model

Source: Authors' own illustration, Wuppertal Institute adapted and simplified from Shannon & Weaver (1998)

In order to design communication strategically, policy-makers and stakeholders should consider each of these elements carefully and be mindful of the specific purpose of the communication. This will differ for different stakeholders and in relation to the purpose of the communication. Specifically, and in relation to the next round of NDCs, there will be differences as to whether they intend to set the political agenda, to inspire policy formulation or to influence decision-making. It should be noted that the figure above provides a simplified version of communication. In reality, there is dialogue between the sender, the recipient and most likely certain intermediaries. In a successful case, the dialogues originating from the initial communication self-enforce themselves by including an ever-widening array of actors in conveying the message.

Firstly, they need to decide who the target audience is. For instance, it can be the general public when a specific policy is subjected to a plebiscite. Or it may be a small group of bureaucrats who are drafting specific sections of legislation. In relation to the choice of the target audience, the question is how to gain their attention. The choice of the right channel is important here. What is the right forum for approaching them? What means of communication do they use? The choice of the channel will have an effect on the choice of the message. What should the objective content of the communication be? Is the chosen channel appropriate for that message? Short advertisement videos are usually not a very practical way of communicating highly detailed information on good practice examples, but targeted policy dialogues may very well be. The tone of the communication is also critical: Is it intended to evoke certain emotions – hope, fear, anxiety – or is it necessary to choose a technical tone in order to be taken seriously by the targeted recipients? Finally, the sender or messenger also needs to be considered. In the case of international climate processes, the number of senders often exceeds the number of recipients. Thus, coordinating and aligning the messaging is often key for successful communication in order to achieve the desired effect on policy-making. Sometimes it is also necessary that information is communicated by individuals with a certain legitimacy (e.g. researchers) or through high-profile celebrities (e.g. Greta Thunberg, Arnold Schwarzenegger or Leonardo DiCaprio) who act as advertisement media.

To summarize our theory of change: The GST can achieve its objective of facilitating effective policy processes towards subsequent NDCs that represent the “highest possible ambition” if and when the results of the GST are communicated effectively to recipients that are able to set a political agenda towards the development of the NDC, inspire policy formulation and use the GST outcome as a benchmark for ambition when the new NDC is about to be adopted. Effective

communication can only be realized if the entire chain of communication is carefully crafted taking into account not only the information base but also the messenger, the channel, the actual message and its tone, as well as the recipient and its ability to act in the desired way.

3 Lessons from similar international processes

The Global Stocktake is not, of course, the first process in which progress is being evaluated. While it is perhaps unique in its exclusive focus on collective progress, there are several other processes on which we can draw for inspiration. The remainder of this section offers a brief review of the literature in relation to three particularly salient examples: the first periodic review (2013-2015) of the long-term goal (LTGG) of the UNFCCC, the Talanoa Dialogue for Climate Ambition, and the Universal Periodic Review (UPR) of the Human Rights Council. We will relate all three of these processes to the GST and highlight differences and similarities. Table 1 provides an overview in this regard.

Table 1 Overview of the Global Stocktake and similar international processes

	Global Stocktake (GST)	Periodic Review (PR)	Talanoa Dialogue	Universal Periodic Review (HRC)
Timeline	2023, 2028, 2033, ...	2013 – 2015 (PR1), 2020 – 2022 (PR2) , ...	2018	2008-2011, 2012-2016, 2017-2021, ...
Explicit purpose	Take stock of PA's implementation, and assess collective progress and enhance collective ambition of action and support	PR1: Adequacy of long-term global goal (LTGG) (based on the UNFCCC Convention) and how to achieve it PR2: understanding the LTGG and its achievement, as well as assessing progress towards achieving the LTGG	Take stock of implementation of the mitigation LTGG of the PA and inform the update of the NDCs	Review the progress on human rights issues
Increasing ambition	Revising NDCs, increasing collective ambition and international collaboration	Better understanding of the temperature LTGG	Discuss implementation of climate goals through sharing success stories Prepare the GST process	Recommendations made by states and civil society organizations
Scope	All LTGG and purpose of the PA, equity and science, cross cutting and as appropriate response measures and loss and damage	Temperature LTGG (Convention)	Temperature LTGG (PA) NDCs 2020	Human rights
Expected results	To inform decisions on new NDCs	PR1: to inform the LTGG of the PA's Art.2.1(a)	To trigger enhanced mitigation targets in	Promote human rights

	PR2: inform understanding the temperature LTGG and progress towards achieving it	the 2020 NDC update; clarify challenges for the GST and provide solutions	
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3.1 Periodic Review under the UNFCCC (2013-2015)

The first periodic review (PR1) took place between 2013 and 2015 and informed the negotiations of the temperature long-term global goal (LTGG) at COP21 in Paris 2015. However, a major difference in the scope of the PR1 was the focus on the temperature goal “in the light of the ultimate objective of the Convention,” whereas the GST informs the NDCs and all long-term goals under the Paris Agreement. This already shows the challenges in terms of communicating the GST compared to the PR1. While the PR1 had a clear goal which we now know to be the 1.5°C goal, the GST entails many possible messages.

Still, the PR1 may be among the only review mechanisms which can effectively inform the GST due to it having the same goal of raising ambition. This is a rather unusual function of review mechanisms in general since they mostly act in terms of ensuring implementation of given standards. Due to its successful process, it was decided that the SBSTA should advise the GST, building on the experience from the PR1 (Milkoreit & Haapala 2018).

Regarding the outcome of the PR1 beyond the formality of providing reports in the process of the structured expert dialogue (SED), the review had a great impact on participants in terms of the global temperature goal that should be envisaged. The summary report of the SED mentioned that meeting 2°C of global warming would be very dangerous in terms of climate impacts (UNFCCC 2015). Indeed, one of the major factors of success was that the discussions that took place in the SED also contributed to strengthening the temperature LTGG towards the 1.5°C since far more parties were convinced of this limit in Paris than in Copenhagen (Milkoreit & Haapala 2018; Schleussner et al. 2016).

In terms of communication, it was crucial that the PR1 with its 1.5°C LTGG could convince a vast majority of parties. This provided the necessary legitimacy for its adoption in the Paris Agreement. Meanwhile the message of the outcome of the PR1 was kept rather simple and the 1.5°C LTGG became a well-known catch phrase associated with the climate targets. Thus, two lessons can be drawn with regard to the GST. Firstly, it is crucial that the outcome of the GST receives high legitimacy through the involved parties. Secondly, the messages should be kept simple if they ought to become political reference points that can be leveraged by civil society to hold governments accountable. The Paris Agreement has served as such a reference point in the past and provided a strong legitimization for civil society actors such as the Fridays for Future movement (see Obergassel et al., 2016). The GST could reinforce and update this point of reference.

3.2 Talanoa Dialogue

In order to prepare and inform NDCs, the so-called Talanoa Dialogue in 2018 aimed to monitor progress and inform climate efforts. It can therefore be understood as a predecessor to the first GST.

In the reporting period, 473 inputs were handed in via the Talanoa Platform although the submission by Parties was rather limited: there were only 24 individual party submissions and 20 group party submissions (Jeudy-Hugo & Charles 2022). The most anticipated input was arguably the Special Report on “Global Warming of 1.5°C” by the IPCC following an invitation to the IPCC by the Paris COP, which had a large impact in creating public attention and further research on temperature goals. In light of the third guiding question of the Talanoa Dialogue, “how do we get there,” the report was discussed by high-level representatives and ministers in 21 roundtables. The result was the “Talanoa Call for Action” which only had a voluntary nature and was not translated into specific recommendations for parties (UNFCCC 2018c). Furthermore, the large number of total submissions made it difficult for Parties to process all information. Thus, in terms of policy impact in the GST a better mode for processing all information would be fruitful

since the Talanoa Dialogue and the guiding questions were not sufficient enough to inform and effectively structure the inputs (Beuermann et al. 2020).

In terms of communication, the Talanoa Dialogue shows that high-level legitimacy of the process and its outputs is an important cornerstone for generating impact. Although the presidents of COP23 and COP24 announced the Talanoa Call for Action (UNFCCC 2018c), this level was arguably not enough to generate a long-lasting impact. Instead, the PR1 shows that all parties should be involved and most parties should demonstrate political resolve for such a call. This is also crucial when it comes to the transfer of such an international message to the national level and its ministerial bureaucracies. Furthermore, it is crucial to manage and make sense of the vast abundance of information. One first example of this is the Global Stocktake Explorer (<https://gst1.org/>) which allows for the topic-related search in all submissions to GST1. While this may not be a tool for creating catch-phrases or widespread public attention, it certainly makes it easier for researchers or policy-makers to make sense of the GST inputs.

3.3 Universal Periodic Review (UPR) of the Human Rights Council (HRC)

The UPR of the HRC is a review process where 193 UN Member States have the opportunity to submit their advancements in terms of human rights actions and obligations fulfillment (United Nations Human Rights Council 2022). The initial idea was to advance human rights globally with a mechanism which ensures a certain level of compliance with human rights norms. In this regard it uses a peer review process among UN Member States. The peer review mechanism is based on consensus among all Member States and relies on positive reinforcement rather than sanctions in terms of reaching compliance (McMahon & Ascherio 2012).

The UPR Working Group of the Human Rights Council conducts the reviews and is comprised of all 47 Member States of the council. The UPR reports are reviewed in so-called UPR sessions which are held three times per year with a maximum of 14 countries under review per session. Although each review is facilitated by three Member States of the council (troika), the UPR process is very open in the sense that all UN Member States and non-governmental stakeholders are allowed to participate (International Justice Resource Center 2020). A key feature of the UPR is therefore the *approach to break up typical coalitions* among countries as it facilitates a feedback process and dialogue among countries which are not necessarily closely affiliated with one another (McMahon & Ascherio 2012). A summary report which comprises the comments and recommendations is then published by the troika and the state under review has the choice to accept or reject. Afterwards the Human Rights Council adopts the final outcome report and civil society organizations as well as member states of the HRC can comment on the report. In the following UPR cycle, the Member State that was under review will then report on the progress of implementing the recommendations (International Justice Resource Center 2020).

Although the UPR cannot be directly transferred to the GST, a mode of extensively employing the contributions from third parties to the GST can maximize the outreach in the respective countries. During the information collection phase, some NGO representatives, members of academia or other informed observers have enhanced public attention to the process, strengthened accountability among countries and thus engaged in 'naming and shaming' (Milkoreit & Haapala 2018). Another lesson for the GST could be the prominent display of best practice examples by the UPR, e.g. in the form of publicly available best practice reports or short videos for a wider audience. Although the progress toward the PA goals has to be assessed collectively in the GST, submissions by Parties, regional groups and NPS are still a good source of best practice examples (United Nations Human Rights Council 2022). In terms of communication the use of best

practice reports or videos in social media can offer a good option for communicating positive messages to a wider public audience.

However, a problem of the UPR is the different level of engagement among countries. The engagement is often related to the political position regarding universal human rights among countries. While some argue that universal human rights should be promoted globally, others point out that the differences between countries should be respected. They argue that it is up to each sovereign country to decide on their interpretation of human rights and thereby reject universalism (cultural relativism) (McMahon & Ascherio 2012). There is also a lesson here for the GST as some countries which are, for example, heavily reliant on fossil fuels in terms of their economic foundation might be less eager to make extensive submissions and enhance the functioning of the process. Furthermore, it is important that GST communication has high legitimacy provided by strong international and national advocates. In this regard, legitimacy is provided by a communication of important actors as senders on the international level and by the inclusion of national stakeholders backing the GST results on the national level.

4 Elements of a post-GST engagement strategy

In terms of the communication model introduced above, there are many ways in which the GST outcome could be leveraged for constructive political debate at the national level. Stakeholders and policy-makers have a wide range of options for designing their communication strategies. Who should the main recipients of the communication be? By what channels can they be reached? And what is the appropriate message and tone to get them to act? There is not a single formula, however, for effective communication at the interface between science and policy. Strategies need to take into account national and sub-national circumstances and, most importantly, they will vary for communications targeting the various steps in the NDC policy process.

In this section, we will provide a first overview of the options and considerations policy-makers and stakeholders will have to face when leveraging the results of the GST for the three relevant stages of the NDC policy process: agenda-setting, policy formulation and decision-making (see Figure 2). For this, we draw on the results of a focus group and a series of interviews held with scientists and civil society activists with ample experience at the science-policy interface.

4.1 Agenda-setting

After the conclusion of the first GST at COP28 and the final decision regarding the consideration of outputs, the GST outcomes should fulfil the important function of influencing national-level political agendas and the next round of NDCs, which should be finalized in early 2025. Therefore, the media and the public in general should be identified as key audience/recipients in this stage of the process. Furthermore, it is important to identify what type of information from the GST is particularly useful for the message. Since the GST only provides aggregate information on collective progress, countries may find it hard to compare their own progress with others. As such, the message could also incorporate additional databases and independent information from the scientific community (see Box 1, below), which allows for a comparison with peers.

Box 1: Additional databases which allow for country-based comparison

Since the GST does not provide individual country level information, policy-makers and stakeholders need to draw on other sources to contextualize their countries' performance. These sources might be helpful to this end:

- ▶ The GST Performance Distribution Tool presents global performance of key indicators in a distribution chart. It allows an individual country within that distribution to be highlighted: <https://globalstocktakedata.org/>
- ▶ The Climate Action Tracker is an independent scientific project that tracks government climate action and measures it against the globally agreed Paris Agreement objectives: <https://climateactiontracker.org/>
- ▶ The Systems Change Lab is an initiative that tracks global progress for more than 70 transformational shifts across nearly every system, enabling users to compare current action against targets: <https://systemschangelab.org/>

A participant from the focus group discussion emphasized that the simple messages should also be adapted to the specific country contexts in order to maximize public attention on the ground. This could be connected to extreme weather events and economic losses in the country but also to consequences regarding the strong economic sectors in the respective country. Another

aspect is the timely communication of the results of the GST directly after its publication. This is vital for a strong agenda-setting phase as this will be the point in time when the media coverage will most likely peak. Furthermore, the persistence of media coverage is a major factor in exerting influence on the subsequent NDCs.

Therefore, the main focus of communication in this stage should be to raise public attention in the form of simple messages and catch phrases. The messages should be easily digestible and memorable in order to reduce the complex details of the GST and to maximize public attention as well as media coverage. As the example of the formulation of the 1.5°C goal below shows, it is vital to involve as many stakeholders in the communication in the role of sender as possible. If parties, UN bodies, NGOs and private stakeholders convey similar messages, the public attention will be much higher. In essence, it is vital to create a self-enforcing cycle whereby the few experts involved in the GST process convey the key results to other Party stakeholders, less informed but interested NGOs and other organizations.

Finally, the tone matters greatly when conveying the message. A suggestion from the focus group discussion emphasized the importance of good practice examples and small success stories when articulating a message which in essence says that much more needs to be done but shows that this is possible. Instead of arguing whether the 1.5°C goal is already out of reach or still achievable, it should be emphasized that every fraction of a degree counts and that it is vital to keep up with the highest possible ambition. There should also be a distinction between mitigation and adaptation and ambitious measures taken that consider the country's context.

Box 2: The structured expert dialogues and the 1.5°C goal

The communication of the 1.5°C goal provides a good example of what successful communication in the agenda-setting phase could look like. A key element was its emergence in the structured expert dialogue under the periodic review which brought together policy-makers and scientists. The knowledge about climate change provided by the IPCC could now find a way into the UNFCCC process and promoted evidence-based climate policy formulation. This was ensured through party consultations on IPCC reports, which led to the understanding among parties that the 1.5°C goal is needed in order to limit the effects of climate change.

The intensive exchange between scientists and Parties resulted in a situation whereby Parties took ownership of the scientific results under the key message of the 1.5°C goal. Thus, a widespread communication coalition could form that involves parties, NGOs, scientists and media and conveys the same message in “simple” terms. However, the case is still a special one and is not necessarily applicable to the GST and the adoption to the national case; however, it still provides some valuable insights.

4.2 Policy formulation

In the policy formulation phase, the main target audience/recipients of communication should be policy-makers, i.e. staff members and consultants in the corresponding national line ministries or legislative bodies in charge with developing the policy proposals, communicating and coordinating them with their peers in other parts of the government before eventually consolidating the proposals and preparing them for political decision-making. In many countries, structured stakeholder consultation processes might be a formal avenue for influencing NDC formulation.

When trying to influence policy developments, more comprehensive and complex messages are needed compared to the other two stages of the policy process. Drawing on the large number of

good practice examples collated under the GST could be particularly useful. Selecting good practice examples in areas, in which the country in question has underperformed in previous years and NDC periods, could help to spur a constructive political debate. Obviously, it is very difficult to transplant policies and instruments from one country to another, but they could still be helpful in initiating a discussion. A key contribution of national stakeholders would be to think about what it would require for the selected good practice examples to be viable within their own national context. Engaging with policy-makers and trying to develop the answers to this question collectively, could be particularly effective, according to one of our interviewees. This interviewee highlighted that engaging early on with policy-makers and establishing a genuine dialogue between researchers, civil society representatives and policy-makers are more effective than presenting solutions that are not a good match to the political challenges the policy-makers are responding to.

To achieve this, stakeholders should participate early in the process when there is still a greater openness to discussing a wider range of options and ideas. In terms of the communication channel, it is best to draw on established communication platforms. These could be formal stakeholder consultation processes where they have been established. In other cases, stakeholders might be able to draw on regular informal meetings between policy-makers and key stakeholders. If none of these options is available, it might be necessary to create them. The key here is to rely on one-off outreach events but establish a genuine and consecutive dialogue at the working level avoiding the highly politicized discussions that will come into play later in the policy process.

Box 3: The French Citizens' Climate Assembly

Citizens' Climate Assemblies could be an interesting alternative way of supporting the policy formulation phase. Such Climate Assemblies are a form of deliberative democracy that bring together randomly selected citizens to address the issue of climate change and develop policy recommendations. These assemblies are typically composed of a diverse group of individuals who represent a cross-section of the population, ensuring that a variety of perspectives are considered. By employing such a representative climate assembly to develop policy packages, it may be possible to avoid major societal backlash. Many environmental policy-makers are particularly wary of such backlash after the "yellow vest" movement created significant social disruption in France and even spilled over in several other European countries.

While the French citizens assembly ultimately failed in the sense that the majority of its recommendations were not adopted as policies, it was still remarkably effective in formulating progressive and innovative targets and policy proposals. Holding a citizens' climate assembly specifically to review the results of the GST in the light of the national circumstances and a mandate to develop policy recommendations for the next NDC could be a resource-intensive but potentially particularly effective form of engaging with the GST outcome.

Decision-making

After the policy has been formulated, the process of deciding on policies and the next round of NDCs should also be accompanied with appropriate communication. The procedures and actual decision-makers will vary across jurisdictions. In some countries, legislators at national level or for some aspects at state/provincial level may be in charge of adopting key laws underpinning the NDC. In other countries executive decisions will be taken at the head of state or ministerial

level. And in some countries, decisions might even be taken by way of a plebiscite (see Box 4, below).

Depending on the assessment of who the relevant decision-makers are, the message, the channel and the tone will vary. In cases in which decisions are taken by ministerial bureaucracies, the degree of complexity included in the message can be highest. Addressing legislators, it might be necessary to reduce the degree of complexity somewhat, although more complex messaging may be possible when communicating with specialized staff who support the elected representatives. When decisions are taken by citizens in a plebiscite, it is probably advisable to minimize the complexity.

Art. 4.3 of the Paris Agreement stipulates that each NDC will represent the highest possible level of ambition reflecting Parties' common but differentiated responsibilities and respective capabilities, in the light of different national circumstances. This is the yardstick that stakeholders and decision-makers should apply when assessing the suitability of the proposed new NDC and the policies and measures underpinning it. Clearly, there is substantial room for interpretation in terms of what constitutes the "highest possible ambition". But the political outputs of the GST and the technical information collected will contain information that supports stakeholders and policy-makers in shaping a shared interpretation for their respective countries.

One of the focus group participants highlighted that in order to maximize the effect of communication with a view to the decision-making phase, it is vital that the communication at this stage comes from within the respective country and takes into account the specific circumstances. Thus, the communication should be substantially based on the context of the decision-maker which is in the focus. For example, if a Member of Parliament (MoP) is addressed, this member could be reminded of the wider policy context, in which the decision takes place. A MoP who has his or her origins in a district which experienced extreme weather events should be addressed differently than a MoP whose district contains a carbon-intensive factory.

Moreover, it has proved to be crucial to coordinate the messaging with a wider coalition of like-minded parties, among policy-makers, NGOs, private sector entities and scientists. Conveying aligned narratives, which highlight the positive effects of climate policy-making and points towards the opportunities for the country was the formula of success in the recent plebiscite on adopting a climate law in Switzerland (see Box 4).

Box 4: Efforts for a 2050 net-zero target in Switzerland

On 18 June 2023, Swiss voters decided in favour of a law that envisages Switzerland to reach net-zero by 2050. This decision was preceded by the effort among political proponents and scientists to shape the narrative around the net-zero target in the media. Through an intensive exchange of views, a position on a common framing of climate science was established and conveyed to the public. In this regard, a scientific advisory committee was established, in which this exchange took place. The opponents of the law argued that the net-zero target would have negative economic consequences for the country. Through the intensive exchange, the proponents were able to align their positions and counter the argument by showing that the economic consequences of net-zero would indeed be positive and that many new opportunities arise from this target. Additionally, they were able to show that other countries are also doing a lot in terms of addressing climate change and thus counter the argument that "nobody is doing anything so why should we." As a result, the success in this vote was secured by a message of hope through a combination of showing positive impacts for the country and positive contributions by other countries.

5 Conclusions and recommendations

The GST is a novel and unique instrument in environmental governance in that it has an exclusive focus on reviewing collective progress. Our review of other seemingly similar international processes reveals that while there may be some lessons drawn, for instance, from how the wealth of information was digested and condensed, there is limited scope for learning with respect to how these processes linked international and national level policy processes. Yet, this is the exact purpose of the Global Stocktake. Specifically, it is supposed to inform the development of the next NDCs. However, there is no formalized process, no automatic mechanism in place to ensure that this happens effectively and the GST is in that sense breaking new ground.

A country-specific digest of the results of the GST should be of interest to national policy-makers and stakeholders alike. In fact, it is a responsibility of national governments to digest and reflect on the GST outcomes in the light of their national circumstances. After all, Parties are obligated to provide information on 'how the Party's preparation of its nationally determined contribution has been informed by the outcomes of the global stocktake' (4/CMA.1 Annex I, UNFCCC, 2018a) as part of the information to enhance transparency, clarity and understanding of NDCs. But it cannot be taken for granted that the results of the GST will be taken up in the national level political discourse. It will not happen all by itself. It requires thorough preparation and a lot of communicative and organizational work. This, of course, will not be possible without committing resources and developing capacities within civil society and government. Where resources and capacities are lacking, actors can revert to international networks to strengthen their capacities.

The communicative work will vary depending on the phase of the NDC policy cycle: agenda-setting, policy formulation, and decision-making. The outcomes of the GST can, in principle, be leveraged to more effectively set the political agenda, to formulate adequate and ambitious policies and to serve as points of reference or benchmarks towards the adoption of the new NDC as well as the policies and measures underpinning it. Each of these phases require a differentiated communication strategy that draws on different elements of the GST outcome.

The literature review on relevant international processes emphasized several lessons that should be taken into account. Firstly, legitimacy is key as the Periodic Review and the Talanoa Dialogue showed. Legitimacy can be provided if a large number of important actors agree on a common goal. Furthermore, the message should be kept simple in order to reach widespread attention. The Universal Periodic Review and the Talanoa Dialogue further showed that the sharing of best practice examples and case-specific stories can enhance mutual understanding and provide policy options. Finally, the Universal Periodic Review also showed that keeping all relevant stakeholders engaged is vital for a successful process, otherwise it loses legitimacy.

We have proposed a simple communication model to support policy-makers and stakeholders in shaping their strategies and organizing political processes in an effective manner. The model differentiates the sender and recipient of the information as well as the message (i.e. the objective content), the tone in which the message is phrased as well as the channel by which it is communicated.

With respect to the agenda-setting phase of the NDC cycle, policy-makers and stakeholders should focus on contextualizing the global results addressing the question: "What does this mean for our country?" To do so, they might need to draw on external information that provides country-specific information and helps them to highlight policy areas in which the given country might have room for improvements compared to its peers. To maximize the credibility of their

messaging, actors should draw on information that corresponds to the same standard of “best available science” that was applied during the Global Stocktake.

During the policy formulation phase, messaging can be more complex, developing a genuine dialogue between civil society and scientific experts on the one hand and policy-makers on the other hand. It can draw on the wealth of experiences and good practice examples provided to the Global Stocktake by parties and observers.

Finally, during the decision-making phase, the outcomes of the Global Stocktake may help to underpin – based on the best available science – the development of a collective understanding of what constitutes the highest possible level of ambition for a given country taking into account its common but differentiated responsibility, capability and national context. This understanding should then be the benchmark for assessing the adequacy of the proposed NDC and the policies and measures underpinning it.

To summarize, this paper offers three major recommendations for policy-makers and stakeholders:

- ▶ Do not take for granted that the outcomes of the Global Stocktake will trickle down into national level political discourse. It will require considerable coordination and communicative efforts from a number of stakeholders to achieve. And this, in turn, requires substantial resources committed and capacities invested early in the process.
- ▶ Design differentiated strategies to affect different stages of the NDC policy process taking into account the different audiences, channels, messages and tone to achieve effective communication for each phase.
- ▶ Coordinate your messaging coalition of like-minded parties, among policy-makers, NGOs, private sector entities and scientists and focus on positive messages highlighting the opportunities arising from ambitious climate action and taking inspiration from other countries.

While the above analysis is focused on the thematic area of mitigation and national-level policy processes, the insights are perhaps also useful for stakeholders and policy-makers working on other issue areas such as adaptation and means of implementation or at other governance levels. Specifically, engagement with sub-national and non-state actors including through the Global Climate Action Agenda might draw on the same models adapting it to their purposes. We hope that the model and the practical examples provided in this paper inspire and support policy-makers and stakeholders to ensure that the echo of the Global Stocktake actually resonates with their national (and sub-national) level policy processes and lead to the desired outcome – an effective policy process – and impacts new NDCs that genuinely represent the highest possible level of ambition.

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