
Just Transitions to
Decarbonisation in the
Asia-Pacific

Asia-Pacific ClimateScapes

Exploring the opportunities, challenges and trade-offs towards just transitions for decarbonisation

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About Just Transitions to Decarbonisation in the Asia-Pacific

Working in partnership with teams from the UK Science & Innovation Network, the programme examines how just transitions whilst tackling climate change and biodiversity is key to supporting inclusive economies and societies in the future. Through the programme, the Academy awarded funding to seven research projects exploring the actions required in the Asia-Pacific to tackle climate change and biodiversity loss, to identify opportunities for decarbonising economies and societies, and to recommend options and pathways for communities, workers, businesses, policymakers and the wider public. The programme was funded by the UK's Department for Business, Energy and Industrial Strategy.

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Executive summary

The purpose of this report is to provide background context to decarbonisation strategies across the Asia-Pacific region. By reviewing existing policies and stakeholder interests, whilst zooming-in on particular case studies, we provide recommendations for promoting just transitions to sustainability. We also highlight the challenges and trade-offs in fulfilling decarbonisation objectives regionally. We adopt a multi-landscape approach and regional political ecology to consider the intersecting social, political, and economic challenges towards decarbonisation across interconnected work packages, these include: 1) RiverScapes, 2) ForestScapes, and 3) OceanScapes.

Our feminist political ecology research and case-driven ethnographic methods challenge the dominant geopolitical narratives orbiting regional commitments to decarbonisation, and ideas of just transitions. Our empirical data draws on a combination of qualitative, ethnographic methods, placing the research teams inside participants' homes, kitchens, fields, plantations and fishing boats. From these vantage points we were able to observe the range of performances which were enacted by women and men in relation to each other and their families and neighbours, as they utilised various props and intermediaries. We were also able to focus on intimate relationships that might otherwise be ignored, and to ask questions that might otherwise be overlooked.

While much effort has been made to understand the social-ecological implications of clean energy transitions in the region, we understand decarbonisation as both the technical and political measures for mitigating anthropogenic greenhouse gas emissions. Such measures include market-based, performance-based, and community-based approaches. Using the multi-landscape approach, we set out to understand the tolerable costs and benefits of decarbonisation for peoples dependent on these landscapes. What should these costs and benefits look like and for whom? How can decarbonisation policies speak to alternative knowledge-claims and be decolonising? How can such initiatives build local capacities and capabilities for climate change adaptation, mitigation and resilience? Responding to these social and environmental justice issues is integral to developing solutions that simultaneously address the climate crisis, biodiversity loss and growing inequality.

Introduction

Nowhere are the drivers and impacts of climate change felt as acutely as in the Asia-Pacific. The world's biggest population. The fastest-growing part of the global economy. Two of the three largest carbon dioxide-emitting countries. The largest share of emissions globally. The region hosts some of the most low-lying and vulnerable countries and is the most exposed to extreme weather events. The Asia-Pacific also hosts some of the youngest populations and many global leaders in green technology. Successfully transitioning to decarbonisation here, will change the course of the climate crisis. Failure will trigger a global domino effect (IMF, 2021).

A rapid decarbonisation of the region's economy with equity offers immeasurable benefits for current and future generations. The pressing duty to tackle climate change is also fundamental to the principle of sustainable development, defined by the Brundtland Commission (1984: 43) as, 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'. Contrary to this principle, an approach to decarbonisation that defers effective climate action onto the poorest, and/or into the future, for example, using targets for future emissions reductions, and unproven green technology developments, disproportionately risks the ability of future generations to meet their own needs. It also blocks the poorest countries from sustainable development.

Just transitions to decarbonisation

Labour and environmental justice organisations have provided some tools and theories that can be applied to help ensure costs and benefits from green interventions in the region are equitable. But transitioning to decarbonisation across Asia-Pacific economies will generate trade-offs. There will be winners and losers as associated costs and benefits fall unevenly on different communities, both now and in the future. The intergenerational implications of decarbonisation programmes cannot be overstated. Abrupt changes to the energy sectors of the UK and USA, for example, have left enduring scars in communities forced sideways into insecure livelihoods.

In forcing regional decarbonisation, this unacceptable collateral damage has prompted calls for 'just transitions'. While the term is increasingly prevalent in the public discourse, it remains variously defined. At its 102nd Session (2013), the International Labour Conference adopted a resolution and a set of conclusions, concerning sustainable development, decent work and green jobs putting forward a policy framework for a 'just transition'. For industrial / post-industrial economies, the labour-driven just transition concept is both justified and essential in light of today's deep political polarisation and 'jobs-versus-environment' tensions. According to the ILO just transitions can be enabled through four pillars of the Decent Work Agenda. These include: 1) social dialogue, 2) social protection, 3) rights at work, and 4) employment. These pillars, they argue, are the indispensable building blocks of sustainable development and must be at the centre of policies for strong, sustainable, and inclusive growth and development. But, these just transitions can never be one-size-fits-all trajectories.

Beyond one-size-fits-all

This report brings together research from three international collaborations exploring transitions to social and environmental justice for climate change mitigation, adaptation, and resilience across the Asia Pacific. These include:

- 1) Living Deltas - a UKRI-funded project exploring sustainable delta futures in South and South-East Asia,
- 2) a Royal Society of New Zealand Marsden Fund project exploring the political ecology of forest protection in Asia-Pacific, and
- 3) a project supported by the UK Overseas Territories Conservation Forum (UKOTCF), exploring the political ecology of large Marine Protected Areas in the Pacific.

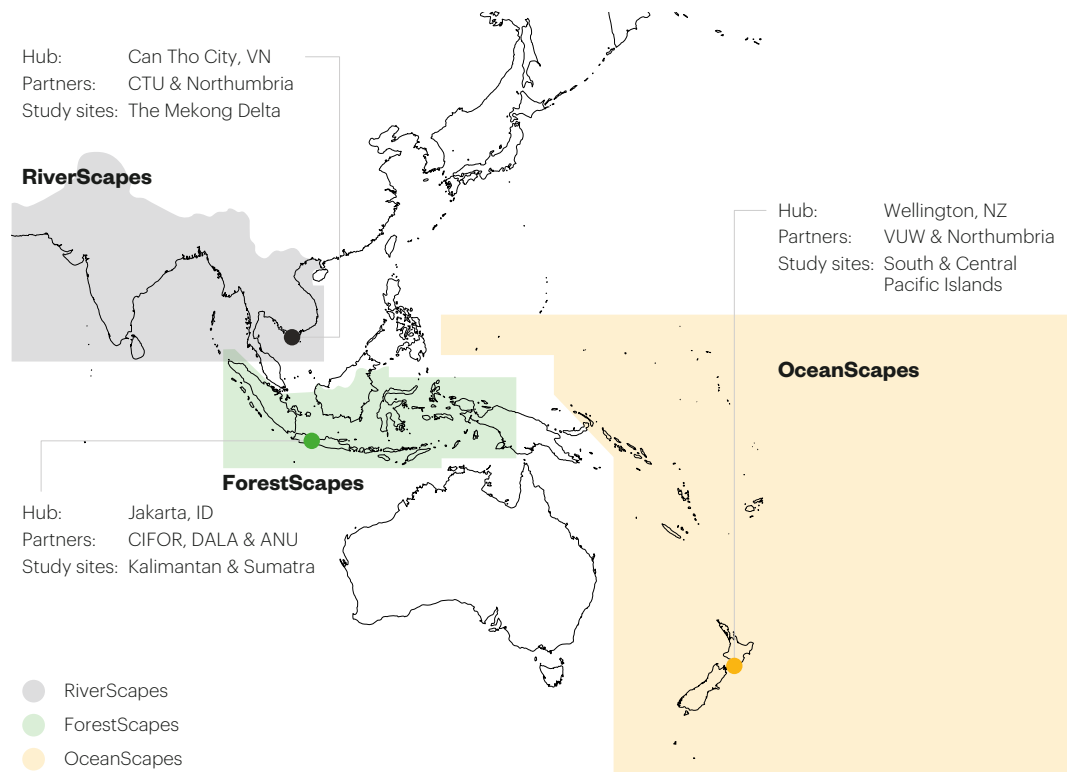
Through our regional partnership networks, we engaged a large portfolio of ongoing nature-based climate change and decarbonisation initiatives in countries across the Asia-Pacific. We adopted a multi-landscape approach and regional political ecology to consider the intersecting social, political, and economic challenges towards decarbonisation across interconnected work packages, these include: 1) RiverScapes, 2) ForestScapes, and 3) OceanScapes. In doing so, we set out to address the following three questions:

- 1) How do young people understand ‘just transitions’, i.e., what trade-offs are they facing, what are the sacrifices they are willing to make, and what do they expect from policymakers to ensure sustainable futures?
- 2) How do young people engage with environmental change and how do they understand and frame the threats arising to their livelihoods?
- 3) How do young people take action for climate adaptation and mitigation?

Using textual analysis, interviews, and participatory action research we explore the role of young people in envisioning and charting a future for living in coastal zones, major river deltas, and tropical forests in times of rapid environmental change.

Landscapes approach

While much effort has been made to understand the social-ecological implications of clean energy transitions in the region, we understand decarbonisation as both the technical and political measures for mitigating anthropogenic greenhouse gas emissions. Such measures include market-based, performance-based, and community-based approaches. Using the multi-landscape approach, we set out to understand the tolerable costs and benefits of decarbonisation for peoples dependent on these landscapes. What should these costs and benefits look like and for whom? How can decarbonisation policies speak to alternative knowledge-claims and be decolonising? How can such initiatives build local capacities and capabilities for climate change adaptation, mitigation and resilience? Responding to these social and environmental justice issues is integral to developing solutions that simultaneously address the climate crisis, biodiversity loss and growing inequality.

Figure 1: ClimateScapes of the Asia-Pacific

OceanScapes, RiverScapes, and ForestScapes are explored through this report drawing from evidence gathered across the Asia-Pacific region ensuring each landscape exploration was regionally focused yet connected to local research and policy hubs. These include Vietnam, Indonesia, and New Zealand.

To challenge the dominant geopolitical narratives orbiting regional commitments to decarbonisation, we use a case-driven ethnographic approach and feminist political ecology. Using a combination of qualitative, ethnographic methods, our empirical data draws from participants' homes, kitchens, fields, plantations, and fishing boats. From these positions we monitor the performances enacted by women and men in relation to each other and their families and neighbours, as they utilised various props and intermediaries. We focus on the intimate relationships that might otherwise be ignored, and to ask questions that might otherwise be overlooked.

Structure of the summary report

The rest of this summary report is arranged into three thematic sections, each exploring a separate but related landscape across which regional approaches to decarbonisation are explored. These ClimateScape sections have 4 objectives: 1) providing a background context to decarbonisation strategies across the defined landscape, 2) reviewing the existing and developing policy arenas where transitions to sustainability are taking place, 3) identifying key stakeholders whilst focusing on case study examples. These examples ground abstract regional policy goals in local contexts. And 4) suggesting recommendations towards just transitions for decarbonisation. The report concludes with a brief synthesis of these recommendations, as well as highlighting areas for further research.

ForestScapes

As the emerging economies in the Southeast Asia region grow, the quality of the environment declines due to overexploitation of natural resources (Nathaniel, 2021). Intensive economic activities produce environmental externalities in the form of pollution and carbon emissions with their associated transboundary implications, such as haze in the Malaysia, Singapore and Indonesia region of Southeast Asia (Khan, 2019). Despite all the countries in the region experiencing similar environmental threats from carbon intensive sectors, their environmental repercussions will be distributed unevenly depending on the country's socio-economic and geographic situations (Mendelsohn et al., 2006). At the community level, it will impact differently those who have measures to adapt to environmental changes compared to those who don't have the agencies to do so.

Southeast Asia is host to 15% of the world's tropical forest but experiences the highest rate of deforestation in the tropics. Agribusiness and the expansion of human settlements are the leading causes of deforestation in region contributing to anthropogenic carbon emissions, with Indonesia contributing to 62% of forest loss, followed by Malaysia (17%), Myanmar (5%) and Cambodia (5%). Southeast Asia is also where around 14% of the world's peat carbon is located, with the majority situated in Indonesia (65%) and Malaysia (10%).

In Indonesia, ecological damage caused by agribusiness expansion has rendered many forest frontier regions heavily degraded and burned (Astuti, 2021). This has been the leading cause of the transboundary haze dilemma and carbon emissions in Southeast Asia, particularly in Indonesia (Miller et al, 2021). Industrial companies are not the only key actors, local farmers are increasingly entangled in the causing of these anthropogenic pressures.

Smallholder producers now account for 40% of Indonesia's palm oil commodity output and contribute to a significant portion of the environmental impacts from that sector. The commercialisation of agriculture has opened up opportunities for young, rural smallholders to engage in cultivating boom crops and intensive mono-culture farming such as oil palm (Howson 2017; Howson & Kindon, 2015). This agrarian transition has changed the pattern of land access and ownership in the rural areas. While some young farmers are able to improve their livelihoods and accumulate land, others fall deeper into poverty and landlessness (Li, 2014). State-backed enclosures and large-scale private land deals have reduced the availability of forest-land commons in the rural areas (Barney & Van Der Meer Simo, 2019). Rent seeking and elite captures in the carbon intensive sector also widen the wealth gap between the richest and the poorest. The accumulated profit from the extractive industries grew disproportionately with the socio-economic impact negatively affecting the life quality of the poorest young people in Indonesia (Oxfam, 2017). For example, the collective wealth of the four richest Indonesian men was \$25 billion, and this was more than the total wealth of the 100 million poorest people (Oxfam, 2017).

We carried out three case studies in 1) Jambi Province, 2) Mentawai Islands, and 3) Central Kalimantan Province, Indonesia (Figure 1). We interviewed young farmers and youth activists to understand their future aspirations in relations to their livelihood security and decarbonisation in Indonesia.

Figure 2: Locations of three ForestScape case studies

Based on the findings from this research, the following recommendations to achieve just transitions to decarbonisation in the agriculture and forest sector are proposed:

- **Prioritising policies that facilitate the achievement of just and secure land tenure for forest and indigenous communities**

The Government of Indonesia has started to pay greater attention to communities' rights with regard to forest and peatlands through the social forestry program. The program opens 12.7 million hectares of forest areas to community access and aims to address land tenure injustice. National policies in climate mitigation initiatives such as the Reducing Emissions from Deforestation and Forest Degradation (REDD+) programme have also highlighted the importance of land tenure security for the successful implementation of decarbonisation initiatives.

- **Fostering the private sector's genuine participation in decarbonisation initiative**

All private sector entities working in the land and forestry sectors are critical to climate adaptation and mitigation. With powers and infrastructures, they can play a key enabling and steering role in pursuing the transition to lower the carbon forms of the forest and agricultural sectors. The private sector can develop the design and delivery of many climate adaptations and mitigation services and genuinely follow the social and environmental safeguards and other instruments. Even the private sector must also take on a bigger role in financing climate adaptation and mitigation (World Bank, 2020). In terms of policy, the private sector requires a strong enabling framework for investing, provided by policies and incentives, that give the right signals to investors. The deployment of proven instruments and mechanisms, such as social and environmental safeguards or FPIC, can help the private sector to reduce the cost of capital and investment risks.

- **Mobilising resource and financing for a successful just transition initiative**

The majority of policy stakeholders emphasise the significance of resource mobilisation to support decarbonisation in the forestry and climate change sector. However, we are against the notion that the national government can only lead the systematic transition to the green economy through the market. Instead, we call for the serious financing commitments from the developed countries to facilitate least-developed countries to achieve just transition in the forest and agriculture sector.

- **Protecting and restoring peatland to decarbonise Indonesia's forest sector**

Indonesia is host to more than 15 million hectares of peatlands. Peatland is a layer of decomposed plant material with acidic and low-nutrient characteristics that remains waterlogged in its natural state. Peatland is a carbon rich kind of soil and the ways it is used in Indonesia are dominated by large scale monoculture plantations. The use of peatland was initiated by the myth that it was empty wasteland, whereby swamps rich in carbon were associated with under-utilised and non-productive land. Millions of hectares of peatlands were converted to agricultural plantations while ignoring the rights of Indigenous and local communities. In the last 30 years, 11 million hectares of peatland have been converted to palm oil plantation. This has resulted in long and deep land tenure conflicts between communities and concessionaires or between communities and the local and national governments.

- **Supporting small-scale inland fisheries sector to protect mangrove forest**

As an archipelago, Indonesia evokes images of a maritime country that thrives on the bounty of its islands, a place of diverse fishing community and traditions dating back centuries on all coastlines and dotted with villages where communities combine agricultural and fishing activities. Having one of the longest coastlines in the world, Indonesia should be a beacon for fisheries and environmental governance. Surprisingly, fisheries are one of the key non-energy economic sectors (ADB, 2020) that are generally overlooked in the conversation about climate changes adaptation and mitigations. Meanwhile, climate change has severely affected the fishing sector, both marine and inland fisheries, and in both physical and biological terms. The rising sea level, ocean acidification, and changes in precipitation, groundwater, and river flows have significantly impacted coral reefs, wetlands, rivers, lakes, mangroves, and estuaries. This has required adaptive measures to exploit opportunities and minimise impacts on fisheries and aquaculture systems. The law governing the management of coastal ecosystems and small islands (No.1/2014 and No.27/2007) is intended to protect the fisheries sector but the question of how remains persistent.

- **Improving the management of the protected areas for decarbonisation**

Protected areas have been designed globally as a key device in searching for sustainable development and battling against climate change. Operating at the landscape level, a national park or wildlife sanctuary provides not only conservation of biodiversity but also essential ecological, social, cultural, and economic services. In many places, protected areas are even the only place where humans can find a sanctuary when there is a catastrophic event. Indonesia has impressively created more than 36 million hectares of both marine and terrestrial protected areas. Most of the protected areas are well managed and remain the sanctuary of natural ecosystems across the country. The presence of natural vegetation, soils, and key marine species such as seagrass and mangrove in the

protected areas have played a major role in climate mitigation, preventing the loss of carbon and capturing carbon dioxide from the atmosphere. The protected areas also provide essential ecosystem services not only for the animal and plants but also to communities beyond the borders.

- **Communicating effective and simple messages to and by young people**

To be effective, communicating decarbonisation and climate change-related topics to communities and young people need to be done in a way and language that can be understood by them. As information technology is playing a significant role in the life of young people, social media and young influencers are also important parts of the climate discussion. Young influencers design their social media content with simple, familiar words and use local contexts and sometimes local language as well. To deliver a compelling message and to be able to reach the followers, the influencers draw a link between climate change issues and young people's lifestyles. For example, packaging a climate message through coffee (the young Indonesian is currently spending a lot of time in a coffee bar) has proven more engaging and gets a lot of attention from young people as they can connect climate crisis with the coffee that they drink. Plastic waste, green economy, green jobs, and environmental protection policy are among the top social media content that attracts young people's attention the most. Unfortunately, young people are less engaged in social media content covering indigenous people. Therefore, improving young people's attention to indigenous issue is important.

- **Removing bureaucratic barriers to enhance youth's participation in decarbonisation**

The majority of the government's climate-related programs for youth are not designed properly for and adapted to the dynamic of young generations. Excessive bureaucracy, the culture of formality, and the lack of transparency diminish the willingness of youth organisations and individuals to participate in the government's program in climate change. The culture of bureaucratic illustrates the paternalistic relations and behaviour created by those adults who hold the power and young generation. Removing bureaucratic barriers and fully supporting youth activities will enhance their participation in decarbonisation initiatives.

In Thailand and Indonesia, youth organisations in environmental issues have come under political pressure from government agencies. The government authorities have closely monitored and increasingly pressured youth organisations, especially those working on environmental issues criticising government development agendas (Wardhana 2021). The pressure indicates that young people are not seen as important stakeholders articulating their voices on an important political issue. It also illustrates the neglect of the political role of youth in having a green perspective and taking a real stand on preserving environment. The deployment of bureaucratic and political pressure in a limited and short-lived state-sponsored program involving youth generations is likely to be seen as a political strategy to tame and channel the political aspirations of youth in ways that suppress genuine political mobilisation. We, therefore, suggest the government authorities to collaborate with youth activists and allow them to shape the policy making processes, especially, on issues that are important to them.

- **Mainstreaming gender equality to support young women**

In Indonesia there is an unwritten social norm that expect young people to diligently observe and obey adults rather than be equal agents of change. Moreover, gender stereotypes contribute to young women's disadvantage in actively participating in and gaining access to the decarbonisation initiatives. For example, in our case study, some young Dayak women reported that they get unhelpful comments from adults about how they should stay at home to protect their skins from getting darker because they were helping reforestation activities under the blazing sun (fairer skin in women is perceived to be more attractive than darker skin). These kinds of biased socio-cultural norms (for example: young people being irresponsible actors and stereotypes disempowering young women) may inhibit their genuine participation and dampen their curiosity and creative energies.

- **Addressing inequality and poverty to support youth's involvement in developing adaptation and mitigation strategies**

Socioeconomic inequality, and the poverty that it spawns, is a primary challenge for young people across the Southeast Asia region as they develop climate change adaptation and mitigation initiatives. In the past two decades, the countries in Southeast Asia have reduced extreme poverty but have failed to close the gap between the richest and the rest of their citizens. Important research clearly shows that poor regions and people are more affected than the prosperous region and rich people. Especially in the frontier and underdeveloped regions, young people living in places that are rich resources, but where they have limited political and economic access, are most likely to suffer from large scale carbon intensive development and economic (mining, logging, plantation) and associated environmental problems such as a floods, drought, and tropical disease. They may have a stronger physical resilience, but they are, psychologically speaking, the most-affected party as they feel disempowered with the lack of social and economic capital. In urban setting, youth poor do not have opportunities in a better education system. They are also likely to be deprived of opportunities to acquire necessary skills and means to prepare them for climate change effects and adapt to such effects.

OceanScapes

Oceania is an incredibly diverse cultural region. In addition to large numbers of indigenous islanders, there are many Indian, Chinese, and Indonesian migrants. Migration away from smaller Polynesian islands in search of better work, education, and social opportunities is common. For example, more people born in Niue and the Cook Islands live overseas than in their country of birth (Figure 2).

Figure 3: Map of Oceania and case study locations



Prior to COP21, Pacific nations strengthened their commitment to energy transition action and sustainable energy goals within their nationally determined contributions (NDCs). This action aimed to put them at the forefront of responses to global warming. The pursuit of energy security through renewable energy makes sense given the impacts of climate change in the region. 13 out of 14 Pacific Island Countries (PICs) have quantified renewable energy targets in their NDCs (nearly 2GW of renewables capacity) supported by the Regional NDC Pacific Hub.

Strategies to adapt to, and mitigate against, climate change have become an important focus for governments aiming for a low carbon future. In the Pacific, where countries are already feeling the impacts of climate change, certain stakeholders are regarded as leaders internationally, and others appear to have less visibility and voice. This literature review – produced as a contribution to the larger Asia Pacific ClimateScapes project – discusses themes and debates in recent literature on climate change and decarbonisation in the Pacific. It also engages with recent scholarship about how youth and other marginalised groups engage in climate action and decarbonisation in the region.

It is widely accepted that Pacific Island Countries (PICs) contribute the least to global Greenhouse Gases (GHG) but are disproportionately impacted by the effects of climate change. PICs have been among some of the first countries to feel the impacts of climate change including increased intensity and occurrence of tropical cyclones and flood events, as well as sea level rise (Bradbury, 2021). As a result of these immediate impacts, PICs have been producing regional and national policies to limit global warming to below 1.5 °C; lower than the Paris Agreement of 2°C), and to adapt to climate change.

Case study data was generated through online and face to face interviews as well as detailed reviews of published materials. Four coastal locations were explored. These include:

- 1) Republic of Palau
- 2) Aotearoa, New Zealand
- 3) Pitcairn Islands, and
- 4) Tuvalu

Based on the findings from this research, the following recommendations to achieve just transitions to decarbonisation in coastal zones are proposed:

- Terminology tends to differ in various policy documents. National and regional policy documents focus on the PICs as being LODS, compared to international policies which use terms like SIDS and ‘developing countries’ to define PICs and the region overall.
- Adaptation is more prominent than mitigation in most PICs, or a combination of both can be seen when implementing climate change initiatives.
- A sense of urgency can be seen in national policy documents, which reflects the situation that the brunt of the impacts of climate change and global warming globally are being experienced by PICs.
- Neo-colonial relationships and expectations endure. Many of the national and regional policies, as well as the international agreements highlight the need for ‘developed countries’ to aid ‘developing countries’ toward a low carbon future as developing countries are seen as vulnerable and requiring partnerships for major progress to be made.
- Despite these enduring relationships, most PICs aim to be global leaders in working toward a low carbon future and adapting to climate change.
- There is little focus on decarbonisation, shown by the lack of regional and national policies documents. Instead, PICs are focusing on renewable energy strategies and adapting to the current pressures of climate change.
- As there is diversity in the Pacific region, there is diversity in policy, strategies and plans. Each PIC varies geographically resulting in different national prioritisation of initiatives and actions.

- Most regional documents do not incorporate youth as stakeholders or as participants in approaches to climate change adaptation, even as they acknowledge the marginalisation of youth and other groups such as women. On the other hand, national policy documents tend to incorporate youth and other marginalised groups into their strategies, acknowledging the need for their participation; however many need to be updated.
- Recognise the specific risks, knowledges, commitments and rights of young people, women, indigenous peoples, small-scale fishers and associated poor communities from coastal areas in the Pacific.
- Create enabling policy engagement opportunities for young people and other usually marginalised groups, which avoid tokenistic consultation.
- Expand the opportunities and support for youth representation in national governments, national delegations and international organisations working on climate change, decarbonisation and just transitions.
- Support investment into accessible funds targeted at youth transitioning into more sustainable (decarbonised) livelihoods – paying attention to ethnicity, geographic location, gender diversity and ability.
- As much as possible, foster co-design approaches to climate change adaptation, mitigation and decarbonisation which integrate locally based knowledges with Western scientific knowledges and technologies.
- Support investment into accessible funds and mentors targeted at youth inclusive climate actions to build capacity for decolonisation and greater connectivity across the region.
- Enhance efforts to address gender inequality across the region.
- Mainstream gender and intergenerational equity into all aspects of climate change response and planning including decarbonisation strategies and transitions to renewable energy.
- Ensure processes to update and implement National Determined Contributions (NDCs) engage gender experts and youth experts.
- Ensure equitable representation of small and large PICs in regional policy forums associated with decarbonisation and just transitions.
- Collaborate with regional youth-led movements to lobby for faster responses to decarbonisation internationally.

RiverScapes

The Mekong Delta (MD) was formed by the deposition of sediments from the Mekong River, which flows from the Tibetan Plateau in China to the East Sea, passing through six countries on its way including China, Myanmar, Laos PDR, Thailand, Cambodia and Vietnam. The average elevation of the Mekong Delta ranges from 0.5 to 1.2m above sea level, except for some land areas along the Cambodian border, where the terrain reaches heights of up to 12m; the elevation of the central part of the delta ranges from 1.0 to 1.5m whereas coastal areas have an elevation of 0.3–0.7m (Renaud & Kuenzer, 2012).

The Mekong Delta is located in the southernmost region of Vietnam, including 13 provinces and cities with a total natural area of about 40,604.7km, 330km of the border with Cambodia, over 700km of the coastline, and 360,000km² of territorial sea. The current population is about 17.59 million people (2015). The Mekong Delta has an interwoven system of rivers, canals, and flooded forests, where the Kinh, Khmer and Cham ethnic groups live together. Vietnam is one of the countries seriously affected by climate change and sea level rise. The Mekong Delta is a particularly vulnerable area to the impacts of climate change and sea level rise. By the end of the 21st century, the sea level in the coastal areas of the Mekong Delta will rise from 62-82cm (with medium emissions) and from 85-105cm (with high emissions) (Lee & Truong An, 2018). If the sea level rises by 1m, about 39% of the Mekong Delta will be flooded, and nearly 35% of the population of the Mekong Delta will be directly affected (Ministry of Natural Resources and Environment, 2012). Several studies by research institutions and the Mekong Delta provinces indicate that climate change in recent decades has caused rising temperatures and droughts (Lee & Truong An, 2018), increasing rainfall (Vu et al., 2018), salt water and sea level rise (Vu et al., 2018). Also, more extreme weather events have been recorded.

With abundant labour resources and favourable advantages of nature in terms of topography, soil, and climate, the Mekong Delta is considered as the granary of rice, fruit, and seafood of the whole country. However, environmental pollution and other impacts of climate change have had a heavy impact on the Mekong Delta. Along with that, there are many internal problems arising in this region such as: reducing growth quality, low labour productivity, unstable economic structure, low labour quality, limited human resources, etc., which are causing economic challenges for the region.

Case study field work in Vietnam comprised the following activities:

- An online participatory stakeholder workshop (19 January 2022)
- Three focus groups comprising members of the CoRe Vietnam student activist organisation at Cantho University (23 January 2022); members of Green Rivers Vietnam, a Cantho-based environmental NGO (13 January 2022); and members of an organic young farmers' cooperative (11 February 2022)
- A detailed investigation of a farming project from start to finish to understand motivations, barriers and opportunities for young people for agricultural transformation
- 20 key stakeholder interviews with officials from local government and Youth Union branches from across the Mekong Delta.

Our findings support the following recommendations:

- Facilitate young people's engagement with local governments to leverage their knowledge and skills. This includes networking, policy and financial support.
- Enable the development of learning networks to allow policy uptake of local innovation, especially where young people are creatively engaged in problem-solving activities and are already embedded in university, NGO or other networks.
- Facilitate long-term engagement of young people with environmental issues to avoid many short-term projects which have little lasting impact on awareness, behaviour, and improvement of the environment. This should include dedicated support for young people to translate their ideas into impactful action. This could include local government schemes that recognise young people as knowledge bearer in their own right, and that allow them to network with actors outside of the government to facilitate knowledge exchange.
- To enable the above, local governments also require more detailed guidance on implementing central government policies. This includes questions of gender mainstreaming and inclusion of young people, but also more broadly how to achieve a transition to a net-zero economy that is socially and environmentally just.
- As part of the above recommendations, questions of justice should be more prominent in the political and social discourse, from which they currently appear largely absent. This also requires recognising the skills and knowledge of actors other than scientists and other professionals, in order to harness the potential of young people in the creation of a just transition to decarbonisation in Vietnam.

Conclusions

To be effective, communicating decarbonisation and climate change-related topics to communities and young people need to be done in a way and language that can be understood by them. As information technology is playing a significant role in the life of young people, social media and young influencers are also important parts of the climate discussion. Young influencers design their social media content with simple, familiar words and use local contexts and sometimes local language as well. To deliver a compelling message and to be able to reach the followers, the influencers draw a link between climate change issues and young people's lifestyles. While climate change and ecological issues capture the attention of young people online, our research shows that young people are less engaged in indigenous struggles.

Many national and regional policies associated with climate change, decarbonisation and oceans highlight the need for 'developed countries' to aid 'developing countries' (such as most PICs) in the move toward a low carbon future. Despite these enduring relationships, however, most PICs also aim to be global leaders calling large carbon emitting countries to account and in their adaptation responses to climate change in the region.

There are ongoing tensions with the representation of PICs. These tensions have implications for what is considered appropriate in the context of climate change, decarbonisation and just transitions. While the latter terms are well understood in New Zealand, in the majority of nation states, the latter terms are not frequently used and the focus rests on the move towards renewable energy production and how best to use and sustain ocean resources. There are noticeable challenges with regional cooperation.

There is widespread recognition by all stakeholder groups of the major impacts of climate change, particularly on coastal communities and low-lying atoll states. The differential impacts of climate change and transitions to decarbonisation with respect to gender are beginning to be recognised, but in relatively simplistic terms that fail to overlook the complexity of intersectionality. Most regional documents do not yet incorporate youth as stakeholders or as participants in approaches to climate change adaptation, and do not explicitly attend to the specific risks they may be facing associated with sustenance of their livelihoods and endogenous knowledges. National policy documents generally pay more attention to youth and other marginalised groups but may not have involved youth in their formation.

Our research revealed that young people in the Mekong delta are highly aware of the fragile state of the environment. River pollution, sea level rise, and general climate change issues were prominent in our discussions. Frustration was palpable about the lack of influence that young people have on government decision making processes and attempts to engage with local government actors often failed.

Our discussions highlighted that young people possess knowledge and skills and are willing to learn and engage in climate change adaptation in the Mekong delta. They have a loud voice and are willing to make it heard such as through protests or different forms of action (including awareness raising campaigns about plastic recycling for cleaner rivers, or organic farming to help with agricultural transformation). However, there is a notable lack of interest from local governments to draw on the ideas and the capacities of young people.

Young people's campaigns and ideas are therefore often isolated from policy making and implementation and are supported mainly by NGOs and, in some cases, universities. NGOs are often viewed with suspicion by local governments, and one student that we spoke to reported that local governments refused to engage with them on the grounds that NGOs are involved in their projects. Meanwhile, government offices and the Youth Union have their own activities involving young people. There appears, therefore, a clear divide between citizen-led projects and government-led projects, with little interaction between them or with little to no policy uptake by local officials of citizen-led activities.

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