App. Envi. Res. 37(2) (2015): 59-74

Applied Environmental Research

Journal homepage : http://www.tci-thaijo.org/index.php/aer

An Institutional Analysis of Climate Finance in Thailand

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Article History
Submitted: 12 December 2014/ Accepted: 2 March 2015/ Published online: 15 June 2015

Abstract

While the institutional infrastructure to coordinate climate change policy in Thailand already exists, previous studies have identified an important gap in this infrastructure. An institutional arrangement/coordinating mechanism is needed to oversee coordination of resource allocation and utilization among government agencies in order to achieve the national goal of a low carbon and resilient society. This paper reviews current policies and institutions related to climate change and recommends a new Sub-committee on Climate Finance be established under the National Climate Change Committee (NCCC). Alternatively, the existing sub-committee could be renamed as a Sub-committee on Climate Finance and Planning. Having a specific coordinating mechanism on climate finance would facilitate the government's oversight of allocation of financial resources, tracking and monitoring of resource use, and also serve as a check point for resource allocation to prevent redundancy in terms of activities and allocated climate change funds. This institutional proposal may also be relevant and applicable to other developing countries facing similar challenges.

Keywords: Institutional analysis; Climate change; Climate finance; Governance; Thailand

Introduction

Climate change (CC) is of increasing concern to the entire international community. For Asia and for Thailand, the impacts of climate change are already evident, and are expected to be especially serious in the near future. Thailand's long coastline (2,615 km) leaves the country highly vulnerable to CC impacts. This is especially true for the country's capital and major ports, which are located in low-lying coastal areas. A recent study [1] indicates that Thailand is among the top ten countries (ranked 9th) most affected from 1993 to 2012, based on the Long-Term Climate Risk Index, and ranks highest for total economic loss during this period. The country's worst floods in 2001 contributed to the country vulnerability score with an estimate of 1.425 trillion baht (US$46.5 billion) in economic loss [2].

Thailand faces great risks from the impacts of CC, but the country is also one of the world's main contributors to global warming. 2010 data from the World Resource Institute [3] indicate that Thailand ranked 24th out of 186 countries globally in terms of total greenhouse gas emissions. The country's total greenhouse gas (GHG) emissions were estimated at approximately 380 $MtCO_2e$[1], placing Thailand as number two in ASEAN after Indonesia. For the 1990-2007 period, Thailand's compound annual growth rate of CO_2 emissions per capita was as high as 5%, compared to the world average of 0.4% per year [4]. CO_2 emissions from Bangkok alone were found to be almost on a par with London, even though the size of Bangkok's economy is around one-tenth that of London. One study [5] showed that in 2005 Bangkok released about 43 million tons of CO_2 compared with 44 million tons in London.

Thailand is therefore facing growing pressure to reduce GHG emissions. Even though Thailand is not currently obliged to limit its emissions under the expired Kyoto Protocol, with a new international agreement anticipated, Thailand and other developing countries will eventually be obliged to reduce their GHG emissions. According to the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR4), developing countries' emissions must show a "substantial deviation from baseline in Latin America, Middle East, East Asia and Centrally-Planned Asia" in 2020, to contribute to stabilizing the concentration of CO_2 equivalent in the atmosphere at 450 ppm [6]. To comply with its forthcoming obligation under the United Nations Framework Convention on Climate Change (UNFCCC), Thailand is planning to announce its national pledge to reduce emissions in energy and transport sectors by 7%-20% from Business-as-Usual (BAU) below 2005 levels by 2020.

In addition, the Thai Government has developed policies and strategies to cope with the potential and real threats posed by climate change. In November 2014, the National Climate Change Committee (NCCC) approved the Climate Change Master Plan (CCMP) (2014-2050) to set the national agenda for climate change activities in the country. The CCMP outlines the mechanisms and measures that will have to be undertaken by various agencies of the Government. Such measures will include both mitigation of GHG emissions and enabling the country to adapt to adverse CC impacts.

Although the CCMP was approved by the NCCC, it does not clearly discuss the climate finance mechanism. Given past experience on the implementation of various national plans, the enactment of national plans and strategies does not *per se* guarantee sufficient budget allocations to implement them. Also, climate finance comes from various sources: international, national, extra-budgetary, and private funding. As such, it is difficult to determine whether existing sources of funding are sufficient. The uncertainty in terms of budget allocation will obstruct the country from achieving the goals set out in the plan.

To prepare for climate mitigation and adaptation, a well thought-out strategy for financing climate change responses is instrumental in enhancing Thailand's readiness to address climate change challenges. While the importance of climate finance and investment is recognized, there is currently limited understanding in terms of institutional arrangements/coordinating mechanisms to track budgetary funds allocated to CC activities, to advise the government on how to streamline budget allocation, and to effectively

[1] Million tons of CO_2 equivalent.

utilize limited resources. This paper reviews the existing institutional arrangement, and assesses the needs and possibilities for establishing such a mechanism which could serve as a check-point to track and monitor the domestic and international resources allocated for climate change responses. Lessons learned will prove useful to Thailand as it faces future climate change challenges, and can also be referenced by other Southeast Asian countries facing similar situations.

Findings from previous studies

The Climate Public Expenditure and Institutional Review (CPEIR) [7] conducted in January -June 2012 was one of the few known studies in Thailand which aimed to review public spending on climate change activities, and assess the extent to which expenditures were supported by existing policies and institutional responsibilities. The CPEIR found that between 2009 and 2011, CC activities were allocated an average of 2.7% of the government's total budget (about 52 billion baht or $US 1.7 million per year). The CPEIR also found that 137 agencies under 14 Ministries were involved in the delivery of CC activities within the government, but that the majority of the allocated budget (more than three quarters) was concentrated in only ten agencies, with three agencies in particular receiving more than half of the allocated budget (namely, the Royal Irrigation Department received 37.8%, the National Parks, Wildlife and Plant Conservation Department was allocated 10.7%, and the Department of Water Resources received 7.5%). Moreover, the CPEIR found that the majority of funds allocated for CC were allocated to projects which only have climate resilience and climate mitigation as secondary objectives such as water distribution and storage projects.

The CPEIR study also identified gaps and constraints that would need to be remedied in order to develop an effective and coherent response to CC in Thailand. One major gap identified is related to institutional arrangements and coordination mechanisms. While the institutional infrastructure to coordinate CC policy in Thailand already exists, the CPEIR found that an important missing piece is an institutional arrangement/coordinating mechanism to oversee coordination on how resources might be allocated and effectively utilized among government agencies. This paper explore the potential for establishing an institutional arrangement/ coordinating mechanism that could help track and monitor the flow of domestic and international resources allocated for CC activities in Thailand.

Analytical framework

As the purpose of this paper is to provide an institutional analysis of the existing landscape of climate finance, this paper draws on, and adapts to suit the context of this work, the institutional analysis frameworks provided by Bandaragoda [8] and IFAD [9], and the framework for assessing climate finance readiness provided by United Nations Development Programme (UNDP) [10].

In light of this, this paper adopts the broad definition for the term 'institutions' as used by Bandaragoda [8], which covers the three pillars of an 'institutional framework,' namely policies, laws, and organizations. In analyzing the existing institutional infrastructure, the paper draws on the institutional analysis guidelines suggested by IFAD [9], which recommends clearly identifying the desired results, then mapping the results to the actions that generate these results and understanding the institutional context. In identifying the desired results, we draw on the work on the readiness of climate finance by UNDP [10], which defines climate finance readiness as the 'capacities of countries to plan for, access, deliver, and monitor and report on climate finance, both international and domestic, in ways that are catalytic and fully integrated with national development priorities and achievement of the MDGs'. Furthermore, to map the desired results to actions, and to understand the institutional context, it is important to identify the key actors, understand their roles and responsibilities, know the rules and incentives that influence them, and understand the supporting resources for achieving desired outcomes. In this study, we tried to identify these factors with the objective of assessing whether the existing institutional arrangement is able to create readiness in terms of climate finance in Thailand.

Data collection

Since this study is an institutional analysis, the research methodology used in this study is a qualitative one. The research activities under this study included documentary research, interviews, and a focus group meeting. The authors also reviewed related secondary literature, as well as the experience of countries such as Indonesia and Cambodia, in regard to institutional arrangements for climate finance [7, 11, 12, 13, 14]. To gain insights on the effectiveness and gaps of existing institutional mechanisms related to climate finance, the authors conducted interviews with the relevant government agencies, (see list of interviewees in Annex). In addition, a focus group of multi-stakeholders, 25 delegates from concerned agencies and academic institutions, was held on 17 February 2014 to give opinions and suggestions on the proposed institutional options.

Institutional analysis

This section applies the institutional analysis framework to assess the existing institutional landscape, identify gaps and assess needs for an institutional arrangement for climate finance to enhance Thailand's readiness for climate finance as defined by UNDP [10].

1) Overall structure of institutional setting for CC actions

The existing institutional setting for CC actions in Thailand can be classified into three tiers: national level institutions, ministry-level mechanisms, and local institutions.

National level institutions

As climate change is a cross-cutting issue that spans the range of economic and social aspects, a national level committee- the National Climate Change Committee (NCCC)- , has been set up under the Prime Minister's Office (PMO) to coordinate CC issues. The NCCC was established by Order of the Office of the Prime Minister on Climate Change Implementation B.E. 2550 (2007). In its current form, the NCCC is chaired by the Prime Minister with the Minister of Natural Resources and Environment (MoNRE) serving as deputy chairperson. Other committee members include Permanent Secretaries from relevant ministries, as well as the National Economic and Social Development Board (NESDB).

The NCCC's responsibilities include formulation of national CC policy, coordination of CC strategy, and determining the country's position in international negotiations under the UNFCCC. The NCCC also has the remit to monitor line ministries' implementation of activities pertaining to CC, which includes budget allocation to line ministries. To support the work of the NCCC, the Climate Change Management and Coordination Division (CCMCD) was established to serve as the Secretariat to the NCCC. CCMCD is under the Office of Natural Resources and Environmental Policy and Planning (ONEP) within MoNRE.

Three main sub-committees have been set up under the NCCC to address specific aspects of climate change including the Academic Sub-Committee, the Negotiation Sub-committee, and the Nationally Appropriate Mitigation Actions (NAMA) Pledge Sub-Committee (see Figure 1).

A coordination system established under the NCCC is the Climate Change Coordinator (CCC) mechanism. CCCs are designated officers charged with the task of communicating and coordinating climate-related efforts between their own agencies and the NCCC. There are a total of 30 agencies with designated CCCs. There is one CCC in each of the 19 ministries, and 11 CCCs in non-ministerial government agencies such as NESDB, the Bureau of the Budget, the Council of State, the Royal Thai Police, and Bangkok Metropolitan Administration. Thus, CCCs have comprehensive coverage of all government agencies, and provide a platform for coordinating climate-related activities both between the NCCC and the respective government agencies and among government agencies themselves. However, interviews with experts on climate change in Thailand revealed that, while the CCC could potentially be a powerful tool for coordination among agencies, it has so far been under-utilized. Thus far, the CCC has had no clear assignments, no regular meetings, and as the designated CCC also has other responsibilities, there are limited incentives for the CCC to fulfil the tasks required for this role.

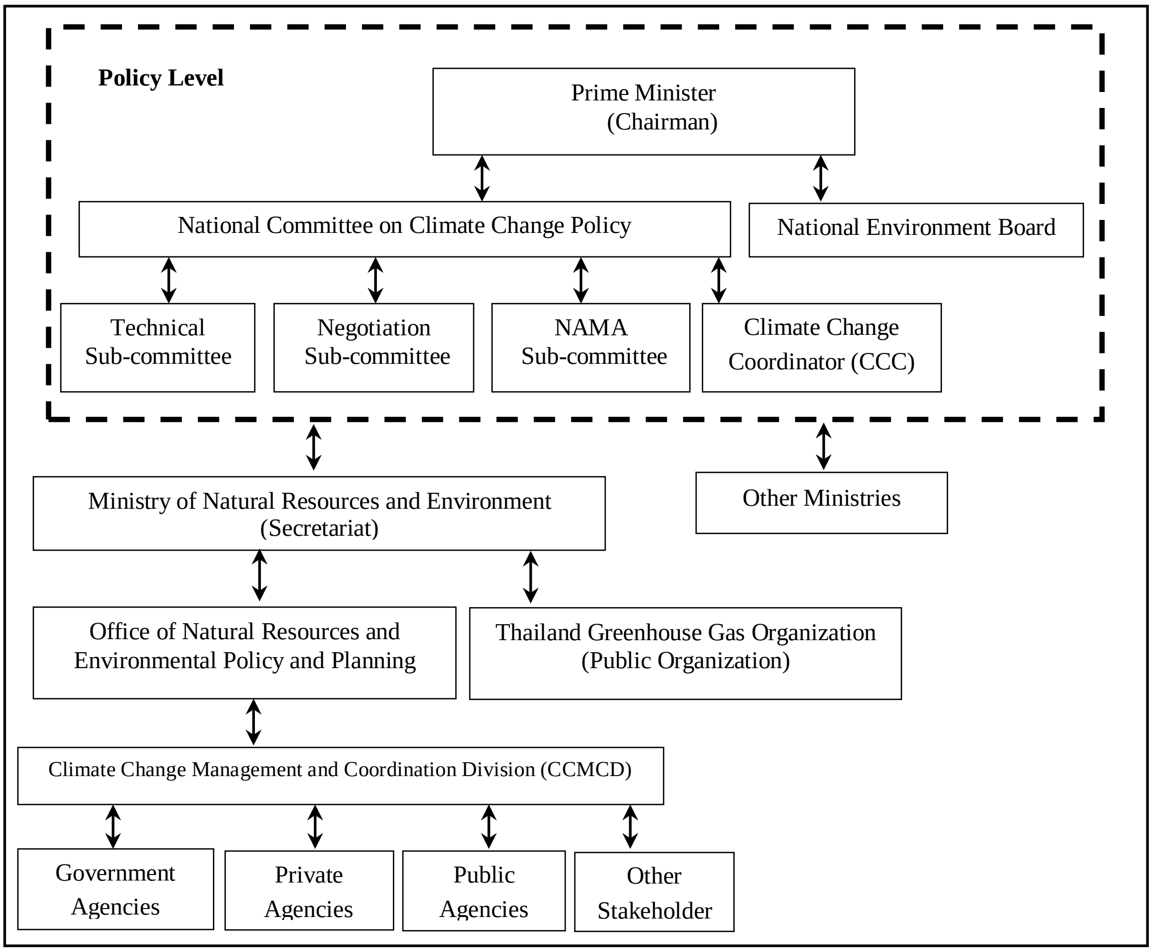

Figure 1 Institutional mechanisms for climate change response in Thailand
Source: Adapted from UNDP (2012a) Thailand CPEIR Summary.

In addition to the NCCC, the NESDB is one other government agency that is concerned with climate change. In 2010 the NESDB published its Master Plan on Climate Change in Thailand, 2010-2050: Energy Prices and Food Security. The Master Plan set goals of sustainable development by way of a low carbon society and identified 5 strategies for achieving its growth target in a sustainable manner. In addition to this, NESDB's task is to support and track the implementation of the country's CC strategy. Furthermore, CC has been highlighted as an important strategy in the Eleventh National Economic and Social Development Plan (2012–2016).

Another national-level player with more autonomy than most other government agencies is the Thailand Greenhouse Gas Management Organization (TGO). Established in 2007 as a public organization under MoNRE, TGO's purpose is to act as the national implementation agency for reducing GHG emissions. It is the Designated National Authority of the Clean Development Mechanism (DNA-CDM) office. TGO also provides technical assistance and information related to GHG emissions in Thailand, proposes ways to manage GHGs, and assesses the mitigation potential in different sectors.

Ministry-level mechanisms

Several ministries have direct roles to play in both CC mitigation and adaptation activities. Key ministries include the Ministry of Energy, Ministry of Industry, Ministry of Transportation, Ministry of Agriculture and Cooperatives, and the Ministry of Natural Resources and Environment. Some ministries have set up committees dealing directly with CC, have set plans or strategies related to CC, and have begun implementing the ministry's own plans and strategies. For example, the Ministry of Agriculture and Cooperatives drafted plans to mitigate the impact of CC on agriculture, and established a committee to draft strategies and an implementation plan to address agriculture-related CC issues [15].

Local-level institutions

Although local institutions would have the most direct role in implementing both mitigation and adaptation policies, at the moment there are no designated organizational structures at local level to implement tasks related to CC. Implementation of CC activities at the local level is done by existing local governmental institutions with the National Municipal League of Thailand and the Sub district Administration Organization Association of Thailand acting as focal points at local level between the local administrative organizations and the central government and/or external agencies.

2) Institutional setting for mitigation action

According to Thailand's Second National Communication to the UNFCCC, which uses greenhouse gas inventory data from 2000, the energy sector is identified as the most important emitter of the main greenhouse gases (except methane) in the country, accounting for 70% of all GHG emissions [16]. The second largest emitter by sector is agriculture and live- stock, which emits 22.64% of all greenhouse gases GHGs the country. However, ONEP [16] noted that total emissions from this sector remain small and the sector is considered as an "emitter for survival." Thus, mitigation action in Thailand should be targeted primarily at the energy sector.

Mitigation measures in Thailand are implemented through a combination of both market-based and non-market-based approaches. Both approaches are adopted in the energy sector. According to the 20-Year Energy Conservation Plan (2011-2030), the Alternative Energy Development Plan (2012-2021), the Power Development Plan (2012-2030), and other key documents in the energy sector, command and control measures are identified alongside incentive-based measures in order to promote energy conservation and spur the use of renewable energy. However, it should be noted that despite the long-term planning and the identification of various measures to reduce energy consumption and promote the use of renewable energy sources, government measures also exist which are contrary to energy conservation goals. These include price controls on certain fossil fuels and tax breaks for purchasers of new automobiles that meet the government criteria effective from September 2011 to December 2012.

The market-based approach to mitigation in Thailand is overseen by TGO which grants Letters of Approval to proposed GHG mitigation CDM projects. In addition, carbon reduction activities are being promoted by TGO through the creation of two voluntary carbon markets. The first of the two takes a project-based approach to emissions reduction, and is known as the Thailand Voluntary Emission Reduction (T-VER) scheme. T-VER has been in operation since the end of 2013. A sister program to T-VER is the Thailand Voluntary Emission Trading (T-VET) scheme. Although voluntary like T-VER, T-VET differs from T-VER since the market is based on a cap-and-trade model, unlike T-VER which is project-based. The establishment of these voluntary carbon markets will expand the scope of TGO's work from primarily dealing with CDM projects to overseeing the voluntary carbon markets, which entail dealing with tasks such as establishing a GHG , inventory, registry, and monitoring, reporting and verification activities (MRV). Nonetheless, if successful, T-VET and T-VER would open up a new source of climate finance that lies outside the government budget.

For mitigation measures funded through the market, there is not much need for public financing from the national budget as private actors participating in CDM and voluntary emissions markets are undertaking such schemes based on expected payoffs from participation. However, measures to reduce GHG emissions in the energy sector identified under the various energy plans would require the use of both budgetary and extra-budgetary funds. For the energy sector, the Energy Conservation Promotion Fund could be tapped into to provide funding for mitigation measures. The establishment of a 'Thailand Carbon Fund' that replicates the structure and activities of a mutual fund as proposed by TGO would also open up an additional channel for climate finance in Thailand. However, in practice it remains to be seen whether the Thailand Carbon Fund will become a reality.

For mitigation measures that are not funded through the market, such as the promotion of renewable energy and the encouragement of energy conservation by government agencies, adequate public budget allocations are required. However, a functional analysis of the climate budget in the CPEIR study found that most the budget was provided to address water resource issues such as distribution (17.7%), storage and irrigation (17.3%), conservation, development and restoration of water resource (5.2%). In comparison, promotion of renewable energy only accounts for 1.5 of the allocated climate budget.

For mitigation and mitigation-promotion measures undertaken by government agencies, steps could be taken to coordinate among various relevant agencies to reduce redundancy in budget requests and increase the chances of being allocated budget. An example is the joint committee on 'Collaboration in Applying Science and Technology for Alternative Energy Development' co-chaired by the Permanent Secretaries-General of the Ministry of Science and Technology and the Ministry of Energy. Comprised of the relevant Ministries and departments, budget proposals for alternative energy projects are streamlined to avoid duplication before being presented to the Bureau of the Budget (BoB). The committee has received considerable success in securing budget allocation in 2011, and serves as an example of collaboration in climate finance requests in Thailand [7].

3) Institutional setting for adaptation action

At the national level, the Office of Natural Resources and Environmental Policy and Planning (ONEP) serves as the national focal point for coordinating government agencies, private entities, non-governmental organizations, and other relevant stakeholders in the development of a coherent adaptation strategy. ONEP also serves as the Secretariat to the NCCC, which is directly responsible for developing the national agenda for both mitigation and adaptation activities.

While ONEP's role at the national level is undisputed, the cross-cutting nature of CC and the absence of clear boundaries between CC adaptation activities and general economic and social development activities make it difficult for ONEP to play a key role in adaptation. Adaptation activities need to be implemented by traditional development agencies, which fall under line ministry agencies other than the Ministry of Natural Resources and Environment (MoNRE) of which ONEP is a part. This could make it difficult to drive the national adaptation agenda as envisioned by both ONEP and the CCMP as the legal status of ONEP is lower than the Ministerial level, and the legal basis for the NCCC is an Order of the Office of the Prime Minister, which is also lower than the legal foundation of Ministries.

With no clear boundaries between adaptation and general economic and social development activities, climate finance cannot be considered independently from development finance. When line ministries make budgetary requests for development activities, it is done through the usual budget allocation channels. This makes it difficult to monitor and track adaptation expenditures. Nonetheless, the Economics of Climate Change Adaptation (ECCA) concept developed by UNDP and its partners [17] can be applied to separate the cost of climate adaptation from the regular costs of development activities. Thus, while difficult, it is possible to separate adaptation finance from regular development finance, and to monitor, track, and evaluate the performance of projects which were allocated adaptation funding.

While, in theory, the government budget can be drawn on to provide funds for adaptation actions, the long-term and uncertain nature of CC adaptation make it difficult to plan budgetary expenditures and to assess project success. Given the current strategic performance-based approach of the budget system, which allocates budget to projects which are in line with each Ministry's strategic plan, it would be unrealistic to expect adaptation funding to be requested by other agencies. However, MoNRE also has several agendas in addition to CC and, given the broad nature of adaptation work, it is unlikely that utilizing budgetary sources for adaptation through the channel of MoNRE alone would be enough to cover the necessary adaptation activities. Thus, if budgetary funds are to be used, other methods for channeling funds for adaptation action will be needed. Supplementing budget financing with extra-budgetary funds would also be important in providing not only the needed funds, but also allow flexibility in fund usage to respond to changing adaptation needs and conditions.

A number of Funds exist in Thailand that could potentially be adapted to serve adaptation purposes. At present, the Energy Conservation Fund has been tapped into to support mitigation action in the energy sector. However, the same cannot be said for the use of funds to support adaptation efforts as adaptation activities usually lie outside the scope of projects permitted under the Energy Conservation Funds. Another potential extra-budgetary channel of finance is the Environmental Fund within MoNRE. According to the Environment Promotion and Quality Preservation Act B.E. 2535 (1992), clauses 25(3) and 25(4), it is possible for the Environmental Fund to offer loans and provide grants to address environmental problems. However, it should be noted that the Environmental Fund has no source of revenue other than the government budget allocation [7]. TDRI [18] suggests that the law governing the Environmental Fund be modified so as to open up new revenue sources (such as through earmarked taxes), increase operational flexibility, and increase support for a broader range of environmental issues including serving the function of a Climate Fund or an 'Adaptation Fund Facility'. This would require MoNRE and MoF to work together to modify the Environmental Fund to serve the objectives set by the NCCC and the CCMP. It is envisioned that this 'Adaptation Fund Facility' would serve as an extra channel for financing government and government-affiliated agencies, as well as non-governmental entities such as communities.

4) Gap analysis and needs assessment

The Climate Change Master Plan (2014-2050)

As the coordinating body for climate change, the NCCC has commissioned MoNRE to draft the Climate Change Master Plan (CCMP) (2014-2050) to set the national agenda for climate change activities in the country. According to the CCMP, the national climate vision for 2050 is that Thailand has immunity to climate change, and the country pursues low carbon growth in accordance with the sustainable development agenda. While the vision is for 2050, the CCMP identifies short-term, medium-term, and long-term goals to be achieved by 2016 (short-term goals), by 2020 (medium-term goals), and by 2050 (long-term goals). In order to achieve the goals set out in the CCMP, the Plan sets three main strategies, which are related to adaptation, mitigation, and capacity-building for effective climate change management.

While the CCMP has many strong points, the Plan has some important weaknesses as follows.

Firstly, although comprehensive, the Plan comes across as an amalgamation of plans rather than a true Master Plan. The Plan includes many goals, and identifies many measures and approaches for implementation that incorporate the usual activities of agencies. This results in an overlap of projects under the CCMP and projects proposed for implementing the regular work of the relevant agencies.

Secondly, while the Plan identifies short-term, medium-term, and long-term goals, it does not identify flagship projects which should be given priority in implementation in any time horizon. Interviews of the relevant agencies conducted by the authors also revealed that many agencies are concerned with the lack of prioritization of projects under the CCMP. Given that CC projects envisioned in the CCMP would need to be inserted among other projects within the line ministries' annual budget request to the Bureau of the Budget (BoB), a lack of prioritization endangers the chances of key CC projects being allocated funds, especially when the line ministries budget request exceed the ceiling set by the BoB.

In addition to the absence of flagship projects, the inclusion of some indicators and activities which are not climate-specific or climate-integrated in the CCMP, e.g. increasing proportion of the population with access to clean water or reducing the number of children under 5 years of age who suffer from malnutrition, makes it problematic in tracking, monitoring, and evaluating the effectiveness of climate finance allocated for projects as many of the activities would overlap with routine work undertaken by the responsible agency. Further prioritization of tasks, and a clearer classification of different types of measures into climate-specific, climate-integrated, and climate-relevant undertakings would not only help the BoB in deciding budget allocations, but would also help in the tracking, monitoring and evaluation of climate change expenditures for different levels of activities undertaken in response to climate change.

The National Climate Change Committee Mechanism

As a national level committee headed by the Prime Minister, the undertakings of the NCCC are dependent on the political will of the ruling administration and the availability of the Prime Minister, who also sits as the chairperson of many other national-level committees. If the political impetus is not behind CC, any plans and projects subject to NCCC rulings could be delayed due to delays in convening NCCC meetings. Furthermore, the NCCC could be disrupted by normal political processes such as the dissolution of parliament. This is readily evident from the case of CCMP approval which was postponed several times due to political instability. The CCMP was finally approved only recently when the NCCC convened its first meeting of the year 2014 on 20 November of that year.

In addition, the legal foundation for the NCCC may hamper its ability to drive the national CC agenda as envisioned in the CCMP. The statute which founded the NCCC is the Order of the Office of the Prime Minister. As a legal instrument, the Order is in a lower hierarchy than an Act, which serve as the legal basis for the missions of Ministries. Thus, while the NCCC involves representatives from various Ministries, there are limited incentives for Ministries to undertake any additional and unfunded mandate for CC proposed by the NCCC.

While the NCCC is responsible for CC planning, and especially for driving forward the plans and policies proposed in the CCMP, it has no authority to grant financing for CC projects. Under the existing institutional arrangement, financing climate change actions is done on a project-by-project basis with line ministries having to request finding via the BoB through the usual channels. As such, there is currently no system in place to ensure that plans and policies proposed under the NCCC will receive lump sum funding from the government. The NCCC also has limited powers to develop and utilize extra-budgetary sources of funds as it does not have the ability to develop public finance instruments that could provide additional financing for climate change activities. This power lies with the MoF, and the role of the MoF might need to be stepped up if this channel of procuring funds is deemed to be important. One other limitation of the NCCC mechanism is in terms of the ability to track and monitor climate finance in the country.

While ONEP has been identified as the Secretariat of the NCCC, as yet no resources have been allocated to ONEP to undertake this important task. Separate from its role as the NCCC Secretariat, ONEP also faces limitations, especially in terms of manpower and budgetary allocations for handling CC undertakings. This is especially true when ONEP wants to translate policies into action at the ground level.

As an agency specializing in environmental planning and policymaking, ONEP has limited experience and expertise in terms of climate finance. Thus, while sufficient funds are needed in order to drive the CC agenda, under the current system, it is unclear who should be tasked with overseeing allocation of climate finance expenditures, as well as tracking, monitoring, and evaluating climate finance expenditures. At present, those agencies with finance expertise do not play significant roles in climate finance in Thailand under the NCCC. As such, the roles of both MoF (on source of revenue) and BoB (on expenditure allocation) have to be strengthened as significant pillars within the NCCC. This represents an important next step in the institutional architecture to secure overall coordination on climate finance.

The Climate Change Coordinator (CCC) Mechanism

Coordination among agencies under the NCCC is also important in order to drive the nation's climate change agenda. At the moment, the mechanism of the Climate Change Coordinator (CCC), which comprises high-level civil servants and staff in the 19 ministries and 11 non-ministerial government agencies, has been put in place. However, interviews with stake- holders reveal that this mechanism has, thus far, not been much utilized as the driving forces behind coordination of climate change policy implementation in the country. If appropriately utilized, the CCC could provide a crucial channel for driving forward the proposed policies, projects and plans under the CCMP, as well as for tracking the progress of implementation of the CCMP. CCCs could also channel information regarding climate finance, and help build up a database of climate projects under their auspices, which could be used to create a national database of climate finance, and climate activities in government and government-affiliated agencies. This national database would provide a platform for tracking, monitoring, and evaluating climate finance in the country.

Recommendations

Based on the institutional analysis framework, we can summarize the existing institutional context and recommendation for improving the institutional mechanisms as shown in Table 1. The main institutional pillars of the NCCC with regard to forwarding the national CC agenda are ONEP, TGO and NESDB, with support from MoF, FPO and BoB on fiscal and public expenditure issues. However, given the usually long intervals between NCCC meetings, a well-resourced Secretariat is required in order to ensure the work of the NCCC operates efficiently and effectively, and to maintain momentum between NCCC meetings. Since the NCCC only meets at intervals, one of the main roles of the Secretariat is to coordinate with various implementing agencies to ensure that CC plans are translated into action so that progress is made by the next NCCC meeting. A well-resourced Secretariat would help the NCCC operate more efficiently by allowing better coordination among line ministries to reduce overlaps in the work undertaken each ministry, thereby saving valuable resources. Coordination efforts by a well-functioning Secretariat would also help projects and plans envisioned by the NCCC to be implemented fully, ensuring their effectiveness.

To achieve the goal of enhancing Thailand's readiness in terms of climate finance, the authors propose the establishment of an institution or mechanism dedicated specifically to climate finance. This mechanism could take the form a sub-committee on climate finance and planning under the NCCC. The proposed institution would have the following mandate:

1) Financial planning and facilitating access to different types of climate finance. The body would set strategies, identify needs, and establish criteria for accessing climate finance available both domestically and internationally. The body should provide climate finance planning by classifying projects into climate-specific, climate-integrated, and climate-related categories to help prioritize among projects, so as to ensure important projects are funded.

2) Collecting information on private finance and linking this to public finance information. This can provide a holistic view of climate finance for the country, and allow comparison of total climate finance budget with the country's greenhouse gas reduction goal.

3) Setting joint Key Performance Indicators (KPIs) among agencies. It is recommended that KPIs used by key agencies should be relevant to CC activities in order to incentivize climate work in line ministries which are not mandated by law to address CC.

4) Creating a roadmap for the development of new monetary and fiscal tools for climate finance. This is in order to open up new channels for financing CC activities. This is in accordance with a proposal under the CCMP. Options such as modification of existing funds such as the Energy Conservation Funds and the Environmental Fund in order to establish a Climate Fund or an 'Adaptation Fund Facility' could also be considered.

5) Coordinating with existing Climate Change Coordinators (CCCs). The CCCs in the different ministries and non-ministerial government agencies should be utilized in order to gather data on climate finance.

6) Creating a central database of climate finance to enable monitoring, tracking, and evaluating the effectiveness of climate expenditures. The database would include information on funds allocated to activities and approaches identified in the Action Plans drafted under the CCMP, and cover both budgetary and extra-budgetary funds. This would include foreign aid/loans, and money allocated from the funds related to mitigation and adaptation to climate change. To enable this function, a reporting mechanism should be established in order to track, monitor, and assess the implementation of different agencies which are allocated climate finance from the sources identified earlier.

Similar institutions to the ones proposed in this paper are already established in Thailand's neighboring countries. For example, Indonesia has established several mechanisms dedicated to climate finance. Firstly, the National Council on Climate Change, or Dewan Nasional Perubahan Iklim (DNPI) (equivalent to Thailand's NCCC) set up 7 working groups to facilitate decision-making. One of these working groups is the Financial Mechanism. Moreover, in 2011 the Ministry of Finance (MOF) in Indonesia established the Centre for Climate Change Financing and Multilateral Policy at the Fiscal Policy Agency (FPA). This Centre performs such functions as formulating policy recommendations, analyzing, evaluating, coordinating, implementing and monitoring issues related to climate change financing. In Cambodia, a subgroup on climate finance was established under the Climate Change Technical Team (CCTT) which acts as technical advisor to support the Cambodia's NCCC. These examples indicate that such an institution as the proposed sub-committee on climate planning and finance would help provide the NCCC with technical expertise on all aspects of financing, something which is crucial to successful implementation of climate plans. For the NCCC, having a sub-committee that deals specifically with climate planning and finance would free up time and resources, allowing the NCCC greater ability to focus on priority issues such as setting the direction of the country's CC agenda.

Recognizing that the creation of a new institutional body/coordinating mechanism in Thailand would result in many overlaps with the work already undertaken by existing institutions within the current institutional landscape, the authors propose that the existing institutional structure be maintained, but that a new Sub-committee on Climate Finance be established under the existing NCCC, and tasked with the above-mentioned mandates.

Alternately, the existing sub-committee structure should be revised with one of them becoming a Sub-committee on Climate Finance and Planning. In addition to carrying out the climate finance work as set out in the above mandates, this revised Sub-committee on Climate Finance and Planning would also be charged with the task of CC planning. However, the NCCC would still retain its role in setting the policy agenda for CC in Thailand. This would reduce the institutional burden, while ensuring that fiscal/budgetary framework is well designed with the existing/ upcoming CC policy and planning.

In order to enhance the effectiveness of the Sub-committee on Climate Finance/ Sub-committee on Climate Finance and Planning (and other sub-committees under the NCCC), the authors also propose that the NCCC mechanism be modified to provide the sub-committees with greater decision-making power in matters that fall within their mandates. This would reduce the administrative burden on the NCCC, while solving the problems of delays due to infrequent NCCC meetings and of the prevailing political condition hampering the routine work of the sub-committees under the NCCC.

The proposed Sub-committee on Climate Finance/Sub-committee on Climate Finance and Planning should include the main agencies responsible for CC mitigation and adaptation policies and plans, as well as those with expertise in finance and budgeting. An important component of the proposed Climate Finance Sub-committee/Climate Finance and Planning Sub-committee is the lead agency, the chair-person and the Secretariat. Based on interviews with relevant agencies, it is recommended that ONEP should serve as the lead agency for the Sub-committee on Climate Finance/Sub-committee on Climate Finance and Planning. The Secretary-General of ONEP could serve as the chairperson, while the Climate Change Management and

Coordination Division (CCMCD) could act as the Secretariat of the Sub-committee. Given the important role of finance agencies, the sub-committee's vice chairperson could be a delegate from the BoB. Other relevant agencies should serve as committees, including the Fiscal Policy Office, the Comptroller General's Department, the Public Debt Management Office, the Bureau of the Environmental Fund, the TGO, the NESDB and experts on matters related to climate finance. More importantly, it is crucial that both manpower and budget allocations to ONEP be increased in order to enable ONEP to effectively undertake the required tasks envisioned for the proposed Sub-committee on Climate Finance/ Sub-committee on Climate Finance and Planning.

Table 1 Institutional Analysis and Recommendation for Climate Finance in Thailand

Component	Existing institutional arrangement	Recommendations
Policy Factor	Relevant policies and plans: • 11th NESDP (2012-2016) (Low Carbon Economy) • CCMP (Low Carbon Society) • Country Strategy (Green Growth) Implementation mechanisms: • NCCC • 3 sub-committees • CCC (19 ministries, and 11 non-ministerial government agencies)	• Identify and classify projects into climate-specific, climate-integrated, and climate-related categories to help prioritize among projects • Increase linkage between CCMP and Country Strategy • Establish a sub-committee on climate finance and planning • Grant some decision-making power to the sub-committees in matters that fall within their mandates
Actors	• Government agencies (central, regional, local) • Private sector • NGOs • Civil society	• Integrate key government agencies under the sub-committee on climate finance and planning • Enhance roles of local governments • Promote public-private partnership • Engage NGOs and civil society in the existing sub-committees
Legal Framework	• Budget Procedure Act B.E.2502 • NCCC established under the Order of the Office of the Prime Minister	Upgrade the legal backup for NCCC to be a national Act
Resources	Domestic resources • Government's budget • Extra-budget (existing funds etc.) International resources • Multilateral cooperation • Bilateral cooperation	• Conduct a roadmap on climate finance (both financial and fiscal instruments) responsible by the proposed sub-committee on climate finance and planning • Consider setting up a Climate Fund or a 'Adaptation Fund Facility' under the existing Environmental Fund
Incentive Structure	• Financial support if the action plans and projects are in accordance with national policies and plans • Tax-breaks for carbon-credit projects	• Financial support for the proposed climate-specific projects and climate relevant projects • Provide extra-KPI (key performance indicators) for agencies involved in the CC implementation

Source: the authors

Conclusions

This study has reviewed the existing landscape of institutions related to CC policy and finance, identified gaps and assessed the need for establishing a new institutional mechanism for climate finance in Thailand. While the main institutional architecture for climate change action, comprising of the NCCC, the CCMP and other master plans, and CCC, is already in place, this paper concludes that there is still a need for an institutional body/coordinating mechanism that deals specifically with climate finance, as finance is seen as one essential component which would drive the implementation of existing policies, plans, and strategies related to CC in the country.

Based on the framework of institutional analysis, the research team proposed that a new Sub-committee on Climate Finance should be established under the NCCC. Alternately, the existing sub-committees can be revised with one of them becoming a Sub-committee on Climate Finance and Planning. The mandates of the proposed Sub-committee on Climate Finance include financial planning and facilitating the access to different types of climate finance, collecting information on public and private finance related to climate action, creating a roadmap for developing economic instruments for climate finance. Furthermore, in the long-term, an Act on Climate Change should be considered in order to upgrade the legal status of NCCC, identify clear roles and responsibilities of concerned agencies and funding sources. The proposed institutional arrangement would provide a linkage between the implementation of CCMP and its upcoming Action Plans, and the Country Strategy. By having an institutional mechanism that integrates CC planning with much-needed financing, CC projects and plans proposed at the national level have a greater chance of success at the implementation level. Thus, with the proposed institutional arrangement in place, Thailand would be well on its way to achieving a higher level of climate finance readiness.

Acknowledgements

The authors are grateful to the United Nations Development Programme (UNDP) Thailand Country Office, Environment Team for their kindness in allowing us to use the data and finding from their report on “Institutional Arrangement and Coordinating Mechanism for Climate Finance: Final Report” (UNDP, March 2014).

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Annex
Stakeholder Interviews

The authors conducted several interviews with key government agencies shown in Table 2.

Table 2 List of interviewees and their affiliations

No.	Position and Affiliation	Date of Interview
1.	Deputy Director, Fiscal Policy Research Institute Foundation	January 7, 2014
2.	Director of the Carbon Business Office, Thailand Greenhouse Gas Management Organization (Public Organization) (TGO)	January 10, 2014
3.	2 Senior Officers, Agriculture, Natural Resource and Environment Planning Office, National Economic and Social Development Board (NESDB)	January 10, 2014
4.	Director of Climate Change Management and Coordination Division, Office of Natural Resources and Environmental Policy and Planning (ONEP)	January 14, 2014
5.	Deputy Director of Environment Department, Bangkok Metropolitan Administration (BMA)	February 5,2014 (Replied by document)
6.	Senior Budget Analyst, Budget Policy and Planning Office, Bureau of the Budget	February 28, 2014
7.	Director, the Off-Budgetary Management Office, Comptroller General's Department, Ministry of Finance	March 27, 2014