



**United Nations** Climate Change  
Paris Committee on Capacity-building



Bangkok, Thailand 2-6 September 2019

The Paris Committee On Capacity-building (PCCB) organizes

# Capacity-building Knowledge to Action Day

Asia-Pacific Climate Week |  
September 2 | 9:00-18:00  
Public Foyer , United Nations Conference Centre



Financial support provided by:  
Ce projet a été réalisé avec l'appui financier de :

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Secrétariat hébergé par :



Environment and  
Climate Change Canada



Environment and  
Climate Change Canada



IISD  
International Institute for Sustainable Development



Federal Ministry  
for Economic Cooperation  
and Development



USA



ICCCAD  
International Centre for  
Climate Change and  
Development



LUCCEED  
Least Developed Countries  
Universities Consortium on  
Climate Change



NDC  
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SEI  
Stockholm  
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and Human Security



**United Nations** Climate Change  
Paris Committee on Capacity-building



Bangkok, Thailand 2-6 September 2019

# Capacity-building Knowledge to Action Day

September 2 | 9:00-18:00

## Welcoming remarks





**United Nations** Climate Change  
Paris Committee on Capacity-building



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**Champion's Special Address**

# Tomasz Chruszczow

Special Envoy for Climate Change from the Ministry of  
Environment in Poland







**United Nations** Climate Change  
Paris Committee on Capacity-building



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September 2 | 9:00-18:00

## Session 1:

Identifying developing countries' capacity-building gaps and needs related to the preparation and implementation of NAPs and NDCs







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## Session 2:

Bridging capacity-building gaps and needs: the role of local, national and regional universities and research institutions





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## Session 3:

Next steps: Identifying response actions to collaborate and bridge capacity-building gaps and needs at a regional level





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## Panel Discussion

Fostering effective collaboration between universities and national research institutions with national/regional stakeholders: lessons learned







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# Capacity-building Knowledge to Action Day

September 2 | 9:00-18:00

Co-chair of the PCCB

## Marzena Anna Chodor

‘Strengthening engagement of academia in capacity-building for climate action: the work of the PCCB’

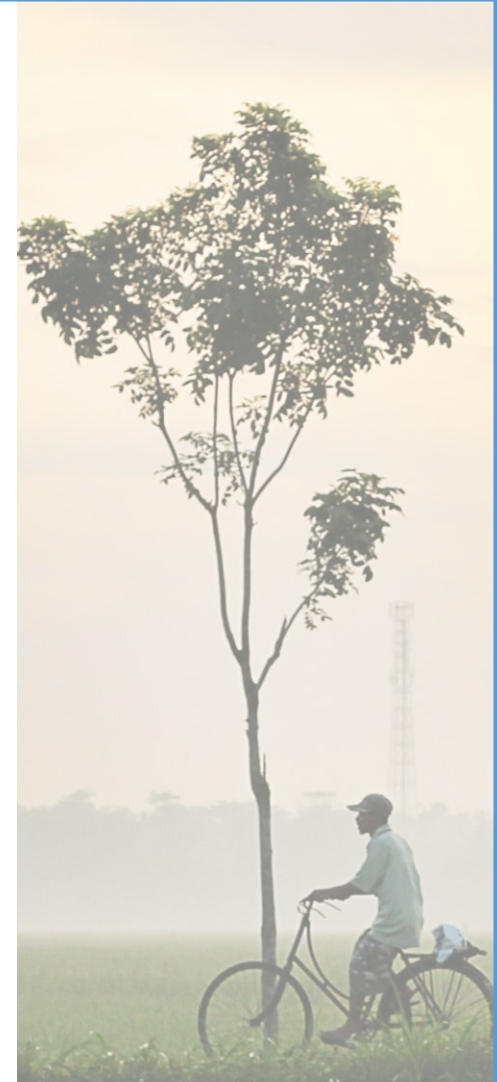




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## Capacity-building Knowledge to Action Day

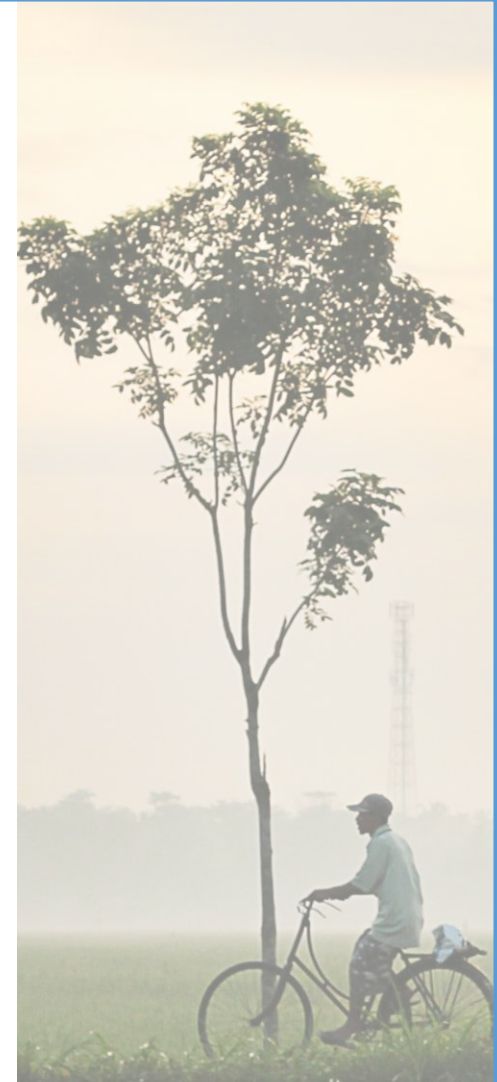
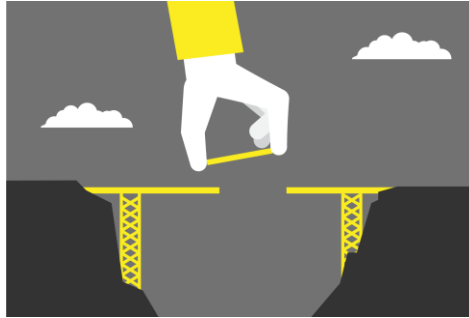
2 September 2019  
Bangkok, Thailand



## The Paris Committee on Capacity-building aims

*“... to address **gaps and needs**, both current and emerging, in implementing **capacity-building** in developing country Parties and further enhance capacity-building efforts, including with regard to **coherence and coordination** in capacity-building activities under the Convention.”*

(1/CP.21, paragraph 71)





# Work plan

- ▶ The PCCB has been tasked with overseeing and managing the **2016-2020 capacity-building workplan** launched by COP 21
- ▶ Based on its aim and mandates, the PCCB adopted a **rolling work plan for the period 2017-2019**;
- ▶ Implemented through the lens of the **PCCB's annual focus area or theme** (2017-2019 focus area: Capacity-building activities for the implementation of NDCs);
- ▶ Supported through **four thematic PCCB working groups** focused on:



## Coherence and coordination

on capacity-building under and outside the convention



## Cross-cutting issues

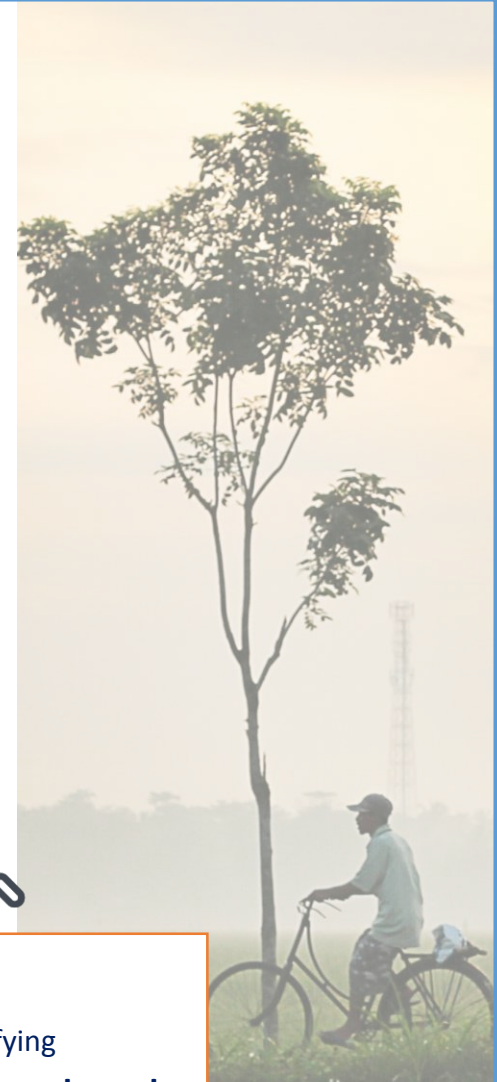
such as gender responsiveness, human rights, and indigenous peoples' knowledge



## Awareness-raising, communications and stakeholder engagement



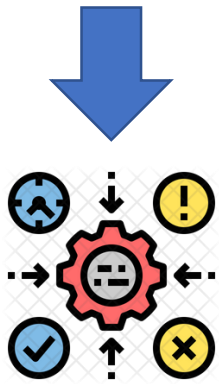
## Identifying capacity gaps and needs



## How will these events contribute to PCCBs work?



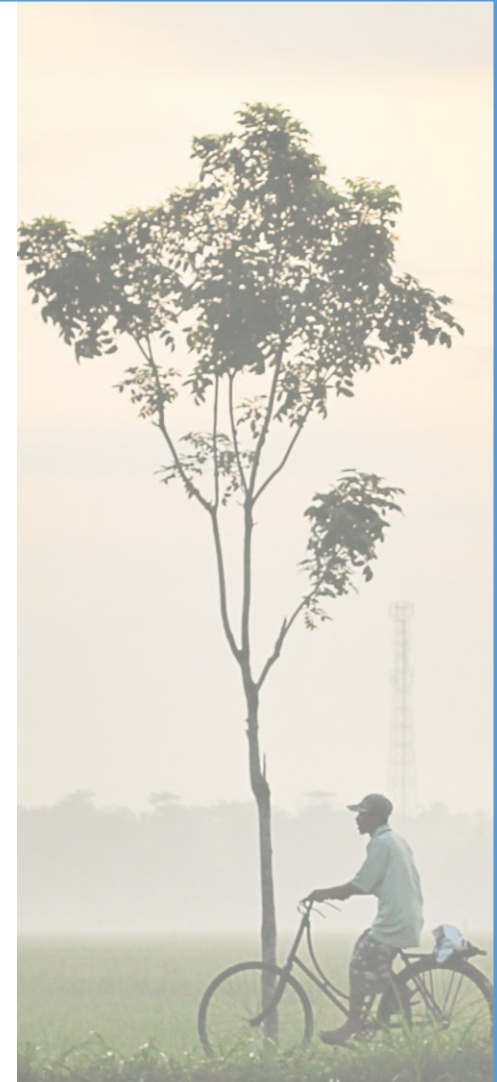
These events will support work of PCCB, especially on:



Identifying context-driven responses to capacity gaps and needs at the local and national level



Bridging the gap between the theory and practice of climate action.



## 8<sup>th</sup> Durban Forum

20 June 2019

### Key messages:



Participants highlighted the important role played by academia in retaining capacities within developing countries.



It is extremely important to understand the role and relevance of local, national and regional research institutions and universities in providing effective capacity-building and context-driven solutions, even more in the context of NDC implementation



Local research should be able to empower countries to develop result-based and actionable solutions. Training and involving local citizens in research would support and enhance capacity at local level.



## Capacity-building Knowledge to Action Days

The Paris Committee on Capacity-building seeks to promote capacity-building initiatives that are embedded in longer-term locally owned plans:



Pursue medium-term impacts rather than short-term outputs



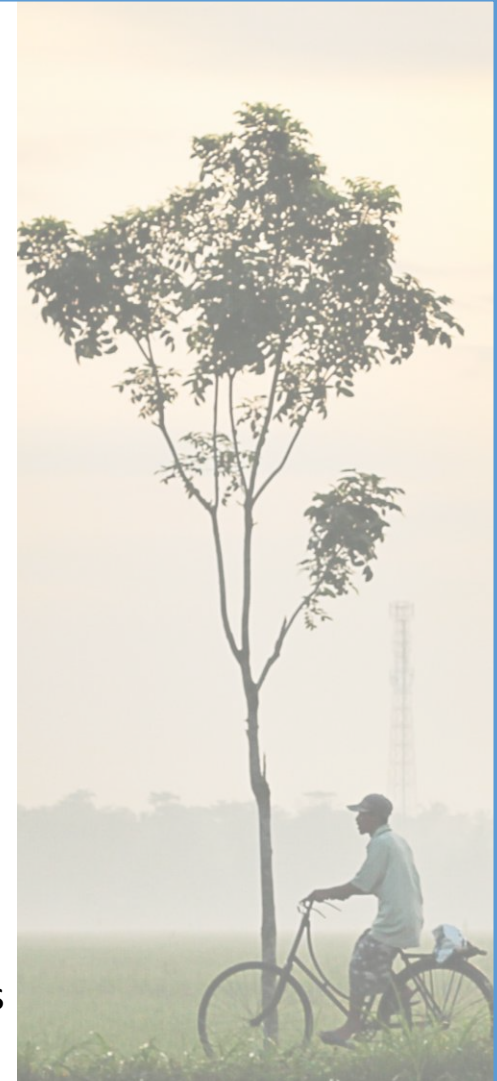
Facilitate peer-to-peer learning and experience-sharing



Involve support to beneficiary countries for institutional strengthening



Promote the engagement of national and regional experts and researchers as well as subnational, national and regional institutions supporting capacity-building



LATIN AMERICA & CARIBBEAN

# CLIMATE WEEK

Salvador, Brazil 19-23 August 2019



Canada



UNITED NATIONS UNIVERSITY  
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United Nations Climate Change  
Paris Committee on Capacity-building

ASIA-PACIFIC

# CLIMATE WEEK

Hanoi, Vietnam 2-6 September 2019



UNITED NATIONS  
**ESCAP**  
Economic and Social Commission for Asia and the Pacific

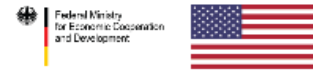


International Centre for  
Climate Change and  
Development



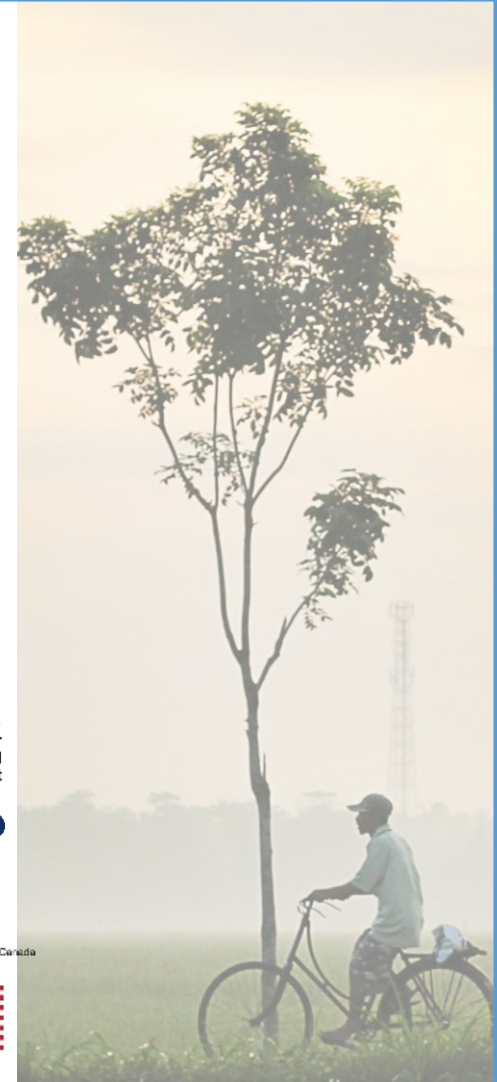
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## Capacity-building Knowledge to Action Days



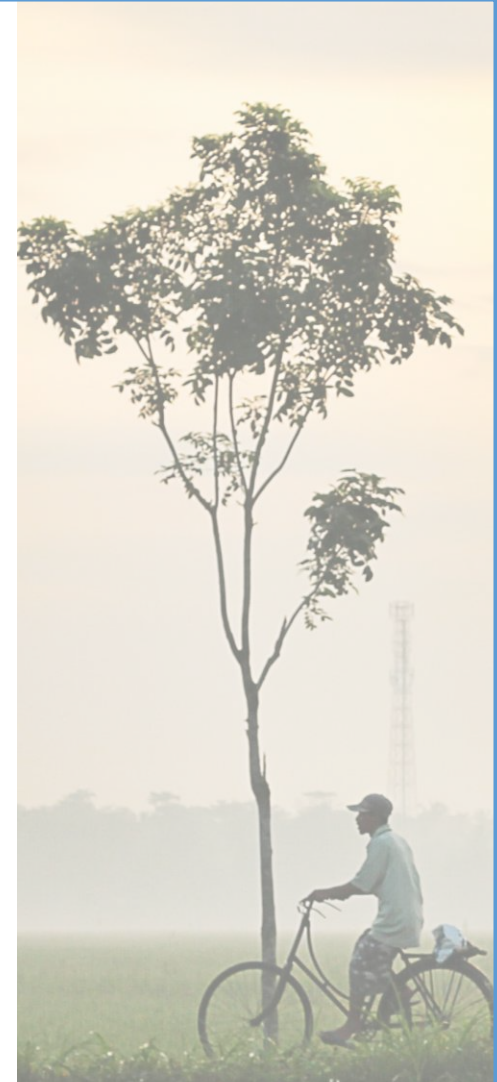
Results will be presented at the 2nd Capacity-Building Hub, hosted by the PCCB



A third workshop is envisaged to be organized during the Africa Climate Week in 2020.



Discussion Paper/ Policy Brief will be developed by all the partners and published in 2020





Thank you very much for your attention

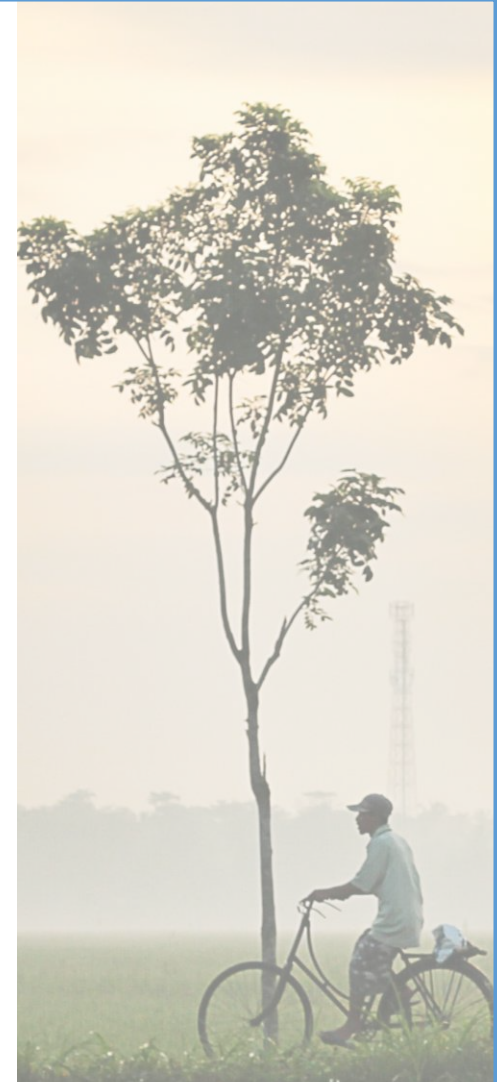
[pccb@unfccc.int](mailto:pccb@unfccc.int)

Marzena Chodor

Co-chair of the Paris Committee on Capacity-building



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# Capacity-building Knowledge to Action Day

September 2 | 9:00-18:00

**Programme Director, LUCCC**

## Mizan R. Khan

‘Capacity Building to address Climate Change: A Fresh Approach’









**United Nations** Climate Change  
Paris Committee on Capacity-building



# From modeling science to climate services for health: development of dengue early warning system in Jakarta, Indonesia.

## Dr. Ardhasena Sopaheluwakan

- Chair, WG on Climate Services, World Meteorological Organization RA-V.
- Co-chair, Expert Team on Global Climate Statement, World Meteorological Organization.
- Deputy Director for Climate and Air Quality Research, Agency for Meteorology Climatology and Geophysics (BMKG), Indonesia



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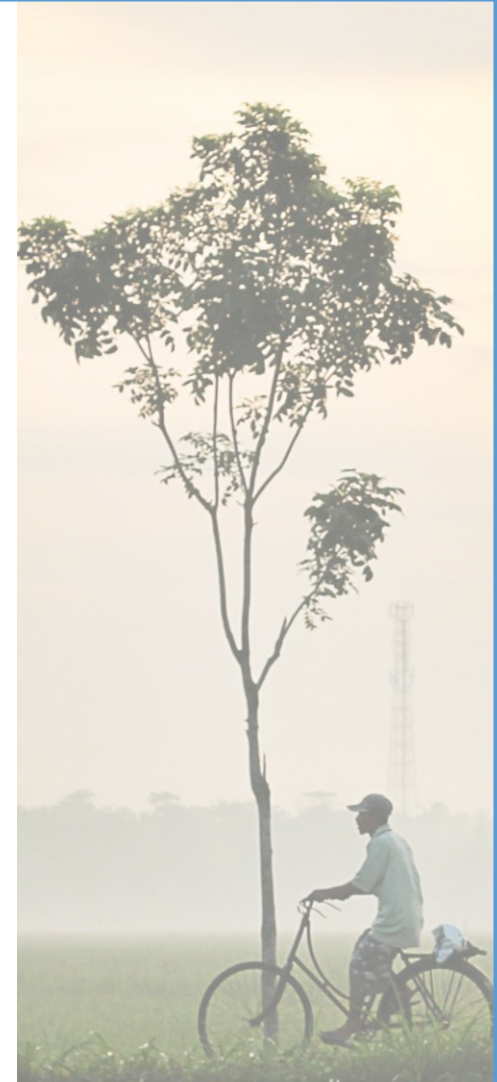


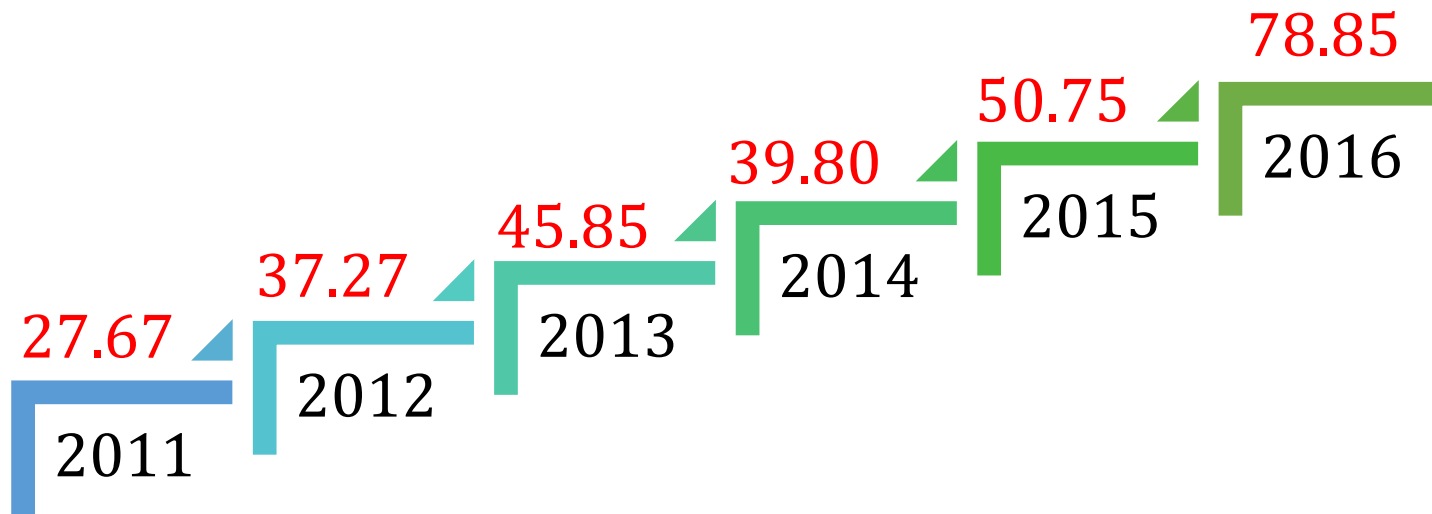
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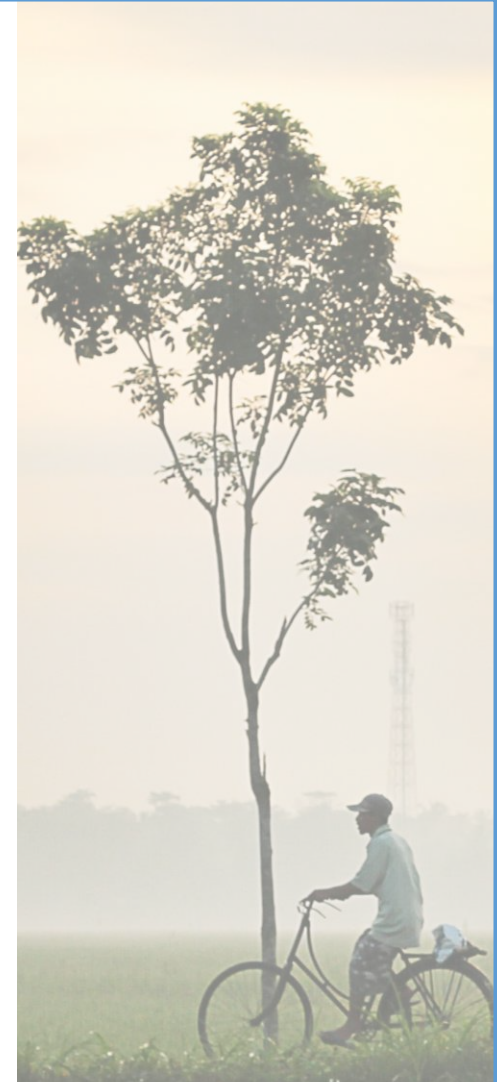
- **Motivation**
- **Development of dengue early warning product framed by the pillars of Global Framework for Climate Services**
  - *Observation and Monitoring*
  - *Research Modeling and Prediction*
  - *Climate Services Information System*
  - *User Interface Platform*
  - *Capacity Development*
- **Summary**





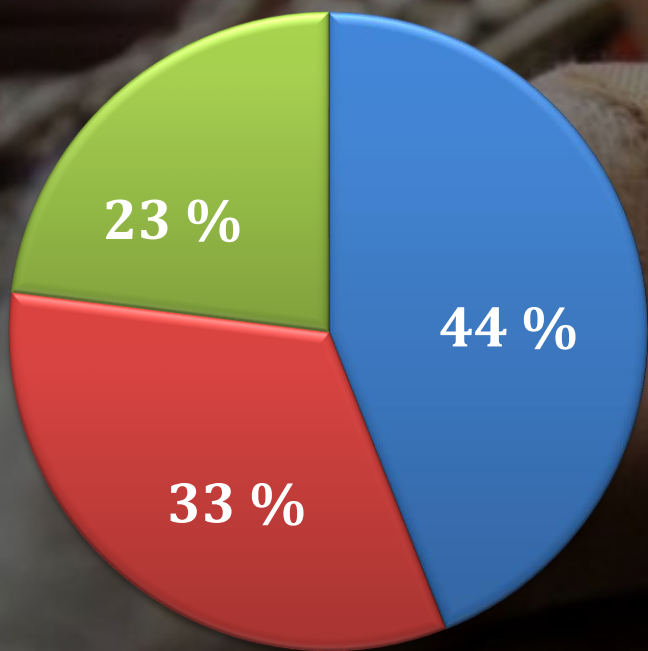
Indigent Rate (IR) : Number of dengue cases per 100.000 population in Indonesia

Increasing IR in Indonesia over the past years





## Dengue case according to group age:



■ 5 - 14 ■ 15 - 44 ■ other



## Fatalities



2014: **907**

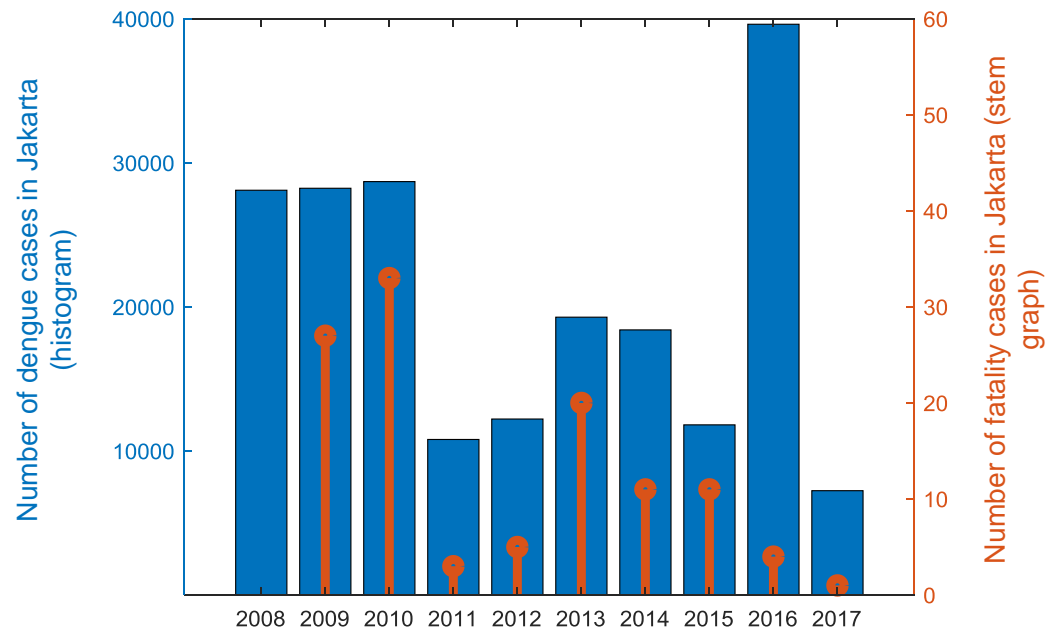
2015: **1229**



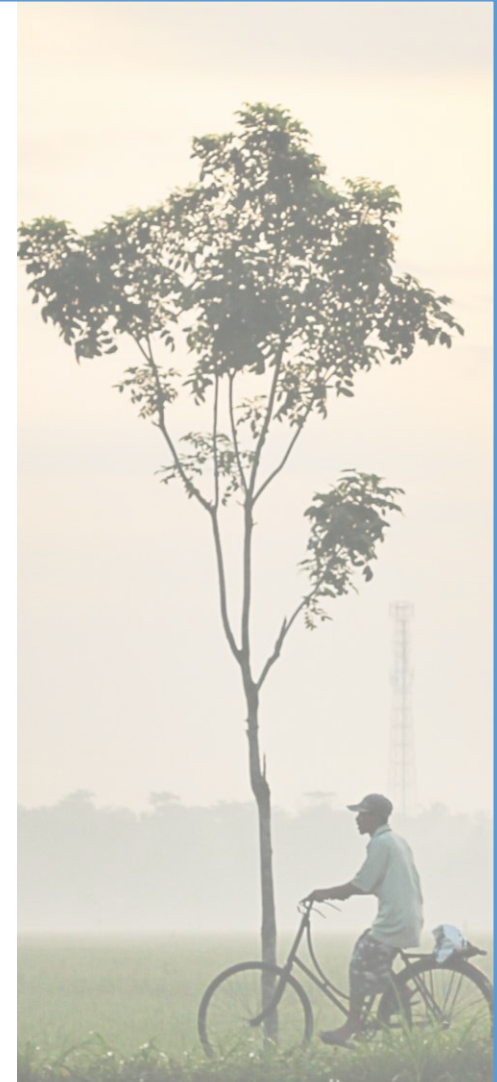
WORLD  
METEOROLOGICAL  
ORGANIZATION



BMKG



The number of dengue cases in Jakarta have been persistently high

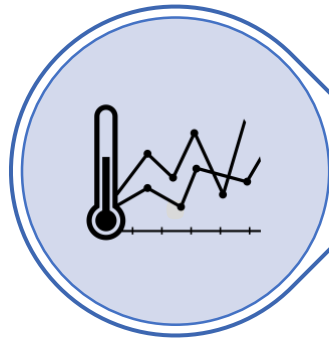


# Surveillance and existing warning practice

The screenshot shows a web browser displaying the 'Seksi Surveilans Epidemiologi' website. The page has a blue header with the text 'Selamat Datang di Seksi Surveilans Epidemiologi'. Below the header is a navigation menu on the left and a main content area. The main content area contains a table with columns for 'Kecamatan' (Sub-district), 'Januari 2019', 'Februari 2019', and 'Maret 2019'. Each month has sub-columns for 'Laki-laki' and 'Perempuan'. The table lists various sub-districts in Jakarta, such as Cempaka Putih, Duren Sawit, and Jakarta Pusat, with numerical data for each category.

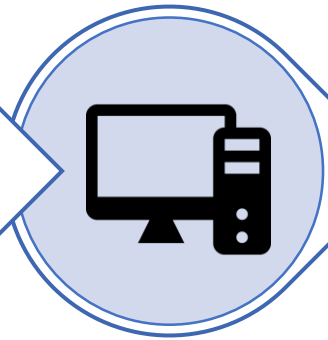
No	Kecamatan	Januari 2019		Februari 2019		Maret 2019	
		Laki-laki	Perempuan	Laki-laki	Perempuan	Laki-laki	Perempuan
1	Cempaka Putih	0	0	0	0	0	0
2	Duren Sawit	0	0	0	0	0	0
3	Kebayoran Baru	0	0	0	0	0	0
4	Kemayoran	0	0	0	0	0	0
5	Kuninggris	0	0	0	0	0	0
6	Sawah Besar	0	0	0	0	0	0
7	Sesau	0	0	0	0	0	0
8	Taman Sari	0	0	0	0	0	0
9	Tebet	0	0	0	0	0	0
10	Tebet Timur	0	0	0	0	0	0
11	Tebet Barat	0	0	0	0	0	0
12	Tebet Selatan	0	0	0	0	0	0
13	Tebet Utara	0	0	0	0	0	0
14	Tebet Barat	0	0	0	0	0	0
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16	Tebet Utara	0	0	0	0	0	0
17	Tebet Barat	0	0	0	0	0	0
18	Tebet Selatan	0	0	0	0	0	0
19	Tebet Utara	0	0	0	0	0	0
20	Tebet Barat	0	0	0	0	0	0
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22	Tebet Utara	0	0	0	0	0	0
23	Tebet Barat	0	0	0	0	0	0
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29	Tebet Barat	0	0	0	0	0	0
30	Tebet Selatan	0	0	0	0	0	0
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37	Tebet Utara	0	0	0	0	0	0
38	Tebet Barat	0	0	0	0	0	0
39	Tebet Selatan	0	0	0	0	0	0
40	Tebet Utara	0	0	0	0	0	0
41	Tebet Barat	0	0	0	0	0	0
42	Tebet Selatan	0	0	0	0	0	0
43	Tebet Utara	0	0	0	0	0	0
44	Tebet Barat	0	0	0	0	0	0
45	Tebet Selatan	0	0	0	0	0	0
46	Tebet Utara	0	0	0	0	0	0
47	Tebet Barat	0	0	0	0	0	0
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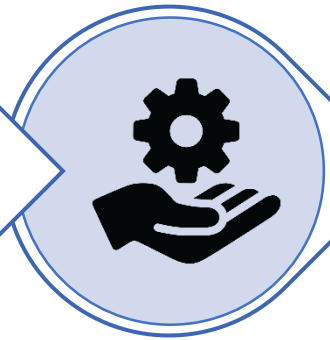


## Science

- Climate
- Health



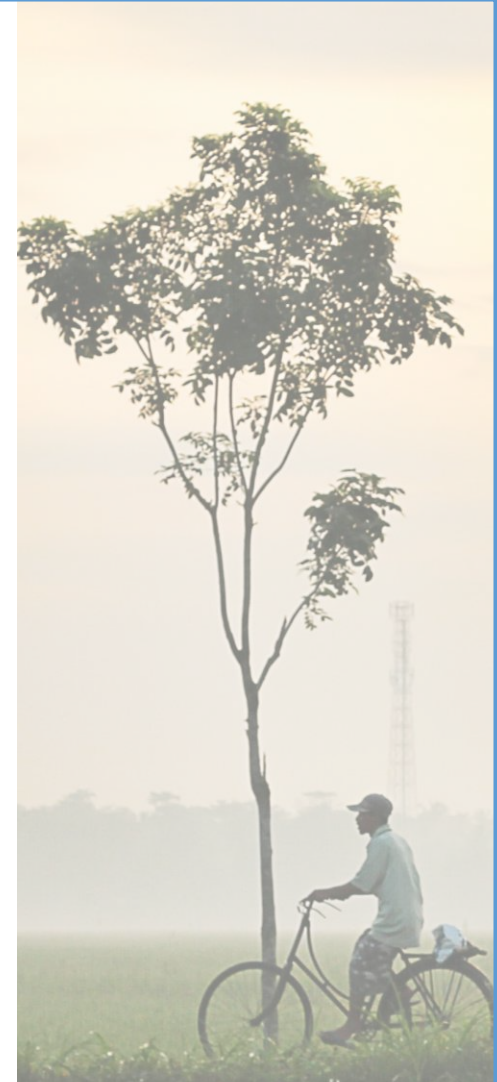
## Services



## Adaptation & Mitigation



## Policy & Planning



WORLD  
METEOROLOGICAL  
ORGANIZATION



BMKG

For **mitigation and planning**, it is necessary to have an **advanced warning for dengue outbreaks**, in addition to the **existing practice of warning based on surveillance that works for immediate responses**.

Output

- Dengue prediction system

Outcome

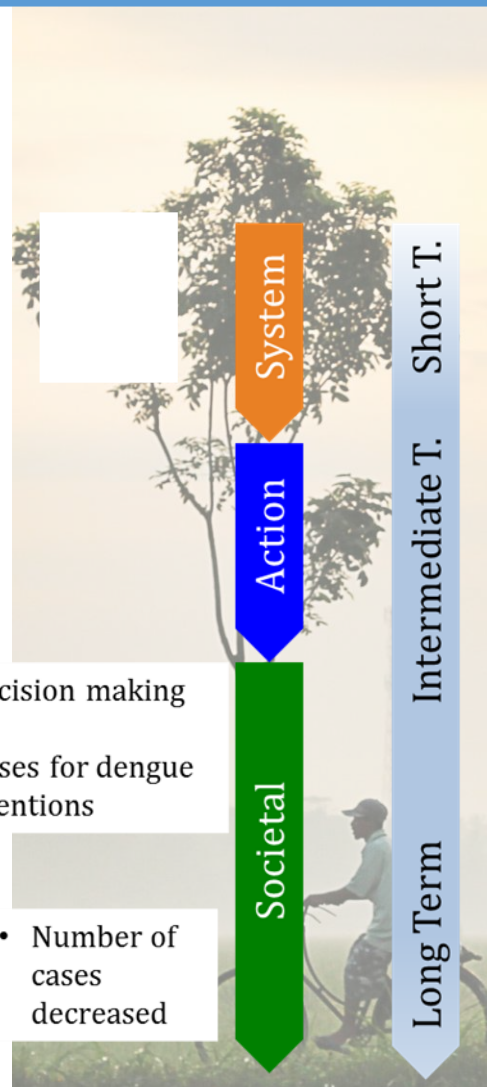
- Short-term mitigation & long-term planning

Benefit

- Modality in decision making and planning
- Proper responses for dengue outbreak preventions

Impact

- Number of cases decreased



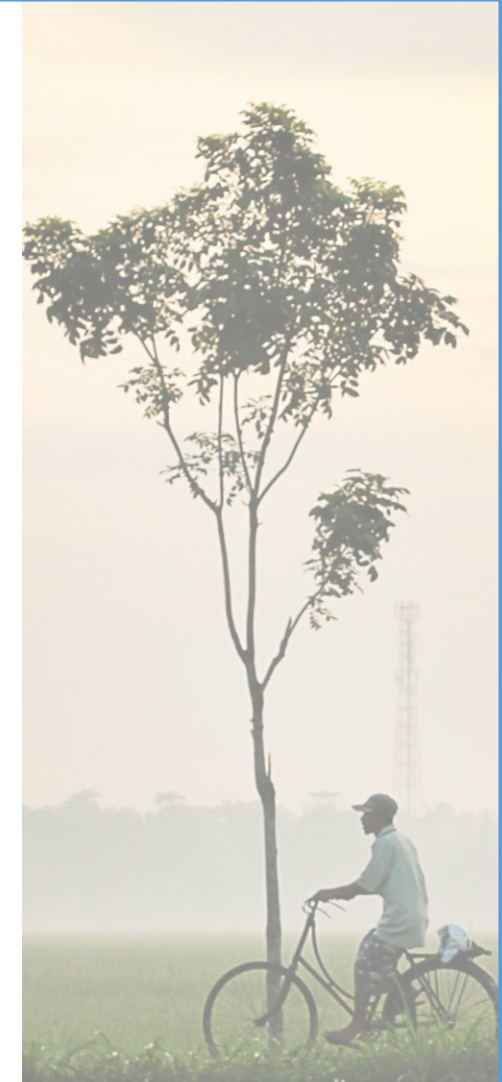
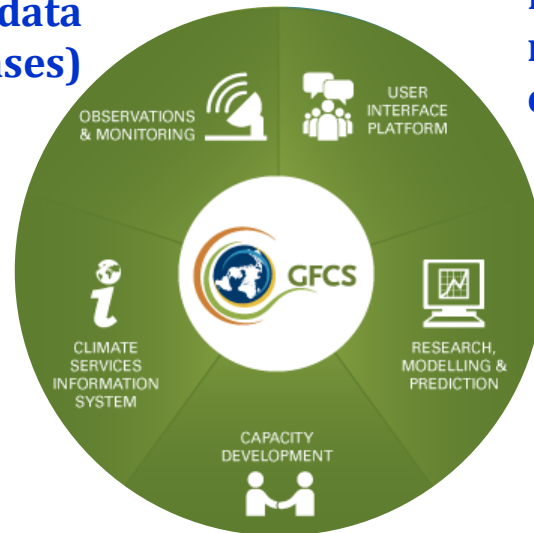
**Climate & health data  
(dengue cases)**

**FGD, stakeholders  
meeting, climate  
outlook forum**

**Dengue prediction  
service**

**Joint research  
with universities**

**Training for internal and external users**

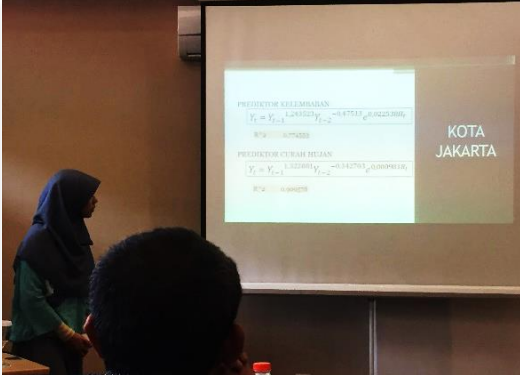
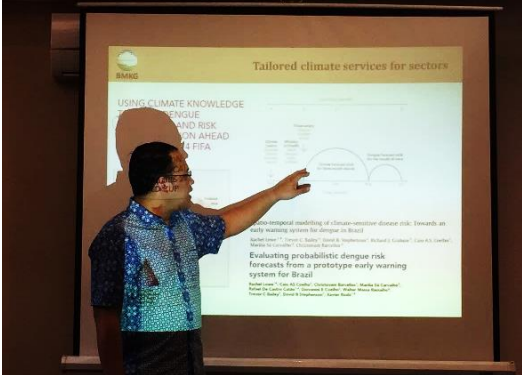
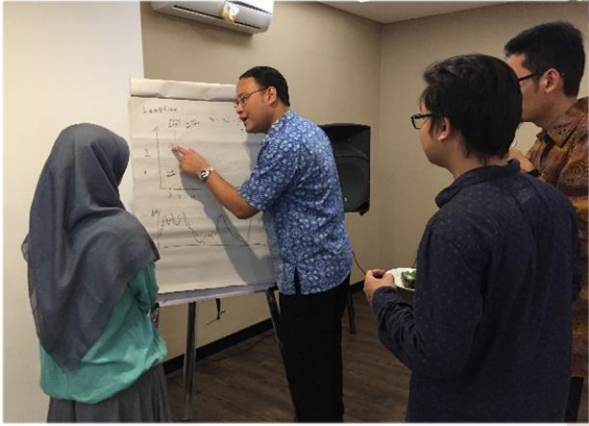




**Engaging academia through joint research.**  
Graduate and postgraduate research topics on dengue fever phenomena  
(with Bandung Institute of Technology (ITB)).

[Research, Modeling and Prediction]

# Joint Development



$$\text{Model 1: } Y_t = \prod_{i=1}^2 Y_{t-i}^{\alpha_i} \cdot e^{\beta \cdot CLIM_t e^{\gamma}}$$

$$\text{Model 2: } Y_t = \prod_{i=1}^2 Y_{t-i}^{\alpha_i} \cdot e^{\beta \cdot CLIM_{t-1} e^{\gamma}}$$

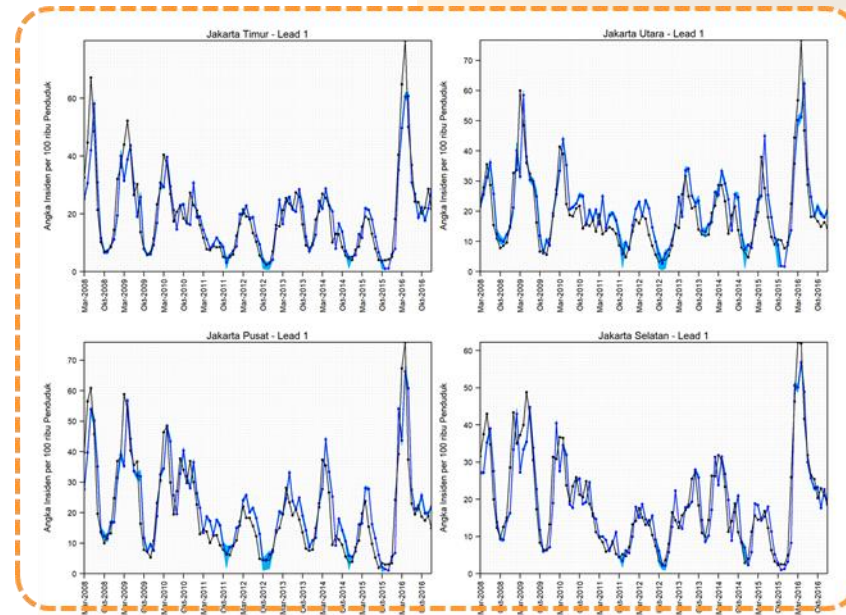
$$\text{Model 3: } Y_t = \prod_{i=1}^2 Y_{t-i}^{\alpha_i} \cdot e^{\beta \cdot CLIM_t}$$

$$\text{Model 4: } Y_t = \prod_{i=1}^2 Y_{t-i}^{\alpha_i} \cdot e^{\beta \cdot CLIM_{t-1}}$$

Several alternatives of lag-lead time dependencies on dengue and climate variables (T, Precip, RH) were investigated.

- **Strong correlation with Relative Humidity.**
- **Conditions favorable for dengue outbreak is found to be correlated with a certain relative humidity threshold.**
- **Incidence increase and sustain (above baseline level) when RH > 75:**

**La Nina in 2010 and 2016**



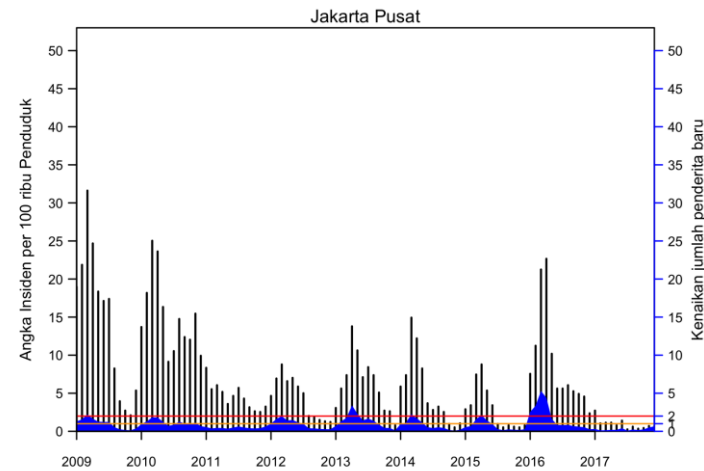
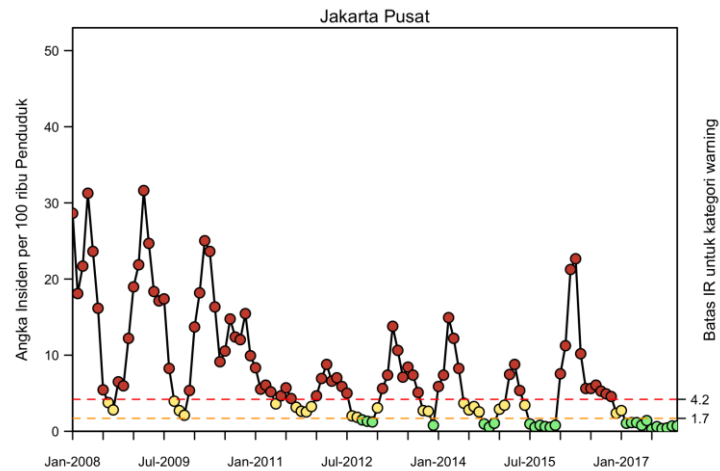
### Accuracy of the (historical) re-forecast?

Correlation:

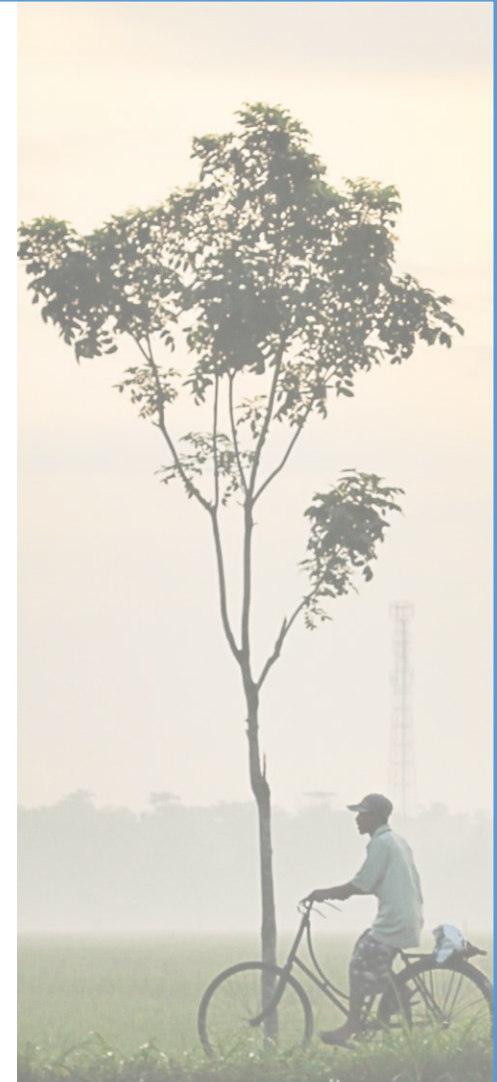
- **0.85-0.91** for 1 month lead time,
- **0.7-0.76** for 2 months lead time,
- **0.52-0.63** for 3 months lead time.



## Threshold for warning categories?



- Although IR is to be predicted, but it to take action in the field, information should be based on “**warning categories**”.
- The thresholds should be set so that it is **not too low (that may cause frequent alarms)** or **too high (that may cause no alarm)**.
- **Decided through dialogue with the user.**



The early warning is disseminated through <http://dbd.bmkg.go.id/>



**PERINGATAN DINI DEMAM BERDARAH DENGUE (DBD) DI DKI JAKARTA**

Web ini menyediakan prediksi angka insiden DBD (per 100.000 penduduk) hingga tiga bulan ke depan dan prediksi kelembaban udara (RH) tersedia hingga lima bulan ke depan.

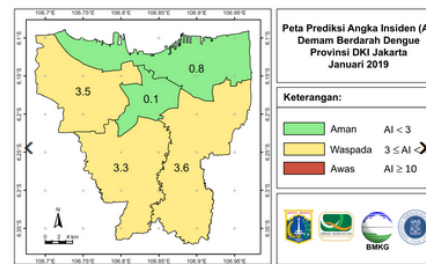
Peta prediksi kelembaban udara (*relative humidity*, RH) menunjukkan probabilitas kesesuaian RH untuk vektor DBD. Semakin tinggi probabilitas maka semakin tinggi kemungkinan RH mendukung pertumbuhan nyamuk *Aedes Aegypti* yang kemudian berakibat pada meningkatnya penduduk yang terjangkit DBD. Angka yang ditampilkan di peta menunjukkan nilai rata-rata model prediksi RH.

Informasi cepat mengenai prediksi kejadian DBD ini disampaikan agar dapat diambil langkah-langkah antisipasi sedini mungkin oleh pihak-pihak terkait. Dalam penelitian ini, Badan Meteorologi, Klimatologi dan Geofisika (BMKG) bersama dengan Dinas Kesehatan DKI Jakarta dan Institut Teknologi Bandung (ITB) bekerjasama untuk melakukan pengembangan model peringatan dini penyebaran penyakit demam berdarah berbasis iklim.

**In Collaboration**

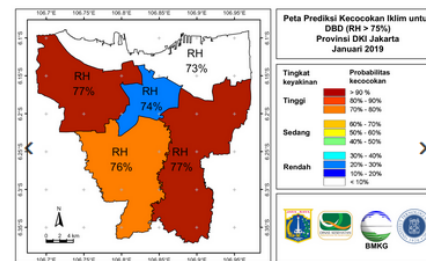
- PEMERINTAH PROVINSI DKI JAKARTA
- BADAN METEOROLOGI, KLIMATOLOGI DAN GEOFISIKA (BMKG)
- DINAS KESEHATAN PROVINSI DKI JAKARTA
- INSTITUT TEKNOLOGI BANDUNG (ITB)

**PREDIKSI ANGKA INSIDEN (AI) DBD**



Januari 2019

**PREDIKSI KESESUAIAN RH**



Januari 2019

[Climate Services Information System]  
**Website for dissemination**

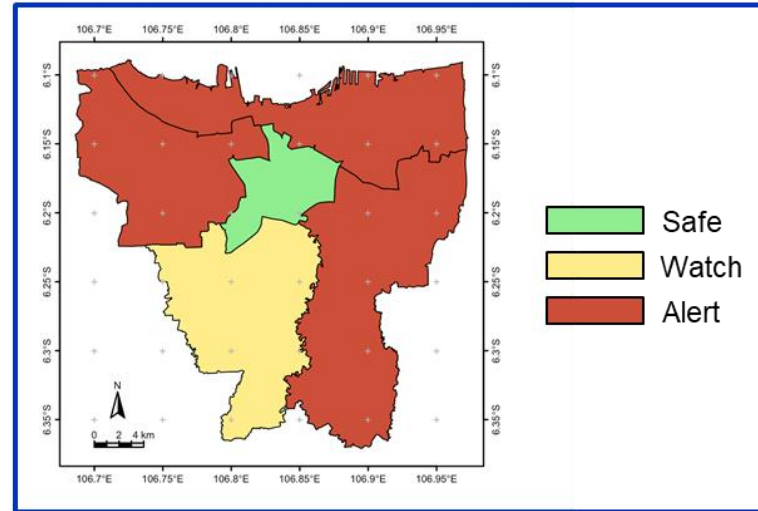
**1** Prediction of dengue incidence rate (IR) level, up to three months lead time.

**2** Probability of exceeding threshold of a climate index (RH) indicating conditions favorable for dengue outbreak, up to five months lead time.



[Climate Services Information System]  
**Action based on warnings**

The **follow-up actions** corresponding to **each warning level/category** that will be taken by the Jakarta Regional Health Agency are also provided as a **general guidance**.



**SAFE**  
INCIDENT RATE < 3

- Epidemiological investigation
- Outreach and education
- Removal of mosquito breeding sites
- Selective larvaciding



**WATCH**  
INCIDENT RATE 3 - 10

- Epidemiological investigation
- Outreach and education
- Removal of mosquito breeding sites
- Selective larvaciding
- Focused fogging



**ALERT**  
INCIDENT RATE > 10

- Epidemiological investigation
- Outreach and education
- Removal of mosquito breeding sites
- Selective larvaciding
- Focused fogging



[User Interface Platform & Capacity Development]

## Engagements and trainings

FGD Climate & Health  
April 2017



Stakeholders meeting  
March 2018



Training for stakeholder, Sept 2018



**Building commitments (with MoU and Implementation Agreement) and sharing ownership** of the climate services with the health sector, through several Focus Group Discussions.



**[User Interface Platform]**  
**Launching of the product**



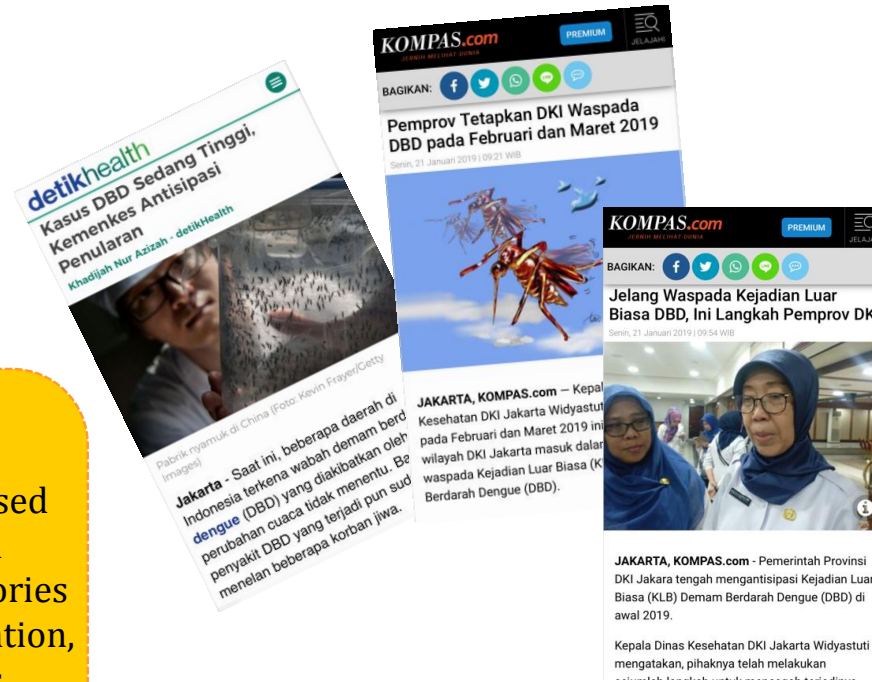
**The signing of the agreement during the National Health Day, 9 December 2018**



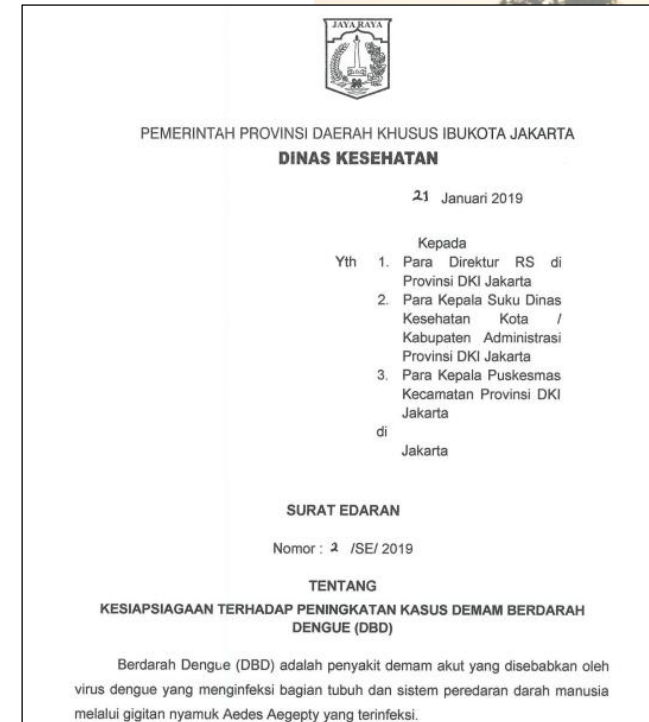


[User Interface Platform & Outreach]  
**Recent media coverage**

The Jakarta Regional Health Agency have used the dengue prediction information for advisories and warnings information, circulated to hospitals, health agencies, and local health facilities.



**Media coverage** on current dengue incidences and Public Health responses in Jakarta (20-21 January 2019)



**Circular Advisory Bulletin** for preparedness of increasing dengue incidences (21 January 2019)

[Action]

# Field actions based on warning information



Education



Fogging



Mosquito breeding site eradication



Larvae monitoring



Volunteers





## Summary

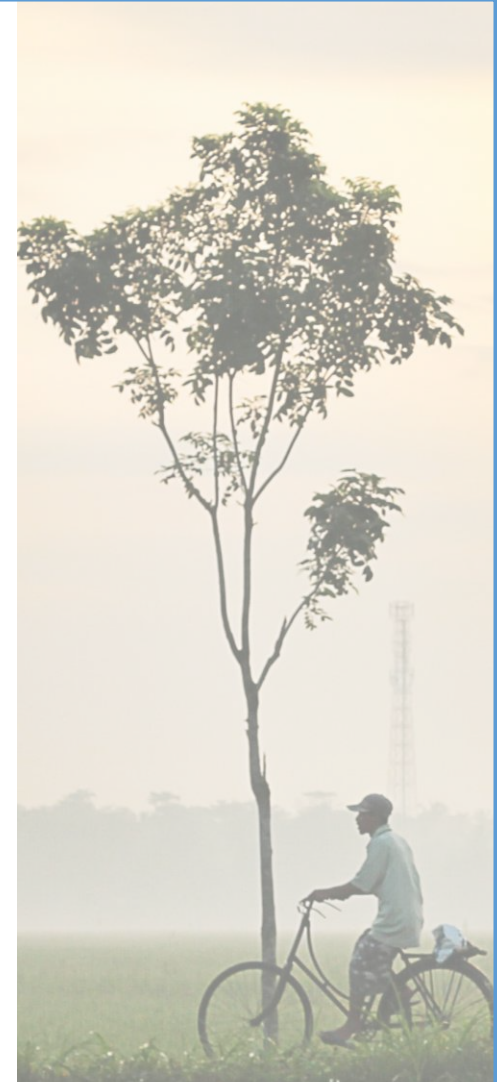
- A first climate-health services was made for dengue EWS in Indonesia.
- Clear benefit of collaboration between climate information provider – academia – application sector (health) to have a societal impact.

### Lessons learnt:

- Important to engage and develop products jointly with all stakeholders from the start, avoiding a purely supply driven approach:
  - Trust and understanding can be built.
  - Sharing of data.
  - Co-benefits for all stakeholders.

### Future plans:

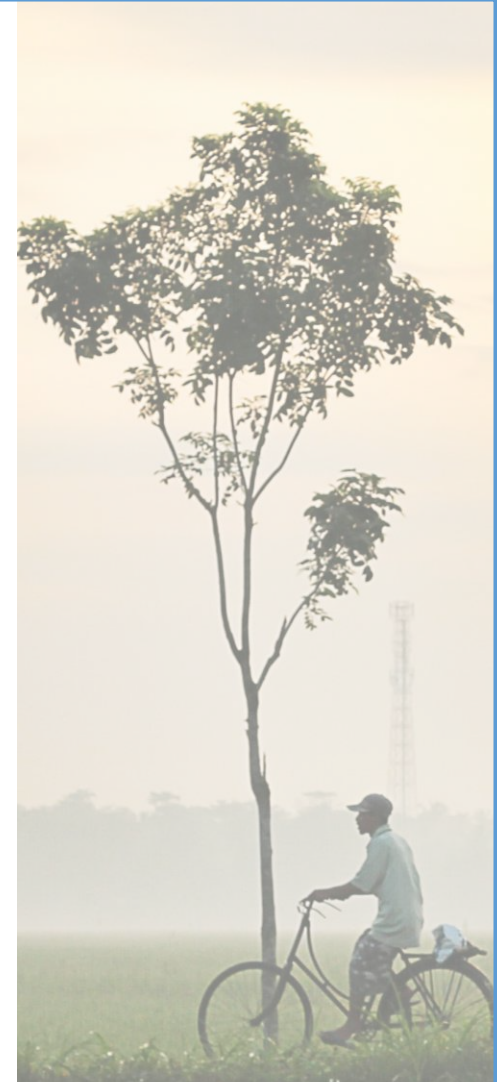
- Extend in other regions with different climate characteristics.
- Facilitate broader engagement of the science community through a national framework.





# Thank you

email: [ardhasena@bmgk.go.id](mailto:ardhasena@bmgk.go.id)





**United Nations** Climate Change  
Paris Committee on Capacity-building



Bangkok, Thailand 2-6 September 2019

# Capacity-building Knowledge to Action Day

September 2 | 9:00-18:00

Stockholm Environment Institute(SEI)

# Chayanis Krittasudthacheewa

Co-production of knowledge for joint solutions on climate change adaptation in the Lancang-Mekong Region'





**United Nations** Climate Change  
Paris Committee on Capacity-building



# Co-production of knowledge for joint solutions on climate change adaptation in the Lancang-Mekong Region”

Dr. Chayanis Krittasudthacheewa, SEI Asia Deputy Director

**Asia-Pacific Climate Week |  
September 2 | 9:00-18:00  
Public Foyer , United Nations Conference Centre**



Financial support provided by:  
Ce projet a été réalisé avec l'appui financier de :

Secretariat hosted by:  
Secrétariat hôte par :



Environment and  
Climate Change Canada



Environment and  
Climate Change Canada



**UNITED NATIONS  
UNIVERSITY**

**UNU-EHS**

Institute for Environment  
and Human Security



Uncertainty in climate and development calls for urgent actions



Cooperation among concerned actors at different levels for joint solutions is crucial

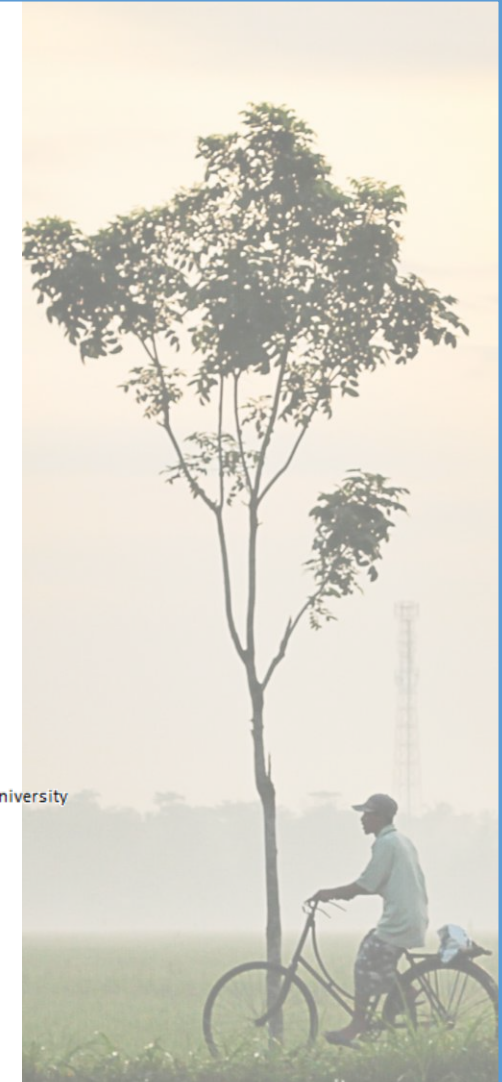
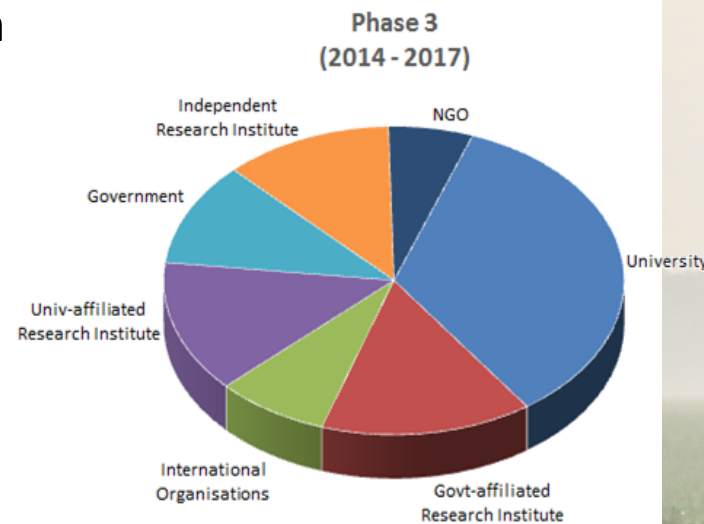


# SEI and SUMERNET

SEI supports decision-making and induces change by providing integrative knowledge that bridges science and policy in the field of environment and development.

**SUMERNET (2005- present)** is a regional research network for sustainable development in the Mekong Region through strengthening knowledge-based policy processes.

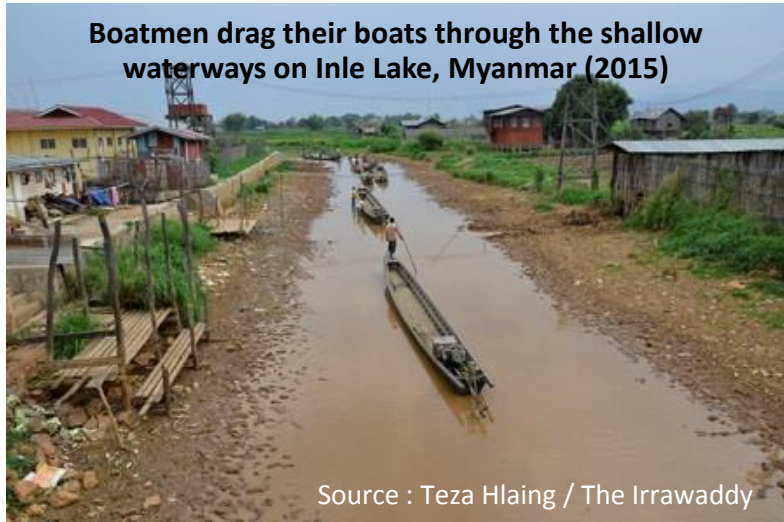
SUMERNET has **diverse memberships/partnership** with research, policy and practice backgrounds from wide-range of sectors relevant to environmental sustainability (68 member institutes).





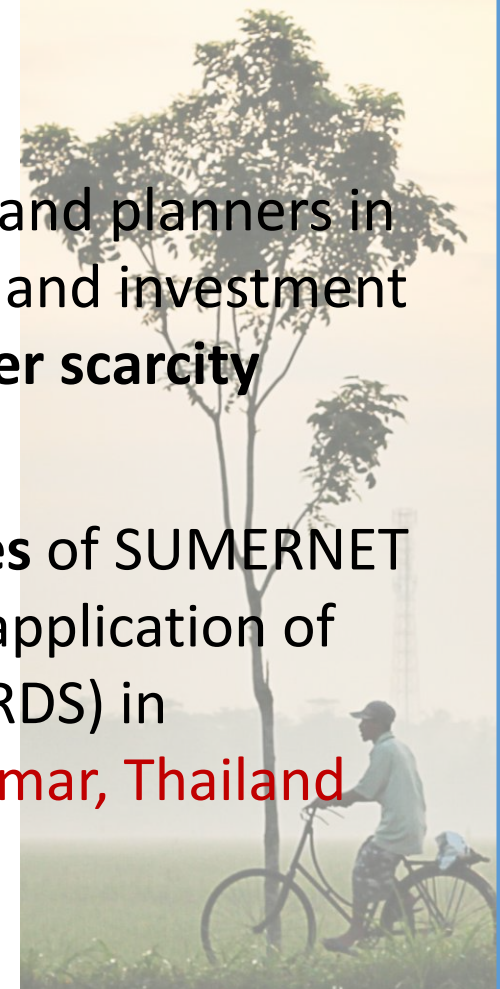
## SUMERNET Regional Assessments on

# “Adapting to multiple and uncertain changes in the Mekong region: Strategies for today and a +4C world”.



### Objectives:

1. To assist the policymakers and planners in developing robust policies and investment strategies to address **“water scarcity amidst plenty”**
2. To build relevant capacities of SUMERNET and other partners in the application of Robust Decision Support (RDS) in **Cambodia, Lao PDR, Myanmar, Thailand and Vietnam.**





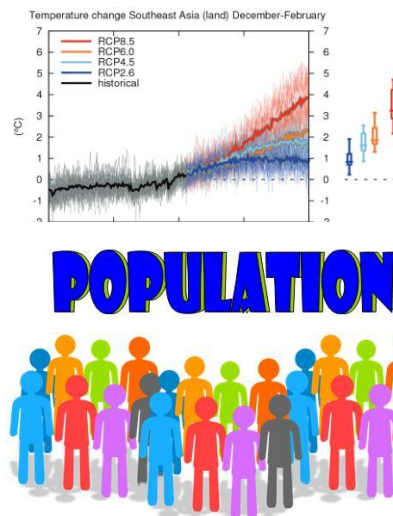
# Robust Decision Support (RDS)

- **New participatory approach to address the uncertainty** in natural resources management
- Helps answer **“What are strengths and limitations of our strategies/options?”**
- **Evaluate the performance of strategies** under various uncertain conditions with multi-stakeholder participation

## Strategies



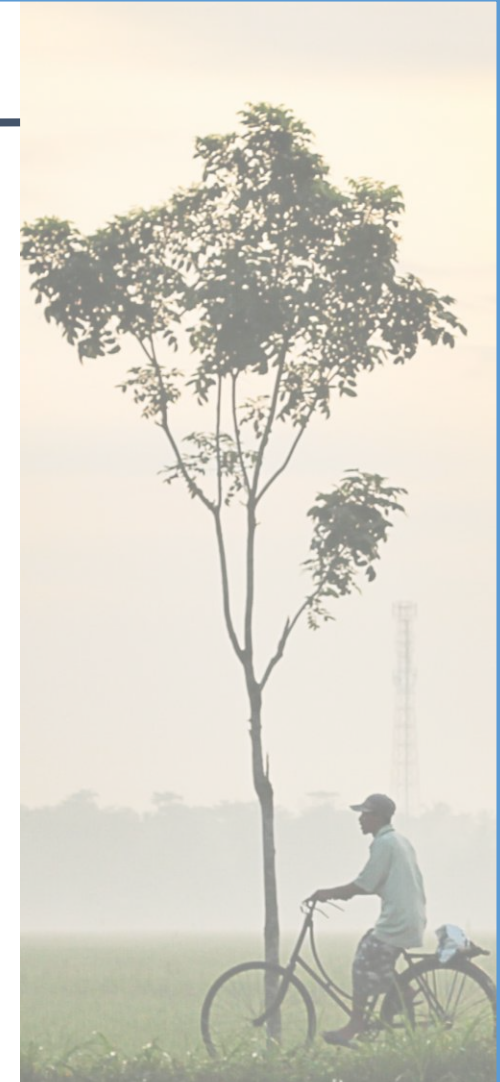
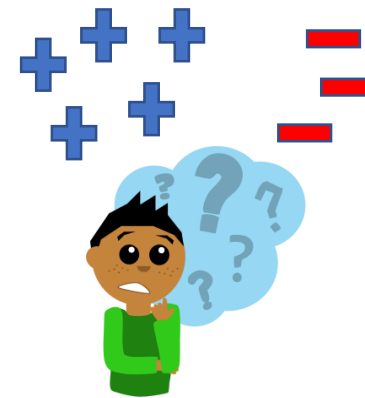
## Uncertainties



## Run model 100 times



## Scenario exploring



## SUMERNET improved local and national governmental policies and plans by **co-production of knowledge**

*“The application of **Robust Decision Support (RDS)** in Huay Sai Bat sub-basin for addressing the uncertainties being faced for water resources management has been very useful. Considering the results from this study, **Khon Kaen provincial government** allocated more than 80 million Baht last year and more than 150 million Baht this year for **groundwater development** to supply water during times of scarcity.” (Nov 2017)*

**Mr. Vongwiwat Tanusilp**  
Khon Kaen Natural Resources and Environmental  
Office, Thailand.



**Groundwater is used for production of healthy vegetables**





# Co-production of knowledge for joint solutions under Lancang-Mekong Cooperation (LMC)



The Thaiger & The Nation (20<sup>th</sup> July 2019)



1<sup>st</sup> regional consultation, 28<sup>th</sup> June 2019, Bangkok, Thailand

SEI worked with the national experts from the LMC countries as a technical support team under a project “Transboundary cooperation mechanism on adaptation to climate change and hydropower development projects”.



Thank you



Stockholm Environment Institute (SEI)





**United Nations** Climate Change  
Paris Committee on Capacity-building



Bangkok, Thailand 2-6 September 2019

# Capacity-building Knowledge to Action Day

September 2 | 9:00-18:00

ICIMOD

## Dhrupad Choudhury

‘Fostering Climate Action in the Hindu Kush Himalaya: ICIMOD’s engagements for climate action through institutional capacity building in the Region’



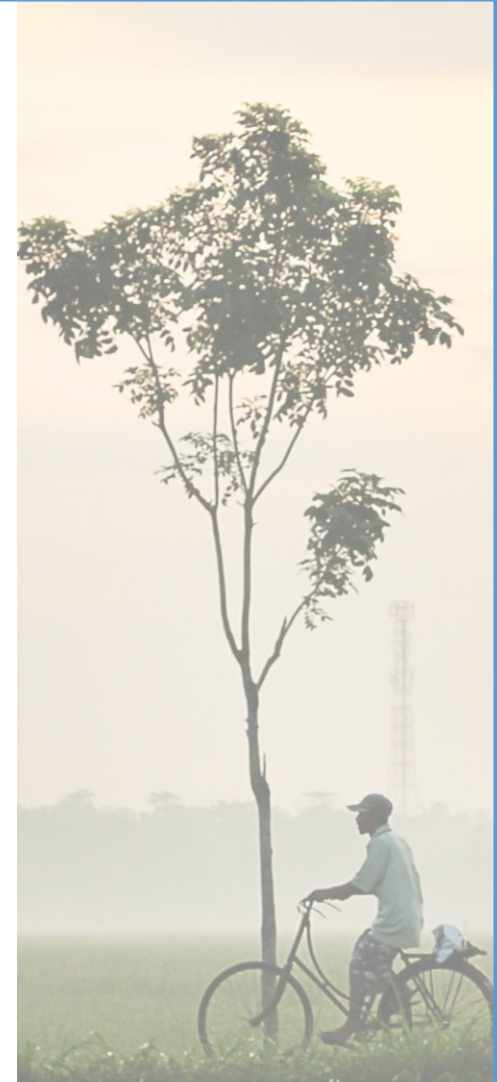


# Fostering Climate Action in the Hindu Kush Himalaya:

ICIMOD's engagements for climate action through institutional capacity building in the Region

## Dhrupad Choudhury

Capacity-Building Knowledge to Action Day  
Asia Pacific Climate Week  
2 September, 2019, Bangkok, Thailand





# Inter-Governmental Institution – serving the mountain people in eight countries

A regional mountain knowledge, learning and enabling centre devoted to sustainable mountain development for mountains and people

Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan



Extends over 3,500 km from Afghanistan to Myanmar and home to 240 million people

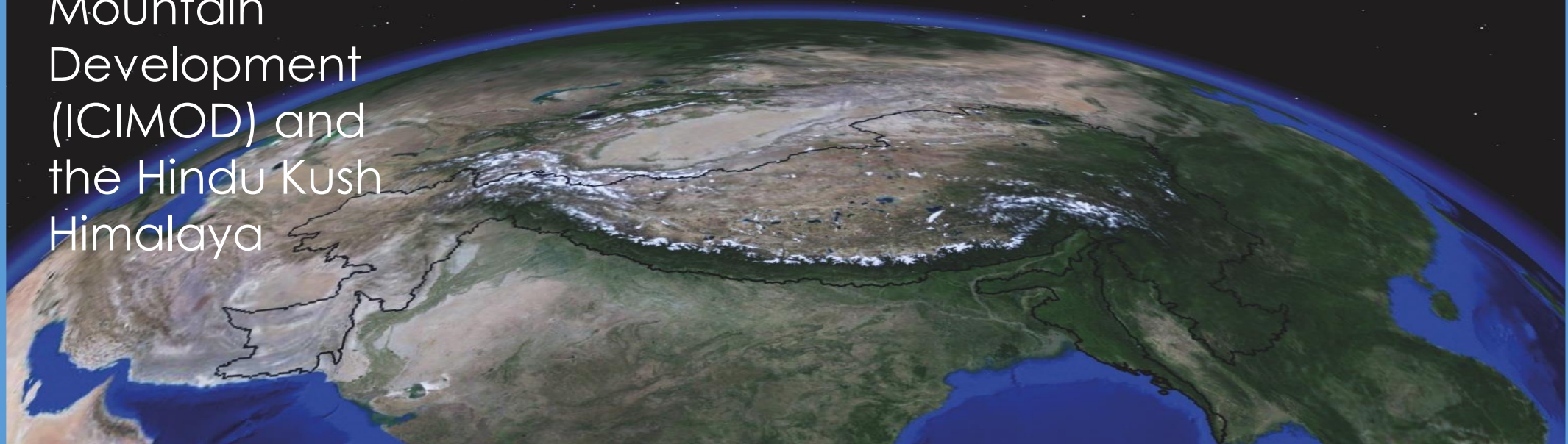
# Responding to Mountain Challenges

International Centre for Integrated Mountain Development (ICIMOD) and the Hindu Kush Himalaya

**Largest reservoir of freshwater outside poles – Third Pole; Asia's Water Tower**

**Source of 10 major rivers – feeds 'food bowls' of Asia.**

**1.6 billion downstream: Nearly a quarter of the global population**





# Governance

**Board of Governors** – representatives of 8 Regional Member Countries

**Programme Advisory Committee** – 7 Independent Board Members

**ICIMOD Support Group** – made up of financial contributors





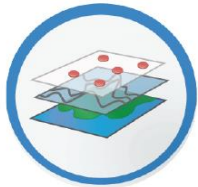
## Core competencies



Livelihoods



Ecosystem Services



Geospatial Solutions



Water and Air



Gender



Knowledge Management and Communication

## Regional programmes

### Adaptation and Resilience Building

To faster transformative action in the light of socioeconomic and environmental change

### Transboundary Landscapes

To improve cooperation accross borders to sustain ecosystem services

### River Basins and Cryosphere

To develop more effective water resource management and disaster risk reduction practices

### Atmosphere

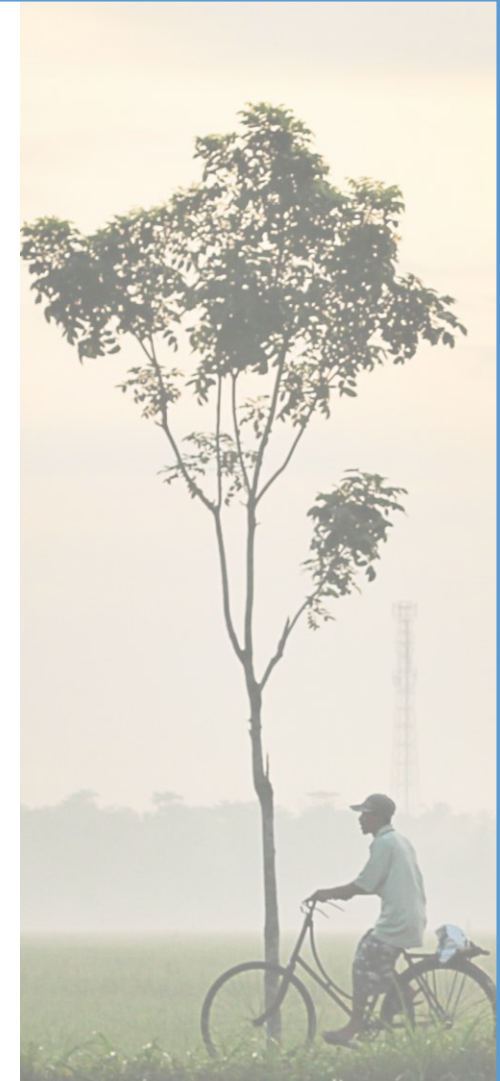
To inform policy and practice to address air pollution challenges

### Mountain Environment Regional Information System

To make better decisions from the village to country to regional levels

### Mountain Knowledge and Action Networks

To build capacity in academia and cultivate future generation of scholars and leaders in the HKH





# Improved understanding of Poverty and Vulnerability in HKH: Poverty and Vulnerability Assessments

## *Multi-dimensional Livelihood Vulnerability Indices (MLVI)*

- 4 sub-basins

## *Mountain specific Multi-dimensional Poverty Indices (MMPI)*

- *Bhutan, India (Meghalaya)  
Nepal, Myanmar*

Targeting: geographical, social, deprivations (who, why)

Programme/ intervention designs for transformative change

*Research partners*

	Countries	No of districts covered	HHs surveyed
1	<i>Bhutan</i>	6	4653
2	<i>China</i>	5	1987
3	<i>India</i>	12	6747
4	<i>Myanmar</i>	11	4290
5	<i>Nepal</i>	23	8819
6	<i>Pakistan</i>	3	1139
			27635

Knowledge to use - IFAD Nepal Country Strategic Programme



# Bridging the Knowledge Gap: Climate Change in HKH

## *Contribution to scientific understanding*

Latest science on climate and water in the HKH

HKH-wide perspective covering Brahmaputra,  
Ganges, Indus, and Salween & Mekong

- Past trends from 1951
- Future projections up to 2050

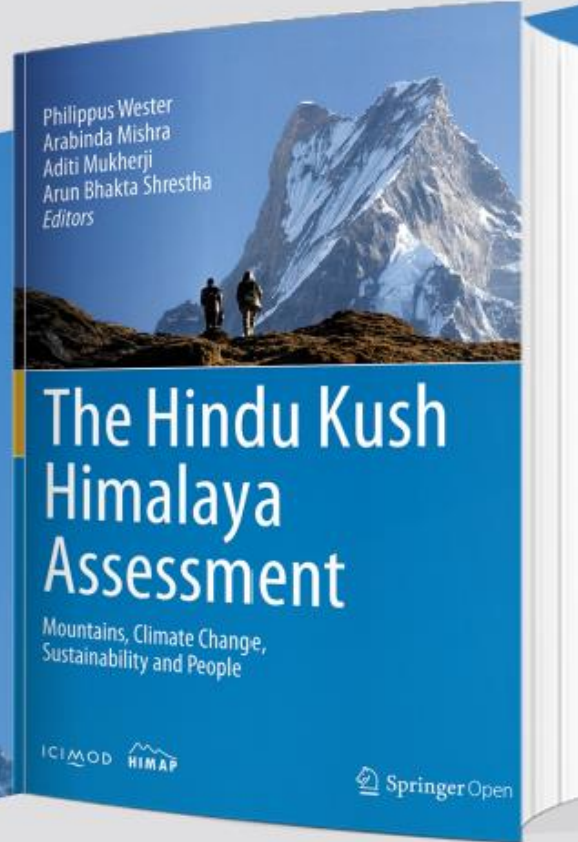
Temperature, precipitation and their impact on the  
region's glaciers, snow and river flow

*Research partners, Government agencies*





# HINDU KUSH HIMALAYAN MONITORING AND ASSESSMENT PROGRAMME (HIMAP)



Scan  
to access

**350**

RESEARCHERS, POLICY  
EXPERTS, AND PRACTITIONERS

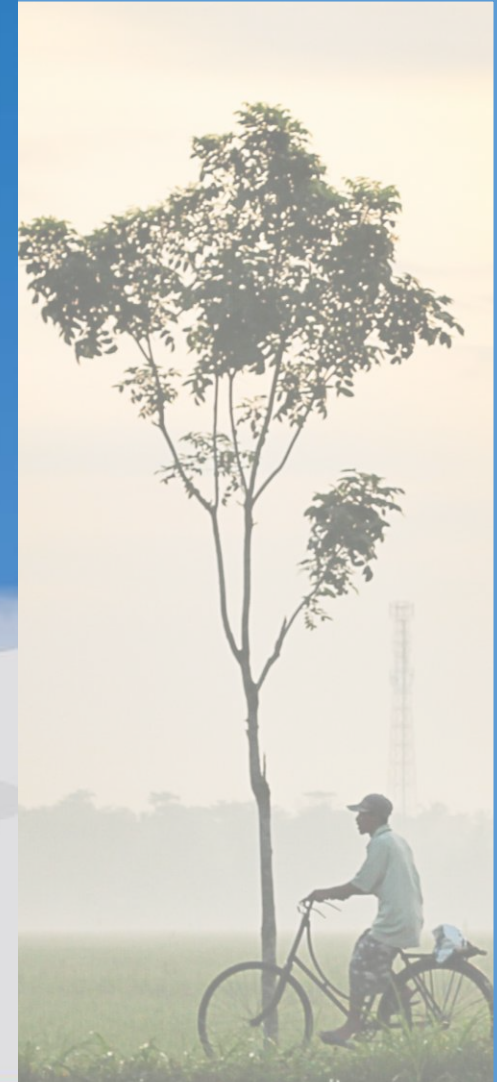
**22**

COUNTRIES

**185**

ORGANIZATIONS

The first comprehensive assessment of the HKH outlines the critical importance of the region's distinct environment, people, and wildlife.





# Fostering partnerships in research & research capacities: The Himalayan University Consortium



**77** members

**60** principal

**17** associates

Members from  
HKH region,  
or working on  
the Himalayas

**HIGH LEVEL MEETING OF HEC/UGC/NEPC CHAIRPERSONS**

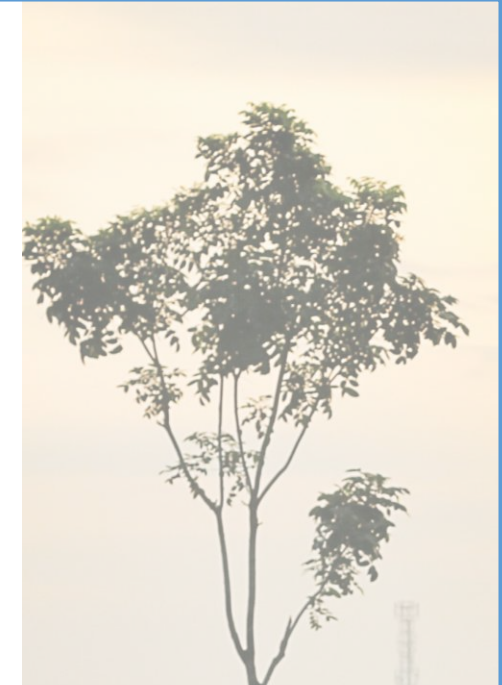
*in conjunction with*

**The Himalayan University Consortium Annual Meeting**

**30-31 October 2018, Kathmandu, Nepal**



# Cryosphere and glacial assessments: Field Based Monitoring Complemented by Satellite Data



# Enhancing capacities in Ecosystem services management

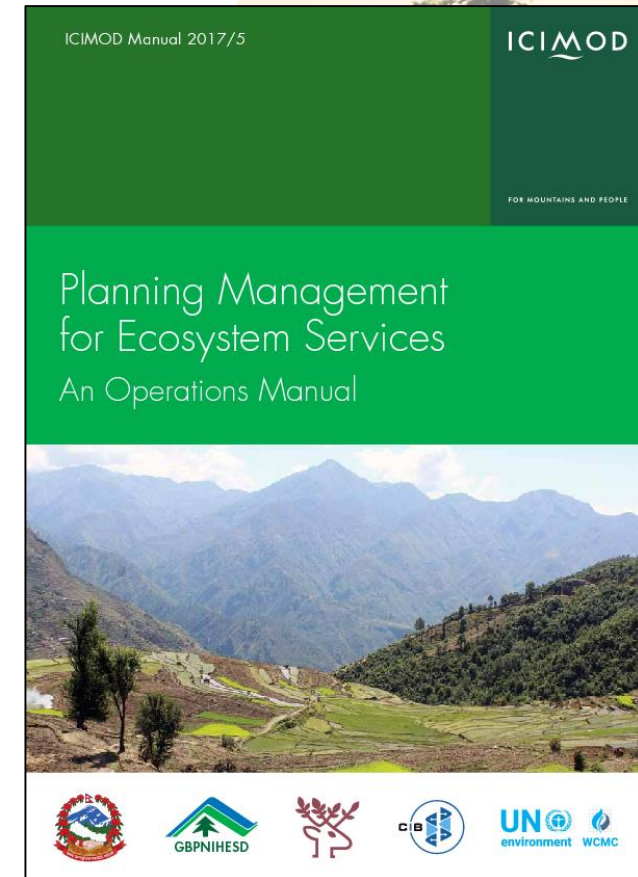
## Operational Manual on planning management for ecosystem services

(illustrated for the Himalayan region but relevant for all terrestrial environments)

Download the Manual from

<http://lib.icimod.org/record/32857>

[https://wcmc.io/management\\_for\\_ecosystem\\_services](https://wcmc.io/management_for_ecosystem_services)







## Contents

1. What are ecosystems?	2
2. What are ecosystem services?	4
3. How does an ecosystem function?	6
4. How do we know, if an ecosystem is healthy or not?	8
5. What factors influence the health of an ecosystem?	10
6. How can we improve ecosystem services?	12
7. Participatory ecosystem management planning	24

Describe the pictures and tell stories

Indicators of the pictures

- 5 Women with different provisions like water, food, and fodder
- 6 Agricultural ecosystem with labourers
- 7 Landscape with religious place
- 8 Healthy landscape with clean and fresh spring water
- 9 Flower field with bees
- 10 Barren land after deforestation
- 11 Ecosystem crossing country borders

Describe the pictures and tell stories

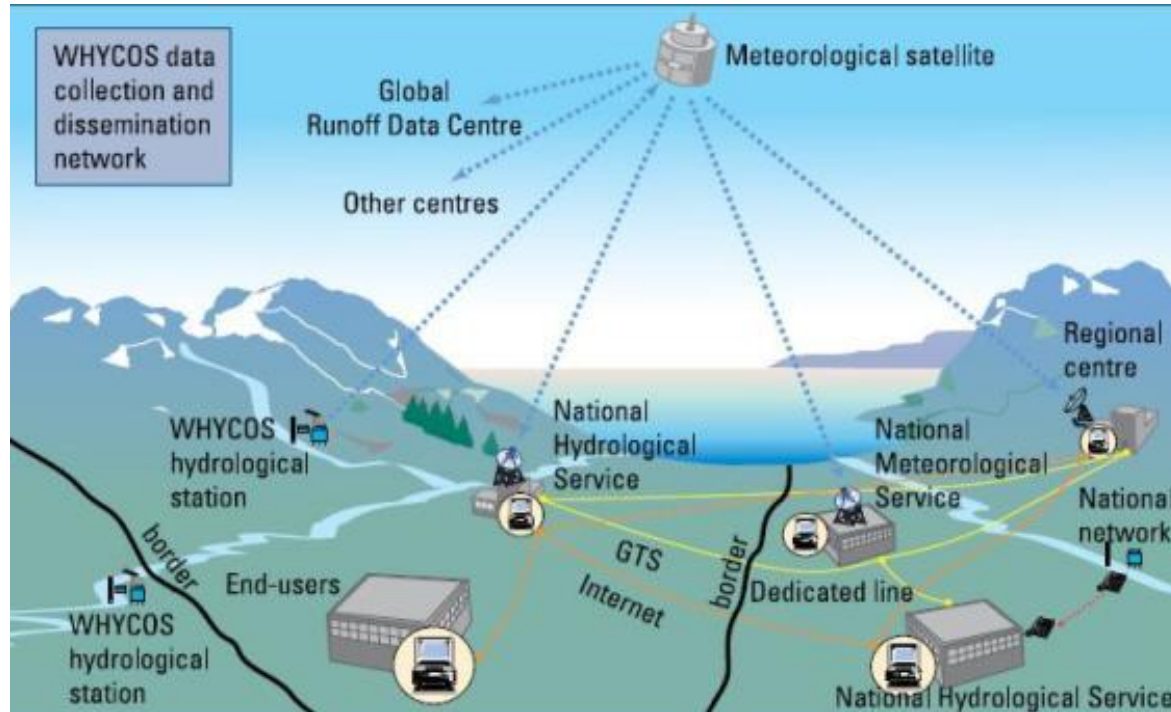
Indicators of the pictures

- 2 Different plants in a forest
- 12 Minerals from composts and others can either stay in or leave an ecosystem
- 13 Water cycle
- 14 Food chain and food web
- 15 Soil structure
- 9 Flower field with bees
- 10 Barren land after deforestation





# HKH-HYCOS: Setting up monitoring stations and establishment of real-time flood information systems



HYCOS is a vehicle for technology transfer, training, and capacity building

Establishment of a Regional Flood Information System in the HKH-Region - Timely exchange of flood data and information through an accessible and user friendly platform



# SERVIR Capacity Building Experiences from the Hindu Kush Himalayas



ICIMOD

SERVIR  HINDU KUSH  
HIMALAYA



# SERVIR-HKH Capacity Building Efforts

National and regional consultations on the priority service areas

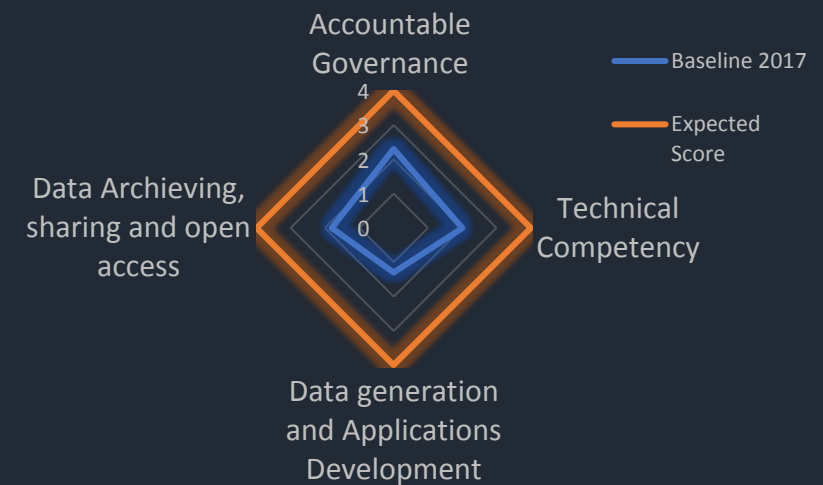
Organizational capacity assessments

Theory of Change for each service



Consultations on needs and priorities

## Organizational Capacity Self Assessment



# SERVIR-HKH Capacity Building Efforts

Courses designed on specific applications/ services

Different types of trainings

- Structured Training
- On the Job Training
- Training of Trainers
- Policy dialogs



High level exchange program



On the job training on glacier mapping

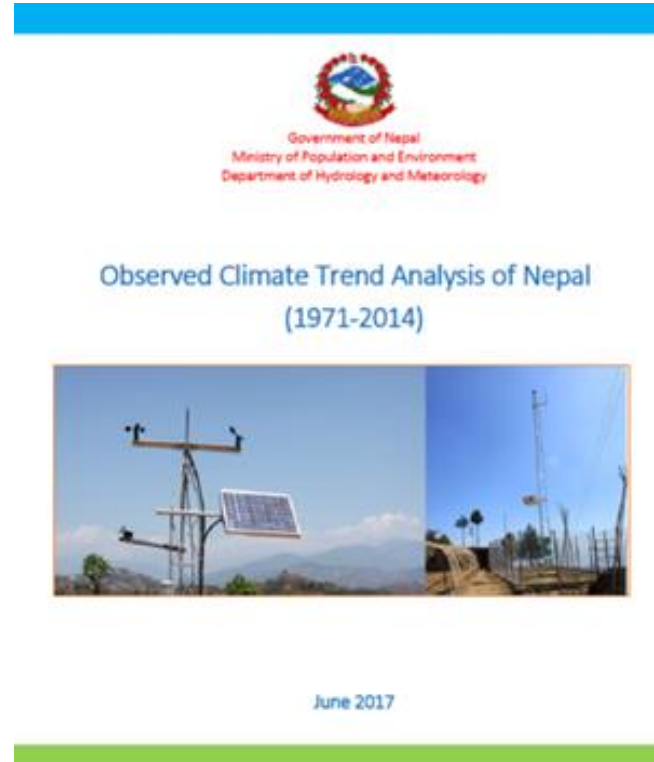


# Supporting the NAP process

Building institutional capacities for vulnerability assessments

Providing technical support to enhance capacities of Nodal Agencies in formulating adaptation strategies and plans

***Nepal, Myanmar***



# Understanding perceptions and impacts of climate change

## Participatory Assessments

Community perceptions

Impacts

Resource dependency

Responses (capacities)

Institutional support needs

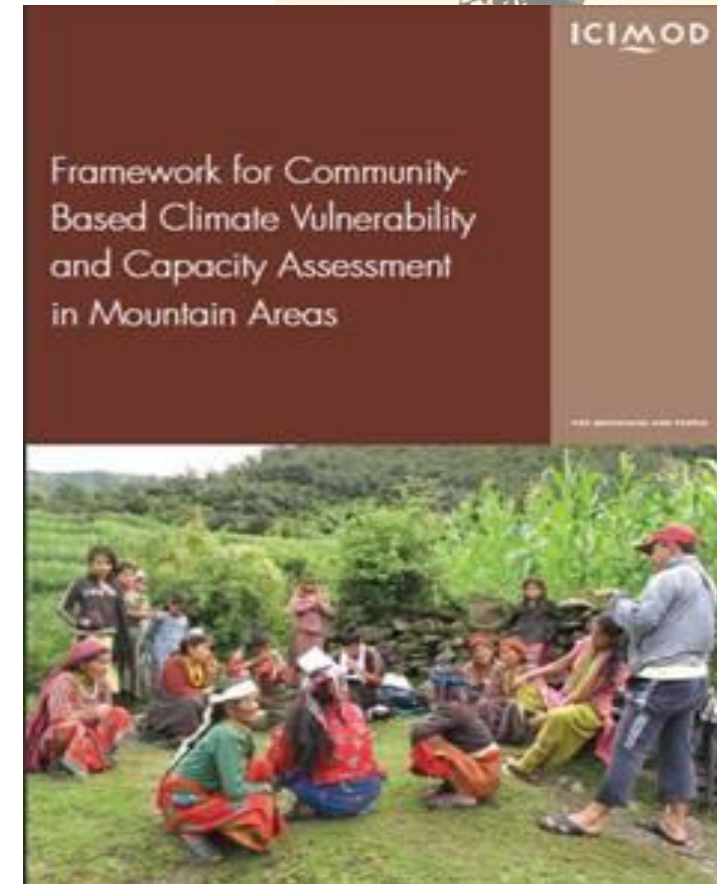
(3 countries, 15 districts, 90 villages between 50-3500 MSL)

*Government agencies, IFAD projects, NGOs*

## Knowledge to use:

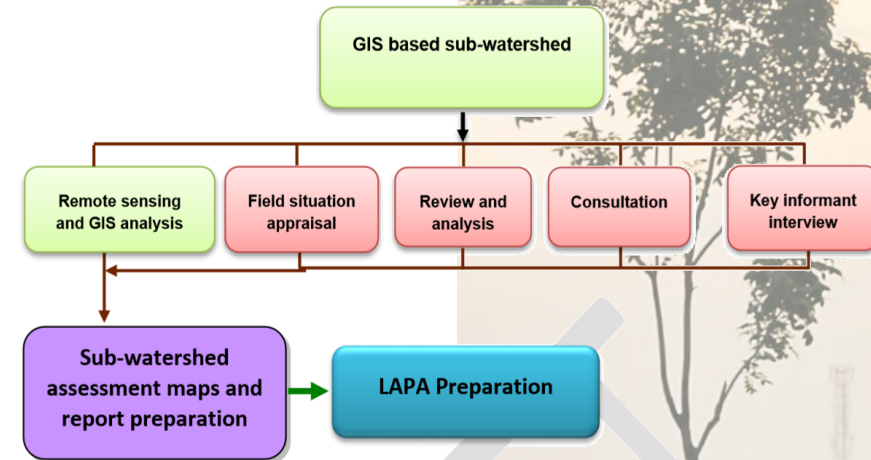
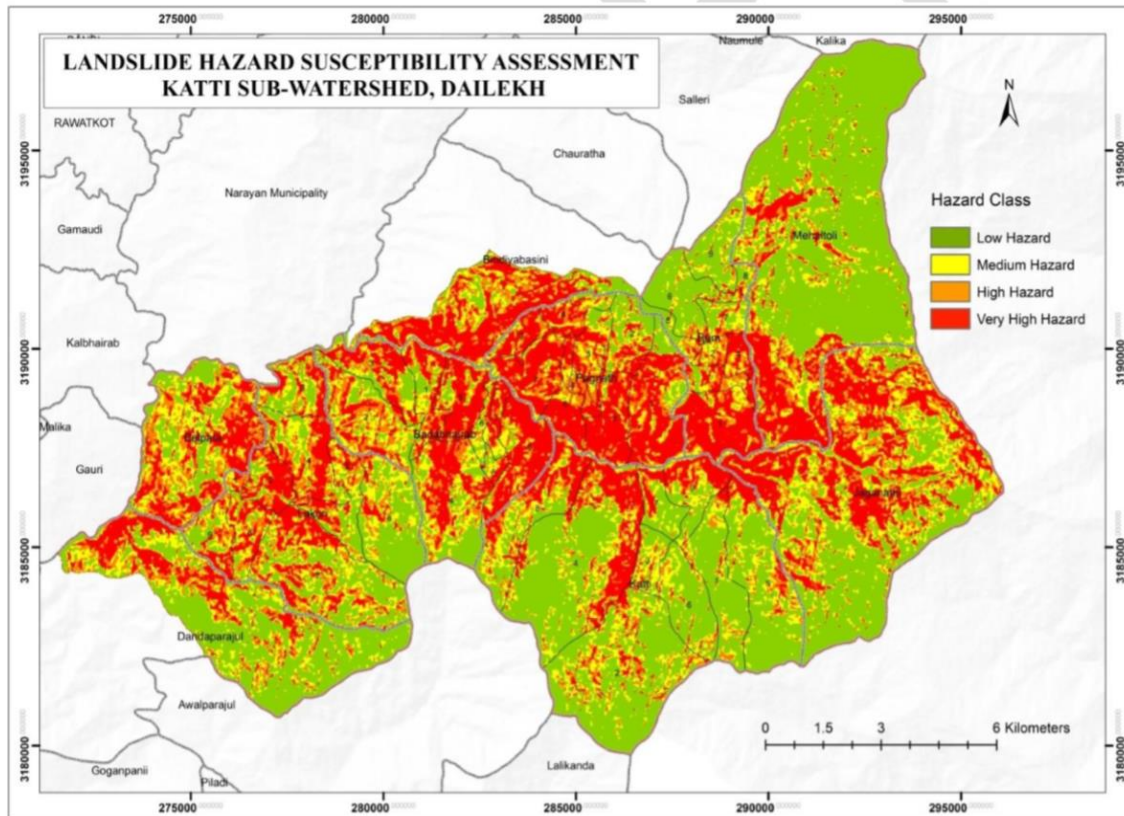
State Action Plans for Climate Change Adaptation  
(Uttarakhand)

ASHA – IFAD Nepal (USD 15 m)





# Using Geospatial tools towards effective preparation of LAPAs (Local Adaptation Plans)



**Adaptation for Smallholders in Hilly Areas (ASHA) project by Ministry of Forest and Soil Conservation (MoFSC), Nepal**

# Community based flood early warning system

## Reaching the most vulnerable communities

Community led, district authority linked

Implemented in river tributaries

Upstream/downstream linkage

Almost real time information

Provide guidance on how to act on warnings

Use of low cost ICT tools





# Himalayan University Consortium: Programmes in CCA

**HUC Academy is an annual intensive programme featuring:**

- mountain focus
- inter- and trans-disciplinarity
- field work
- leadership

**Catering to:**

- early career researchers
- government officials
- practitioners

**The first two Academies, 2017 and 2018, focused on climate change, adaptation, water and DRR management.**

**In-house faculty and external resource persons, recruited through HUC network**



# An innovative Institutional capacity building mechanism



ICIMOD



International Institute for Applied Systems Analysis



Fourth Indus Basin Knowledge Forum:

## Pathways to impactful research

23–24 August 2019, Kathmandu, Nepal



**Organized by** International Centre for Integrated Mountain Development (ICIMOD)  
International Institute for Applied Systems Analysis (IIASA)

**Supported by** Australian Government's Department of Foreign Affairs and Trade through Sustainable Development Investment Portfolio  
Swiss Agency for Development and Cooperation (SDC)



# UNFCCC collaboration

Closing Knowledge Gaps in the Hindu Kush Himalaya



ICIMOD

FOR MOUNTAINS AND PEOPLE

The Hindu Kush Himalaya (HKH) spans 3,500 kilometres across eight countries, from Afghanistan in the west to Myanmar in the east. It is the source of 10 large Asian river systems—the Amu Darya, the Indus, the Ganges, the Brahmaputra (Yarlungtsanpo), the Irrawaddy, the Salween (Nu), the Mekong (Lancang), the Yangtze (Jinsha), the Yellow River (Huanghe), and the Tarim (Dayan)—and provides water, ecosystem services, and the basis for livelihoods to a population of around 210.53 million people in the region. The basins of these rivers provide water to 1.3 billion people, a fifth of the world's population ([www.icimod.org](http://www.icimod.org)).

The HKH is often called a 'data scarce' region in terms of climate studies. The regional countries are at different stages of development, and spatial data and information technology utilization. One of the major challenges is that the data available is fragmented, heterogeneous, and not easily accessible. Besides this, global datasets lack the details needed to define mountain geography and ecosystems. The study of melting glaciers, greenhouse gases, aerosols (principally black carbon), biodiversity, and disasters caused by extreme events, requires transboundary cooperation and data sharing. While the effects of climate change are more noticeable in the mountains, consequences such as changing water cycles and water storage impact downstream communities who are most vulnerable and need to adapt to these changes.

Adaptation knowledge gaps have been repeatedly identified as a barrier to widespread and successful adaptation actions. Recognizing this challenge, the United Nations Framework Convention on Climate Change (UNFCCC) and the United Nations Environment Programme (UNEP) initiated the Lima Adaptation Knowledge Initiative (LAKI) to address knowledge barriers that impede the implementation and scaling up of adaptation action, through a participatory process of knowledge gaps identification, categorization and prioritization, accompanied by facilitated science-policy-practice dialogues to catalyze collaborations and

LAKI-HKH Priority Setting Workshop, 20-22 October 2016, Sri Lanka

The Lima Adaptation Knowledge Initiative (LAKI) aims to address knowledge barriers that impede the implementation and scaling up of adaptation action in the context of various subregions and areas of vulnerabilities. The LAKI is a collaborative pilot between the secretariat of the United Nations Framework Convention on Climate Change (UNFCCC) and the United Nations Environment Programme (UNEP). In each subregion, a subregional coordination entity plays a unique role in supervising the implementation of the LAKI.

As the regional collaborating agency for the UNFCCC's Nairobi Work Programme, knowledge for action network on climate resilience the International Centre for Integrated Mountain Development (ICIMOD), together with the UNFCCC and UNEP, organized a LAKI Priority Setting Workshop for the HKH. Government agency representatives, academics, and civil society representatives from Bangladesh, Bhutan, China, India, Nepal, Myanmar and Pakistan participated in the workshop. They deliberated on identifying the highest-priority knowledge gaps identified in a scoping paper prepared by ICIMOD.

The results of the Priority Setting Workshop was presented to the COP in Marrakesh by UNEP during the reporting of the progress on the LAKI process. The UNFCCC's Subsidiary Body for Scientific and Technological Advice (SBSTA) conclusions on the Nairobi Work Programme adopted in Marrakesh welcome the LAKI, including the most recent workshops held in Hindu Kush Himalaya and Indian Ocean Island countries in collaboration with the ICIMOD and the International Water Management Institute (<http://unfccc.int/resource/docs/2016/sbsta/eng/122.pdf>).

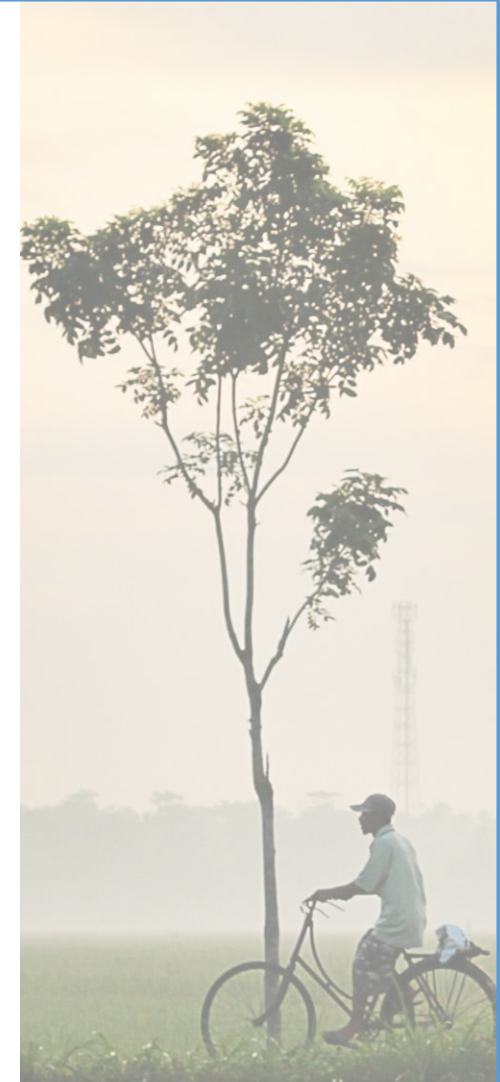
The LAKI Priority Setting Workshop is perhaps the first example of a focused attention under the Nairobi work programme by the Convention on addressing adaptation issues specific to the Hindu Kush Himalaya.

For detail [nwp@unfccc.int](mailto:nwp@unfccc.int)

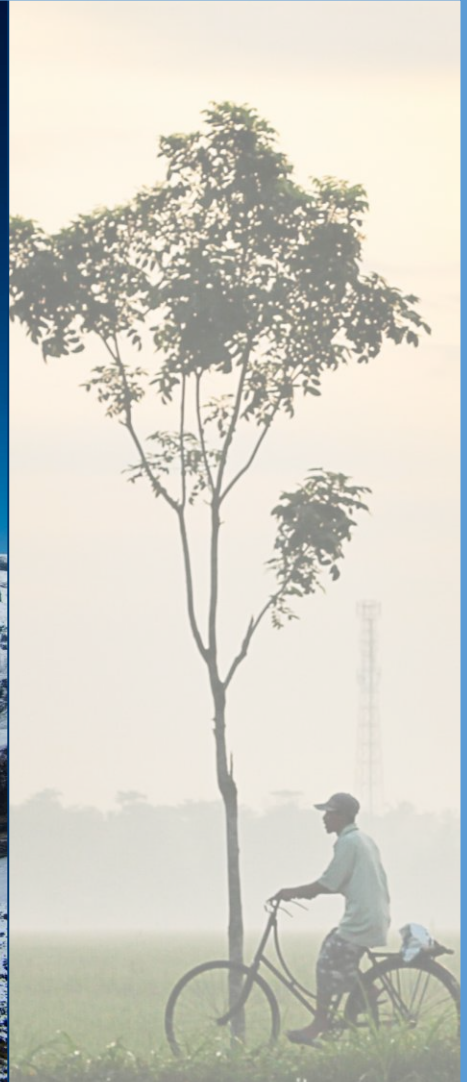


## Collaborating Institutions

- NWP
- LAKI
- Advisory Group for LEG
- .....PCCB?



**Thank you**







**United Nations** Climate Change  
Paris Committee on Capacity-building



Bangkok, Thailand 2-6 September 2019

# Capacity-building Knowledge to Action Day

September 2 | 9:00-18:00

UNU-EHS

## Supriya Dharkar

‘Universities for the Implementation of NDCs, UN SDGs and Global Climate Action’





**United Nations** Climate Change  
Paris Committee on Capacity-building



Bangkok, Thailand 2-6 September 2019

# Capacity-building Knowledge to Action Day

September 2 | 9:00-18:00

## Panel Discussion

Fostering effective collaboration between universities and national research institutions with national/regional stakeholders: lessons learned







**United Nations** Climate Change  
Paris Committee on Capacity-building



Bangkok, Thailand 2-6 September 2019

# Capacity-building Knowledge to Action Day

September 2 | 9:00-18:00

**Closing remarks and next steps**

# Youssef Nassef

Director of Adaptation Unit, UN Climate Change

