

Portfolio of APN Engagements

Australia



ASIA-PACIFIC NETWORK FOR GLOBAL CHANGE RESEARCH

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History and mission of the Asia-Pacific Network for Global Change Research

The Asia-Pacific Network for Global Change Research (APN) is an intergovernmental network of 22 countries established in 1996. Originating from the US White House Conference on Science and Economics Research Related to Global Change in 1990, where President George H. W. Bush advocated for collaboration in global change research and emphasised the need for international networks in this field, APN is working towards an Asia-Pacific region that is successfully addressing the challenges of global change and sustainability through:

- **Supporting research action:** Empowering collaborative research and science-based strategies for effective change.
- **Bridging science and policy:** Effectively linking scientific outcomes with policy mechanisms applicable at all levels of governance and across diverse social sectors.
- **Building scientific capacity:** Enhancing scientific capabilities of early career professionals, policymakers and practitioners, extending to local communities and civil societies.

Notable statements from Australia

“There are great challenges in front of us. Australia appreciates the efforts of the APN and its participants in building the scientific basis for future action and increasing the capacity of the region to respond to these challenges.”

Mr David Borthwick, Secretary, Department of the Environment and Heritage [9th Intergovernmental Meeting and Scientific Planning Group Meeting in Australia, 2004]

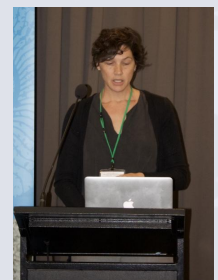


“Interaction of science and policy in APN is at the heart of what APN is doing. Science must underpin policy and good science lies at the base of good policy.”

Dr Michael Stoddart, Chief Scientist, Australian Antarctic Division, national Focal Point for Australia [9th Intergovernmental Meeting and Scientific Planning Group Meeting in Australia, 2004]

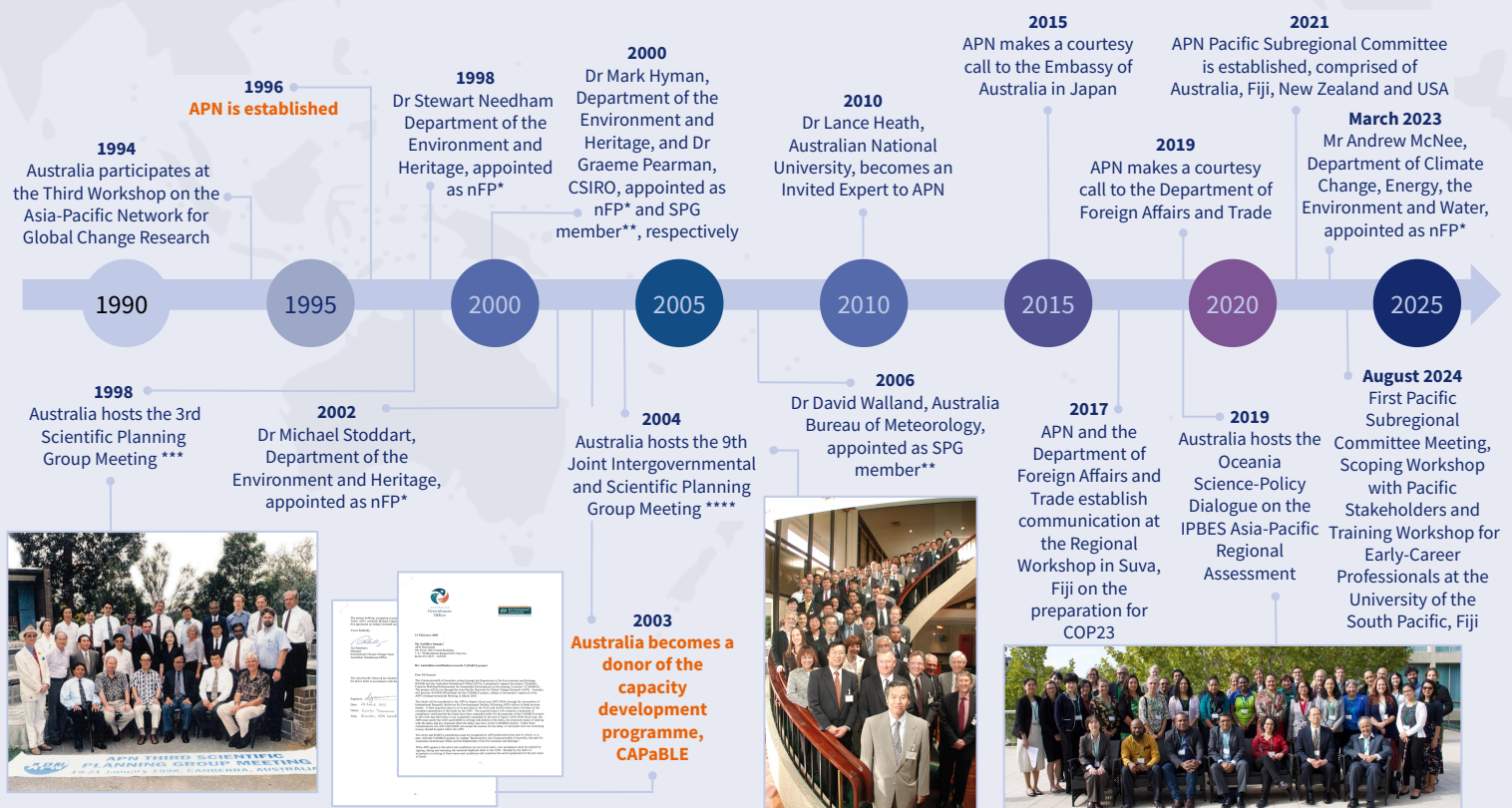
“A cornerstone of Australia’s climate change policy is to strengthen resilience to the impacts of climate change in the Pacific through resilience intervention strategies and programmes.”

Ms Kelly Buchanan, Head, International Policy Section, Department of the Environment and Energy [Oceania Science-Policy Dialogue on the IPBES Asia-Pacific Regional Assessment in Australia, 2019]



History of APN and Australia’s institutional engagement (1994-2023)

* National Focal Point
** Scientific Planning Group member



*** Environment Australia hosted the 3rd Scientific Planning Group Meeting in 1998 in Canberra, Australia, to discuss APN's scientific programme and procedures of the call for proposals.
**** Australian Greenhouse Office hosted the 9th Joint Intergovernmental Meeting and Scientific Planning Group Meeting in 2004 in Canberra, Australia. This inaugural joint meeting signified a fresh initiative aimed at enhancing collaboration between policymakers and scientists.
Photo of Dr Stoddart by Jessica Fitzpatrick

Portfolio of APN Engagements Australia

Overview of APN Global Change Research projects engaging Australia

Since 1999, APN and Australia have been strategically engaged in driving global change towards sustainable development. At present, APN has engaged researchers from over **60 institutions in Australia** to **implement 123 projects**.

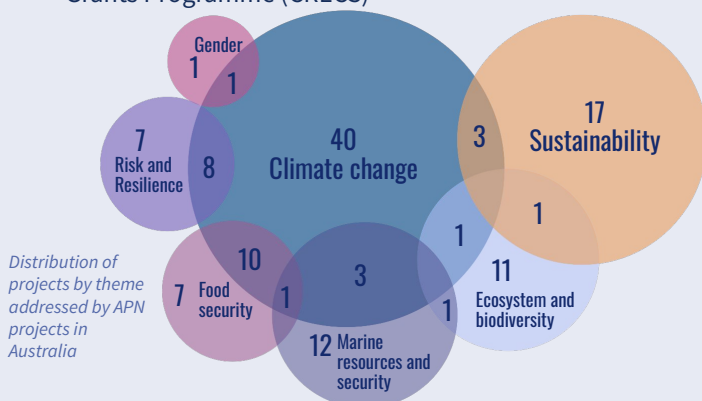
20  Government agencies

33  Research universities

9  Other institutions

The interrelated thematic focus of APN projects with Australia underscores the transdisciplinary approach embraced by APN, highlighting its commitment to integrating diverse perspectives in designing sustainable development solutions. APN research activities and programmes that have engaged and funded Australia-based researchers include:

- Annual Regional Call for Research Proposals (ARCP)
- Scientific Capacity Development Programme (CAPaBLE)
- Climate Adaptation Framework (CAF)
- Collaborative Regional Research Programme (CRRP)
- Collaborative Research for Early-Career Scientists Small Grants Programme (CRECS)



Projects in focus

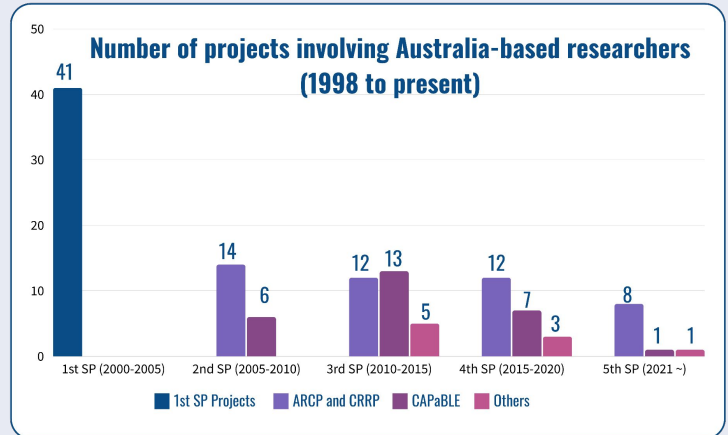
Project: Building scientific capacity in seasonal climate forecasting (SCF) for improved risk management decisions in a changing climate
The project highlights the pivotal role of integrating SCF into policy processes in Southeast Asia. By leveraging ENSO-based predictive systems and investing in targeted pilot projects, APN countries such as Australia can build capacity in climate risk management strategies, fostering regional resilience and sustainability.

PROGRAMME Scientific Capacity Development
PROJECT LEADER Dr Yahya Abawi, Australia Bureau of Meteorology
GRANT DOI [10.30852/p.4387](https://doi.org/10.30852/p.4387)

Project: Greenhouse gas budgets of South and Southeast Asia

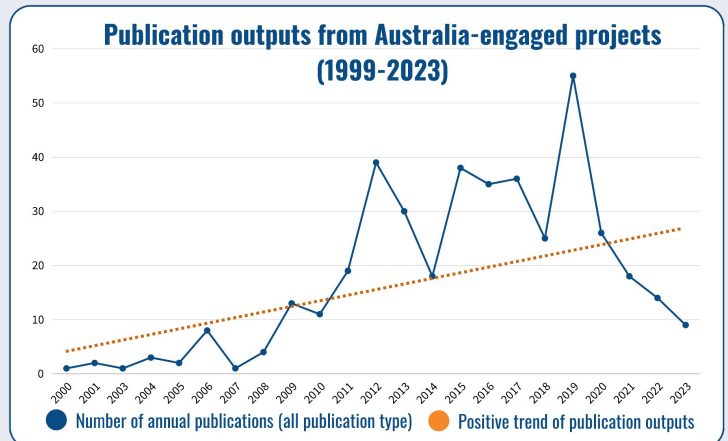
Over the course of three years, under the leadership of Australia's CSIRO and Japan's JAMSTEC, the project made significant strides in finalising territorial budgets for CO₂, CH₄ and N₂O in South and Southeast Asia. These achievements, acknowledged in both IPCC AR5 and AR6, underscore the project's international significance. It established a network of collaborators, extending the impact of APN in fostering comprehensive GHG budgets in Asia and the Pacific.

PROGRAMME Annual Regional Call for Research Proposals
PROJECT LEADER Dr Josep G. Canadell, CSIRO; Dr Prabir K. Patra, JAMSTEC
GRANT DOI [10.30852/p.4298](https://doi.org/10.30852/p.4298)



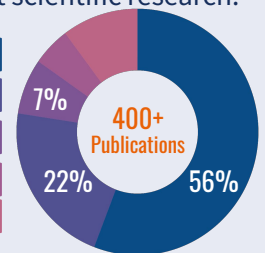
* SP - Strategic Phase

Publication in focus



These projects generated over **400 publications** that support scientific advancements and science-based policymaking. Peer-reviewed publications comprise **56% of the total publications**, ensuring the integrity and quality of published policy-relevant scientific research.

- Peer-reviewed publications (56%)
- Report (22%)
- Book or chapter (7%)
- Brief (5%)
- Resources and other materials (10%)



Policy-relevant project highlights led by Australia



Contributions to the Intergovernmental Panel on Climate Change (IPCC) Assessment Reports

More than 100 peer-reviewed articles from APN projects, including those from APN's flagship and Scopus-indexed "APN Science Bulletin" journal, were cited in the IPCC Sixth Assessment Report (AR6). As an example, IPCC AR6 featured **12 peer-reviewed articles from projects led by the University of the Sunshine Coast**, and cumulative total of **39 peer-reviewed citations from projects engaging Australian researchers**, with the most contributions to Chapter 15 "Small Islands". These citations demonstrate a testament to the impact of APN's scientific research and climate adaptation projects highlighting the vital role of APN and its partners in informing science policies in the Asia-Pacific region.

Scientific impacts and outreach for the Pacific region



Project: Risk and resilience in the Pacific - Influence of peripherality on exposure and response to global change

Seventy-three communities were visited and assessed along core-periphery urban gradients in the archipelagic countries of the Federated States of Micronesia (FSM) and Fiji, to assess the autonomous capacity of local communities to cope with environmental and climate adversity. Periphery indices were formulated from approximately 630 individual community questionnaires, with findings indicating that **a loss of traditional knowledge and community self-belief is anathemic to locally-led climate adaptation**. Through engaging with Pacific Island nationals in the conduct of the research and dissemination of project results, the project empowered early to mid-career academics from the region to drive evidence-based solutions that are likely to be effective and sustainable.

Owing to this project lead's expertise on climate change in the Pacific and numerous publication outputs, Prof. Patrick Nunn was **nominated by the Government of the FSM, the Government of Fiji, and the Government of Australia to the 6th Assessment Report** of the IPCC in June 2018. Prof. Patrick Nunn served as a Lead Author on the "Small Islands" chapter in the IPCC 6th Assessment Report of Working Group II, of which the full Working Group II report **cited 10 of the peer-reviewed articles** produced from this project.

PROGRAMME Collaborative Regional Research Programme
PROJECT LEADER Dr Patrick Nunn, University of the Sunshine Coast
GRANT DOI [10.30852/p.4554](https://doi.org/10.30852/p.4554)

Global change research across the Asia-Pacific region

Project: Optimising climate change adaptation through enhanced community resilience

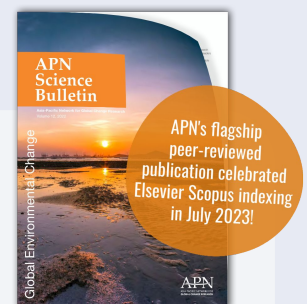
Led by research expertise from Australia, a community resilience assessment toolkit was developed and piloted across three peri-urban and rural communities in Cambodia and Vietnam to support local climate change adaptation for long-term monitoring. With its application, the tool may be readily taken up by Commune Councils to mainstream local climate adaptation and initiatives. Twelve focus groups engaged more than **70 community members**, and a further 30 public sector, academic and non-governmental stakeholders were engaged in **three regional policy dialogues**. A peer-reviewed article published from this project was also cited in the **IPCC 6th Assessment Report**.

PROGRAMME Climate Adaptation Framework
PROJECT LEADER Dr Chris Jacobson, University of the Sunshine Coast
GRANT DOI [10.30852/p.4537](https://doi.org/10.30852/p.4537)

Project: Coral reef and water quality status and community understanding of threats in the Eastern Gulf of Thailand

Coral reef health and community knowledge surveys were conducted in Thailand, Cambodia and Vietnam to support the management of marine resources and clarify the influences of anthropogenic marine pollution and fishing practices. The findings illustrated the critical need for a transnational IUCN Man and Biosphere Reserve to be established in the Gulf of Thailand for biodiversity protection and food security. A peer-reviewed article from this project was published in the APN Science Bulletin and **cited in the IPCC 6th Assessment Report**.

PROGRAMME Annual Regional Call for Research Proposals
PROJECT LEADER Dr RW Bill Carter, University of the Sunshine Coast
GRANT DOI [10.30852/p.4425](https://doi.org/10.30852/p.4425)



Intergovernmental Science-Policy Platform for Biodiversity and Ecosystem Services (IPBES) Science-Policy Dialogue in Oceania on the IPBES Asia-Pacific Regional Assessment



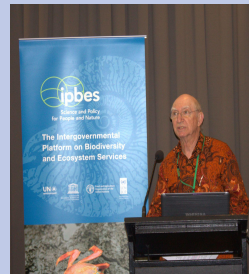
Capacity Building for the Implementation of the IPBES Asia-Pacific Regional Assessment

The Oceania Science-Policy Dialogue was held from 4-5 April 2019 in Canberra, Australia, to harmonise the science-policy interface for comprehensive biodiversity conservation. Delegates underscored challenges such as poor visibility, insufficient collaboration and policy disconnects, highlighting the imperative for clearer communication and transboundary cooperation. Recognising the significance of indigenous, local and traditional knowledge (ILTK), enhancing private sector engagement and fostering clearer policy directives emerged as pivotal strategies. This dialogue shed light on the path towards more effective biodiversity management and policy implementation, advocating for a holistic approach that integrated diverse knowledge systems and promoted collaboration across sectors and borders for sustainable outcomes.



Participants of the IPBES Science-Policy Dialogue in Canberra, Australia (2019)

Mr Ulu Bismarck Cramley, Ministry of Natural Resources and Environment, Samoa



▶ **“There is a need for governance improvement and behavioural change to enhance policy impact.”**

Dr Peter Bridgewater, Adjunct Professor, Institute for Applied Ecology and Institute for Governance and Policy Analysis, University of Canberra, Australia

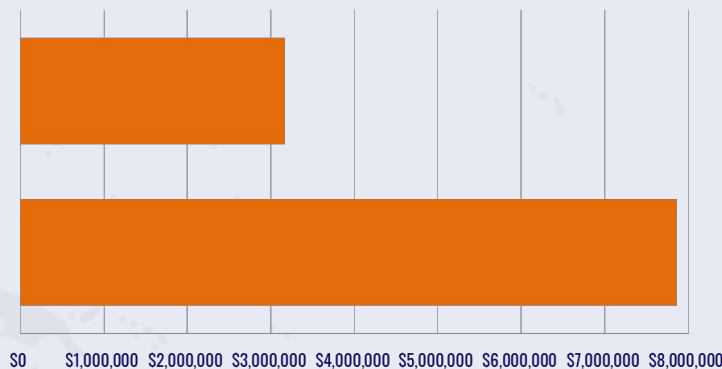
Financial contributions and impact

\$3,126,302 (USD)

APN investments in projects led by Australian institutions since 1998.

\$7,820,831 (USD)

APN investments in projects engaging Australian researchers since 1998.



APN received the direct financial contributions of USD 112,373* from the Government of Australia between 2003-2007.
*AUD converted to USD

Breakdown of APN investments

- 1st Strategic Phase Regional Research, Capacity Building and Networking Projects: USD 2,582,011 (33.0%)
- Collaborative Regional Research Programmes (ARCP and CRRP): USD 3,576,005 (45.7%)
- Scientific Capacity Development Programme (CAPaBLE): USD 1,083,065 (13.8%)
- Collaborative Research for Early-Career Scientists Small Grants Programme: USD 58,000 (0.7%)
- Climate Adaptation Framework: USD 461,750 (5.9%)
- Any Other Activities: USD 60,000 (0.8%)

