

# AI for Climate Action and Resilience: Philippine Experiences and Prospects

Caezar Angelito E. Arceo

Technology Application and Promotion Institute (TAPI)

Department of Science and Technology (DOST)

Philippines

Technology and Innovation Conclave 2.0  
Ministry of Earth Sciences, Prithvi Bhavan,  
Lodi Road New Delhi, India | 29 January  
2026



APCTT  
Asian and Pacific Centre  
for Transfer of Technology



90.8%  
Digital readiness

81%  
Having internet access

20%  
Philippine firms aware of AI, other 4IR techs

14.9%  
Philippine businesses using AI

7.9%  
ICT sector

5.94%  
BPO sector

# THE PHILIPPINE STAR

Philstar.com | September 14, 2025  
Source: PIDS, Readiness for AI Adoption of Philippine Business and Industry

- Key barriers to AI adoption include limited digital infrastructure, skills gaps, low AI awareness, and insufficient funding opportunities.
- Regional disparities in digital infrastructure and business activity further hinder AI adoption, causing less developed regions to lag behind technologically.
- Despite government initiatives such as DTI's National AI Strategy Roadmap and the Center for AI Research, several barriers persist, especially for MSMEs.

# Backdrop

AI for Climate Action and Resilience: Philippine Experiences and Prospects  
ESCAP | APCTT Asian and Pacific Centre for Transfer of Technology



58%

use generative AI for skill development and learning

14.9%

use AI for writing tasks

# INQUIRER.NET

INQUIRER.NET | November 21, 2024

Source: Jobstreet; SEEK, Decoding Global Talent Report 2024

46%

Filipinos use generative AI monthly at work

- Filipino workers **aged 18–24** are twice as likely to use generative AI compared with other age groups.
- **82%** of Filipinos believe AI will change some aspects of their work, with **35%** expecting a major impact that could eliminate or significantly transform their careers.
- Craft or physical workers are the most concerned about AI's impact, with **56%** expecting significant job changes, while technical and engineering workers are the least concerned (**28–30%**).
- Despite concerns, over **70%** of Filipino workers are willing to reskill to stay relevant in the age of AI, with **24%** open to reskilling only when absolutely necessary.

71%

digitalization and data science workers (industry with highest AI usage)

65%

information technology professionals (industry with 2<sup>nd</sup> highest AI usage)

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# Women empowerment during disasters

## Agriculture-related climate-related AI R&D

PCAARRD-GIA	USD 6,488,644.81
DOST-GIA	USD 14,000,815.97

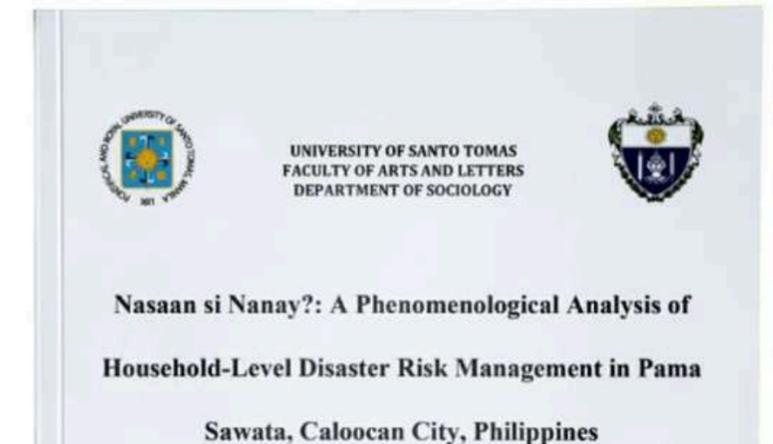
Ongoing	USD 17,645,493.76
Completed	USD 5,399,618.53



### Role of Women in Disaster Risk Reduction and Management



### Nasaan si Nanay?: A Phenomenological Analysis of Household-Level Disaster Risk Management in Pama Sawata, Caloocan City, Philippines.



# Backdrop

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# Some PH AI patents related to CRI



Source:  
Engr. Wilfredo O.  
Calaguan, Intellectual  
Property Office of the  
Philippines

**Arceo, CAE. AI Asia Expo  
08 November 2023**

Ph22015000315	Method for Predicting Physical Attributes of Milled Rice Using Image Processing Software	Philippine Rice Res Institute Philrice [Ph]
Ph22015000316	Method of Image Acquisition of Milled Rice for Image Processing	Philippine Rice Res Institute Philrice [Ph]
Ph12015000419	Method and System for Detecting and Classifying Cardiovascular Diseases Using Portable Monitoring Ecg Device	Montano Vincent D [Ph]

Ph12016000024	Drowsiness Detector Cap	Tabal Keith Marlon R [Ph]
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PH12018000201	Artificial Intelligence Based Service Control and Home Monitoring	Accenture Global Solutions Ltd [Ie]
PH12018000311	Adaptive Product Management Platform	Accenture Global Solutions Ltd [Ie]



PH12019000098	Virtual Services Rapid Deployment Tool	Accenture Global Solutions Ltd [Ie]
PH12019000172	Generating an Execution Script for Configuration of A System	Accenture Global Solutions Ltd [Ie]
PH12019050062	An Active Monitoring, Risk Assessment, Pilferage Detection and Fraud Mitigation Device	Spingine Corp [Ph]
PH12019050076	Enhancing Device Geolocation Using 3d Map Data	Samsung Electronics Co Ltd [Kr]
PH12019050079	Speech Enhancement of Coded Voice Calls Using Deep Neural Networks	Samsung Electronics Co Ltd [Kr]
PH12019000255	Maturity Identifier of Sugar Cane via Image Processing and Artificial Intelligence	Tech Institute of The Philippines Manila [Ph]

PH22021050738	System for Physical Distance	Science and Technology of Southern Philippines
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PH12020050067	System for Detecting and Identifying Fraud in Healthcare and Health or Medical Insurance Programs	Department of Science and Tech Advanced Science and Tech Institute [Ph]
PH22020050631	A Wireless Disinfecting Apparatus Using Ozone	Hinolian Carlos Jose G [Ph]

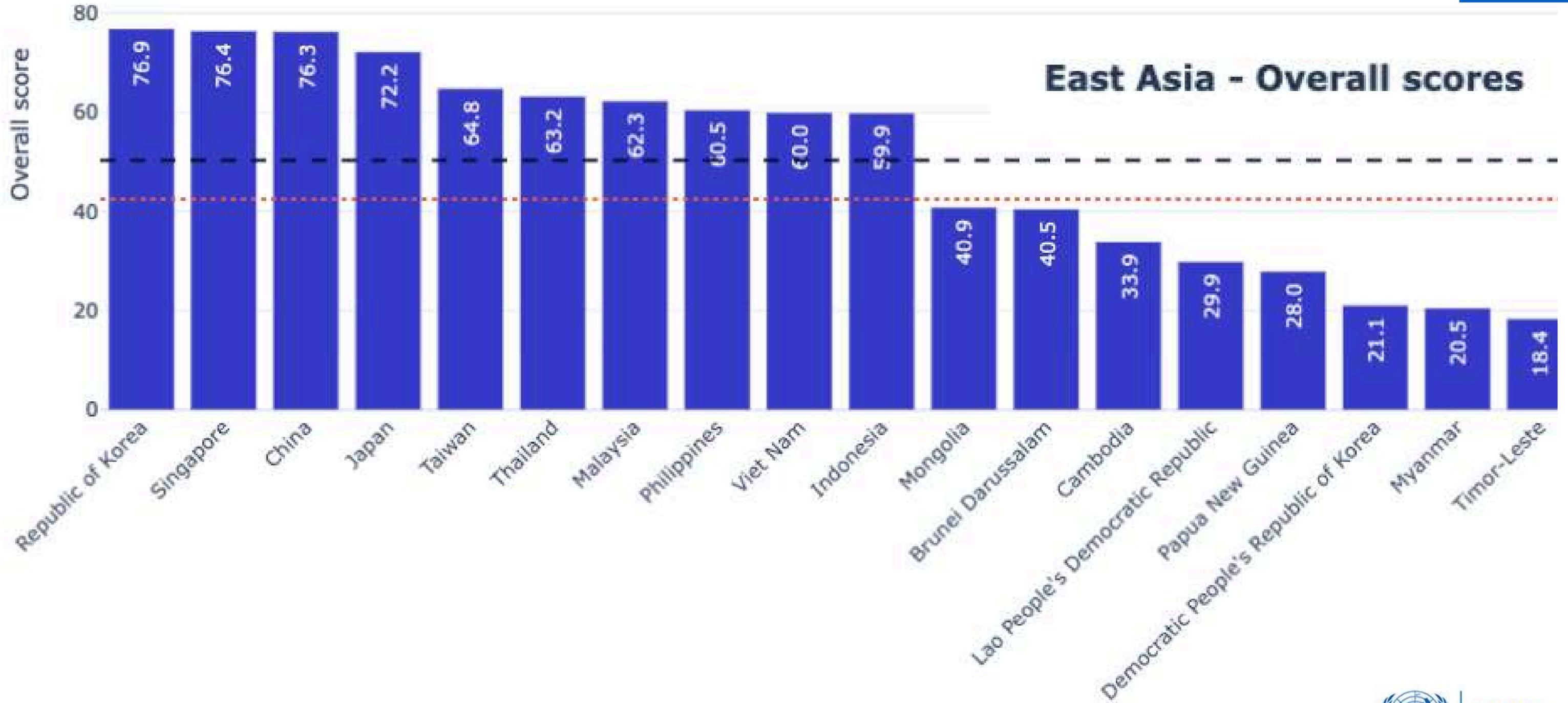
# Backdrop

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# AI readiness index

<https://oxfordinsights.com/ai-readiness/>



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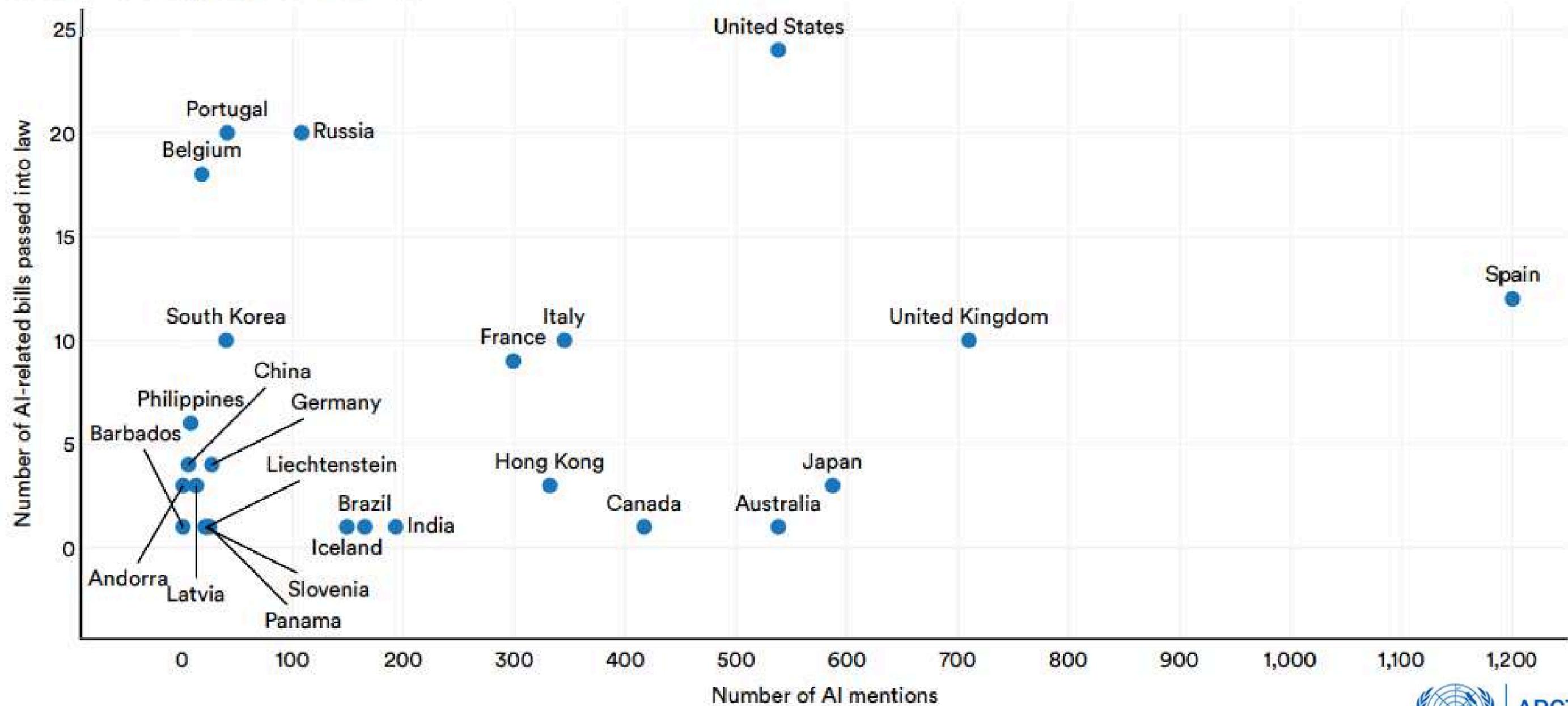


# AI readiness index

<https://hai.stanford.edu/ai-index/2025-ai-index-report>

## Mentions of AI in legislative proceedings vs. AI-related bills passed into law in select countries, 2016–24

Source: AI Index, 2025 | Table: 2025 AI Index report



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# PH framework

Republic Act No. 11293

## "Philippine Innovation Act"

Republic Act No. 10055

## "Ph Technology Transfer Act"

Republic Act No. 11337

## "Innovative Startup Act"

Republic Act No. 11032

## "Ease of Doing Business"

Republic Act No. 10667

## "Philippine Competition Act"

# Guides

## The National Innovation Council:

Member Agencies	Renato Solidum Jr.	Secretary of Science and Technology
	Alfredo E. Pascual	Secretary of Trade and Industry
	Domingo F. Panganiban	Secretary of Agriculture
	Toni Yulo-Loyzaga	Secretary of Environment and Natural Resources
	Ted Herbosa	Secretary of Health
	Raphael Lotilla	Secretary of Energy
	Jaime Bautista	Secretary of Transportation
	Gilbert Teodoro	Secretary of National Defense
	Ivan John Uy	Secretary of Information and Communications Technology
Executive Members	J. Prospero E. De Vera III	Chairperson of the Commission on Higher Education
	Rowel S. Barba	Director-General of the Intellectual Property Office of the Philippines
	Mark Sultan P. Gersava	Representative for the Micro, Small, and Medium Enterprises Sector
Executive Members	Monchito P. Ibrahim	Representative for the Business Sector
	Earl Martin S. Valencia	Representative for the Business Sector
	Gisella P. Concepcion	Representative for the Academe and Scientific Community
	Ria Liza C. Canlas	Representative for the Academe and Scientific Community
		Representative for the Academe and Scientific Community

Philippine Experiences and Prospects ESCAP | re  
logy

# NIASD 2023-2032

## National Innovation Agenda and Strategy Document

### Pillar 1: Pro-active, Smart, and Innovative People

- 1. Learning and Education
- 2. Health and Well-being

### Pillar 2: Competitive and Resilient Economy

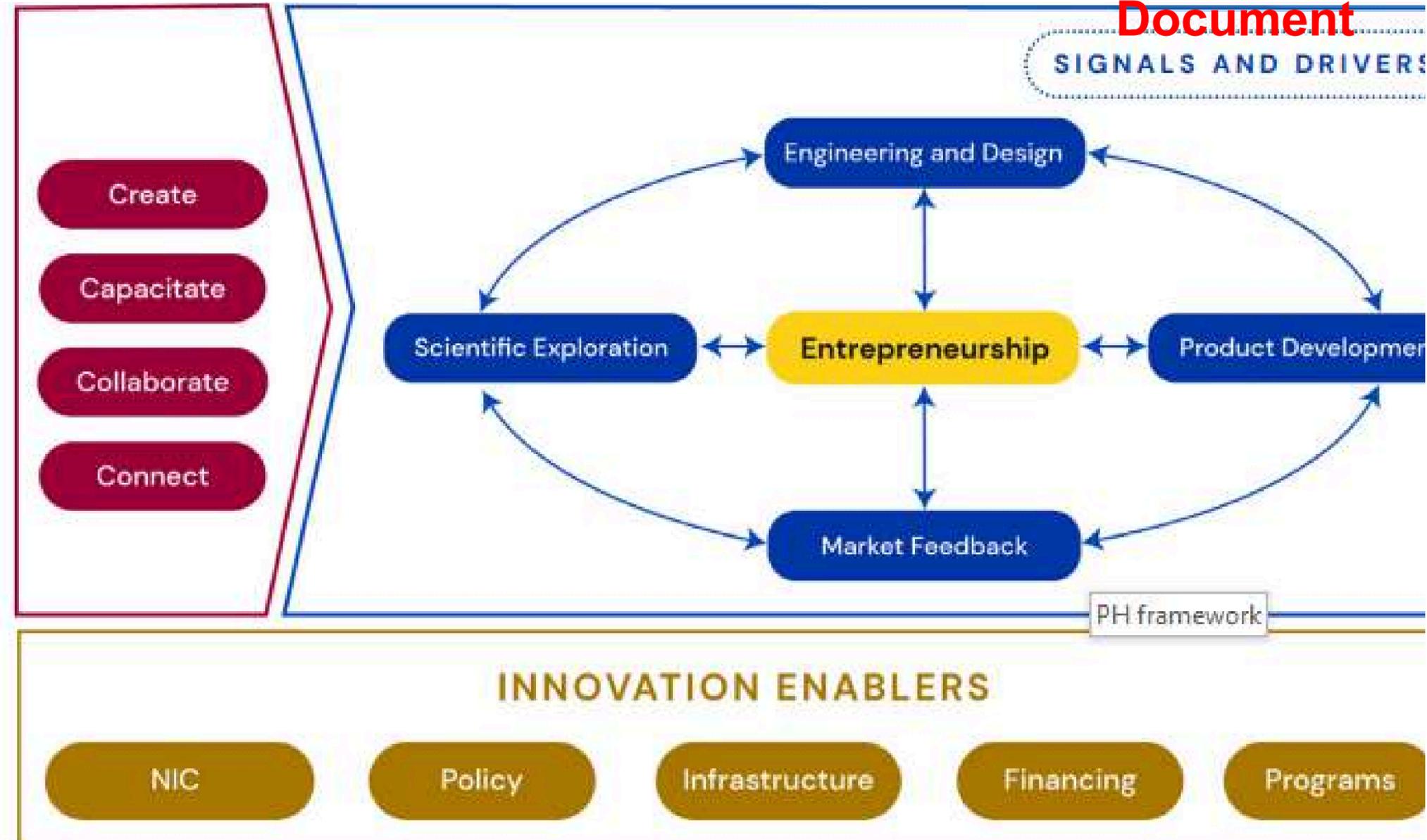
- 3. Food and Agribusiness
- 4. Finance
- 5. Manufacturing and Trade
- 6. Transportation and Logistics

### Pillar 3: Collaborative and Reliable Institutions

- 7. Public Administration
- 8. Security and Defense

### Pillar 4: Efficient, Clean, and Sustainable Environment

- 9. Energy
- 10. Blue Economy and Water



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# NAISR 2.0

## Philippines' National AI Strategy Roadmap



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2 May 2025

# Philippines: DICT mandates unified ICT planning standards across government

The Department of Information and Communications Technology (DICT) [has issued](#) a new policy requiring all government bodies to adopt unified standards in their Information Systems Strategic Plans (ISSPs).

The policy, outlined in Department Circular No. HRA-001 s. 2025 applies to national agencies, government-owned and controlled corporations, state universities and colleges, and other covered entities. It mandates that all ICT planning be aligned with national priorities through a centralised framework, with quality assurance and oversight provided by the DICT and the Medium-Term Information and Communications Technology Harmonization Initiative (MITHI) Steering Committee.

According to DICT Secretary Henry Aguda, the objective is to eliminate redundancy, improve digital preparedness, and ensure that government ICT investments directly support citizen-focused public services. Agencies must use the standard ISSP template and meet minimum quality requirements set by the DICT. Submissions are to be sent directly to the MITHI Secretariat. Aguda added that the policy is

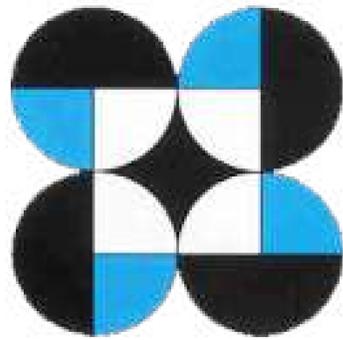
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# Guides

# Who we are

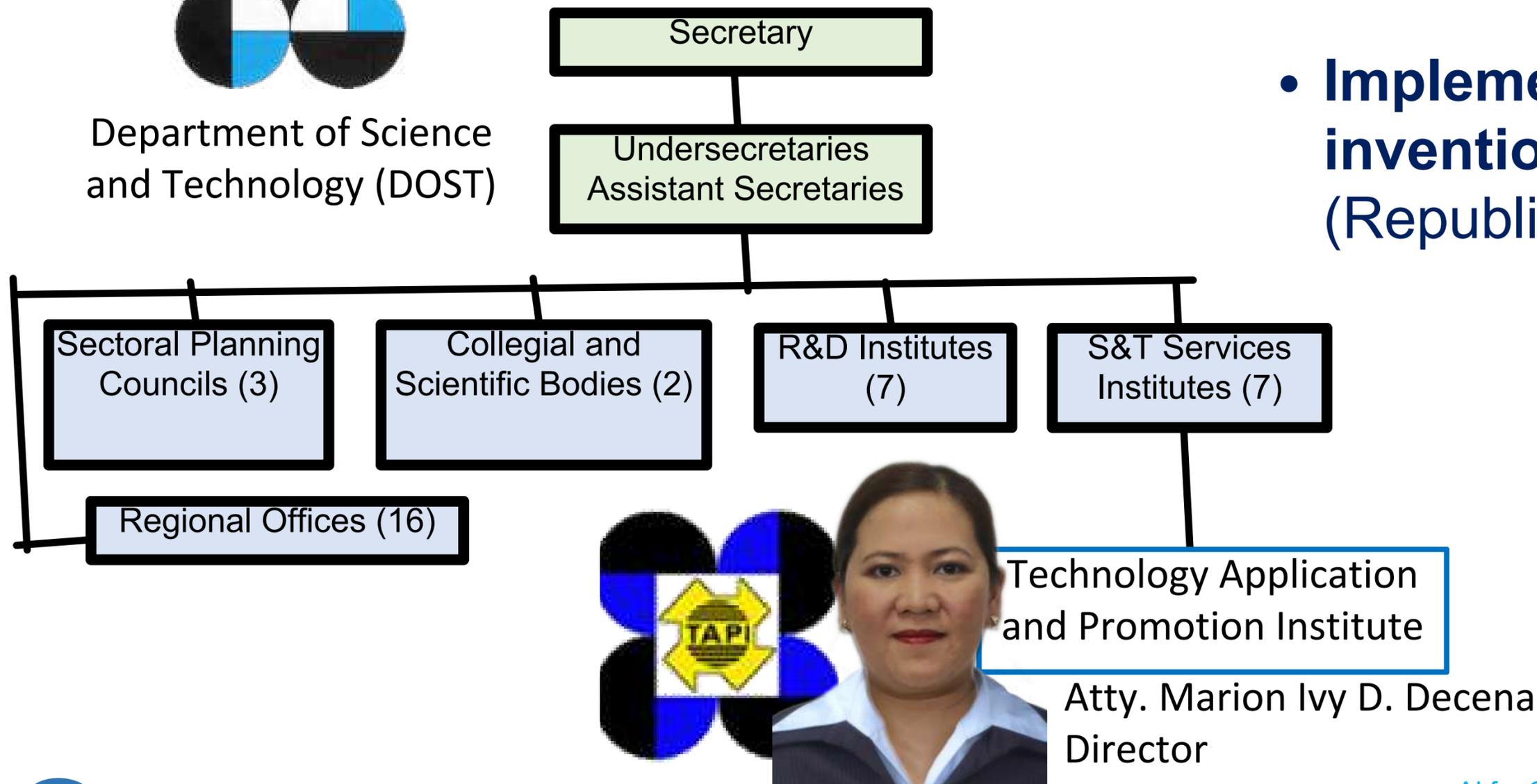


Department of Science and Technology (DOST)

- **Technology transfer arm of the DOST** (Executive Order 128, 1987)

- **Implements inventors' and inventions incentives law** (Republic Act No. 7459, 1992)

- **Depository institution of fairness opinion reports** (Amended IRR, Republic Act No. 10055, 2009)



# Structures

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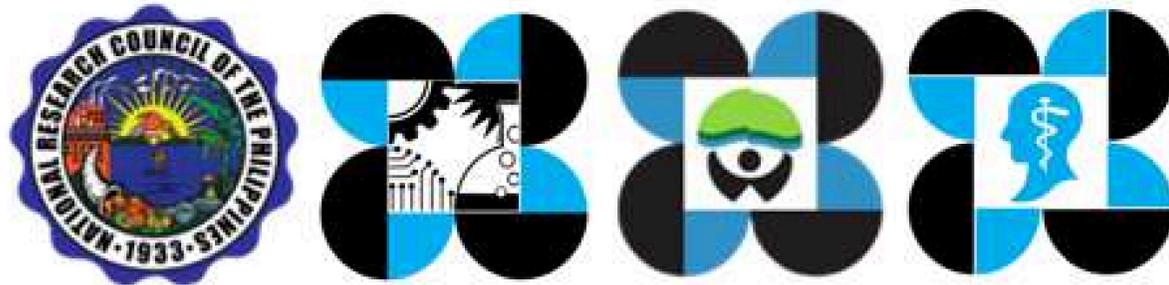
# INNOVATION PATHWAY

**RESEARCH**  
IDEATION: Basic and Applied



**COMMERCIALIZATION**  
Full Commercial Deployment and  
Market Expansion

**PROGRAMS**



“Towards Market Entry”

Climate Resilient Growth and Technology  
Development, Upgrading and Deployment (CRAG-UPD)



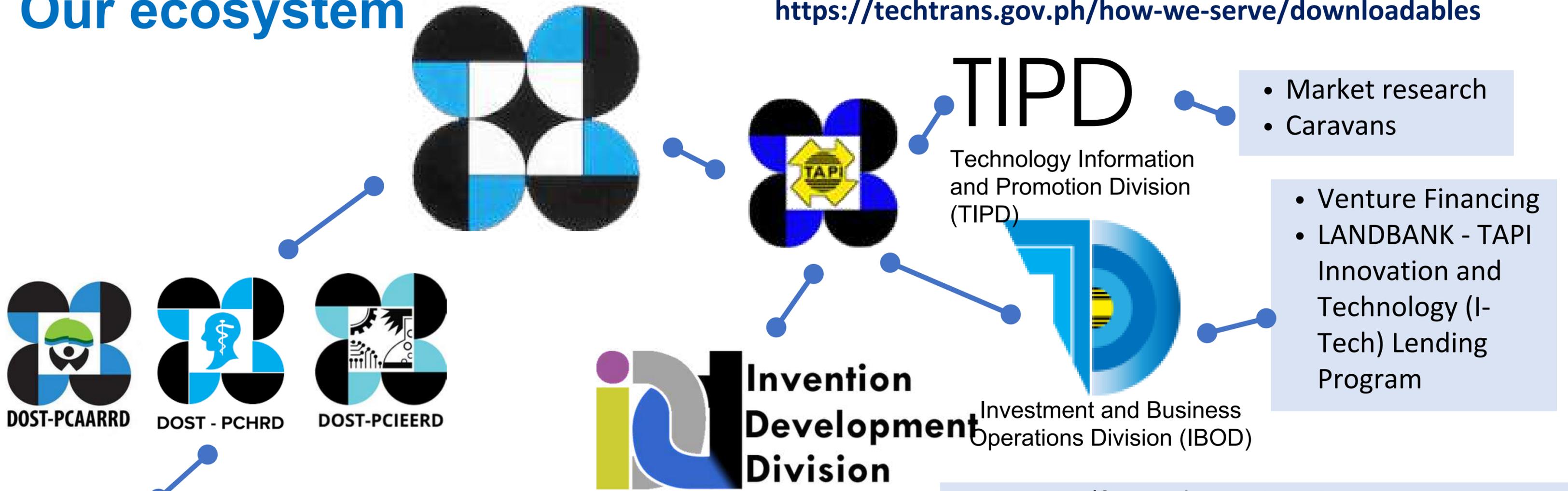
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# Structures



# Our ecosystem

<https://techtrans.gov.ph/how-we-serve/downloadables>

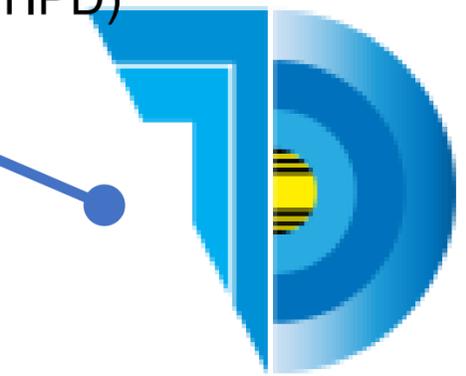


## TIPD

Technology Information and Promotion Division (TIPD)

- Market research
- Caravans

- Venture Financing
- LANDBANK - TAPI Innovation and Technology (I-Tech) Lending Program



Investment and Business Operations Division (IBOD)



- GALING (formerly Testing, Concept-Proto, IBID, IBED)
- Technology Innovation and Commercialization (TECHNiCOM)
- IPR and Expanded IPR Assistance Programs
- Invent School Program

<https://s4cp.dost.gov.ph/>



- Collaborative R&D to Leverage the Economy (CRADLE) Program
- Business Innovation through S&T (BIST) for Industry Program

Climate Resilient Growth and Sustainable Technology Development, Philippine Department of Science and Technology



# Structures



# DOST-TAPI Priority Areas 2026

1. Waste Security, and Water Resource and Waste Management
2. Medical/Health Technologies
3. Renewable Energy
4. Climate Resilience and Disaster Risk Reduction
5. Agriculture/Forestry
6. Chemical Technologies
7. Electronics Industry
8. Information and Communication Technologies
9. Construction Technologies
10. Manufacturing - Automotive assembly and EV supply chain
11. Supply Chain and Logistics Management

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# INNOVATION PATHWAY

**RESEARCH**  
IDEATION: Basic and Applied



**COMMERCIALIZATION**  
Full Commercial Deployment and  
Market Expansion

**STAGE OF  
TECH DEVELOPMENT**  
Late Stage R&D to  
Commercialization

## Pre-Commercialization:

- GALiNG Program
- TECHNiCOM Program

## Protection

- IP Rights Assistance Program (IPRAP)
- Expanded IPRAP

## Commercialization

- i-TECH Lending Program
- Expanded Venture Financing Program
- HIRANG 2.0 for Spin-offs

## Promotion and Marketing

- Marketing Assistance Program (MAP)
- National / Regional Invention Contest (NICE / RICE)
- SPICE Travel Assistance Program



“Towards  
Market Entry”

# Structures

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# Some PH technologies with CRI applications

## Concept Prototyping

2021-2024:

- 14/23 technologies
- P1.4M (US\$24K), or 64% of total funds

## IBED, IBID, Testing

2011-2022:

- 46 / 82 technologies
- P17.4M (US\$311K), or 40.89% of total funds



2020:

- Capacitated 7 R&D Institutes
- 12 valuation reports
- 12 signed term sheets



2024:

- 5 / 12 technologies
- Spinoffs as strict output (ongoing)

Ideation

Precommercialization

Commercialization

Market

## GALING

Grants and Assistance to Leverage Innovations for National Growth

2023-2024:

- 18 / 27 technologies
- P2.2M (US\$39K), or 68.98% of total funds



2011-2019:

- 33 / 60 technologies
- P144.9M (US\$2.69M), or 54.83% of total funds

2022-2024:

- 22 / 29 technologies
- P66.9M (US\$1.19M), or 76.49% of total funds

## Venture Financing

2015-2024:

- 25 / 74 technologies
- P30.3M (US\$541K), or 40.20% of total funds

## iTech

2018-2022:

- 3 / 7 technologies
- P19.3M (US\$35.4M), or 54.60% of total funds

# Structures

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# GATES Program

Geospatial Analytics and Technology Solutions

## Purpose

build a National Spatial Data Infrastructure (SDI) and enable smarter, data-driven governance

## Efforts

Key projects:

1. geospatial data discovery, cleansing, and standardization to create an AI-ready data architecture
2. core infrastructure, including a **Data Lakehouse** and the GATES user interface for advanced visualization
3. specific geospatial analytics interfaces, including decision-support tools and **AI chatbots** for agency-specific needs
4. policy alignment, sustainability, and ethical AI frameworks while managing capacity building and stakeholder training

# NAIS PH

National AI Strategy of the Philippines

utilize AI to boost economic competitiveness, improve governance, and enhance public services in agriculture, healthcare, and disaster resilience.

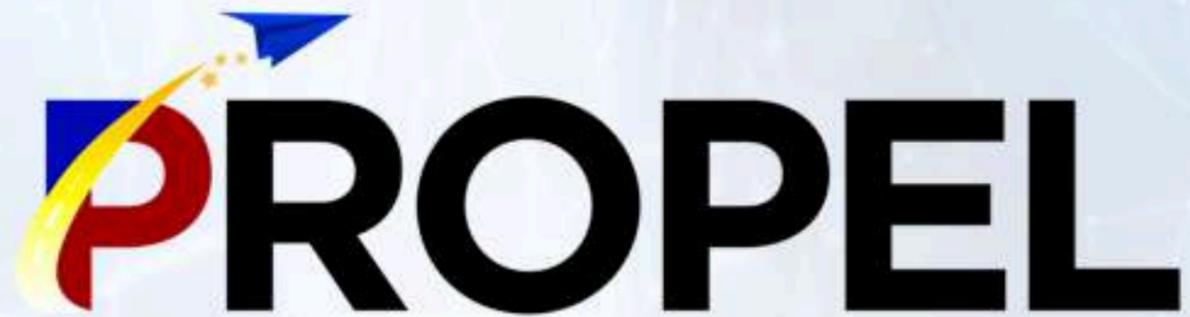
P2.3B (USD39.1M) funding  
113 projects

# Efforts

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The logo for PROPEL features a stylized 'P' in red and blue with a yellow swoosh, followed by the word 'PROPEL' in large, bold, black capital letters.

Accelerating Innovations in the Philippines, Propelling Innovations from the Philippines.



*Office of the Assistant Secretary for Technology Transfer, Communications, and Commercialization, DOST*

**Primary Role:**

Commercialization and market acceleration of Philippine innovations.

**Position in the Innovation Pipeline:**

Post-R&D to pre-market / market entry

**Core Focus:**

Moving validated technologies toward commercial readiness  
Business development, investor readiness, and industry linkage  
Integration of DOST services (IP, incubation, funding, promotion)

**Distinct Value Proposition:**

Transforms technologies into viable enterprises and products.

# Efforts

AI for Climate Action and Resilience:  
Philippine Experiences and Prospects





# PHITEST

Philippine Technology Evaluation and Standards for Testing

*Office of the Assistant Secretary for Technology Transfer, Communications, and Commercialization, DOST*

### Primary Role:

Technology validation, testing, and credibility assurance.

### Position in the Innovation Pipeline:

Late R&D to early commercialization (proof-of-performance stage)

### Core Focus:

- Scientific, technical, and functional validation
- Standardized testing protocols
- Alignment with national and international standards
- Strengthening HEI-based innovation credibility

### Distinct Value Proposition:

Transforms research outputs into trusted, evidence-based technologies

# Efforts

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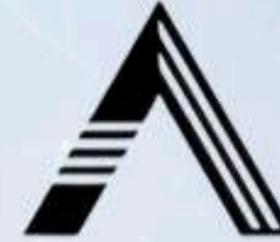
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Office of the Assistant  
Secretary for Technology  
Transfer,  
Communications, and  
Commercialization, DOST

# PROJECT ASCEND



## Primary Role:

System-level capacity building and institutional strengthening to enable innovation, sustainability, and inclusive development.

## Position in the Innovation Ecosystem:

Enabling environment / ecosystem and policy level

## Core Focus:

- Institutional capacity, governance, and human capital development
- Regional or national scaling
- Policy reform, financing mechanisms, and cross-country knowledge transfer
- Sustainability, inclusivity, and resilience

## Distinct Value Proposition:

Transforms institutions and systems to sustainably support innovation and development at scale.

# Efforts

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## Key Differences in Deliverables (Side-by-Side)

			
<b>Primary Output Type</b>	Commercialization-ready innovations	Validated and credible technologies	Strengthened institutions and systems
<b>Typical Deliverables</b>	Business models, pitch decks, licensing agreements, market entry plans	Validation reports, test data, compliance or credibility certifications	Policy frameworks, capacity-building programs, financing and implementation models
<b>Level of Intervention</b>	Firm / technology / startup level	Technology / HEI / R&D level	National, sectoral, or regional level
<b>Immediate Beneficiaries</b>	Innovators, startups, MSMEs	HEIs, researchers, technology developers	Governments, agencies, sectors, academe, communities
<b>Time Horizon</b>	Short- to medium-term market outcomes	Medium-term readiness and adoption	Medium- to long-term systemic impact

# Efforts

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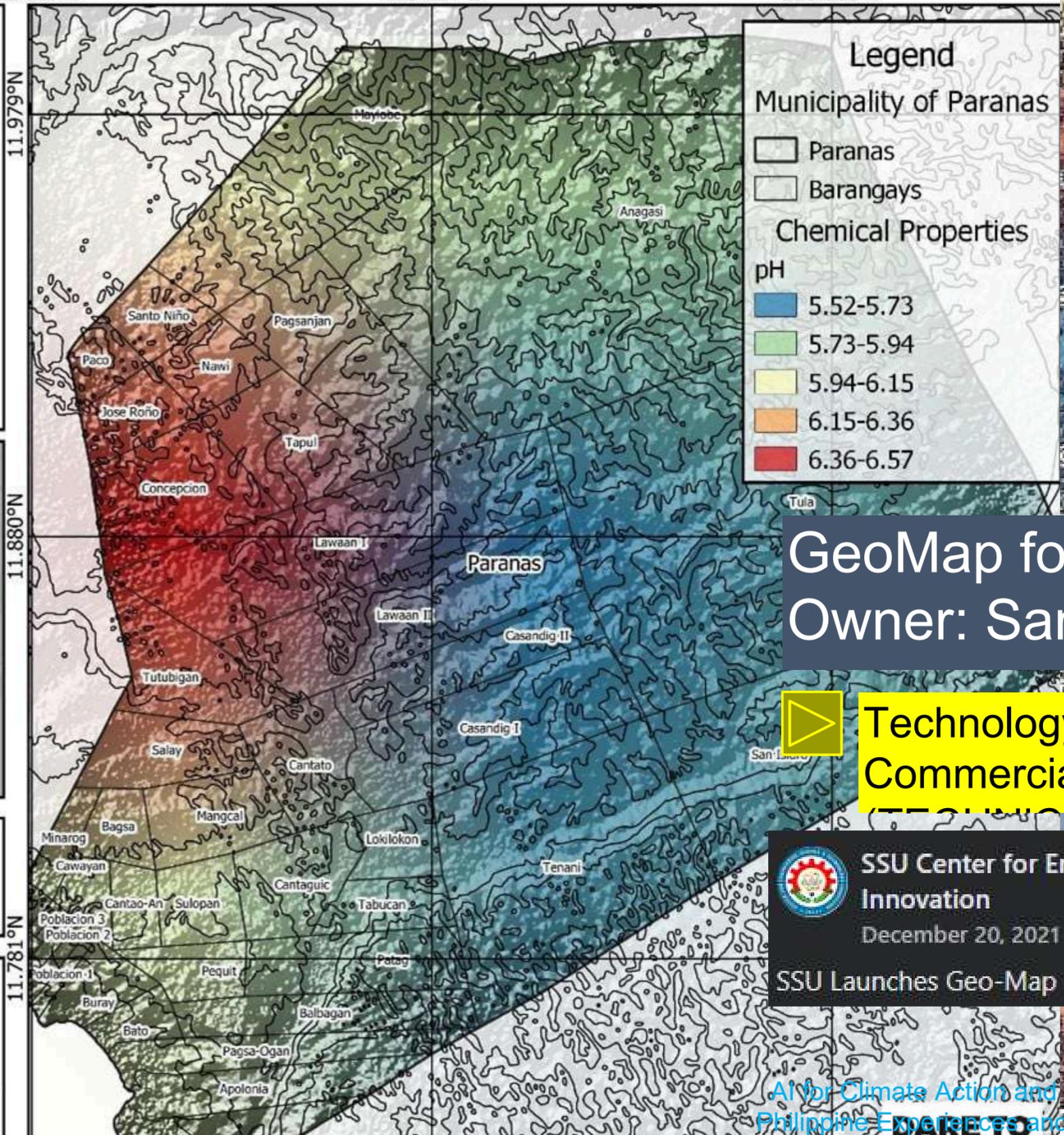


125.020°E 125.114°E 125.208°E



# SOIL PH MAP PROVINCE OF SAMAR MUNICIPALITY OF PARANAS

5 5 10 km



GeoMap for agri lands  
Owner: Samar State U

▶ Technology Innovation for Commercialization

Geographic Coordinate System: WGS 84  
Datum: WGS 84  
Prime Meridian: Greenwich  
Angular Unit: Degree

Developed by:  
**SAMAR STATE UNIVERSITY**  
Center for Engineering, Science and  
Technology Innovation  
Address: A. M. Linao Blvd, Brgy. G. Indapunan,  
Cebu City 6705 Samar  
Phone: (053) 123 39

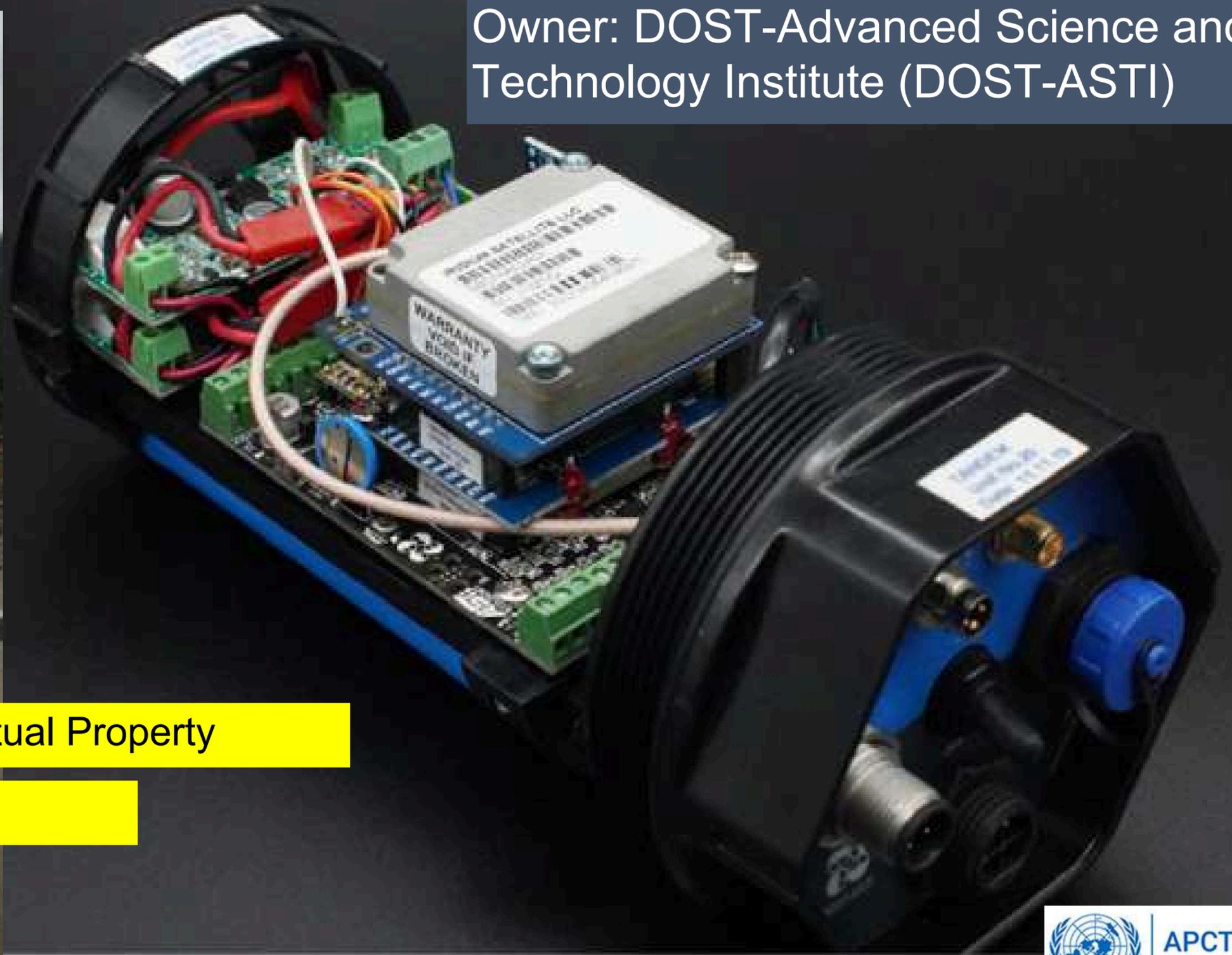
**SSU Center for Engineering, Science and Technology Innovation**  
December 20, 2021  
SSU Launches Geo-Map Samar Web App

# Products

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Advanced remote data acquisition (aRQ)  
Owner: DOST-Advanced Science and  
Technology Institute (DOST-ASTI)



- ▶ Intellectual Property
- ▶ IP Due
- ▶ Others

# Products

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# HIRAYA TECH. SOLUTIONS

An advanced pressure management system that uses AI analytics to reduce non-revenue water [Hiraya Intelligent Modular Optimization (HIMO)]

## SPICE Program

International Exhibition and Market Entry :

1. Consumer Electronics Show (CES) 2025
2. World Invent Singapore 2024

## Expanded Venture Financing

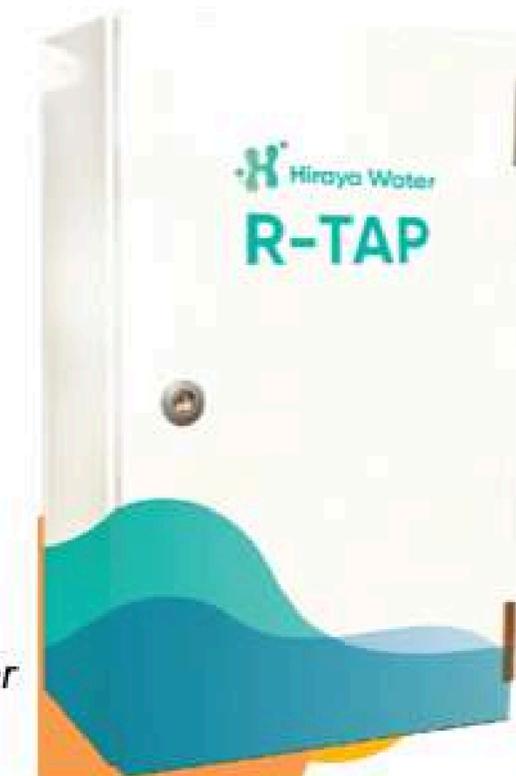
Local Market Entry and Expansion - tapping new markets for expansion

## TECHNiCOM Program

Scaling of Operation: Field and Market Testing to Different Water Service Providers in the Philippines

## GALING Program

IMPROVEMENT OF PROTOTYPE: Commercial prototyping of an invention



Investment leads in USA

On-going contracts with local water districts and service providers

Expansion plans to related industries

# Products

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for Transfer of Technology

 Search

*Advanced features of HazardHunterPH may now be accessed by partner organizations with GeoRiskPH accounts.*

Use Current Location

Use Coordinates

Go to Map View

HazardHunterPH is the country's one-stop shop for hazard assessment.

Find out if a location is prone to seismic, volcanic, or hydrometeorologic hazards. Generate hazard assessment reports.

See which critical facilities and areas in the Philippines are prone to different hazards.

All hazard information used for assessment has been generated by government agencies.

Know more about HazardHunterPH [here](#).

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# Products



**LOCATION TOOLS**

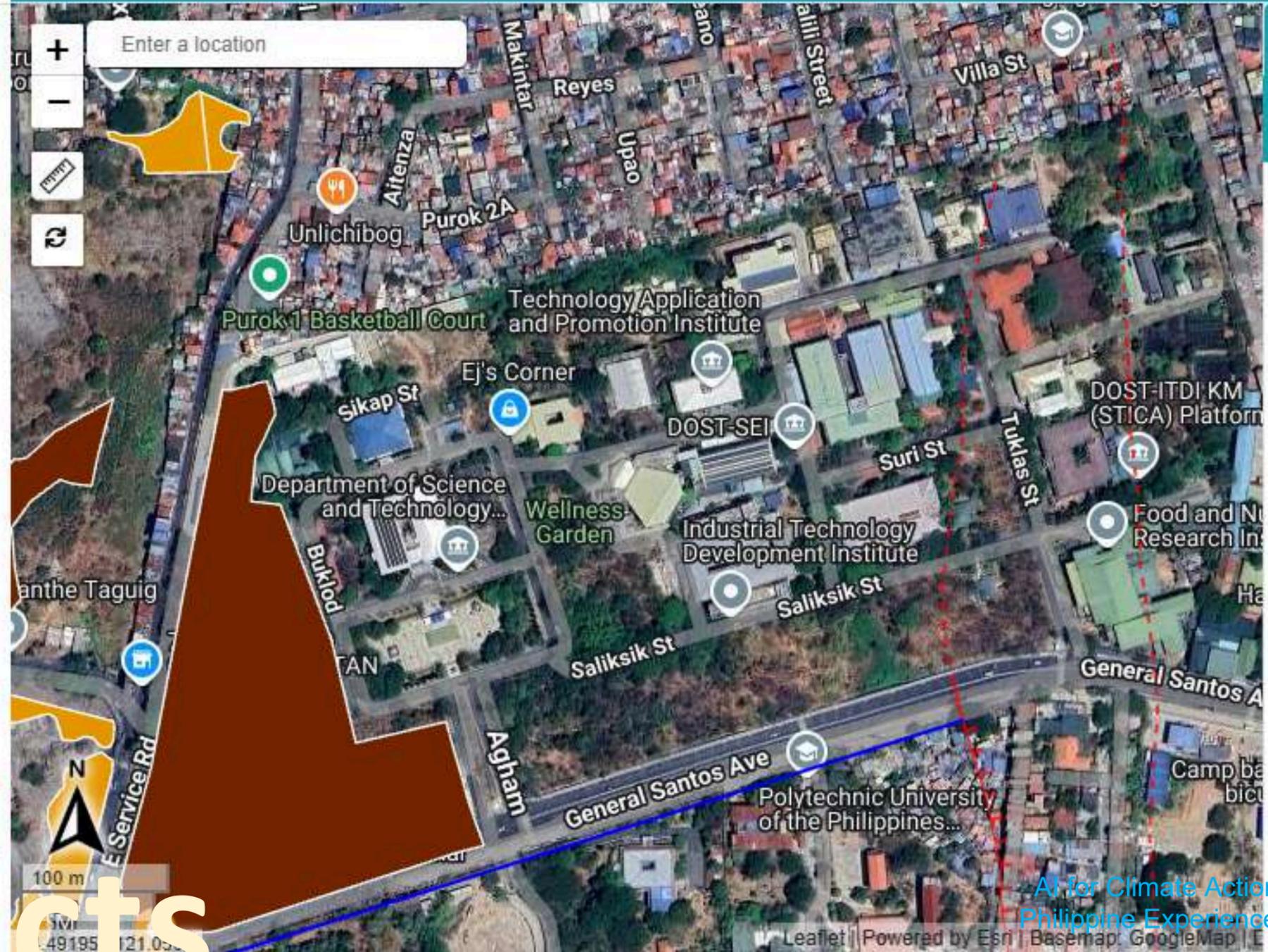
- Current Location
- Long-Lat Coordinates

**DISPLAY OPTIONS**

- Basemaps
- Hazards
- Exposure
- Coping Capacity
- Impact
- Advanced Layers
- Project LIGTAS

**MONITORING**

- Earthquake
- Volcano



**Assessment Results**

**SEISMIC HAZARD ASSESSMENT**

Nearest Active Fault	Approximately 567 m west of the Valley Fault System: West Valley Fault
Ground Rupture	Safe
Ground Shaking	Prone; Intensity VIII
Earthquake-Induced Landslide	Safe
Liquefaction	Safe
Tsunami	Safe

**VOLCANIC HAZARD ASSESSMENT**

Nearest Active Volcano	Approximately 53 km north of Taal
Nearest Potentially Active Volcano	Approximately 52.3 km east



Products






 DEPARTMENT OF SCIENCE AND TECHNOLOGY  

 BAGONG PILIPINAS

**2024 HANDA PILIPINAS:**  
 INNOVATIONS IN CLIMATE AND DISASTER RESILIENCE











## MASID TECHNOLOGIES

The ASTI-developed Technologies for Meteorological Data Acquisition Stations for Information Dissemination (MASID) consist of locally-developed weather monitoring and warning stations collectively known as PhilSensors. These PhilSensors were designed to automatically gather on-site weather data and alert communities during approaching disasters. Collected data are recorded near-to-real time on the PhilSensors website for public use.

Among these PhilSensors are the Automated Weather Station (AWS), Automated Rain Gauge (ARG), Water Level Monitoring Station (WLMS), Water Level and Rain Monitoring Station (WRMS, also known as Tandem), Agrometeorological Station (AGROMET), Flood Early Warning Station (FEWS), Community Tsunami Alerting Station (CTAS), and Meteorological Buoy Station (Metbuoy).


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# kò.òha



2024

## HANDA PILIPINAS:

INNOVATIONS IN CLIMATE AND DISASTER RESILIENCE



### KOOHA

Kooha is an Android application empowering users to collect real-time participatory photo and sensor data using smartphones and other mobile devices. Named after the Filipino word "kuha," meaning capture, this tool aims to foster public participation in data collection, thereby generating a wealth of real-time data for various applications. The gathered data can then be used to create new knowledge and yield actionable insights across multiple sectors, including environmental monitoring in Disaster Risk Reduction and Management (DRRM).



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# REDAS

RAPID EARTHQUAKE DAMAGE ASSESSMENTS SYSTEM

# PlanSmart

Ready to Rebuild



# VolcanoPH

## iNFO

## DYNASLOPE PROJECT

The Dynaslope Project is a research program focused on developing an early warning system for deep-seated and catastrophic landslides. Our goal is to contribute to the landslide resilience of Filipino communities.

We achieve this by building the capacities of our partner communities and local government units to develop and implement a people-centered early warning system.

## HazardHunterPH™

HAZARD ASSESSMENT AT YOUR FINGERTIPS

CHANGING THE GAME IN HAZARDS ASSESSMENT AND MONITORING

2024 **HANDA PILIPINAS:**  
INNOVATIONS IN CLIMATE AND DISASTER RESILIENCE

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AI for Climate Action and Resilience:  
Philippine Experiences and Prospects



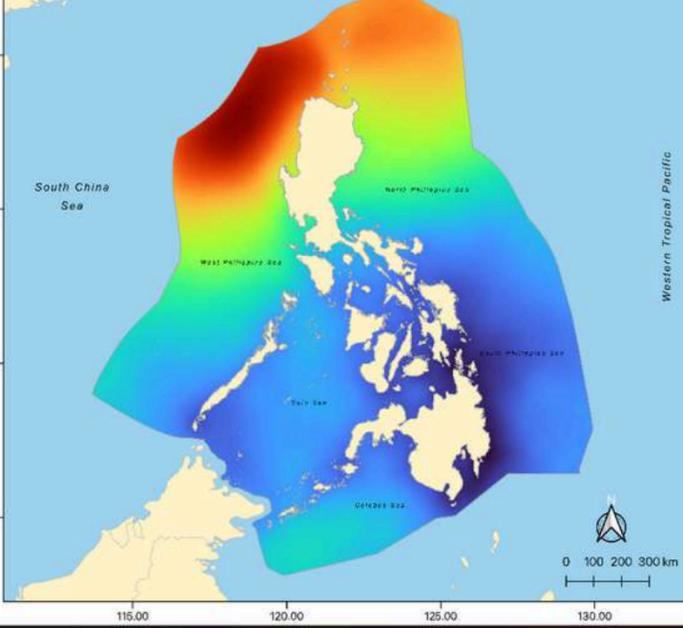
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# SatREx

A Tool for Monitoring Extreme Rainfall  
a web-based platform  
containing near-real-time  
information of  
extreme rainfall  
events



**Maximum intensity of Marine Heatwaves**  
1.27 °C 1.55 °C

**Explanation**  
Marine Heatwaves (MHWs) are persistent extreme warming events that could last for at least five days to months. One of the characterizing metrics of these events is maximum intensity which refers to the maximum temperature anomaly during an MHW. This map shows that MHWs occur in all parts of the Philippines with relatively higher values in the West Philippine Sea.

**Limitations**  
This analysis is based on the sea surface temperature anomalies that are more than the 90th percentile of the mean climatology from January 1, 1982 to December 31, 2011. Values were re-gridded to 0.01° x 0.01° through cubic spline interpolation.

**Data Source**  
This analysis used the daily Global Ocean OSTIA Sea Surface Temperature and Sea Ice Reprocessed dataset from the Copernicus Marine Service covering the period January 1, 1982 to December 31, 2021 with 0.05° x 0.05° spatial resolution.

Coordinate Reference System and Projection:  
WGS 84 UTM Zone 51N

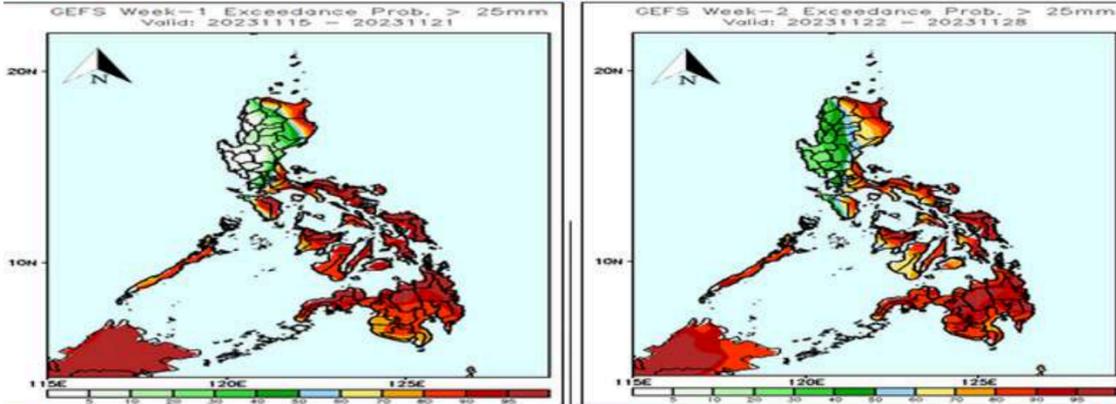
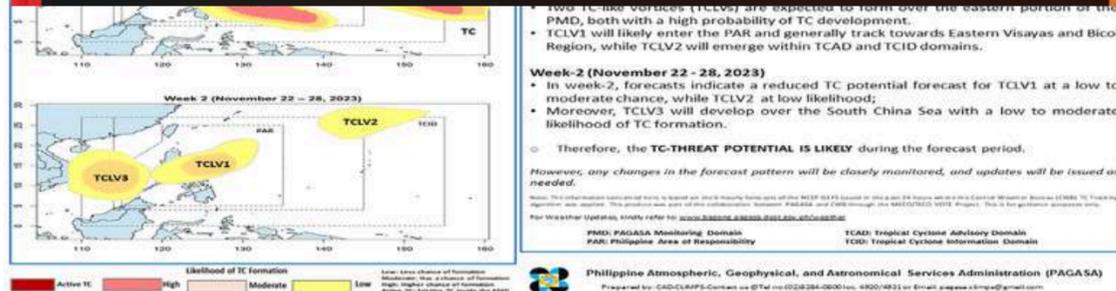
Project: Survey of Heatwaves in the Philippine Seas  
Implementing Agency: University of the Philippines Cebu  
Funding Agency: Department of Science and Technology

DEPARTMENT OF SCIENCE AND TECHNOLOGY  
BAGONG PILIPINAS

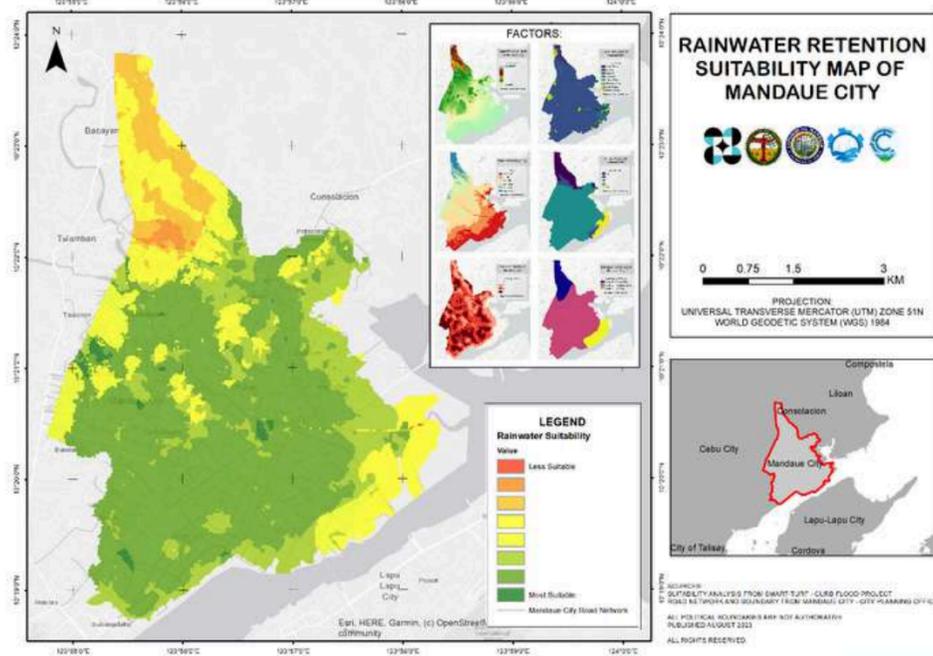
# 2024 HANDA PILIPINAS:

INNOVATIONS IN CLIMATE AND DISASTER RESILIENCE

## SATELLITE-BASED MONITORING OF RAINFALL EXTREME



## Survey of Heatwaves in the Philippine Seas (SHIPS)



**What is Impact-Based Forecasting?**  
Impact-Forecasting (IBF) warnings provide detailed information on how hazards may impact warning recipients. Progressing from weather forecasts and warnings to multi-hazard impact-based forecasts and warning services represents a paradigm shift in service delivery for many meteorological agencies.

**THE PARADIGM SHIFT**  
From: WHAT THE WEATHER WILL BE  
To: WHAT THE WEATHER WILL DO

**WHY DO WE WANT TO DO IBF?**  
The IBF consists of a description of the weather event, its intensity, and the potential impacts on the population and infrastructure.

**SAMPLE IBF WARNING ISSUANCE**

**BUILDING PARTNERSHIPS AND COLLABORATION**  
Partnerships & collaboration are critical for the IBF System to function. Agencies need to work in partnership with other government agencies and stakeholders such as emergency response, mapping agencies, transport, public, etc. Data sharing among different agencies and departments is vital. Partners should work hand-in-hand towards effective, sustained, and successful IBF operation.

**GREEN** No Severe Weather Expected.  
**YELLOW** Be aware. There is a moderate risk of severe or low risk of extreme weather occurring. Remain Alert and ensure you access the latest weather forecast.  
**ORANGE** Be prepared. There is a high risk of severe or a moderate risk of extreme weather occurring. Remain vigilant and ensure you access the latest weather forecasts. Take precautions where possible.  
**RED** Take action. There is a high risk of an extreme weather event occurring. Remain extra vigilant and ensure you access the latest weather forecast. Follow orders and any advice given by authorities under all circumstances and be prepared for extraordinary measures.

**KEY TERMS IN IMPACT-BASED FORECASTING**

**COMMUNICATION & DISSEMINATION**

**Weather and Climate Science for Service Partnership for South-East Asia (WCSSP - SEA)**  
"Building a safer community to weather and climate variability through science and variability."

## IMPACT-BASED FORECASTING (AND EARLY WARNING SYSTEM)

## S2S FORECAST

# Products

## SMART-TUrf Program City-Wide Urban Flood Modeling (CURB Flood) Project

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**Historical** | CMIP5 | CMIP6

Temperature  
Mean  
Minimum  
Maximum  
Rainfall  
Mean  
Extremes

10yrs Return Period  
20yrs Return Period  
50yrs Return Period  
100yrs Return Period

Months  
Jan Feb Mar  
Apr May Jun  
Jul Aug Sep  
Oct Nov Dec

Compare

**Baganga**  
Province: Davao Oriental  
Region: Davao Region  
Municipality: Baganga  
Value: 25.5°C  
Latitude: 7.665638  
Longitude: 126.477356

Downloadables:  
 Davao Region Regional Map (.png)  
 Davao Oriental Provincial Map (.png)  
 Baganga Municipality Map (.png)  
 Historical File (.csv)  
 Baganga Municipality GIF (.gif)  
 Raw Files for Adv. Users (.nc)  
 Download

**Region XI Annual Average**  
 1991-2020 Maximum Temperature (°C)  
 1991-2020 Mean Temperature (°C)

**Davao Oriental Annual Average**  
 1991-2020 Maximum Temperature (°C)  
 1991-2020 Minimum Temperature (°C)  
 1991-2020 Mean Temperature (°C)  
 2001-2020 Rainfall (mm)

**Baganga, Davao Oriental Annual Average**  
 1991-2020 Maximum Temperature (°C)  
 1991-2020 Minimum Temperature (°C)  
 1991-2020 Mean Temperature (°C)  
 2001-2020 Rainfall (mm)

## CliMap v2.0

CliMap, or the Climate Information Map is an online platform featuring an interactive map where users can explore and download the available climate data over the desired area anywhere in the Philippines. Clicking on any point on the map will reveal historical and projected changes in climate information of its municipality, province, and region.

This platform allows users to download maps of the annual average variables, historical monthly mean in a spreadsheet file, and monthly time series plots in the regional, provincial, or municipality-level from the historical data. The CMIP6-based Climate Information Risk Analysis Matrix (or CLIRAM) can also be downloaded from the climate projection data.

CliMap will primarily serve the public in providing the high-resolution observation-based gridded dataset of surface climate variables.

# Products

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**2024 HANDA PILIPINAS:**  
INNOVATIONS IN CLIMATE AND DISASTER RESILIENCE

Icons: Wi-Fi, Gear, Satellite, Group, Lightbulb, Smartphone, AI, Rocket, Virus

## LIGHTNING DETECTION SYSTEM

DOST-PAGASA introduces the new Lightning Alert System for operational use at the Ninoy Aquino International Airport to ensure the safety of airport crew and passengers, as well as aircraft and other facilities.

It monitors threatening lightning strikes from a reference point using state-of-the-art equipment to monitor any lightning activity within the aerodrome and issue corresponding lightning alert or Red alert.

The system sends critical information to NAIA Management and Airport operations unit to aid their decision-making whether to continue monitoring or halt airport operations during thunderstorm activities to ensure the safety of ground personnel and airline passengers.

# Products

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ESCAP

Invention  
Development  
Division

# Our one-stop shop: DOST's Techhub portal

techub.dost.gov.ph

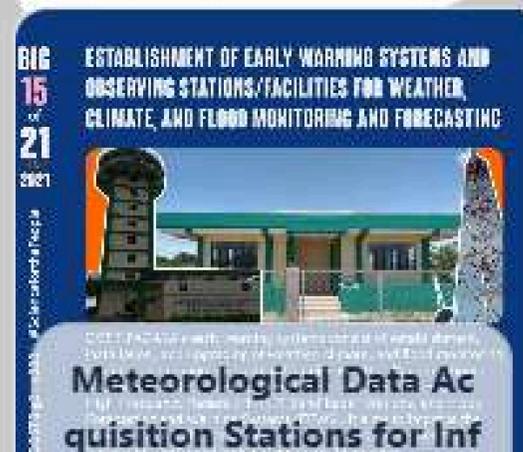
## Latest Added Technologies

[View More](#)



## List of Technologies Produced

[View More](#)

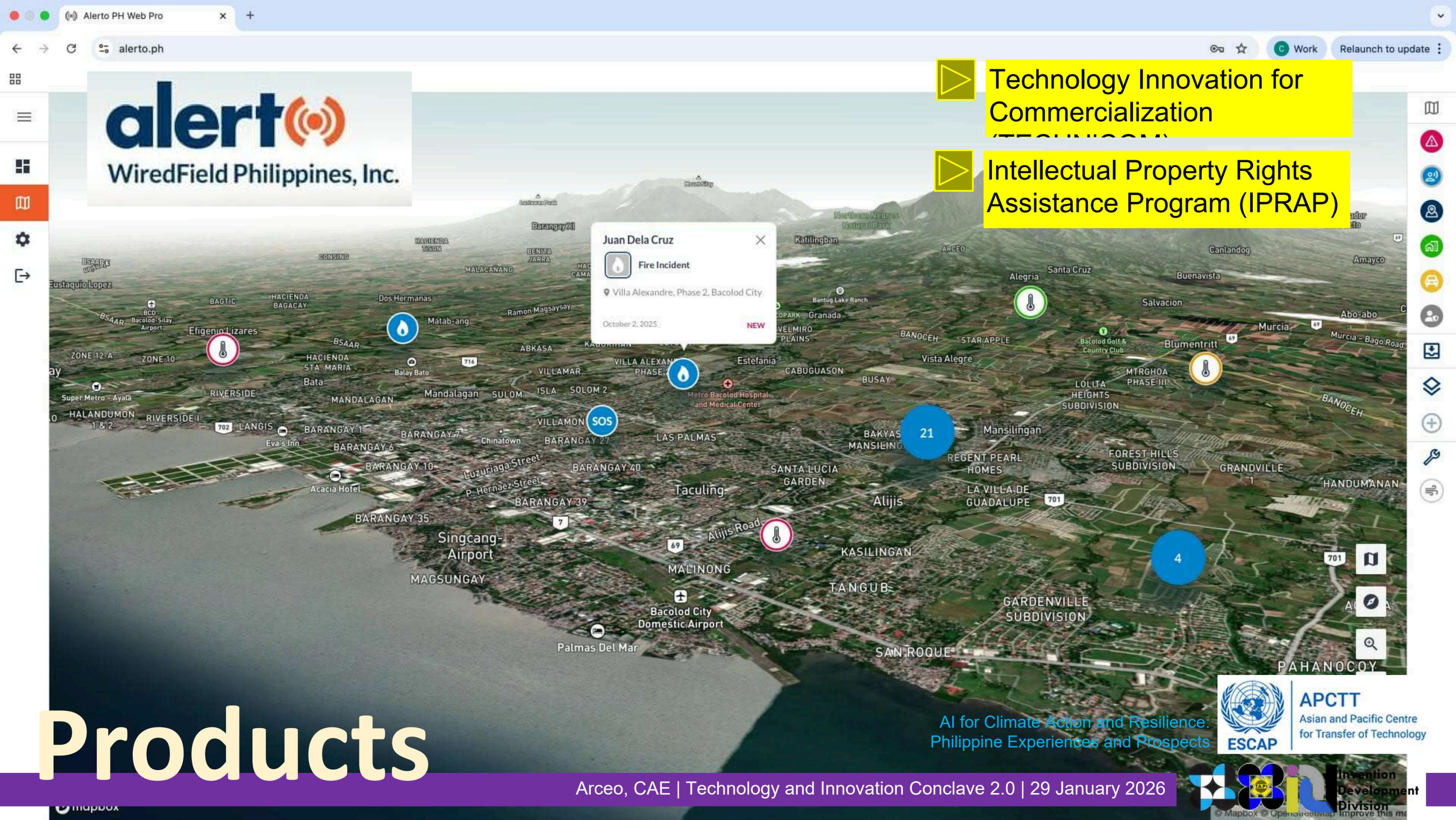


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**alerto**  
WiredField Philippines, Inc.

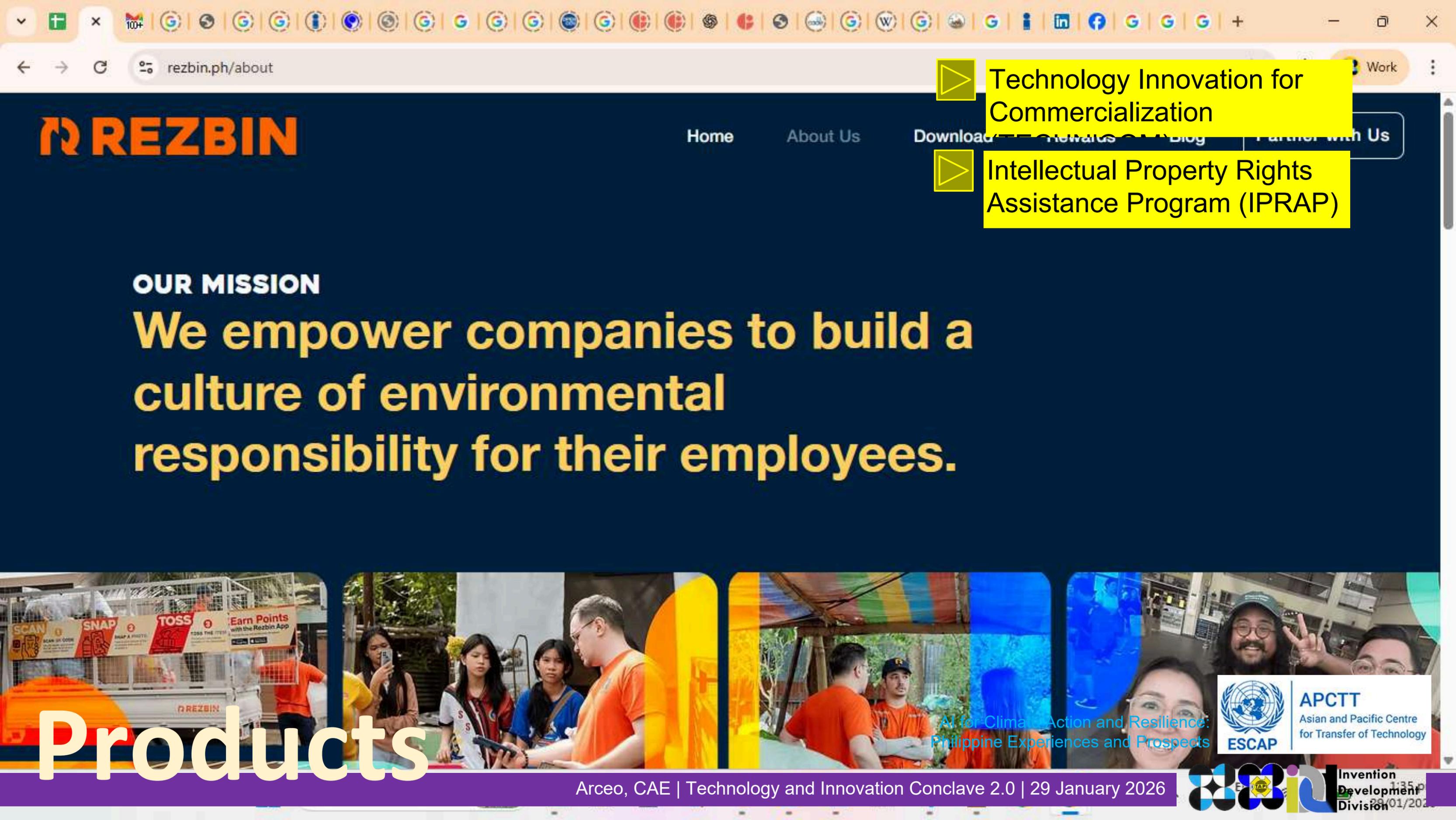
▶ Technology Innovation for Commercialization (TECHNOCOM)

▶ Intellectual Property Rights Assistance Program (IPRAP)

# Products

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▶ Technology Innovation for Commercialization  
▶ Intellectual Property Rights Assistance Program (IPRAP)

**OUR MISSION**

**We empower companies to build a culture of environmental responsibility for their employees.**

**Products**



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# To the beyond...

Slow but still (sort of) at par with our neighbors.

Socio-political aspects.

Procurement process (for government).

PH Technology Transfer Act.

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## AI for Climate Action and Resilience: Philippine Experiences and Prospects

**Caezar Angelito E. Arceo**

Technology Application and Promotion Institute (TAPI)  
Department of Science and Technology (DOST)  
[info@tapi.dost.gov.ph](mailto:info@tapi.dost.gov.ph) | [www.tapi.dost.gov.ph](http://www.tapi.dost.gov.ph)

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Atty. Marion Ivy D. Decena Dr. Preeti Soni  
Assistant Secretary Napoleon K. Engr. Pankaj Kumar  
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Dr. Noel A. Catibog Ms. Raquel M. Sangalang  
Mr. Romeo M. Javate Mr. Randy A. Sales  
Mr. Mark Anthony C. Bigayan Atty.. Marvin Eric D. Dela  
Ms. Rodelia R. Padilla Cruz  
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Mr. Mark Angelo B. Lasala Engr. Theda Mae Salvania-  
Ms. Tricia Marie S. Pacer Dumali  
Ms. Mirielle V. Vacal Mr. Rodel R. Oracion  
Mr. Roberto R. Verzosa Ms. Maria Irene S. Amatorio  
Engr Josa C. Elegado Engr. Wilfredo O. Calaguan  
Engr. Mark Anthony Ferrer Engr. Rhoalyn dela Rosa  
Engr. Jayson B. Nuval Mr. Romel Neri  
Engr. Wilfredo O. Calaguan

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Ministry of Earth Sciences, Prithvi Bhavan, Lodi  
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