Five Dimensions of Mainstreaming Climate Change Adaptation

A reflection framework for practitioners and policy makers in Thailand's water sector

Adapting to climate change is a rapidly growing challenge. Even if greenhouse gas emissions are reduced significantly in the coming years, climate change impacts, such as drought, floods, severe weather events and sea-level rise are likely to result in food shortages, increases in vector-borne diseases, infrastructure damage and the degradation of natural resources.

Thus, climate change has become a development issue and adaptation needs to be integrated into national planning to become part of broader policies for development as the decisions taken today influence the adaptive capacity of people and their governments well into the future. We cannot afford to delay adaptation planning and action. Yet, many development policies, plans and projects currently do not sufficiently take climate change adaptation (CCA) into account.

Interventions to integrate the topic are needed on various levels: on the one side, CCA can be incorporated into broader development plans and activities through the national and project level. However, since vulnerability and response options are highly sector-specific, important steps and decisions on adaptation also have to be taken at the sectoral level. Mainstreaming climate change impacts and adaptation options is of particular importance for those sectors that are inherently vulnerable to climate risks, including the water sector.

In 2017, the Global Climate Risk Index ranked Thailand as the 10th country most affected by climate change. Besides other challenges, the risks posed by climate change are expected to make sustainable water management more difficult in the coming years. "The risk of floods and droughts, the risk of undermining the resilience of freshwater systems, the risk of unbalanced use and allocation (demand and supply) of water as well as water quality issues impact Thailand's water security situation." In order to guarantee long-term sustainable water management, climate risks and adaptation options, including ecosystem-based solutions, therefore need to be mainstreamed into the policies and activities of the Thai water sector.

Mainstreaming climate change adaptation

- **Mainstreaming is the systematic integration of climate change adaptation into sectoral and cross-sectoral policies, strategies, programmes and practice in order to achieve adaptive capacity and other development objectives.**
- It is a complex process, involving changes and coordination at different political levels and groups of society.
- This complexity often hinders the identification of mainstreaming challenges and possible responses, as well as the assessment of progress.

To reduce complexity, it is helpful to identify basic areas (or dimensions) in which mainstreaming becomes evident. For example, the degree of mainstreaming is detectable in the degree to which institutional arrangements allow for multi-sectoral collaboration. It also becomes evident in the degree to which policies are coherent, and corresponding instruments are in place, e. g. to solve conflicts of interest between those agencies aiming for increasing adaptive capacities and those aiming to achieve other development objectives. The degree of CCA mainstreaming is also reflected in the variety of adaptation options considered and in the amount and variety of financial resources available. And it is observable in the social sphere, e.g. when assessing the importance the public attaches to climate risks and adaptation options.

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The Five Dimensions Framework

The five dimensions framework of mainstreaming CCA aims at providing practitioners and policy makers with a structured and easy-to-use approach to reflect on mainstreaming in their specific working contexts. Due to its basic nature, it is applicable in different contexts and can be used with varying depth of information (ranging from a rough assessment to an in-depth analysis) according to the specific demand and time budget. In the following, the focus will be put on the integration of CCA into the water sector in Thailand. However, the framework can also be adapted to other sectors and countries.

The framework describes 5 dimensions on a continuum.

1. Institutional arrangements
2. Policies and regulations
3. Range of topics of policies and programmes
4. Financial and human resources
5. Public awareness and participation

On the one side of the continuum, there is a low degree of CCA mainstreaming, while on the opposite side of the continuum, there is a high degree of mainstreaming CCA into the water sector. The framework allows for a relative assessment along each dimension. The resulting profile describes the status quo of CCA mainstreaming in the Thai water sector. It provides a starting point for a more systematic discussion about the integration of climate change adaptation, helping to form a common understanding among different stakeholders, where progress has been achieved and can realistically be made in the future.

Low degree of mainstreaming	High degree of mainstreaming
Institutional arrangements	
CCA is taking shape as an area of action only for the Office of Natural Resources and Environmental Policy and Planning (ONEP)	All relevant water related agencies are concerned with climate change impacts on water resources and adaption options.
There is no focal point institution coordinating CCA integration among different governmental agencies in the water sector and no coordination mechanisms in place	There is a strong focal point institution coordinating CCA integration among different agencies related to CCA in the water sector and coordination mechanisms are in place.
The multilateral environmental agreements (esp. under UNFCCC) are only implemented by ONEP.	The multilateral environmental agreements (esp. under UNFCCC) are implemented in an integrated, synergetic manner
Policies and regulations	
There is a tendency towards "soft" instruments (informative and voluntary) to raise awareness for CCA in the water sector.	There is a coherent legal framework for integrating CCA into the water sector.
The development of water policies and projects is not informed by up-to-date climate risks and vulnerability assessments and projections.	The development of water policies and projects is informed by up-to-date climate risk and vulnerability assessments and projections.
Relevant standards and regulations are rigid and cannot be adapted when more detailed information on climate risks become available.	There is a high degree of flexibility of relevant standards and regulations to facilitate the eventual consideration of climate risks as they become available.
Scope of adaptation options	
Water policies and programmes do not consider climate change impacts and adaptation options.	All relevant water policies and programmes consider climate change impacts and adaptation is a key objective.
There are no cross-sectoral policies and measures to adapt to climate change.	There are cross-sectoral policies and measures to adapt to climate change.
There is a narrow focus on a few adaptation options in the water sector.	A variety of adaptation options, including ecosystem-based adaptation (EbA) solutions, are applied in the water sector.
Financial and human resources	
There is an emerging (small) budget for implementation of CCA in the water sector within ONEP.	There is a large budget from a variety of sources for CCA through a variety of instruments in the water sector.
Investments in the water sector are not informed by climate risk scenarios.	Investments in the water sector take climate risk scenarios into account at an early stage.
Research, knowledge and competencies to integrate considerations of CCA into the water sector are lacking.	There is sufficient research, knowledge and competencies to integrate considerations of CCA into the water sector.
Public awareness and participation	
The general public does not know about climate change-induced risks for water resources and about adaptation options.	There is strong awareness of climate change impacts on water resources and various adaptation options, including EbA.
Only a limited number of actors participates in the implementation of adaptation measures in the water sector.	Many stakeholders, including the scientific community and the private sector, participate actively.

Figure 1 – Selection of aspects from the 5DF to assess the degree of mainstreaming CCA in the Thai water sector

Application of the framework

The framework was adapted from the five dimensions framework for mainstreaming biodiversity conservation developed by GIZ's sector programme "Implementation of the Convention on Biological Diversity". It can be applied to both, general CCA and ecosystem-based adaptation (EbA).

Its application includes four steps:

1. Introduction of the five dimensions framework.
2. Assessment of the current situation in each dimension resulting in a "mainstreaming profile" at sector level. ("Where are we at?")
3. Definition of the desired and realistically feasible progress in each dimension based on the "profile". ("Where do we want to get to?")
4. Identify contributions to achieve this progress. ("Who can do what to move towards the desired mainstreaming status defined in step 3?")

The framework was tested in a participatory workshop with various water and climate change experts in Thailand and was seen as a helpful tool to start a reflection and discussion process and to visualise the current and the potential degree of mainstreaming.

Figure 2 – Climate and water experts discussing the 5DF

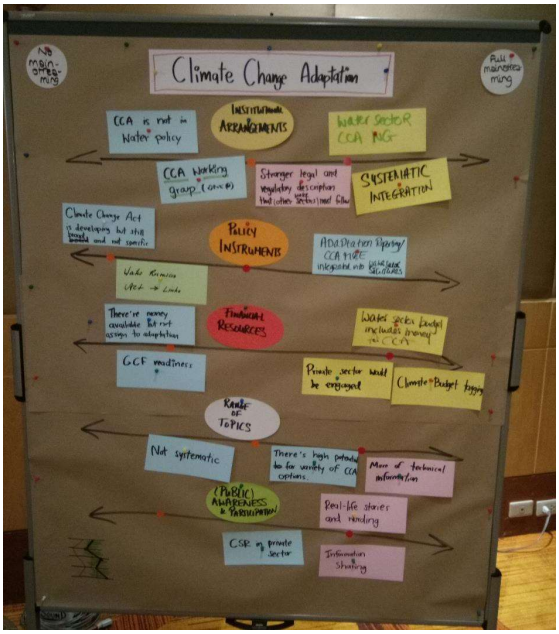

Figure 3 – Example of the 5DF application

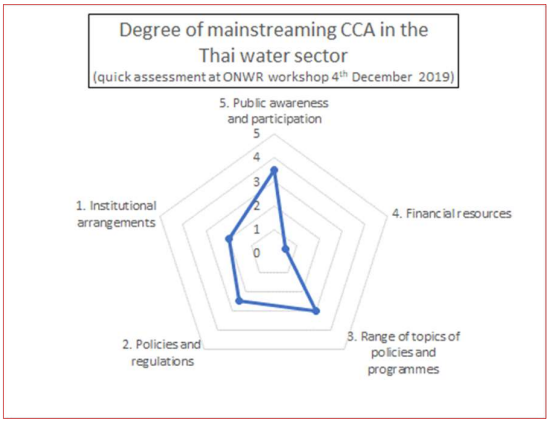

Figure 4 – Example 5DF application as a spider diagram

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Registered offices
Bonn and Eschborn, Germany

Friedrich-Ebert-Allee 36 + 40
53113 Bonn, Germany
T +49 228 44 60-0
F +49 228 44 60-17 66

Dag-Hammarskjöld-Weg 1 - 5
65760 Eschborn, Germany
T +49 61 96 79-0
F +49 61 96 79-11 15
E info@giz.de
I www.giz.de

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Author/Responsible/Editor, etc.:
Neomi Lorentz, Cologne
For TGCP Water, Bangkok

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Neomi Lorentz, Cologne

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