



PMAC | PRINCE MAHIDOL
AWARD CONFERENCE **2026**

PS 3.2: Digital Futures in a Demographic Shift: Technology for Health, Justice, and the Planet.

Climate Health Initiatives and AI Support

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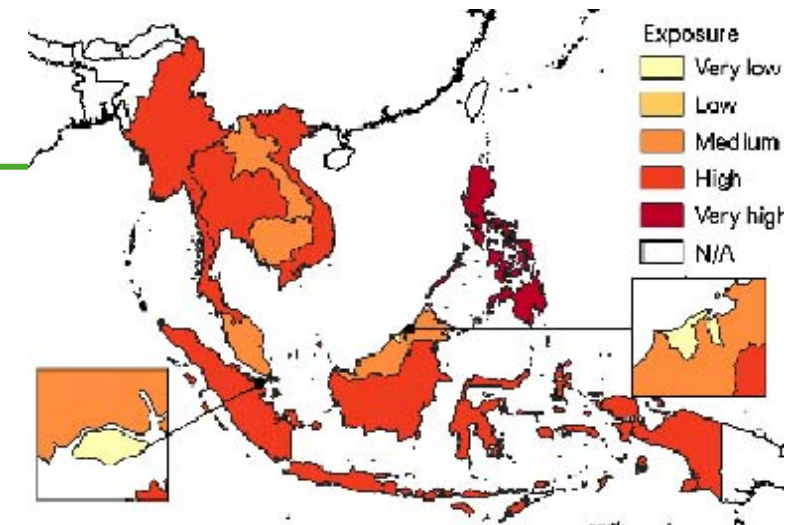
Climate and Health in Asia

Climate & Health Challenges

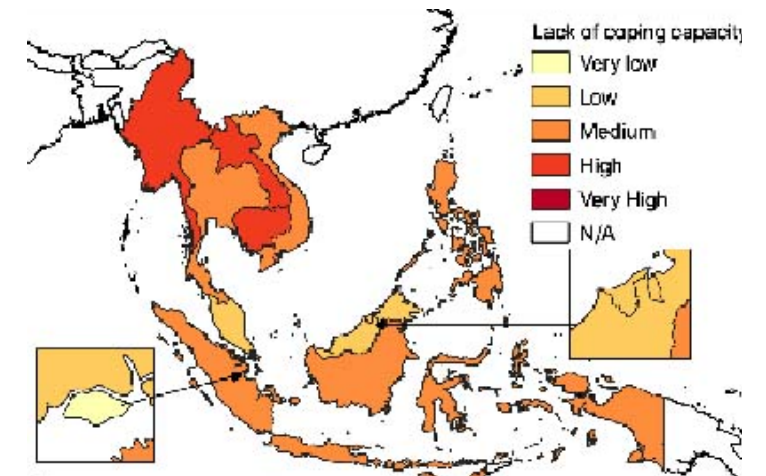
- Southeast Asia: Dengue, malaria, floods
- South Asia: Heat stress, malnutrition
- Pacific Islands: Sea level rise, cyclones
- Central & West Asia: Glacier melt, water scarcity, extreme heat
- **Health systems are central to climate adaptation** – prevent and control climate-induced diseases, disaster risk management.
- **Health systems vulnerable to climate change** – need to be adapted to climate change

Health Impacts

- Vector-borne diseases increasing
- Food/water insecurity rising
- Extreme weather health emergencies
- Climate-driven NCDs (CVD, respiratory)



Exposure to multiple climate hazards



Limited coping capacity

Source: AHA Centre. ASEAN Risk Monitor and Disaster Management Review (ARMOR) 2nd edition, 2021



ADB Support to Climate and Health

- ADB portfolio includes loans, grants, and technical assistance projects.
 - \$ 100 billion cumulative climate finance from 2019 to 2030
 - Health projects to attain 15% climate financing
- Since COP 28, ADB has expanded on climate and health through:
 - Creation of ADB's Climate and Health Initiative – a large technical assistance project on climate and health;
 - In Southeast Asia, it facilitates a) regional learning on climate and health, b) development of country investment pipelines on climate and health, and c) mobilization of funds on climate and health.
 - Significant grant funding for climate-transformative projects (ADF)

ADB projects support on climate health



Support MOH governance and inter-ministerial collaboration.



Develop a national footprint, HNAP, LCC-AP.



Support low-carbon infrastructures, clean and renewable energy.



Increase disease prevention and health promotion.



Integrate climate into the national health financing.



Revise the health workforce policy and invest in a climate health workforce.



Invest in research, evidence-based, innovative technology.



Align procurement and supply chain policy to green practices.

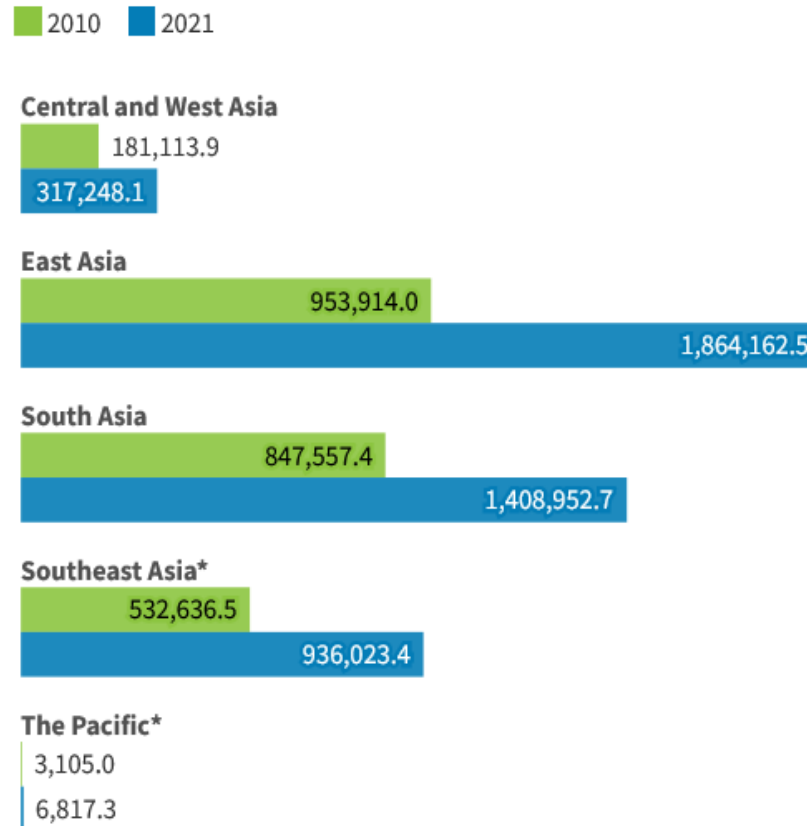


Source: Adapted from ADB (2025). *Sustainable and Low-Carbon Health System. High-Level Health Care Climate Action Principle 2*

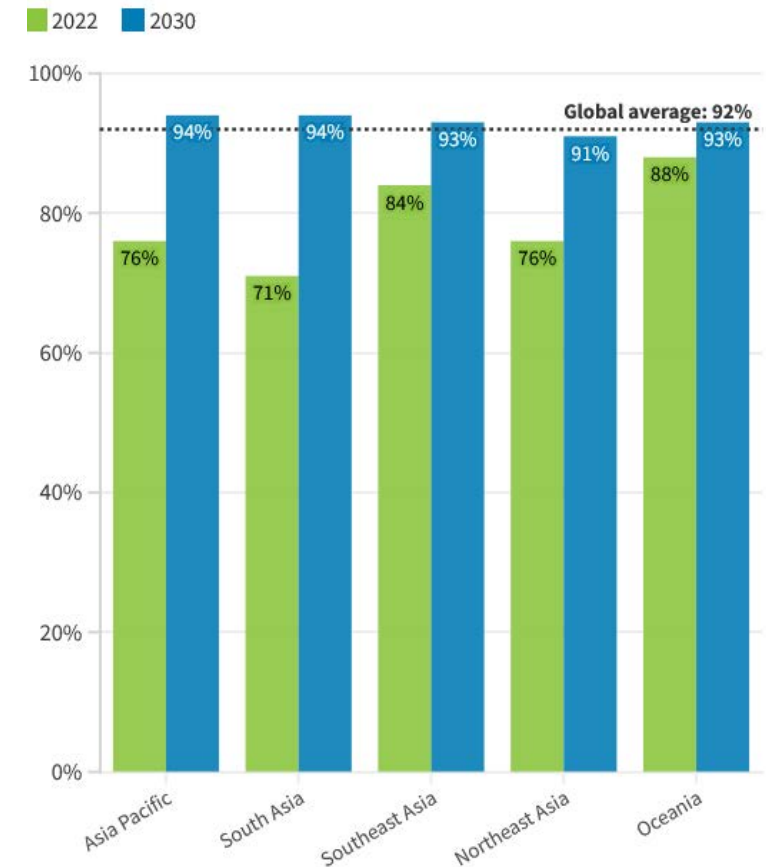
ADB Initiatives on Digital Technology

- Internet use in Asia has doubled since 2010 .
- Since 2010, ADB supported 240 health projects of which 46 (19.2%) are linked to digital health.
- Among 27 approved health projects in 2025, 12 (44.4%) are linked to digital health.
- Within a single year (2024), ADB Health projects benefitted 24 million people, established 13 health services, and achieved 67.38% of the UHC service index

Access to mobile phones and the internet, total subscriptions



Smartphone adoption in Asia and the Pacific



Source: ADB (2025). What We Do: Health <https://www.adb.org/what-we-do/topics/health>

Source: ADB (2025). Digital technology in Asia and the Pacific. <https://www.adb.org/what-we-do/topics/digital-technology>

ADB Support to Digital Health

Building blocks

- **Governance standards** : (Tonga, PNG, Lao PDR)
 - Developed digital health strategy
 - Development of standards on unique id and electronic medical records
 - Development of policies and servers (HL7FHIR) for interoperability
 - Patient, facility and workforce registries
- **Workshops and knowledge products on building blocks**



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Digital applications

- **Mobile apps** for early warning, disaster management, telemedicine (India and Turkmenistan), migrant health (Cambodia), and pandemics (Cambodia, Thailand, Vietnam, Philippines, Tajikistan)
- **Health information systems**, including electronic medical records, supply chain (Lao PDR and the Philippines), human resources management, hospital information systems and laboratory information systems (Indonesia).

Digital infrastructure

- **Digital health infrastructure** (e.g. servers, computers, data storage, etc) through loan projects such as the China Horizon Healthcare Resilience Project and the Border Areas Health Projects in the Lao PDR, and Cambodia
- Workforce trainings on digital health, including application use, standards and SOPs



Knowledge Tools for Digital Health

OPTIMIZING HEALTH FINANCING
DIGITAL SOLUTIONS AGAINST HEALTH CARE
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JANUARY 2025

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STRATEGY 2030
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for Development**
Directional Guide
Supporting Inclusive Digital Transformation
for Asia and the Pacific

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MAY 2021

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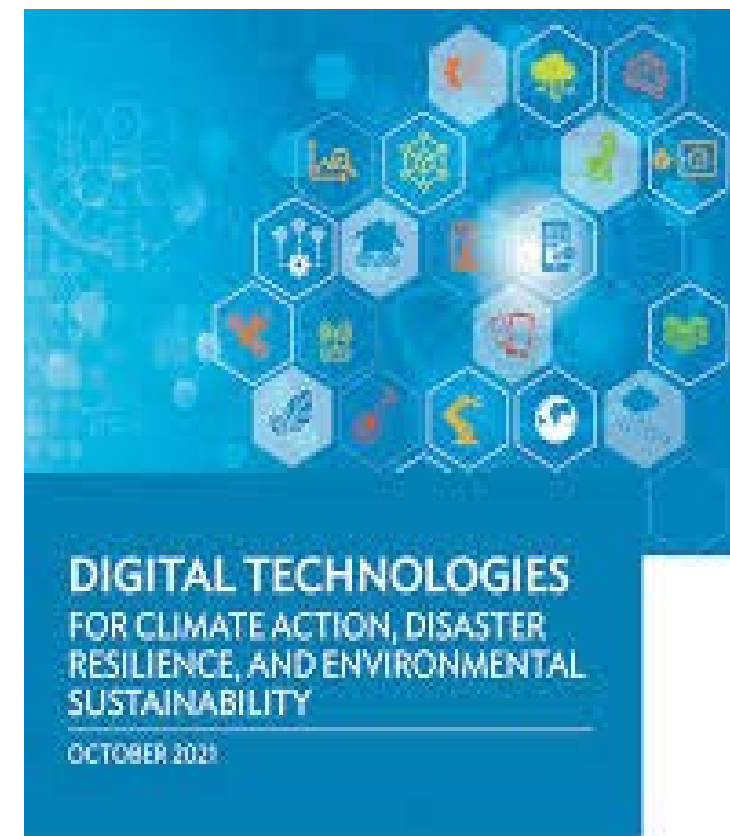
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ADB support - climate related AI and digital applications

- **Mobile apps for early-warning, rapid alert response (Cambodia, Thailand, Vietnam, Philippines, Tajikistan):** climate impacts and disaster management, health security, pandemic, and hospital information systems
- **AI-based chronic disease care system (China):** (i) Predictive analytics: AI algorithms integrate environmental, physiological and behavioral data to generate real-time risk alerts for climate related NCDs (ii) AI-tailored self-manage health education, medication reminders, and telehealth consultations to reduce hospitalization (iii) integrated hospital and community health records for health care provider by using HL7/FHIR standards.
- **MyHealth Diary (Indonesia):** empowered communities in Indonesia to monitor their health conditions and assess climate condition for travel readiness, AI provide timely health and climate information directly in people's hands.
- **CROMA (Thailand):** monitored vital signs remotely by AI during pandemic and disaster conditions. (ECG, Heart rate, SPO2, Temperature), analyzed, processed, and stored data in the cloud, and transmitted it to health care providers.



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ADB

Challenges and enablers for AI in climate-health

Challenges

- AI/ML expertise in-countries
- Infrastructural limitations
- Digital literacy
- Change Management
- Sustainability and cost implications on sustained use of AI tools for long-term
- Language: AI tools and documentations often in English

Enablers

- Build on existing platforms like DHIS2 & EMRs
- Open-source tools (Climate App, CHAP)
- Availability of funding (ADB, GCF)
- National digital health strategies

The way forward: potential AI applications for climate-health

- AI powered Diagnosis & Triage in EMRs
- Climate data integration and AI modeling Integrated Early Warning Systems
- One Health surveillance platforms
- Climate-smart supply chain optimizations
- Investment prioritization modeling using AI

Digital Health for Futures Demographic Shift



Inclusive Digital Health Enterprise

- Digital upscaling for youth (AI-learning)
- **Digital care for the aging population** and long-term care (Smart-home, robotic assistance)



Integration with Demographic Data

- Big data analysis on fertility insight
- AI support for **demographic intelligence**
- **Integrate real-time population register** (health, civil registration, migration)



Revision of Digital Health Governance

- AI-driven policy simulation
- **Digital ID/UHI & E-Government**
- **Blockchain** for pensions & **health benefits**



Optimizing Digital Health Workforces

- AI Multiplier courses (Udemy, Microsoft, Deep-Learning)
- **Telehealth**
- Digital nomadism for lifelong learning
- **Robotic workforces for disasters**, bio-chemical & climate hazards



Investment Planning Demographic Realities

- Smart-city urban planning
- AI tools for public services
- Investment in long-term care
- **Investment** in sustainable **digital technologies**

Source: Adapted from ADB (2021). Digital Health Implementation Guide For the Pacific: <https://www.adb.org/publications/implementing-digital-health-pacific-guide>