

Conceptual framework of climate governance capacity in developing countries to accelerate net-zero transition*

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1. Introduction

Given the enhanced understanding of climate crisis, there is a growing momentum to declare/legislate net-zero greenhouse gas (GHG) targets by 2050 and increase the ambition of Nationally Determined Contributions (NDCs) for 2030. Importantly, those pledges were not been limited to developed countries; developing countries also formulated comparable targets. Net-zero transition requires drastic changes to not only energy but socioeconomic systems, and especially for developing countries this would require significant changes (Waisman et al., 2019; IDB and DDPLAC, 2019; Levin et al., 2020). It is also likely to entail reorganizing established economic, social and political structures. This poses greater challenges in developing countries, which continues to be most populous, rapidly growing, and still in need of effective governance. Therefore, net-zero transition in those vulnerable countries needs to be sustainable.

One of the main challenges to steering sustainable net-zero transition involves climate governance. While there is growing recognition that developing countries will have significant concerns related to governance and institution in net-zero transition by mid-century (Brutschin et al., 2021; IPCC, 2022; IPCC, 2023), much of the current net-zero and decarbonization research has a technological orientation (Pye and Bataille, 2016; IEA, 2021; Duan et al., 2021). Furthermore, existing studies highlighted that climate governance is one of enabling conditions to successfully implement climate actions and reduce emission reductions (Puig et al., 2018; Sridhar et al. 2022; Elliott et al., 2019); however, they lack a clear framework with quantification measurement of climate governance capacity toward net-zero transition.

The main objective of this research is to develop a framework of climate governance capacity that can accelerate net-zero transition in developing countries and quantify key components of it. The study is most concerned with climate governance at the national level of developing countries due to their lack of effective governance and institutions. Climate governance capacity in this research refers the ability of government institutions to plan, coordinate, develop, fund, implement, evaluate and adjust climate actions, policies and measures effectively toward net-zero transition. The scope/focus of this study is limited to the view of national governments.

2. Methodology

Existing studies including grey literature on climate governance are being conducted to develop a conceptual framework of climate governance capacity and qualitative data analysis is used to identify key components of the framework. We used “climate governance” and/or “institutional capacity” and/or “institutional arrangements” and “net zero transition” as a key word on Google scholar and Scopus to identify existing studies from 2010. Net-zero transition involves a wide range of stakeholders and economy-wide emission reductions; therefore, existing literature on governance of implementing sustainable development goals (SDGs) was also used. So far, we have identified around 20 studies that have discussed general climate governance and institutional framework to effectively implement climate actions and SDGs toward NDC targets, Paris Agreement 1.5°C goal and Agenda 2030, respectively.

3. Result

Figure 1 shows a preliminary result which summarizes key components of a conceptual framework of climate governance capacity. We have identified the common categories such as coordination, legal framework, stakeholder engagement, policy monitoring processes, financial resources, leadership and institutional structure.

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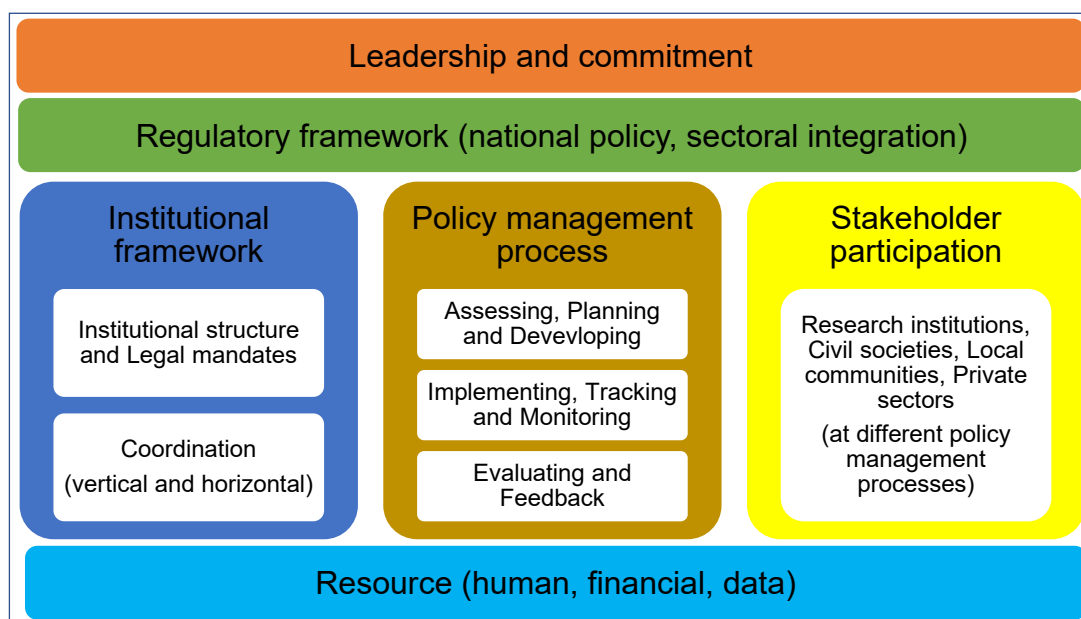


Figure 1. Key components of a conceptual framework of climate governance capacity

4. Discussion

As for the next step, we will develop indicators for each key component to measure and quantify climate governance capacity. Furthermore, we will apply the framework with quantification of measurement for developing countries as case studies to identify challenges and strengthening in different countries. This will provide important insights and lesson learned on how to develop and increase climate governance capacity at the national level, which enables developing countries to accelerate climate actions toward net-zero transition.

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