

Issue

Brief

ISSUE NO. 559
JULY 2022



A Roadmap for India's Climate Cooperation with Pacific Small Island Developing States

Ramendra Prasad

Abstract

Pacific Small Island Developing States (PSIDS) are highly vulnerable to disasters emanating from the impacts of climate change, geopolitical tensions, and fluctuations in global energy markets. To overcome this, the PSIDS have committed to ambitious carbon reduction targets, and to adopting renewable energy and low carbon emission initiatives. However, they must contend with critical barriers, such as the lack of finance, capacity, and technology. This brief assesses how India can assist the PSIDS in these areas, and the benefits it will gain through closer cooperation with these countries.

Small Island Developing States (SIDS) are increasingly experiencing more acute impacts of climate change; rising sea levels, saltwater intrusion, and extreme weather events are now commonplace. SIDS are geographically detached and dispersed over the vast oceans, with limited land resources and smaller economies of scale. The Pacific SIDS (PSIDS), in particular, have small land sizes and severe resource constraints and are highly vulnerable to changing weather patterns. Over 90 percent of the population in the PSIDS, excluding in Papua New Guinea, live within 10 km of the ocean, making them extremely susceptible to even a slight change in sea levels. Of the 14 PSIDS,^a Vanuatu, Tonga, Solomon Islands, and Papua New Guinea are among the world's most disaster-prone nations, while the low-lying coral atolls and reef islands of Kiribati, Tuvalu, and the Marshall Islands are among the most climate-vulnerable.¹

Although six of the 14 PSIDS ratified the Paris Agreement in April 2016,^{b,2} they had already set ambitious nationally determined contribution (NDC) targets and net-zero emissions strategies as part of the 2012 Barbados Declaration on Achieving Sustainable Energy for All in Small Island Developing States.³ Several of the PSIDS's strategies have since been updated.^{4,5,6} The PSIDS's commitment to climate action was further reinforced during the 2017 UN Conference of Parties (COP23) held in Bonn, Germany, and presided over by Fiji, which marked the first time a SIDS had assumed the presidency of the talks. This leadership was key to highlighting the plight of the SIDS and ensuring the issues most critical to them were given due consideration.⁷ However, despite being active in the global climate fight, the PSIDS face financial and technical capacity issues in the bid to mitigate climate change impacts.

Given its vast resources and technical expertise, India can play a key role in assisting the PSIDS and other SIDS in their climate fight. Given its around 1,300 small inhabited and uninhabited islands and approximately 7,500-km-long coastline, India has much in common with the SIDS in terms of safeguarding from climate calamities.⁸ This brief explores the areas in which India can support the PSIDS, such as developing renewable energy, transforming the transportation sector, policy development, and capacity building and training. It also assesses the benefits to India through closer cooperation with the PSIDS.

a Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Nauru, Niue, Palau, Papua New Guinea, Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu

b Fiji, Nauru, Palau, Republic of the Marshall Islands, Samoa, and Tuvalu ratified the agreement in April 2016; Cook Islands, Federated States of Micronesia, Kiribati, Papua New Guinea, Solomon Islands, Tonga, and Vanuatu in September 2016; and Niue in October 2016.

India and PSIDS: Areas of Collaboration

Modern India's relations with the PSIDS can be traced to 1948, when it first stationed a Commissioner in Fiji, with the position being elevated to High Commissioner following Fiji's independence in 1970. The ties received a boost in 2014 when Indian Prime Minister Narendra Modi visited Fiji, during which the Forum for India-Pacific Islands Cooperation (FIPIC) was proposed to enhance New Delhi's engagement with the 14 PSIDS.^{9,10} The first FIPIC Summit was convened in 2015 in Suva, Fiji, and the second in 2016 in Jaipur, India.

India has provided financial support through aid, grants, and soft loans, and established several initiatives and programmes in the PSIDS. These include developing the small and medium enterprises (SMEs) sector;¹¹ supporting the agriculture, health, infrastructure, and energy sectors; committing to set up centres of excellence in information technology in Fiji, Cook Islands, Nauru, Samoa and Niue;¹² providing election support, humanitarian assistance and disaster relief support (in Fiji, Tonga, and Vanuatu), COVID-19 vaccine assistance (in Fiji, and Tuvalu), and setting up a fund for strategic response to the COVID-19 pandemic (in Tuvalu); consigning agricultural seeds and setting up a tsunami alert system in (Tonga); establishing air services and defence training and support, and scholarships to PSIDS students to study in India; and upgrading government facilities (in Kiribati, Fiji, Tonga, and Tuvalu).^{13,14} India has also participated in and contributed to the Pacific Island Forum^c as a key dialogue partner.^{d,15,16}

India has also pledged to assist the PSIDS in finding practical solutions to implement their NDCs. For instance, it provided developmental aid to Fiji to establish a cogeneration power plant for electricity and heat generation;¹⁷ allocated a line of credit to Fiji to help diversify the sugar industry into biofuels;¹⁸ and committed to electrifying 200 houses in the PSIDS.¹⁹ India has also assisted in solarising the residences of the heads of state of 11 PSIDS, and has provided support for the storage, supply, and management of water in drought-prone Tuvalu.²⁰

c An intergovernmental organisation aiming to enhance cooperation between countries and territories in the Pacific Ocean.

d India is one of 19 dialogue partners, alongside the US, UK, European Union, and China.

India and PSIDS: Areas of Collaboration

While the PSIDS have been active in the global climate fight, they lack the financial and technical capacity to achieve the determined goals. Although India's ties with the PSIDS have seen some periods of flux,^{e,21} the country has vast experience to offer for collaboration, particularly in low-cost renewable energy, transportation, and policy development.²²

Renewable energy and energy access

With immense experience in low-cost renewable energy technologies for wind and solar, India could provide valuable inputs to the PSIDS to reduce their carbon footprint and achieve the NDC targets.

India's experience in rural electrification can be applied to assist the remote and maritime communities in the PSIDS in accessing affordable modern electricity supply. India can also share knowledge and technological expertise in solar photovoltaic (PV), micro and pico hydro, biomass, coconut biofuels, and biogas to develop the PSIDS's renewables sectors. The development of income-generating opportunities in these areas can also be explored.

It can also consider developing efficient electricity generation in the PSIDS through a large utility-scale grid like Rajasthan's Bhadla Solar Park,²³ with the exploration of advanced storage systems and smart grid opportunities.

The PSIDS also need to develop testing facilities for solar PV panels, batteries, energy-efficient lights, and electrical equipment. This will ensure that only high-quality and efficient equipment is used in these countries. Although there are already many solar PV suppliers of solar PV in the PSIDS, it is difficult for these nations to test for quality. The use of substandard products can lead to a malfunction of the grid, and the local communities and investors may lose confidence in the technology.

Another area where India can assist the PSIDS is wind energy development. The PSIDS have ample wind resources for large wind farms, but due to prior unfavourable experiences (such as low capacity factor, operations and maintenance issues, and a high variability that the grid could not cater to), wind

e Such as when the Indian High Commission and Indian Cultural Centre in Fiji were closed in the late 1980s/early 1990s due to the political upheaval in that country. The High Commission was eventually reopened in March 1999.

India and PSIDS: Areas of Collaboration

energy is deemed highly unreliable. However, if India were to share proper research and expert knowledge, this technology could function well, with the potential for power-to-X^f opportunities.

Transportation sector transformation

The PSIDS continue to grapple with high emissions from the transportation sector²⁴ despite setting ambitious targets to reduce such pollution, even as they improve their transportation networks. India could provide expertise and development strategies for e-mobility for land and maritime transportation.

While the PSIDS have considered adopting e-mobility, particularly for land transportation, these efforts have been hindered by the high capital expenditure needed, the lack of existing necessary infrastructure (such as dedicated charging stations and home charging equipment), and insufficient renewable energy penetration among the masses. India's support in this area is vital. India has devised innovative strategies and policies for e-mobility,^{25,26} such as having a consolidated portal of all related information (e-AMRIT²⁷), and developing national missions related to solar, water, sustainable agriculture, enhanced energy efficiency, and strategic knowledge for climate change. Some of these could be tested for their applicability in the PSIDS, such as a mission for water and energy tailored to the Pacific, as these are critical issues. Similarly, a mission for climate change, traditional knowledge, and agriculture will also be very beneficial in helping the PSIDS adapt to climate impacts. The PSIDS could also emulate the establishment of research networks, technology watch groups, and knowledge networks in India such that they can develop the regional capacity for modelling climate impacts at island scales.

The PSIDS have numerous remote atolls surrounded by waters, and so it is necessary to develop maritime transportation for conveyance and trade. For example, state-of-the-art electric boats (such as the Water Metro fleet in India's Kochi²⁸) could be replicated and trialled in the PSIDS for better trade and connectivity between the respective islands within each island nation.

^f The 'power-to-X' concept refers to activities that take surplus renewable electricity from wind, solar or water and convert it into other energy carriers to be able to store this energy for later use and absorb energy fluctuations.

India and PSIDS: Areas of Collaboration

Policy development

The PSIDS could also benefit from India's policy development experiences. India could share expertise in strategising for climate change, renewable energy, and sustainable development. Many private investors deem that renewable energy investments in the PSIDS have low returns due to the smaller economies of scale and remoteness of these islands, resulting in stunted private sector participation due to the lack of finance and capacity barriers.²⁹ As such, innovative policy and tax incentives are required to entice investors into developing feasible electrification projects and schemes alongside income-generating opportunities in the PSIDS.

Participation in Pacific regional dialogues

The PSIDS have formed numerous regional organisations—the Pacific Islands Development Forum, the Pacific Community, Pacific Islands Forum, Regional Pacific NDC Hub, Climate Action Pacific Partnership, and the Melanesian Spearhead Group—that aim to share and refine strategies and solutions for these nations by giving them a platform and voice in the global arena. India must actively participate in these forums, especially to enhance cooperation with the PSIDS.

Capacity building and training

India can offer more scholarships for specialised training at local organisations in renewable energy, climate change, and sustainable development. In addition, individuals from the PSIDS could also be provided with scholarships to upskill in innovative interdisciplinary programmes such as renewable energy management.

Research opportunities

Often, the PSIDS replicate global climate solutions without local contextualisation and expect similar results. However, given the varied situations in each PSIDS, localised research is required to find solutions to specific issues. Support in research in terms of funding and sharing expertise and experiences is needed. India can provide research grants to local academic institutions to conduct research in partnership with Indian educational institutions.

There is great potential for India to benefit from its collaboration with the PSIDS. Notably, India stands to gain moral leverage by assisting the PSIDS in achieving their emission reduction targets. The partnership also has geopolitical advantages. The Pacific Ocean, where the PSIDS are located, is the world's largest ocean and borders globally and regionally important countries like the US, China, Russia, Australia, New Zealand, and Indonesia. The Pacific Ocean is a major route for trade and naval passage between these countries. India's presence in the region through partnerships with the PSIDS will mean it will share critical geopolitical space with the other big countries.

China has a significant influence in the South China Sea, over which it claims sovereignty, routinely engages in skirmishes with other nations, and which joins the Pacific Ocean. China's ties with the PSIDS date back to the 1970s, and it has long provided economic and technical assistance to these states. As the second-largest donor to the PSIDS,³⁰ it has implemented over 100 aid projects; delivered more than 200 batches of in-kind assistance; trained about 10,000 people in various fields; dispatched 600 medical staff to the island nations; and provided nearly 600,000 doses of vaccines and more than 100 tons of anti-epidemic supplies.²¹ China has also assisted the PSIDS countries in disaster prevention and climate change mitigation³¹ with funding to purchase climate change mitigation-related materials; construct climate-related infrastructure; and enhance capacity through government scholarships and short-term training programmes (such as training sessions on green and low-carbon development). It has also strengthened renewable energy cooperation with the PSIDS, such as through the construction of hydropower plants in Fiji and Papua New Guinea, and has launched the China-Pacific Island Countries Climate Change Cooperation Center in April 2022.³² Given this deep engagement, India's presence in the Pacific through partnerships with the PSIDS will counterbalance China's power, to the benefit the larger region.

Additionally, by being a PSIDS-friendly country, India has the potential to deepen its engagement with United Nations (UN) organisations, UN specialised agencies, and UN funding programmes. The PSIDS have voting rights in these organisations, and if it were to maintain good ties with these countries, India could potentially leverage this advantage to secure a stronger position in the UN bodies.

What India Gains


The Pacific Ocean has abundant marine resources, such as seafood and minerals. One avenue for cooperation and mutual benefit is setting up seafood processing plants. Indian firms can establish seafood processing operations in the PSIDS, which will provide monetary benefits to the business (and elevate India's economic position) and the local economies by creating employment opportunities. Additionally, the many unexplored marine areas in the waters surrounding the PSIDS could potentially hold valuable minerals, and oil and natural gas reserves.³³ India could explore these areas for deep sea mining and sustainable opportunities in extracting manganese nodules, seafloor massive sulphides, and cobalt-rich crusts.³⁴ This could be beneficial for India, given the rising demand for rare metals and minerals.

A tangential beneficiary can be the Indian film industry, which can leverage the country's closer ties with the PSIDS to access unexplored and unpictured locations. India should also consider setting up a pharmaceutical distribution centre in the PSIDS, which will provide a market for Indian pharmaceutical products and improve access to healthcare in the Pacific countries. Over the long-term, India could consider establishing a pharmaceutical manufacturing plant in the region with raw materials sourced from India, which could enhance PSIDS trade with Australia and New Zealand.

“India stands to gain a moral and geopolitical advantage by assisting the PSIDS in achieving their emission reduction targets.”

Conclusion

India's existing relationship with the PSIDS has the potential to develop into an even deeper engagement. Sharing best practices in renewable energy technologies (particularly on solar PV, biomass and biofuels, and batteries); helping the transportation sector transition to e-mobility; guiding the development of climate-related policies; and assisting with capacity building, training, and research will be incredibly beneficial for the PSIDS.

Such a partnership can ensure the PSIDS are on the path to achieving their NDCs, even as it creates opportunities for Indian businesses. Sustained collaboration will benefit India and the PSIDS economically, geopolitically, and strategically. Additionally, India could use the learnings from cooperating with the PSIDS to explore opportunities in other SIDS and to benefit its uninhabited islands. These learnings may also assist in increasing resilience in conserving and restoring India's long and crucial coastline. 

Ramendra Prasad is the Head of the Science Department and Senior Lecturer at the University of Fiji.

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20, Rouse Avenue Institutional Area,
New Delhi - 110 002, INDIA
Ph. : +91-11-35332000. Fax : +91-11-35332005
E-mail: contactus@orfonline.org
Website: www.orfonline.org