

UN CTCN Partnership and Liaison Office Regional Capacity Building Program: Asia and the Pacific

Internal Summary Report

AI4ClimateAction

Date & Venue: 3rd – 5th July and 10th – 12th July 2024, Songdo, Republic of Korea (ROK)

Co-hosting organization: National Institute of Green Technology

Partnered organization: UNFCCC TEC

Background: In June 2023, the UNFCCC Technology Mechanism launched Initiative on Artificial Intelligence (AI) for Climate Action (#AI4ClimateAction) to explore the role of AI in advancing digitalisation and scaling up transformative climate solutions in developing countries. With a specific focus on least-developed countries (LDCs) and small island developing States (SIDS), the Technology Executive Committee (TEC) and the Climate Technology Centre and Network (CTCN) will jointly:

- a. Provide a space for policy discussions, including UNFCCC national focal points and NDEs, awareness raising, and exchange of knowledge and experience among relevant stakeholders on developing and deploying climate solutions powered by AI;
- b. Support capacity-building efforts in developing countries to leverage emerging digital technologies and devise locally led solutions harnessing AI;
- c. Develop CTCN regional networks of entities supporting AI for climate actions.

Purpose and participants: The main objective of this capacity building program on AI4Climate Action is to increase NDE's knowledge related to AI technologies and assist the formation of NDE-led regional networks of entities supporting AI for climate actions. For the Asia and the Pacific programs, 22 NDEs and their representatives participated (see Annex I for a full list and group photos). The program introduced key players of AI4Climate action in this global system, to allow all types of AI technologies available for future climate technology innovation and RD&D collaboration to be considered for the transformation of 5 system areas (see Annex II for the detailed agenda).

Approaches and activities: Centering a holistic approach, this program communicated the role of AI in advancing climate action and the necessity of engaging individuals at all levels – from policymakers, technology solution holders, and citizens. A five-step co-creation process was applied using four sequential methods: Segmentation, Education-focused information distribution, National-level need identification, and Participatory sessions. Table 1 illustrates all sub-activities and expected outputs of the process undertaken.

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Table 1 Overall process of facilitating co-creation of AI-technology-led Climate Technology Innovation

Process	Methods Applied		Program Activities	Outputs
1. Planning	Co-creating AI-technology-led TA projects	Segmentation	NDC and Network analyses and Pre-program survey	Identification of potential groups with similar AI technology needs
2. Sensitizing		Information distribution	2 Keynote speech and 13 lecture presentations	Introduction to the initiative, the concept and future of AI, and applied case studies in 5 system transformation areas
		Need Identification	In-program survey and pre-program survey results	Sharing of NDC analyses on AI applicability and discussing perceived benefits of adopting AI technology for climate action
3. Facilitating		Participatory sessions	Brainstorming workshop on barriers	Identification of perceived barriers and challenges of adopting AI technology for climate action
			Brainstorming stakeholder mapping	Identification of key resource person for national collaboration for AI-tech-led TA project ideation
4. Engaging			Networking with members with AI techs	Introduction to the Network members with AI solutions
			Field visit	Introduction to the AI technology experience
5. Analyzing		Evaluation	Post-program engagement	Analyses of insights gathered from NDEs and follow-up on the bilateral results

Step 1. Planning: The key to this step is preparing materials and resources for the upcoming steps. In the planning stage, CTCN reviewed 169 National Determined Contributions (NDCs) mentioning AI applications for climate mitigation and/or adaptation and conducted the status check of global Network members on AI solutions. This step also involved the collection of countries' interests towards AI technology and sector priorities.

First, in the retrospective analysis of 169 countries that submitted NDCs, only 57 countries mentioned digitalisation and of those, 5 countries¹ expressed their national plan to apply Artificial Intelligence-related technologies for mitigation and adaptation (see Figure 1).

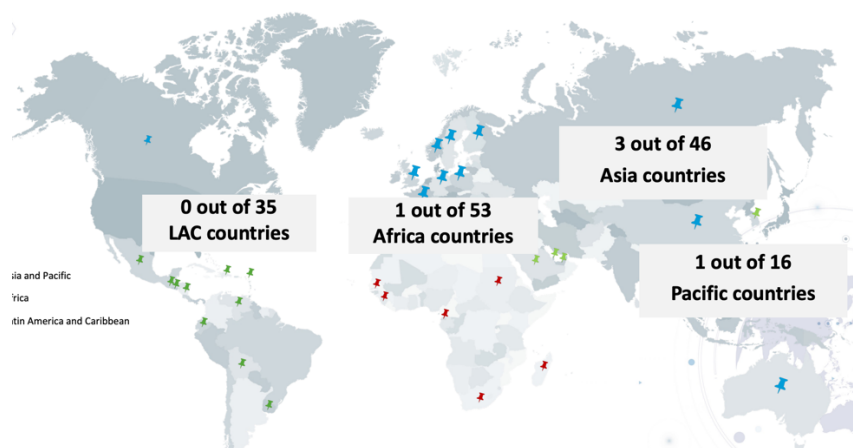


Figure 1 Global status - NDCs and AI technology

Specific to this region, four countries² mentioned AI as a climate technology solution for mitigation and adaptation. Of 62 submitted NDCs from AP countries, 13 countries³ had a

¹ Cambodia, UAE, Viet Nam, PNG, Côte d'Ivoire

² Cambodia, UAE, Viet Nam, PNG

³ Cambodia, UAE, Viet Nam, PNG, China, Armenia, Thailand, Sri Lanka, Pakistan, Jordan, Bangladesh, Lebanon, Cyprus

brief plan on digitalisation in agriculture and sustainable mobility sectoral transformation. Considering the NDC is the most critical document guiding the next TA project support, we have taken these results to understand the current level of countries' readiness to adopt AI technology.

CTC Network member analysis was conducted to examine the current status of the global AI network pool that our NDEs have full access of. Among 830 Network members, 25 were those classifies their main climate technology solution as AI-driven (see Figure 2 and Annex III for the full list). When we stretched the analysis to include Network members with the potential to provide AI-based climate technology solutions, 35 Korean Network members were added. Two weeks before the program, we invited these Network members to voluntarily join a walk-in networking opportunity with NDEs.



Figure 2 CTC Network with specialties in AI

A week before the program, confirmed NDEs (N=22) were invited to complete the pre-program survey consisting of 5 questionnaires. Two questions were for a Free Association Test (FAT), to reveal preconceived ideas related to 'Digitalisation' and 'Artificial Intelligence' (see Figure 3 for the word cloud of each keyword). Three questions were to identify sector preferences and perceived readiness to adopt AI technology.

FAT results informed perceived advantages in adopting AI technology as 'tapping innovation', 'increasing efficiency', and 'strengthening connectivity'. Disadvantages were mentioned as 'danger', 'robotics/unemotional', and 'identity theft', revealing the NDEs' concern of unethical or imprudent development and application of AI technology for climate change.

3 keywords that comes into your mind, when you think of 'Digitalisation'

Infrastructure and Green Transformation & Software efficiency and capacity
Data digital technologies
electronic copy accuracy **technology** Digital Artificial intelligence
electronic processing- Efficiency
Green Infrastructure Innovation Automation **efficiency** Green Finance
processes & business technologies- Data

3 keywords that comes into your mind, when you think of 'Artificial Intelligence'

Deep learning management of data Predictive Analytics Internet of Things
Smart Technology data computerized Data and Analytics
Big Data Computer **robots** technology
robots and future Analytics systems- Machines
Robot workers computer system Machine Learning intelligent & computers
Machine LearningInnovationData

Figure 3 FAT test results

Of all system transformation sectors, NDEs considered 'Water-Energy-Food nexus' (n=11) as the most urgent field to apply AI technology, followed by Energy System (n=5), Buildings and Infrastructure (n=4), and Business and Industry (n=1). Not a single NDE prioritised AI applications to transform Sustainable Mobility sector.

Applying segmentation methods, we triangulated participants' responses of 'Most urgent sector that requires digitalisation' and 'Agreeableness that AI technologies will benefit the sectoral transformation', and NDC analyses mentioning the AI application for climate. As a result, 8 sub-groups with similar interests towards AI technology, sector priorities, and country readiness were identified. Table 2 summarises classified groups.

Table 2 Summary of 'Pre-program survey' results

Forum	Group number	Countries grouped by matching sector and readiness.	Most urgent sector that requires digitalisation	Agree that AI technologies will benefit the sectoral transformation	NDCs
Asia	1	Jordan, Sri Lanka	Water-Energy-Food Nexus	Strongly agree	Yes
	2	Cambodia, Thailand			Yes
	3	Nepal, Tajikistan, Timor-Leste			No
	4	Mongolia, Thailand	Energy System, Business and Industry (for Vietnam)		No
	5	Vietnam, *Lao PDR			Yes (Vietnam only)
Pacific	1	Palau, Cook Islands, Solomon Island	Water-Energy-Food Nexus		No
	2	Maldives, Marshall Islands	Energy System		No
	3	Samoa, Nauru, Tonga, Fiji	Buildings and Infrastructure		No

*Note. Lao PDR was randomly assigned to Group 5 – Energy System.

Step 2. Sensitizing: The key to the second step is familiarising the audiences with the context of AI applications. Focusing on transferring knowledge and information on AI technologies, we coordinated two keynote speeches introducing the AI concepts related to improving climate actions and echoing the accumulation of use cases for improvement of the AI technologies to benefit society. 12 lecture presentations were delivered including the history of AI technology, expected social impact and ethical standards of AI technology, five case studies pioneered the transformation effort in each sector.

In between informative sessions, a participatory in-program survey was conducted to further sensitize the participants to the context of AI technology applications for climate action. Two open-ended questions welcomed the on-site live responses from the participants and the results were displayed on the screen for all (see Figure 4, top for Asia and bottom for the Pacific). A roundtable discussion further exploring the means to each response was facilitated, allowing participating NDEs to share personal reflections on AI technology.

This mini exercise was particularly important to create a safe room for participants to freely assert their perceived benefits and challenges towards applying AI technology for climate action. Together with the pre-program survey results, we observed sub-regional differences in interpreting and comprehending AI technology applications, especially between the perceived justification to adopt AI technologies. A collectivistic mindset, including a sense of community and common good towards AI technology application, was observed among the Pacific participants, meanwhile, the Asian participants revealed an individualistic mindset focusing on goal setting and progress improvement of AI technology application.

What is #AIforClimateAction to you?

23 responses

reduce climate problem
great to be initiative
technology
solution maker
copilot
my life
must build a capacity
early stage
positive to data analysis
proofing tool
future challenge if no cb
helpful for drr
right track
good intervention plan cc
env data analysis
for climate solutions
sustainable future
interest
automation
innovative tool
it is about data accuracy
it is a great initiative
enabling data cc predicts

Why do we need #AIforClimateAction?

8 responses

To prepare well for climate changes and climate hazards for early information system projection and intervention. To build infrastructure more resilient to all kind of climate disasters.

It needs to advance the early warning systems.

For absolute reduction in GHG emissions

AI is enhanced data analysis, efficiency optimization, resource management, disaster response, and emissions reduction.

To enable me and my family to live in an environment that is less hot and less threatening from natural disasters.

For adaptation and mitigation actions

To meet our goal of National adaptation plan and NDC IP. AI can give solution for climate change impacts. It will be a tool for planina and

To build NDEs capacities in AI, as this topic will be the main future topic

What is #AIforClimateAction to you?

18 responses

change for the better fut
combat cc using tech
way of the future
information
advancement
improving
collaboration
survival technology
response
smart and efficient
bridging the gap
new opportunities
accessibility to hi-tech
something innovative
life saving
technology response
support
rapid

Why do we need #AIforClimateAction?

13 responses

Human Intelligence is insufficient

Changes for the better future

Due to advancement in technology

provide accurate data for decision-making

For a peaceful and safe life for me and my family.

To save humanity and property

Bridging the gap

Different solutions for different times

A global challenge

To make changes faster so we can keep up and change accordingly

Preparation for the Futue

To further support countries existing products and tools around technology.

For absolute reduction in GHG emission

Figure 4 In program sensitization survey results

Step 3. Facilitating and Engaging: In this step, three participatory sessions namely ‘Calling from Future – Policies’, ‘Networks of AI technology’, and ‘Field visit’ were implemented to facilitate the brainstorming of potential actions that each participant can take to increase the benefits of applying AI technology through CTCN TA future projects.

Workshop 1: Calling from Future – Policies

Before the workshop activities, the participants were exposed to all materials prepared in Step 1, featured in Figures 1,3, and 4. Accounting for sub-regional differences, we engaged participants to a different sequence of participatory activities:

- Asia: Individual activity of barrier identification, then group activity of technology prioritisation;
- Pacific: Group activity of stakeholder mapping, then group activity of barrier identification.

For the Asia workshop, a 45-minute-long individual activity was facilitated with two key questions tapping prioritised-sector-specific perceived barriers in applying AI technologies and identification of existing national plans supporting digitalisation (see Figure 5). All answers to the first two questions were written on sticky notes (see Figure 6).

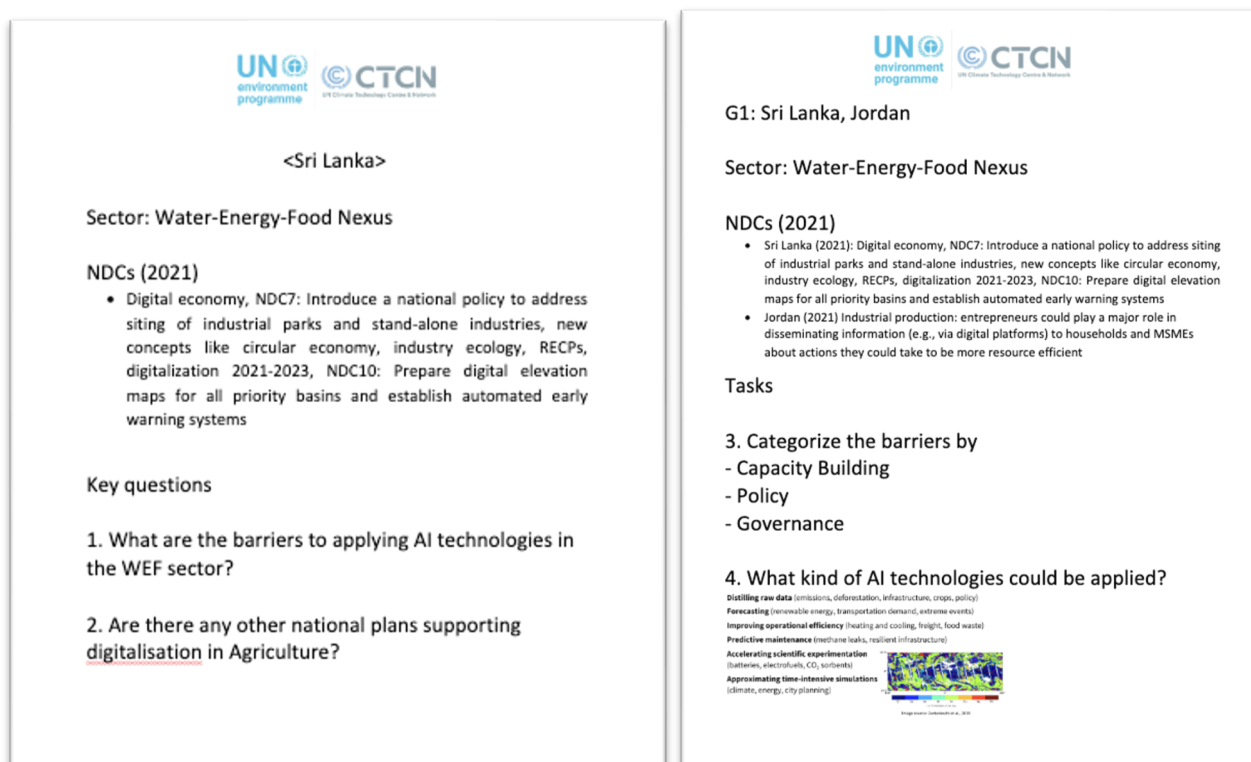


Figure 5 Workshop materials used for Asia group (left for individual, right for group activity)



Figure 6 Asia - Individual Activity

Then, the participants were invited to categorise identified barriers by their types (i.e. Capacity building, Policy, Governance) to the brainstorming board (Figure 7). This second sub-activity was a group discussion, allowing the exchange of barriers identified individually to the neighbouring countries with similar sectoral priority and NDC status. CTCN colleagues and NIGT researchers joined in each group to facilitate the process. Due to time constraints, the activity could not facilitate the specification of AI technology needs among grouped countries.



Figure 7 Asia - Group Activity

For the Pacific workshop, stakeholder mapping and barrier identification activities were facilitated as a group activity. Considering the relatively small climate governance of the Pacific country's NDEs have to coordinate for TA ideation at a national level, the participants were first asked to list the ministries and government stakeholders, academic and private sector, NGOs, and communities whose engagement is required and would benefit from AI technology applications (Figure 8, top). Then, the sector-specific barrier in applying AI technology, against key stakeholders identified was discussed on the brainstorming board (Figure 8, middle). Each activity took 45-50 minutes, with the facilitation of CTCN and Flinders University colleagues for each group.

Upon completing the workshop, all participants were asked to sit on a bilateral with CTCN for AI-driven TA project ideation.

Thinking about possible application of AI to your chosen sector,
think about **who** should be at the table during national negotiations,
when starting to discuss this idea?

Think about:

- Which **ministries and government** stakeholders need to be invited?
- Which stakeholders from the **private sector**?
- Which other stakeholders, NGOs, international organisations and other stakeholders?

G1: Palau, Cook Islands, Solomon Islands

(2022) Restoring damaged coral reefs in Palau with heat-tolerant corals
(2021) Feasibility Study for Low Carbon Transport in Solomon Islands
(2018) Cook Islands; Technical support and guidance to conduct a Technology Needs Assessment, develop a GCF Readiness proposal and provide technical assistance to develop a GCF Readiness proposal
(2017) Multi-country (Kiribati, Marshall Islands, Palau, Solomon Islands) Capacity development to address risks in coastal zones
(2017) Solomon Water & Energy Efficiency and Self-Generation Plan

Sector: Water-Energy-Food Nexus

NDCs: None

Task 2

What are the barriers to applying AI technologies in the Water-Energy-Food Nexus sector?

- Capacity Building
- Policy
- Governance
- Technological readiness
- Barriers from the perspectives of each of the key stakeholders involved with AI application



Figure 8 Pacific - Group activities

Workshop 2: Networks of AI technology

On the final day of the program, the participants were invited to the 'Networks of AI technology' workshop. This workshop consisted of three sequential participatory activities.

- Pre-arranged solution showcase by selected Network member;
- Identification of existing national AI network;
- Voluntary networking with Korean Network members with AI solutions.

Based on the network member analysis results, two prominent Network members were invited to each program to showcase their AI technologies for 20 minutes (Figure 9, left top). Two Network members were selected to meet the different sub-regional needs. This allowed the participants to be informed of strong network members that CTCN can support in matchmaking their needs for AI technology, upon their request. Out of 35 invited Network members, three for each program, joined the walk-in networking opportunity with NDEs (Figure 9).



Figure 9 Pre-arranged and Voluntary networking sessions

In between networking sessions, we introduced the current status of CTC Network membership with AI specialties using Figure 2 results. Then, the participants were asked to complete the listing of national AI technology experts on a paper and an Excel sheet (see Figure 10).

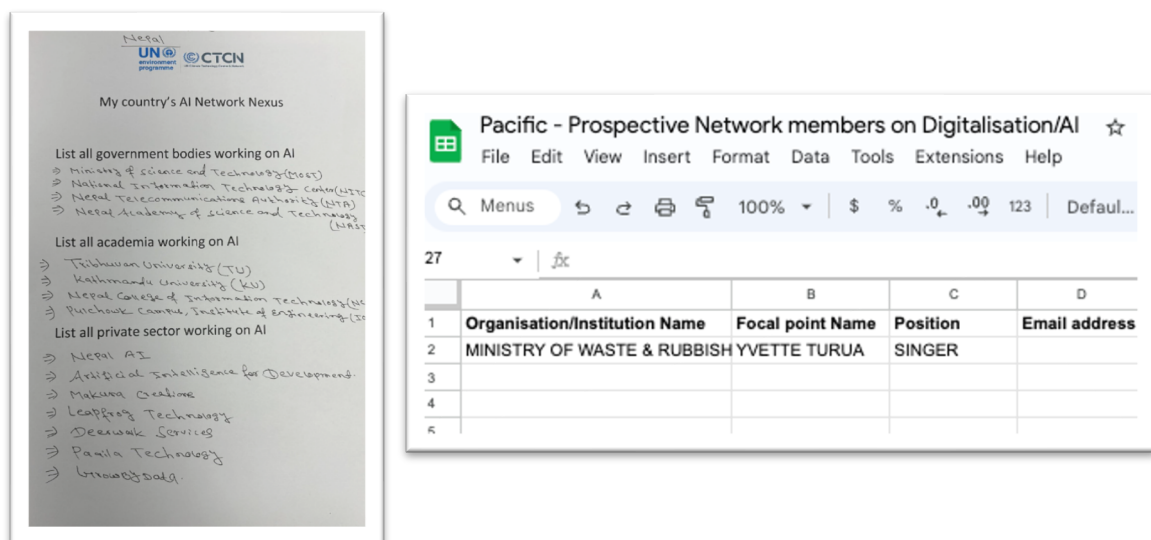


Figure 10 Individual activity – Materials used to list the prospective national AI network members

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Lastly, the participatory session was completed with a field trip to the T.um centre⁴. The participating NDEs were introduced to the public entertainment facility established by Korea's largest telecommunication company SK, featuring "Hi-Land" where advanced AI technologies are applied for energy efficiency, urban agriculture, and the healthcare system. This visit demonstrated a cultural shift effort that the South Korean government is creating to support the smooth transition towards AI technology with the next generation. The experience is expected to inspire the application of AI technology among participated countries (see Figure 11).



Figure 11 Field Trip - T.um

Step 5. Analysing: Thematic analyses of barriers discussed during the program resulted in the below bullet point. Overall, **low intention to buy-in the AI technology application for climate action is observed among AP regional NDEs**. Simply, the **perceived benefits of adopting AI technologies are low to go beyond the individual and multifaceted barriers**. Prospective organisations NDEs nominated to strengthen national and regional AI networks are to be updated in an Excel sheet. Actionable items for follow-up are listed below along with the reflection on the program for internal process improvement.

⁴ <https://tum.sktelecom.com/eng/main.do>

Barriers

- **Policy**
 - Inalignment to the existing NDC
 - Institutional framework on advanced techs (No Roadmap, No Action plan)
 - The government's financial constraints put less priority on AI
- **Capacity (Human)**
 - Low political incentive and diplomacy
 - Too simple/complicated decision-making process
 - Internal consensus on AI applications, hindering the transition
 - Trained people (government officers), for example, navigating the needed processes/paperwork is another challenge
 - Group empowerment
 - Mistrust in the use of digital technology
 - Lack of adaptive management skills when things go wrong
 - Lack of cultural values
 - Hard to find the right partners
 - Limited AI knowledge and literacy
- **Capacity (Infrastructure and technology)**
 - Infrastructure gathering high-quality data
 - Limitations of AI technology penetrating old system
 - Potential harms not identified
 - No standards and safeguarding measures
 - Low internet connectivity
 - AI technology looks complicated and will only bring complexity, not comfort
- **Finance (Public and private sector engagement)**
 - Lack of replacement options for businesses
 - Proven business model, creating new jobs and opportunities
 - High investment cost, minimal expected return
 - Unpredictable maintenance cost

TAs

Table 3 summarises the list of 17 verbal requests on AI TAs collected, along with barriers identified by each country representative. Empty blocks indicate room for further discussion to clarify demands. **The iconic AI TA theme/activity could be 'Developing new systems for live data capture and live dashboard reporting'.**

Table 3 Verbal TA requests received during the CB program (Day 3-4)

Region	Objective	System transformation areas	Proposed title/topic	Country	Barriers
Asia	Mitigation	Sustainable Mobility	Integrated smart mobility system for urban areas in Nepal	Nepal	Missing business model to engage private sector & government.
	Adaptation	Water-Energy-Food Nexus	Establishing AI based water resource management system to improve drinking water		Lack of research and development. Lack of clear regulatory policies to support the agenda.
	Adaptation	Water-Energy-Food Nexus	Smart agriculture	Cambodia	Lack of stakeholder and community awareness. Lack of internal resources to support building consensus among colleagues.
	Adaptation	Water-Energy-Food Nexus	Small farmers' water scarcity and digitalised mitigation insurance solution	Mongolia	Limitations of AI technology unresolved.
	Adaptation		Climate data: weather forecasting, meteorology	Tajikistan	Lack of policy to support AI technology application.
	Adaptation		Satellites and AI, weather/disaster (typhoon, tornado, flood, etc.) monitoring/forecasting	Tajikistan	
		Renewable energy sector/W-E-F nexus	Roadmapping and policy adviser for using AI techs (activities include regulatory requirement, capacity building, infra building)	Jordan	Lack of internal consensus and understanding on importance of developing roadmap.
Pacific	Adaptation		Satellites and AI, weather/disaster (typhoon, tornado, flood, etc.) monitoring/forecasting (Coastal management)	Palau	Geographical constraints (Weather unpredictable).
			Exploring opportunities to use AI in identifying suitable solutions and designing seawalls to reduce coastal erosion and address sea level rise	Marshall Islands	Lack of human resources.
	Adaptation	Water-Energy-Food Nexus	Foldable agrivoltaics with smart farm system		Energy from solar panels cannot be transmitted to the power station. No net metering policy. No feed-in tariff.
	Adaptation		Satellites and AI, weather/disaster (typhoon, tornado, flood, etc.) monitoring/forecasting	Fiji	Governance under restructuring (As of program month).
			Improving data collection AI based	Cook Islands	Lack of AI-use cases. Technology readiness and Infrastructure connectivity questioned.

Region	Objective	System transformation areas	Proposed title/topic	Country	Barriers
			Centralising data management system for climate action	Tonga	Lack of funding and source to communicate the benefit of developing management system to the financing bodies.
	Adaptation		Coastal erosion		The monitoring system for the mangroves needs to be enhanced. Their current method involves using drones, but they also rely on people physically visiting the mangrove areas to monitor them in person.
	Adaptation		Training and capacity building for staff with AI technologies to meet the NDC targets.		Required entire team capacity building, which is costly in both monetary and nonmonetary values.
	Adaptation		Satellites and AI, weather/disaster (typhoon, tornado, flood, etc.) monitoring/forecasting	Samoa	Internet availability and data sharing questioned.
	Adaptation		Satellites and AI, weather/disaster (typhoon, tornado, flood, etc.) monitoring/forecasting	Solomon Islands	Limited knowledge on AI and literacy.

Actionable items for CTCN:

- TA team to follow up on potential multi-country TA with
 - Nauru, RMI, Cook Islands on exploring technologies for reducing coastal erosion.
 - Fiji, Tonga, Samoa, Solomon Islands on monitoring mangroves/forests with satellites and AI technologies
- Network specialist to follow up on the nominated national AI experts and invite them to the CTC Network member
- Capacity building specialist to map the global barrier and identify commonalities and differences to develop sub-region-tailored workshops in 2025. Future programs could be bespoke mentoring and/or masterclasses. Another option is to provide these capacity building resources in a workshop library that could be actively used as a practical resource for step-by-step how-to do AI applications for their prioritised sectors. An online version of this program must be implemented in parallel to cover the countries that did not join this program.

Reflection on the program and potential solutions

- NDEs perceived that the current climate technology is unable to complement the high economic cost and environmental damage that AI infrastructure will cause.
 - Communicate the facts right. Present not only economic value but also the expected social return on investment, in an easy format of formulas and numbers.
- Mistrust in the advanced AI technology and perceived high maintenance issue.
 - Move away from only sharing success stories. Communicate failed examples to create full transparency on all sides of applying AI technologies for climate action.
 - Deliver multi-stakeholder co-design workshop to facilitate the NDE-owned AI TA project development. The process must involve line ministries and community leaders to fully communicate the total cost of expenditure (i.e. time, effort, people) of all involved.
- Demand for AI4ClimateAction is weak as the benefit of such technology is not visible from developing countries' point of view
 - Communicate personal values of adopting AI technology, rather than focus on social contract and/or common goal. Start with tapping on self-interested characteristics to compensate for the perceived institutional barriers and trigger individual motivation to move beyond challenges. Once use cases are accumulated, empower NDEs with climate stewardship thus encourage them to lead the creation of a positive spillover effect towards the common goal.
- The lack of integration/coordination/collaboration between national stakeholders across different departments – a common problem.
 - Consider launching a stakeholder capacity building program (e.g., train the trainer) for NDEs on how to identify and map stakeholders, how to bring together different stakeholders, navigate conflicting views, and negotiations. This capacity building could be an interactive master class, series of workshops (with pre-recorded and hands-on training components) to empower NDEs to be more proactive in building their internal alliances.

Annex I – Participant List

Forum	Country/Org	Name	Position
Asia	CTCN Advisory Board	Stephen Minas	Vice-Chair
	CTCN Advisory Board	Ketevan Vardosanidze	Member
	UNFCCC Secretariat	Taeyoon Kim	Program Officer
	Cambodia	Ou Chanthearith	National Designated Entities
	Jordan	Sara Qais Al Haleeq	National Designated Entities
	Kazakhstan	Rustam Nassirkhan	National Designated Entities
	Lao PDR	Sakounsit Sengkhamyong	NDE representative
	Mongolia	Choikhand Janchivlamdan	National Designated Entities
	Nepal	Himal Shivakoti	NDE representative
	Sri Lanka	T. G. W. Thiranagamage	NDE representative
	Tajikistan	Sunatullo Pirov	National Designated Entities
	Thailand	Jitsuna Darachai	NDE representative
	Thailand	Asira Chirawithayaboon	NDE representative
	Timor-Leste	Luis dos Santos Belo	National Designated Entities
	Vietnam	Tran Thi Bich Ngoc	NDE representative
	Green Climate Fund (GCF)	Satya Shiva Saswat	Regional Manager – South Asia
	Korea National University of Transportation (KNUT)	Sangwon Lee	Principal Researcher (IP for Bangladesh TA)
	Korea Institute of Energy Research (KIER)	Moon Ji Hong	Principal researcher
	Korea Institute of Industrial Technology (KITECH)	Jeong Yeol Kim	Principal researcher
	Korea Institute of Energy Research (KIER)	Jiho Yoo	Principal researcher
	Korea Research Institute of Chemical Technology (KRICT)	Hyung-Ki Min	Principal researcher

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Forum	Country/Org	Name	Position
	Nature Preserve	Hansol Bae	Chief Scientific Officer
	T&C Co.	Kyuhwa Jang	President
	Gwangju Institute of Science and Technology	Jun Yub Kim	Postdoctoral Researcher
	Gwangju Institute of Science and Technology	Eunseong Kang	Researcher
	KIBO	Heechang Park	Director of global cooperation center
	KIBO	Bumjin Park	Manager of global cooperation center
Pacific	CTCN Advisory Board	Christian Lohberger	Member
	Technology Executive Committee	Thibyan Ibrahim	Chair
	Cook Islands	Yvette Turua	NDE representative
	Fiji	George Langman	NDE representative
	Marshall Islands	Warwick Harris	NDE representative
	Nauru	Reagan Moses	National Designated Entities
	Palau	Ophelia Ongalibang	NDE representative
	Papua New Guinea	Emily Mulina Pomoh	NDE representative
	Samoa	Ueligitone Enosa	NDE representative
	Solomon Islands	Thaddeus Siota	National Designated Entities
	Tonga	Margaret Moala	NDE representative
	Maldives	Fathimath Nashwa	NDE representative
	GCF	Diane McFadzien	Regional Manager – Pacific
	GCF	Samantha Rabine	Regional Officer – Pacific
	National Institute of Green Technology	Jooyeon Moon	Researcher (IP for Samoa TA)
	Korea Institute of Energy Research (KIER)	Hanki Kim	Principal researcher (IP for PNG TA)
	Korea Environment Institute	Sang In Kang	Principal researcher (IP for Solomon Islands TA)

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Forum	Country/Org	Name	Position
	Korea Institute of Industrial Technology (KITECH)	Jeong Yeol Kim	Principal researcher
	Korea Institute of Science and Technology (KIST)	Seongpil Jeong	Principal researcher
	Korea Research Institute of Chemical Technology (KRICT)	Hyung-Ki Min	Principal researcher
	Green Energy Institute	Seungheun Song	Principal researcher
	U Energy	Changgon Ahn	Vice president
	SIA Analytics	David Smith	International Manager
	Gwangju Institute of Science and Technology	Myongji Park	Postdoctoral Researcher
	KIBO	Bumjin Park	Manager of global cooperation center

Annex II – Final program book (Asia and the Pacific, sequentially)

Capacity Building Program on AI4Climate Action

Day 3 (Wednesday, July 3rd)

Time (KST)	Dur.	Content / Speaker
Opening Ceremony		
		MC: Ji-Hee Son, NIGT
10:00~10:05	05'	• Opening Remarks Stephen Minas, CTCN Advisory Board Vice-Chair and TEC Member
10:05~10:10	05'	• Welcome Remarks Sanghyup Lee, President, NIGT
10:10~10:15	05'	• Introduction to the program Jeawon Kim, CTCN Secretariat
10:15~10:20	05'	• Group photoshoot
[Session 1]		
		Scene-setting
		Moderator: Ji-Hee Son, NIGT
10:20~10:50	30'	• Keynote Speech: Opportunities, challenges and risks of using AI for climate action - Speaker 1 : Priya Danti, Climate Change AI
10:50~11:20	30'	• Keynote Speech: Supporting AI-powered solutions in developing countries - Speaker 2 : Zaki B. Khoury, World Bank
Lunch Break (11:20~12:30)		
[Session 2]		
		Introduction to Artificial Intelligence
		Moderator: Ji-Hee Son, NIGT
12:30~13:00	30'	• From past to present, and future: History of AI - Speaker 3 : Junseong Bang, Ymatics
13:00~13:00	30'	• AI for the Environment and Climate Change - Speaker 4 : Stephanie King, Ceimia
13:30~14:00	30'	• Disaster risk reduction and technology - Speaker 5 : Alf Ivar Blikberg, UNDRR
14:00~14:30	30'	• Q&A
14:30~15:00	30'	• Real-time survey with NDEs on views on AI4ClimateAction
Coffee Break (15:00~15:30)		
[Session 3]		
		Pathways to sustainable use of AI4ClimateAction
		Moderator: Ji-Hee Son, NIGT
15:30~16:00	30'	• FAIR Forward – Artificial Intelligence for All - Speaker 6 : Karlina Octaviany, GIZ
16:00~16:30	30'	• Digitalisation Readiness Index - Speaker 7 : Jongseok Shin, NIGT
16:30~17:00	30'	• AI for the Social Impact - Speaker 8 : Svetlana Bogomolova, Flinders University Center for Social Impact
17:00~17:30	30'	• Q&A

Capacity Building Program on AI4Climate Action

Day 4 (Thursday, July 4th)

Time (KST)	Dur.	Content / Speaker
[Session 4]		Overview of AI technology for the CTCN Five System Transformation Areas
		Moderator: Joonho Yeo, NIGT
09:25~09:50	25'	• AI for Energy Systems - Speaker 9 : Junsung Chung, Samsung Electronics
09:50~10:15	25'	• AI for Buildings & Infrastructure - Speaker 10 : Rui Kotani, GEO Secretariat
10:15~10:40	25'	• AI for Business and Industry - Speaker 11 : Haruka Yoshida, UNIDO
10:40~10:50	10'	• Q&A
Coffee Break (10:50~11:00)		
11:00~11:25	25'	• AI for the Water-Energy-Food Nexus - Speaker 12 : Aziz Elbehri, FAO Regional Office for Asia and the Pacific
11:25~11:50	25'	• AI for Sustainable Mobility - Speaker 13 : Siho Kim, Yonsei University
11:50~12:00	10'	• Q&A
Lunch Break (12:00~13:00)		
[Session 5]		Calling from Future – Policies
		Moderator: Jeawon Kim, CTCN Secretariat
13:00~13:25	25'	• AI and Digitalization: Experience by CTC Network Member - Speaker 14 : Hansol Bae, Nature Preserve
13:25~15:00	95'	• Brainstorming barriers to AI4Climate Action All NDEs 1) Individual activity: NDEs identify most attractive AI technological solutions that attempt to address national priorities 2) Group activity a. NDEs discuss their national priorities and most attractive AI solutions b. Group NDEs based on activity 2-a, and co-ideate on the AI technology application
Coffee Break (15:00~15:30)		
15:30~17:00	90'	• Bilateral with CTCN • Bilateral with TEC Secretariat

Capacity Building Program on AI4Climate Action

Day 5 (Friday, July 5th)

Time (KST)	Dur.	Content / Speaker
[Session 6]		Facilitating #AI4ClimateAction Initiative
		Moderator: Jeawon Kim, CTCN Secretariat
09:00~09:30	30'	- Technology Mechanism #AI4ClimateAction Initiative - Speaker 15 : Taeyoon Kim, UNFCCC Secretariat
09:30~10:30	60'	- Brainstorming of National AI Network nexus All NDEs a) Identify existing AI network/governance b) Mapping AI network/governance c) Developing policies to support mapped AI network
10:30~11:30	60'	- Networking to develop TA related to #AI4ClimateAction All NDEs and Network members - All NDEs
Trip to Seoul (11:30~13:30)		
[Session 7]		Field Trip
13:30~14:30	60'	Visiting Data Centers in Myeongdong: T.um (Group 1)
14:00~15:00	60'	Visiting Data Centers in Myeongdong: T.um (Group 2)



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Capacity Building Program on AI4Climate Action

Day 3 (Wednesday, July 10th)

Time (KST)	Dur.	Content / Speaker
Opening Ceremony		
MC: Yura Jung, NIGT		
10:00~10:05	05'	• Opening Remarks Thibyan Ibrahim, TEC Chair
10:05~10:10	05'	• Welcome Remarks Sanghyup Lee, President, NIGT
10:10~10:15	05'	• Introduction to the program Jeawon Kim, CTCN Secretariat
10:15~10:20	05'	• Group photoshoot
[Session 1]		
Scene-setting		
Moderator: Yura Jung, NIGT		
10:20~10:50	30'	• Keynote Speech: Opportunities, challenges and risks of using AI for climate action - Speaker 1 : Priya Donti, Climate Change AI
10:50~11:20	30'	• Keynote Speech : Supporting AI-powered solutions in developing countries - Speaker 2 : Zaki B. Khoury, World Bank
Lunch Break (11:20~12:30)		
[Session 2]		
Introduction to Artificial Intelligence		
Moderator: Yura Jung, NIGT		
12:30~13:00	30'	• From past to present, and future: History of AI - Speaker 3 : Junseong Bang, Ymatics
13:00~13:30	30'	• AI for the Environment and Climate Change - Speaker 4 : Stephanie King, Ceimia
13:30~14:00	30'	• Disaster risk reduction and technology - Speaker 5 : Alf Ivar Blikberg, UNDRR
14:00~14:30	30'	• Real-time survey with NDEs on views on AI4ClimateAction
14:30~15:00	30'	• Q&A
Coffee Break (15:00~15:30)		
[Session 3]		
Pathways to sustainable use of AI4ClimateAction		
Moderator: Yura Jung, NIGT		
15:30~16:00	30'	• FAIR Forward – Artificial Intelligence for All - Speaker 6 : Karlina Octaviany, GIZ
16:00~16:30	30'	• Asia-Pacific Digital Transformation Report 2024: Mitigating the Climate Crisis - Speaker 7 : Charlene Lui, UNESCAP
16:30~17:00	30'	• Digitalisation Readiness Index - Speaker 8 : Mukes Kapilashrami & Sochi Gopal, George Washington University
17:00~17:30	30'	• AI for the Social Impact - Speaker 9 : Svetlana Bogomolova, Flinders University Center for Social Impact
17:30~18:00	30'	• Q&A

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Capacity Building Program on AI4Climate Action

Day 4 (Thursday, July 11th)

Time (KST)	Dur.	Content / Speaker
[Session 4]		Overview of AI technology for the CTCN Five System Transformation Areas
		Moderator: Eun Ju Lee, NIGT
09:25~09:50	25'	• AI for Energy Systems - Speaker 10 : Junsung Chung, Samsung Electronics
09:50~10:15	25'	• AI for Buildings & Infrastructure - Speaker 11 : Rui Kotani, GEO
10:15~10:40	25'	• AI for Business and Industry - Speaker 12 : Haruka Yoshida, UNIDO
10:40~10:50	10'	• Q&A
Coffee Break (10:50~11:00)		
11:00~11:25	25'	• AI for the Water-Energy-Food Nexus - Speaker 13 : Aziz Elbehri, FAO Regional Office for Asia and the Pacific
11:25~11:50	25'	• AI for Sustainability Mobility - Speaker 14 : Siho Kim, Yonsei University
11:50~12:00	10'	• Q&A
Lunch Break (12:00~13:00)		
[Session 5]		Calling from Future – Policies
		Moderator: Jeawon Kim, CTCN Secretariat
13:00~13:25	25'	• AI and Digitalization: Experience by CTC Network Member - Speaker 15 : Changgon Ahn, U Energy
13:25~15:00	95'	• Brainstorming barriers to AI4Climate Action All NDEs 1) Individual activity: NDEs identify most attractive AI technological solutions that attempt to address national priorities 2) Group activity a. NDEs discuss their national priorities and most attractive AI solutions b. Group NDEs based on activity 2-a, and co-ideate on the AI technology application
Coffee Break (15:00~15:30)		
15:30~17:00	90'	• Bilateral with CTCN • Bilateral with TEC Secretariat

Capacity Building Program on AI4Climate Action

Day 5 (Friday, July 12th)

Time (KST)	Dur.	Content / Speaker
[Session 6]		Facilitating #AI4ClimateAction Initiative
		Moderator: Jeawon Kim, CTCN Secretariat
09:00~09:30	30'	• Technology Mechanism #AI4ClimateAction Initiative - Speaker 16 : Taeyoon Kim, UNFCCC Secretariat
09:30~10:30	60'	• Brainstorming of National AI Network nexus All NDEs a) Identify existing AI network/governance b) Mapping AI network/governance c) Developing policies to support mapped AI network
10:30~12:00	90'	• Networking to develop TA related to #AI4ClimateAction All NDEs and Network members - All NDEs
Trip to Seoul (12:00~14:00)		
[Session 7]		Field Trip
14:00~15:00	60'	• Visiting Data Centers in Myeongdong: T.um



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Annex III – List of CTC Network members with AI specialities

Sector	Name of Network member	Country	Type of Organization	Application	Digital Technology Applied	CTCN Network URL	Company website URL
Water	Water in Sight AB	Sweden	Private sector organization	Hydro-meteorological observations in LDCs	Water and weather data monitoring	https://www.ctc-n.org/about-ctcn/network-members/water-sight-ab	https://www.waterinsight.se/
Energy Systems	Blockchain & Climate Institute	United Kingdom	Research and academic institution	Pilot projects range from disaster risk parametric insurance and peer-to-peer renewable energy trading to water trading and adaptation infrastructure procurement, etc. We are distinct from the other organisations in that BCI has unique experience in relevant capacity building, policy and legislation support, which enable us to provide one-stop-shop services for partner governments	Deployment of Big Data, GIS, remote sensing, machine learning and IoT	https://www.ctc-n.org/about-ctcn/network-members/blockchain-climate-institute	http://www.blockchainclimate.org
Building and Resilient Infrastructure	Meteosim, S.L.	Spain	Private sector organization	Improvement of numerical weather prediction results and climate change simulations by using machine learning and AI algorithms. Improve Air Quality forecasting for cities using remote sensing data.	Remote Sensing, AI, Machine Learning	https://www.ctc-n.org/network/network-members/meteosim-sl	http://www.meteosim.com
Building and Resilient Infrastructure	FUNDACIÓ EURECAT	Spain	Not for profit organisation	Climate resilience	Real-time decision support systems (DSS), AI	https://www.ctc-n.org/about-ctcn/network-members/fundacion-eurecat	https://eurecat.org/en/eurecat/#
Biodiversity	UK Centre for Ecology and Hydrology	United Kingdom	Research and academic institution	Automated monitoring of insects, Research on data science for natural environment	Monitoring, Big Data, AI, Machine Learning	https://www.ctc-n.org/about-ctcn/network-members/uk-centre-ecology-hydrology	https://www.ceh.ac.uk
Health	ARIA Technologies / SUEZ	France	Private sector organization	Computation of pollutant dispersion, meteorological analysis, wind, emission, and air quality modeling.	AI, Machine Learning, Satellite data monitoring	https://www.ctc-n.org/about-ctcn/network-members/aria-technologies	https://www.aria.fr
Early warning and Environmental assessment	Relief Applications	France	Private sector organization	multi-platform IT solutions	Big-data, disaster risk modelling	https://www.ctc-n.org/about-ctcn/network-members/relief-applications	https://reliefapplications.org/
Industry	Beanstalk Agtech Pty Ltd	Australia	Private sector organization	digital platform applications for local industry	Data analytics	https://www.ctc-n.org/about-ctcn/network-members/beanstalk-agtech-pty-ltd	https://www.beanstalkagtech.com/
Building and Resilient Infrastructure	Groupehuit	France	Private sector organization	Urban planning, disaster risk reduction	GIS/spatial planning	https://www.ctc-n.org/about-ctcn/network-members/groupehuit	https://groupehuit.com/
Business and Industry	Nature Preserve	Denmark	Private sector organization	Carbon footprint analysis platform	Blockchain	https://www.ctc-n.org/about-ctcn/network-members/nature-preserve-aps	https://www.naturepreserve.co/
Water	DHI Group	Denmark	Private sector organization	Hydrometeorology modeling, flood/drought risk modelling	GIS/spatial planning, real-time decision support system	https://www.ctc-n.org/about-ctcn/network-members/dhi	https://www.dhigroup.com/

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Cross-sectoral	Envisioning Labs	Canada	Private sector organization	Support R&D programmes	Design thinking of digital solutions	https://www.ctc-n.org/about-ctcn/network-members/envisioning-labs	https://www.envisioninglabs.com
Energy Systems	Siemens AG	Germany	Private sector organization	Smart energy system	AI and Machine Learning	https://www.ctc-n.org/about-ctcn/network-members/siemens-ag	https://new.siemens.com/global/en/products/energy/energy-automation-and-smart-grid/energy-business-advisory.html
Cross-sectoral	Satellite Applications Catapult Ltd	United Kingdom	Not for profit organisation	Early warning and Environmental assessment	Satellite remote sensing	https://www.ctc-n.org/about-ctcn/network-members/satellite-applications-catapult-ltd	https://sa.catapult.org.uk/
Business and Industry	OXCARBON SOLUTIONS LIMITED	Nigeria	Private sector organization	Carbon MRV	Data analytics	https://www.ctc-n.org/network-member/application/oxcarbon-solutions-limited	https://Oxcarbon.co
Cross-sectoral	African Center for Technology Studies (ACTS)	Kenya	Research and academic institution	Cross-sectoral	AI and Machine Learning	https://www.ctc-n.org/network-member/application/african-centre-technology-studies	http://acts-net.org/
Early warning and Environmental assessment	Rupantaran Nepal	Nepal	Private sector organization	Disaster risk management	Early warning	https://www.ctc-n.org/network-member/application/rupantaran-nepal	
Cross-sectoral	Ghana Climate Innovation Centre	Ghana	Research and academic institution	Support startups and innovations	Design thinking of digital solutions	https://www.ctc-n.org/network-member/ork-members/ghana-climate-innovation-centre	http://ghanacic.org
Water-Energy-Food Nexus	Institute of Water Resources Planning (IWRP)	Viet Nam	Public sector organisation	IWRP has been using AI for water, climate and ecosystem management, i.e. use of machine learning, remote sensing, large-scale modelling to improve flood simulation, structure operation in case of emergency, simulation of climate change and climate responses scenario	Machine Learning, Remote Sensing, Large-scale modelling to improve flood simulation	https://www.ctc-n.org/network-member/ork-members/institute-water-resources-planning	http://iwarp.org.vn
Building and Resilient Infrastructure	Respirer Living Sciences Pvt. Ltd.	India	Private sector organization	Methane detection and air quality monitoring	Big-data, atmospheric modeling, Satellite data monitoring and event detection	https://www.ctc-n.org/about-ctcn/network-members/respirer-living-sciences-pvt-ltd	
Ocean	Centro de Investigaciones del Mar y la Atmósfera	Argentina	Research and academic institution	Climate modeling, numerical simulations and forecasting for ocean and atmosphere at different time scales	Improved weather forecasting, early warning	https://www.ctc-n.org/network-member/ork-members/centro-de-investigaciones-del-mar-y-la-atmosfera	https://www.cima.fcen.uba.ar/
Early warning and Environmental assessment	ICEM Asia Consulting Pte. Ltd.	Singapore	Private sector organization	climate vulnerability assessment and adaptation, renewable energy, hydrometeorology, water governance, nature-based solutions, environmental economics, disaster risk reduction	GIS/spatial planning	https://www.ctc-n.org/about-ctcn/network-members/icem-asia-consulting-pte-ltd	https://icem.com.au/decision-support-systems/
Water	Aquaquest	Zambia	Private sector organization	Groundwater monitoring	Data monitoring and early warning	https://www.ctc-n.org/about-ctcn/network-members/aquaquest-limited	http://www.aquaquest.info
Water	Impact Water Solutions	South Africa	Private sector organization	Intelligent water management	GIS/spatial planning, real-time	https://www.ctc-n.org/about-ctcn/network-	https://water-solutions.co.za/

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					decision support system	members/impact-water-solutions	
Water	Water Sprint	Pakistan	Private sector organization	Smart water and agriculture services	GIS/spatial planning, real-time decision support system	https://www.ctc-n.org/about-ctcn/network-members/watersprint-limited	https://watersprint.io/