THAILAND

OFFICE OF NATURAL RESOURCES AND ENVIRONMENTAL POLICY AND PLANNING

OFFICE OF NATIONAL ECONOMIC AND SOCIAL DEVELOPMENT BOARD

COUNTRY BRIEF

STRENGTHENING THE GOVERNANCE OF CLIMATE CHANGE FINANCE IN THAILAND

OCTOBER 2014

Office of Natural Resources and Environmental Policy and Planning
Fiscal Policy Office
Ministry of Agriculture and Cooperatives
Office of National Economic and Social Development Board
Bureau of Budget

GOVERNANCE OF CLIMATE CHANGE FINANCE TO BENEFIT THE POOR AND VULNERABLE IN ASIA PACIFIC

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THAILAND’S CLIMATE CHANGE FINANCE CONTEXT

Thailand, a middle income country, is in a position to mobilize significant domestic and international finance to respond to climate change. However, utilizing these financial resources effectively requires a comprehensive, cross-government approach. This approach has been termed a climate fiscal framework.

Thailand undertook a Baseline Assessment for a Climate Fiscal Framework in 2011. In 2012, a national Climate Fiscal Framework Working Committee was established as an inter-agency platform to oversee the Climate Change Public Expenditure Review (CPEIR) process in Thailand. It is chaired by the Fiscal Policy Office (FPO) of the Ministry of Finance with core members from the Office of Natural Resources and Environment Plan and Policy (ONEP) of the Ministry of Natural Resources and Environment (MoNRE), the office of National Economic and Social Development Board (NESDB) and the Bureau of Budget (BoB) under the Prime Minister’s office.

Thailand’s first Climate Public Expenditure and Institutional Review (CPEIR) was also completed in 2012. The first ever analysis of its kind, the CPEIR reviewed how public climate change related expenditures are integrated into national budgetary processes. This analysis was set within the context of the national policies and institutional arrangements that exist to manage Thailand’s response to climate change.

In 2013, Thailand began implementing the program Strengthening Thailand’s Capacity to Link Climate Policy and Public Finance, which supports Thailand in allocating and using its public finances effectively and efficiently to achieve national objectives on climate change and green growth. The program, led by ONEP with the other three key agencies, namely, NESDB, FPO, and BoB, builds on recommendations from the CPEIR and on consultations with key counterparts and stakeholders.

This Country Brief will provide an overview of the approach being taken in Thailand to integrate climate change into the budgeting process, and will highlight lessons and key factors which may be relevant for other countries engaged in similar work.

BACKGROUND AND CONTEXT TO THE WORK UNDERWAY

The CPEIR conducted in 2012 made various policy, institutional and public financial management (PFM) recommendations which addressed gaps identified in both central agencies and sectoral ministries. The Ministry of Agriculture and Cooperatives and the Ministry of Natural Resources and Environment in particular were encouraged to recognize the climate component of their budgets more explicitly in terms of both performance targets and the policy drivers behind the programs. The recommendations also stated that “study at sector level is warranted to gain a better understanding of climate change actions and their coherence with sector policies. Agriculture, water and the forestry sectors would be good starting points for this sector analysis”.

The expenditure review found that an average of 2.7 percent of total budget expenditures in 2009-2011 had been allocated to climate related activities. The CPEIR analysis also indicated those sectors where most of the climate change related public expenditure is currently located and the Ministry of Agriculture and Cooperatives (MoAC) was identified as the recipient of the largest proportion (54.9%) of climate change related budget allocations in Thailand, as illustrated in Figure 1 below. At the same time, a 2013 scoping study reviewed MoAC’s policy framework, institutional arrangements, and expenditure composition, and found that although “the policy framework related to the climate change and green growth objectives was well in place, climate change mainstreaming within the national budget cycle remained a challenging task”.

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In view of these factors and considering that agriculture is a key sector which could be greatly impacted by climate change, a program of support, the MoAC Climate Change Planning and Budgeting Pilot Analysis (hereafter, “Pilot Analysis”), was rolled out in 2014.

An **immediate objective** of the Pilot Analysis is to build capacity within MoAC to respond effectively to climate change, by improving the analysis of the effectiveness of MoAC expenditure to include consideration of climate change implications. This improved analysis will allow MoAC to make stronger proposals to the Bureau of Budget (BoB).

An **intermediate objective** is to use the experience with the MoAC Pilot Analysis to show how the existing Strategic Performance Based Budgeting system can be used to protect Thailand from the risks of climate change to economic growth and public revenue and to help Thailand contribute to mitigation. This will assist other line ministries in improving climate change planning and budgeting, including the preparation of the National Adaptation Plan (NAP) and the Climate Change Master Action Plan.

The remainder of this *Country Brief* will discuss the MoAC Pilot Analysis in more detail: the approach, the process, the results and lessons learned.

**THAILAND’S MINISTRY OF AGRICULTURE AND COOPERATIVES (MoAC): POLICY AND INSTITUTIONAL ANALYSIS**

*National Strategies Affecting Climate Change Planning and Budgeting in MoAC*

The primary strategic reference document for national planning and budgeting in Thailand is the National Economic and Social Development Plan (NESDP), the current version of which runs for 2012-16. In principle, all budget submissions must be shown to relate to this plan. The plan is quite broad and it is usually possible to relate climate change activities to priorities in the NESDP. However, there should be scope for heightening the importance of climate change in the next NESDP, which should help to add weight to climate change related budget submissions.

The country strategy of the previous government administration, formulated based on the NESDP, is composed of four main strategies (inclusive growth, growth and competitiveness, Green Growth, and Internal Process) and climate change is one of the core issues under the Green Growth Strategy. The country strategy has been revised as a new government administration was established in October 2014. The new policy direction still emphasizes climate change as a key issue Thailand will respond to as part of the global community, and in line with international obligations.

The Office of Natural Resources and Environment Policy and Planning (ONEP) has produced a Climate Change Master Plan which reviews the full scope of adaptation and mitigation policies across government. ONEP are currently preparing a short term Climate Change Action Plan and a mid-term Climate Change Action Plan, to complement the CCMP and this will help to bring more focus to the prioritization of these actions.
**Climate Change in MoAC Strategies**

The current Agriculture Development Plan (ADP) 2012-2016 defines three broad strategies and notes that climate change is one of the key ‘driving forces’ that will influence the future of rural Thailand. Climate change is particularly important in dealing with the third strategy, which relates to the balanced, efficient and sustainable use of natural resources. The ADP also defines nine key issues. One of the nine (Green and Cool Agricultural Economy) is explicitly linked with climate change and is concerned mainly with agriculture’s contribution to mitigation. All the other key issues are affected by climate change and MoAC recognizes the need to take climate change into account in designing the most effective MoAC policies. It is therefore possible for MoAC to justify mitigation and adaptation through reference to the ADP.

MoAC has also prepared sub-policy frameworks which can provide added weight to budget submissions. These include a strategic framework for climate change in agriculture (ASPCC) which is in line with ONEP’s Climate Change Master Plan (CCMP), as well as relating to MoAC’s ADP and to the NESDP. The ASPCC aims to build agriculture that is resilient to climate change and contributes to sustainable development. The ASPCC has three main strategies: adaptation to climate change, agricultural mitigation and carbon sequestration, and capacity building. The main service delivery agencies under MoAC with missions that are related to ASPCC are: livestock, fisheries, agricultural extension, agriculture, land development, land reform, irrigation, etc.

**MoAC Institutional Set-up**

The ADP is the guiding document for all departments and sub-agencies in the preparation of their five year programs and, hence, in the annual projects and budget requests. The Committee on Policy and Planning for Agriculture and Cooperatives Development (CPPACD) is responsible for the preparation of strategies, policies and plans in MoAC. The CPPACD is chaired by the Minister and has senior officials from each department, plus representatives from the private sector and external experts. The CPPACD appoints sub-committees to address specific issues (including one for climate change) and these sub-committees work with departments to ensure that their budgets are in line with sub-sector policies.

The Office of Agricultural Economics (OAE) serves as the secretariat to CPPACD and is responsible for compiling the MoAC budget proposal, based on departmental proposals, and for the submission of this proposal to BoB, including the justification of the proposal by relating the budget to the sectoral and national strategies and arguing for the effectiveness of the proposed budget. Each Department in MoAC has its own Departmental Planning Committee (DPC) responsible for planning and budget preparation and provincial and local level units in MoAC have Provincial and Local Planning Committees.

**THAILAND’S MINISTRY OF AGRICULTURE AND COOPERATIVES (MoAC): CLIMATE CHANGE PLANNING AND BUDGETING PILOT ANALYSIS**

The Pilot Analysis analysed the implications of climate change on the benefits from MoAC policies and programs, in pursuit of the immediate and intermediate objectives described above. The Pilot Analysis was undertaken primarily as an ex-ante appraisal of new MoAC policies and programs.

In addition to Thailand, there are two countries (Cambodia and Indonesia) where work has been undertaken on the implications of climate change for the benefits of public expenditure, in the context of integrating climate change into planning and finance. In all of these countries, the analysis has used national evidence, wherever possible, supplemented by international studies. In all three countries, the benefits analysis supports public finance reform initiatives that aim to improve the evidence base of policy formulation and introduce results based management.
**Method**

Typically, the climate change relevance of Government policies and programs has been determined qualitatively using expert judgment based on declared objectives of programs, but such subjective approaches can be contested. An approach to addressing this problem is to quantitatively and objectively estimate the extent to which the benefits of a policy are affected by climate change. The Pilot Analysis, using the method described below, had these objectives in mind.

The Pilot Analysis used an extended Cost Benefit Analysis (CBA) framework that is typical for many policy appraisals. This framework includes an estimation of the economic benefits arising from the policy. **The approach taken in the Pilot Analysis was to assess the net benefits of a policy with and without climate change and to compare the two.**

This is done by using a standard Benefit-Cost Ration (BCR) for a given policy (e.g. irrigation) with a business-as-usual approach. In a second phase, the analysis re-calculates the benefits and costs with the assumption that climate change will take place. This adjusted BCR capturing the impact of climate change is a key indicator to help decision-makers with planning and prioritization processes. It should, however, be complemented with indicators of economic (e.g. income; assets), social (poverty reduction; gender equity; welfare) and environmental benefit (biodiversity; reduced pollution), and any other considerations.¹

The percentage difference between the two BCRs leads to what is called a **Climate Change Relevance Score (CC%)**. The CC% provides decision-makers with additional evidence on how climate change may impact existing evidence of expected policy performance². The CC% can be used: a) to estimate changes in the level of climate change financing; and b) to demonstrate how changes in program design (e.g. climate proofing) will lead to improved net benefits. **In short, the analysis can be used by a program manager, and their ministry, as an estimate of the increased importance of the program if climate change takes place.**

The MoAC Pilot Analysis covers five programs: i) climate proofing irrigation; ii) integrated pest management; iii) improved shrimp farming; iv) biogas from pig waste; and v) vetiver grass which provides key benefits for land and soil preservation.

The Analysis also assists with two related functions. First, it shows the sensitivity of MoAC programs to climate change, which allows MoAC to demonstrate the resources being devoted to addressing climate change, both through changes in the balance of funding to different programs and through designs to improve the Climate Change Relevance Score (CC%) of programs (e.g. through climate proofing). Second, it aims to estimate the monetary value of additional benefits, which provides a good indication for central economic agencies of the value of MoAC activities, with and without climate change.

**Results**

The results of the analysis are presented in Tables 1 and 2 below. A Benefit Cost Ratio (BCR) of 2.0 is roughly equivalent to an Investment Return Rate (IRR) of 10% and, in most cases, this would considered high enough to justify policies and investments. BCRs of more than 2.0 are strongly positive

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¹ It is important to note that the CC% is NOT the primary indicator of the performance of the policy – this remains the Benefit Cost Ratio, demonstrating economic performance, supplemented by any evidence on social and environmental benefits that can be quantified.

² A hypothetical example of a CC% estimate is as follows: if days of drought increase from 100 to 150 due to climate change, then the benefits of an irrigation system which delivers water during these 150 days will be 33% related to climate change.
and are normally high enough to allow policies to be viable, even if there is some unintended over-optimism in the appraisal.

Table 1: Implications of Climate Change (CC) for the Benefits in the Pilot Analysis

<table>
<thead>
<tr>
<th>Department</th>
<th>BCR no CC</th>
<th>BCR with CC</th>
<th>CC%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irrigation, with climate proofing</td>
<td>RID⁵</td>
<td>2.8</td>
<td>3.2</td>
</tr>
<tr>
<td>Integrated Pest Management</td>
<td>DOAE⁶</td>
<td>4.8</td>
<td>6.2</td>
</tr>
<tr>
<td>Improved Shrimp Farming</td>
<td>Fisheries</td>
<td>1.7</td>
<td>2.2</td>
</tr>
<tr>
<td>Biogas from Pig Slurry</td>
<td>Livestock</td>
<td>1.5</td>
<td>2.0</td>
</tr>
<tr>
<td>Vetiver Grass</td>
<td>LDD⁵</td>
<td>2.2</td>
<td>2.7</td>
</tr>
</tbody>
</table>

In the table, the CC% gives the proportion of the BCR with climate change (CC) that is attributed to climate change. The results show that four of the five case studies have CC% of between 20% and 25%. This clustering of results is entirely a chance outcome, since the composition of benefits and the nature of the climate change implications for benefits is highly varied amongst the five case studies.

**Aggregate Results for the Whole of MoAC**

Although the representativeness of the Pilot Analysis is varied, it does provide an indication of the initial order of magnitude of the potential impact of climate change on the benefits from MoAC expenditure, provided that expenditure incorporates mitigation and adaptation into the design of all their activities in a manner that is similar to that of the Pilot Analysis. If MoAC were to achieve this, at least for the THB 60bn (approximately USD $1.85bn) budget of the five departments covered by the Pilot Analysis, then the BCR ratio of this expenditure would increase from 2.8 to 3.2 and the total discounted benefits would rise from THB 166bn to THB 193bn (approximately USD $5.12bn to $5.94bn).

Table 2: Indicative Aggregate Impact of MoAC Departments

<table>
<thead>
<tr>
<th>2014 budget (THB m)</th>
<th>2014 budget (THB m)</th>
<th>BCR</th>
<th>Discounted Benefits 2015-2050 (THB m)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Without CC</td>
<td>With CC</td>
</tr>
<tr>
<td>Irrigation (if proofed)</td>
<td>40,095</td>
<td>2.8</td>
<td>3.2</td>
</tr>
<tr>
<td>Integrated Pest Management</td>
<td>5,435</td>
<td>4.8</td>
<td>6.2</td>
</tr>
<tr>
<td>Fisheries - shrimps</td>
<td>3,653</td>
<td>1.7</td>
<td>2.2</td>
</tr>
<tr>
<td>Livestock - pig slurry</td>
<td>5,331</td>
<td>1.5</td>
<td>2.0</td>
</tr>
<tr>
<td>Land Development - vetiver</td>
<td>5,193</td>
<td>2.2</td>
<td>2.7</td>
</tr>
<tr>
<td>Total</td>
<td>59,707</td>
<td>2.8</td>
<td>3.2</td>
</tr>
</tbody>
</table>

The majority of these benefits come from benefits to farmers, especially for irrigation and integrated pest management. The estimate of these benefits will also be an estimate of the extent to which MoAC activities increase agricultural GDP. **Many of these benefits will be received by the poorer members of society** and the incorporation of adaptation and mitigation into the design of MoAC programs should **therefore contribute to improved income equality**, or at least help to prevent a worsening of income inequality, normally associated with the higher vulnerability of poorer households to climate change.

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³ RID: Royal Irrigation Department  
⁴ DOAE: Department of Agricultural Extension  
⁵ LDD: Land Development Department
KEY FACTORS AND OUTCOMES
Evidence based policy appraisal, of the sort undertaken in the Pilot Analysis, can be used to help budget negotiations over the priority to be assigned to different programs. It can be particularly useful in weeding out programs that are likely to be ineffective. However, the most important role of the analysis is not to guide prioritization but to highlight the issues that are most likely to affect the success of the program, so that these issues can be addressed in the design and management of the program.

Revising the Design of MoAC Programs
The Pilot Analysis demonstrates the value to program designers and managers of being precise about the expected benefits from the program and the impact of climate change on those benefits. The analysis can help with program design in various ways.

- In many cases, the analysis shows that the adaptation and mitigation benefits are still relatively small, compared with economic benefits and wider social and environmental benefits. This might initially be seen as an undesirable finding for program managers who wish to show the maximum possible impact from climate change to generate renewed interest in their programs. The primary indicator of priority is not the CC% but the BCR with climate change. The CC% shows only the extent to which BCRs change, when climate change is taken into account. However, this would be wrong. Any program that delivers BCRs of more than 2.0 should command strong public financing. A higher BCR with a lower CC% may be just as viable as a lower BCR with a higher CC%. In fact, given the uncertainty surrounding climate change, it is often suggested that ‘low regrets’ options should be given the highest priority. These low regrets options are programs that deliver high BCRs without climate change and which are at least resilient to climate change and may also deliver higher BCRs with climate change. All the programs in the Pilot Analysis are examples of low regrets programs. For more information on Climate Risky and No, Low and High Regret Actions, please see Box Number 1.

- The relative value of different benefits gives an indication to program managers about where to focus their attention in improving design. For example, in the biogas program, there is a natural tendency to focus on using the methane to produce electricity, because this appears to give high profile mitigation benefits. However, the analysis suggests that the benefits from the fertilizer by-product may be higher than those from mitigation benefits, which would suggest that attention to (and investment in) the fertilizer production and marketing should receive a relatively high priority.

Increasing Priority Given to MoAC Programs
In theory, all budget proposals should include an assessment of the performance of the expenditure and the benefits that it is expected to bring. In particular, investment projects should include estimates of the return on investment. This information should be submitted by departments as part of the preparation of their budget proposals. Ministries should then report on this information when submitting their budget proposals to the BoB.

The BoB would be interested in information on economic performance and expected to consider this evidence if submitted. There is, therefore, an opportunity for MoAC to gain support for its budget submission if it is able to generate estimates of benefits and demonstrate that programs have been designed in a way that take into account the implications of climate change on economic performance.

The results of the Pilot Analysis suggest that the programs managed by MoAC may deliver somewhere between 10% and 20% more benefits as a result of climate change. This data provides MoAC with a strong argument to BoB to be sympathetic to budget requests that clearly demonstrate that programs are capturing these potential additional benefits.
Aggregate Impact

Table 2 presents initial indicative results on the implications of climate change on the impact of MoAC expenditure. The results show that those MoAC departments covered by the Pilot Analysis have a 2014 budget of THB 60bn and suggest that this expenditure generates THB 166bn of benefits with the current climate, and that these benefits will increase to THB 193bn, with climate change. This is equivalent to annual benefits of THB 9bn without climate change and THB 11bn with climate change. With agricultural GDP at about THB 1000bn, the MoAC expenditure in the five departments is

\[ \text{Benefits of MoAC expenditure} = \text{AGB} \times \text{Clearing Rate} \]

Text Box 1: Climate Risky and No, Low and High Regret Actions

A climate risky action is one for which the benefits will be reduced when climate change (CC) takes place, usually to levels that make the action unattractive. A no regret action is one in which the benefits are sufficient to be attractive regardless of whether CC takes place. The benefits may be affected positively or negatively by CC. (If they are unaffected by CC, then the action is not CC relevant.) A high regret action is one that delivers good benefits with CC, but poor benefits without CC. Low regret actions are similar to high regret actions, but the benefits without CC are roughly similar to the costs and so there would be little regret if CC did not take place. These relationships are illustrated in Figure 2.

Figure 2: Relationship between the benefits of an action and the severity of climate change

Notes: The ‘Clearing Rate’ is the rate of benefits that actions need to achieve in order to be accepted. In theory, it is calculated by ranking actions according to their benefits and accepting the most beneficial first, until all resources are used up. In practice, most governments and development agencies have a standard clearing rate (e.g. 10% Internal Rate of Return or 2.0 Benefits Cost Ratio). The bar charts on the right refer to the benefits occurring without climate change (in solid colors) and those occurring with the full severity of climate change identified on the x-axis of the line graph on the left (in hatched color).

Source: Kit Nicholson; Climate Change Financing Frameworks, A Methodological Note, October 2014.
generating a growth of about 0.9% in agricultural GDP without climate change and 1.1% with climate change. Thus, the additional climate change benefits are therefore 0.2% of agricultural GDP.

This can also be compared with analysis of the potential damage to GDP arising from climate change. There is little work on the total impact of climate change on agricultural production in Thailand, but studies in other countries in Southeast Asia suggest that the growth in agricultural GDP could be up to 5% lower by 2050, with climate change. As a first assumption, this annual damage can be expected to grow in a linear fashion, so the agricultural GDP growth rate would decline by 0.14% each year. This suggests that the current levels of MoAC expenditure are at roughly the right levels to offset the damage resulting from climate change, provided that all the expenditure of the five departments are ‘climate sensitized’ to the same degree as the activities covered by the Pilot Analysis.

The analysis is also one part of the analysis required to estimate the net impact of MoAC expenditure on the budget. There are a number of ways in which the budget revenue could be impacted.

- Revenue will be increased, including direct taxes from income and profit related tax and any income from trade taxes. Taxes from income and profits for agriculture are often relatively small, except for plantation agriculture, but export taxes may be more significant.
- There may be an impact on subsidies and the costs of any market stabilization programs. This impact will be difficult to estimate and requires a more detailed analysis of the structure of the policies and the implications of the changing production patterns.

The mid-term expenditure framework requires forward estimates of revenue that provide the basis of expenditure ceilings. The way in which climate change affects the performance of MoAC activities, and the impact of this on revenue is likely to be small and limited to fractions of a percentage, at least in the short to mid-term. However, expenditure planning is sensitive to such small changes and they need to be taken into account by the institutions involved in revenue projections and expenditure ceilings.

**CHALLENGES AND LESSONS**

The Pilot Analysis has demonstrated the potential value of including climate change in the appraisal of existing and planned policy. It has also demonstrated some of the challenges. One challenge for climate change benefits analysis is ensuring that there is demand for the results from those responsible for policy decisions, including those approving the design of policies and the attendant budget for those policies. In the Thailand case, there has been growing interest in evidence-based policy appraisal from NESDB, BoB, ONEP, and MoAC, so this has not been a major constraint.

There may also be a challenge associated with the complexity of the analysis and the level of commitment required from officials to have full confidence in the analysis. In MoAC, this has not been a problem for departments which use quantitative evidence-based policy appraisal on a regular basis. For some departments, however, the Pilot Analysis has involved gaining experience with more general evidence-based policy analysis, whilst also gaining experience with analysing the implications of climate change for that analysis. See Text Box 2 for additional discussion on this.

The availability of data can also pose a challenge, including data on the technical parameters of the case studies and on the economic variables. International evidence has been used for some aspects of the MoAC Pilot Analysis. This is not ideal, but it is not a major problem, provided the evidence is used cautiously and the limitations are recognized. The analysis is being done mainly from the perspective of ex-ante policy appraisal, rather than ex-post policy evaluation, and it is therefore inappropriate to claim to be highly accurate. The analysis serves as much to identify the variables that need to be managed most carefully as it does to predict the outcomes.
**Addressing the Challenges**

The challenges will need to be addressed at two levels. At the level of national systems, leadership will be required from senior management in MoAC and in BoB, to ensure that MoAC program managers are motivated to invest the time and effort to expand and improve the analysis and build this work into their routine approaches to policy design.

At the program level, OAE will need to work with program managers. Firstly, OAE will need to help them realize the value of analyzing the benefits of their programs and the implications of climate change for these benefits. Secondly, they will need to make sure that the analysis is reliable enough to be of use and to be credible to BoB. Collaboration will also be required with ONEP to make sure that any new evidence on climate change is taken into account.

In parallel to the Pilot Analysis carried out with MoAC, a study at the national level was undertaken to review the existing legal, policy institutional arrangements and coordinating mechanisms related to climate finance. The study presented different scenarios for an institutional set-up involving BoB, NESDB, FPO and ONEP. **One issue to be further explored is the potential establishment of an institutionalized inter-ministerial mechanism (e.g. a Climate Finance Sub-committee) with a clear mandate and sufficient capacity to report on the delivery of climate finance in Thailand.**

In order to enhance the delivery of climate services to the poor and vulnerable, and extra-budgetary fund review has also been undertaken. Various financial management strategies for achieving this purpose were reviewed and their feasibility assessed. The purpose is to establish mechanisms which maximize use of country systems while retaining the flexibility necessary for prompt delivery. The key recommendations from the extra-budgetary funds review is that there was no need for setting up a new funding mechanism targeting the poor but to refine criteria as well as the processes of the existing extra-budgetary funds.

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**Text Box 2: Capacity Building as Integral to the MoAC Pilot Analysis**

Climate change impact related cost-benefits analysis is a data intensive technique. Significant effort is required to collect the necessary data and information for each pilot project through field surveys and other methods. As cost-benefit analysis tools can be quite technical, facilitation was required to translate jargon into language that staff could be at ease with.

The design and rollout of the Pilot Analysis was therefore accompanied by a capacity building program which targeted BOB, FPO, MoAC, NESDB and ONEP. The program began with central agencies, ONEP and MoAC, and included a focus on the following concepts:

- Climate change impact on economic growth and sectors
- Climate change impact on budget
- Basics of climate change planning and budgeting
- Defining and measuring climate change finance
- Benefits analysis and cost effectiveness
- Climate finance modalities and the private sector

The content of the capacity building program and modules had to be adapted to the needs of a diverse audience. Different departments within MoAC present differing level of technical strengths and knowledge.

A key achievement has therefore been a better understanding within the major departments of MoAC of how climate change will impact their projects’ activities and outputs and how the existing projects contain adaptation/mitigation benefits which they never thought about before. The benefit-cost analysis also helped strengthen their approach to designing and setting up Key Performance Indicators for monitoring the programs efficiently in the future.
NEXT STEPS

The MoAC Pilot Analysis has shown the potential of considering the impacts of climate change on policy performance, design and management of projects, and overall investments. It has demonstrated how MoAC’s budget submissions could be improved and gain additional traction by speaking the language of economic performance and results-based budgeting familiar to BoB. It is expected that the support to MoAC through the Pilot Analysis will offer significant benefits to that Ministry.

The Pilot Analysis has shown that there is an opportunity for MoAC to gain support for its budget submission by being able to generate estimates of the benefits and to demonstrate that programs have been designed to take into account the implications of climate change for economic performance. A critical step will be for MoAC to include reference to climate change in their budget submission. This can be done in two main ways:

- by ensuring the submissions refer to the reference to climate change in existing strategy documents
- by ensuring the submission shows how the budget addresses the climate change risks and the improvement in effectiveness of expenditure compared with a Business as Usual (BAU) budget

The budget cycle in Thailand follows a conventional pattern, and the table below presents some of the key points at which climate change can be introduced into the budget cycle.

<table>
<thead>
<tr>
<th>Institution</th>
<th>Budget Step</th>
<th>Climate Change Influence on MoAC Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOB, MOF, NESDB, BOT and GA</td>
<td>Estimate of Revenue and Expenditures</td>
<td>Work on potential impact of CC on GDP growth and future revenue</td>
</tr>
<tr>
<td>GA, BOB, NESDB and OPOC</td>
<td>Targets and Strategies Review</td>
<td></td>
</tr>
<tr>
<td>MOF, NESDB, BOB, BOT</td>
<td>Revised Revenue Estimates</td>
<td>Influence on next NESDP (2017-22)</td>
</tr>
<tr>
<td></td>
<td>Proposals on Budget Policy, Size and Strategic Goals based on NESDP</td>
<td>GAP</td>
</tr>
<tr>
<td></td>
<td>Annual Budget Expenditure Allocation based on GAP</td>
<td></td>
</tr>
<tr>
<td>Cabinet</td>
<td>Budget Policy, Size and Strategic Goals</td>
<td>Champion within the Cabinet to raise CC importance</td>
</tr>
<tr>
<td>Line Departments and SOEs</td>
<td>Budget Proposals</td>
<td>Relate MoAC budget to NESDP statements on CC and environment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MoAC estimate extra benefits from CC adaptation in budget submission, for rural areas and for BoB revenue</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CC in new ADP (2017-22)</td>
</tr>
<tr>
<td>BoB</td>
<td>Revised Budget Proposals</td>
<td>BoB consider extra benefits from accepting MoAC CC submission</td>
</tr>
<tr>
<td>Cabinet</td>
<td>Draft Budget Proposals</td>
<td>Champion in Cabinet</td>
</tr>
<tr>
<td>Parliament</td>
<td>Draft Budget Act</td>
<td>Champion in Parliament</td>
</tr>
<tr>
<td></td>
<td>Annual Budget Expenditure Act</td>
<td></td>
</tr>
</tbody>
</table>

Notes: NESDP: National Economic and Social Development Plan; GAP: Government Administration Plan; SOE: State Owned Enterprise
Another concrete way for scaling up the MoAC Pilot Analysis outcomes to other Ministries in Thailand is through the development and dissemination of a common template for analysing climate change benefits and policy appraisal, potentially as one additional criteria for project screening and budget allocation. While this is still under discussion, there is a view to demonstrating how the methodologies and processes in the MoAC Pilot Analysis are broadly relevant for decision-making on budget allocations by BoB, as well as for overall monitoring of Thailand’s Climate Change Master Plan. **There is a commitment to scaling up incrementally this approach in other Ministries and agencies in Thailand in particularly climate-relevant sectors such as energy and transportation.**

Another important area of work planned for 2015 is to integrate the support at the national/central level with complementary support to the sub-national level. This will involve choosing one pilot province that has existing projects relevant to climate change adaptation, and provide support to strengthen provincial/local planning and budgeting processes, as well as M&E frameworks, with an aim of establishing Key Performance Indicators related to climate vulnerability.

This recognizes that a robust whole-of-Government approach to strengthening the governance of climate change finance **must take into account not only horizontal integration between Ministries and agencies at the central level, but also vertical coordination between central Ministries and sub-national government systems.**

It is also important to mention that the interventions described in this *Country Brief* is part of a coordinated and integrated effort by UNDP and other development partners, to support a whole-of-Government approach in Thailand to effectively integrate climate change into planning and budgeting. An overview of some of the other key pillars of support can be found in Table 4 below.

**Table 4: Whole-of-Government and Coordinated Approach to Climate Finance in Thailand**

<table>
<thead>
<tr>
<th>Government Agencies</th>
<th>Ongoing Development Partner Support</th>
<th>Role for Climate Finance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office of National Economic and Social Development Board</td>
<td>Economics of Climate Change Adaptation</td>
<td>Analyse climate change impacts and benefits-costs</td>
</tr>
<tr>
<td>Office of National Economic and Social Development Board</td>
<td>Mainstreaming Climate Change Adaptation and Disaster Risk Reduction in Development Planning in Thailand</td>
<td>Mainstream climate change adaptation, particularly disaster risk, into national and sub-national planning</td>
</tr>
<tr>
<td>Department of Disaster Risk Management, Ministry of Interior</td>
<td>Strengthening Disaster Risk Management Capacities in Thailand</td>
<td>Strengthen capacities of functional agencies to manage climate change risk, particularly disaster risk</td>
</tr>
<tr>
<td>Office of National Economic and Social Development Board</td>
<td>Biodiversity Financing (BIOFIN)</td>
<td>Strengthen capacities to integrate biodiversity (which is also related to climate change adaptation and mitigation) into national planning and financing</td>
</tr>
<tr>
<td>Office of Natural Resources and Environmental Policy and Planning</td>
<td>Support to the Development and Implementation of Thai Climate Change Policy</td>
<td>Strengthen capacities of national/functional agencies on climate change planning and implementation</td>
</tr>
</tbody>
</table>

The work taking place in Thailand, a component of which has been outlined in this *Country Brief*, will likely be of interest to other countries facing similar challenges of addressing climate risk by adapting country systems of planning and budgeting. The value of South-South Cooperation is therefore well recognized, and Thailand has been taking a lead in sharing its experience in linking climate policy and public finance, especially among ASEAN countries.
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