The 4th International Climate Change Adaptation Platforms Meeting

15th December 2023 at TKP Conference, Tokyo, Japan

Regional Resource Centre for Asia and the Pacific at Asian Institute of Technology

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Introducing Asian Institute of Technology Regional Resource Centre for Asia and the Pacific

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Regional Resource Centre for Asia and the Pacific

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cCcA
Center for Climate Change Adaptation

Snapshots of AIT RRC.AP

Asian Institute of Technology, Regional Resource Centre for Asia and the Pacific

2016 — Formulation of Concept Note and City Resilience Training Programmes

Climate data downscaling workshops introduced

2018 — AIT Listed in AF Network of Providers of Readiness Support for Adaptation

Continued refinement of training approach and methodology

2020 — AIT Listed in GCF Framework for Communities of Practice

YEA
Youth Energy Academy
1st YEA in ASIA

2022 — Downscaling software improved and installed

FloodS tool introduced for adaptation planning

Networks and Initiatives engaged:

- Adaptation Research Alliance
- MCR 2030 Campaign
- Asia-Pacific Adaptation Information Platform (AP-PLAT)
- Providers of Readiness Support for Adaptation for Adaptation Fund Secretariat, CTCN, GCF, GCF-NDA and PCCB

Wider reach in Asia and the Pacific

- Continued engagement of Regional Workshops
- Continued engagement of Youth

Strengthen national and local-level support

- Climate Data Downscaling and field applications
- E-learning on climate change related issues
- GCF Concept Note Development
- Diversify capacity building efforts
- Support project implementation – Management and Technical Support

Introduction to the Climate Change Cluster

Services

Capacity building

- Comprehensive Training Programmes
- Mentoring and Post-training Follow-up

Knowledge sharing

- Development of Knowledge Products
- Dialogue (Webinars, Side-events, etc)
- Technical and Policy Advice

Technical Services

- Programme/project design
- Technical Consultancies
- Programme/project implementation

Thematic Areas

Accessing Climate Finance

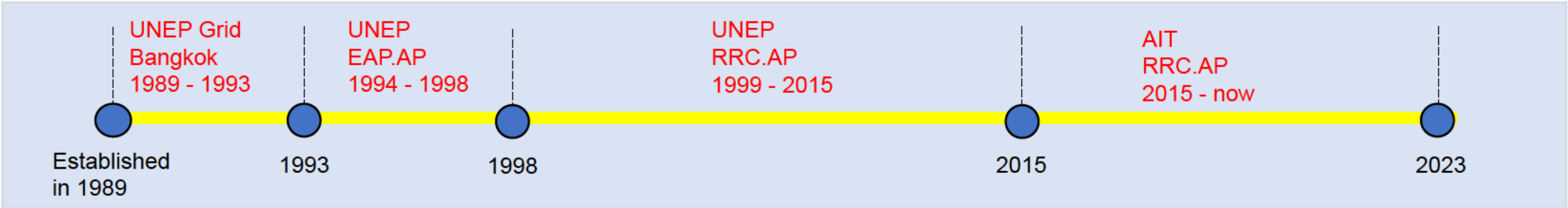
- Project Conceptualization & Design

Adaptation Planning and Disaster Risk Reduction

- Resilience Planning for Cities and communities
- Climate data downscaling
- Technical and Policy Advice

Clean and Renewable Energy

- Youth-led renewable energy applications
- Feasibility studies & EIA
- Research and Technology assessments



Some Donors and Partners for last year

環境省
Ministry of the Environment
Government of Japan

GREEN CLIMATE FUND

IGES
Institute for Global Environmental Strategies

National Institute for Environmental Studies, Japan

UN-HABITAT

UNDRR
UN Office for Disaster Risk Reduction

UN environment programme

筑波大学
University of Tsukuba

YUNUS THAILAND

epic-network

AP-PLAT
Asia-Pacific Climate Change Adaptation Information Platform

apan
asia pacific
ADAPTATION NETWORK

adpc

FISCAL POLICY AGENCY
MINISTRY OF FINANCE
REPUBLIC OF INDONESIA

Hitachi Power Solutions Co.,Ltd.

KONRAD ADENAUER STIFTUNG

Introduction to Adaptation Tools of S8DS and FloodS

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S8DS

https://ds02.rrcap.ait.ac.th/

Web application based on Graphical User Interface (GUI) system. Developed by Tsukuba University, Japan with support from the Ministry of Environment, Japan (MoEJ). User-friendly Platform (generate output by click and drag function).

S8DS requires only PC and internet, no pre-requisite of technical climate knowledge needed for use, minimum workload and is free and easy to access. S8DS bridges science-based solutions for everyone.

Basic features of S8DS

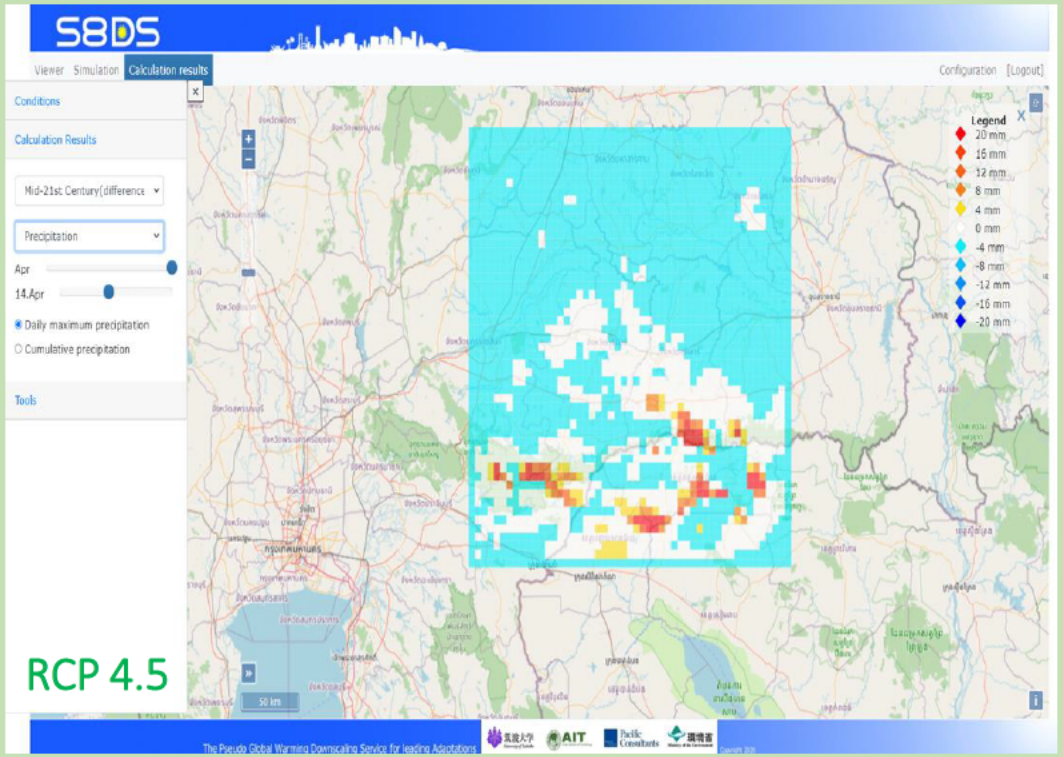
Method	Pseudo global warming method –dynamic downscaling
Baseline Data	Global Climate Model(GCM), Special Report on Emissions Scenarios (SRES), Representative Concentration Pathway (RCP) and Coupled Model Intercomparison Project (CMIP3 and CMIP5), Regional Climate Model (RCM).
Resolution	Between 1-10 km
Model Simulation Time	3-64 hours depending on the resolution and amount of data input
Prediction Parameters	Temperature, Precipitation, Wind Speed/Direction, Humidity, Solar Radiation (ShortWave), Sea Level Pressure
Additional Features	Considers impact of human activity on future climate such as land use change and energy use

Simulation Example for Precipitation in Buriram Province Thailand

The overall precipitation will be decreasing about **4 mm per day from base year**.

The decrease of rainfall might **affect rain-fed agricultures** which contributes to about **89% of livelihoods**.

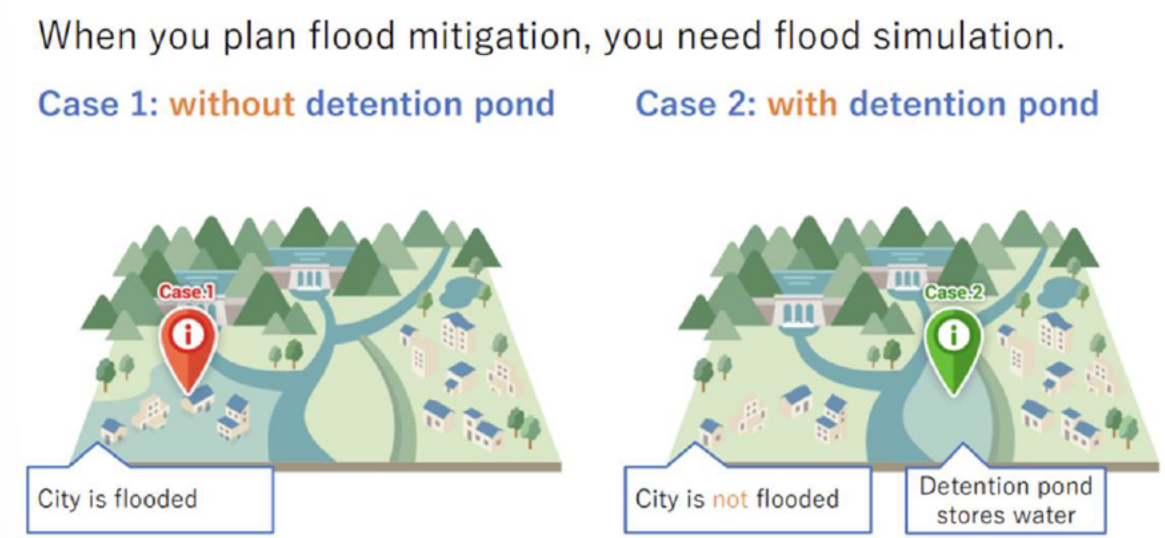
The daily maximum precipitation in Buriram province at Mid 21st century of RCP 4.5 is projected to be **lower than current year in many areas**.



FloodS

https://top.floods.green/

FloodS is a tool for flood hazard mapping and decision-making and occurrence of flood for adaptation and prevention. Developed by HITACHI Corp. Ltd, Japan with support from the Ministry of Environment, Japan (MoEJ). Service Provider, AIT RRC.AP. FloodS intends to develop flood simulation system with excellent usability and visibility. Used for Adaptation Planning, Disaster Risk Reduction, River Management, Urban Planning. It can measure water depths and flows, evaluation of counter measures such as embankments.



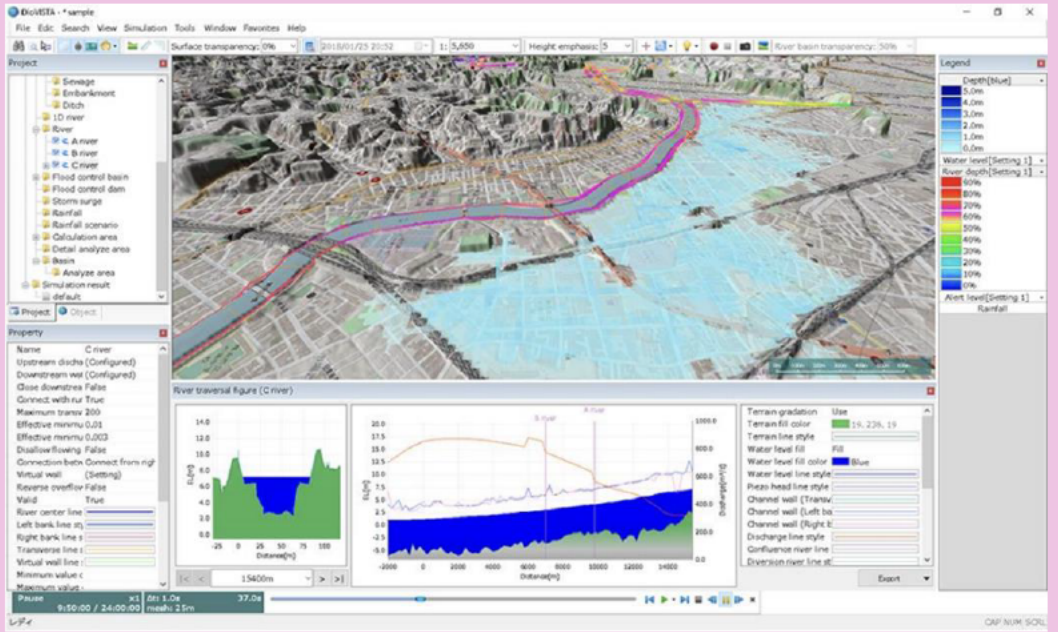
Helps mitigation planning by evaluating the effect of flood flow control measures (e.g., detention pond). Can simulate floods that have not occurred in the past.

Simulator by DioVISTA

FloodS uses a fast flood simulator
Provided by Hitachi Power Solutions as product **DioVISTA Flood**.

DioVISTA is used for

- Flood hazard mapping by local governments
- Flood risk assessment by insurance companies
- Business continuity planning by private enterprises



Raising Awareness on ClimoCast and Adaptation Platform AP-PLAT

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ClimoCast

CMIP6 Climate Projection Tool. ClimoCast enables you to see **future climate projections on the map**, it enables you to **compare climate scenarios** and **download the data**. It is a quick and easy access to project climate scenarios.

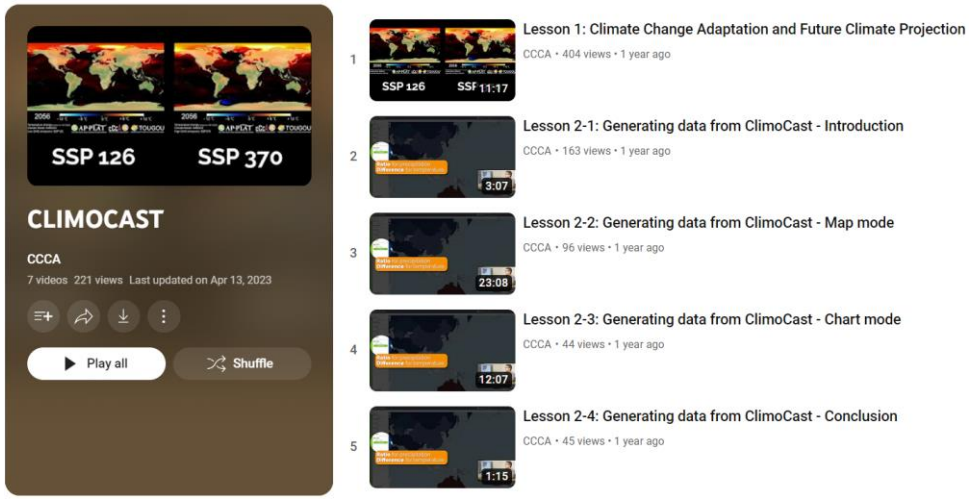
ClimoCast can answer in **two steps**: how many degrees will temperature increase in my country, province and town? Where can I get this data?

Examples that ClimoCast can answer are as follow:

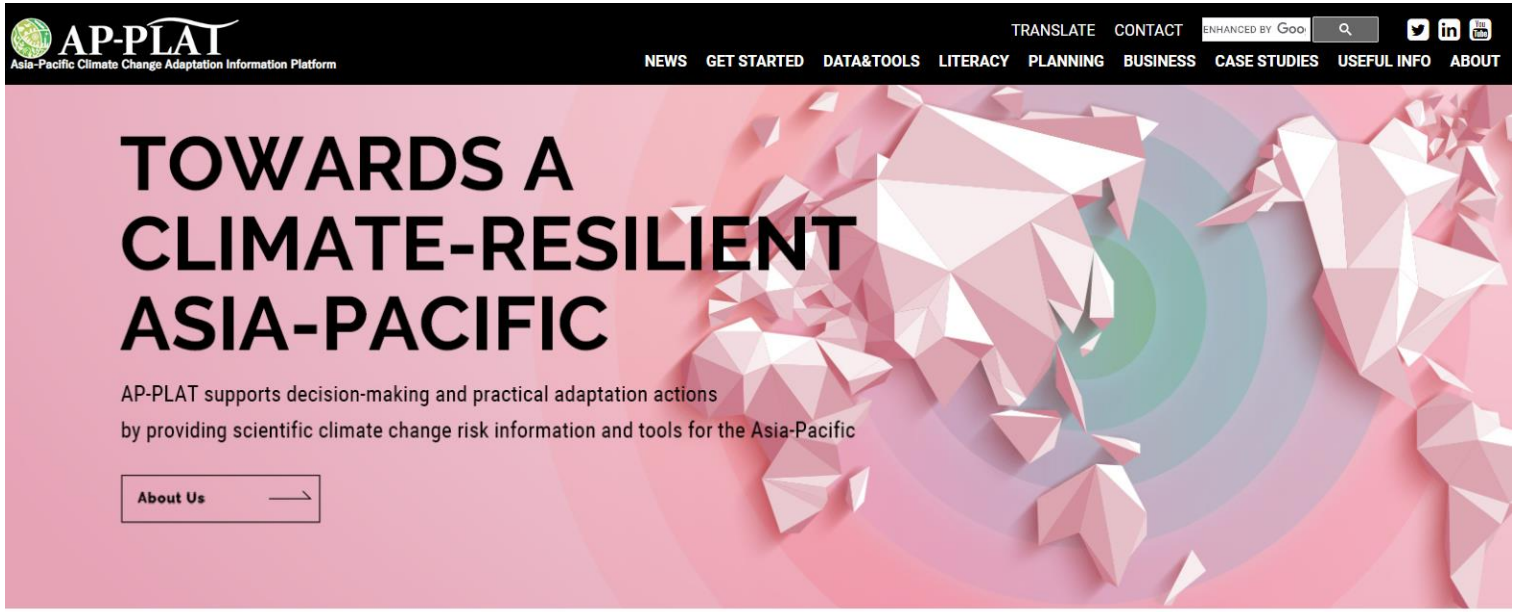
1. **Quantification of Mitigation effect** - What is the difference in temperature increase between SSP126 (low emission) and SSP 370 (high emission).
2. **Identifying hotspots** - Where is the region of highest temperature?
3. **Identifying dry/wet spots** - Where is the region of highest drying/ wetting?
4. **Identifying dry/wet season** - Which month will precipitation decrease or increase?

Tutorial Series of ClimoCast can be found on YouTube: https://www.youtube.com/playlist?list=PL9jaKxAv72IwIyjx4I1yD-DuzEjowzR2G

https://a-plat.nies.go.jp/ap-plat/cmip6/global.html



AP-PLAT



Goal: to contribute to the sustainability and resilience of the Asia-Pacific region by informing decisions and supporting adaptation actions.

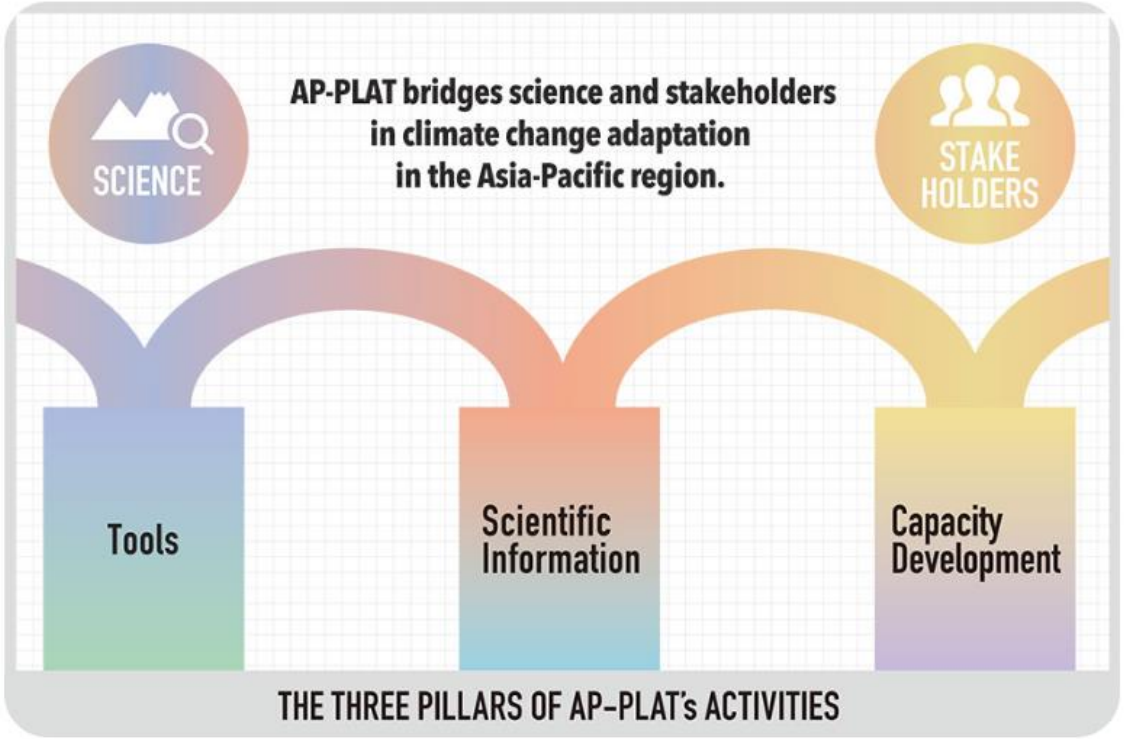
https://ap-plat.nies.go.jp/

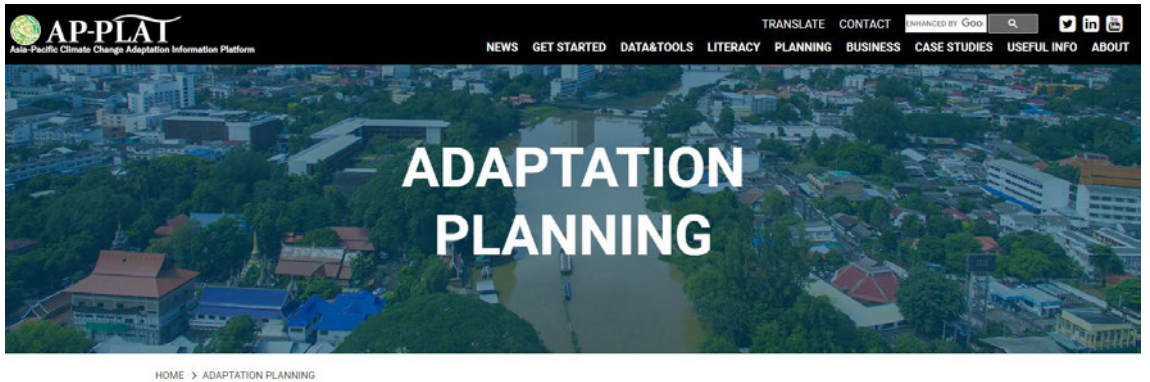
AP-PLAT was launched in June 2019 by **Ministry of Environment Japan** (MOEJ) during G20 Ministerial Meeting on Energy Transitions and Global Environment for Sustainable Growth held under Japan's presidency of G20.

AP-PLAT is a **web-based information platform** for national and local policymakers, researchers, businesses, and individuals seeking practical, up-to-date information on climate change adaptation and relevant science.

Covers three core areas of Scientific Information and Knowledge Creation, Tool Development and Capacity Development.

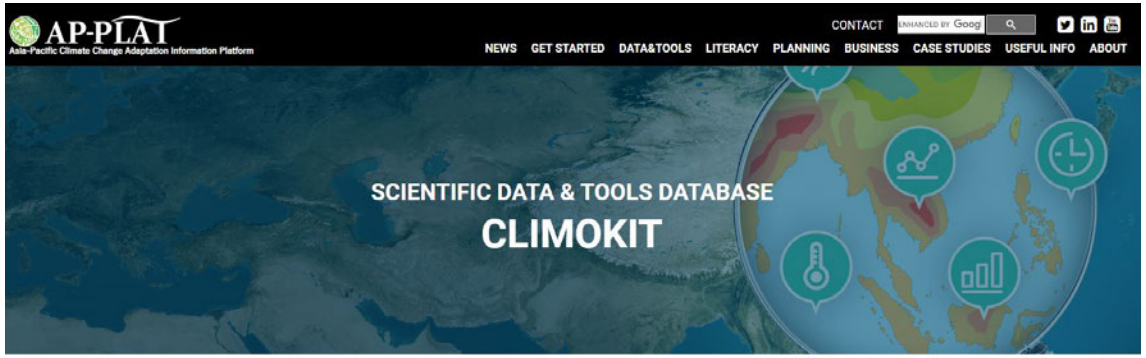
It provides data and information, news and events, e-learning courses.



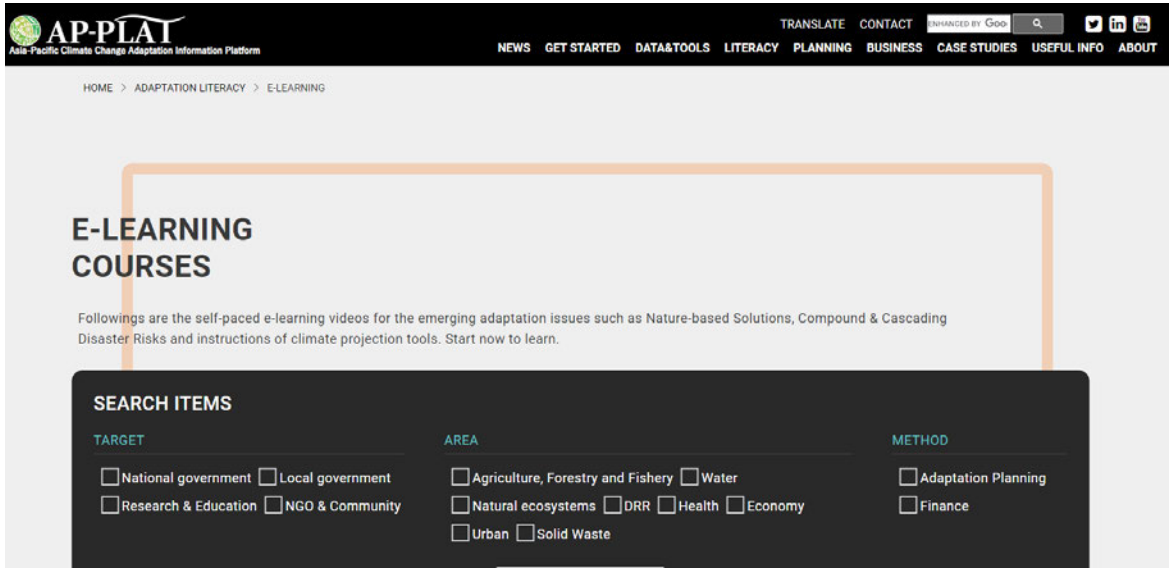


HOME > ADAPTATION PLANNING

Adaptation planning, implementation, and monitoring and evaluation (M&E) based on scientific impact assessments are core components of adaptation to climate change. Sustainable adaptation requires these three stages to be revisited periodically. This page provides practical information for countries in all stages of this cyclical process. Our resources will help you understand the position, role, and significance of adaptation planning. We provide guidance on National Adaptation Plans (NAPs) and others in the UNFCCC process, as well as information on the status of adaptation planning in the Asia-Pacific. We hope this will help you develop and update your adaptation



HOME > SCIENTIFIC DATA & TOOLS



E-learning Courses developed for AP-PLAT

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E-learning Courses up and running on AP-PLAT developed by AIT RRC.AP 2022 & 2023

- Increasing Coherence in Climate Change Adaptation and Disaster Risk Reduction (**March 2023**).
- Climate Adaptation and Resilience Building Through Sustainable Waste and Resource Management (**March 2023**).
- Developing Concept Notes for the GCF Simplified Approval Process (**March 2022**).

E-learning Courses being developed for AP-PLAT for 2024

- Integrating Gender and Indigenous Factors into Locally-Led Adaptation (**March 2024**).
- Using the FloodS Flood Forecasting Tool for Adaptation Planning at the City Level (**March 2024**).

GCF Concept Note Development and GCF Concept Note Mentoring Session

Strengthening Climate Resilience Through Strategic Agriculture Zone in Gorontalo District: Transforming Food Crops, Coconut and Livestock Industries

GCF Concept Note Section B.1. Context & Background:
Climate Vulnerabilities & Impacts

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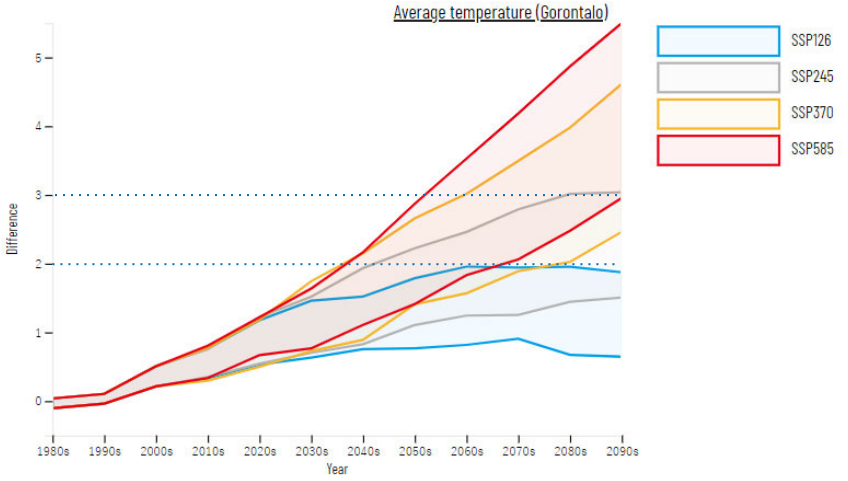

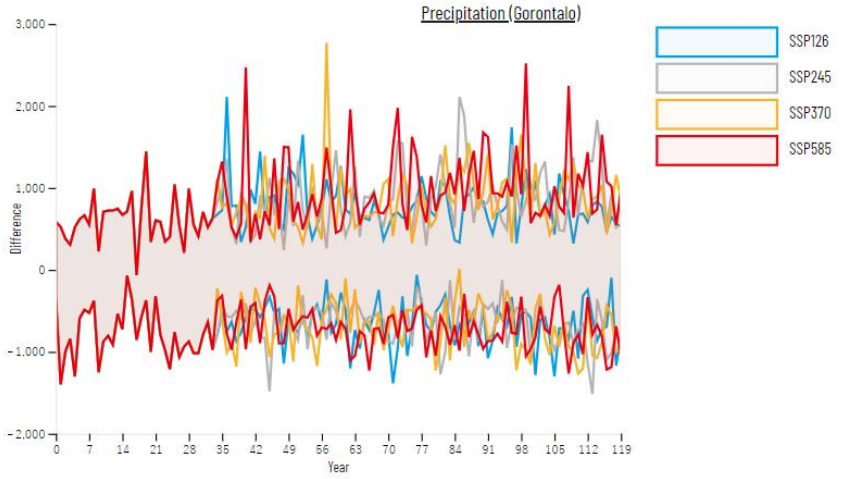

Climate Projections:

- Increase of weather extremes and drought between 22%-300% due to anthropogenic emission & ENSO.
- Increase of avg. temperature in the district **by +2 °C by 2050s** in all scenarios and **+3 °C by 2090s** in 3 scenarios (SSP245, -370, -585).
- Increase of **precipitation ratio variability in the district between 0.8 to 1.2 in all scenarios** which may lead to uncertain weather pattern by 2090s.

Vulnerabilities & Impacts:

- Shift of maize suitability from suitable to marginally suitable and not suitable.
- Projected decrease of paddy productivity by more than 25%, thus Gorontalo is listed as Top Priority by BAPPENAS in LCDI plan.
- Potential threat of drought, floods, and pests attack increase to crops which reduce productivity or crop failures which affects .
- Low income farmers vulnerable to fall into poverty.

Reference: ClimoCast (https://a-plat.nies.go.jp/ap-plat/cmip6/global.html)

Expectations and Thoughts on AP-PLAT

COP 28 has focused on key thematic in the lines of Climate Change and Health, Climate Change and Cities. Thus, my recommendations for AP-PLAT is to align with these thematic.

- Liaising with **World Meteorological Organization** (WMO). Integrating some of the **Climate Services** they offer with AP-PLAT.
- Liaising with **Inter Governmental Panel for Climate Change** (IPCC) and integration of **7th Assessment Cycle** support work within AP-PLAT. 7th Assessment Cycle has just begun.
- Liaising with **Making Cities Resilient 2030** with AP-PLAT. **Launching the new e-learning videos** at MCR 2030 scheduled for 19th – 22nd February 2024 in Bangkok, Sukosol Hotel. AIT RRC.AP collaborations possible.
- Introducing **Early Warning Systems** and its technical support through AP-PLAT. A lot of countries are currently integrating these measures. AIT RRC.AP collaborations possible.
- Introducing **measurement, reporting and verifications** (MRV) technical support for GHG emissions evaluations through AP-PLAT. Countries are currently implementing these measures. Some are struggling to do so within Asia and the Pacific.

Thank you

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