

Asia-Pacific Network for Global Change Research (APN)

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



About

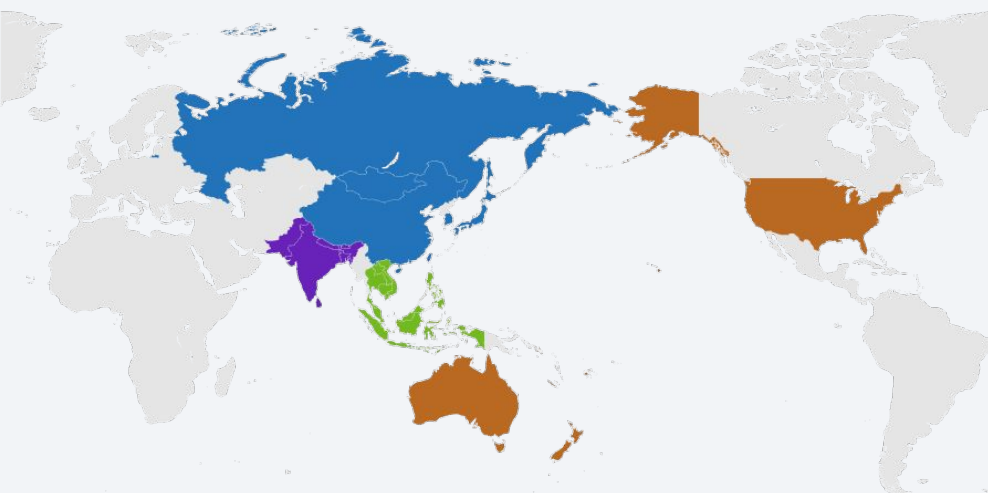
Established 1996

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

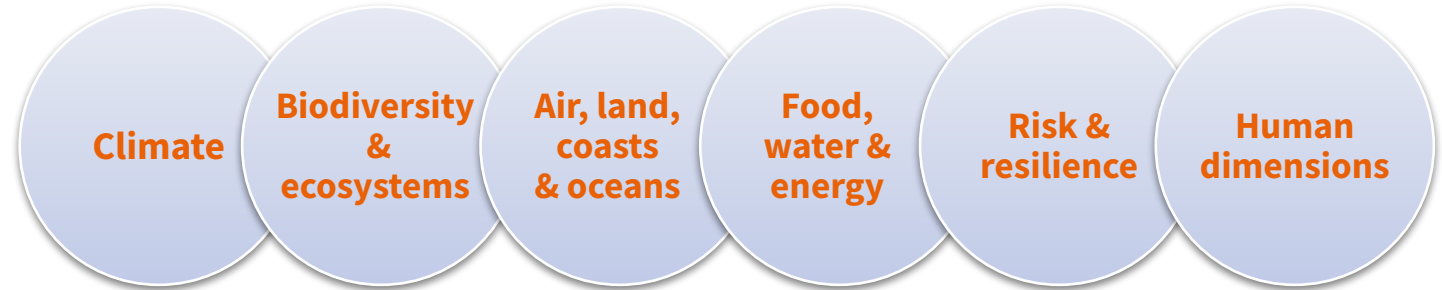
Secretariat Kobe, Hyogo Prefecture, Japan

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

Cooperating 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, WCRP, CORDEX programmes;**
 - ❑ 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. **APN will support the WCRP OSC in Rwanda**
- ❑ 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)

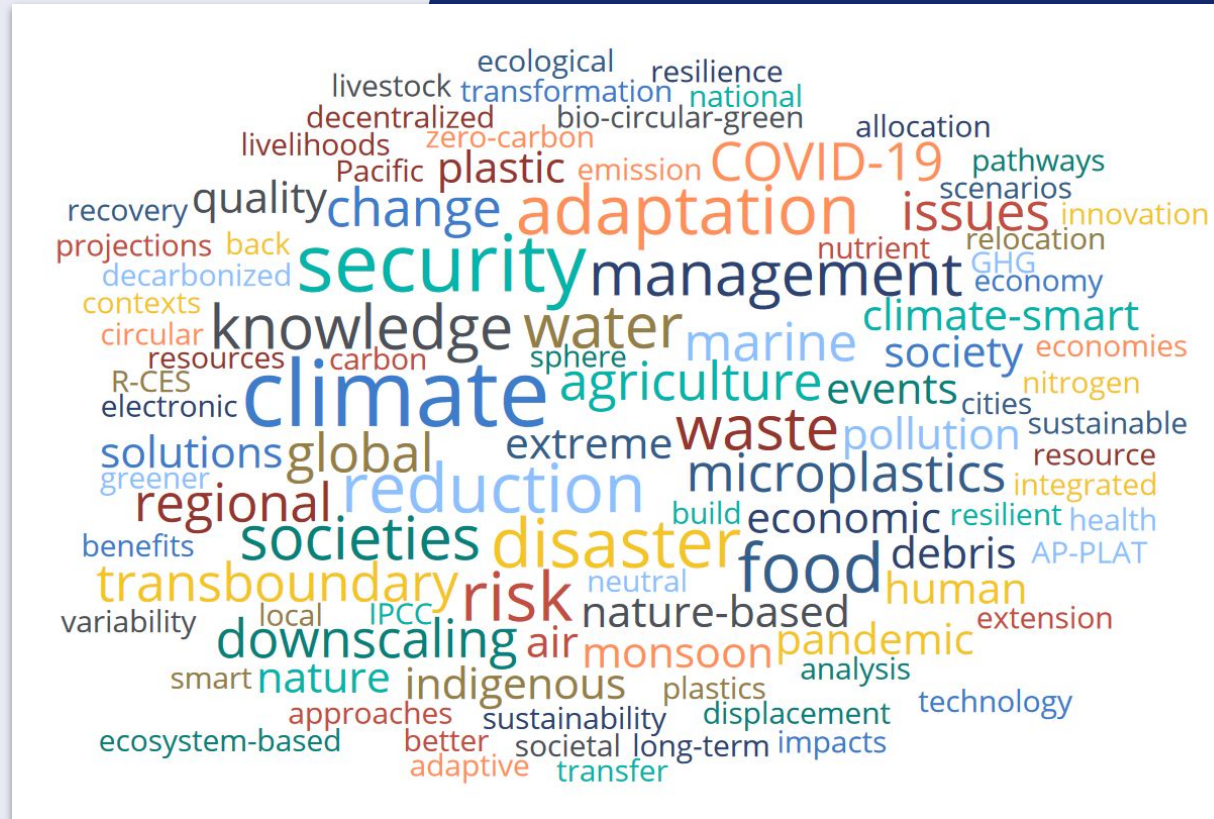
Fifth Strategic Phase: Our current focus

77.6%

Projects led by researchers from **developing countries** (FY 2020–FY2022)

60%

Projects led by **young and early-career** professionals (FY2022)



Word cloud of priority topics from FY 2020–2022.

Fourth Strategic Phase Report (2015-2020)



Abe, T., Bastaman, H., Deng, X., Fukushi, K., Heath, L. C., Hill, D. P., ... Yoshikawa, K. (2020). APN Fourth Strategic Phase Report. doi: [10.30852/spr.4](https://doi.org/10.30852/spr.4)

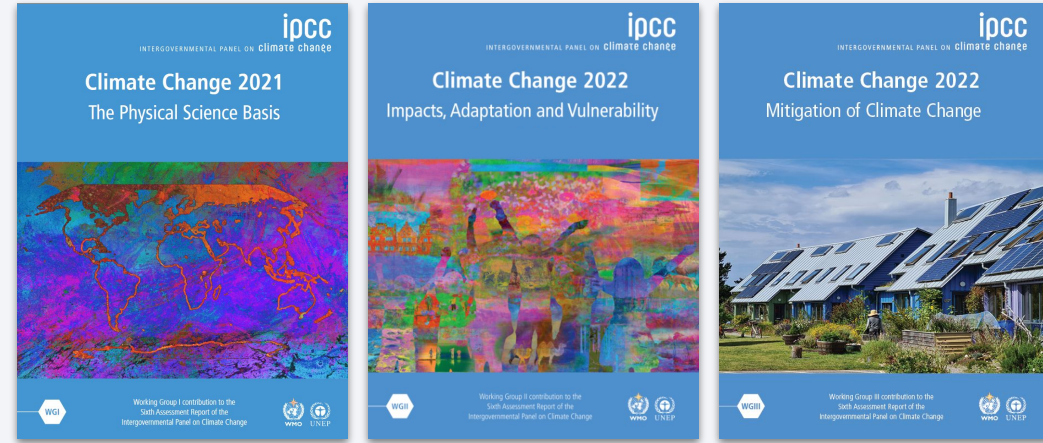


□ Phrase cloud showing member country priorities (2016-2019).



Recent accomplishments: 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 WGII 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

Outputs of CORDEX-SEACLID Southeast Asia (funded by APN)

1. <https://doi.org/10.1002/joc.6163>: Projected future changes in mean precipitation over Thailand based on multi-model regional climate simulations of CORDEX Southeast Asia
2. <https://doi.org/10.30852/sb.2018.436>: Future changes in annual precipitation extremes over Southeast Asia under global warming of 2°C
3. <https://doi.org/10.1002/joc.5151>: Sensitivity of temperature to physical parameterization schemes of RegCM4 over the CORDEX-Southeast Asia region
4. <https://doi.org/10.1016/j.gloplacha.2016.12.009>: Bias correction of global and regional simulated daily precipitation and surface mean temperature over Southeast Asia using quantile mapping method
5. <https://doi.org/10.1002/joc.4829>: Observed changes in extreme temperature and precipitation over Indonesia
6. <https://doi.org/10.1007/s00382-017-4028-8>: ENSO modulation of seasonal rainfall and extremes in Indonesia
7. <https://doi.org/10.1002/joc.5032>: Characteristics of precipitation extremes in Malaysia associated with El Niño and La Niña events
8. <https://doi.org/10.3354/cr01386>: Sensitivity of Southeast Asia rainfall simulations to cumulus and air-sea flux parameterizations in RegCM4
9. <https://doi.org/10.1002/joc.4803>: Performance evaluation of RegCM4 in simulating extreme rainfall and temperature indices over the CORDEX-Southeast Asia region
10. <https://doi.org/10.1016/j.atmosres.2020.104926>: Future projections of Malaysia daily precipitation characteristics using bias correction technique
11. <https://doi.org/10.1002/joc.6693>: Climate analog and future appearance of novel climate in Southeast Asia
12. <https://doi.org/10.1080/02626667.2019.1612901>: Future hydro-meteorological drought of the Johor River Basin, Malaysia, based on CORDEX-SEA projections
13. <https://doi.org/10.1007/s00382-020-05322-2>: Projected future changes in rainfall in Southeast Asia based on CORDEX-SEA multi-model simulations
14. <https://doi.org/10.2151/sola.2019-001>: Application of quantile mapping bias correction for mid-future precipitation projections over Vietnam
15. <https://doi.org/10.1016/j.atmosres.2020.105155>: SouthEast Asia HydrO-meteorological drought (SEA-HOT) framework: A case study in the Kelantan River Basin, Malaysia
16. <https://doi.org/10.2151/sola.2020-023>: Extreme Rainfall Projections for Malaysia at the end of 21st Century using the high resolution Non-Hydrostatic Regional Climate Model (NHRCM)
17. <https://doi.org/10.1016/j.envres.2020.109350>: Multi-model projections of precipitation extremes in Southeast Asia based on CORDEX-Southeast Asia simulations
18. <https://doi.org/10.1002/joc.7070>: Climatological characterization of tropical cyclones detected in the regional climate simulations over the CORDEX-SEA domain
19. <https://doi.org/10.1002/joc.7150>: Projected evolution of drought characteristics in Vietnam based on CORDEX-SEA downscaled CMIP5 data
20. <https://doi.org/10.1002/joc.6897>: Time of emergence of climate signals over Vietnam detected from the CORDEX-SEA experiments
21. <https://doi.org/10.1002/joc.4803>: Performance evaluation of RegCM4 in simulating extreme rainfall and temperature indices over the CORDEX-Southeast Asia region
22. <https://doi.org/10.1002/joc.6693>: Climate analogue and future appearance of novel climate in Southeast Asia
23. <https://doi.org/10.1002/joc.5211>: Performances of BATS and CLM land-surface schemes in RegCM4 in simulating precipitation over CORDEX Southeast Asia domain
24. <https://doi.org/10.1002/joc.7440>: Potential influence of sea surface temperature representation in climate model simulations over CORDEX-SEA domain
25. <https://doi.org/10.15625/2615-9783/16942>: A high-resolution climate experiment over part of Vietnam and the Lower Mekong Basin: performance evaluation and projection for rainfall
26. <https://doi.org/10.1002/joc.7433>: Climate change impact on sea surface winds in Southeast Asia

Thank you!

APN website

www.apn-gcr.org

Publications library

Reports, proceedings, guides, toolkits
and other output from APN projects

www.apn-gcr.org/publications-library/

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Peer-reviewed articles from
APN projects

www.apn-gcr.org/bulletin/

Policy briefs

Policymaker-oriented concise
summary of APN project outputs

<https://www.apn-gcr.org/briefs>

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www.apn-gcr.org/getmail

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