

Enhancing Non-State Actors' (NSAs) Engagement in the Global Stocktake of the Paris Agreement: **Establishment of a Regional Hub in Southeast Asia**

Summary report on the initial interactions with
potential member organisations of the Hub
from March to September 2022

December 20, 2022

Institute for Global Environmental Strategies
Institute for Climate and Sustainable Cities



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About the Team



ICSC is a non-government group advancing fair climate policy and low carbon, climate-resilient development. Based in the Philippines, it is engaged with the wider international climate and energy policy arena, particularly in Asia, and is recognized for its role in helping advance effective global climate action and the Paris climate agreement.

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1

Introduction

1.1. The Global Stocktake (GST)

The Paris Agreement sets three long-term goals: limiting global temperature increase to well below two degrees and pursuing efforts to limit it to 1.5 degrees above pre-industrial levels; fostering climate resilience and increasing the ability to adapt to climate impacts; and making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development¹.

The Global Stocktake (GST) is a process to assess the collective progress towards achieving these long-term goals. The identified opportunities and challenges will inform countries in updating and enhancing their Nationally Determined Contributions (NDCs), as well as strengthening international cooperation for climate action. To allow countries to consider the outputs of the GST and to reflect this in their NDCs, the GST is conducted in a five-year cycle and is designed to be completed two years before the NDC submission.

The GST consists of three phases: 1) information collection and preparation, 2) technical assessment, and 3) consideration of outputs. In November 2021 at the 26th session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC), the information collection and preparation phase of the first GST started, while the first technical dialogue under the technical assessment phase was conducted in June 2021. The first GST will be completed by November 2023 at COP28 with consideration of outputs².

The participation and engagement of non-state actors (NSAs), including civil society, businesses, local governments, academia, and NGOs, plays an essential role in the implementation of the GST. NSAs can join the GST by making submissions and attending its technical dialogues. Their active participation fills various gaps in information by providing independent scientific and technical knowledge, which contributes to the “global” representation of information to be assessed in the GST. Also, GST outputs that incorporate inputs from a range of stakeholders, including NSAs, will more likely be accepted widely, even by governments, thereby generating momentum for enhancing climate actions aligned with the NDCs.

However, participation and engagement of NSAs in the GST has been a challenge for a variety of reasons. For example, the GST is not yet well known by NSAs as part of the process under the Paris Agreement¹ and international discussions in the GST are highly technical and complex to fully understand. There is also a lack of resources to engage with the GST, and it is still unclear what the incentives and benefits are of NSAs engagement with the GST.

1 Paris Agreement: https://unfccc.int/sites/default/files/english_paris_agreement.pdf

2 Global Stocktake: <https://unfccc.int/topics/global-stocktake>

1.2. The independent Global Stocktake (iGST) Southeast Asia Hub

Against this background, the iGST Southeast Asia Hub (SEA Hub) aims to provide a platform to make NSAs' voices and activities in Southeast Asia more visible in the GST process. This is a joint effort led by the Institute for Climate and Sustainable Cities (ICSC) and the Institute for Global Environmental Strategies (IGES) with the support from the ClimateWorks Foundation. The ClimateWorks Foundation runs an umbrella programme called the Independent Global Stocktake (iGST), which is a consortium of civil society actors working together to support the GST³.

Through a series of initial interactions with potential NSA members, the SEA Hub began its activities in March 2022, with a focus of identifying the themes, topics, and approaches of the Hub, that are of particular importance within the region. This report summarises discussions of the initial interactions and will serve as the basis for creating a roadmap for the Hub for 2022-2024. The roadmap will contain detailed activity plans and will outline the specific roles of core organisations and participants. We plan to finalise this work in consultation with member organisations by early 2023.



Photo by Serg Zhukov on Unsplash

3 independent Global Stocktake: <https://www.climateworks.org/independent-global-stocktake/>

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Approach to the Initial Interactions with NSAs

Our initial interactions with potential member organisations of the Hub included a one-day inception session in June 2022, and a two-day deep dive session in August to September 2022. We took the following steps to organise these sessions:

First, a list of NSAs that were considered active in the field of climate change was compiled from the existing regional networks of ICSC and IGES, the co-leads of the iGST SEA Hub. Some of the organisations on the list also recommended additional organisations from their networks that could potentially contribute to the Hub.

Secondly, invitations for both the inception session and the deep dive session were sent to the identified organisations. A total of 30 organisations participated in both or either of the sessions. The breakdown of the number of participating organisations by country was: Indonesia (8), Philippines (7), Viet Nam (5), Thailand (4), Singapore (1), Malaysia (1), Cambodia (1), and Regional (3) (see Annex 1). These institutions were composed of universities, research institutes, or non-governmental organisations, rather than grassroots and local community organisations, or private sector entities.

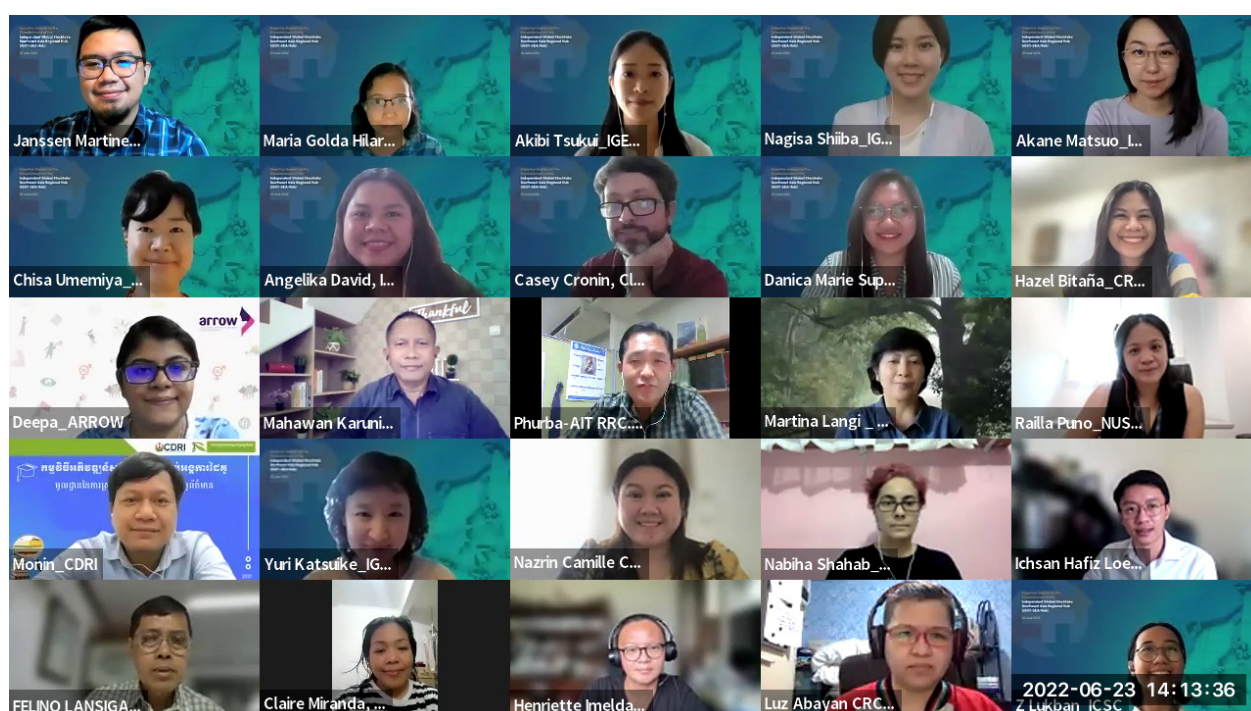
The inception session was aimed to understand the perceptions and expectations of participating organisations with regard to the GST, and to encourage them to promote their activities and missions. We started the session with a briefing presentation on the GST and iGST SEA Hub, followed by breakout sessions into three groups – mitigation, adaptation, and means of implementation and support (MOI). These groups were decided based on participants' interests.

After the inception session, we conducted a literature review to identify potential key areas driving climate actions in Southeast Asia. The results recognised that energy transition, and forestry and land use are key areas for mitigation actions, with agriculture/food security, disaster risk reduction, and ecosystem-based adaptation being key for adaptation actions. Details are included in the literature review summary in Annex 2.

The deep dive session was held about two months later, to understand the ongoing activities by participating organisations and the challenges they face. We began with an overview of the first technical dialogue of the GST and key findings from the literature review. This was followed by more detailed discussions on focal thematic areas for the iGST SEA Hub. Unlike discussions at the inception session, we integrated MOI-related questions into mitigation and adaptation because previous discussions during the inception phase also addressed the issues around MOI. We also considered loss and damage, gender, and youth as some of the cross-cutting issues for the thematic areas. Finally, possible functions of the Hub were discussed based on a proposal made by the co-leads. The proposed functions of the Hub are presented in Annex 3, and the agenda and guiding questions of the inception session and the deep dive session are provided in Annex 4.

In the next section, we present a summary of discussions at both of the sessions, highlighting:

- Perspectives on the GST and expectations on the Hub: summarising general perspectives and expectations expressed by participants on the potential roles of the Hub in the context of the GST,
- Focused areas of the Hub: representing ongoing activities of participating organisations and challenges and opportunities they face, with respect to the thematic areas of the GST and cross-cutting issues, and
- Functions of the Hub: highlighting what the Hub could offer (described as a work programme) and by when, to contribute to the GST.



Group photo at the inception session

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Summary of Discussions

3.1. Perspectives on the GST and Expectations of the Hub

3.1.1. Participants' Perspectives on the GST

Some participants highlighted that the GST is a key mechanism for ensuring the implementation of the Paris Agreement and achieving its goals. There were also positive expectations that outputs of the GST will not only provide input for countries to improve their commitments but it can also put pressure on countries to update their commitments.

Several challenges were recognised regarding communication on the GST, as well as the transparency and inclusiveness of the process. More outreach activities targeting border stakeholders including NSAs are necessary because the GST is “not as well-known as the Sustainable Development Goals (SDGs)”. While there may be many experts and specialists working on addressing climate change in SEA countries, they are not likely to be involved in the GST. Women, youth, indigenous people, and vulnerable communities also tend to be excluded from the process. Thus, the GST should include gender and human rights perspectives, and be open to all stakeholders, ensuring that all voices are heard.

The importance of considering national circumstances in the context of the GST was also raised, alongside the GST assessing the global aggregated progress. The GST should collect and refer to different types of data, research, and information to reflect the actual situations of countries and regions.

3.1.2. Participants' Expectations for the Hub to Enhance their Activities in the GST Context

Given the challenges the participants recognised for the GST, some participants expressed that the Hub could fill gaps between the global and regional levels, maintain the transparency of the GST process, and create space for marginalised groups including women and youth.

Many participants also expected that the Hub could play a role in building communication among different types of stakeholders, collecting regional voices, and sharing and delivering messages from the region.

Participants made several suggestions for the activities that could be conducted in the Hub, which includes the following:

- Share the latest information about the GST,
- Provide the latest scientific knowledge,
- Collect, synthesise, and analyse regional-specific information,
- Conduct structured dialogue with experts and Hub participants,
- Help understand the discussion at technical dialogues of the GST and implications for the region,
- Share good practices, experiences, and lessons learnt,
- Create an opportunity to discuss results and implications among different stakeholders,
- Develop a mechanism to take stock of regional progress, and
- Develop monitoring indicators.

3.2. Focused Areas of the Hub

3.2.1. Mitigation

3.2.1.1. Ongoing Activities by Participating Organisations



Energy Transition

The participants conduct various energy transition activities at different levels, such as research and analysis, project implementation, and lobbying/policy advocacy. One of the project examples is the shift towards renewable energy by promoting geothermal energy in collaboration with the private sector and local government. The research includes addressing transboundary issues for Carbon dioxide Capture and Storage (CCS) and geoengineering (e.g., ocean-based CCS), and applying renewable energy and hydrogen power to public transport. Some participants are engaged in policy advocacy activities such as lobbying for policy changes and the full implementation of relevant energy laws that could increase renewable energy, as well as seeking policy influence by integrating renewable energy and the Just Transition into plans being developed by local governments.



Forestry and Land Use

Participants are engaged with broader stakeholders in this area. Some participants focused on agroforestry and social forestry, involving local people and small businesses to protect and utilise forests for other activities like ecotourism. Others conducted research on the supply chain of GHG emission estimates of Japan's coffee imports. Outreach activities to inform the public of international discussions on forest issues were also organised.

3.2.1.2. Challenges and Opportunities



Energy Transition

Some participants emphasised that more efforts are required on the adoption of renewable energy at an affordable price. Coal phase-out was discussed as one of the key approaches to achieving energy transition, where participants highlighted the need to encourage and support local governments to create a plan for transitioning from coal mining. In addition, the Just Transition was also recognised as an important element in creating green jobs, reducing coal dependency, and addressing job displacement.



Forestry and Land Use

The need for research on expanding and integrating REDD+ into the Paris Agreement was mentioned. Long-term commitment from the private sector was also raised as a challenge.

3.2.2. Adaptation

3.2.2.1. Ongoing Activities by Participating Organisations



Agriculture / Food security

There are various ongoing capacity-building efforts led by participating organisations including climate-resilient farming, technical assistance to local government units and municipal agricultural organisations, and community enterprises. Climate-smart agricultural management, such as adoption of weather index-based insurance and crop forecasting systems, is being implemented in some countries. In addition, there are also existing efforts to preserve local wisdom on sustainable agricultural practices and production.



Disaster Risk Reduction (DRR)

Participants introduced several DRR initiatives at national, subnational, and local levels in the region. Some national governments are conducting revisions of DRR policies to include anticipatory and adaptation actions in pre-disaster situations. In the case of the Philippines, support is being extended to local governments, so that they can integrate the outputs of research projects on climate change adaptation into flood management when updating their Comprehensive Land Use Plan (CLUP). Some activities targeted at specific social groups such as women and children were also introduced by the participants.



Ecosystem-based Adaptation (EbA)

Ecosystem-based Adaptation (EbA) and Nature-based Solutions (NbS) have been incorporated or mainstreamed across a range of research activities and capacity-building projects by the participating organisations. Research includes biodiversity and ecological studies on sustainable management of coastal resources such as mangrove forests, as well as the establishment of specific research centres to produce policy-relevant science on nature-based climate solutions. These research activities then inform capacity-building activities like webinars and e-learning courses focusing on NbS. Some participants have also been engaged in grassroots activities such as supporting women-led social enterprises in promoting NbS at the local government levels, and supporting local communities to carry out reforestation.

3.2.2.2. Challenges and Opportunities



Agriculture / Food security

Despite ongoing efforts, some participants highlighted that technology transfer and funding for research on climate-smart agriculture remains insufficient. Knowledge gaps on climate-resilient agriculture are common at different geographical levels. Another challenge is the low uptake of climate risk insurance especially in vulnerable farming communities.



Disaster Risk Reduction (DRR)

Even with the further integration of DRR, additional efforts are still required for national policies on DRR and Climate Change Adaptation (CCA) to situate and establish more aggressive and strategic adaptation measures. Participants also emphasised that advocacy work on CCA and DRR integration should be more locally led. In the practice of DRR, technical assistance for developing an early warning system through a telecommunications platform is one example of a solution.



Ecosystem-based Adaptation (EbA)

The participants recognised the need to further promote EbA in transboundary biodiversity landscapes such as watershed management. Although the IPCC report discussed the importance of EbA in the context of resilient urban blue-green infrastructure development, no such efforts were voiced by the participants.

3.2.3. Means of Implementation and Support (MOI)

3.2.3.1. Ongoing Activities by Participating Organisations

Most of the participating organisations have integrated capacity-building into their activities to a certain extent. There are some notable opportunities in mobilising finance for participants to conduct activities, including Payment for Ecosystem Services (PES), carbon market mechanism, and public-private collaboration on investment. In Indonesia, their government has issued green bonds for renewable energy projects. Only a few organisations conduct specific capacity-building programmes like supporting the process of the National Adaptation Plan and Green Climate Fund project formation.

3.2.3.2. Challenges and Opportunities

Lack of financial resources still remains as a barrier for most organisations in promoting their activities. Other challenges raised by the participants include increasing public awareness on climate change and identifying the best ways to assess the impacts of the training.



Photo by iSawRed on Unsplash

3.2.4. Cross-cutting Issues

3.2.4.1. Ongoing Activities by Participating Organisations

Several organisations include youth and gender perspectives in their activities. Supporting women-led social enterprises to manage community-based renewable energy facilities and promote nature-based solutions, supporting women and children to increase their capacities to overcome barriers in pre-disaster and post-disaster situations, and providing capacity-building on decentralised renewable energy for youth are just some examples of ongoing initiatives.

Some participants also conduct activities that generate co-benefits of mitigation and adaptation. There has been research on biodiversity and regeneration capacity of mangrove ecosystems, and reforestation and conservation of forest and mangrove ecosystems. This kind of project activity includes promoting NbS as mitigation actions, which aims to deliver co-benefits of adaptation measures.

3.2.4.2. Challenges and Opportunities

Several participants emphasised the importance of consulting and promoting women's and children's views and creating space for them to participate.

Communication was identified as a challenge. According to the participants, understanding the GST can be difficult because discussions are highly technical and complicated. This is a barrier for both adults and the youth.

Given that the GST targets global-level aggregated efforts and progress, there was a discussion on the importance of citing local information when discussing the GST in the context of SEA. It was raised that it would be challenging for the Hub to filter information and decide what should be shared because of the region's uniqueness and diversity.

3.3. Functions of the Hub

As noted earlier, the participants discussed the functions of the Hub based on the proposal made by the co-leads. At the deep dive session, participants generally agreed with the proposal and did not offer any critical comments or questions. This partly reflects that the proposal was well in line with what has been discussed, but this may also imply that the time was too short for the participants to fully digest the proposed functions of the Hub. We will discuss these limitations to our approach in the next section.

3.3.1. Work Programme

The participants discussed and generally agreed to the proposed overview of the work programme, which focused on the following four topics:

1. Management of GST-related knowledge and information, including sharing the latest information.
2. Understanding the discussion of the GST and its implication for Southeast Asia. Since the GST assesses global collective progress, rather than progress made by individual countries, it is critical to translate and localise results and outputs of the GST into the regional and national context. Some of the recommended approaches are providing the latest scientific knowledge; collecting, synthesising, and analysing the regional-specific information; conducting structured dialogue with experts and participants; and sharing good practices, experiences, and lessons learnt.
3. Contributions to the increase in ambition, which could cover disseminating results of activities and creating an opportunity to discuss results and implications among different types of stakeholders, including government officials who are in charge of or related to updating NDCs and adaptation commitments.
4. Development of a mechanism to take stock of regional progress and monitoring indicators, looking ahead to the second GST.

3.3.1.1. Timelines

Participants considered timelines for the work programme, as illustrated in Figure 1. The schedule for the GST includes the deadline for inputs to the third technical dialogue (at the end of February 2023), the third technical dialogue (June 2023), and the consideration of outputs (November 2023). The Hub will focus on creating a roadmap by December 2022, which can serve as an input for the third technical dialogue by the end of February 2023. This gives the Hub enough time to launch the roadmap during the Asia-Pacific Climate Week (date to be decided). Given this timeline, the work programme could start after the submission or after the launch of the event at the latest.

There are two phases to be considered in designing the work programme and its timeline. Phase 1 of the implementation period is from June 2023 to November 2023, which is during the GST and after the technical assessment phase. This means that the GST momentum will be further increasing toward the outputs of the GST and the Hub's activity needs to do the same. Phase 2 will be from November 2023 to December 2024. Keeping the momentum and taking action to increase ambition based on results of the GST is a possible challenge for the countries involved.

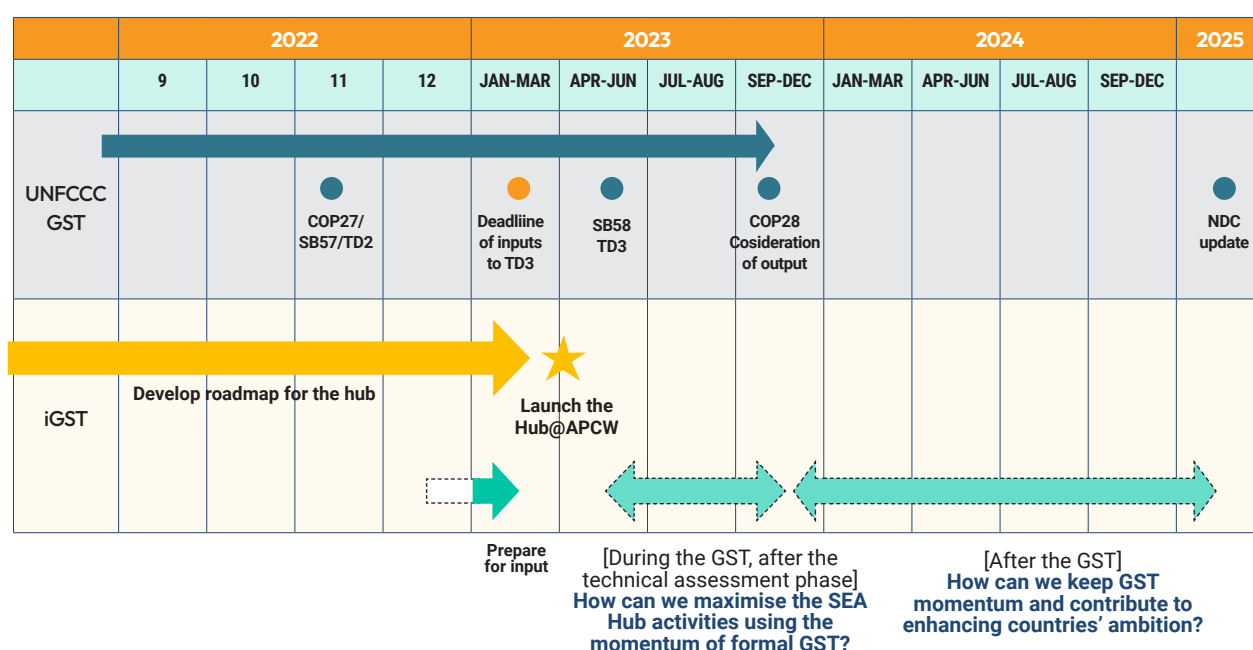


Figure 1. GST timeline and the Hub's work programme

4

Overall Findings, Remaining Issues, and Next Steps

This section aims to:

- Share our thoughts on areas of focus and the functions of the Hub in Section 4.1,
- Highlight some remaining issues for further consideration in Section 4.2, and
- Consider the next steps in Section 4.3.

4.1. Overall Findings

Lack of recognition of the GST and less engagement with NSAs are just some of the challenges we observed in implementing the GST. We also understood that the GST was expected to strengthen its communication, secure transparency, and ensure inclusiveness. As an NSA, it would be useful for the Hub to complement these aspects by providing open and interactive space, and including gender and human rights perspectives in its activities.

Before the deep dive session, we identified mitigation and adaptation themes as focus areas. For mitigation themes, we centred on energy transition and forestry and land use, while food security, DRR, and EbA/NbS were set as the adaptation themes. These topics were also discussed in the first technical dialogue of the GST. Some points of discussion were the importance of urgent action to start energy transition, the role of forestry and land use and related activities, links between food security and urbanisation, DRR in the context of adaptation efforts as well as loss and damage, and planning and implementation of EbA/NbS⁴. We acknowledge that the participants also have rich and practical knowledge and experience in these areas. Focusing on these themes allowed us to collect and deliver regional voices to the GST that will help us digest and translate the global discussion into the regional context.

MOI is one of the three thematic areas of the GST and this was discussed in depth during the first technical dialogue. The summary report of the first technical dialogue also showed that MOI was frequently discussed in relation to mitigation and adaptation. Similarly, we recognised that most of the participants of the Hub integrated MOI-related initiatives within their scope, and only a few organisations focused on specific MOI activities. Given this situation, it would be more effective and practical for the Hub to integrate MOI with mitigation and adaptation rather than discussing it on its own.

From an equity perspective, inclusiveness is a critical aspect of the GST. However, there are various challenges such as lack of recognition of the GST and less NSA engagement with marginalised groups. We learned that some organisations of the Hub particularly engage with women and youth in the context of climate change. Others design and implement projects with

⁴ Summary report on the first meeting of the technical dialogue of the first global stocktake under the Paris Agreement.
https://unfccc.int/sites/default/files/resource/GST%20TD1_1_sreport_26_09_2022_Final.pdf

women and youth to integrate their perspectives. When developing a roadmap and detailed activity plan, the Hub should communicate with participating organisations to discuss the appropriate way to strengthen inclusivity and cover the perspectives of women and youth. By doing so, the Hub could present actual cases of equitable participation, thereby contributing to the GST.

We frequently heard about the importance of the co-benefits of mitigation and adaptation during initial interactions among member organisations. While co-benefits have been touched upon a few times in the technical dialogue of the GST, there has been no specific space for discussion because the GST looks at mitigation and adaptation as separate themes. In the SEA, it has been known that further mitigation efforts will be available by pursuing socio-economic development and other climate objectives, such as adaptation and resilience⁵.

Some participating organisations have experiences in using NbS for both mitigation and adaptation, so it provides the Hub with an opportunity to deliver regional messages and provide complementary information to the GST by looking into the potential impacts that co-benefits can have across the thematic areas of the GST.

We believe that the Hub's work programme should complement the official GST processes from the perspective and position of NSAs, which would ensure a robust GST. It would also allow us to avoid overlaps and duplication with other ongoing initiatives. The biggest uncertainty of the GST is how its outputs actually ratchet up ambition. Considering this challenge, the Hub could focus its 2023-2024 activities on understanding the implication of the GST discussion in SEA and how it can contribute to increasing the ambition of countries in the region for a greater impact.

4.2. Remaining Issues

Although we had a wide range of participants from various countries and different types of organisations, we still need to exert more effort into expanding the Hub's reach to unrepresented countries and organisations including the grassroots, local communities, and private sector.

In general, the participants agreed on the proposed functions of the Hub, but we recognise that they needed more time to further digest the information given to them. We recommend exploring further opportunities to present more detailed plans and schedules.

4.3. Next Steps

In order to develop a roadmap for the Hub, we will be taking the following actions: 1) design a governance structure and identify the core competencies of member organisations and their willingness to engage, and 2) integrate the identified focus areas into the Hub's work programme. Furthermore, it would be useful for us to share knowledge on an effective strategy for NSAs to engage with other existing regional hubs in Latin America and West Africa. We must also consider and strengthen our present communication strategies.

⁵ CASE (2021) Beyond Net Zero: Empowering Climate Mitigation by Linking to Development Goals:
<https://caseforsea.org/wp-content/uploads/2021/11/Beyond-Net-Zero-Empowering-Climate-Mitigation.pdf>

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IPCC (2022b). Summary for Policymakers [H.-O. Pörtner, D.C. Roberts, E.S. Poloczanska, K. Mintenbeck, M. Tignor, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem (eds.)]. In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press. In Press.

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Annexes

Annexe 1. List of participating organisations at the inception session and deep dive session

COUNTRY	NAME OF INSTITUTIONS / ORGANISATIONS
Cambodia	Cambodia Development Resource Institute
Indonesia	IESR
Indonesia	Indonesia Research Institute for Decarbonization (IRID)
Indonesia	Climate Change and Forestry Expert Network (APIK)
Indonesia	Center for Research on Energy Policy Institut Teknologi Bandung
Indonesia	Research Institute for Decarbonization (IRID)
Indonesia	Institute for Essential Services Reform (IESR)
Indonesia	Indonesian Disaster Management Community (MPBI)
Indonesia	Universitas Tanjungpura (UNTAN)
Malaysia	Asian-Pacific Resource and Research Centre for Women (ARROW)
Philippines	Oxfam Pilipinas
Philippines	Child Rights Coalition Asia
Philippines	University of the Philippines Los Baños
Philippines	ETC Group
Philippines	Climate Reality Philippines
Philippines	Asia People's Movement for Debt and Development (APMDD)
Philippines	The Climate Reality Project Philippines
Singapore	National University of Singapore (NUS)
Thailand	Regional Resource Centre for Asia and the Pacific, Asian Institute of Technology
Thailand	King Mongkut's University of Technology Thonburi (KMUTT)
Thailand	Sirindhorn International Institute of Technology, THAMMASAT University
Thailand	Thai Rice Department
Vietnam	VIETSE
Vietnam	Vietnam Institute of Meteorology, Hydrology and Climate Change
Vietnam	ISPONRE
Vietnam	Viet Nam Institute of Meteorology, Hydrology and Climate Change
Vietnam	Vietnam Initiative for Energy Transition (VIETSE)
Regional	11.11.11 Asia
Regional	Regional Asia Comms Lab
Regional	Child Rights Coalition Asia

Annexe 2. Literature review to identify potential areas to be focused on in SEA

Mitigation

Modelled mitigation pathways that limit warming to 1.5 and 2°C involve deep, rapid and sustained emissions reductions. The global greenhouse gas (GHG) emissions from NDCs announced prior to COP26 would make it likely that warming will exceed 1.5°C and make it harder after 2030 to limit warming to below 2°C. To limit global warming to 1.5°C, global GHG emissions will have to peak before 2025, reduced by 43% by 2030, and methane will have to be reduced by 34% by 2030. Even limiting global warming to 2°C will require global GHG emissions to peak before 2025, with a 27% reduction by 2030. There are options available now in every sector – energy, land use, industry, urban, buildings, and transport – that can at least halve emissions by 2030 (IPCC, 2022a). In SEA, the energy, as well as land use and forestry sectors are key to pursuing low-carbon development.

Energy Transition

Although SEA has vast sources such as geothermal, solar, hydro, and wind, the area is largely dependent on coal. Coal is more expensive and posits greater environmental damage and emissions. Fossil fuels cause air and water pollution and adversely impact species both on land and water. Since renewable energy provides opportunities to address the increasing coal prices, transitioning to renewable energy is a realistic economic option for countries in the region. Key elements for the future vision of the power sector transition include renewable technologies, flexibility, market design, and grid structure (CASE, 2022).

Forestry and Land Use Sector

Land-based biological approach is one of the common carbon dioxide removal methods in the region. Nature-based solution to forest management does not only address the need for natural carbon sinks but also food security. The latest IPCC report puts emphasis on the important role of biodiversity (IPCC, 2022b). The SEA region is among the biodiversity hotspots in the world; however, it is threatened by human-induced activities and climate change impacts that are projected to worsen. SEA's intact forests and protected areas are important reserves for the region's tropical biodiversity and above-ground forest carbon stock. Thus, forestry work needs both conservation and proactive restoration efforts.

Opportunities of Co-benefits of Adaptation and Mitigation

The majority of the globally tracked climate finance is targeted at mitigation activities, while adaptation finance remains small and predominantly from public sources (IPCC, 2022b). In SEA, the pursuit of socio-economic development and other climate objectives, such as adaptation and resilience, has proven to be promising enablers of mitigation efforts (CASE, 2021). It is essential to look into opportunities from the co-benefits of adaptation and mitigation in the region.

Adaptation

As has already been made clear in previous IPCC reports, the latest IPCC AR6 WG2 Report warns with high confidence that human-induced climate change, including more frequent and intense extreme events, has caused widespread adverse impacts and related losses and damages to nature and people, beyond natural climate variability (IPCC, 2022b). Despite current adaptation efforts, loss and damages are increasing around the world as tropical cyclones intensify, sea levels rise, and heavy rains increase. This story concerns both developed and developing countries, with particularly growing impacts in urban areas with significant development and population concentrations. According to the IPCC assessment, 3.3 to 3.6 billion people currently live in hotspots of high vulnerability to climate change. The assessment also shows that adaptation actions are indeed progressing, but the progress is very uneven and not fast enough. The adaptation gap, unfortunately, is greatest in low-income populations. The assessment also warns against maladaptation, or poorly planned adaptive behaviour, with its unintended consequences.

And it is also the disadvantaged people, such as Indigenous communities, people living in informal settlements, and local communities, who are most affected. The report also warns that there are practical limits to adaptation. Unfortunately, even effective adaptation cannot prevent all loss and damage. Climate change is already having significant and irreversible impacts on ecosystems and socio-economy. It is also clear that current financial flows are inadequate, especially in developing countries, where most of the money is spent on mitigation rather than adaptation.

The IPCC report also provides an analysis of regional impact assessments and adaptation options. In the Asia region which includes SEA, risks in the areas of ecosystems, health, cities and settlements, migration, water, cryosphere, and food and energy have already been evident and are expected to continue to rise. The effective adaptation measures to these risks include: Climate-smart agriculture to ensure food security, Disaster Risk Reduction (DRR), and Ecosystem-based Adaptation (EbA) especially on urban infrastructure (IPCC, 2022d).

Agriculture / Food security

Recent evidence suggests that climate-related risks to agriculture and food security in Asia will gradually increase in each region as global average temperatures rise above pre-industrial levels by 1.5°C or more. Various adaptation measures already adopted in agriculture and fisheries may be beneficial in mitigating the adverse effects of current climate extremes, but may not be sufficient to fully offset the adverse effects of future climate scenarios. In SEA, where the majority of the population makes its living from agriculture, it is crucial to strengthen strategies to promote science-based adaptation, invest in critical infrastructure, and address farmers' barriers to adaptation in order to advance transformative adaptation (IPCC, 2022c).

Disaster Risk Reduction (DRR)

In recent years, climate-related disasters have become more frequent in Asia, with increasing economic and social impacts. The projected increase in the frequency and intensity of climate-related disasters requires the promotion of sustainable development pathways to effectively address risks, reduce vulnerability, and enhance resilience. This calls for more effective integration of CCA and DRR in policy development.

Risk assessments for various hazards such as floods, droughts, rainfall-induced landslides, sea level rise, and heat stress, as well as environmental assessments of coastal areas have been conducted. Various strategies for climate risk management have also been studied. This includes on-site adaptation through ecosystem and community-based adaptation measures, managed retreat or relocation, planned evacuation in flood zones, sustainable livelihoods for farmers and fishermen considering long-term CCA measures, mangrove plantations for shore protection, management of ecosystem services to reduce drought impacts, proactive investments including holistic assessment of watersheds, institutionalising adaptive governance, and linking science and local knowledge (IPCC, 2022c).

Ecosystem-based Adaptation (EbA)

Literature on Ecosystem-based Adaptation (EbA) has grown significantly, especially in the context of enhancing urban resilience in Asia. There is growing recognition that adaptation through hard infrastructure often entails ecological and social trade-offs that need to be complemented with ecosystem-based actions to manage risks more effectively, enhance adaptive capacity, and in some cases, achieve mitigation measures and the SDGs. In EbAs employed for flood management, stormwater capture and storage, restoration of urban lakes and rivers, and reduction of surface runoff, hard infrastructure, and ecosystem-based approaches are often combined (IPCC, 2022c).

Means of Implementation and Support (MOI)

Finance

The IPCC AR6 recognises that although global tracked climate finance has shown an upward trend since the IPCC AR5 assessment, current global financial flows for adaptation, including from public and private finance sources, are insufficient and tend to constrain the implementation of adaptation options, especially in developing countries. The majority of global tracked climate finance was targeted to mitigation while a small proportion was targeted to adaptation (IPCC, 2022b). Equity in adaptation and mitigation finance must be considered to deliver co-benefits of adaptation and mitigation.

The recently published report by Vulnerable Twenty (V20) Group of Ministers of Finance of the Climate Vulnerable Forum (CVF) highlights that V20 countries would be 20% wealthier today if not for climate change, which has eliminated one-fifth of their wealth over the last two decades. To quantify, V20 economies have lost USD 525 billion in aggregated dollar terms due to climate change and its associated impacts from 2000-2009 (V20, 2022).

Technology and Capacity-building

Availability and quality of technology and capacity-building initiatives are not the problem, but the means of support including both financial and human resources for the development and implementation of these mechanisms. SEA is home to many scientists and practitioners specialising in climate science, adaptation, and mitigation. There are many practices taking different approaches to tackle climate change including community-based and gender-responsive innovations and capacity-building, as well as incorporating indigenous knowledge and practices.

There are two possible approaches to strengthen and accelerate climate action in the region. It is important to turn to adaptation as the anchor strategy and pursue mitigation as a function of adaptation. Another way is to integrate climate action with resilience and sustainable development. This includes, for example, empowering coastal ecosystems for coastal risk-reduction, food security, and national and global climate risk resilience; addressing the demand for reliable, secure, and affordable power; as well as organising to deliver efficient, safe and sustainable urban mobility.

Annexe 3. Functions of the Hub proposed by co-leads

Possible Activities

GST Knowledge Management

- Share the latest information about the official GST
- Support capacity building to participate in the GST (e.g. making inputs to the GST)

Translating the GST into the regional context

- Provide the latest scientific knowledge to participants
- Collect, synthesise and analyse the inputs from members
- Conduct structured dialogue with experts and participants
- Understand discussion at the UNFCCC-GST technical dialogues and its implication to the region
- Share good practices, experiences and lessons learnt to complement the UNFCCC-GST

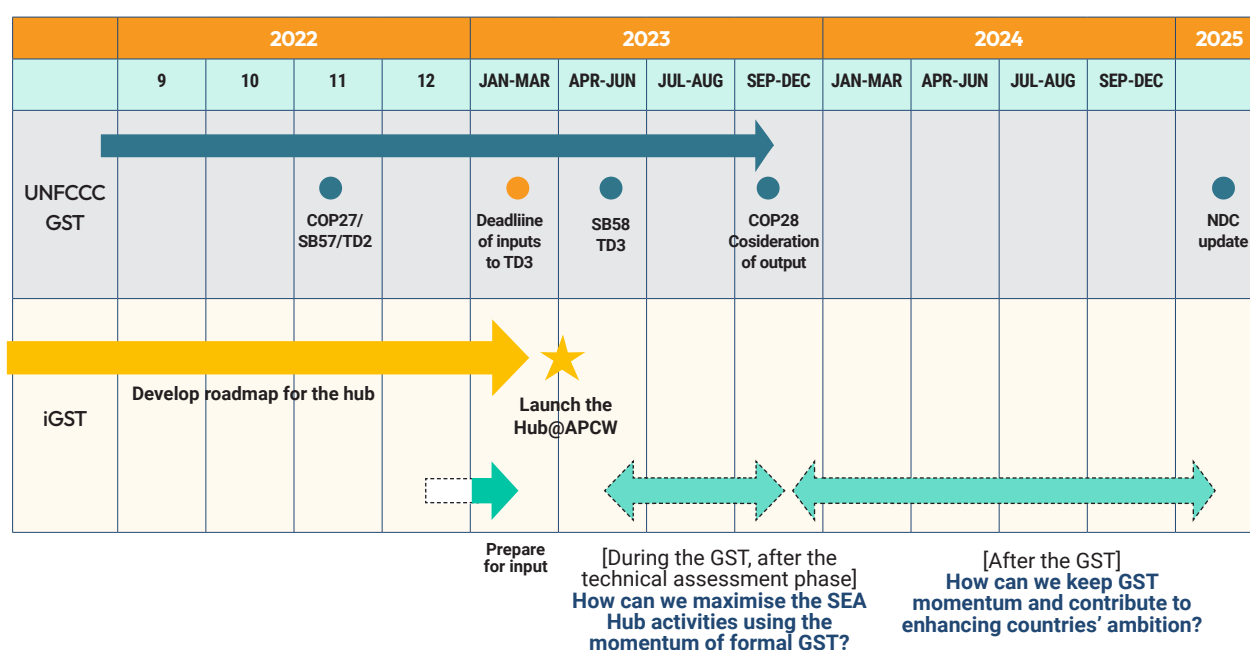
From GST to higher ambition

- Disseminate result of the activities above
- Create an opportunity to discuss results and implication among different levels of stakeholders, including government officials

Beyond GSTI

- Develop a mechanism to take stock of regional progress
- Develop monitoring indicators

Possible Activities - Thinking from Timeline



Annexe 4. Agenda and guiding questions of the inception session and the deep dive session

Agenda of the Inception Session on the Establishment of the Independent Global Stocktake (iGST) Southeast Asia Regional Hub (SEA Hub)

23 June 2022 | Online via Zoom | Language: English

TIME	TOPIC
2:00-2:20	Opening of the inception session: Introduction of the session, Preliminaries, Netiquets, Expectation setting
2:20-2:50	What is the iGST and GST? 1. Overview of the work and functions of the iGST; 2. A practical guide on the Global Stocktake.
2:50-3:05	Presentation of the initial impression of the iGST Southeast Asia Hub
3:05-3:10	Coffee Break
3:10-4:00	Breakout Session During this session, participants will be grouped based on the GST thematic areas: Mitigation, Adaptation, and Means of implementation and support. Discussion guiding questions include: 1. What are your perspectives on the Global Stocktake? 2. As an individual/organisation/institution specialising in mitigation, adaptation, or means of implementation, what are the key issues within the thematic areas that need to be addressed through country-level engagements and through regional dialogues (policy, technical, social)? 3. What do you think would be the role of the SEA Hub in addressing these? 4. In your opinion, how can the SEA Hub support enhancing you/your organisation's activities?
4:00-4:20	Presentation and deliberation of output from the breakout session
4:20-4:30	Ways Forward

Agenda of the Deep Dive Session on the Establishment of the Independent Global Stocktake (iGST) Southeast Asia Regional Hub (SEA Hub)

31 August & 1 September 2022 | Online via Zoom | Language: English

DAY 1 - AUGUST 31, 2022	
TIME	TOPIC
2:00 - 2:15	Preliminaries and Introduction to the sessions
2:15 - 2:45	<p>Panel discussion/presentation on the overview of the thematic areas (Adaptation, Mitigation, and Finance) and its implication in the Southeast Asia Region.</p> <p>ADAPTATION: Akane Matsuo, Policy Reseracher–Adaptation and Water Area, Institute for Global Environmental Strategies (IGES)</p> <p>MITIGATION: Denise MARGarete Matias, Ph.D., Professor, Eberswalde University for Sustainable Development (HNEE)</p> <p>MEANS OF IMPLEMENTATION: Janssen Martinez, Senior Analyst for Climate Finance, Institute for Climate and Sustainable Cities (ICSC)</p> <p><i>*discussion for each thematic area to include technology transfer initiatives, capacity-building, and loss and damages</i></p>
2: 45- 4:15	<p>Part 1 A. Focus group discussion on the current issues within the region in the context of adaptation.</p> <p>Scope:</p> <ul style="list-style-type: none"> • Thematic area to be focused in the context of the SEA region: <ul style="list-style-type: none"> • Climate resilient agriculture, • Disaster Risk Reduction (DRR), • Food Security, • Nature-based Solutions/Ecosystem-based Adaptation • Assessment of the effectiveness of each country's adaptation efforts including unintended impacts. • Regional collective actions towards achieving adaptation plans at different levels. • Common understanding on the meaning of big concepts (e.g. Global Goal on Adaptation (GGA)) • Putting beneficiaries into the centre of adaptation actions, including inclusion on gender lens into climate actions. <p>Guide questions:</p> <ol style="list-style-type: none"> 1. What are the "ongoing efforts whether from your organisation, in partnership with the government and other stakeholders with regards to the scope above and other issues/ areas"? 2. What are the "Things you haven't achieved / started though you think it's important"? And What are the "possible solutions / necessary support to fill the gap"? 3. In relation to the ongoing efforts mentioned, what are the means for monitoring and evaluating the progress of these efforts? How do you link your ongoing efforts with regional and global adaptation goals (e.g. GGA)? 4. Among the ongoing efforts discussed, are these incorporated in particular climate action plans of your government (e.g. Nationally Determined Contribution (NDC), National Adaptation Plan (NAP))? 5. Are there capacity-building initiatives, mobilised finance sources (whether public or private) or forms of technology transfer initiative to implement ongoing efforts?
4:15 - 4:30	Report back and reminders for Day 2
END OF DAY 1	

DAY 2 - SEPTEMBER 1, 2022	
TIME	TOPIC
2:00 - 2:10	Preliminaries, recap of day 1 and Introduction to the sessions
2:10 - 3:25	<p>Part 1 B. Focus group discussion on the current issues within the region in the context of mitigation.</p> <p>Scope:</p> <ul style="list-style-type: none"> Thematic area to be focused in the context of the SEA region: <ul style="list-style-type: none"> Low carbon development The energy transition (including the power sector, transport, etc.); Net zero carbon neutrality targets, transition from coal as source of energy. Forestry, land-use, in the context of carbon sequestration Putting beneficiaries into the centre of mitigation actions, including inclusion of gender lens into climate actions. Assessment of the effectiveness of each country's mitigation efforts including unintended impacts. <p>Guide questions:</p> <ol style="list-style-type: none"> 1. What are the "ongoing efforts whether from your organisation, in partnership with the government and other stakeholders with regards to the scope above and other issues/ areas?" 2. What are the "Things you haven't achieved / started though you think it's important"? And What are the "possible solutions / necessary support to fill the gap"? 3. In relation to the initiatives mentioned, what are the means for monitoring and evaluating the progress of these initiatives? How do you link your ongoing efforts with regional and global mitigation actions? (e.g. Mitigation Work Programme, Transition to net zero emission, etc.) 4. Among the ongoing efforts discussed, are these incorporated in particular climate action plans of your government (e.g. NDC)? 5. Are there capacity-building initiatives, mobilised finance sources (whether public or private) or forms of technology transfer initiative to implement ongoing efforts?
3:30 - 3:45	REPORT BACK
3:45 - 4:15	<p>PART 2: Functions of the iGST Southeast Asia Hub</p> <p>Presentation of the possible functions of the Hub derived from the inception session:</p> <ul style="list-style-type: none"> Platform for connecting the GST and members in the region Stocktaking actions and stories in the region Improving visibility in the GST of different sectors/actors from the region/communities, e.g. children, private sectors Communication space for accelerating the feedback mechanism of GST to promote actions in each country Analyse, synthesise and produce knowledge products Peer-to-peer learning or information exchange for good practices/lessons learned Support capacity-building to participate in the GST <p>Guide questions:</p> <ul style="list-style-type: none"> Based on the suggested functions of the hub, what are the activities that we can we want to convene within the 2022-2023 timeline, or for the first implementation period (2023-2025)? Are there additional activities not included in the list that we can add to our future activities? Identify milestones from 2023-2025
4:15 - 4:30	Closing and next steps
END OF DAY 2	

