The **Pacific Insight Briefs** capture climate and disaster integration knowledge, lessons, and insights from the Australia Pacific Climate Partnership, and implementing partners. The ten thematic briefs were developed with support from the University of Technology Sydney.

Australian Aid | Australia Pacific Climate Partnership

Pacific Insight Brief 6 | **Education and Skills**

Education and skills development are crucial components in climate change mitigation and adaptation. Increasing awareness and supporting education on climate change and disasters is needed to mainstream climate across all aspects of society and economy. Specific skills are needed to address emerging and future challenges and take hold of opportunities associated with the growth of the 'green' low carbon economy. Further, supporting resilience within the education sector is critical for minimising disruptions of education services from slow and sudden onset disasters, ultimately contributing to broader community resilience.

There are a range of strategies and approaches that can be considered to integrate climate change and disasters into education and skills initiatives. These range from supporting early education, targeting specialised skills development, through to building resilience in the education system.

This brief provides insights based on the Australia Pacific Climate Partnership's (Climate Partnership) experience in supporting a range of education and skills research, support, and integration initiatives including lessons, barriers, and opportunities. It may be of interest and use to practitioners involved in designing and managing education and skills initiatives for climate resilient development in the Pacific. It builds on the Climate Partnership's guidance note on integrating climate and disaster resilience to support education programming in the Pacific which is available in the resources section of ClimateWise.

Insights and lessons

Education:

Education is a critical tool and driver to addressing climate change.

The Paris Climate Agreement (UNFCCC COP 21, 2015) Article 12 reiterates the importance of the role of education in enhancing climate action. It also reflects a right to know of global issues that affect all lives. Ensuring a foundational understanding of climate change and how it impacts society can be supported through the aid program, which includes a significant focus across various elements of early, secondary, vocational, and tertiary education systems in the Pacific islands region. One example is the Accelerating Climate Education for the Pacific (ACE) Program, which was supported by the Climate Partnership to integrate climate and disaster resilience concepts in school curricula.

A key challenge is engaging Ministries of Education, particularly those in smaller Pacific island countries (PICs) that lack the resources and technical capacity to prioritise climate education initiatives.

Given these constraints, enhancing the national environmental education curriculum to include relevant climate change information, training of teachers on climate change topics, retrofitting schools and associated infrastructure to withstand the impacts of climate change and climate-related risks and using the best available local and scientific knowledge on climate change solutions often become secondary priorities. Targeted support that aligns with the governments' national development plan, education plans and climate policies is therefore essential to enhance climate change and disaster risk management.

There are successful examples of climate change integration in education that can be built on.

The Vanuatu Skills Program is building the skills of Vanuatu to grow its economy, adapt to climate change, and drive low-carbon growth in tourism, agribusiness, handicraft, and construction sectors. Through the PNG Australia Secondary Schools Program, teachers and students were supported to access climate education materials to increase their understanding of climate change impacts and local adaptation options. The PNG Australia Awards supported short course scholarships to obtain Climate Policy diploma qualifications. In Samoa, the education sector has been supported to mainstream climate change and disaster across all policy, system, and curriculum components. The Australia Pacific Training Coalition (APTC) is also pursuing a range of strategies with local TVET institutions to support the delivery of climate change and disaster relevant courses. While these examples serve to demonstrate options, a more strategic and comprehensive approach across the aid program, and in coordination with country counterparts can be pursued.

Climate focused activities can enhance students' experiences.

Targeted climate change and disaster management activities as broader school activities beyond curriculum integration can be utilised to build climate skills and strengthen communities. The PNGAus Partnership Secondary Schools (PASS), supported by Australia's Education Program in PNG in 2021, ran a Climate Sprint for the PNG and Australia secondary schools. This is a short one-day educational "sprint" where students came together to focus on climate resilience and develop solutions using a design thinking approach. They also undertook a Climate Resilience Project (VA Leap) which was delivered over two years, this initiative encouraged secondary schools to do a vulnerability assessment. The pilot initiative saw 12 high performing secondary schools in PNG and 12 secondary schools in Australia engage in reciprocal immersion experiences. These initiatives need to be contextualised. Ministries of Education may seek support from youth champions, youth-based organisations and faith-based organisations to understand community's perspective to re-design the initiatives appropriate for target communities.

Existing education initiatives delivered through other partners and donors are open to partnerships to progress climate integration efforts.

There are many existing regional and global education initiatives (e.g. Climate Resilience Alliance, Global Partnership for Education, SPC's Education Quality & Assessment Programme), which are progressing various climate resilient education initiatives. Engaging with these including through bi-lateral education sector support programs offer opportunities to strengthen integration in the aid program.

The education sector plays an important role in supporting broader community resilience.

For example, there is a tendency for school facilities to be used as shelters during and after natural disasters such as cyclones and floods. This dual-purpose approach to school infrastructure may make sense but there are implications to consider. First – if schools are to serve as shelter during and after disaster events, the infrastructure needs to be designed and built according to appropriate climate resilient design standards. Secondly, potential disruption to education delivery needs to be considered and should be done as part of a comprehensive education sector / school disaster management plan.

Such plans can set out ways to ensure students are re-engaged in education as soon as possible following climate induced disruptions, including for girls whose education return can be most disrupted by such events.

Resilient and inclusive education infrastructure is a priority concern.

Climate change and disasters impact schools and school infrastructure. At present, however, there is limited funding to improve the quality of schools (and roads near schools) to withstand the effects of climate change over the short- and long-term. There is limited funding available under Ministries focused on rebuilding schools after a major disaster. Specific initiatives to climate-proof schools and inclusive infrastructure are therefore needed. Risk assessments of primary schools in Tonga and Vanuatu by the World Bank's Global Program for Safer Schools Pacific Roadmap, and a review of school infrastructure in Fiji's Suva-Nausori corridor by Fiji bilateral education program are some of the preliminary initiatives to better understand the status of school infrastructure.

However, comprehensive school infrastructure strategies are very much required to ensure the safety of schools and school children as well as for making schools inclusive for all. In addition, to reduce duplication of efforts, strategies for climate-proofing education infrastructure should build on existing safe-school guidelines[1]. The added value of 'climate change-specific guidelines' is to include future climate change projections into infrastructure planning beyond immediate disaster-response needs. For example, climate change projections provide information about areas which are likely to become more susceptible to flood or cyclone risks and are therefore unsuitable for school construction.

There is a lack of data and evidence base to identify, fund and implement climate resilient education solutions.

Intuitively, there is an understanding that climate change and climate-related disasters have an impact on education and learning – but evidence remains mostly anecdotal and undocumented. What limited data are available are collected through disaster and needs assessments and therefore tend to focus only on immediate damage to schools, textbooks and education material, or on injuries to students and teachers. But climate change can also have long-term impacts on education indirectly through effects on food and nutrition security, livelihoods and income, air pollution, water access and sanitation, health, and energy. These indirect effects are often understudied but can have a far more significant effect on education than direct impacts like the destruction of infrastructure.

[1] In addition to the generic infrastructure guidelines/principles, there are a lot of external guidelines for schools. Most notably, there is the Comprehensive School Safety Framework, including safe education facilities. https://www.unicef.cn/media/24851/file/Comprehensive%20School%20Safety%20Framework%202022-2030.pdf

Case example | **Climate Education Resources.**

Australia strongly believes in education as a powerful driver of change and invests in resources and tools to empower students and communities. Through the Climate Partnership, the Australian Government recently supported the Island Research Education initiative to develop climate-focused education materials for the Pacific.

Five primary readers, distributed in 11 Pacific Island countries, were developed to supplement reading activities and inform climate and disaster specific classes in the curriculum. The readers use accessible language and place-based content to reflect local landscapes and environments and cultural and geographic distinctions so that students can relate to what they see around them.

The readers use engaging storytelling to explore a range of climate-related concepts including food and water security, health and hygiene, conservation, and community resilience. They also prompt students to think about the role they can play to strengthen climate and disaster resilience in their communities.

In addition to the readers, two handbooks - Living with Hazards and Water for Life - have been developed and distributed to supplement climate and disaster, and water focused curriculum for high school and TVET students.

Skills:

Supporting and building leadership within the sector to tackle climate change is critical.

Education stakeholders can strengthen their capacity in understanding and acting on climate change and disaster risk reduction and proactively participating in relevant climate and disaster resilience policymaking and financing processes at regional, national, and sub-national levels. Ministries of education in the region often have limited engagement with Ministries of environment, and therefore lack opportunities to exchange expertise and ideas on climate change and disaster issues. Education Ministries and stakeholders can promote cross-sectoral collaboration with other Ministries and agencies to systematically understand the implications of climate change and disasters on education systems and to enable cross-sectoral actions for making climate resilient education a reality.

There is a shortage of skills within the region to address the range of climate change challenges and opportunities.

As one of the most vulnerable regions in the world to climate change and disasters, it is increasingly important that skills to address both adaptation and mitigation issues are developed in the Pacific. According to the Climate Partnership's skills audit in 2021, there is a shortage of specialised skills across climate finance and policy, integration and mainstreaming climate change and disaster risk reduction (DRR) policies, coastal and land management, water and waste management engineering, climate resilient agricultural and fisheries management, as well as skills to support the uptake of renewable energy.

For Pacific islanders there continue to be ongoing barriers and limited opportunities to access climate related careers.

Some of these barriers from the Climate Partnership skills audit research include complex recruitment processes preventing local practitioners from accessing senior leadership positions, a bias towards international university qualifications at the expense of other work and lived experience; and a market that supports applications from international candidates for national or Pacific-based consultancy work. Pacific Islanders find it difficult to apply for consultancy positions in international development/climate change programs that often require at least 10 years' experience. Pacific professionals should be supported with access to alternative pathways for gaining expertise, beyond traditional formal qualifications. This could involve the introduction of short courses tailored to their needs or facilitating access to existing short courses.

Support job trainings on climate and disaster resilience.

The most common barrier for developing climate skills as found in the Climate Partnership's skills audit is limited opportunities for on-the-job learning. While courses provide theoretical knowledge on climate and disaster resilience concepts, training that helps employees learn and perform their jobs in real-life situations, in turn, builds their confidence. On the job learning is an effective and practical form of skill development. Given that employees working with the community are often the first responders and experience climate change events firsthand, it is critical to prioritise capacity building for frontline workers while they are actively engaged in their roles within the community.

At TVET level there is a strong interest within county organisations to build capacity to engage with and promote climate and disaster relevant skills and qualifications.

For example, the Kiribati Institute of Technology (KIT) is progressing towards the development of a climate and disaster short course and is looking to mainstream climate across relevant vocational qualifications. Similarly, the Vanuatu Institute of Technology (VIT) is being supported to form a Green Committee that will coordinate the implementation of the VIT Climate Change and Environmental Awareness Action Plan 2022-2026.

Approaches to climate change education and skills development can incorporate traditional and local knowledge (TLK).

Pacific education curricula can incorporate TLK as well as Western science-based knowledge, so that Pacific people learn all they can about the dynamic environments in which they live, thereby optimising livelihood and development strategies and decisions. Since TLK is difficult to contextualise and properly communicate in foreign languages, the use of preferred vernaculars and engagement of local leaders should be encouraged.

There is a growing network of professionals across the Pacific working together to enhance skills and leverage experience and knowledge.

This is being supported through the establishment of the Australia Pacific Climate Alumni Network (APCAN) and individual country climate alumni networks, associated with Australia Award Alumni networks. These networks deliver climate change and DRR events on training, knowledge sharing, and skills development as a valuable resource and pool of expertise and advice. A well-resourced and climate-focused alumni network could help alumni keep up to date with evolving climate change science and information which can then be applied on the job. Having a database of Australian Awardees with their details can also assist donors, contractors and implementing partners in sourcing professionals with preferred qualifications for climate change consultancy and employment. Moreover, it could provide aspiring individuals and groups with the opportunity to seek mentorship and peer support from previous awardees.

Opportunities

Enhance supply of climate skills. Climate change skills are increasingly in demand throughout the Pacific region and all PICs are experiencing a skills shortage including in disciplines related to climate change. There is considerable potential for a joined-up approach regionally involving DFAT investments and local training providers to increase the quality and supply of skilled workers. This can be encouraged through increased collaboration between DFAT regional programs (e.g., the APTC, Australia Awards, Australian Volunteers) and Fiji bilateral skills development programs. Climate change impacts different sectors such as tourism, health, and infrastructure, therefore, it is crucial to consider developing climate skills across diverse sectors to ensure climate resilient development.

Support knowledge development. Climate and disaster resilience information should be integrated into the curriculum at all levels (primary, secondary, TVET, university, industry training) and across all topic areas and as part of dedicated modules (e.g., Vulnerability Assessment and Early Action Planning). New and up-to-date climate change and disaster Information should be shared with students in accessible formats such as readers and handbooks; be taught to trainers including schoolteachers, vocational education and training providers and university staff. It is also important to recognise that climate change knowledge is constantly evolving. Therefore, it is essential to establish a clear timeline and process for revising the resources. Outside of school, policymakers can support public awareness campaigns to educate communities and improve climate-responsible behaviour. There is also a need to align curriculum integration with the governments' education sector plans and the ministries of educations' school term timelines to be effective and sustainable.

Strengthen systematic collection and use of data from education systems and other sectors. There are opportunities to routinely collect data on the ways in which climate-related risks affect education in a cost-effective manner through integration with different government databases, such as environment, health, housing and water, in order to accurately measure the impact of climate change and inform policy decision. In this regard, there is scope for integrating education data into climate and disaster data platforms, such as those typically maintained by national meteorological services, disaster management agencies and ministries of environment.

Incorporate education system priorities into climate change policy and financing. Climate finance requirements for the education sector are rarely met. There is significant scope for expanding the availability of contingency funds for the education sector during climate-related disasters. At present, only a fraction of contingency funds is allocated to education ministries (with most funds going to agriculture and infrastructure). The climate investment needs for the education sector could also include mitigation needs, such as the provision of reliable, affordable, and sustainable clean energy services for schools or energy efficiency measures of education infrastructure.

Improve cross-sectoral collaboration and programming. Collaboration is also needed across other sectors, especially given that impacts of climate change on the education sector are cross-sectoral. One of the ways through which climate change affects education and learning outcomes in the region is through impacts on health, which translate to increased absenteeism. Enhancing collaboration with Ministries of health on climate change issues can ensure that schools and education authorities are better equipped to respond to health risks that may become more frequent under climate change.

Future formal labour market assessments need to consider the climate change dimension to ensure labour market recommendations address ongoing demand for climate skills. The identification of climate skills demand and potential employment opportunities during the design stage of a project is one mechanism to help match labour supply with demand. This will involve collaboration between labour ministries, job centres, employment networks, donor partners, training providers and employers.

Case example | **Integration of climate and disaster resilience in the Samoan education sector.**

The Australian and New Zealand governments are working in partnership with the Samoan government to deliver a Climate and Disaster Resilience Strategy for the education sector through the provision of budget support. This represents an effective approach to sector wide integration of climate and disaster resilience as it incorporated the following aspects:

- Climate change specialist included on the design of the program.
- Draws on the Samoan Education Sector Plan which identifies the development of a Climate Change and DRR Strategy.
- Budget support and implementation plan for the development of the Climate Change and Disaster Risk Resilience Strategy.
- Funding for technical assistance identified to develop and support implementation of the strategy.
- Climate and disaster resilience focal point identified to coordinate across the Education sector.

'The strategy is also streamlined with the implementation, financial management, reporting, monitoring, and evaluation processes of the Education Sector Plan. This approach recognises that the management of climate change and disaster risks must be incorporated into strategic planning and operational functions of Implementing Agencies, schools and school committees, and training providers.' (Education Sector Climate Change & Disaster Resilience Strategy 2021 – 2024).

Further reading:

Please visit the resources section of ClimateWise. to access a range of knowledge products including the Climate Partnership's Integration Guidance Note for Education and Skills, the Climate Skills Audit and country factsheets, and the Climate Education Readers.