

National Adaption Plan 2017 Asia Expo  
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# Climate Change in Myanmar Process and Prioritizing Adaptation at the Local Level

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# Outlines

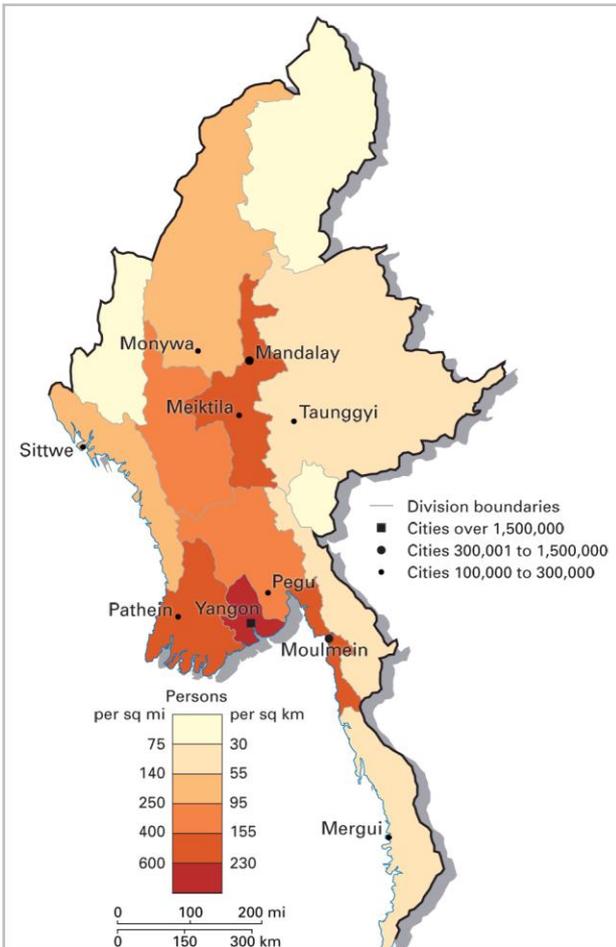
- Climate Change in Myanmar
- Climate Change Policies
- National Adaptation Plan of Action–NAPA
- National Institution for Climate Change
- Myanmar Climate Change Alliance–MCCA  
Sectoral Outcomes
- VA and Adaptation Plan for Chin State
- The way forward to Adaptation Planning

# Climate Change in Myanmar



- Highly exposed to severe natural climatic events
  - Droughts,
  - Heavy rains,
  - Cyclones / strong winds
  - Floods & storm surge (as a result of cyclones)
  - Extreme temperatures
  - (Earthquakes also potential hazard)
- Vulnerability increased by sensitivity and low adaptive capacities against a large concentration of population and assets in exposed areas
- The changing climate present new patterns of exposure, vulnerability and risks

# Climate Changes in Myanmar



~52 millions (Census 2014)  
population concentrated in the  
Ayeyarwaddy basin area (that  
largely sustains socio-economic  
sectors and livelihoods) over two  
main macro-areas:

1. Delta area (~50,400 km<sup>2</sup>) and most exposed to recurring tropical storms, cyclones and floods and potential storm surge
2. 'Dry' zone area, exposed to chronic droughts

# Climate Changes in Myanmar



## Observed evidence of climate variability and change in Myanmar

- increase in temperatures across the whole country ( $\sim 0.08^{\circ}\text{C}$  per decade) i.e. in the northern and central regions;
- increase in total rainfall over most regions, but notable decreases in certain areas (e.g. Bago Region);
- decrease in the duration of the south-west monsoon season as a result of a late onset and early start times; and
- increases in the recurrence and severity of extreme weather events

# Scientific modelling forecast

## 2001–2100

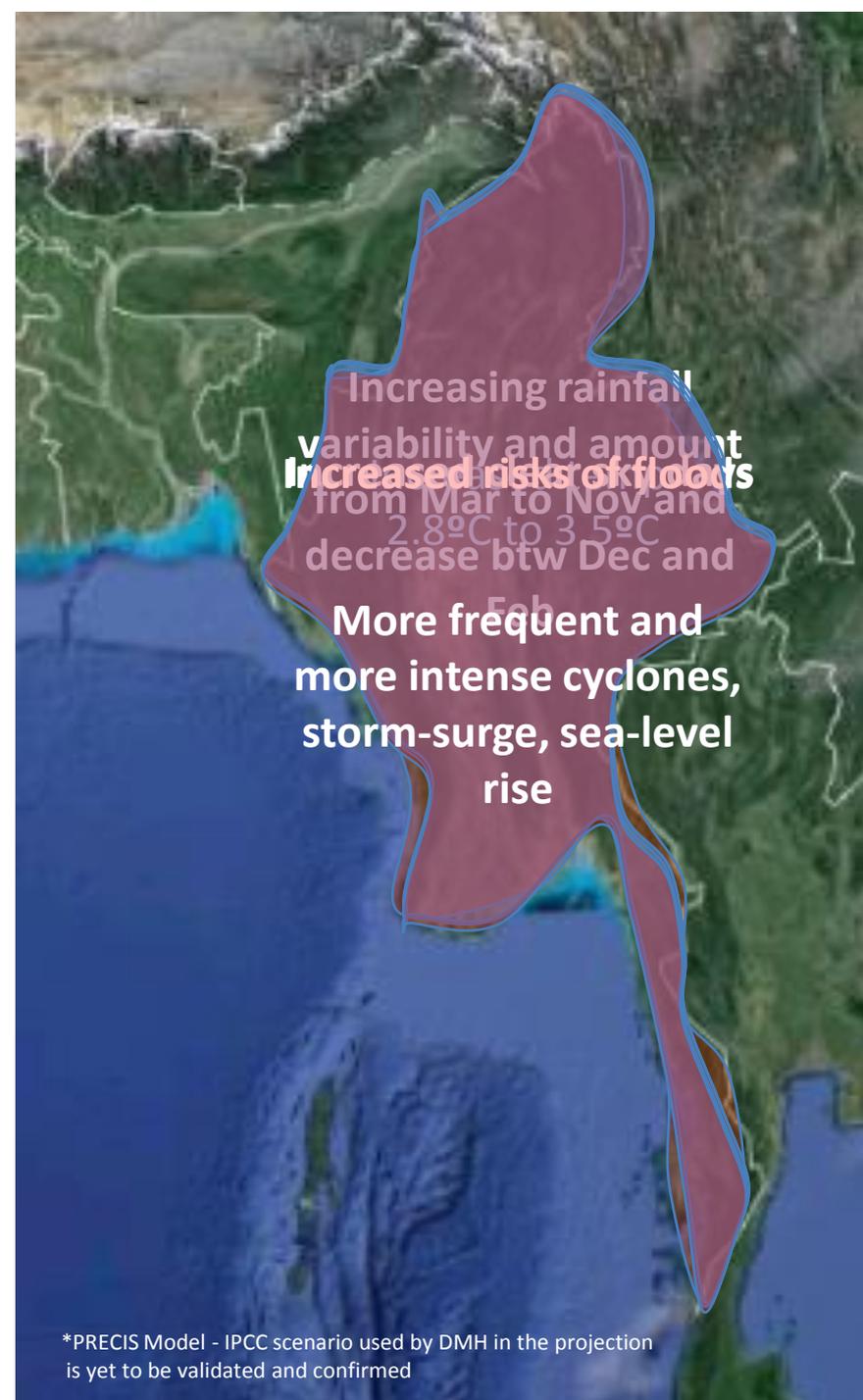
**INCREASE IN TEMPERATURE** across the whole country, particularly from December – May with the Central and Northern regions experiencing the greatest increases

**INCREASE IN CLEAR SKY** days exacerbating drought periods

**CHANGING RAINFALL PATTERNS AND AMOUNT** an increase in rainfall variability during the rainy season including an increase across the whole country from March – November (particularly in Northern Myanmar), and decrease between December and February

**INCREASE IN RISK OF FLOODING** resulting from a late onset and early withdrawal of monsoon events;

**INCREASE IN # and INTENSITY** of cyclones/strong winds, flood/storm surge, intense rains, extreme high temperatures, and sea-level rise.



# Climate Change Policies

National Adaptation Programme of Action (NAPA)

National Environment Policy (1994)

Myanmar Forest Policy (1995)

The National Health Policy

The National Energy Policy

Constitution of the Republic of the Union of Myanmar

National Environment and Health Action Plan (NEHAP)

National Biodiversity Strategy Action Plan (NBSAP)

Myanmar Action Plan on Disaster Risk Reduction (MAPDRR)

The Myanmar Action Plan on Disaster Risk Reduction,  
Preparedness, Relief and Rehabilitation

Ozone Layer Protection

# National Adaptation Plan of Action–NAPA

Myanmar's NAPA contains 32 priority activities, known as Priority Adaptation Projects

- 1) Agriculture;
- 2) Early Warning Systems;
- 3) Forest;
- 4) Public Health;
- 5) Water Resources;
- 6) Coastal Zone;
- 7) Energy and Industry; and
- 8) Biodiversity.

# National Environmental Conservation and Climate Change Central Committee

**WC on Policy, Law, Rules .  
Procedures, Standards**

**WC on Industry, Urban and  
Rural Development**

**WC on Climate Change  
Mitigation and Adaptation**

**WC on Natural Resources and  
Cultural Heritage  
conservation**

**WC on Human Resource  
Development, Education and  
Extension**

**WC on Green Economy and  
Green Growth**

**Regions/States  
Environmental  
Conservation  
and Climate  
Change  
Supervision  
Committee**

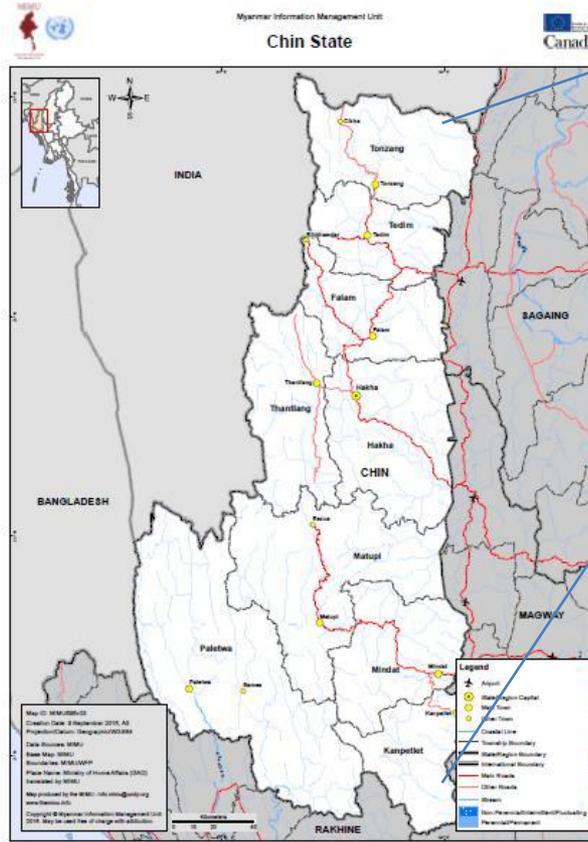
# Myanmar Climate Change Alliance–MCCA

## Sectoral Outcomes

- Climate Smart Agriculture, Fisheries and Livestock for Food Security
- Sustainable Management of Natural Resources for Healthy Eco-System
- Resilient and Low Carbon Energy, Transport and Industrial Systems for Sustainable Growth Climate
- Climate Resilient, Inclusive, and Sustainable Towns and Cities for People to Live and Thrive
- Climate Risk Management for People's Health and Wellbeing
- Education, Science and Technology for a Resilient Society

# VA and Adaptation Plan for Chin State

A thorough discussion with the people consulted on matters of Hazards, Impacts, Stressors, Socio-economic, Infrastructure and Environmental Sensitivities. The willingness to share data was also explored.



# Process on VA , Adaptation Planning and Prioritizing

- Vulnerability and risk assessment and adaptation planning framework and methodology
- Carry out stocktaking of climate information and knowledge on climate risk and impact
- Based on the stocktaking exercise, identify the most vulnerable/risk-prone townships for the VA and adaptation planning work
- Vulnerability assessment and adaptation planning



## Process on VA , Adaptation Planning and Prioritizing

- Carry out field work to collect information on climate risk and vulnerability at the local level particularly looking at climate trends/scenarios, hazards, exposure and vulnerability.
- The vulnerability assessment cover potential climate change impacts on assets and systems, including critical thresholds; asset and system priorities, according to their vulnerability; and options and actions for adaptation.
- Organize a township level workshop to present the outcome of the vulnerability assessment and carry out adaptation planning work to identify short, medium and long term adaptation strategies

# Process on VA , Adaptation Planning and Prioritizing

- Discuss with the government and relevant stakeholders and prioritize adaptation options
- Develop detailed a plan for implementation (institutional structure, funding, monitoring and evaluation guidelines).



# Example of prioritized adaptive measures (Environment)

1	Expected Result	Activities	Type	Cost	Feasibil	Accept	Adapti	No regre	Speed	Rank/Pe	Strategic value
2	ER1 Forestry coverage is restored (to 1980 levels), enhanced and protected so to continue providing services as protection from hazard, eco-system for biodiversity (fishery), construction materials, soil regulation	Protecting existing mangrove/forestry areas by enforcing laws and regulations on protected forestry areas		5	4	5	4	5	2	25	100
3		Protecting existing mangrove/forestry areas by creating community awareness on the need to maintain forestry		5	4	5	4	5	2	25	100
4		Enhancing and restoring mangrove/forestry coverage in areas exposed to natural hazards and in areas with soil erosion		3	4	3	4	5	1	20	100
5		Enhancing access to renewable energy sources as cookstoves, Solar Power to reduce weight on mangrove and forest		1	5	4	4	5	3	22	100
6		Implementing Community Forestry (Integrated Management and Livelihoods) to provide for construction, cooking, livelihoods (acceptance was 3		3	4	5	4	5	1	22	75
7		ER2 Natural resources and in particular the soil and the sea/river biodiversity are protected and enhanced so to continue supporting agriculture, fishery and people	Enhancing knowldge and capacities for Sustainable Soil Management (sustainable organic fertilizer,		3	3	5	3	4	3	21
8	Testing integrated soil management techniques to mantain soil productivity/fertility, including in salt			3	3	5	3	4	3	21	50
9	Raising awareness on sustainable fishery and illegal chemical fishery			4	4	4	4	5	2	23	75
10	Enhancing and restoring mangroves to (re)create eco-systems for fishery			3	4	5	4	5	2	23	100
11	ER3 The salinization process effects are mitigated by means of adaptive crops, regulating services	Protecting paddy fields/fields from salinization by constructing small community embankements		3	4	5	5	4	3	24	25
12		Protecting fields by constructing constructing large embankements		1	5	4	5	5	2	22	50
13		Protecting fields by constructing dykes systems structing dykes		1	5	4	5	5	2	22	75
14		Testing crops resistant to salt to mantain and increase agricultural productivity		3	3	5	5	3	4	23	100

# The way forward to Adaptation Planning

- 1) Identify roles and responsibilities of key actors
- 2) Strengthen communication and coordination across levels (vertical and cross-sectoral)
- 3) Provide clear guidelines for planning, financial budgeting, and monitoring and evaluation
- 4) Build capacity in information management
- 5) Create coherence and integration among existing and emerging legal frameworks and policies

# The way forward to Adaptation Planning

- 7) More engage with NGOs, CSOs, communities, and others in the process to ensure ownership at the local levels
- 8) Scale-up actual adaptation at local level, through several mechanisms
- 9) Promote collaboration between ministries and with non-government organizations and communities

An aerial photograph showing a village completely surrounded by floodwaters. The houses have various colored roofs, and some trees are visible above the water. The water is a muddy, brown color. The text "Thank You for Your Kind Attention" is overlaid in the center of the image in a large, bold, black font with a white drop shadow.

**Thank You for Your  
Kind Attention**