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Development Cooperation Review

Special Coverage on
Small Island Developing States (SIDS) and Climate Change

(Continued on outside back cover)

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Editorial

The special issue of DCR aims to assess the local challenges to Small Island Developing States (SIDS) and the impact of climate change on their socio-economic development challenges. SIDS are not a list of countries based on the traditional metrics of their per capita income. They are a group of countries identified in terms of their geographical characterstics - namely being island states. There are countries which may be termed high income countries and there are low income countries as well. Further, there are countries which are recognised by UN systems as sovereign states, whereas there are others which are not considered sovereign states but occur as principalities still dependent on some sovereign states. SIDS are also different from the V20 countries, which are considered to be vulnerable to environmental disasters but not necessarily confined to those considered islands in terms of their geographical existence. Some prominent vulnerable countries include those which have no coastal regions as well, such as Bhutan, Nepal among others. The issues covered in the present issue are confined to only those faced by the SIDS countries as created as a special group of countries that require special attention for being considered for assistance from the global communities. We have identified three papers to initiate the discussions on the difficulties being faced by the SIDS.

Eberherd Weber in his paper '*Climate Change, Disasters and Cooperation in SIDS*' focuses on the climate change impacts and vulnerabilities faced by SIDS, specifically in the Pacific and the Caribbean islands. Physical damages incurred due to natural hazards as well as the social impact of climate change, viz, food insecurity, resettlement and displacement costs, and climate change induced migration are highlighted in the paper. Cooperation among SIDS is crucial to advance issues that are of particular importance to them, hence, Alliance of Small Island States (AOSIS) and their efforts are also described in the paper.

In the paper '*SIDS, Vulnerability and Climate Change: Looking through the Lens of South-South Cooperation Practices*', authors *Dinoj K Upadhyay* and *Shweta Shaju* outline the socio-economic development effects of climate change on SIDS. The paper discusses about another vulnerability based grouping, V20 and how they are distinct in terms of their share in total population, land size and Exclusive Economic Zone (EEZ) area. The authors express the urgency to take action and describe the issues to

be considered while handling climate change, for example, climate fair share, climate finance, damage & loss leverage, among others. The role of South-South Cooperation is highlighted with some effective practices within SIDS, regional cooperation and using international discourses.

The paper by *Vinod Kumar* on '*Climate Change Vulnerabilities of SIDS and Potential for South-South Cooperation*' brings out the key outcomes of the UN Climate Change Conference in Glasgow (COP 26), efforts of SIDS in mobilising voice and the cooperation among SIDS. The author also describes the efforts of various countries, particularly India and Indonesia and various initiatives such as Coalition for Disaster Resilient Infrastructure (CDRI), Infrastructure for Resilient Island States (IRIS), The Global Energy Alliance for People and Planet, International Solar Alliance (ISA), among others in furthering the goal of climate action.

The section on SSC in Statistics by *Sushil Kumar* analyses the impact of natural disasters by estimating the economic damages and loss of lives in the SIDS which are members of the UN system.

Climate Change, Disasters and Cooperation in SIDS

*Eberherd Weber**

"A major obstacle is that the Conferences of the Parties of the UNCCC process require unanimous decisions, even when a huge majority of humankind would like to get better policies to protect them from the impacts of climate change and compensation for losses and damages."

Introduction

The degradation, pollution and destruction of the natural environment have become a serious challenge in many countries of the Global South, including Small Island Developing States (SIDS). The challenges also include natural hazards that have the potential to become serious disasters. Societies located on small islands are particularly exposed to such events.

The Intergovernmental Panel on Climate Change (IPCC) stated in its 6th assessment report that climate change would worsen existing poverty, exacerbate inequalities and unsettle livelihoods in future. Climate change and it impacts particularly affect SIDS. Many of them are located in the Pacific Island region and the Caribbean Sea. Although there are differences between island societies, they have many aspects in common, especially when we reflect on climate change: 1) they have not contributed to the generation of the challenge. Their per capita emissions of Green House Gases (GHG) are miniscule. Their total emissions are even smaller. 2) Despite their insignificant contribution to climate change, SIDS are among the most severely affected countries

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by climate change, and 3) they usually do not have the resources, capabilities and capacities to confront the challenges they are exposed to.

Under such scenario close cooperation between SIDS in the Pacific and the Caribbean Islands (as well as other parts of the world) has become crucial to mitigate climate change exposure, strengthen resilience and adaptive capacities and reduce vulnerabilities. The question this paper explores is whether countries are well equipped to tackle climate change challenges with enhanced resilience.

Climate Change Impacts on SIDS in the Pacific Ocean and the Caribbean Sea

In the second decade of the 21st century, climate change has become an important discourse in academia (Birkmann & McMillan, 2020), a crucial political topic (Zawadzki *et al*. 2020), and for an increasing number of people from all over the world a frightening apocalyptic picture of a perishing earth (Pates & Leser, 2021).

After ideas of climate change had become a scientific paradigm in the 1980s, primary focus was around mitigation (Puertas & Marti, 2021): what can be done to prevent climate change and what is necessary to prevent the global temperatures from rising to the point where they pose a threat to all societies around the globe. At that time, major activities to manage the climate were in the so-called developed world. A major policy instrument, in that regard, had been the Kyoto Protocol, which did not require developing countries to commit any GHG reduction (Kirikkaleli & Sowah, 2021).

Today's major concerns have changed: although mitigation still plays an important role, scientific mainstream has admitted that climate change cannot be prevented to such a degree that no adverse impacts on societies are felt. The paradigm now concentrates on how societies are able to adjust, adapt to or at the very least cope with the impacts of climate change. (Klöck, 2020; Leal Filho, 2020; Robinson, 2020). In this context, questions on how poor countries that are particularly exposed to the impacts of climate change are able to adapt to the various hazards and to recover from impacts are crucial. Much work in the recent past has been on the resilience of island societies (Klöck, 2020).

Vulnerabilities and Resilience of SIDS in Pacific Ocean and Caribbean Sea

Major vulnerabilities for SIDS is their exposure to climate change impacts, like on agriculture, affecting food security, health, possibly favouring diseases that disperse well in warmer climates. Further, there are concerns relating to natural hazards caused or intensified by climate change, which can easily turn into disasters. Hazards of particular concern are tropical cyclone (in the Caribbean Sea called hurricanes), floods and droughts.

Food Insecurity

Pacific island countries do not have histories of distinct food insecurity like many countries in Africa and South Asia. However, some time ago

Bruce Currey (1980) brought together historical records on food insecurity and famine in the Pacific. He concludes that famine vulnerability is closely related to 'the prevalence of natural disasters and the limited ability of isolated island social systems to adapt to these events' (Currey, 1980:447). More recently Pacific islands have become locations where obesity is a more serious articulation of malnutrition than the lack of food (Tsuchiya *et al*., 2021). People living in Pacific Islands such as the Cook Islands, Nauru and Tonga have the highest prevalence of obesity in the world (Akkiz, 2021; Lobstein & Jewell, 2021). Similarly, in the island societies of the Caribbean Sea, there is widespread hunger and long-lasting famines, although the hunger crises originated in the first place due to colonialism, slavery and poverty of indigenous populations. Haiti, in particular, stands out with very high levels of mal- and under-nutrition related to wide-spread poverty (Martínez, 2005).

The literature on economic and environmental vulnerability of SIDS frequently highlights small islands' exposure to natural hazards (see below) and their difficulties in responding adequately to such shocks. Here, the connection between climate change and food insecurity becomes particularly relevant. Two aspects contradict such an enhanced vulnerability of small island societies and their food security to natural hazards: frequent exposure to risk and shocks actually should enhance coping mechanisms to such events. The more often people are exposed to such shocks the better they learn to cope. It also seems that today Pacific Island societies are not suffering from famine or food crisis or even from under-nutrition to an extent we know it from many parts of Africa and Asia. On the other hand, an enormously high share of Pacific Island population suffers from lifestyle diseases caused by obesity rather than insufficiency of food supply, though doubtless, it is indicative of malnutrition of a quite different type. This does not necessarily mean that climate change impacts and food security are irrelevant for SIDS. It surely means that vulnerabilities that emerge are complex and beyond the traditional perception of food crisis, hunger and starvation. Although changes in agricultural production systems are important aspects to consider, changes in access to resources, dependency on food imports and changes in international food systems and prices are equally important.

Challenges exist particularly for atolls and other small and isolated islands. Kiribati and other atoll countries import most of the food for their citizens. Conditions for agricultural production are very restricted and it is not possible to provide a varied diet to people living on atolls and coral islands. However, it is to be noted that bigger countries with well-established agricultural systems also import large amount of food and expending much of their valuable foreign exchange.

Natural Hazards and the Dangers of Disasters

Natural hazards are events that have the potential to cause disasters. Natural hazards are considered to be events of nature, although such perspective

is at times not clear, exclusive and/or unequivocal. A flood can be a natural or a human-made event or have both aspects such as too much rainfall, deforestation in the hinterland, negligence of drainage systems, and others. If we follow the idea of human-made climate change then devastating tropical cyclones are not necessarily and exclusively natural hazards, but are often influenced by human activities. Activities that lead to higher water temperature in tropical regions, for instance, intensify cyclone hazards (Balkaran, & Smith, 2021). Other 'natural' hazards that intensify under the impact of climate change are droughts and floods (Birkmann *et al.*, 2021; Johnson, Higgins, & Stephens, 2021; Roopnarine *et al.*, 2021). Even when the debate whether climate change can cause earthquakes and tsunamis (McGuire, 2013) is so far inconclusive, there is little doubt that tsunamis can become more damaging due to climate change. Higher sea levels increase the exposure of coastal areas to tsunami waves.

Pacific and Caribbean Islands indeed are severely exposed to hazards that are moderated through climatic factors. Table 1 show that windstorms (particularly Tropical Cyclones in the Pacific islands region and Hurricanes in the Caribbean islands) top the list of disasters between 1980 and November 2021 in these regions. Windstorms caused 48 per cent of disasters in Pacific Island countries; in Caribbean countries it was 57 per cent. In both regions, floods stand second in the frequency of disasters arising from 'natural' hazards. All in all, 'windstorms' and 'floods' cause 62 per cent of disasters in Pacific Islands and 85 per cent of disasters in Caribbean Islands.

Table 1: Type and Frequency of Disasters in the Pacific and Caribbean Islands (1980-2021)

	Pacific Islands						Caribbean Islands					
	1980-1989	1990-1999	2000-2009	2010-2019	since 2020	total Pacific	1980-1989	1990-1999	2000-2009	2010-2019	since 2020	total Caribbean
Windstorm	37	30	36	40	10	153	41	67	94	69	13	284
Flood	4	3	21	15	3	46	30	24	40	45	1	140
Earthquake	5	13	11	7		36	-	2	6	2	3	13
Volcanic	1	4	11	6		22	-	4	1	-	1	6
Drought	2	6		10	1	19	5	5	4	9	-	23
Others	5	9	17	10	2	43	5	8	5	12	2	32
total	54	65	96	88	16	319	81	110	150	137	20	498

Source: Compiled by author using EM-DAT (2021).

Over the past few decades, droughts have also caused severe disruptions of societies in Tuvalu (2011; Sinclair, Atumurirava, & Samuela, 2012), Kiribati (2011); Niue (2012), Cook Islands (2015); PNG (2016), and the Marshall Islands (2015-16; RMI, 2017) (Iese *et al*. 2021). There are also reports of droughts emerging from Caribbean islands. Countries with the highest incidences of droughts are Cuba (1981, 1986, 1993, 1998, 2000, 2004, 2015), Haiti (1980, 1992, 1993, 2003, 2014, 2016), and Jamaica (1981, 2000, 2014). In the past 41 years droughts in these three countries affected some 6.8 million people, most of them (5.7 mill) in Haiti (EM-DAT 2021; see also Gamble *et al*., 2010, Herrera *et al*., 2020; Miller& Ramseyer, 2020).

Whether disasters have become more frequent in SIDS in the past 40 years is difficult to say. The figures do not give a clear picture. This is also because in recent decades reporting has become more precise and more complete. There is much evidence that recording improved in more recent decades, and lower frequencies of disasters in decades further in the past can be because of under-reporting (Leonard & Law2019; Ray et al., 2021).

Disasters in Pacific Islands

In the Pacific Island region, Fiji, Vanuatu, Tonga, Solomon Islands and Samoa are the countries with the highest frequencies of disasters that are possibly influenced by climate change (windstorms, drought, and floods). Looking at such indicators,

Table 2: Type of disasters from different hazards in Pacific Island countries (1980 -2021)

	Pacific Island Countries														Pacific Territories						
	Polynesia						Melanesia				Micronesia				P	P	P	Me	Mi	Mi	
hazard	Cook Islands	Niue	Samoa	Tokelau	Tonga	Tuvalu	Fiji	Papua New Guinea	Solomon Islands	Vanuatu	Kiribati	Palau	Marshall Islands	Micronesia (Fed. Rep.)	Amerocan Samoa	French Polynesia	Wallis & Futuna	New Caledonia	Guam	Northern Mariana	total
Windstorm	7	2	8	3	15	6	33	6	14	20	1	3	2	7	3	3	2	7	7	4	153
Drought			1		1	2	3	3	3		1	1	2	2							19
Flood			1				11	20	5	2	2		2	1	1	1					46
Earthquake			1		1		2	16	5	8					1		1		1		36
Volcanic								13		8										1	22
Biological	3	1	1		2		1	7	2	2		1	1	1				1			23
Landslide								14		1						3					18
Wildfires			1					1													2
	10	3	13	3	19	8	50	80	29	41	4	5	7	11	5	7	3	8	8	5	319

Source: Compiled by author using EM-DAT (2021).

however, one has to consider that the countries that stand out in absolute terms are by far the biggest countries in the Pacific Island region. More than 52 per cent of the windstorms were recorded in Melanesia, another 9.7 per cent fall in Polynesian countries and territories.

Looking from a relative perspective, tiny countries like Niue, with just some 1,500 inhabitants, are severely affected by Tropical Cyclones. In each case 100 per cent of Niue's population is exposed to such hazards. Plans have been discussed more than once to evacuate all residents of Niue to New Zealand because of the very high risk to its people caused by Tropical Cyclones (Wade 2005). After Tropical Cyclone Ofa in 1990, the tiny island-nation Niue became a food-dependent country for more than two years. Tropical Cyclone Heta hit the country in 2004. The impact on agriculture was even bigger (Wade 2005). In Samoa tropical cyclones Val & Wasawas are the worst tropical cyclones affecting Samoan since the 1889 Apia cyclone. It caused damages of 230 per cent of the country's GDP (World Bank 2006).

In disaster years more than 10 per cent of Fiji's population are affected causing damages of around eight per cent of the country's GDP. Figures for Samoa, Tonga and Vanuatu were even higher. In these countries above 40 per cent of the population are affected in a disaster year. Damages took major shares of the respective countries' GDP. Samoa stands at top of the list, where damages from disasters are above 45 per cent on average of disaster years (World Bank, 2007).

The world's biggest disaster in recent decades caused damages of around 1-2 per cent of the respective countries GDP in the year (Hurricane Katrina, 2005

Table 3: Type of disasters in various Pacific Island countries according to hazards (1980 -2021)

hazard	Anguilla	Antigua and Barbuda	Bahamas	Barbados	Cayman Islands	Cuba	Dominica	Dominican Republic	Grenada	Guadeloupe	Haiti	Jamaica	Martinique	Montserrat	Netherlands Antilles	Puerto Rico	Saint Barthélemy	Saint Kitts and Nevis	Saint Lucia	Saint Martin (French)	Saint Vincent .Grenadines	Sint Maarten (Dutch)	Trinidad and Tobago	Turks and Caicos Islands	Virgin Island (British)	Virgin Island (U.S.)	total
Windstorm	4	9	18	8	7	37	11	34	4	7	38	21	10	3	2	18	1	7	12	1	9	1	4	7	4	8	285
Drought		1		1		7			1		6	3				1			1		1		1				23
Flood	1		2	1		23		28		1	58	7				7		1	2		6		3				140
Earthquake				1		1	1	1		1	3		1			2			1				1				13
Volcanic						2							1	4							1		1				9
Biological								8			7	2							1		1						19
Landslide											1					2			1				1				5
Wildfires						2		2																			4
	5	10	20	11	7	72	12	73	5	9	113	33	12	7	2	30	1	8	18	1	18	1	11	7	4	8	498

Source: Compiled by author using EM-DAT (2021).

caused damages worth 1.1 per cent of USA GDP; Tōhoku earthquake, tsunami and nuclear disaster, Japan, in 2011-the damages were less than 2 per cent). Compared to this, average damages of 30-45 per cent in disaster years have been recorded in Pacific Island countries like Vanuatu and Samoa. In case of Samoa, economic damages recorded have been of 161.8 per cent of the GDP and in Vanuatu, damages have been 131.2 per cent of the GDP for individual disasters. This shows that in relative terms, disasters in Pacific SIDS can be huge (Lee, Zhang, & Nguyen, 2018). Such relative figures particularly help to comprehend the difficulties societies and governments have to deal and recover from such events.

Major challenges of sea-level rise exist for atolls and low-lying coral islands; however, river valleys and coastal areas of volcanic, high islands can also be severely exposed (Johnson, Higgins, & Stephens, 2021; Velmurugan, 2008). Pacific Islands have a very big population living on atolls and low-lying coral islands. Around 300,000 Pacific Islanders lived in mid-2020 on atolls and low-lying islands, the majority in Kiribati (120,000) and the Marshall Islands (55,000). Presently, many atoll/low-lying coral islands experience severe flooding, when king tides happen (Cauchi *et al.*, 2021; Román-Rivera & Ellis, 2018).

Disasters in Caribbean Islands

There are also severe challenges coming from natural hazards in the Caribbean Island region. As already indicated, the most frequent and most destructive hazards come in forms of Tropical Cyclones, in this part of the world called Hurricanes. Between 2020 and 2022 Hurricanes Elsa, Eta, Isaias, Laura, and Ida were the most destructive ones, happening at the same time when countries were battling the COVID-19 pandemic.

Hurricane Elsa (July 1-July 14, 2021) affected Cuba, Barbados, the Dominican Republic, Jamaica, Haiti, Saint Lucia, Saint Vincent and the Grenadines, and other Caribbean islands before it reached the United States of America. For Barbados it was the first hurricane in 66 years (Jamaica Observer, July 2, 2021). It damaged more than 1,300 homes, causing power cuts to the entire island. In Saint Lucia and Saint Vincent, one person died and heavy damages (USD 34 million) were inflicted to the banana crop in Saint Lucia. The people of Saint Vincent and the Grenadines were still recovering from the eruption of La Soufrière volcano which affected them three months earlier (UNST, 2021). More damaging were hurricanes Isaias (July 30-August 6, 2020) and particularly Laura (August 20-August 29, 2020), although Isaias brought an end to a long drought in Puerto Rico, Dominican Republic and other Caribbean islands.

One of the deadliest hurricanes was Laura, which killed at least 81 people (Haiti 31, Dominican Republic 9, USA 41). Damages have been estimated at USD 19 billion, most of them in the USA, where also major agricultural losses happened, greater than Hurricanes Katrina and Rita combined had caused (The Advocate, 2020).

Most recently Hurricane Ida (August 26, 2021-September 4, 2021) has caused severe damages in the Caribbean Islands

region, the USA and Canada. Next to Hurricane Katrina (2005) Ida has been the worst damaging hurricane ever recorded in the USA. Total insured losses from Hurricane Ida were estimated between USD31 billion and USD75 billion (Lerner, 2021; NOAA NCEI 2022). Flooding caused by Ida killed 20 people in western Venezuela. An even greater death toll (96) suffered by the USA.

Examples from Central America, however, show that severely damaging and deadly hurricanes in the Americas are not restricted to the Caribbean Island region. Hurricane Eta (October 31, 2020-November 14, 2020) was most damaging in countries in South (Colombia), Central (Nicaragua [2 deaths; 30,000 affected], Honduras [110; 4.6 mill], Guatemala [160; 2.4 mill], El Salvador,Costa Rica [2], Panama [79], Belize [0; 60,000], and Mexico [31; n.a.]) and the USA [12; n.a.] (Jasper , 2020; Stewart, 2021; EM-DAT, 2022). Close to 400 people were killed and the hurricane affected more than 7 million people in Central America. The entire damage was in the range of USD 7.3 billion. The Caribbean Region was marginally affected in Cuba and the Cayman Islands.

Hurricane Iota (November 13, 2020-November 18, 2020) followed less than two weeks after Hurricane Eta. It caused 84 deaths (Colombia, 10 deaths; El Salvador, 2; Guatemala, 2; Honduras, 13; Nicaragua, 39; Panama 1). The damage was at least USD 1.4 billion. (Pasch *et al*., 2021; EM-DAT, 2022).

Social Impact of Climate Change

Climate change has multiple severe social impacts. Exposure to food insecurity has already been highlighted. One of the disturbing impacts of climate change is when people are no longer able to stay in their places of residence. Natural hazards can cause displacement or resettlement (Boyd *et al*., 2021; Brown *et al*., 2021). Situations of displacement or unavoidable resettlements are not dangers which will happen sometime in the future, but they are already happening (Klöck & Nunn2019; Kupferberg, 2021; Nunn *et al*., 2020; Tabe, 2019). Closely related to this are migration efforts of people possibly because of climate change. A severe challenge is also when climate change destroys or devalues people's sources of livelihoods.

Resettlement and Displacement as Impacts of Climate Change

Often expressions like climate refugees take up the matter of displacement in a populist, sensationalist manner, but there is no doubt that environmental and climate change can make locations uninhabitable (Weber, 2014). SIDS are particularly exposed to such challenges as land for alternative and more suitable residence is scarce or just not available at all. Often displacement goes along with natural hazards such as cyclones/ hurricanes and flooding. When cyclones/ hurricanes/ floods destroy people's houses, displacement can be long-term/ permanent. Often it is temporary, particularly when evacuation centres are available where people can seek protection during such events and return to repair, build back their properties once the hazards are over (Pill, 2021; Siebeneck *et al*., 2021; Wu *et al*. 2019).

Social scientists, politicians and policy makers are still struggling to put a name to the phenomenon. Expressions like 'Climate / environmental displacement' or 'climate change-induced migration' suffer as such complex processes like displacement can hardly be explained through simple, mono-causal statements. The same applies to the question of whether people who fled their country due to environmental and climate change or natural hazards are entitled to a special legal status. The term "environmental refugee" was first used in a UNDP report in 1985 as "people who are forced to leave their traditional habitat temporarily or permanently because of a pronounced environmental disturbance [...] that threatens their livelihood and/or significantly affects their quality of life" (El-Hinnawi 1985, p. 4; see also Braga, 2020). Other sources note that this terminology appeared earlier and attribute it to Lester Brown (Hassine, 2019; Jolly, & Ahmad, 2019). The Convention Relating to the Status of Refugees (1951) and its protocol of 1964, however, does not accept environmental degradation or climate change as valid reasons to receive the status of a refugee although countries like Australia and New Zealand have started to provide refugee protection for some people who suffer from climate change (Osobka, 2021).

In Oceania, the applications of refugee issues are not very wide spread - except in Australia. After the Tampa incident of 2001, a very restrictive refugee policy was started in Australia - known as 'Pacific Solution'. It entailed that nobody will be allowed to reach Australia without permit by ship, and applications as asylum seekers will be processed on Manus Island (PNG) or Nauru. Many are worried that such restrictive policies will also be applied, when people have to leave their home islands / countries because of climate change, a hazard to which they have hardly contributed anything (Ibekwe, 2021; Kalir, 2022; Moretti, 2021; Weber, 2015).

In the Caribbean Island region, there are often reports of floods and hurricanes that people have been displaced temporarily or were advised to move their residences further in-land, away from the shore (Thomas & Benjamin, 2018, 2020).

Resettlement in contrast to displacement is an organised approach to bring people to safety who are insecure in the places they live (Nalau, & Handmer, 2018). The Fiji Government was the first to enact a Planned Relocation Guidelines document in 2018, which provides policies as well as implementation plan to support people who are no safer in the places they reside and have to move elsewhere. The Planned Relocation Guidelines was developed under the guidance of the Ministry of Economy with support from the DeutscheGesellschaft für Internationale Zusammenarbeit (GIZ) and Prof. Cosmin Corendea (Bertana, 2020; COP23, 2018; McNamara&Des Combes, 2015; Piggott-McKellar *et al*. 2019). Plans for planned community relocation in Fiji exists since 2007 (Cawaki 2007, pers. communication), but due to insufficient resources, only a handful relocation projects have been completed so far. First, the relocation of Vunidogoloa in the eastern part of Vanua Levu was completed in 2014 (Bertana, 2018).

Another effort is by the people of Kiribati to prepare for a future when living on their own islands becomes more difficult. In 2014, their government under the then president Anote Tong bought some 2,500 ha of land at the Natoavatu Estate on Vanua Levu, Fiji's second-biggest island (Fröhlich, & Klepp, 2019; Klepp, 2018; Klepp, & Herbeck, 2016). The primary objective was to use the land for food production for Kiribati, but many assume that the land is also intended to provide a new home to I-Kiribati when they have to leave their home islands, intending to enhance the economic and social resilience of Kiribati in the face of climate change. President Anote Tong followed an approach he called 'migration with dignity' (Fladvad, Klepp, & Dünckmann, 2020), which reflected on the 'Pacific Solution' and how badly refugees are also treated elsewhere (Tong, 2010; pers. communication).

Climate change induced migration

Most social scientists agree that migration and environmental quality may be linked in one way or another. At the same time, it is highly contested that there are simple casual relationships between people's mobility and climate change. Indeed, there is little agreement on what exactly constitutes migration which is caused as a result of environmental change. It is often unclear whether migration is the only driving force or if a decision to move is the result of more complex processes and considerations (Santos, & Mourato, 2021; UK Government Office for Science Foresight Report 2011). There is no automatism between climate change and migration. One cannot say: 'the more rainfall, the more droughts, or the increase in Tropical Cyclones the more migration'.

A very important aspect is that migration is often a crucial part of poor people's livelihood strategies. The need to diversify sources of livelihoods often requires to move. The idea is not recent, but discussions going back to the early 1970s (Meillassoux, 1972, 1973). Discussion on the articulation of modes of production argued that same households can be engaged in subsistence and capitalist world market production at the same time (Mafeje, 1981; Soiffer, & Howe, 1982; Trapido, 2016). The discourse then took a distinct Indian stream discussing pre-capitalist/feudal and capitalist modes of production and their impacts on peasant societies (Patnaik, 1990; Washbrook, 2007). A similar notion took the so-called Bielefelder Verflechtungsansatz (Bielefeld Approach of the Articulation of Modes of Production), which more distinctly argued that poor and vulnerable sections of societies aim to reduce risk by diversifying their sources of livelihoods. To be able to pursue such livelihood, strategy migration plays a crucial role (Bohle; Elwert, Evers, & Wilkens, 1983; Neubert, 2019; Rauch, 2014). A particular Pacific Islands notion of ideas about the articulation of modes of production contains the so-called MIRAB approach. It is argued that the people in some Pacific Island countries do much better than the 'health' of the economies of their countries would expect. The explanation of this contradiction is that many people **mi**grate and send **r**emittances. At the

same time the economies of countries receive high per capital **a**id inflows that help to entertain huge public sectors/ **b**ureaucracies. Mobility, thus, is perceived as one way of adaptation. The question, therefore, is not if mobility is good or bad, but efforts need to concentrate to assure that migrants can reap benefits from leaving their homes and moving to other places. More recently such approaches have found new attention through a perspective of 'translocality' and 'translocal' development (Peth, & Sakdapolrak, 2020; Porst, & Sakdapolrak, 2018; Weber, 2017; Weber, Kissoon, & Koto, 2019).

Like highlighted above, SIDS in the Pacific as well as in the Caribbean are usually seen vulnerable territories in the context of climate change. Discourses of resilience have played crucial roles to identify how island societies can cope with adverse impacts of climate change. Indeed, expectations go beyond coping, long-term adaptation, resilience (bouncing back) or even more, like it is expressed in the slogan 'to build back better' have raised hopes that the destruction in societies can even be an initiation to enhance development (Kelman, 2014). SIDS' resilience closely depends on their ability to cope with the impacts of natural hazards. This includes social and economic aspects of resilience, meaning that with such innovations, societies become better prepared to face future challenges. To bounce back to where societies have been before a disaster struck will inevitably lead to a repeat of a disaster, if the same happens again.

South-South Cooperation among SIDS

South-South Cooperation involving SIDS has become a serious mechanism to advance issues that are of particular importance for small island states.

Climate change intensifies the divide between the haves and the have-nots. It makes the differences between rich and poor people wider, but also widens the gap within rich and poor countries (Weber & Kopf, 2018). A particular role in this divide corresponds to SIDS, which are particularly exposed to severe impacts of climate change. At the same time, they do not have the capacities and capabilities to adequately respond to these challenges (IPCC, 2014).

At the same time, South-South Cooperation to address climate change is embedded in national and international discourses of development. Such cooperation reflects in constellations of the international economic and political system. SIDS have organized themselves in the Alliance of Small Island States (AOSIS). Often, they seek and get support from the Group of 77 (G77) and the Non-Aligned Movement (NAM). Moreover, memberships in these three groups of countries overlap.

When in 1995 the first Conference of Parties (COP1) met in Berlin, reduction of Greenhouse Gas (GHG) emissions was decided. This was supported by G77 and all countries of AOSIS. Two years later the Kyoto Protocol was born, requiring participating developed countries in Annex 1 to reduce their GHG emissions, while of countries in the South, including the SIDS did not

need to reduce any emissions. The Kyoto Protocol was weak as the USA did not ratify it and as China and India, two big emitters of GHG, were not among those countries required to reduce emissions.

AOSIS lobbied strongly for the Paris Agreement of 2015 (Fletcher, 2021). Important demands were to reduce the impact of dangerous climate change by keeping the increase in the mean global temperature well below 2 °C compared to pre-industrial levels. SIDS, with support of AOSIS and other developing countries were the strongest supporters of the 1.5 °C target in the Paris Agreement (The Economist, September 19, 2019). The agreement then envisioned to restrict the increase to 1.5 °C. (DeConto *et al*., 2021; Peterman & Cordes, 2021; Rogelj *et al*., 2016, 2019). Some scientists even raised concerns, if an increase of not more than 1.5 °C would prevent serious damages to SIDS in the Caribbean Islands (Clarke *et al*., 2021).

In addition to the goal to prevent dangerous climate change by curbing temperature increases, AOSIS at the COP26 in Glasgow lobbied for developing countries to receive USD 100 billion per year climate starting in 2020 (and not in 2023). SIDS have huge challenges to procure climate finance. Since COP15 (Copenhagen, 2009) and COP16 (Cancun, 2010) developed countries made commitments to provide USD 100 billion a year by 2020 (UNFCCC; 2009), but so far this did not happen. AOSIS also wants that subsidy on fossil fuel should be phased out by 2023 (Suresh, 2021). AOSIS' suggestion is certainly worth considering, but it appears that poorer countries might be more severely affected than richer ones. In many OECD countries fossil fuels are heavily taxed and do not receive subsidies. There has been also a considerate change in recent decades, where electricity generation is concerned. The path away from fossil fuels for power generation is far more advanced in developed countries than in the South, where power stations are often also highly insufficient (Fuhr, 2021).

The most important demand SIDS have been to get compensation for losses and damages that affect them due to climate change (Ferreira, 2021; Siegele, 2021). Article 8 of the Paris Agreement gives a strong foundation to compensate loss and damages, but so far implementation has been insufficient. Already in 1991, AOSIS had suggested to set up a compensation and insurance mechanism for losses from climate-induced sea-level rise (Mechler, & Deubelli, 2021). Financial mechanisms to compensate for losses and damages are separate from the USD 100 billion already pledged, but not yet provided (Khadka, 2021).

Conclusion

SIDS have a very strong interest that climate change mitigation is successful and that they receive support for adaptation measure. As they are not able to shoulder severe challenges that come their way, for instance, in the form of intensifying hazards, they need compensation for damages from processes to which they have little contribution, but are severely affected.

Climate change impacts are not only about losses and damages to the countries' exchequer. They have severe impacts on people's social, economic

and even cultural lives. Not a few have to reorganize their entire lives, leave the places they have lived for most of their lives, see coastal erosion eating away their land and after a while even their houses. What earlier was called a century flood or cyclone, now happens every couple of years, undoing development people had built for decades.

SIDS appear to be tiny and thus weak. Such perspective does not necessary show a complete picture. By 2020, the United Nations Department of Economic and Social Affairs listed 52 SIDS, although only 36 of them are members of the UN. This is a considerable share of UN member countries, although far from a majority. With support of G77 (134 countries) and NAM (120), things look different, although, as mentioned above, membership overlaps. The three groups - SIDS (UN members), G77 and NAM constitute 140 countries. This is 72.5 per cent of the UN General Assembly, where there is one country one vote. There are 28 countries that are members of all three groups (SIDS, G77, NAM), another seven SIDS are members of the G77, but not of NAM. Only three SIDS (Aruba, Palau, Tuvalu) hold no membership in either G77 or NAM.

This certainly does not mean that policies supporting climate change mitigation and adaptation policies automatically become mainstream, or that compensation for losses and damages are easy to achieve. Many G77/ NAM members face similar challenges of development, which are disturbed by climate change. Coalitions with SIDS are feasible in important questions. A major obstacle is that the Conferences of the Parties of the UNCCC process require unanimous decisions/ final texts, even when a huge majority of humankind would like to get better policies to protect them from the impacts of climate change and compensation for losses and damages (Khadka, 2021).

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LAUNCH OF IRIS AT COP26: INDIA'S ASSISTANCE TO SIDS

At the 26th session of the Conference of Parties (COP26), an initiative - Infrastructure for Resilient Island States (IRIS) - to boost the infrastructure in SIDS was launched by India, Australia, and the UK in collaboration with SIDS (Fiji, Jamaica and Mauritius). This initiative is aimed at providing technical support on the issues posed by infrastructure systems, and work with SIDS to find potential for partnerships to strengthen infrastructure systems in these nations for resilient development. Prime Minister Narendra Modi said at the conference in Glasgow that the Indian Space Research Organisation (ISRO) will develop a dedicated data window for SIDS to collect timely information on cyclones, coral-reef monitoring, and coast-line monitoring through satellite.

PM Modi recognised that climate change poses the greatest threat to the lives and economies of small island developing states. India made special preparations for cooperation with Pacific Islands and CARICOM countries after identifying the threat of climate change to SIDS. Solar technology training was provided to the citizens, among other contributions to their development.

Source: NDTV. (2021, November 02). India to Build Special Data Window For Information On Cyclones: PM Modi. Retrieved from https://www.ndtv.com/india-news/indias-isro-to-build-special-data-window-for-information-on-cyclones-pm-modi-2597045

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SIDS, Vulnerability and Climate Change: Looking through the Lens of South-South Cooperation Practices

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"Implications would be higher than expected, if the international community does not evolve greater policy synergy for implementing ambitious actions aiming to limit global average warming to 1.5°C."

Introduction

Amid the uncertainty and socio-economic and health challenges caused by the COVID-19 pandemic, the threats of climate change have further increased. Intergovernmental Panel on Climate Change Sixth Assessment Report[1] issued explicit warning of 'rapid', 'widespread' and 'intensifying' climate change, and implications for society and economy. (IPCC, 2021).

Small Island Developing States (SIDS) are a group of nations recognised by their sensitivity to economic and environmental shocks. (MacFeely *et al*., 2021) Scattered across three geographical regions - the Caribbean, the Pacific, and the Atlantic, Indian Ocean and South China Sea (AIS), SIDS form a heterogeneous group of nations and territories in terms of population, natural resources, development progress and income, among others; however, these island nations face '*unique social, economic and environmental challenge*' (UN, n.d.).

While three-fifths nations of SIDS nations belong to the category of upper middle-income countries, they are among the most vulnerable developing countries. Compared to larger upper middle-income countries, SIDS in this same income group

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Views expressed are personal.

are 73 per cent more vulnerable (OECD, 2018). These island nations are highly exposed to climate change induced threats and they have considerably limited coping capabilities in terms of limited land, financial resources, services delivery and climate resilient infrastructure. Despite their existential threat and increased urgency, the outcome of global negotiations could not adequately address the concerns of these countries. Considering the high potential impact of climate hazards, and rise in global temperature beyond 1.5°C can potentially pose existential risks to these nations.

In this context, the paper analyses the vulnerability of SIDS to further aggravating threats of climate change, and how global negotiations unfold in addressing these challenges. Finally, the paper discusses the relevance of South-South Cooperation (SSC) practices in dealing with challenges of climate change as well as facilitating sustainable development in the SIDS.

Impact of Climate Change on Socio-economic Development in SIDS

The SIDS' economy is sensitive to changing climate and extreme weather conditions. Crucial sectors such as tourism, fisheries and agriculture, which are mainstays of livelihood opportunities and determinants of growth, are closely linked to climate change and highly dependent on conducive environment as well. SIDS face numerous existing challenges ranging from over dependence on one sector - primarily on tourism, higher transportation costs, outward migration, unemployment, low scale economic activities, declining marine resources coupled with ocean acidification, among others; these challenges would further escalate due to changing weather pattern. Some island nations such as Haiti, Guyana, Saint Lucia, Cabo Verde, etc account for unemployment rates more than 15 per cent with St. Vincent & Grenadines at 21.6 per cent (World Bank Data Bank). Services exports contribute on average 25 per cent to SIDS' GDP and almost half of their services exports consist of travel services (UNCTAD, 2021). On average, the tourism sector accounts for almost 30 per cent of the GDP. It is much higher in countries such as Maldives, Seychelles, St. Kitts and Nevis and Grenada with over 50 per cent of the GDP. Therefore, direct and indirect contributions of tourism to GDP and foreign revenues are as high as 72 per cent in Maldives (UNCTAD, 2020).

Climate change would also pave way for the issues of submergence, threat to agro-economic activities leading to food insecurity, natural disasters, etc. The increasing frequency of climate change induced disasters would have severe implications for adaptive capacity and socio-economic stability in these nations. OECD (2018) notes that SIDS suffer the largest relative loss from the natural disasters due to their limited capacity to respond. Annual damages experienced by SIDS during 1990-2022 is estimated to be USD 2.13 billion. (Kumar, 2022 in section SSC statistics) The SIDS are the least responsible for climate change, however they are among the most vulnerable to its impact. They are dependent on others for significant action to be taken to tackle climate change at an international level.

SIDS and V20 - A Comparative Analysis

Several indices have been in place tracking the development, vulnerability aspects of countries across the globe such as the Global Climate Risk Index[2], Human Development Index (HDI), among others. The Climate Vulnerable Forum (CVF) is a global alliance of countries that are disproportionately affected by the consequences of climate change. During the Climate Vulnerable Forum in 2015 in Lima, Peru, the official bloc of the forum - 'V20' or 'Vulnerable Twenty' was launched, which consisted of the top 20 nations from around the world that are most vulnerable by the climate-change related disasters. Afghanistan, Bangladesh, Barbados, Bhutan, Costa Rica, Ethiopia, Ghana, Kenya, Kiribati, Madagascar, Maldives, Nepal, Philippines, Rwanda, Saint Lucia, Tanzania, Timor-Leste, Tuvalu, Vanuatu, and Vietnam were the countries that made up the bloc. During the 2nd V20 Ministerial Dialogue in April 2016 in Washington, DC, the V20 recognised 23 new CVF members as incoming members in the V20 initiative. Currently, the V20 bloc consists of 48 countries, including 16 from SIDS, that are all diversely affected by climate change issues such as superstorms, storm surges, droughts, famines caused by climate factors, food shortages as a result of climate change, power outages, flash floods, mud slides, desertification, heatwaves, and other effects of climate change.

Table 1 shows the disparity in classification of vulnerable countries in V20 and SIDS grouping. SIDS is the most affected by the effects of climate change, however 42 island nations do not form a part of V20. The group of SIDS consists of island nations, whereas V20 is a heterogenous group of islands, mountainous regions and countries with coastal regions. Table 2 describes the share of SIDS and V20 in the world population, land share and EEZ. The share of population and land is significantly higher for the V20 grouping,

Table 1: Common Member Countries in SIDS and V20 grouping

V20 \ SIDS	Member	Non-Member
Member	16	32
Non-Member	42	X

Source: Author's calculation

Table 2: Comparative Statistics

	World Pop Share	World Land Share	World EEZ Share	EEZ/Land Area
SIDS	0.93%	0.92%	25.19%	29.47
V20	14.58%	11.00%	14.88%	1.45

Source: Author's calculation using United Nations Population Division estimates & Vivid Maps.

whereas the share of EEZ and EEZ/ land area is high for SIDS. The group of islands constitute less than 1 per cent of the world population, however, on average, the Exclusive Economic Zone (EEZ) is 29 times the SIDS countries' land mass. Thus, the majority of the natural resources in the SIDS come from the ocean. The difference between these two groups lies mostly in terms of the share of EEZ, which is remarkably high for SIDS compared to V20.

Going further, the paper concentrates on SIDS countries alone.

Time for Action

There is urgency amid uncertainty induced by multiple crises for the SIDS. Implications would be higher than expected, if the international community does not evolve greater policy synergy for implementing ambitious actions aiming to limit global average warming to 1.5°C. It is also a fact that these nations are suffering from consequence of actions by industrialized nations. Although SIDS' vulnerability is recognized by the international community, they lack the political clout in global politics to define climate agenda and influence the outcome. It is crucial to support SIDS' national efforts in the course of adaptation and mitigation as well as in the process of socio-economic development at grassroots level. Development financing, technology, information and knowledge sharing, etc. for economic diversification, climate resilient infrastructure, renewable energy, fresh water, capacity building, public health and so on would be essential in ushering a sustainable future for them.

Multiple topical issues, viz. climate fair share, climate ambition, climate finance, damage & loss leverage, and carbon market, are significant in handling the climate change. SIDS do not have the *luxury of time* like others because of their small share in world GDP on one hand and large share in terms of losses on the other hand (Meddeb, 2020).

Since the onset of industrial revolution, more and more fossil fuels are burnt and which has caused earth's temperature to rise considerably. High income group countries became prosperous through the untrammelled burning of fossil fuels and therefore it becomes their responsibility to contribute more towards reduction commitment, helping developing countries to achieve their target and in advancing and financing climate agreeable innovation. However, it is being evident that the countries' national mitigation contributions are deficient to achieve the 2015 Paris Agreement objective of limiting global warming to 'well below 2°C, preferably to 1.5°C, compared to pre-industrial levels' and in this manner unequipped for deflecting calamitous outcomes of environmental change (Höhne *et al*., 2017, 2020; IPCC, 2018b; Rogelj *et al*., 2016; UNEP, 2019, 2020; UNFCCC, 2016).

The share of greenhouse gas (GHG) emissions of SIDS is approximately 0.76 per cent of global emissions (Ge *et al*., 2020).[3] SIDS, as a whole, contribute less than 1 per cent to greenhouse gas emissions, however they are the most affected by such emissions and global warming, in general. Island and low-lying countries were among the first to grapple with global warming

nearly 30 years ago, as they began to experience its alarming impacts first hand. However, since they are small, developing economies, they do not seem to have efficient resources to defend against these impacts. Their ambition of meeting net zero emissions is dependent on other nations.

Since the countries' contribution to climate change and the capacity to prevent and cope with its consequences is varied, it is imperative that some countries contribute more than others. This has been identified globally and thus the Convention, the Kyoto Protocol and the Paris Agreement call for financial assistance from Parties with more financial assistance to those that are less endowed and more vulnerable. To avert dangers of climate change, mitigation and adaptation measures are equally important. Mitigation efforts are required in terms of large-scale investments needed to significantly reduce emissions. Since the effects of climate change are varied and especially magnified in case of SIDS, significant financial resources are needed to adapt to the adverse effects and reduce the impacts of a changing climate and therefore, climate finance is needed for adaptation.

At the 2009 United Nations Climate Change Conference held in Denmark (Copenhagen Accord), developed countries committed to a goal of jointly mobilising USD 100 billion per year in climate finance by 2020 to address the needs of developing countries in areas of meaningful mitigation actions and transparency on implementation. However, this goal was not reached (UNFCCC 2009, paragraph 8). The delivery of the said commitment by developed countries was supposed to set the tone for deliberations on future collective climate action goal, from a floor of USD 100 billion, which was decided in Paris Agreement 2015 to be agreed upon before 2025 (UNFCCC 2015, paragraph 53).

Role of South-South Cooperation

Climate urgency has renewed the urge for enhancing development cooperation and deepening of policy synergies further. SSC on climate change has gained momentum. Particularly, SSC with SIDS in areas of socio-economic development, infrastructure development, capacity building, including renewable energy, infrastructure, disaster risk reduction, agriculture, fisheries, among others have been nurtured and gradually expanded.

In the past few decades, SSC has expanded its scope and taken on new forms: facilitating regional, sub-regional and interregional integration, providing innovative approaches to collective actions and strengthening its contribution to sustainable development. In this context, the SSC Action Plan has been adopted by UN principals as a substantive pillar to support the implementation of the United Nations Secretary-General's Climate Change Engagement Strategy in November 2017. The Action Plan aims to support and promote SSC and Triangular Cooperation on climate change by making use of existing network and capacity of the United Nations.

The Action Plan has four key pillars which talk about the wider political

interactions at the high level in the sideline of COP. It aims to take stock of progress of climate change plans. It also aims to have a Southern perspective of climate change action plan, organizing work, academic interactions and publications of Southern Climate Solution Series to support developing countries on developing knowledge to address climate change.

In coping with the effects of climate change on SIDS, it is worthwhile to learn from the experiences of the South, particularly SIDS. UNDP (2021) describes innovative ways in which different models of international cooperation can support SIDS to overcome shared challenges and showcases some effective SSC practices. The solutions are founded upon the critical role of SSC, which is a proven and trusted platform to share and implement solutions.

For instance, Cuba has a National Climate Change Plan called Life Task that aims to boost resilience and promote the use of renewable energy, energy efficiency, and sustainable development. Since Caribbean countries are exposed to similar environmental risks, learning from Cuban knowledge could help to facilitate cooperation between the Caribbean Island countries of Dominican Republic and Haiti. The World Food Programme (WFP) began collaborating with these Caribbean Island nations within the framework of SSC with the goal of developing disaster risk reduction capacities. Various Workshops, field visits, and deputations of experts on disaster risk management, among other things, were undertaken to identify shortcomings in each country's disaster risk management. With the help of the WFP, the countries established a set of actions to be undertaken through SSC in order to allow peer learning on disaster risk reduction in the Caribbean to continue.

Building on the model learned in Cuba, the National Meteorological Centre of Haiti implemented a numerical model that permits forecasting of possible hurricane trajectories within 48-72 hours. At the community level, Haitian employees were trained to handle hazard, vulnerability, and risk assessments. Using the experience of Cuba's Civil Defense, the Haitian government devised a countrywide hurricane contingency plan. As a result of Cuba's technical cooperation in forecasting floods caused by heavy rains, many missions of Cuban technicians were sent to the Dominican Republic to teach meteorological counterparts on how to use numerical models established by the Cuban Institute of Meteorology. These techniques have proved beneficial in strengthening the Dominican meteorological system's technical ability to predict the impact of extreme winds and heavy rainfall.

The Aviation Needs Analysis in Pacific Small Island Developing States (PSIDS) is another example of cooperation. With a combined population of 10 million people spread across an area covering 15 per cent of the Earth's surface, the PSIDS are among the world's smallest and most distant countries. Remoteness, vulnerability to external shocks and natural disasters, an excessive reliance on foreign trade, fragile environments, and limited resources are some of the distinct challenges faced by them.

Civil aviation is critical for PSIDS, particularly in terms of connectivity, socio-economic development, and disaster relief. Recognizing the issues of air connectivity faced by PSIDS, the International Civil Aviation Organization (ICAO) proposed a study to identify and solve the existing challenges and demands of PSIDS in terms of aviation safety, air navigation, and aviation security during its 39th Assembly. The PSIDS Study was made possible by substantial financial and in-kind donations from Australia, Chile, China, Fiji, Singapore, the United Kingdom, and the United States of America, in addition to the resources supplied by ICAO.

Based on the information gathered and the analyses performed within the study's time and resource constraints, a total of 30 recommendations have been formulated to be taken forward by the PSIDS, PIF and ICAO. Some of the ICAO recommendations try to persuade aid donors, training institutions, and multilateral development banks to do more to promote PSIDS. The recommendations advocate for a holistic approach to the development and implementation of a Pacific aviation road map to ensure the region's aviation regulatory systems is effective, sustainable, and resilient.

IBSA Fund is yet another form of successful SSC in SIDS. Some projects in areas of sustainable development, livelihood, conservation agriculture, permaculture and sustainable fisheries management, have been undertaken and implemented in SIDS under the IBSA Fund. These projects have also contributed in achieving Sustainable Development Goals (SDGs).

The 'Empowering Rural Women: Scaling Up the Rocket Stove Project' in Fiji, for example, helped to improve the lives and health of women in rural regions by introducing a novel cooking method based on rocket stoves. According to the IBSA Fund Annual Report 2019, 1,350 women have been trained in the manufacture and use of energy-efficient, enhanced rocket stoves, which help to reduce the use of fossil fuels and deforestation for firewood (UNOSSC, 2020).

In Kiribati, the IBSA Fund implemented a project "Enhancing Inclusive Sustainable Economic Development via Coconut-sector Development." For the period of January 2018 to June 2020, the project had a budget of USD 315,000. The project's overall purpose is to help smallholder farmers generate revenue and improve their livelihoods by producing value-added coconut products, all while contributing to inclusive, long-term economic growth as envisioned in the national development strategy. Timor-Leste has been awarded a USD 1,428,772 grant for a project "Conservation Agriculture, Permaculture, and Sustainable Fisheries Management". The adoption of sustainable production techniques, as well as the intensification and diversification of smallholder farming and fishing systems, were supported through this project.

IBSA has provided assistance to Haiti and Saint Lucia in the areas of solid waste management and irrigated agriculture. Successful efforts in these countries piqued the SIDS' interest in collaborating. Tonga and Kiribati, for example, have expressed interest in having Fijian women trainers visit their nations to

help women in the production of better rocket stoves. At this time, the exchange is confined to knowledge sharing.

Several partnerships have been developed by India for facilitating sustainable development at the bilateral as well as regional level. India and PICs have cooperated in building infrastructure, and policy synergies at the global and regional level. India and PICs leaders met at the sidelines of UN General Assembly. In recent context, India's Prime Minister Narendra Modi has announced new grants to the India-UN Development Partnership Fund during meetings with leaders of the Caribbean Community (CARICOM) and PSIDS alongside the United Nations General Assembly in September, 2019. USD 14 million will be given to projects in the Caribbean and USD 12 million US to projects in the Pacific. The India-UN Development Partnership Fund supports Southern-owned and led, demand-driven, and transformational sustainable development projects across the developing world, with a focus on least developed countries and SIDS. The Fund is managed by UNOSSC, and United Nations agencies implement Fund projects in close collaboration with partnering governments.

A Commonwealth Window has also been established within this Fund, representing USD 50 million over a period of five years. Established in June 2017, the Fund has already enabled 44 development projects in 44 countries across all 17 Sustainable Development Goals. Projects cover a range of SDG thematic areas including climate resilience, environmental sustainability, gender equality, renewable energy, improving women's and maternal health, water and sanitation, education, employment and livelihoods, disaster recovery and risk management, agricultural development and infrastructure.

The role of SSC, now, is more crucial than ever before in assisting SIDS in not just recovering from the pandemic, but also in making greater and faster progress toward the Sustainable Development Goals.

Conclusion

Considering the growing threats of climate change and vulnerability of the SIDS, it is crucial to take effective measures. However, the outcome of COP26 does not live upto the expectation. It appears that developed nations are not keen on sharing more burden for providing additional resources for loss and damage. Greater cooperation is expected from the relatively developed nations in mobilizing sufficient financial resources for effectively dealing with severe impacts of climate change; however, they have not fulfilled their commitments. At the same time, it is observed that cooperation in broader ecosystem of SSC has been increasing. The principles and modalities of SSC are more people-centric and without conditionality. The South has already made considerable efforts facilitating sustainable development partnership. India is an important development partner of SIDS both at the bilateral as well as multilateral level. India has voiced their concerns at various multilateral forums, and has taken initiatives for promoting renewable energy, training and capacity building for sustainable

practices at the grassroots level. It also strives for triangular cooperation for building "resilient, sustainable, and inclusive infrastructure"(CDRI, n.d.).[4] Indian CSOs and private sector are also engaged in the widening and deepening of the development partnership of India and SIDS.

Endnotes

1. Working Group I contribution to the IPCC Sixth Assessment Report released in August 2021
2. Global Climate Risk Index is published annually by the international environmental think tank 'Germanwatch'. The Index analyses the extent to which countries and regions have been affected by the impacts of weather-related loss events (storms, floods, heat waves etc.). The impact is calculated in terms of fatalities and economic losses, both.
3. As of 2018, SIDS contribute 374 metric tonnes of GHG emissions out of world total of 48.9 gigatonnes.
4. Launch of 'Infrastructure for Resilient Island States' (IRIS) at COP26, CDRI

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16TH INDIA-US DEFENCE POLICY GROUP MEETING

Regional matters of mutual concern were discussed, including about South Asia and the Indian Ocean Region ahead of the India-US 2+2 ministerial dialogue. Defence Secretary Ajay Kumar led the Indian delegation, while Under Secretary of Defense for Policy Colin Kahl led the American group at the 16th India-US Defence Policy Group.

Ways to improve collaboration with like-minded allies in order to keep the Indo-Pacific free and open was deliberated upon. Officials said that the meeting advanced an ambitious set of bilateral priorities, including information-sharing, high-end maritime cooperation, logistics, and defence trade, reflecting India and the United States' growing defence ties.

Source: SNS. (2021, October 09). India, US discuss situation in South Asia, cooperation in Indo-Pacific. *The Statesman*. Retrieved from https://www.thestatesman.com/india/india-us-discuss-situation-south-asia-cooperation-indo-pacific-1503016539.htm

Climate Change Vulnerabilities of SIDS and Potential for South-South Cooperation

*Vinod Kumar**

"There is great potential for exchange of ideas, experiences and best practices between SIDS in the Pacific and the Caribbean, in order to find suitable solutions and replicate best practices for addressing the various threats posed by climate change and disasters."

Introduction

The 2030 Agenda for Sustainable Development and the Sustainable Development Goals adopted by the UN in 2015 dwelt on the impact of climate change on sustainable development. Recognizing climate change as one of the "greatest challenges of our time" with its adverse impacts undermining the ability of all countries to achieve sustainable development directly and indirectly, and noting that the "survival of many societies and the biological support systems of the planet" are at risk, the Sustainable Development Goals (SDGs) include a dedicated goal of taking urgent action on climate change and its impacts.[1]

Small Island Developing States (SIDS) are a distinct group of 38 UN Member States and 20 Non-UN Members/Associate Members of United Nations regional commissions that face unique social, economic and environmental vulnerabilities. For SIDS, the Exclusive Economic Zone (EEZ) is, on average, 28 times the country's land mass. Thus, for many SIDS the majority of the natural resources they have access to comes from the ocean. Factors like small population size, remoteness from international markets, high transportation costs, vulnerability to

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exogenous economic shocks and fragile land and marine ecosystems make SIDS particularly vulnerable to biodiversity loss and climate change because they lack economic alternatives.[2]

The SIDS are the least responsible for climate change, however they are among the most vulnerable to its impact. They are dependent on others for significant action to be taken to tackle climate change at an international level. Due to their circumstances the international community has recognised the special situation of SIDS in the context of climate change impact. This paper intends to highlight the vulnerabilities of SIDS and the potential of South-South Cooperation, especially in the light of the COP26[3] Summit in November 2021 in Glasgow, UK.

South-South Cooperation is a "broad framework of collaboration among countries of the South in the political, economic, social, cultural, environmental and technical domains. Involving two or more developing countries, it can take place on a bilateral, regional, intraregional or interregional basis. Developing countries share knowledge, skills, expertise and resources to meet their development goals through concerted efforts".[4]

Triangular Cooperation involves 'Southern-driven partnerships between two or more developing countries, supported by a developed country(ies) or multilateral organisation(s), to implement development cooperation programmes and projects.[5]

The SAMOA (SIDS Accelerated Modalities of Action) Pathway, outcome of the Third International Conference on SIDS (Apia, Samoa, 1-4 September 2014) articulates the sustainable development pathways and aspirations for SIDS over the period 2015-2025, and promotes international assistance to address challenges faced by small islands.[6]

SIDS Vulnerabilities

For SIDS, small, dispersed populations hamper the creation of sizable domestic markets and lead to capacity constraints. Their remoteness determines that as a group they are less than one third as well connected as other developing countries (OECD report: Making Development Cooperation Work For Small Island Developing States[7]), and this reduces their access to international markets and competitiveness. As a result, most SIDS rely on small, undiversified economies and often face high debt levels, many of them also relying on the rest of the world for remittances, official development assistance (ODA) and financial services. These economic vulnerabilities are interrelated and reinforced by the climate and environmental challenges, such as increasingly frequent extreme weather events, rising sea levels, ocean acidification, loss of ocean oxygen and ecosystem degradation.[8]

Rising sea levels as a result of climate change not only pose the threat of submergence of coastal areas, and in some cases entire islands, but also affect their economy and livelihoods of people highly dependent on the ocean. The increasing frequency of climate change induced disasters would have severe implications for adaptive capacity and socio-economic stability in these nations. Single disasters often have widespread

and long-term effects for SIDS, eroding adaptive capacity and socio-economic stability. An example is Hurricane Maria in 2017 that caused damages in Dominica totalling over 225 per cent of the country's GDP, and displaced the entire population of Barbuda. Such disasters make it harder for SIDS to allocate resources and finances to sustainable development, and increases vulnerability to other climate impacts.[9]

COP 26

The 2021 UN Climate Change Conference (COP26) in Glasgow, UK in November 2021 has not led to a sense of achievement that we had seen after the Paris Agreement in 2015. While the Glasgow Climate Pact and the frenzy of pledges during the first week clearly signal that a decarbonised future is on its way, they are almost certainly too little too late to limit global warming to 1.5°C above pre-industrial levels.[10]

Speaking at COP26, Barbados Prime Minister Mia Amor Mottley called for the global average temperature increase to be limited to 1.5° C adding that a 2° C increase is a death sentence for several countries. "We do not want that dreaded death sentence. We've come here today to say 'try harder, try harder' because our people, the climate army, the world and planet need our actions now, not next year, not in the next decade".[11]

Finance was extensively discussed and there was consensus on the need to continue increasing support to developing countries. The call to at least double finance for adaptation was welcomed by the Parties. The duty to fulfil the pledge of providing 100 billion dollars annually from developed to developing countries was also reaffirmed. And a process to define the new global goal on finance was launched.[12] Parties collectively agreed to work to ensure that the rise in the average temperature is limited to 1.5 degrees. Alok Sharma, UK President of COP26 said: "We can now say with credibility that we have kept 1.5 degrees alive. But its pulse is weak and it will only survive if we keep our promises and translate commitments into rapid action. I am grateful to the UNFCCC[13] for working with us to deliver a successful COP26." [14]

Developed countries came to Glasgow falling short on their promise to deliver USD 100 billion a year for developing countries. Voicing "regret," the Glasgow outcome reaffirms the pledge and urges developed countries to fully deliver on the USD 100 billion goal urgently. Developed countries, in a report, expressed confidence that the target would be met in 2023. The Glasgow Pact calls for a doubling of finance to support developing countries in adapting to the impacts of climate change and building resilience. This won't provide all the funding that poorer countries need, but it would significantly increase finance for protecting lives and livelihoods, which so far made up only about 25 per cent of all climate finance (with 75 per cent going towards green technologies to mitigate greenhouse gas emissions).[15]

SIDS Actions

Despite making negligible contributions to global greenhouse gas emissions, SIDS have also focused on mitigation. The

Nationally Determined Contributions (NDCs) of many SIDS focus on shifting to renewable energy, an opportunity to reduce emissions while also reducing risk to extreme events and moving toward energy sovereignty. Some SIDS have developed ambitious mitigation plans to become carbon neutral or even carbon negative. However, the need for human, technological, and financial support to achieve mitigation goals will need to be addressed.[16]

SIDS used COP26 to highlight their conceptions of the climate emergency, including its existential threat, loss and damage due to climate change impacts, and the need for increased financial commitments to mitigate the effects of climate change.[17] SIDS leaders expressed the growing need for action through international cooperation, because SIDS alone cannot address the crisis - global action is needed for their survival.[18]

SIDS are taking bold stances on the sustainable ocean economy and are calling on the international community to support their ambition. SIDS have identified sustainable ocean economies as an SDG accelerator, considering that investments in the sustainable ocean economy will have large multiplier effects across many other economic and social areas. Many SIDS also have developed blue economy strategies. Cook Islands declared its entire exclusive economic zone (EEZ), equivalent to 1.9 million km², a multiple-use marine protected area - the world's largest. Palau established its entire EEZ as a fully protected marine reserve, making it a no-take zone and banning all fishing and mining activities.[19]

SSC and SIDS

Enhanced international cooperation is crucial for all countries to combat climate change. As a complementary way to address climate change, South-South Cooperation (SSC) on climate change is gaining momentum with an increasing number of developing countries undertaking traditional and innovative SSC modalities. The UN Action Plan on South-South Climate Cooperation (2017 -21) aimed to:

- Maintain and strengthen the political momentum on climate change
- Strengthen knowledge, awareness and understanding of South-South climate cooperation
- Accelerate United Nations system-wide efforts and enhance coordination to support South-South climate cooperation
- Engage multi-stakeholders of the South for global climate action[20]

There is growing recognition of the potential of SSC and Triangular Cooperation (TrC) to facilitate technology development and transfer for climate action in developing countries under the Paris Agreement. The thematic areas identified as most promising for technology cooperation via South-South and triangular channels include agriculture, disaster risk reduction, renewable energy and energy efficiency, forestry, transport, water resources and waste management.[21]

Cooperation among SIDS

Knowledge sharing and solution exchanges are bread and butter for South-South cooperation.[22] SIDS have been engaged in cooperating and collaborating

among themselves in tackling climate change. One early example of regional cooperation on climate change was the Caribbean Planning for Adaptation to Climate Change (CPACC) programme (1997 -2001). With resources obtained from the GEF (Global Environment Facility) trust fund, Caribbean SIDS cooperated in identifying strategies to cope with adverse effects of climate change, particularly sea level rise, to develop an integrated management and planning framework for cost-effective responses and adaptation to climate change in coastal and marine areas, to provide training and institutional strengthening that could enhance regional and national capacities, and to identify and assess policy options.[23] At present the Caribbean Community Climate Change Centre as an inter-governmental Caribbean Community (CARICOM) institution, maintains the Caribbean's repository of information and data on climate change specific to the region.

In the Pacific, the South Pacific Regional Environmental Programme (SPREP) - a technical, intergovernmental organisation, has become a central actor in the Pacific to promote co-operation in the South Pacific region and improve sustainable development. SPREP also receives and channels international financial support. Since its establishment in the early 1990s SPREP has supported the capacity of national departments and environmental strategies.[24] The Pacific Climate Change Centre at SPREP set up in 2019 in partnership with the Government of Japan delivers capacity development programmes in adaptation, mitigation, climate services and project development. The Centre's mandate includes to "Deliver capacity development programmes in adaptation, mitigation, climate services and project development" and "promote and foster applied research, drive innovation and build capacity in these areas".

The initiative SIDS DOCK set up in 2015 as a "DOCKing station," to connect the energy sector in SIDS with the global markets for finance and sustainable energy technologies, is a SIDS-SIDS institutional mechanism established to facilitate the development of a sustainable energy economy within the small island developing states, with its secretariat in Belize. It announced a Global Ocean Energy Alliance (GOEA) with international partners on the sidelines of COP26. The Prime Minister of Tonga, as President of SIDS Dock Assembly, announced that the partners will officially launch the GOEA at the UN Oceans Conference, scheduled for July 2022, in Lisbon, Portugal, and asked the international community and the private sector to join the Alliance. "We are seeking partners and we are looking to our oceans and in particular, ocean energy, as the principal source of energy to help a number of islands survive and thrive. Ocean energy is the big game-changer to turn the tide on climate change and get to Net Zero. This is the only option left for our children's survival and our future."[25]

There has been cooperation between Pacific and Caribbean SIDS in the South-South framework. These countries and local communities have a range of capacities and practices for effective disaster prevention and management, as well as for coping with and adapting to

climate change. There is great potential for exchange of ideas, experiences and best practices between SIDS in the Pacific and the Caribbean, in order to find suitable solutions and replicate best practices for addressing the various threats posed by climate change and disasters. Under this initiative, UNDP, as a neutral broker with long-term presence on the ground in both regions and their member countries, plays a facilitation role to lay the groundwork for sustained South-South cooperation on these urgent development issues.[26]

The Steering Committee of the SIDS Partnership Framework (established by UN following the 2014 SIDS Conference in Samoa) in 2019 launched the SIDS Partnership Criteria and Norms. A genuine and durable partnership for SIDS is one that strives to follow the SIDS Partnership SMART criteria - a partnership that is SIDS-Specific, Measurable and monitorable , Achievable & Accountable, Resource-based & results focused, Timeline for implementation & transparency by all parties.[27]

Singapore, itself a SIDS, has offered special technical assistance packages for SIDS since 1999. The latest package - the "Singapore Partnership for the SAMOA Pathway (SPa)" - was launched at the 74th UNGA in September 2019 and extends to 2024 to support SIDS' implementation of the SAMOA Pathway. It offers targeted and tailor-made programmes, particularly on climate change and disaster risk reduction. Some of these programmes will be organised through enhanced partnerships with the UN and other international organisations.[28]

India and SIDS

India has a coastline of over 7500 km, including about 2000 km along its 1382 islands. Climate change and the vulnerability of coastal areas is, therefore, a common concern between India and the SIDS, and India works closely with them on international climate change issues.

In 2007, a workshop on Sustainable Development, jointly organised by the Pacific Island Countries (PICs) and Indian Mission in Suva, Fiji in association with The Energy and Resources Institute (TERI) of India, provided training on sustainable development for PIF member countries, covering themes such as renewable energy, rainwater harvesting, and waste management and treatment. In 2017, Government of India (GOI) organised the India-Pacific Islands Sustainable Development Conference (IPISDC) at Suva under the FIPIC (Forum for India-Pacific Islands Cooperation) framework, in partnership with TERI, business chambers and the Pacific Islands Development Forum (PIDF). During the two-day conference, India and the PICs discussed the blue economy, climate change adaptation, mitigation practices, disaster preparedness.[29] An Indian delegation from the Ministry of Earth Sciences visited PNG in 2019 on a scoping mission to establish the Institute for Sustainable Coastal and Ocean Research in Pacific region and network of marine biology research.[30]

GoI and the Barefoot College in Tilonia, India partner in a programme that trains elderly rural women from SIDS and Least Developed Countries (LDCs) to become solar engineers,

innovators, and educators. The Barefoot College has worked with local CSOs, such as the Locally Managed Marine Area Networks in Pacific Countries.[31]

Indonesia

Indonesia is the world's largest archipelagic state, consisting of more than 17,500 islands with over 81,000 km of coastline. Indonesia is highly vulnerable to climate change impacts, including extreme events such as floods and droughts, and long-term changes from sea level rise, shifts in rainfall patterns and increasing temperature.[32]

One of the priority sectors for the current Indonesian G20[33] Presidency is 'Energy Transition'.The Indonesian Presidency will promote energy transition toward new and sustainable energy by prioritizing energy security, accessibility, and affordability. This will ensure a green and sustainable future and manage the climate change issues more effectively.[34]

Indonesia is committed to increasing its role in the global community to overcome development challenges using the framework of international development cooperation. It is an embodiment of the commitment to the Bandung Spirit of the 1955 Asia-Africa Conference. The South-South and Triangular Cooperation programme is a part of national development priority.[35]

Indonesia is a partner country of the P4G (Partnering for Green Growth and Global Goals 2030) that invest in Start Up and Scale Up partnerships for sustainable development. According to Minister of National Development Planning of Indonesia Suharso Monoarfa, these partnerships are concrete examples on how the government, private sector and civil society can work collaboratively to help Indonesia reach its SDGs and climate goals.[36] This experience could be useful in P4G and Indonesia partnering with the private sector in SIDS particularly in the Pacific.

In addition to cross-sector approaches, cross-country approaches may be needed due to the transboundary nature of natural marine assets. A positive example is the Coral Triangle Initiative, a partnership between the governments of Indonesia, Malaysia, Papua New Guinea, Philippines, Solomon Islands and Timor-Leste with support from GEF, Australia, the United States, Asian Development Bank (ADB) and other development partners. The Coral Triangle is one of the greatest centres of biodiversity on Earth, containing more than 75 per cent of the known coral species and home to 363 million people, of whom 141 million live within 30 kilometres of a coral reef (Indonesia Ministry of Marine Affairs and Fisheries, 2019[11]). The work of the Initiative is organised around the themes of assessment and action for threatened species, climate change adaptation, ecosystems-based management of fisheries, and Marine Protected Areas (MPAs).[37]

CDRI and IRIS

Prime Minister Narendra Modi announced a global Coalition for Disaster Resilient Infrastructure (CDRI) at the UN Climate Action Summit 2019. It is a partnership of "national governments, UN agencies and programmes, multilateral development banks, financing mechanisms, private

sector, and knowledge institutions for promoting the resilience of new and existing infrastructure systems to climate and disaster risks in support of sustainable development." The CDRI aims to "promote rapid development of resilient infrastructure to respond to the Sustainable Development Goals' imperatives of expanding universal access to basic services, enabling prosperity and decent work." Its strategic priorities include technical support and capacity-building, research and knowledge management, and advocacy and partnerships.[38]

To strengthen resilience, disaster risk reduction seeks to (i) prevent new disaster risk, (ii) reduce existing disaster risk, and (iii) manage residual risk. The business case for resilience investments is compelling with an average $1 spent saving $4-$7 in response.[39]

The Infrastructure for Resilient Island States (IRIS) initiative, launched on 2 November 2021 on the sidelines of COP26, is a joint programme between the CDRI member countries and SIDS. Speaking at the IRIS launch in Glasgow, Prime Minister Narendra Modi said that through IRIS it will be easy and faster for SIDS to mobilize technology, finance, and necessary information. India's space agency, ISRO (Indian Space Research Organisation) will build a special data window for SIDS to receive timely information about cyclones, coral-reef monitoring, coast-line monitoring.[40]

Corporate Global Responsibility

Energy and major industries around the world have been major GHG emitters. Heat and electricity generation is responsible for most emissions (31.9 per cent of total GHG emissions in 2018), followed by transportation (14.2 per cent) and manufacturing and construction (12.6 per cent).[41]

Major corporations have been engaged in some efforts to address concerns relating to GHG emissions and also contribute to mitigation and adaptation measures. The Rockefeller Foundation and its partners are investing $10 billion to establish The Global Energy Alliance for People and Planet (GEAPP) launched at COP26. Led by The Rockefeller Foundation, GEAPP will benefit from the resources, networks, influence, and dedication of a consortium of partners, including the Bezos Earth Fund and the IKEA Foundation. Several international finance corporations and multilateral development banks also are providing financing. GEAPP aims to extend clean, productive-use energy to 1 billion underserved people, create tens of millions of green jobs, and avoid and avert over 4 billion tons of emissions. It will build a transformational pipeline of projects by supporting the decommissioning and repurposing of fossil fuel plants, utility-wide adoption of renewable energy, and reliable, productive-use power for off-grid and underserved communities.[42]

ISA

The International Solar Alliance (ISA), conceived as a joint effort by India and France, is an action-oriented, member-driven, collaborative platform for increased deployment of solar energy technologies as a means for bringing energy access, ensuring energy security, and driving energy transition in its member countries.[43]

The ISA and the United Nations Framework Convention on Climate Change (UNFCCC) signed a Memorandum of Understanding (MoU) at COP26 to collaborate and support the Parties in the implementation of ambitious national action in line with global efforts. As part of the agreement, the two institutions will jointly organize activities to facilitate the implementation of mitigation action in the energy sector, implementation of Nationally Determined Contributions and Long-term Low Emission Development Strategies. This will also lend support to developing country stakeholders including SIDS and LDCs in accelerating the adoption of policy options and approaches for decarbonization technologies.[44]

ISA - GEAPP

At COP26, ISA and GEAPP announced a partnership for accelerating energy transition in SIDS and LDCs. The partnership will champion significant solar capacity generation globally while supporting grid-based and distributed renewable solutions. Over the next decade, it aims to unlock US$ 100 billion in public and private capital and tackle three profound human problems simultaneously: (1) POWER - reaching one billion people with reliable, renewable energy; (2) CLIMATE - avoiding and averting four billion tons of carbon emissions; and (3) JOBS - building an on-ramp to opportunity by directly creating more than 150 million jobs. As part of the engagement, ISA will act as a global delivery partner for GEAPP, providing project development and policy support across distributed renewable and grid-based energy transition in LDCs and SIDS member countries.[45]

IORA

Blue economy is one of the focus areas of the Indian Ocean Rim Association (IORA) which was established in 1997 to promote sustained growth and balanced development in the Indian Ocean Region. Disaster risk reduction is also one of the priority areas of IORA. On the basis of the strategic location of the Indian Ocean region, IORA has emphasised on growing the Blue Economy in a sustainable, inclusive and people centred manner. IORA's Indian Ocean Blue Carbon Hub aims to build knowledge and capacity relevant to protecting and restoring blue carbon ecosystems (which include mangroves, seagrasses and tidal marshes) throughout the Indian Ocean in a way that enhances livelihoods, reduces risks from natural disasters and helps mitigate climate change.[46] Renewable Ocean Energy is one of the priority pillars of IORA's vision of a blue economy. The ocean offers vast potential for renewable "blue energy" from wind, wave, tidal, thermal and biomass sources.[47]

Comoros, Maldives, Mauritius, Seychelles, Singapore are the SIDS members of IORA. The IORA Sustainable Development Program (ISDP) was introduced in 2014 dedicated for the least developed countries (LDCs) that require assistance and support to conduct projects, and with the main purpose to promote sharing experiences and best practices among IORA Member States.[48]

Conclusion

There is a greater need for rejuvenation and innovation in SSC and TrC with SIDS as these countries strive to recover from the impact of the global Covid-19 pandemic. Not only is the ocean important to SIDS, they are important to the ocean and the benefits that all humankind derives from it.[49]

To further increase the effectiveness and long-term sustainability of SSC and TrC projects to facilitate climate technology development and transfer and their contribution to the implementation of NDCs and National Adaptation Plans (NAPs), future projects could include such components as research and development, adoption of policies and regulations, and creation of local value chains. Countries and multilateral organisations could consider increasing their engagement in TrC on climate technologies to support developing countries to expand the sharing of knowledge, practices, technologies and know-how in this area.[50]

South-South development partnerships with SIDS has gradually expanded in recent years. Hopefully with the COVID 19 pandemic appearing to be ending, and in the context of the COP26 initiatives, such cooperation would expand further to deal with climate change ramifications. Developing countries which have been dealing with the impact of climate change in their own small islands, such as India and Indonesia among others, could collaborate more with SIDS in South-South and TrC frameworks. Those countries among SIDS which have developed experience and expertise in tackling climate change may share it with others, including with financing and technical support from TrC partners.

The United Nations and international communities can play an important role in promoting SSC on development and climate actions, further unleashing its potential for the achievement of the Sustainable Development Goals. Although SSC has gained momentum in recent years, challenges to scaling up remain due to limited operational capacity in the developing world. International communities, and in particular the United Nations system, have enormous knowledge, expertise and experience in supporting development cooperation that can be deployed to realize these global goals. The United Nations system could further enhance its role as a conveyor and facilitator of South-South cooperation in order to help developing countries overcome their shared challenges related to sustainable development pathways, including ambitious climate action goals.[51]

As mentioned in the paper, the global industry has been responsible for much of the GHG emissions, which in turn pose a serious threat to the SIDS. It would therefore be imperative for the industry to not only reduce their GHG emissions, but also contribute towards adaptation and mitigation measures. Governments may consider the possibility of requiring major corporations to make a contribution, linked to their GHG emissions, specifically towards adaptation measures in SIDS.

The global community also needs to make serious lifestyle changes for the sake of our children's future. India at COP26 conveyed the message that the world needs mindful and deliberate

utilisation, instead of mindless and destructive consumption. The mantra of LIFE- Lifestyle for Environment to combat climate change was also shared in COP 26.[52]

To conclude on a note of cautious optimism, a few lines from Rilee O'Neill:

Can't do it by myself So I'm asking for your help

Together we can change the world

Sail past where it's been charted

Roll your sleeves up, let's get started

Together we can change the world.

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SSC in Statistics

Impact of Natural Disasters on SIDS

*Sushil Kumar**

The United Nations currently classifies 38 countries (UN members) as Small Island Developing States (SIDS)[1]. It is a diverse group with more than 67 million people, representing less than one percent of global population. It shares many similar features as their small size, large distance to major markets, narrow economic bases, limited natural resources and climate related disasters, which have a demonstrable effect on growth and often led to a high degree of economic volatility[2]. This write-up analyses impact of natural disasters on SIDS.

Estimated Economic Damages in SIDS by Natural Disasters

SIDS are especially vulnerable to natural disasters due to a strong exposure to meteorological hazard and rising sea levels, their small size, the high density and concentration of population, and high per capita costs of roads, ports and airport infrastructure[3]. When a natural disaster occurs, the immediate effect is destruction of human and physical capital. According to the most widely used database on natural disasters (EM-DAT), the economic cost of natural disaster during the 1990-2022 was nearly USD 64 billion. The highest economic damages were in Cuba (USD 19.62 billion) followed by Haiti (USD 14.75 billion), Bahamas (USD 8.38 billion), Dominican Republic (USD 4.37 billion) and Dominica (USD 2.53 billion) etc over the time period 1990-2022 (see figure 1).

People Affected by the Natural Disasters in SIDS

A total of 708 natural disasters event occurred in SIDS between 1990 and 2022. Among all these disasters, 313

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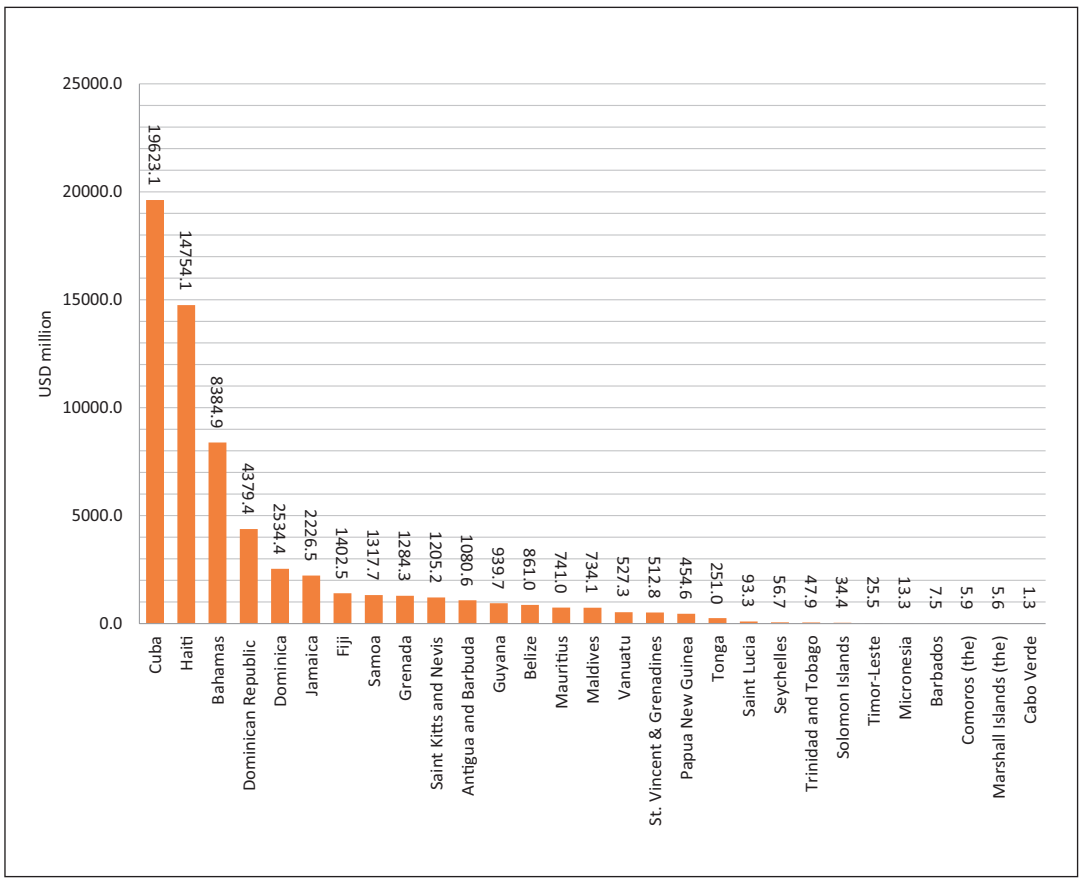
were caused by the storm, with the highest frequency, accounting 44 per cent of total; 186 caused by floods accounting for 26 per cent; 65 caused by epidemics, accounting for 9 per cent; 47 by droughts accounting for 7 per cent, 44 by earthquakes, accounting for 6 per cent, 30 by volcanic activities accounting for 4 per cent; 16 caused by landslides, accounting for 2 per cent and 1 per cent by other.

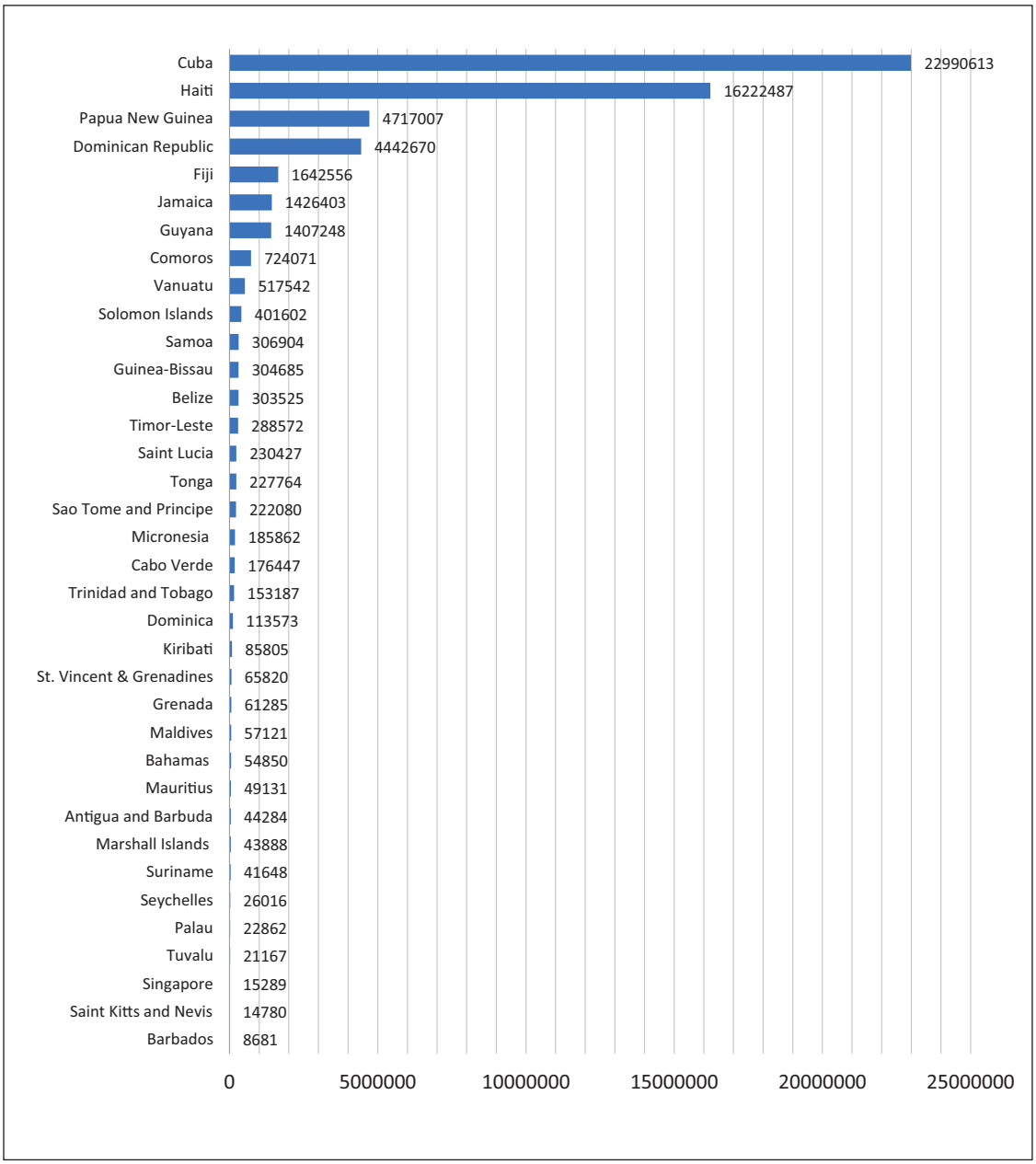
A total of 58 million people were affected by natural disasters in SIDS over the time period 1990-2022 (see figure 2). EM-DAT statistics show that in the past 32 years 22.99 million people were affected in Cuba due to natural disasters followed by the Haiti (16.22 million people), Papua New Guinea (4.71 million people), Dominican Republic (4.44. million people) and Fiji (1.64 million people), see figure 2.

Figure 1: Total Damages by natural disasters in SIDS, USD million (1990-2022)



Source: Author's calculation using data from EM-DAT[4]

Figure 2: No. of People Affected by natural disasters in SIDS (1990-2022)



Source: Author's calculation using data from EM-DAT

The analysis shows that SIDS are prone to be most disaster affected countries in the world. Estimated data shows that on average, SIDS suffer an annual damage of USD 2.13 billion over the period 1990-2022. The most disaster-prone island is the Haiti, Papua New Guinea, Dominican Republic, Cuba, Fiji,

Vanuatu and Jamaica. The cumulative cost of disasters to SIDS' economies over the past one and half decades till 2014 has been as high as 90 per cent of GDP, reversing years of development gains (UNEP, 2014).

Endnotes

1 https://www.un.org/ohrlls/content/list-sids

2 https://www.unido.org/sids

3 ser-rp-2020d14_en.pdf

4 https://public.emdat.be/data (EM-DAT,CRED/UCLouvain,Brussels,Belgium-www.emdat.be)

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United Nations Environment Programme (2014). Our Planet, UNEP, Nairobi, Kenya https://sustainabledevelopment.un.org/content/documents/1693UNEP.pdf

Anja Slany (2020). Multiple disasters and debt sustainability in Small Island Developing States, UNCTAD Research Paper No 55, UNCTAD. https://unctad.org/system/files/official-document/ser-rp-2020d14_en.pdf.

GLOBAL SOUTH-SOUTH DEVELOPMENT EXPO 2022

The eleventh Global South-South Development Expo (GSSD Expo) is scheduled to be held at the United Nations Conference Centre (UNCC) in Bangkok, Thailand, from September 12 to 14, 2022, in conjunction with the United Nations Day for South-South Cooperation. The overarching theme of the GSSD Expo 2022 is "Advancing South-South and Triangular Cooperation for Sustainable COVID-19 Recovery: Towards a smart and resilient future".

GSSD Expo, which began in 2008, is UNOSSC's flagship event, held in its role as the UN system-wide and global coordinator and champion for South-South and triangular cooperation (SSTrC). This is done in accordance of UN General Assembly's mandate to systematically exhibit Southern development solutions and advance sustainable development. The Nairobi Outcome Document, adopted at the High-Level UN Conference on South-South Cooperation in Nairobi, Kenya in 2009, endorsed the annual GSSD Expo.

Key subthemes of the GSSD Expo 2022 is decided as follows: Digitalization and Smart Future, SDG aligned South-South Approaches and Practices, Trade and Investment, Role of Youth and Women, Volunteerism and Entrepreneurship, and Public-Private Partnership, Creative Economy and Sustainable Tourism, Green Recovery, Environmental Sustainability and Climate Action, Food Security and Supply Chain, Disaster Risk Reduction and Climate Change, and Public Health Preparedness and Emergency Response.

"The GSSD Expo is an UN system and world-wide platform for showcasing development solutions at national and the only Expo solely for South-South and triangular cooperation offered by the United Nations. The 11th GSSD Expo will be the first ever to be held in the Asia and Pacific region; First one after the BAPA+40, and the first Expo in hybrid formats (both in-person and virtual) leveraging digital technology." said Mr. Adel Abdellatif, Director a.i, UNOSSC. International cooperation is more crucial than ever as we build back from the crisis.

Source: UNESCAP. (2021, November 22). Pre-Launch of the Global South-South Development Expo 2022 [Press Release]. United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). Retrieved from https://www.google.com/search?q=escap+75&oq=escap+75&aqs=chrome..69i57j0i22i30l2j0i10i22i30j0i390l3.2616j0j9&sourceid=chrome&ie=UTF-8

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2. Manuscripts should be prepared using double spacing. The text of manuscripts should not ordinarily exceed 1500 words. Manuscripts sent for peer review section may be limited to 5000 words. Such submissions should contain a 200-word abstract, and key words up to six.

3. Use 's' in '-ise' '-isation' words; e.g., 'civilise', 'organisation'. Use British spellings rather than American spellings. Thus, 'labour' not 'labor'. (2 per cent, 3 km, 36 years old, etc.). In general descriptions, numbers below 10 should be spelt out in words. Use thousands, millions, billions, not lakh and crore. Use fuller forms for numbers and dates— for example 1980-88, pp. 200-202 and pp. 178-84, for example, 'the eighties', 'the twentieth century', etc.

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Introduction of a Section on Peer Reviewed Articles/Essays

In keeping with suggestions, feedbacks and accumulated experience, we have decided to introduce a section, containing peer reviewed full length articles/essays. Interested scholars willing to contribute are requested to send in their manuscripts (preferably in not more than 5000 words) to the editorial office.

About Development Cooperation Review

Development Cooperation Review (DCR) aspires to capture holistic narrative around global development cooperation and fill an important knowledge gap towards theorisation, empirical verification and documentation of Southern-led development cooperation processes. Despite growing volumes of development partnerships around the Southern world, there remains an absence of detailed information, analysis and its contribution to global development processes. Even though there have been sporadic efforts in documenting some of the activities, a continuous effort in chronicling the diverse experiences in South-South Cooperation (SSC) is still absent. RIS, in joint publication with GDI, FIDC and NeST has endeavoured to launch DCR, a quarterly periodical, to fill this gap.

About Research and Information System for Developing Countries (RIS)

RIS is a New Delhi–based autonomous policy research institute envisioned as a forum for fostering effective policy dialogue and capacity-building among developing countries on global and regional economic issues. The focus of the work programme of RIS is to promote South-South Cooperation and collaborate with developing countries in multilateral negotiations in various forums. @RIS_NewDelhi

About Global Development Centre (GDC)

Established at RIS, the Global Development Centre (GDC) aims to institutionalise knowledge on India's development initiatives and promote their replication as part of knowledge sharing in Asia and Africa with the help of its institutional partners, including civil society organisations. It attempts to explore and articulate global development processes within a micro framework and works as a unique platform to collate and assimilate learning processes of other countries towards promotion of equity, sustainability and inclusively based on multi-disciplinary and multi-functional approach.

About Network of Southern Think Tanks (NeST)

Knowledge generated endogenously among the Southern partners can help in consolidation of stronger common issues at different global policy fora. Consequent to the consensus reached on many of these issues at the High-Level Conference of Southern Providers in Delhi (March 2013) and establishment of the subsequent Core Group on the SSC within the UNDCF (June 2013), the Network of Southern Think-Tanks (NeST) was formally launched at the Conference on the South-South Cooperation, held at New Delhi during 10-11 March 2016. The purpose of the NeST is to provide a global platform for Southern Think-Tanks for collaboratively generating, systematising, consolidating and sharing knowledge on SSC approaches for international development. @NeST_SSC

About Forum for Indian Development Cooperation (FIDC)

FIDC aims to encourage detailed analysis of broad trends in South-South cooperation and contextualise Indian policies by facilitating discussions across various subject streams and stakeholders based on theoretical and empirical analysis, field work, perception surveys and capacity building needs. @FIDC_NewDelhi

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DCR is brought out by GDC as part of cross-learning and sharing of development cooperation practices in Global South.

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