

**Fourth meeting of the global network of basins
working on climate change adaptation
14-15 February 2019, Geneva**



Introduction of MASAP and Its Mainstreaming at National Level

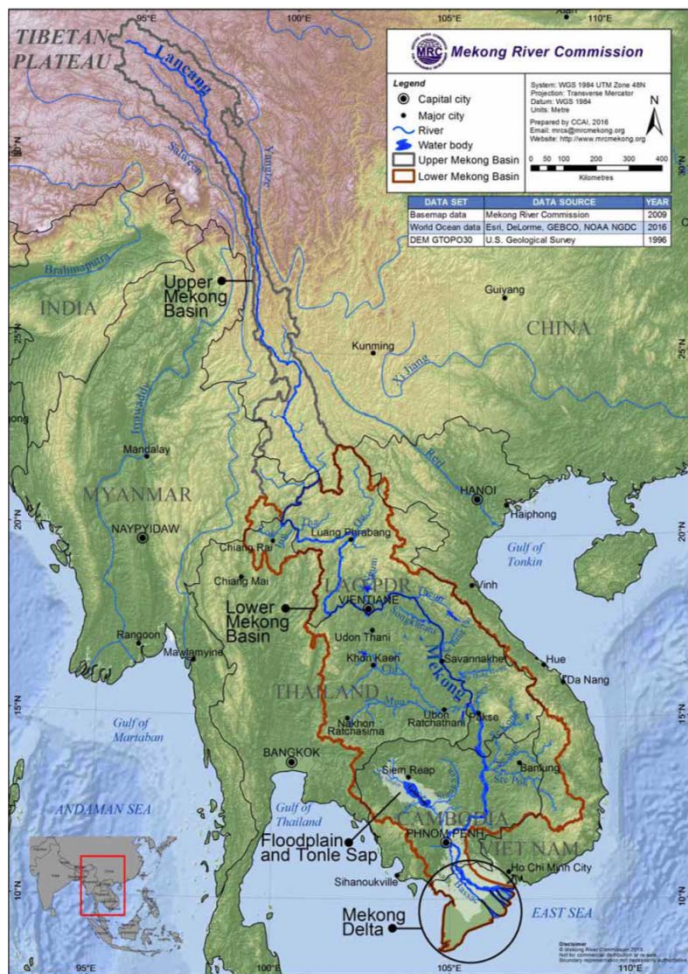
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Anne C., GIZ-MRC**



Outline

- Mekong River Commission (MRC) and Mekong CC Adaptation Strategy and Action Plan (MASAP)
- Mainstreaming MASAP at national level
- MASAP implementation and disaster risk reduction
- Lessons learnt

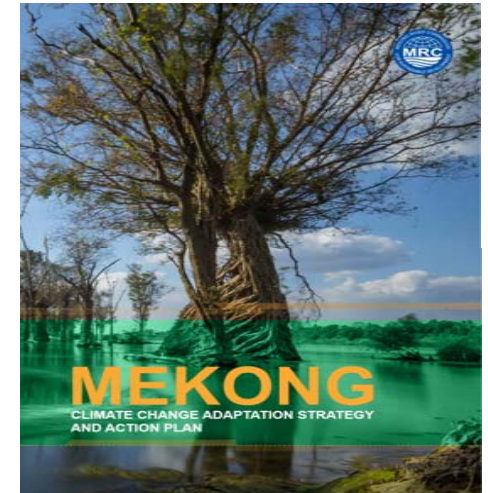
The Lower Mekong Basin and the Mekong River Commission



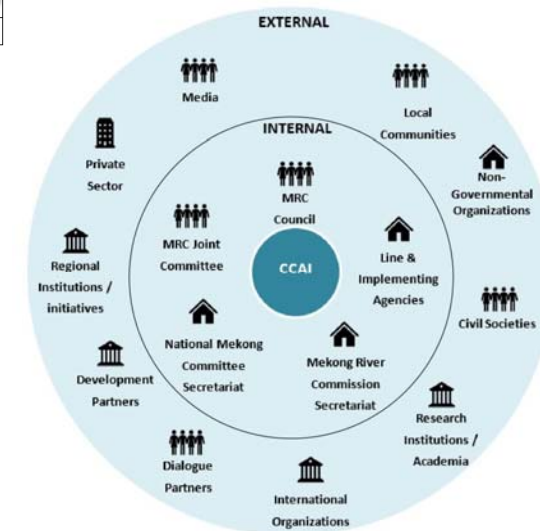
- Mekong Agreement 1995
- Mekong River Commission
- 4 Member Countries : Cambodia, Lao PDR, Thailand, Vietnam
- Lower Mekong Basin countries identified among the most vulnerable countries to CC in the world
- 2007: MRC Council requested the MRCS to develop the Climate Change Adaptation Initiative (CCAI) aimed at: basin scale analysis of CC impacts on water resources, capacity building, awareness raising, development of basin strategy (MASAP)

MASAP and its Formulation

	2013	2014	2015	2016	2017
	Preparation	Formulation		Finalization	Approval
Information inputs	<ul style="list-style-type: none"> Literature review on climate change studies Capacity need assessment Lesson learned from demonstration projects Multi-stakeholder dialogue (1st round-table discussion) 	<ul style="list-style-type: none"> Status of climate change and adaptation Extreme climate change analysis Projected climate change scenarios Basin-wide assessments of climate change impacts and vulnerability Identification of adaptation options Compilation of experiences from international, national and local levels Multi-stakeholder dialogue (2nd roundtable discussion, 1st Rhine-Mekong symposium, 2nd Mekong Climate Change Forum) 		<ul style="list-style-type: none"> Final basin-wide assessment results Multi-stakeholder dialogue (MASAP stakeholder forum/ 3rd Mekong Climate Change Forum) Guidance from JC and Council 	<ul style="list-style-type: none"> Negotiation on pending issues Endorsement from JC and approval from Council
Timeframe	[Timeline represented by blue arrows showing progression from 2013 to 2017]				
Outputs		<ul style="list-style-type: none"> Agreed roadmap 		<ul style="list-style-type: none"> 1st draft of strategy Final draft of strategy Final strategy 	
High-level consultation				JC	JC, C



- MASAP built on some CCAI key products (policy review and BWAs) and was formulated through a series of stakeholder consultations (4 rounds of national consultations, 1 high-level round table discussion, 5 regional consultations, 2 stakeholder forums)



Content of MASAP

- Chapter 1: Introduction
- Chapter 2: Framework Conditions
- Chapter 3: Climate Change and Vulnerability in the LMB
- Chapter 4: Strategic Guidance and **Priorities** for Basin Adaptation to Climate Change
- Chapter 5: **Action Plan** for Basin Adaptation to Climate Change



MASAP Strategic Priorities

MASAP is a Statement of the LMB countries of strategic priorities and actions at basin level to *address CC risks and strengthen basin-wide resilience.*

Strategic priorities:

1. **Mainstreaming** CC into regional and national policies/programs/ plans
2. Regional and international **cooperation and partnership** on adaptation
3. Preparation of **transboundary**, gender sensitive adaptation options
4. Access to adaptation **finance**
5. **Monitoring**, data collection and sharing
6. **Capacity development** for CC adaptation strategies/ plans
7. **Outreach** of MRC products on CC and adaptation.

MASAP Mainstreaming at National Level (1)

CC mainstreaming from a regional perspective into national actions/ activities/ projects

Approach:

- Activity financed by MRCS basket fund
- International consultant and 4 national consultants (1 per country)
- Important effort of consultation (regional working sessions, national consultations)
- Focus on the identification of national activities where MRC intervention can add value

Challenges:

- To capture the very diverse landscape of interventions and actors in the CC sector in 4 countries
- To stay within MRC mandate
- To identify the added value of the basin scale on top of all existing national initiatives



MASAP Mainstreaming at National Level (2)

Intervention contributing to national objectives and adding value through MRC mandate :

1. National actions are undertaken in a way that is complimentary to and helps to achieve broader regional objectives and outcomes
 - Ex: Development of CC scenarios, set-up of corridors/protected area for biodiversity preservation....
2. Prioritizing national actions in the LMB (for countries partly lying in LMB)
3. Up-take of basin-wide tools and/or assessments developed in CCAI for national intervention:
 - Ex: Flood mapping, vulnerability assessment, impacts on hydropower production...
4. Building synergies through the 4 MCs
 - Ex: Joint trainings; promotion of technical exchanges between countries; access to climate finance (regional accredited entity)....



MASAP implementation and disaster risk reduction

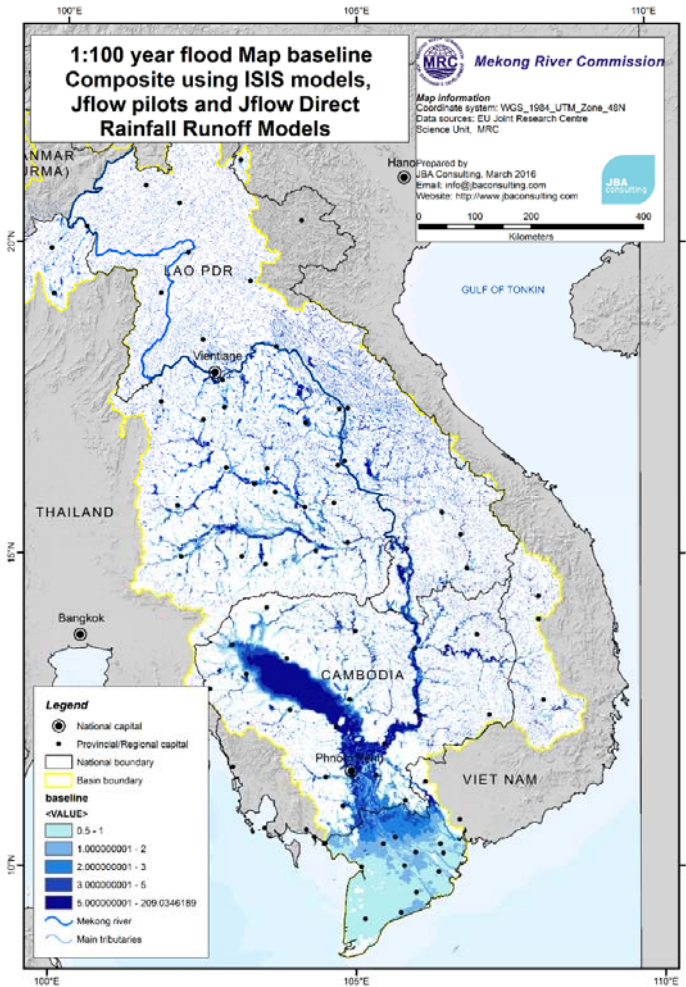
MASAP mainstreaming at regional level: integrate CCA into MRC sectoral strategies and BDS

In 2019: Mainstream MASAP perspectives into flood management and mitigation strategy update

Dissemination: MRC products related to disaster risks

- A range of CC scenarios were analyzed and selected for the LMB
- Basin-wide assessments of the impacts of CC scenarios on different water and water related resources were done
- Historical trends of hydroclimatic conditions including extreme events (*tropical storms and typhoons*) were statistically analyzed
- Specific methodologies were developed to assess CC impacts on flood and drought patterns and such assessments are not always existing at national levels

CC impacts on Flood patterns in the LMB



- Considering CC scenarios, as well as development scenarios
- Combination of raster based modelling and 2D hydrodynamic modelling, probabilistic mapping (range of return periods)
- Spatially explicit modelling results allowing identification of hot-spots

➔ High increase of flooded surface and affected population in the LMB

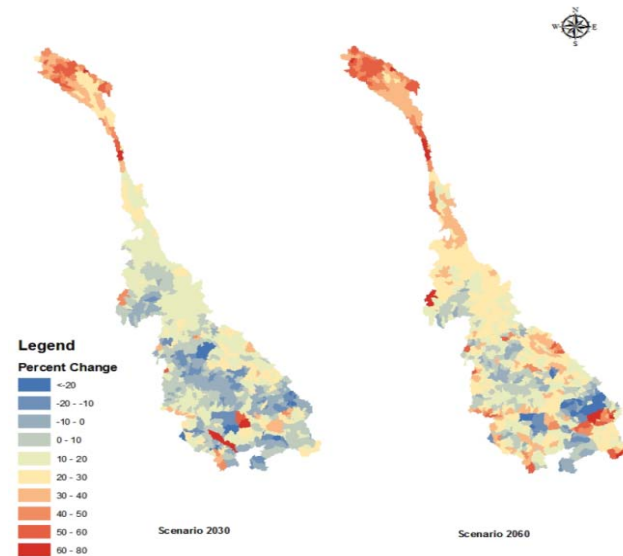
Area Flooded (Ha)	Area of Flooding at 1:100 year event Baseline	Area of flooding 2060 Medium change	Area of flooding 2060 Extreme Change	% Increase Flooded Area Medium Change 2060	% Increase Flooded Area Extreme Change 2060
Cambodia	5,009,360	5,383,096	5,667,144	7%	13%
Lao PDR	3,105,288	3,382,004	3,654,076	9%	18%
Thailand	3,439,312	3,686,108	4,012,840	7%	17%
Viet Nam	3,112,212	3,845,956	4,074,148	24%	31%
Total	14,666,200	16,297,200	17,408,200	11%	19%

Increase in flood extent at 1:100 yr by country for Medium (Seasonal) or Extreme (Wetter) Climate Change Scenarios.

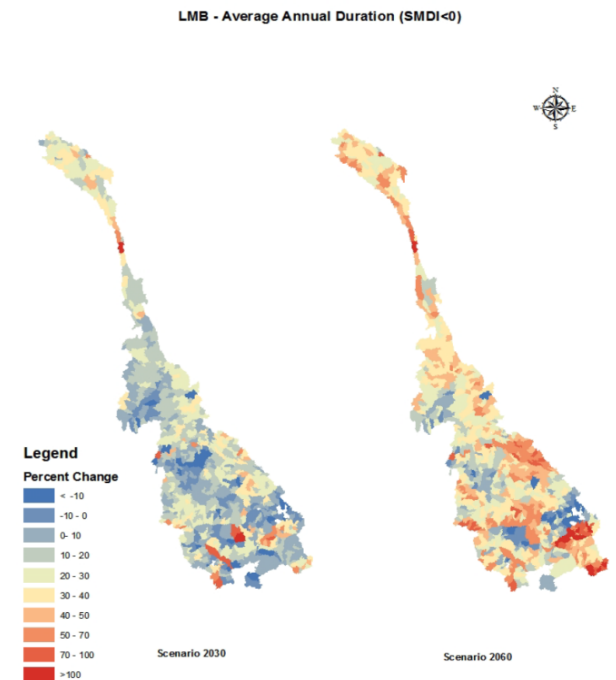
CC impacts on Drought patterns in the LMB

- The % change of different drought indicators (meteorological, hydrological and agricultural drought indicators) are assessed
- Changes in the frequency of meteorological, hydrological and agricultural droughts are assessed as well as changes in pattern (shift, intensity) and duration of droughts.

Agricultural drought (SMDI): % change compared to baseline

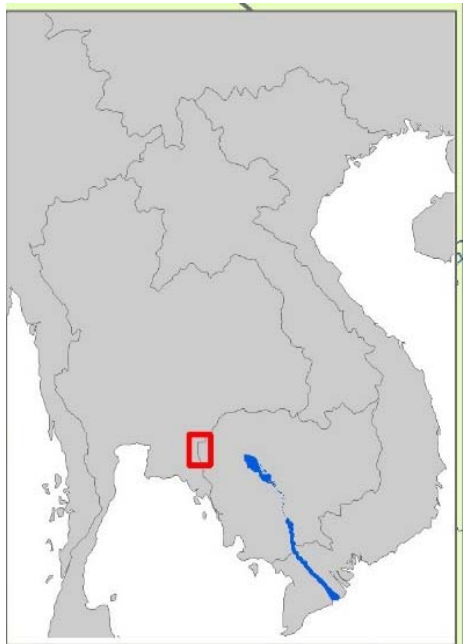


Average annual frequency



Average annual duration

Joint Project on Flood & Drought (1)



- Mekong sub catchment shared between Cambodia (downstream) and Thailand (upstream)
- Series of significant floods alternating with severe drought in recent years and present trend indicating possible increase in intensity of future events
- Significant social economic development on going and expected with increasing pressure on the limited water resource
- Willingness from both countries to investigate the potential for mutually beneficial transboundary water resource planning and disaster risk management

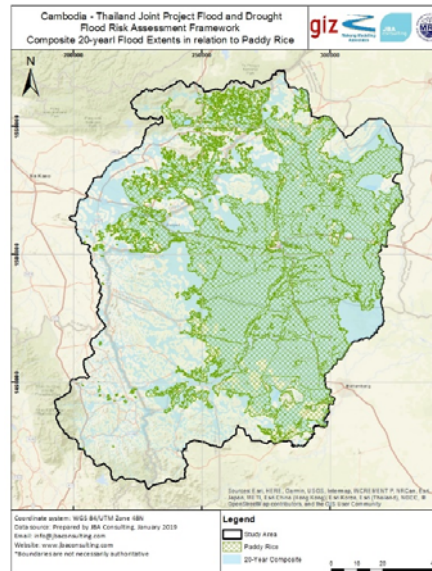


**Joint Project on Flood and Drought
in Cambodia and Thailand**

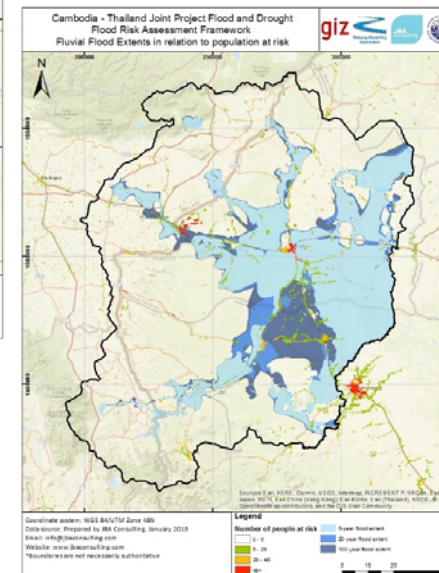
Joint Project on Flood & Drought (2)

In 2018 - 2019

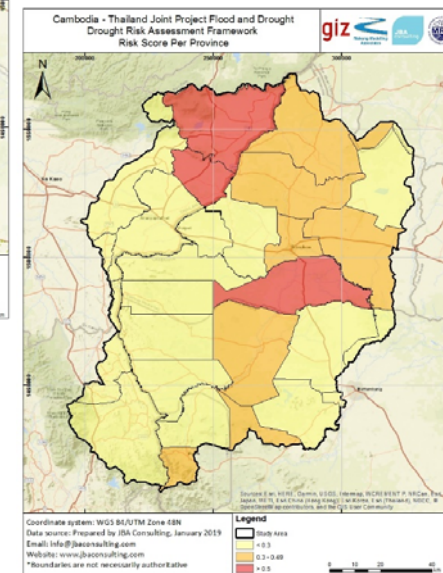
- Assess flood and drought risks in the transboundary sub-catchment
- Identify the different development initiatives
- Prioritize mitigation measures (along Sendai Framework pillars) for joint action



20yr flood extend and paddy rice fields



Range of flood of different return periods and people at risk



Drought Risk Score per province

➡ Establish a **joint strategy** with an implementation plan: short and longer-term structural and non-structural mitigation measures (harmonized alarm levels, improved flood warning, quantify groundwater potential, improvements at structures for high flood)

➡ Support development of funding proposals (to national budget, DP, others)

Lessons learned

- **Multiplicity of national initiatives and actors in the field of CCA -> importance of extensive consultation processes (*costly*)**
- **Basin/transboundary intervention on top of existing national initiatives in CCA and DRR -> challenge of identifying relevant actions for which the basin/transboundary level adds more value than 'costs' to the national ones**
- **MRC member countries and MRC Secretariat have significant know-how and experience in terms of CCA and DRR -> high potential for cross-fertilization, synergies, exchanges that MRC has to promote**



Thank you

