

# Putting SDG 13 in the Spotlight

## Climate Resilience and Fostering Innovation in the Asia-Pacific

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**APCTT**

Asian and Pacific Centre  
for Transfer of Technology

**International Conference on the Commercialization of  
Intellectual Property Assets**

14-17 July 2025, Manila, Philippines

# Outline

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Evolving context in Asia Pacific: Progress on SDGs, particularly SDG 13

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Role of Innovations and emerging technologies for driving progress

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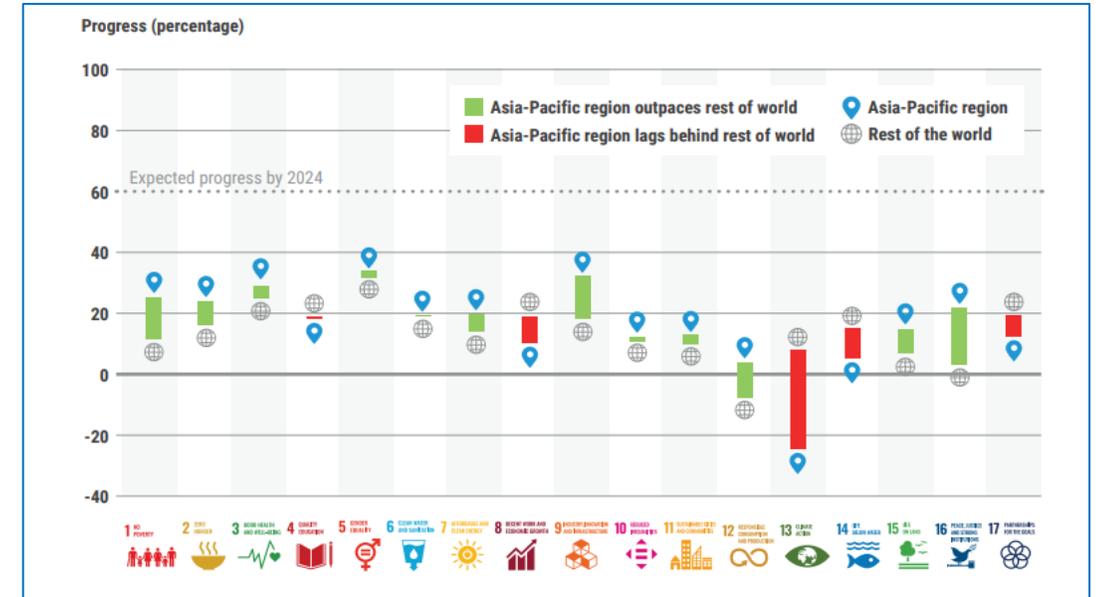
Enabler of innovation - regional cooperation

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APCTT – A regional technology cooperation platform

# 1. Evolving Context in the Asia-Pacific – SDGs Progress

- **Asia- Pacific holds a pivotal role in sustainable development**
  - Progress on SDGs is **significant**; but **uneven & slow**
- **Overall progress on the 17 SDGs is off track**
  - **Only 16 of 117** measurable targets (**14%**) are on track.
  - 83 targets (71%) require accelerated progress.
  - Progress on 18 targets (15%) has regressed (majority are related to climate & disaster risk)
  - SDGs 3 & 9 made the greatest progress. SDG 13 is regressing
- **At current pace, the region will not achieve SDGs until 2065**

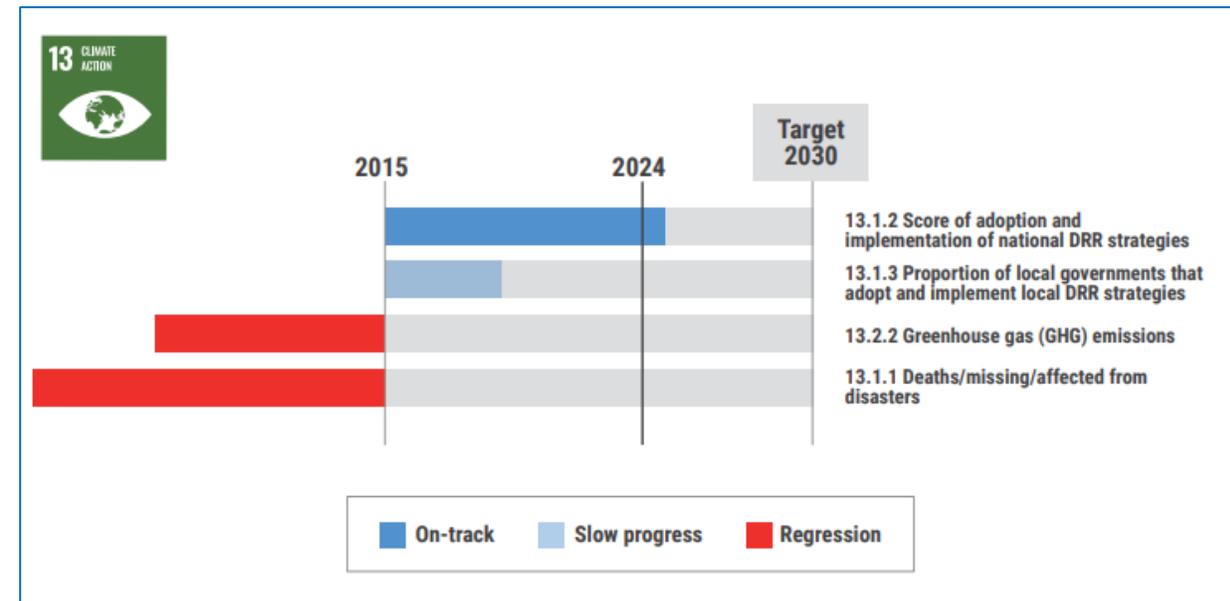


Progress of SDGs in Asia Pacific compared to rest of the world (Asia And Pacific SDG Progress Review, 2025)

Outperforms rest of the world on SDGs 1, 2, 9 but lags Goals 8, 13, 14 & 17

## 2. Progress on SDG 13 (Climate Action) in the Asia-Pacific

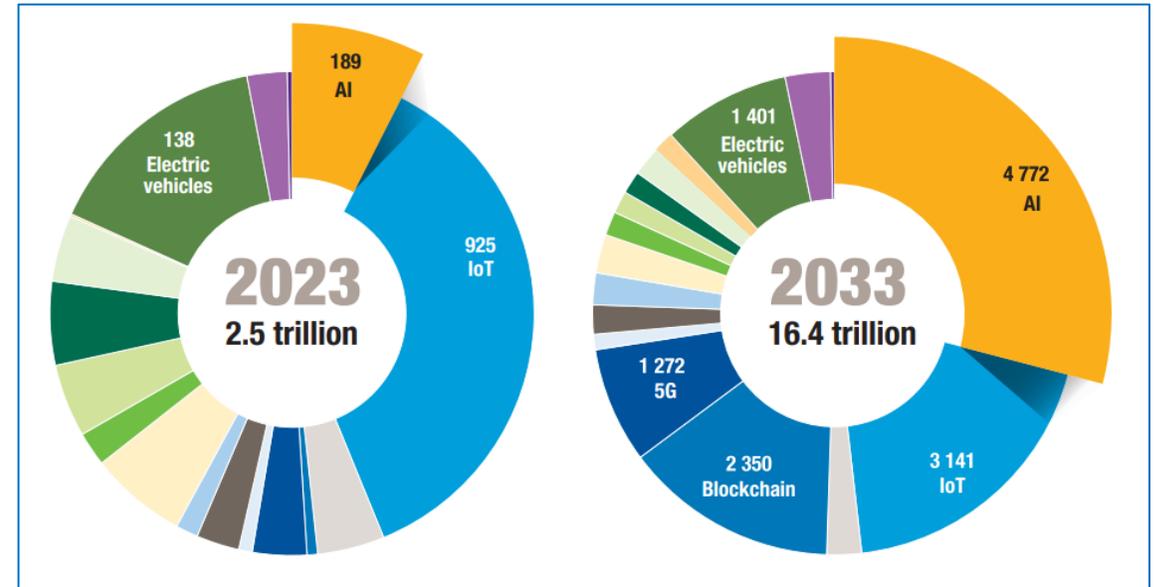
- Progress is regressing, driven by region's vulnerability to disasters & GHG emissions
  - Presents a **mixed picture of progress**
  - Some progress under NDCs, and in **adoption & implementation of national & local DRR strategies**
  - Number of **people's lives impacted by disasters** is significantly increasing
  - **GHG emissions** continue to rise, contributing to overall regression on climate action
- Current efforts are **insufficient to mitigate** the severe impacts of climate change



Progress on Goal 13 (Asia And Pacific SDG Progress Report, 2025, ESCAP)

### 3. Evolving Context in the Asia-Pacific – SDGs Progress and Technologies

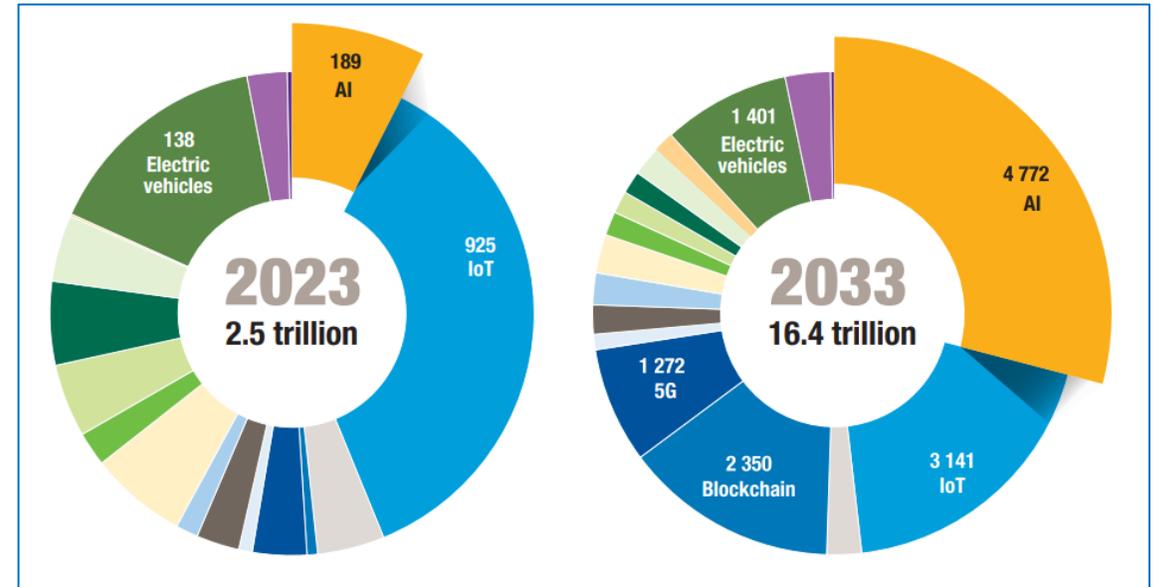
- Innovation and technology are vital for sustainable development**
  - 70% of SDG targets can be enabled by existing 4IR technologies (WEF).
  - Technology can reduce cost of achieving SDGs by >USD 55 trillion, enabling 103 of 169 SDG targets (2023 Report)
- Technology market is expanding; so is technology gap:** Frontier technologies represented a \$2.5 trillion market in 2023 and are estimated to increase sixfold in the next decade, reaching \$16.4 trillion by 2033 (UNCTAD).
- Asia-Pacific economies are among innovation leaders.** Many among top 50 in GII 2024 rankings (WIPO). Some countries perform better due to R&D & industry capacity => need to enhanced innovation ecosystems



Rapid expansion of Frontier Technologies (Technology and Innovation Report 2025, UNCTAD)

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## 4. Role of Innovations in driving progress for climate action and resilience



### Improved energy efficiency, reduce emissions, enhance reliability, optimize costs

- IoT enabled smart energy systems; Intelligent motors; 5G wireless systems networks; Cloud-based control centres; Smart sensors to improve efficiency of post-combustion carbon capture



### Enablers of climate resilience

- Machine learning for accurate rainfall and climatic projections; Drone-based solutions for sustainable agriculture; IoT applications to manage traffic pollution

# 5. Climate innovation, technologies and science support multiple SDGs



Climate, weather and water sciences can together support multiple SDGs. (source: WMO 2024)

*Science is central. It is widely understood that weather, climate, and water-related sciences provide the underpinnings for climate action. These sciences can supercharge progress on the SDGs across the board” (UNSG)*

*“Groundbreaking scientific and technological advances, such as high-resolution climate modelling, artificial intelligence and nowcasting, can catalyze transformation to achieve the SDGs. And achieving Early Warnings for All by 2027 will not only save lives and livelihoods but also help safeguard sustainable development,” (WMO)*

## 6. Enablers of innovation and cross-border technology transfer

**‘Regional cooperation’ is critical for scaling up actions to leverage innovation and promote adoption and transfer of technologies to achieve sustainable development.**

### **Key enablers**

- Enabling policy frameworks
- Harmonization of IP ecosystems
- Capacity-building, knowledge-sharing
- Institutional linkages & networks
- Finance and investments
- Cross-border collaboration for innovation, technology transfer, commercialization
- South-South and triangular cooperation
- Start Up Ecosystems and R&D collaboration

### **Additional considerations**

- Gender equality
- Building the capacity of youth

## 7. Role of regional cooperation

### Actions needed

- Planning well-formulated strategy for increased usage of innovative technologies
- Promoting policy discussion and technical cooperation in net zero goals and low carbon action and resilience
- Strengthening institutional and digital infrastructure
- Strengthening R&D, innovation and demonstration
- Augmenting financing for the scaling up of innovations and commercialization
- Supporting workforce through capacity-building, training, exchange programmes
- Establishing multi-stakeholder partnerships and collaborations

# APCTT – Our mandate

## Strengthen capabilities of member States to

- Develop and manage national innovation systems
- Develop, transfer, adapt and apply technologies
- Improve the terms of transfer of technologies
- Identify and promote the development and transfer of technologies relevant to the region

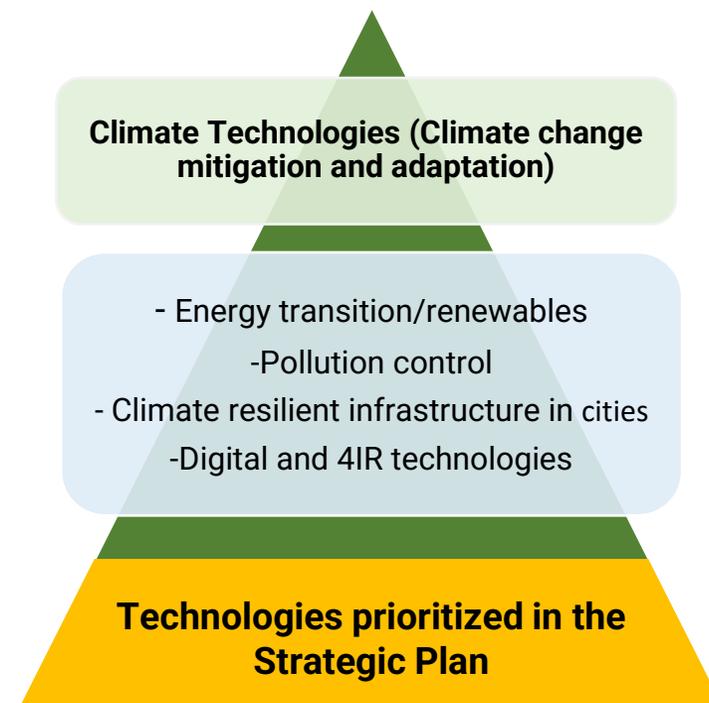
## Strengthen regional technology cooperation and transfer

» Support achievement of SDGs with particular focus on SDGs 7, 9, 11, 12, 13 and 17



# Strategic Plan (2023-27)

Enhanced cooperation for adoption, diffusion and transfer of innovative and emerging technologies in the Asia Pacific region for addressing climate change and achieving sustainable development goals



» Support achievement of SDGs with particular focus on SDGs 7, 9, 11, 12, 13 and 17

# Modalities/service lines

## Policy & analytical support

Enhanced capabilities to adopt innovative technologies for city air pollution control in select countries of the Asia-Pacific

- **Donor:** Korea-ESCAP Cooperation Fund
- 2022 to 2023
- **Target cities:** Bangkok, Dhaka, Gurugram

**Objective:** Strengthened policies to facilitate adoption of innovative technologies for controlling air pollution in the Asia-Pacific

Evidence-based innovation policy for implementation of 2030 Agenda :

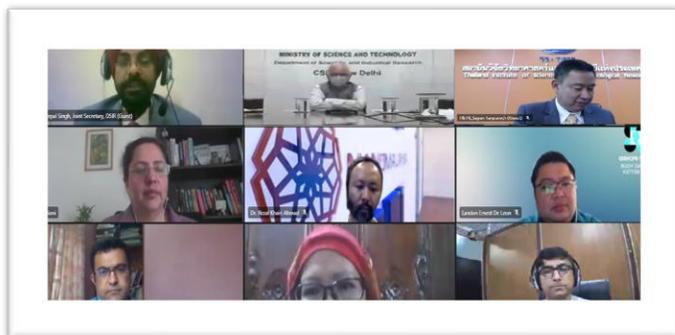
- Supported development of **technology database** for small industries in Bhutan
- Developed roadmap for creating an online database of **inclusive innovations & technologies**



## Capacity building



## Technology facilitation & partnerships



Technology Facilitation Consultative Meeting to address the Challenges of COVID-19 Pandemic, 23 August 2021, India

### Technology Databases

#### Technology4SME

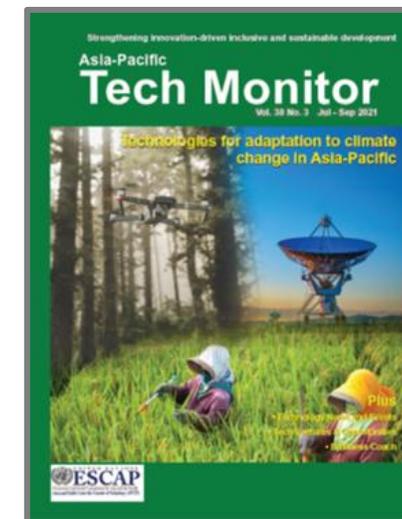
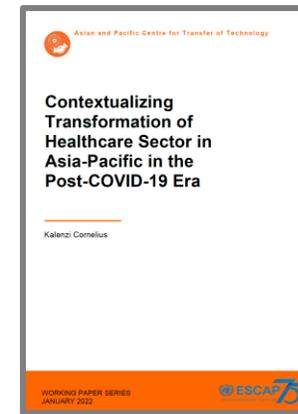
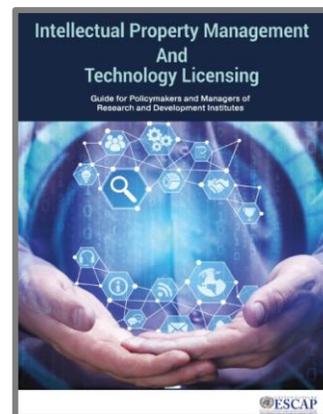
- The Database serves as an online platform for information exchange on the availability and sourcing of technologies for small and medium sized enterprises in countries in the Asia Pacific region.
- The Database provides information on the technologies available for transfer (*technology offers*), technologies needed (*technology requests*) as well as the opportunities for business cooperation (*Joint venture and Partnerships*).
- The use of Technology4SME database is free of cost.
- If you are interested to submit Technology Office, Technology Request or Joint Venture and Partnerships, please register (new users) and login (existing users).

Login Register

#### Renewable Energy Technology Bank (RET-Bank)

The primary objective of the Renewable Energy Cooperation-Network for the Asia Pacific (RECAP) established by APCTT is to facilitate technology transfer cooperation among countries in the Asia-Pacific region in the area of renewable energy. Towards this end, APCTT has developed a "Renewable Energy Technology Bank (RET-Bank)" of tested and proven renewable energy technologies (RETs) initially in the areas of solar, biomass, wind, mini-hydro power and geo-thermal energy. APCTT has developed this Renewable Energy Technology Bank as on-line technology database freely available for public access through its RECAP website.

## Knowledge management

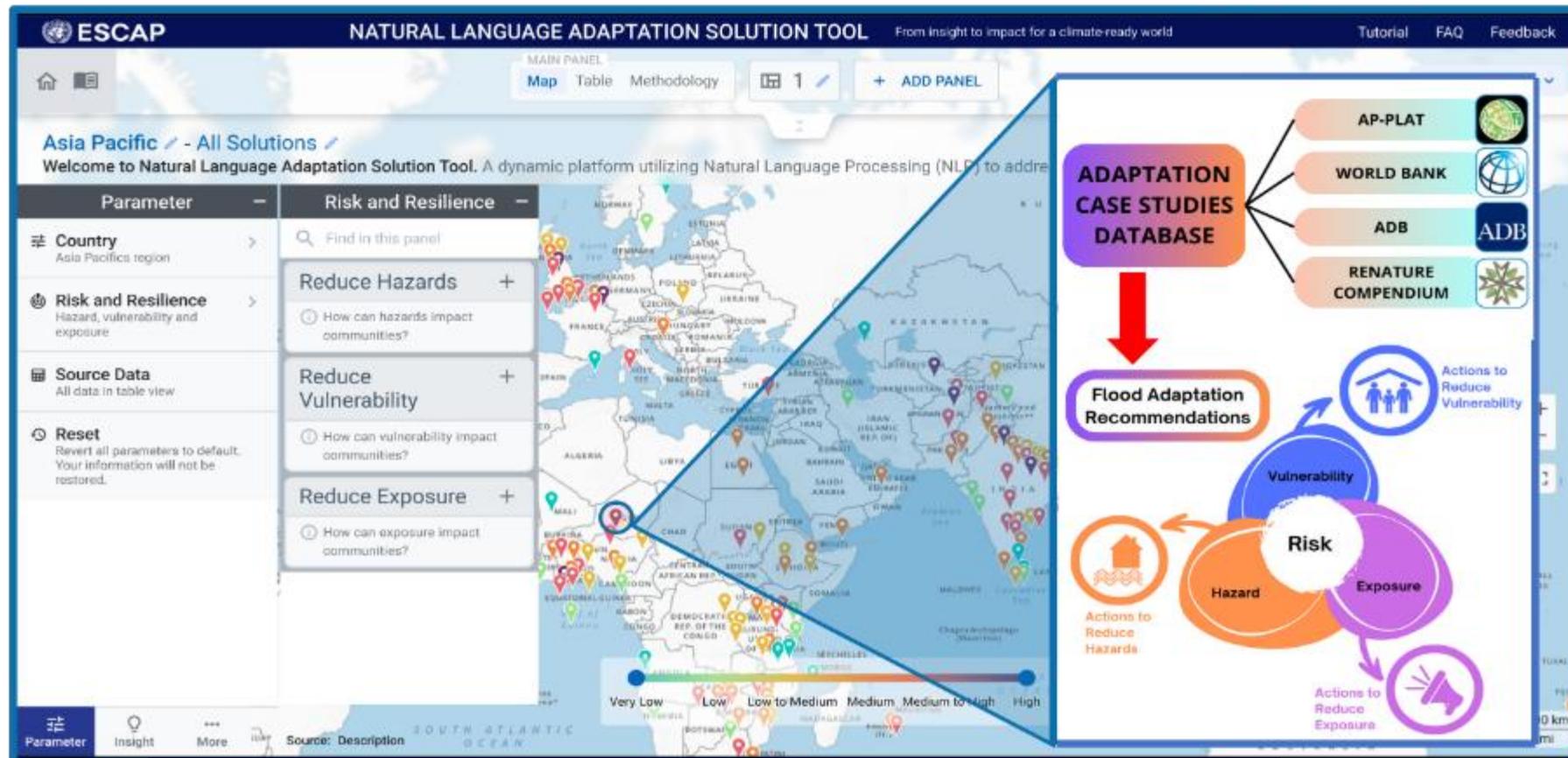


## Tool 2: ClimaWise: AI-Powered Exposure Reduction and Adaptation Planning

ClimaWise leverages CDRI Data(to generate risk profile) and AI to provide critical insights for reducing exposure to hazards and guiding disaster preparedness strategies.

### Map of Adaptation Solutions Database

Explore, learn, and adapt from proven adaptation solutions.

**ESCAP** NATURAL LANGUAGE ADAPTATION SOLUTION TOOL From insight to impact for a climate-ready world Tutorial FAQ Feedback

MAIN PANEL  
 Map Table Methodology 1 + ADD PANEL

Asia Pacific - All Solutions  
 Welcome to Natural Language Adaptation Solution Tool. A dynamic platform utilizing Natural Language Processing (NLP) to address

Parameter	Risk and Resilience
Country Asia Pacific region	Find in this panel
Risk and Resilience Hazard, vulnerability and exposure	Reduce Hazards + How can hazards impact communities?
Source Data All data in table view	Reduce Vulnerability + How can vulnerability impact communities?
Reset Revert all parameters to default. Your information will not be restored.	Reduce Exposure + How can exposure impact communities?

Very Low Low Low to Medium Medium Medium to High High

**ADAPTATION CASE STUDIES DATABASE**

- AP-PLAT
- WORLD BANK
- ADB
- RENATURE COMPENDIUM

**Flood Adaptation Recommendations**

**Risk**

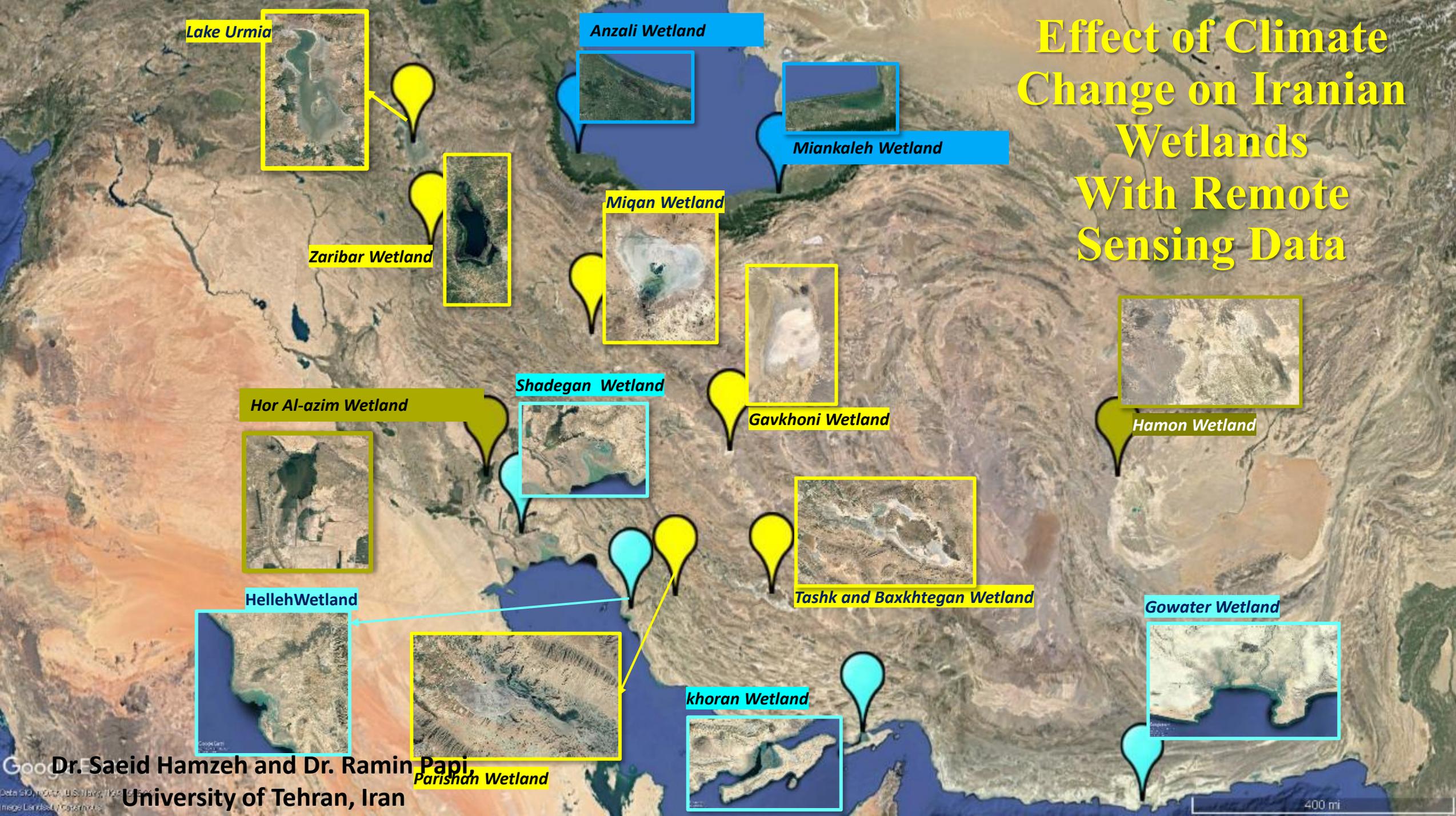
- Hazard
- Exposure
- Vulnerability

Actions to Reduce Hazards

Actions to Reduce Exposure

Actions to Reduce Vulnerability

# Effect of Climate Change on Iranian Wetlands With Remote Sensing Data



Lake Urmia

Anzali Wetland

Miankaleh Wetland

Zaribar Wetland

Miqan Wetland

Shadegan Wetland

Gavkhoni Wetland

Hamon Wetland

Hor Al-azim Wetland

Helleh Wetland

Tashk and Baxkhtegan Wetland

Gowater Wetland

khoran Wetland

Parishan Wetland



# Innovative Technologies for Developing Climate-Resilient Infrastructure in Uzbekistan

## Innovations in the Construction Sector

**Sustainable Materials:**  
Eco-friendly concrete,  
recycled materials,  
and thermal insulation  
panels

**Energy Efficiency:**  
Reducing energy use  
and costs through  
better insulation and  
smart designs

**Resilient  
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kō.ōha



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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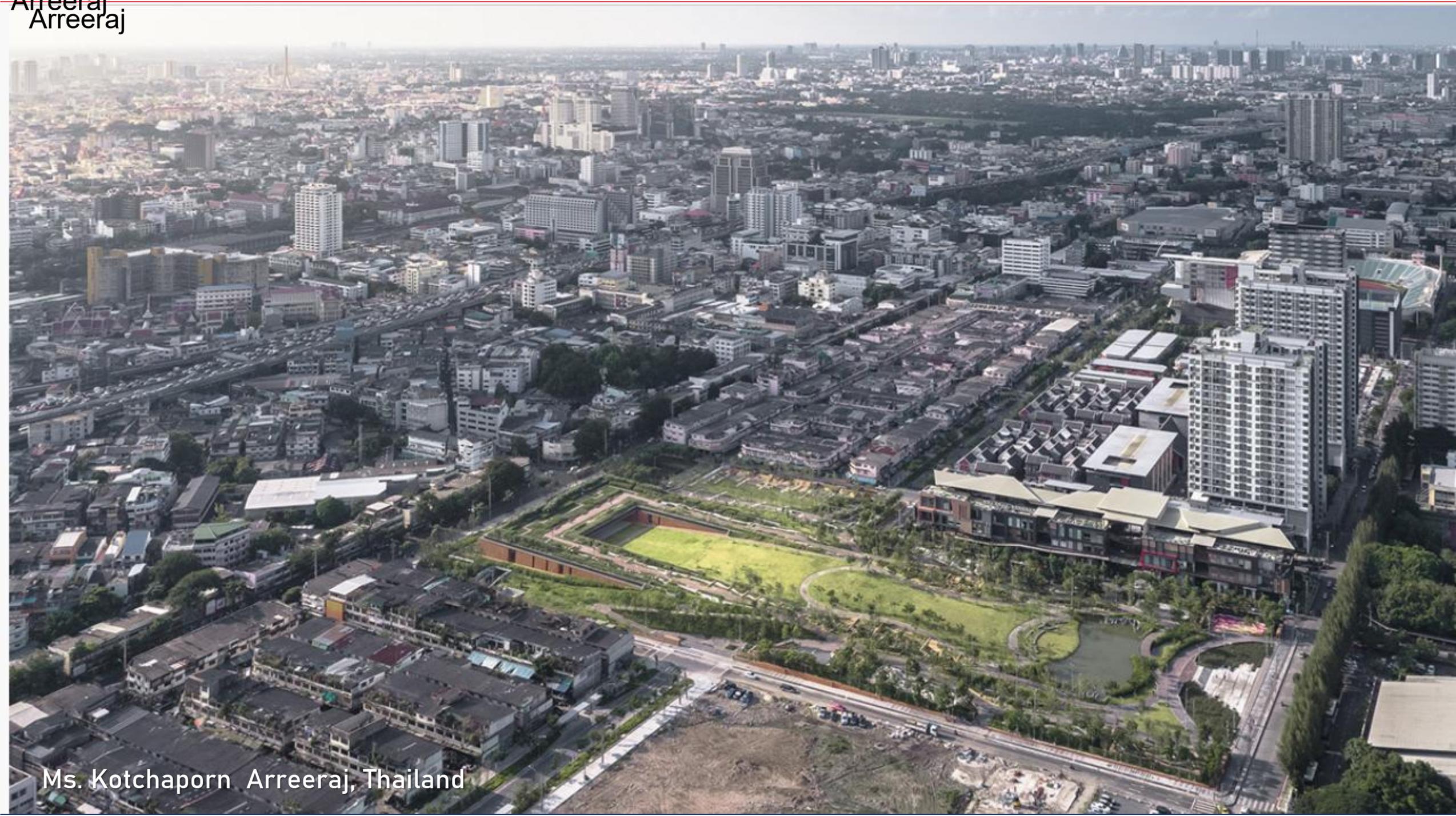
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## In conclusion

- Innovative technologies are critical for achieving sustainable development goals
- Inclusiveness, affordability, accessibility, market readiness and localization of innovations are important considerations for innovative technologies
- Invest in human resources development and technology collaboration
- Strengthen international and regional cooperation
- Leave no one behind



# Thank you



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