

Asia-Pacific Network for Global Change Research (APN)

Over 25 years of policy-relevant
research on global change in the
Asia-Pacific region

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Asia-Pacific Network for Global Change Research



About

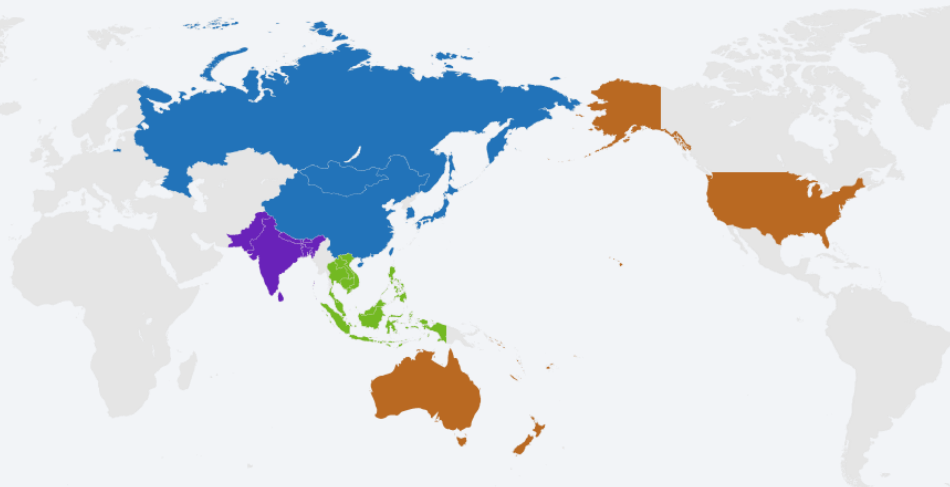
Established 1996

Member countries 22 countries in Asia-Pacific region
 Additional “approved countries”

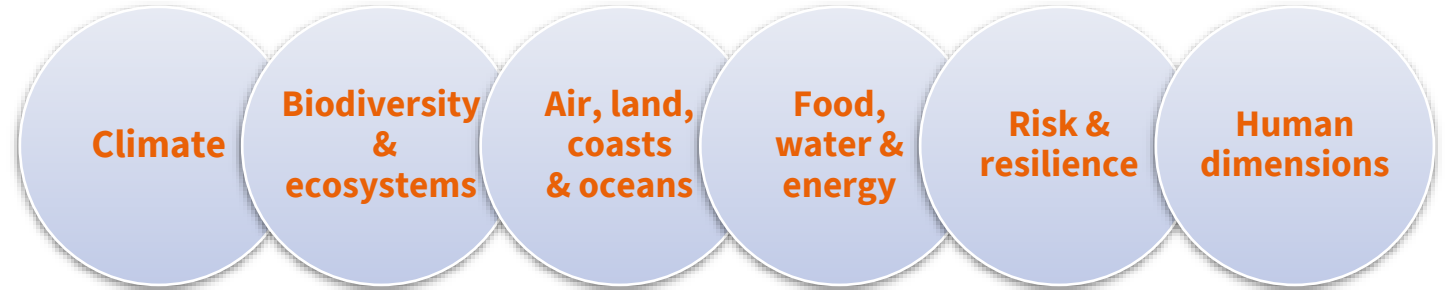
Secretariat Kobe, Hyogo Prefecture, Japan

Donors

- Ministry of the Environment, Japan
- Hyogo Prefectural Government, Japan
- Ministry for the Environment, New Zealand
- Ministry of Environment, Republic of Korea



Focus areas



Strategic goals

REGIONAL RESEARCH

Support regional cooperation in global change research on issues particularly relevant to the Asia-Pacific region.

CAPACITY DEVELOPMENT

Enhance capabilities to participate in global change and sustainability research and support science-based decision-making.

SCIENCE-POLICY LINKAGES

Strengthen interactions among scientists and policymakers; provide scientific input to policy decision-making, and scientific knowledge to the public

STAKEHOLDER ENGAGEMENT

Cooperate with other global change and sustainability networks and organisations.

Direction of APN in the Fifth Strategic Plan

Contribute to the realisation of global agendas, such as:



Fifth Strategic Plan (2020-2026)



Focused activities in the Fifth Strategic Plan

- Explore new research initiatives that contribute to:
 - AP-PLAT and WCRP-CORDEX programme;**
 - Synergy between climate change and disaster risk reduction;**
 - Achieving carbon neutral society; and
 - Addressing issues on marine plastic debris and microplastics.
- Advance work in areas of Circular and Ecological Economy, zero carbon cities, **nature-based solutions and climate-smart agriculture**, etc.
- Provide support to early-career professionals through tailored research activities and programmes that meet their specific needs.
- Strengthen linkages between scientists, policymakers and practitioners, etc., and provide sound scientific information for policymaking processes.



Abe, T., Bastaman, H., Fukushi, K., Heath, L. C., Hill, D. P., Hoshino, Y., ... Yoshikawa, K. (2021). APN Fifth Strategic Plan. doi: [10.30852/sp.5](https://doi.org/10.30852/sp.5)

Priority Topics

□ Special consideration for early-career professionals and proposals that are gender-balanced

Frequently asked questions

www.apn-gcr.org/faq

South Asia

Monsoon and the impacts of extreme events

Climate adaptation to extreme events, including flood, drought, climate-resilient agriculture, etc.

Ecosystem services and ecosystem-based adaptation

Future emission scenarios, including decarbonisation pathways

Food, water and energy security, including low-cost energy, bioenergy, food production in agriculture, ecosystem services, etc.

Nitrogen management for nutrients, soil health, food security, etc.

Waste management in the context of climate change mitigation and environmental degradation

Climate-resilient urbanisation

Southeast Asia

Bio-circular green economy (food, agriculture, health and wellbeing, tourism and creative economy, bioenergy and biochemical and bio-material)

SDGs in the post-COVID pandemic era, particularly SDG6 (water and sanitation) and SDG13 (climate)

Climate change and disaster risk reduction

Food, water and energy security in the face of climate change, including nature-based solutions and food security, and alternative energy production

Marine debris (zero waste) and microplastics

Transboundary issues, including air pollution, waste management, electronic waste, marine debris and microplastics

Education on Big Earth Data for SDGs

Temperate East Asia

Carbon neutral societies, zero carbon futures, particularly related to: alternative energy production; energy security; zero carbon cities

Climate resilience, particularly related to nature-based solutions; climate-related disaster risk reduction in relation to urban management

Climate change and economic analysis

Climate smart agriculture

Transboundary issues particularly related to: air pollution; waste management; marine plastics and marine pollution

Biodiversity and post-2020 Aichi targets, particularly related to: nature positive; 30x30 (protecting land and sea by 30% by 2030); nature-based solutions

Pacific

Displacement, relocation, food security and water security using global knowledge and/or traditional and local knowledge

Adaptation and disaster risk reduction in the context of global knowledge and/or traditional and local knowledge

Climate change and climate variability and their related impacts in national and regional contexts, including projections/downscaling; remote sensing; extreme events; Asia-Pacific Climate Change Adaptation Platform (AP-PLAT); knowledge/technology transfer; etc.

Global change and its impacts on marine ecosystems and livelihoods in the Pacific, including the impacts of microplastics on fisheries and food security; marine plastic debris; conservation and protection; impacts of ocean warming, ocean acidification, harmful algal blooms on food security; etc.

Comprehensive Regional Research Programme (CRRP)

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Relevance **Latest** Title A-Z

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Project • CRRP2022-09MY-Myagmarsuren

Strengthening local adaptation plans through integrating socio-economic vulnerability assessment and policy gap analysis in Mongolia and China
- 

Project • CRRP2022-02MY-Shoyama

Ecosystem-based adaptation in Temperate East Asia: Development of an indicator system for evaluating rural ecosystem restoration programs
- 

Project • CRRP2022-04MY-Ho

Safeguarding regional food security under climate change impacts via mainstreaming nature-based solutions-centred adaptation strategies (NAFOS)

Scientific Capacity Development Programme (CAPaBLE)

Sort by:

Relevance **Latest** Title A-Z

Projects X CAPaBLE X


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Project • CBA2022-10MY-Balt

The science-policy adaptive capacity for local herding and government groups to reduce climate vulnerability
- 

Project • CBA2022-02SY-Phan

Promoting youth role in raising community resilience to climate change in the Vietnamese Mekong Delta (Mekong Delta CoRe)
- 

Project • CBA2022-01SY-Lo

Developing the capacity of student scientists for supporting disadvantaged communities to cope with flooding (DECAF)

Reaffirming Commonalities across the region

Knowledge synthesis

- Uchiyama, C., Stevenson, L. A., & Tandoko, E. (2020). Climate change research in Asia: A knowledge synthesis of Asia-Pacific Network for Global Change Research (2013–2018), Environmental Research, Volume 188, <https://doi.org/10.1016/j.envres.2020.109635>.



Synthesis Overview

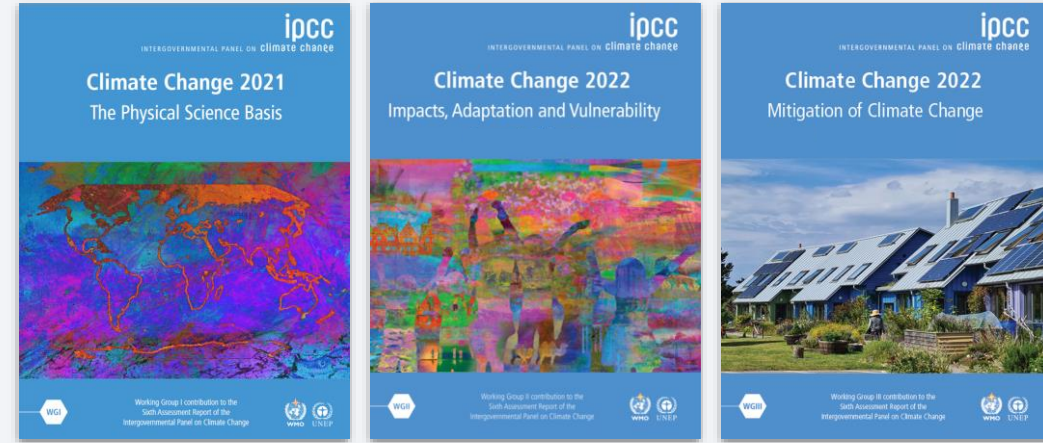
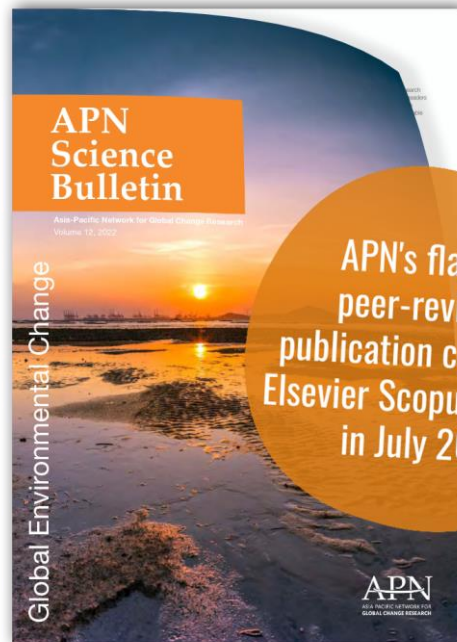
- **115 relevant projects completed**, mainly in Southeast Asia, South Asia, and Temperate East Asia.
- Most projects focused on **community-based resilience, climate adaptation and mitigation, ecosystems and biodiversity, water-food-energy nexus, sustainable waste management, and climate education**.
- **163 knowledge products** were analysed, including peer-reviewed articles, reports, policy briefs, guidelines, toolkits, books and perspectives.
- **Key results from literature and knowledge products** can be categorized into five groups: highly normative, elaborated norms, technical/knowledge-based, evidence-based/practical (solution-oriented), and highly practical (framework-oriented).

Analysis and findings emphasise for the Asia-Pacific region:

- Importance of diversifying community livelihoods and technologies to enhance income.
- Need for infrastructure establishment/revitalization for improved system utilisation in response to risk.
- Urgent need for more community participation and increased capacities through training and exposure programmes.
- Urgency for mainstreaming climate change adaptation (CCA) and disaster risk reduction (DRR) measures at the local level.
- Evolving synergies between the global climate targets and SDGs call for improved interlinkages and dissemination.
- APN should strengthen its role in science-policy partnerships and networking for disseminating knowledge and best practices.

Contribution to IPCC

More than 100 publications from APN projects and activities have been cited in the Working Groups I, II, and III contributions to the IPCC Sixth Assessment Report.



Over

60

APN projects contributed to IPCC Sixth Assessment Report

15

Number of countries where these APN project leaders are from

76%

APN publications **cited in the WGI contribution** as a percentage of all AR6-cited APN publications

In the **WG II contribution**, most citations appear in

Chapter 5. Food, fibre, and other ecosystem products

Chapter 10. Asia

Chapter 15. Small islands

Read the press release here: <https://www.apn-gcr.org/?p=21069>

Community Risk & Resilience



What are some of the things we have done/are doing to overcome barriers to community resilience - it's not just about understanding the science...

Addressing inequality and its impact on climate resilience:

- Existing inequality structures influence how climate change and disasters affect local communities.
- Addressing the needs of marginalized groups is crucial for effective climate adaptation.
- Gender-responsive approaches play a vital role in this context.

Empowering local communities:

- Local communities possess valuable knowledge and contribute to knowledge production.
- Action research promotes co-production of knowledge by local people and scientists.
- Integration of diverse knowledge types is essential for successful Local-Level Adaptation (LLA).
- Tools for local-scale adaptation planning are available to address challenges such as lack of data, resources and capacity (e.g. from AP-PLAT)

Awareness and information:

- Establish community-based information centres to provide access to climate resilience resources and programmes.
- Develop tailored communication strategies, including using local languages and traditional communication channels.
- Conduct awareness campaigns through local media, workshops and community meetings.

Technology Gaps:

- Provide training workshops on basic ICT skills and the use of mobile phones to access climate information and resources.
- Establish community technology centres with internet access and technical support.
- Develop user-friendly mobile applications that deliver climate forecasts and resilience strategies.

Cultural and Social Considerations:

- Involve community leaders and elders in designing and endorsing climate resilience initiatives.
- Adapt innovative programmes to align with local customs and traditions to increase acceptance.
- Incorporate indigenous knowledge and practices into climate resilience planning.
- Co-design projects and meet somewhere in the middle (not strictly bottom-up or top-down approaches)

Ongoing & Future Collaboration



As a network:

- APN fosters networking, collaboration, research, and dialogue for Asia-Pacific progress.
- APN informs policy with trusted science, highlighted in IPCC AR6 citations, bridging knowledge to action.
- APN aligns its members national priorities with global climate policies considering intricate policy-economy-resource dynamics.

For adaptation our efforts are emphasised through:

- APN's joint project with IGES on locally led adaptation (more information will be provided at our session at APAN8).
- Collaborative activities with Asia-Pacific Climate Change Information Platform (AP-PLAT)
- Adaptation Research Alliance (ARA)
- Common events, including Asia-Pacific Climate Change Adaptation Forum (APAN), Gobeshona Global Conference, UNFCCC-COP side events, SBSTA International Research Dialogue
- In our 5th Phase, APN is particularly interested in promoting/expanding its work in the Pacific region, and we look forward to furthering our dialogue with other relevant partners/participating organisations in this regard.

APN's published work in climate change adaptation



Special Issue on Climate Change Impacts, Vulnerability and Adaptation

- Shrestha, S., Stevenson, L. A., Shaw, R., & Pulhin, J. (Eds.). (2020). Editorial of Special Issue on Climate Change Impacts, Vulnerability and Adaptation: Asian Perspective. Environmental Research, 109826. Retrieved from <https://www.sciencedirect.com/journal/environmental-research/special-issue/10KXCRMVJ96>

Knowledge synthesis of APN's work on Climate Change research in Asia

- Uchiyama, C., Stevenson, L. A., & Tandoko, E. (2020). Climate change research in Asia: A knowledge synthesis of Asia-Pacific Network for Global Change Research (2013–2018), Environmental Research, Volume 188, <https://doi.org/10.1016/j.envres.2020.109635>.

Assessing APN's contribution to the Sendai Framework

- Uchiyama, C., Ismail, N., & Stevenson, L. A. (2021). Assessing contribution to the Sendai Framework: Case study of climate adaptation and disaster risk reduction projects across sectors in Asia-Pacific (2015–2020), Progress in Disaster Science, Volume 12, <https://doi.org/10.1016/j.pdisas.2021.100195>

Upcoming book on linking CCA, DRR and L&D

- 14 case studies on Linking Climate Change Adaptation, Disaster Risk Reduction and Loss & Damage will be published by Springer Nature / Macmillan Palgrave in **October 2023**

Publications library

Reports, proceedings, guides, toolkits and other output from APN projects
www.apn-gcr.org/publications-library/

Policy briefs

Policymaker-oriented concise summary of APN project outputs
<https://www.apn-gcr.org/briefs>

APN Science Bulletin

Peer-reviewed articles from APN projects
www.apn-gcr.org/bulletin/

Newsletter: APN Updates

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Thank you!