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Multi-Level Governance As A Climate Change Adaptation Strategy In The Coastal Cities In Indonesia And Thailand

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ABSTRACT

Multi-level global governance, or MLG, is now a framework for reducing the effects of climate change on a worldwide scale. The systemic and architectural aspects of multi-level global climate governance across many levels and sectors are examined in this article. Models and their real-world application at the international, regional, national, provincial, and city/district levels are discussed. Exploratory qualitative research employing a multi-case study technique is the methodology employed, with a focus on Bangkok, Thailand, and Samarang City, Indonesia. The data analysis technique uses the Nvivo-12 version of the tool. The findings demonstrated the following: (1) the multilevel climate governance system on climate change adaptation in coastal areas can be viewed as a structure that offers opportunities for policy innovation-based climate strategies; (2) each level of the global adaptation system has distinct roles, difficulties, opportunities, and ways to offer insights or conclusions as recommendations for policy; (3) the primary takeaway is that the MLG adaptation system is more controllable and scalable for mitigating climate change; and (4) the multi-sector and multi-actor system structure offers chances to rally diverse interests in support of climate policy objectives. This research contributes to improving the adaptation of vulnerable systems, policies and communities at all levels to the threat of climate change in two countries, Indonesia and Indonesia.

Keywords : Multi-Level Governance, Climate Change, Adaptation Strategy, Coastal Cities

INTRODUCTION

Several scientific kinds of research have found that cities in Southeast Asia are extremely susceptible to climate change's effects (Letchumanan, 2010; Mayer et. al, 2011). Indonesia is among the nations most susceptible to the effects of climate change because of its extensive coastline, dense population, and reliance on coastal industries (Tejakusuma, 2011; Wibowo & Supriatna, 2011). Rising sea levels, in addition to the potential for increased flooding, are also the prospect of damage by climate change that will impact these areas. The phenomena of floods, hurricanes, and other extreme weather-related natural disasters tend to damage this region in an unprecedented situation (Sinaga, et al., 2013; Syah, 2013). This situation may lead to coastal cities in Southeast Asia being threatened with food security and clean water supply.

The Southeast Asian region with a population of 600 million people is considered seriously threatened by the impacts of climate change, with most of the area being a coastal area. This Southeast Asian region has 170,000 kilometers of coastline, with around 80% of the population living in areas less than 100 km from the coast, including in several big cities. It is estimated that every year, the sea level rises by 1 to 3 millimeters. Hence, it is estimated that by 2100, the rise will have reached 70 centimeters. It means that there is a threat of being affected by major flooding in the event of sea level rise in coastal cities in the Southeast Asian region. The higher vulnerability to floods and other disasters will have a major economic impact (Eucker, 2014; Sutduean, et al., 2019).

Southeast Asian nations have already taken action in response to this actual threat scenario. For instance, the Indonesian government has created a National Action Plan on Climate Change (RAN-PI) document and directed all local governments to incorporate climate change consequences into policy decisions. A Regional Action Plan on Climate Change Adaptation and Disaster Risk Reduction (RAD-API & DRR) has been released as a follow-up at the regional level. Different approaches are still being taken to address climate change adaptation at the regency and local government levels.

Major Indonesian cities, such as Semarang, are aware of the effects of climate change, but institutional commitment has not yet kept pace with awareness. From an institutional standpoint, local governments' ability to react to central government institutional changes in the absence of established implementation plans. Developing an adaptation implementation strategy is particularly important for the Semarang City government, given the priorities in the 2021-2026 Semarang City Medium-Term Development Plan, one of whose strategic programs is to create a resilient city.

In another development, The Thailand Climate Change Master Plan 2015-2050 (TCCMP) was created by the Thai government. By 2030, the TCMMP seeks to cut greenhouse gas emissions by 20–25% below the baseline "business as usual" scenario. The national policy of the Thai government is to create an action plan for mitigating climate risk while preserving economic growth, agricultural productivity, and sustainable development. The climate policy and TCCMP have also been criticized by various parties for being overly ambitious, vague, ignoring the social and environmental context, and neglecting marginalized groups (Lebel et. al., 2009; Wongsa, 2015).

The agglomerated city of Bangkok - the capital of Thailand, is already experiencing the impacts of climate change. Its position on the coast of the Chao Praya River, which empties into the South China Sea, makes Bangkok a serious threat to flooding due to rising sea levels. Bangkok has become particularly vulnerable to the impacts of climate change and other environmental issues (Chienwattanasook & Prianto, 2018; Jermsittiparsert et. Al., 2018). In particular, due to the "three water problems" of runoff, rainfall, and sea level rise, as well as the low-lying topography of 1.0-2.0 metres, large areas of the capital are vulnerable to flooding (Marine, 2016). various people in Thailand—scientists, media representatives, locals, climate practitioners, monks, and others—have various perspectives on the reality of climate change. Therefore, there are various perspectives and facts regarding climate change (Vaddhanaphuti, 2020).

Since ASEAN is an area that would mostly bear the effects of climate change, the vulnerability phenomena has strategically positioned the region's role in climate change mitigation strategy (Prianto, et. al., 2021). The ASEAN's efforts since the 2007 Singapore Summit began when climate change issues were added to the list of priority themes. As of right now, the Kyoto Protocol—a critical global framework for climate change mitigation—has been ratified and signed by every ASEAN member state. Specifically, in 2012, the ASEAN Climate Change Initiative (ACCI), the Joint Response to Climate (JRC), and the ASEAN Working Group on Climate Change (AWGCC) were established. These stand for regional agreements based on multi-level governance to combat the effects of climate change (Hooge & Marks, 2001; D' Browski, et. al., 2014).

The multilevel governance (MLG) model is an approach to governance introduced by the European Union (EU) governance system in the early 1990s (Hooge & Marks, 2001; Janicke, 2017). This model requires the structuring of levels of governance at the local, national, regional, and global levels in solving common problems. As climate change has become a global agenda, the multi-level governance approach is relevant to assessing the adaptive capacity and

collaboration of governments at the local level. Semarang City Government and Bangkok Metropolitan Government have made efforts at the local and global levels to increase the city's resilience to climate change impacts. Malik et.al (2021) research shows that climate change has biophysical and socio-economic impacts on urban vulnerability, especially on coastal women's communities (Prianto & Abdillah, 2023). Meanwhile, pointed out that increased carbon emissions and other environmental threats, which trigger climate change - such as in the city of Bangkok, are also the result of the behavior of the tourism industry itself. The rapid growth of the tourism industry will further degrade the ecological conditions of tourist destinations in the ASEAN Region.

This paper will explore a multi-level governance model in climate change adaptation by urban governance actors, focusing on Semarang City, Indonesia, and Bangkok City, Thailand. The multi-level governance perspective will map the role and influence of each level of government, locally to globally, in accelerating and adapting to climate change impacts on coastal cities.

METHOD

This research employs a multi-case study methodology combined with a qualitative-exploratory approach. This study was carried out in Bangkok, Thailand, and Semarang and Makassar, Indonesia. The research focuses on how coastal areas in Thailand and Indonesia might adapt to climate change using the multi-level governance (MLG) paradigm. In the dynamics of stakeholder engagement, multi-level governance (MLG) is divided into five (five) levels: local, provincial, national, regional, and global.

The goal of this study is to examine how quickly coastal areas in Thailand and Indonesia are adapting to the effects of climate change at every level. First, widespread opposition and the need for international agreement limit the ability to make decisions about legally obligatory regulations at the international level. Second, it examines the regional political organizations' structures, such as ASEAN, the European Union, the Latin American Community, CELAC, or the African Union, that serve as a platform for the supranational expression of shared interests in the area. Third, the national government is currently the most powerful actor in the network for climate policy and is also a major participant in the MLG system. Fourth, the province level is where subnational or provincial areas have unique duties in carrying out national policies. It is also where global companies are involved, who typically compete for direct investment and sell unique products on the world market. Fifth, since the majority of federal regulations must be implemented in the city or district, the local community is crucial at this level. The NVivo 12 Pro program was used to process the study's results and analyze qualitative data.

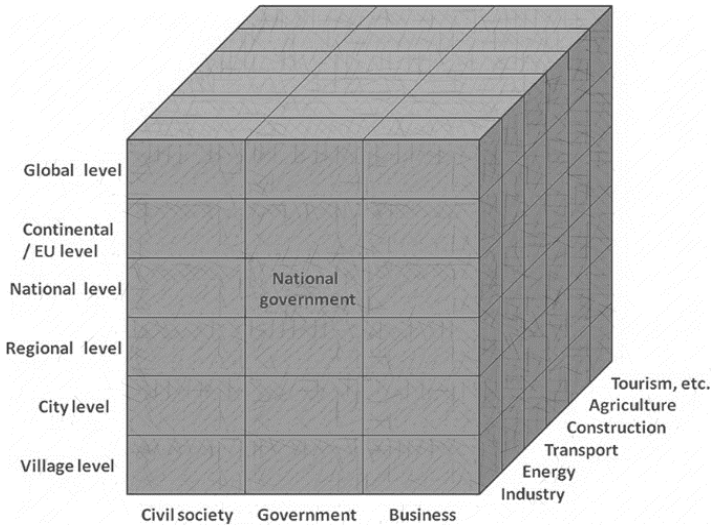
RESULTS AND DISCUSSION

1. Theoretical approach to multi-level governance

The issue of climate change has become a very popular buzzword in all sectors, including managers of public sector organizations. Natural phenomena because of climate change, in many ways, affected the performance of public organizations in implementing development and public services. Development management systems and mechanisms- planning, implementation, and evaluation - are also facing uncertainty. Government organizations must be able to build systems and mechanisms that are adaptive to climate change situations (Akmani & Wilson, 2011). A government system in which all parties view it as an innovation, learning process, and combination of technology to assist policy instruments rather than as a challenge is known as polycentric governance, or multi-level governance (MLG). (Sovacool, 2011). There are two types of MLG: the first is a multi-center model that involves several overlapping and interrelated

horizontal authoritative fields in particular problem settings; the second is a hierarchical approach that focuses on how various levels of government share authority and power. MLG is crucial as an environmental governance system for the following reasons: (1) The integrated nature of MLG from a global to a local perspective; (2) The specific role of each level, from a global to a local perspective; (3) Vertical interactions provide MLG with additional system potential; (4) Multiple stakeholders and sectors (Janicke, 2017). The two types of MLG and the relationship between participants, level of jurisdiction, and description of regulatory issues are shown in Figure 1:

Figure 1. Multi-Level And Multi-Sectoral Governance Models

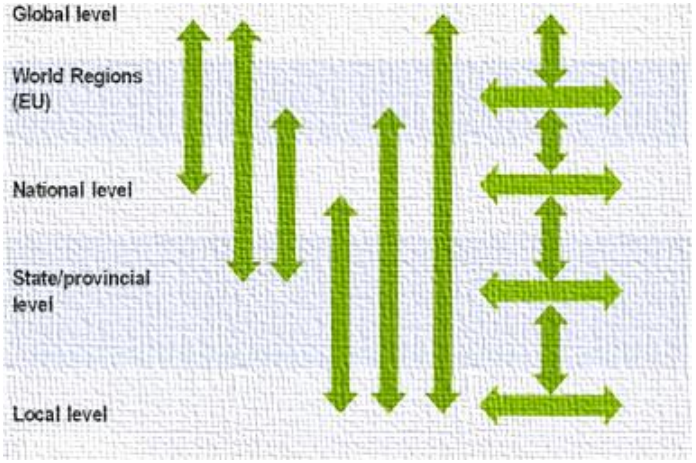


Source: Janicke (2017)

Figure 1 shows how a global approach is necessary for both climate protection and sustainable development. Nonetheless, national and local governments—which are a component of the international political system—are necessary for global governance. Every level, from global to local, has different roles. Every level of government has duties, possibilities, and challenges. Additionally, each level of government has unique horizontal dynamics, such as institutional cooperation, learning, and competition.

At the same time, the multi-level governance (MLG) model of climate mitigation is a feature of the global system, offering several avenues for interaction amongst entities working toward the same objective. It is a worldwide interactive learning environment with multiple avenues for engagement (Figure 2). In addition, it has many impulses (Janicke, 2015). While climate-related impulses may be modest on their own, they can combine to produce a powerful influence when they come from different parts of the system.

Figure 2. The Wide Range Of Possible Interactions In A Multi-Level Global Governance Model



Source; Janicke (2017)

There may also be variations in the horizontal dynamics at each level. Different roles can be played by networking, collaboration, benchmarking, and lesson descriptions depending on the context. For instance, interactions between cities are more frequent than those between provinces or international regional organizations like the Asia-Pacific Economic Cooperation (APEC) and the North American Free Trade Agreement (NAFTA). In recent years, the rural community level, which is the lowest level of the system, has also gained more significance.

Based on the existing theoretical background, efforts to develop a multi-level governance model in climate change adaptation programs will be reviewed from various sides and levels. Operationally, the concept offering will provide guidance and direction for modeling. Such as exploration and mapping in the following table 1.

Table 1. Mapping Of Roles Between Levels Of Government (Multi-Level Governance) On Climate Change Adaptation

Level of Governance	Roles
Global	The global climate policy agenda is determined by international organizations like the Commission on Sustainable Development and the United Nations Environment Program (UNEP), and it is subsequently communicated to member nations.
Region (ASEAN)	Playing role in supranational articulation, for the common good. Formulating solutions to problems in the region area
National	Has special responsibility in implementing national policies
Province and city/district	This is the level where most national regulations must be implemented
Community	Drivers of initiatives, technology, and eco-friendly lifestyles
Individual	Governance members and basic objectives of global climate knowledge (e.g. IPCC reports)

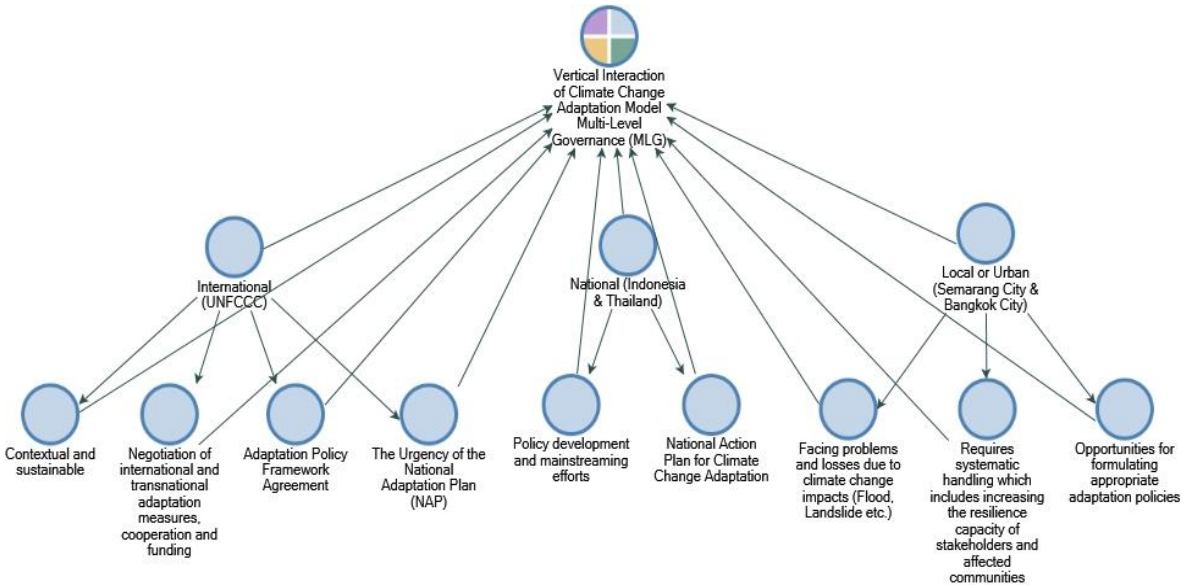
Source: processed by researchers from various sources

2. Multi-Level Governance (MLG)-Based Adaptation System in Indonesia and Thailand

The Ministry of Environmental Affairs' National Action Plan for Climate Change Adaptation has elevated the topic of climate change to the top of Indonesia's national policy agenda (Aisya, 2019). As a focal point for research on climate change adaptation and mitigation in Indonesia, the National Council on Climate Change was founded to carry out the country's action plan. In addition, the establishment of the Indonesia Climate Change Trust Fund (ICCTF) as a fund manager to address climate change challenges and integrate them into the country's development plan (IPCC, 2014).

In terms of vertical interaction, the MLG model's depiction of climate change adaptation shows how state actors are involved through the National Action Plan for Climate Change Adaptation, which gives local actors opportunities, and the international climate change regime, which sets the agenda. Municipal governments, like those in Bangkok, Thailand, and Semarang, Indonesia, are tasked with creating policies for adapting to climate change that are appropriate for the issues at hand. Local climate change challenges can also serve as a reflection of and a source of feedback for national and international climate change adaptation action negotiations.

Figure 3. Vertical Interaction Model In Climate Change Adaptation Based On Multi-Level Governance (MLG)



Source: Produced by researchers from various sources using Nvivo 12 Pro, 2024

As previously mentioned, the dynamic interaction of stakeholders (government, private sector, and civil society) at each level (local, provincial, national, regional, and global) is a characteristic of the multi-level governance (MLG) model. The following examples of climate change adaption models in coastal cities in Thailand and Indonesia will be compared:

2.1 Global level

At this global level, almost all cities in various countries, look at the MLG model for adapting to climate change impacts. As Janicke (2017) says:

"The global level of climate governance is influenced primarily by the United Nations Framework Convention on Climate Change (UNFCCC) regime, the United Nations Environment Program (UNEP), the Commission on Sustainable Development, or the knowledge base of the Intergovernmental Panel on Climate Change (IPCC). The G-8 at Heiligendamm in 2007 and the G7 summit in Elmau in 2015, also played an important role in global climate policy. The G20 has referred to climate issues on several occasions (eg in the St. Petersburg Declaration, September 2013). Security Council the UN has also addressed issues such as the security impact of climate change..."

Climate governance at the global level can simply be interpreted as having relatively weak formality characteristics due to the UNEP and UNFCCC secretariat and budget. in its relevance, in making binding policy decisions, legally bound by the preconditions of broad opposition and global consensus (Ulatowski, 2020). However, the climate negotiation process at least has a catalytic function. Adapting to the impact of knowledge bases at the global level provides key confidence, legitimacy, and relevant information for lower-level participants of a multi-layer governance system (MLG).

2.2. Regional Level

Southeast Asia is made up of eleven (eleven) countries, including Thailand, Laos, Cambodia, Vietnam, Myanmar, Malaysia, the Philippines, Indonesia, Brunei, Singapore, and Timor Leste, with a combined population of 639 million. With the exception of East Timor, all of these countries are members of the Association of Southeast Asian Nations (ASEAN), and as such, a shared goal of the Association is to tap into this market, with GDPs of US$2.55 trillion in 2016 (ASEAN 2017). Southeast Asian Nations. The Economic Community of ASEAN. (AEC), as the seventh-largest comprehensive economic zone entity in the world. Many ASEAN countries have achieved remarkable economic success in the last 30 years, accompanied by development, land-use change, and urbanization. Some of the world's most populated cities are located in this region. The second and fourth most populous countries in the world, Indonesia's Jakarta metropolitan area (30.5 million) and the Philippines' Manila metropolitan area (24.1 million), together account for 37% and 17% of each nation's total GDP, respectively. The poverty rate in the region has decreased dramatically in recent decades as a result of investments in infrastructure, education, and the opening of foreign markets. Extreme poverty in East Asia and the Pacific (defined as 1.90 US dollars per day) has fallen from 29.1% of the population in 2002 to 7.2% in 2012. However, this 7.2% represents 166 million people living in poverty. still living in poverty. poor. Truly poor, there are millions of people whose standard of living is slightly higher than theirs (Mac Clune, 2017).

ASEAN has prioritized climate issues since the 2007 ASEAN Summit in Singapore. However, discussions on climate change at regional meetings have not been carried out consistently. ASEAN countries have not raised the issue and taken concrete actions to achieve their Nationally Determined Contributions (NDCs) targets, as proof of their commitment to climate change mitigation. Climate change that is not influenced by geopolitical dynamics must be solved with a transnational approach. Close cooperation between ASEAN countries is very necessary considering that ASEAN's geography and

economy influence each other and are very vulnerable to the impacts of climate change. The lack of commitment by member states to climate action and cooperation could threaten the future of the region (Wongsa, 2015; Aisya, 2019).

From a regional perspective, political institutions such as ASEAN, the European Union, the Latin American Community, and CELAC or the African Union play an important role in regional articulation. Regional political institutions become supra-national forces for the common good and build solutions to problems in the region (Janicke, 2015; Jermsittiparsert, et. al., 2021). This regional political institution plays a role in providing policy recommendations related to solutions to the problem of climate change impacts in coastal areas at the national level. Such as health care and poverty alleviation in urban coastal areas. Such policies can be accelerated at a lower level, as an implementing institution for policies dealing with the impacts of climate change (Malik, et. al., 2021), such as in coastal areas in Semarang City, Indonesia, and Bangkok City, Thailand.

2.3. National Level

The primary obstacle facing climate policy adaptation governance, particularly for national governments and climate institutions, is the disparity between the scope of governance and the scope of action (Kurniasih, et al., 2023). Global north-based international non-governmental organizations (NGOs) highlight the value of approaching the development context with an open mind. While the importance of local knowledge has not received much attention, it is crucial to guarantee the sustainability of interventions in the governance of climate adaptation. People who are respected locally and contextually important might nonetheless be influenced by international representation, often without realizing it (Mac Clune, 2017).

At the national level, the central government plays a crucial role in multilevel governance (MLG). Because of its central location, top-down and bottom-up viewpoints might differ greatly. High-level national and global governance is extensive and typically has a broad scope. Disconnecting the timeline of climate change from the timescale of local interests is the primary obstacle facing climate adaptation today. (Prianto and Abdillah, 2023). Without a clear trend, there is a gap that needs to be filled between the needs for long-term adaptation and the present. The primary issue at the national level is how to finance climate change adaptation due to the effects of the changing climate in coastal cities like Bangkok, Thailand, and Semarang, Indonesia. National research is dependent on funding for mitigation methods of climate change at the provincial and local levels in addition to adaptation.

Therefore, reducing point emission sources, which are determined by the global quantity of carbon in the atmosphere—though regional and national emissions can be inferred to some degree from these global measurements—is how mitigation is carried out. The obvious problem is that funding for climate adaptation must be relevant locally; when communities adjust to the effects of climate change, they must move proactively to address those effects in order to satisfy local demands. Here, adaptability is mostly a local problem. The task facing the climate community is to establish a connection between the global and local governance of adaptation funding.

2.4. Provincial Level

Locally, Southeast Asian countries are seeing the devastation and disappearance of coral reef ecosystems as a result of climate change. Significant effects include declining fish stocks, lessening the allure of travel, and increasing the susceptibility of urban coastal towns to storm threats. Southeast Asian nations typically have comparatively large population densities along their coasts. Because of this, the area is extremely susceptible to things like increasing sea levels, harsh heat waves, stronger tropical cyclones, and acidity and warming of the water. In Southeast Asia, excessive heat, particularly with high heat indices, can also have an impact on rural inhabitants and industrial output. Like the Philippines' coconut farmers' crops, which Typhoon Haiyan wrecked (Mac Clune, 2017).

When it comes to addressing the effects of climate change, there is still a gap between local requirements and the international financing channels allotted to provinces and cities. When an obvious need arises, national authorities are able to move swiftly in contrast to international institutions. Thailand's Nationally Determined Contribution (NDC), the Ministry of governmental Development Planning, and Indonesia's Climate Change Trust Fund (ICCTF) are two instances of governmental initiatives to finance climate change challenges in Southeast Asia. There are obstacles in the way of both initiatives. While the ICCTF struggles to undertake more institutional work and adhere to international financial rules, the Thailand NDC struggles to meet local adaption criteria and transfer funds. They have advanced significantly in addition to global financial institutions.

At the provincial level, in addition to national funding, an increasing number of implementing entities have direct access to global funding. The provincial government is therefore strongly advised to expand its global access, especially to non-state institutions. The aim is to address barriers to cooperation between countries to encourage broader adaptation action in cities and districts. This will enable more innovation and adaptation of climate change adaptation strategies at the provincial level.

2.5. City/District Level

Examining the city-level adaptation initiatives to climate change in coastal cities using a multi-level governance model in Bangkok, Thailand, and Semarang, Indonesia. At the municipal governance level, the MLG model incorporates interactions between government, private, and civil society players to promote urban climate resilience. One initiative to train the impoverished and vulnerable is the Asian Cities Climate Change Resilience Network (ACCRN) program. In order to address the effects of coastal climate hazards both now and in the future, ACCRN offers relevant resources, tools, and techniques. fostering collaborations among stakeholders across the whole program lifecycle in the Indonesian coastal region of Semarang City (Septiarani, 2021).

This program undertakes the development of coastal restoration activities and alternative livelihoods. The Mangrove ecosystem restoration program is carried out by increasing the communication capacity of climate information in coastal communities. During 2015, five community groups were trained to understand the climate information presented (Septiriani, 2021). This climate information provides information for fishermen and pond farmers such as weather information and daily rainfall. In practice, women's groups in the *Kelurahan Mangunharjo* and *Kelurahan Mangkang Wetan* have used climate information to predict the processing time of their products: shrimp

crackers and fish crackers. The main concern of mangrove restoration activities is the involvement of community groups (ACCCRN, 2010).

There are at least two elements in the organization of the implementation of the ACCCRN program. ACCCRN encouraged the formation of a Climate Change Working Group which was later legalized through a Mayor's Decree. The Working Group is responsible for implementing ACCCRN programs. The task force, which was later referred to as the City Team, consisted of individual representatives from irresponsible government (related agencies), representatives from non-governmental organizations (NGOs), and academic experts. The City Team is then responsible for the ACCCRN program based on the results of the plans that have been prepared. For program implementation, each sub-program in ACCCRN is implemented by the Project Implementation Unit (PIU). Usually, a program consists of only one institution, but in ACCRN programs, many implementing agencies with different expertise are incorporated and managed under the PIU (Septiarani, 2021).

The Thai government has taken a different practice to adapt to the impacts of climate change in the coastal areas of Bangkok City. Governments, the private sector, and civil society are beginning to respond to the challenges posed by climate change (Label, et. al. 2009). In Thailand, flooding is a normal part of the seasonal cycle and is seen as beneficial for several ecosystems and livelihoods. Floods will only be a disaster if the severity is beyond normal. Flood events pose risks and can cause disaster if the impact is broad and in the medium and long term. Regime change and stakeholders determine the status of floods, they have the authority to define what is normal and what is not. The dynamics of stakeholders are the most important variables for institutional development and disaster adaptation in the city of Bangkok, Thailand. A flood regime is a historically experienced pattern of variability in the onset, duration, extent, and frequency of impacts due to climate change (see table No. 1).

Table. 2 Various Problems As A Result Of Climate Change In Bangkok City, Thailand

Type of disasters	Impact of climate change on coastal areas	Factors affecting the flood regime	Vulnerable and affected groups	Unfair adaptation
Riverbank overflow	Longer rainfall and more intense cyclonic depression will increase bank overflow	• Cutting trees in the upper river area for agriculture and urban development • Irrigation scheme • Structural failure - in dam and embankment structures	Settlements, coastal communities, industry, infrastructure, and agriculture	Diversion of water to farmers' fields for the protection of urban areas, carried out without compensation
Coastal flooding	Increased risk of coastal flooding due to rising sea levels	Land subsidence due to groundwater pumping	Coastal farming and fishing communities	Embankment to protect hotel & property creates the risk of erosion and flooding

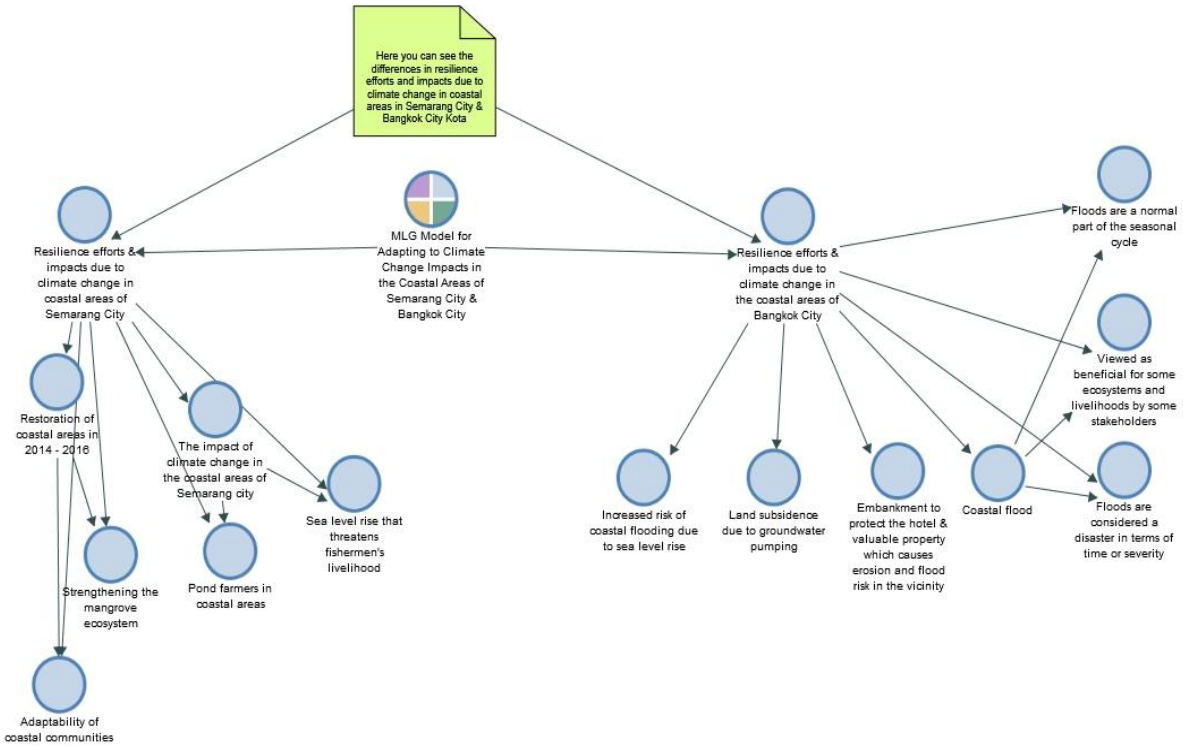
Source: processed by researchers from various sources, 2024

The severity of the impact of climate change depends on the interaction of the government, the private sector, and civil society in Thailand's coastal areas. The differences between provinces in Thailand can be seen from the differences in the current climate: from dry and seasonal conditions in northeastern and northern Thailand to the less humid tropical climate of Thailand's southern peninsula. Predictions of future rainfall patterns are highly uncertain, and current MLG modeling work is expected to provide reliable information. Great uncertainty impacts how to articulate challenges in one place and how to respond appropriately and strategically in another.

3. Acceleration of coastal climate governance in Indonesia and Thailand

Climate governance players have potential thanks to multilevel and multisectoral systems. Although it offers a wide range of systemic potential that can be purposefully triggered, it is not automatic. Conditions for the establishment of a global multi-level climate governance system must include the presence of well-established actors and their tactics. According to Wurzel and Connelly, eds. (2010), this model calls for a type of leadership based on knowledge, abilities, and incentive to act in a network. It's critical to understand that MLG is a reflective approach that welcomes fresh knowledge (Voss and Bornemann, 2011).

Figure 4. The Strategy Of Efforts And Impacts For Climate Change Resilience In Semarang City & Bangkok City



Source: Produced by researchers from various sources using Nvivo 12 Pro, 2024

Figure 4 shows that the challenges that exist in the coastal areas of Semarang City and Bangkok City, as well as the resilience efforts that have been carried out and the disaster perspectives of the stakeholders. In the city of Semarang, there is a periodic increase in seawater in the coastal area and the efforts that have been made are mangrove restoration for 3 years in 2014-2016. In the city of Bangkok, due to high seasonal rainfall, flooding occurs in the

coastal areas of the city. However, the flooding in Bangkok City is not considered a disaster, until the actual flooding that occurs has a severe impact. Floods in the city of Bangkok are decided by the stakeholders (government, private, civil society) and also bring benefits to ecosystems and livelihood opportunities for certain communities (Wongsa, et. al., 2018). Thus, the strategies and resilience efforts carried out by the city of Semarang and the city of Bangkok have formed a different multi-level governance (MLG) model.

Multi-level governance frameworks ought to be aspirational yet grounded in practicality in specific areas. Semarang is one of the major Indonesian cities that is aware of the effects of climate change, but institutional commitments that are appropriate have not been made despite this awareness. In general, when it comes to institutional changes, which happen quickly from the global to the local level, local governments lack an implementation strategy. The Semarang municipal Medium Term Development Plan (RPJMD) 2021–2026's strategic and priority areas are where the Semarang municipal government has integrated the adaptive implementation strategy.. In a different context, the Thailand Climate Change Master Plan (TCCMP) 2015–2050 was created by the Thai government. In comparison to the fundamental "business as usual" scenario, the TCMMP seeks to cut greenhouse gas emissions by 20–25% by 2030. It is expected of provincial and local governments to create plans for mitigating climate risk while preserving their competitiveness in terms of economic expansion, agricultural output, and sustainable development. Many parties have criticized TCCMP and climate governance policies for being overly ambitious, ambiguous, disregarding the socio-environmental context, and neglecting underprivileged populations.

At every level of acceleration in the multi-level governance model, institutions as authorities, rules and procedures influence the many actors who interact to make decisions and take actions. These include policies and laws, organizational arrangements, and coordination principles. Institutional capacity determines whether a city can be adaptive in the face of developments or pressures, shocks, and societal expectations of climate change impacts. It can be concluded that adaptive institutions are considered sufficiently capable to face the challenges of climate change. At the same time, it was found that institutional innovation is needed to open opportunities for cities to be better prepared for climate change impacts and risks.

CONCLUSION

The foregoing study leads to the simple conclusion that the coastal cities of Thailand and Indonesia should use the following multi-level governance (MLG) model to address the effects of climate change:

At the 1992 United Nations Summit in Rio de Janeiro, a new paradigm for promoting the widespread worldwide mobilization of diverse actors in sustainable development was unveiled: multi-level global governance. Climate governance has been included in this model. This model has developed into a dynamic, global system with stability mechanisms, logic, and dynamics. Multilevel governance is creating chances for each level to respond to the effects of global cities' climate change more quickly.

Every level of the multi-level governance (MLG) model. First, the absence of funding and the UNEP and UNFCCC secretariats make multi-level governance (MLG) at the international level extremely formal but also weak. Second, at the regional level, political organization institutions can represent the region in addressing the issue of climate change impacts in coastal areas of world cities like Bangkok, Thailand, and Semarang, Indonesia. However, decision-making is also limited by widespread opposition and requirements of global

consensus. This political institution is responsible for offering policy recommendations related to national solutions to issues pertaining to the effects of climate change in coastal areas; third, if provincial funding opportunities, national funding opportunities, and direct access to global financing are available, it is strongly advised to expand global access as this can stimulate a greater variety of adaptation actions in the local area. At the provincial level, measures include encouraging greater innovation and adaptation in tandem with the dynamics of climate change institutions; fourth, a mangrove planting program is in place at the city level in an attempt to restore coastal areas in the face of climate change consequences. Every stakeholder at the multi-sector and multi-actor levels is involved in this endeavor. The coastal zones of Bangkok City and Semarang City will have a framework for addressing the negative effects of climate change thanks to the multi-level governance (MLG) model. Efforts to strengthen the resilience of coastal cities can coexist with the coastal mangrove restoration program.

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