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Editorial

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Chief's Corner



After some prolonged silence, the Cowrie is happy to bring you this 2021 Edition of the UNDESA, SIDS Times Magazine.

Shortly after the issuance of our last publication, our world was gripped by the devastating impact of the COVID-19 pandemic bringing with it unprecedented socio-economic impacts the likes of which unseen in recent history.

A raging global pandemic, sparing no country or region, inflicting the worst recession since the great depression, COVID-19 plunged our world into an acute health and economic crisis, the severity of which has not been seen in nearly a century. The pandemic exposed and exacerbated vulnerabilities and inequalities within and among

countries. It reconfirmed that the systems on which we depend, for food, trade, health, climate etc. are not only increasingly interdependent, but increasingly fragile.

Severe interruptions to international trade and travel crippled economies, forcing reevaluation of economic, health, and environmental trajectories. It triggered widespread changes in human behavior, reduced pollution and presented opportunities for positive change. How we emerge from this pandemic and its impacts will drive a new world economy, hopefully, with lasting effects on global biodiversity and supply chains.

The Cowrie expresses its deepest appreciation to the Authors who contributed to this 2021 Edition. Focusing generally on COVID-19 Recovery, they shed light on several pertinent issues related to Small Island Developing States, ranging inter alia from the Island health systems and services, climate and gender, alien invasive species and tourism, each offering suggested solutions on how to build back better from the Pandemic. I wish to highlight that most, if not all, of the Articles included in this Edition were written in early 2021, some references in their contents, are reflecting them it at such. We hope nevertheless that you will find them useful.

Sainivalati S. Navoti Chief, SIDS Unit Division for Sustainable Development Goals UNDESA

"Building back better after COVID-19: restoring a more equitable global economy, inclusive societies and sustainable recovery"

USG Liu Zhenmin's Remarks to the Economic and Financial Committee (2nd Committee - 75th Session of the UNGA)





Your Excellency, Ambassador Amrit Bahadur Rai, Chair of the Second Committee, Excellencies, Distinguished Delegates, Ladies and Gentlemen.

Allow me to begin by congratulating you, Ambassador Rai, and the other members of the Bureau on your election. I also wish to thank the previous Chair of the Committee, His Excellency Ambassador Niang, and the members of the previous Bureau for their outstanding work in advancing the Committee and improving its alignment with the 2030 Agenda.

I would also like to thank Professor Stiglitz for his keynote address today and I extend my high appreciation to him for his strong support to the United Nations, in particular DESA.

Distinguished Delegates,

This Committee is meeting as we endeavour to overcome the COVID-19 pandemic and get back on track to deliver the 2030 Agenda and the Sustainable Development Goals.

The effects of COVID-19 and the measures taken to mitigate its impact have overwhelmed health systems globally. COVID-19 has kept up to 90 per cent of students out of school, and caused businesses and factories to shut down. It has disrupted global value chains and the supply of products. Millions of jobs have been lost, many of which will never come back.

The pandemic is expected to push over 70 million people back into extreme poverty, and cause 132 million more to suffer from undernourishment in 2020. Around 370 million children missed out on school meals due to school closures this spring.

While the virus has impacted everyone, it is affecting the world's poorest and most vulnerable people the most and deepening gender inequality.

Distinguished Delegates,

The world economy is in the midst of its deepest recession since the 1930s. According to the latest DESA projections, global output will decline by four per cent this year, further deepening job losses and poverty.

However, we have also seen recent glimmers of hope. Global trade in goods has started to recover following a historic decline in the second quarter. Economic activity has picked up in some of the world's largest economies.

Yet, the economic outlook has continued to deteriorate in others.

Developing countries have been hit hard by the crisis.

Still, while such uncertainties hang over the world economy, some rebound is expected in economic activity in 2021.

But the most important question is not what happens to economic activity this year. It is rather, what can we do to minimize the lasting damage from the pandemic on the SDGs? And how can we rebuild the global economy to be more inclusive, more resilient and more environmentally sustainable?

Distinguished Delegates,

To set the world on a path towards recovery, COVID-19 response measures must be geared to supporting medium- and long-term sustainable development. This is all the more urgent in this Decade of Action to deliver the SDGs by 2030.

Let me flag four areas where we need urgent action:

- 1. We need to deploy all available resources to reduce poverty and inequality in all dimensions. The pandemic has exposed glaring gaps in social protection and job security. It is time to make universal social protection a reality. Policy efforts should also be focused on preserving – and bringing back - employment as much as possible. This requires strong support for small and medium-sized businesses.
- 2. Stimulus packages responding to COVID-19 will be most effective if they prioritize public investments that contribute to achieving the SDGs. In particular, we must boost investments in the green economy, climate mitigation and adaptation, and digital infrastructure. These investments will also help to create new jobs. At the same time, investing in health, education, skills and technical know-how will help us prepare better for the future. We must also develop robust universal healthcare systems building upon the emergency measures taken during the pandemic.

3. We must do everything to avoid a crippling debt crisis in developing countries. Creating fiscal space in highly indebted low- and middle-income countries is one of the most pressing global economic challenges today. The G20 Debt Service Suspension Initiative will not be enough. Many countries will need debt relief and restructuring to reduce their debt burden. As the UN G20 Sherpa, I will bring to the G20 the views of the broader UN membership at the Second Committee. I started to do that at the third G20 Sherpa meeting last week. I will also bring to the G20, the new ideas that emerge from the FACTI Panel, and the discussion group on illicit financial flows under the Initiative on Financing in an Era of COVID-19. 4. We must mobilize a comprehensive response to the pandemic. The private sector needs to shift towards business models that integrate the SDGs. International development cooperation must be boosted to combat the crisis and promises must be kept. South-South and triangular cooperation also have critical contributions to make. In devising our response to the crisis, we must engage the most vulnerable and furthest behind.

Distinguished Delegates,

A brighter future is within reach. But Member States need to work together urgently. In the current context, we have seen achievements implemented at a scale never seen before, ranging from rapid migration to digital technologies and a new generation of financial products and infrastructure, to ambitious social protection programmes.

The 2020 ECOSOC and the High-level Political Forum on Sustainable Development (HLPF) in July, the recent SDG Moment, the event on the UN 75th Anniversary, and the General Debate of the General Assembly – all sent a strong message about the power of multilateralism and collective action. And in the coming weeks, you will elaborate guidance to reinforce the support that the UN development system provides to developing countries, through the quadrennial comprehensive policy review (QCPR) of the operational activities of the UN system. This review will serve as the guidance for the UN development system for the coming four years, building on the historical reforms since 2018. The Secretary-General has said that the 2020 QCPR should focus – not only on how the UN system works – but on the kind of support it should provide to integrated policies and programmes to support implementation of the SDGs.

Distinguished Delegates

Looking forward to 2021, we shall convene global conferences on Oceans, Sustainable Transport as well as the High-level Dialogue on Energy.

We shall make better use of the FfD Forum, DCF, STI Forum and HLPF to follow up the initiatives discussed at the current GA.

Sustainable development is a global endeavour that requires collective action.

I wish you a fruitful 75th session of the Second Committee to translate your results into tomorrow's sustainable development.

Thank you.



What happened to Pangea?

The supercontinent of Pangea, the one large landmass that broke apart to create the continents we recognise today, is the ideal metaphor and mindset for how the modern world needs to unify in its multilateral efforts to combat Covid-19 and the myriad of issues it poses to every system. Any preexisting state weaknesses have been amplified by this year's pandemic and none more so than the island states that are often subject to unsustainable and secluded national policies.

Being leader of an island state struggling amidst the Covid-19 pandemic, Irish president Michael D. Higgins spoke with authority last month, quoting the National Economic and Social Council report (NESC, 2020) that emphasised the need for social cohesion, improved equality and ecology to be placed at the centre of a new global functionality; a new eco-social paradigm. He stressed the importance of shared solidarity in providing a broad policy agenda that addresses universal basic services and provides sufficiently for people's needs in these unprecedented times (Higgins, 2020). The effects of global crises, be they climatic, medical, societal or economic, are felt most by those already vulnerable and none more than Small-Island Development States (SIDS). This policy brief aims to outline the national policy reforms needed to create more supportive, multilateral relationships, ensuring that SIDS build back better in the aftermath of COVD-19 and remain on track with the implementation of the SAMOA Pathway and the 2030 Agenda.

The Samoa Pathway and Covid-19

The SAMOA Pathway saw the formation of 300 multi-stakeholder partnerships and the creation of the intergovernmental SIDS Partnership Framework to ensure sustainability and durable partnerships. This purposeful and multifaceted governance approach that ideally provides social protection and place-based development is commended by national reports such as NESC (2020) but only if implemented effectively, removing the burden of financing such developments from those most vulnerable.

Republic of Nauru

The island economy of the Republic of Nauru was once rated one of the wealthiest countries in the world with a 8,865.6\$ GDP per capita in 2014 thanks to its well of mineral phosphate. (DFAT, 2019) However, with neglect and mismanagement of this one non-renewable resource by this rentier economy, there is now a total reliance on foreign aid given begrudgingly by Australia for the island state to function. When the neighbouring Marshall islands declared a climate emergency in 2019, it wasn't long before Nauru felt similar devastating effects of environmental damage. "Climate change is a freight train heading straight toward the [...] Islands [...] No country has greater cause to declare a climate crisis." (Rust, 2019)

With only one main port, that is frequently damaged by increasingly violent ocean conditions, and a major reliance on imports for sustenance, the SAMOA pathway has identified improved infrastructure as a priority for Nauru. "Through the Nauru Infrastructure and Services Program, Australia is working with the Asian Development Bank, the Green Climate Fund and the Government of Nauru to build a climate resilient deep-water port to facilitate the efficient delivery of essential supplies and to encourage increased trade and economic activity." (DFAT, 2019) In its initiative to provide sustainable and resilient connectivity, it aims to achieve sustainable development goal 9a "through enhanced financial, technological and technical support to [...] small island developing States". (SIDS, 2019) This attempt at integrated cooperation by international stakeholders to improve national policy is the type of initiative needed to assist vulnerable states such as Nauru island but still simply remains that; an attempt.

The new climate-resistant port promises to "attract new business opportunities" for the Nauru Port Authority (NPA) and the island but is conditional on the restructuring of the NPA as a State-Owned Enterprise (SOE) instead of the current department-type management at a local level; the creation of a cost recovery level tariff structure; an improved asset management system; and the provision of capacity-building training for port authority staff. To date, the Nauru government has agreed to institute necessary legislative approvals for transforming NPA into a SOE, undergo a revision to tariff structure, and to introduce or revise port related regulations. (SIDS, 2019)

With deliverables of 11,300 individuals benefiting from a climate-resilient port and an estimated 535,400 tonnes of carbon dioxide equivalent reduced or avoided by 2068, the SAMOA pathway's intentions for Nauru are commendable but still remain quite theoretical and distant.

This restructuring of the NPA to become state-owned may mean more secure overseas funding initially but the lack of property and intellectual rights at a local level may prove problematic as the project progresses. Lack of quality multilateral relationships is already being felt by locals who describe themselves as "the forgotten ones" in relation to Australia failing to take responsibility for the island's covid-care funding and measures. (Ryan, 2020) Australia's donor-fatigue and cost of keeping both the economy and government of Nauru afloat continues to grow with "the opening of the Australian Regional Processing Center for asylum seekers" since 2012 and the "vessel day scheme"" for fishing licences. (CIA, 2020)



Plan for Nauru Port (Source: ADB, 2020)

Financial Solutions

The economic impacts of the covid-19 pandemic are three-fold according to Sachs (2020) in healthcare costs, forced reduction of economic activities and the effects on consumption and investment spending. The implications of such a crisis are evident in every aspect of life but particularly in levels of unemployment and rising public debt worldwide, with none more evident than debt levels in Nauru where the national sum has reached \$1.03286 (IMF, 2020).

More circular and diverse economic models that encourage movement of money to benefit the most economically challenged, such as that pioneered by Michael Santiago Render to keep financial investment local and includes various "Give Back" models to incentivise local loans and banking, could hugely benefit SIDS such as Nauru. (Alvarez, 2020).

As demonstrated at the "Finance in Common Summit", investment in more locally owned renewable energy projects instead of fossil-fuel financing is essential for future sustainability. (Baclagon, 2020) Tighter anti-laundering regulations, such as those introduced in the neighbouring Marshall Islands, would also improve the reputation of Nauru's financial institutions, returning autonomy to the local stakeholders and thus sustainability (ADB, 2019).

Education Solutions

Education is key to solving the majority of the challenges faced by Nauru island. The SAMOA pathway already envisages that "children across the Pacific [will] reach their full potential through regionwide investment in high quality and sustainable early childhood care and education (ECCE) programmes and initiatives" through the Pacific Regional Council for Early Childhood Care and Education (SIDS, 2014) but this initiative is still inactive and its benefits to the island are only likely to be seen in the long-term.

Initially, to achieve the construction of a new port as planned by the SAMOA pathway, targeted training of NPA members needs to be designed and implemented immediately as there is an acknowledged "lack of necessary skills of the NPA workforce in operating port activities efficiently." (SIDS, 2019) This upskilling is essential and described as "Urgent [...] to improve employment prospects of young people in the SIDS as a way to foster economic, social and political stability". (SIDS, 2014)

"The World Summit on Sustainable Development confirmed the essential links between biodiversity and livelihoods" (SIDS, 2005) and, with an unemployment rate of 27% in 2013 (CIA, 2020), Nauru island must prioritise their environment to see economic improvements. Successes in the creation of "green" jobs and improved human capacity can be clearly seen in examples such as Dr.Radhika lyengar's "fluoride warriors" in Bhopal, India (Iyaengar, 2020) and through Viana's focus on vocational skills and online masters programmes which drastically increased the levels of young people choosing to remain in the Amazon rainforest to work (Viana, 2020).

Improved IT skills would not only improve weather-prediction capacity (and therefore preempt damage to the new Nauru port) but it would also lead to improved understanding of the natural resources and environment on Nauru island. Digital twins, as championed by Visbeck (2020), could offer greater insight into the blue economy, how to repair soil damaged from over extraction of phosphate and the creation of green corridors and improved biodiversity through rewilding. This connection of experts with citizens would also ensure that the cloud-based ownership of observations, data and knowledge is returned to the local and most vulnerable stakeholder.

Strengthened digital infrastructure could also prove vital if covid-19 was ever to infect the island population, granting greater accessibility to services such as AEROMD air ambulances or edoctor consultations, in place of the

isolated "fence" protection approach currently being employed on the island. (Pueyo, 2020)

Nauru's food system, which has been heavily dependent on imports to date, could be reimagined if local food consumers and producers are educated and supported in keeping food chains operational and responsibly managed. "Focusing efforts and resources on the conservation and sustainable use of island biodiversity and the fair and equitable sharing of benefits arising from the utilization of island genetic resources can provide rapid progress towards the reduction in the rate of biodiversity loss." (CBD, 2006) Although food security is an issue for many pandemic-threatened countries, the negative effects of the failure to improve this system on the already-vulnerable Nauru island will be far more devastating and extreme than elsewhere in the world.

This newly upskilled workforce could then act as a living asset of the island and could be the return on investment that donors to such initiatives crave. Education and employment collaborations between donor and recipient countries could take the form of online masters programmes, a step further than the Australia Award and Australia Award Pacific Scholarships currently offered, or through the filling of virtual vacancies in the newly digitized post-covid global workforce, expanding on the existing "Seasonal Worker Programme and the Pacific Labour Scheme, that connects workers from Nauru with Australian employers experiencing labour shortages". (DFAT, 2019)

Conclusion

No man is an island, and no state should be either. We need to develop a more Pangea-focused mindset as we improve the goal-interaction nexus and the global assistance provided to SIDS. Nauru is one of the world's smallest, most economically challenged and vulnerable islands. Any local initiative there, that is successfully supported by national government and the international community, can be scaled up and implemented elsewhere, making it an extremely valuable case study. "The vulnerabilities of small islands require not only special but urgent attention from their inhabitants and the world community." (CBD, 2006)

"The international community [...] reaffirms the importance of international cooperation and technical and financial support to small island developing States" (SIDS, 2005) and although foreign aid may be strained in present-day circumstances, government and overseas collaboration is essential in supporting local efforts to improve environmental, economic and social sustainability and to build back better in the aftermath of Covid-19. In the words of Henry Ford (1930), "Coming together is the beginning. Keeping together is progress. Working together is success."

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"The vulnerabilities of small islands require not only special but urgent attention from their inhabitants and the world community."

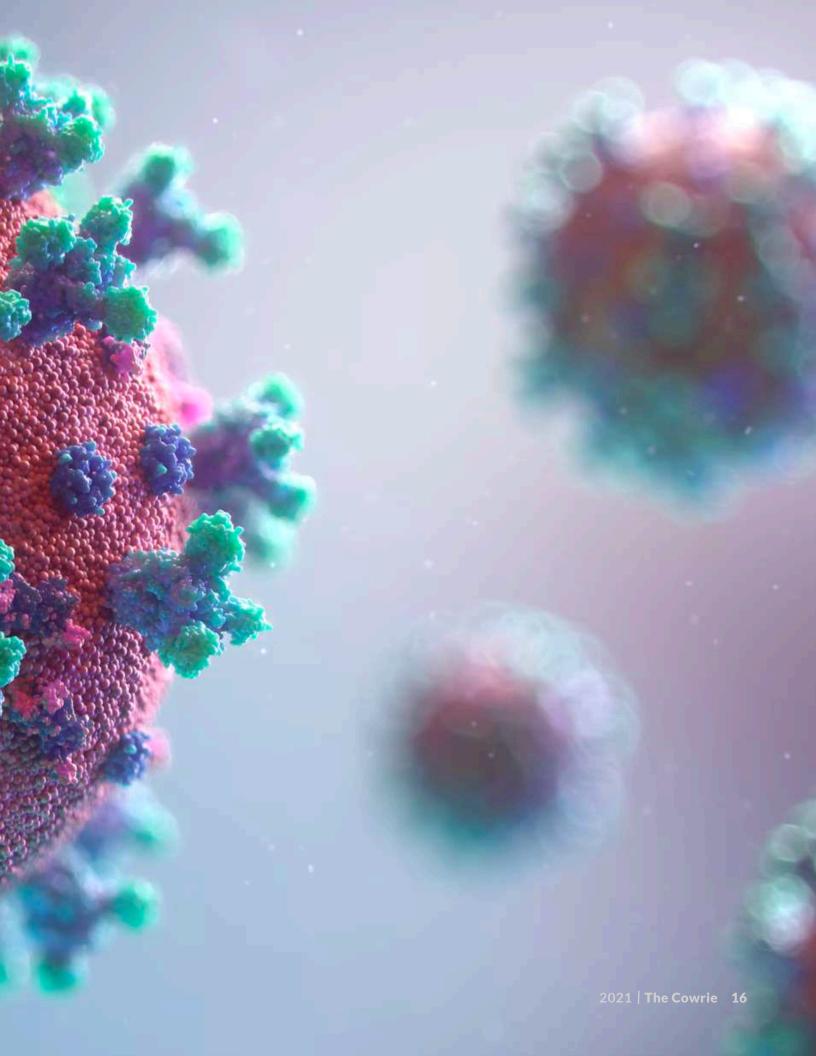


Children at Nauru Port (Source: CourierMail, 2020)

References

- Asian Development Bank (2019) "Pacific Finance Sector Briefs", ADB Pacific Liaison and Coordination office, Level 20, 45 Clarence St, Sydney, 2000, Australia. DOI: http://dx.doi.org/10.22617/ BRF190380-2. October, 2019.
- Alvarez, Lauren (2020) "How Killer Mike's Greenwood Will Transform Banking For Black And Latinx Communities", Forbes, October 12th, 2020. Retrieved from: https://www.forbes.com/sites/ laurenalvarez/2020/10/12/how-killer-mikes-greenwood-will-transform-banking-for-black-and-latinxcommunities/?sh=66afb7c1ec07
- Baclagon, Chuck (2020) "Move the Money for a Just Recovery in Asia", 350.orgAsia, November 10th, 2020. Retrieved from: https://350.org/move-the-money-for-a-just-recovery-in-asia/
- Convention on Biological Diversity (2006) "Island Biodiversity", UNEP, Conference of the Parties to the Convention on Biological Diversity, Agenda item 14. June 15th, 2006. Retrieved from: https:// www.cbd.int/doc/decisions/cop-08/cop-08-dec-01-en.pdf
- CIA (2020) "Nauru Economy 2020", 2020 CIA world factbook, January 27th, 2020. Retrieved from: https://theodora.com/wfbcurrent/nauru/nauru_economy.html
- CIA (2020) "International Rankings of Nauru 2020", 2020 CIA world factbook, January 28th, 2020. Retrieved from: https://theodora.com/wfbcurrent/nauru/ nauru_international_rankings_2020.html
- Department of Foreign Affairs and Trade, Australia (2019) "Nauru Australia's commitment to strengthening climate and disaster resilience in the Pacific", Retrieved from: https://www.dfat.gov.au/ sites/default/files/naur-cef.pdf
- Department of Foreign Affairs and Trade, Australia (2019) "Nauru: Country brief", Overview of Australia's Development Programme to Nauru. Retrieved from: https://www.dfat.gov.au/geo/nauru/ development-assistance/development-assistance-in-nauru
- Ford, Henry (1930) "Leadership- Henry Ford: Leadership and Legacy", Retrieved from: https:// 9. henryfordleadershiplegacy.weebly.com/leadership.html
- Higgins, Michael D. (2020) "New Approaches to Economic Challenges", Address by President Higgins to the OECD, president.ie, 9th October, 2020. Retrieved from: https://president.ie/en/diary/ details/president-addresses-oecd-confronting-planetary-emergencies-event/video? fbclid=IwAR2UNqsG95AfIX7gDBhAHCWziYXM9dFK9dTMJWJ41yIsELD27imOqS UQW0#newapproaches-to-economic-challenges-address-by-president-higgins-to-the-oecd-october-2020
- 11. IMF (2020) "Nauru: GDP and National debt", November 21st, 2020. Retrieved from: https:// countrymeters.info/en/Nauru/economy
- 12. Iyengar, Dr. Radhika (2020) "Four Pillars of Sustainable Development", M.Sc. Sustainable Development, University College Dublin [lecture], Global Classroom 2020, Foundations of Sustainable Development, Earth Institute, Columbia University, New York City, November 11th, 2020. Retrieved from: https://wordpress.lehigh.edu/globalclassroom/lecture-10-dr-radhika-iyengar/
- Moore, Dr. Jeanne (2020) "Progressing Sustainability in the Context of Covid-19: Grasping the Opportunity", Secretariat Covid-19 Working Paper Series, National Economic and Social Council, July 2020. Retrieved from: http://files.nesc.ie/nesc_background_papers/c19-progressing-sustainability.pdf

- Pueyo, Tomas (2020) "Coronavirus: The Swiss-Cheese strategy", Stanford University 450 Jane Stanford Way, Stanford, CA 94305-2004, medium.com. November 8th, 2020. Retrieved from: https://tomaspueyo.medium.com/coronavirus-the-swiss-cheese-strategy-d6332b5939de
- Rust, Susan (2019), "Marshall Islands, low-lying U.S. ally and nuclear testing site, declares a climate crisis", Los Angeles Times, 11th October, 2019. Retrieved from: https://www.latimes.com/ environment/story/2019-10-11/marshall-islands-national-climate-crisis
- Ryan, Hannah (2020) "Life On The Tiny Pacific Island Where No-One Has The Coronavirus", Buzzfeed Australia, May 11th, 2020. Retrieved from: https://www.buzzfeed.com/hannahryan/naurucoronavirus-no-cases-pacific-refugees
- Sachs, Jeffrey (2020) "Economic Impacts of Covid-19: Macroeconomics", M.Sc. Sustainable Development, University College Dublin [lecture], Columbia University, New York City, November 19th, 2020. Retrieved from: https://brightspace.ucd.ie/d2l/le/content/114750/viewContent/1080171/ View
- SIDS (2005) "Draft Mauritius Strategy for the further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States", United Nations SIDS Strategy, January 13th, 2005. Retrieved from: https://www.un.org/smallislands2005/pdf/ sids strategy.pdf
- SIDS (2014) "Pacific Regional Council for Early Childhood Care and Education (PRC4ECCE)", Small Island Development States Action Platform, United Nations, September 7th, 2014. Retrieved from: https://sidspartnerships.un.org/partnerships/?p=7447
- SIDS (2014) "Sustainable development through decent jobs for youth", Small Island Development States Action Platform, United Nations, July 29th, 2014. Retrieved from: https:// sidspartnerships.un.org/partnerships/?p=34373
- 21. SIDS (2019) "Sustainable and Climate Resilient Connectivity for Nauru", Small Island Development States Action Platform, United Nations, October 16th, 2019. Retrieved from: https:// sidspartnerships.un.org/partnerships/?p=34373
- Viana, Professor Virgilio (2020) "People based solutions for nature-based solutions", M.Sc. Sustainable Development, University College Dublin [lecture], Global Classroom 2020, Foundations of Sustainable Development, Manaus, Brazil. October 13th, 2020. Retrieved from: https:// wordpress.lehigh.edu/globalclassroom/lecture-6-professor-virgilio-viana/
- Visbeck, Martin (2020) "Future Ocean Sustainability- From Ocean Observation towards Sustainable Development", M.Sc. Sustainable Development, University College Dublin [lecture], Global Classroom 2020, Foundations of Sustainable Development, Kiel University, Germany. October 20th, 2020. Retrieved from: https://wordpress.lehigh.edu/globalclassroom/lecture-7-mr-martin-visbeck/



Caribbean Public Health Management: Reform needs revealed by the COVID-19 pandemic

n dealing with the global pandemic Caribbean SIDS have dealt with many new challenges that have revealed systemic gaps within our public health systems. But by shining light on these issues, these SIDS are presented with opportunities to make real and sustainable improvements. First principles of sound public management always goes back to structures, people and process. Based on the observed Caribbean experience, we identify four such points that we must critically assess to improve our public health systems.

The Historically Under-resourcing of Public Health Facilities became Glaring

Finance is often cited as a public health limitation in SIDS but less obvious and entangled with the latter is how our public health systems are organized (or not). One illustrative Ministry review in Barbados found that the delivery of healthcare was 'unsatisfactory' in continuity and coordination of care across the network of services, community-based services, operational policies and procedures, and regulation of standards of public and private health institutions. With two main hospitals on the island with about 519 beds, when COVID-19 hit, a majority of these in-patient beds were filled, hindering patient service quality. In November, a hospital statement said "patients seeking help at the Accident and Emergency Department will experience lengthy waits, only emergency surgeries will be performed and emergency ambulance services will also be delayed." Jamaica's healthcare system deals with similar issues, particularly a lack of doctors with only one doctor per 2,000 patients.

'Primary effects of stratification' in healthcare often leads to systemic weaknesses and challenges, as reported in a 2019 study in Trinidad and Tobago, but characteristic across many SIDS. The term refers to the idea that social class determines level of healthcare they receive. The subjects surveyed for this study believed there were "four central problems facing the health sector: long waiting time, inadequate health financing, poor maintenance, and social inequality" leading to stratification. The poor are unable to pay for private healthcare and that this subjected them to long waiting times, poor facilities, and indifferent attitudes from over-worked healthcare personnel." These pre-existing weaknesses around for decades, were fully exposed during the pandemic forcing health administrators to face them in light of public pressure. From his challenge, the Ministry of Health has learned that this issue is one that needs to take priority now to ensure an event, like COVID-19, will not overwhelm the system again.

But stratification is not just a question of social class but also poor long term sector planning and geography. In Guyana clinics and hospitals are mostly located along the coastlines, where a majority of the population lives. The people who do not live there reside in the rural hinterlands. Where clinics are often inferior in quality and services when compared to the coastal locations. In addition, private healthcare also exists in the country, leaving doctors and nurses with few incentives to join the public healthcare system, which has led to medical staff shortages. The Georgetown Chamber of Commerce and Industry has said, "the pandemic has made it clear that Guyana needs free, accessible healthcare for all with incentives for medical staff to stay in the public sector."

Investments in Communications and Information Technologies will pay Dividends

Technology is playing a big role in this COVID-19 battle and how modern ICT is being harnessed by public health authorities in SIDS is relatively easy to discern from Ministry of Health websites and online messages. For example, the Trinidad and Tobago website shows clear instructions for preventing COVID-19 transmission in addition to all the updates the government has made to ensure COVID-19 safety as part of the countries "New Normal" campaign launched in May 2020. In addition, there are near-daily information press briefings to update the population in terms of the number of infections and deaths as well as new measures taken to counteract the spread of the virus. Geo-spatial maps were also updated regularly showing locations of new infections."

Barbados' Ministry of Health launched a highly praised information app that allows people to report symptoms and find health centers and other resources in their area in addition to travel information and global COVID-19 information. While this is a beneficial source of community engagement, it leaves out anyone that is unable to download this app due to lack of technological resources. Once there is increased access to mobile technology to all citizens have access to this app, then their public health communication would be a great example for other countries. In the near future, these efforts should be scaled up and expanded upon, so they are fully ready in the event of a second wave of COVID-19 or if another health event occurs.

Apart from such direct usages within the public health system, several SIDS jurisdictions have harnessed ICT to help the general public and post-infection patients to cope with the pandemic lockdowns, curfews and lack of social interactions. From online learning platforms to introducing persons who have not used social media to do so and keep connected with their friends and families, we now vividly recognize mental and social health as critical to our societal well-being.

Public Health Regulations do not work without Monitoring and Enforcement

Many SIDS have had to quickly enact 'dusty' parts of their Public Health Acts, issue extraordinary regulatory rules and direct police officers, health inspectors and others to accelerate monitoring and enforcement of lockdowns and curfews across communities. In Antigua and Barbuda, for example, as early as March 2020, the authorities were empowered to declare "mandatory curfew from 6 am to April 9 to 6 am on April 16t with all nonessential businesses forced to close and all essential businesses only open from 7 am to noon." This was then extended through May. In addition, new legislation was passed - the Quarantine Act Order of 2020 and backed up by authoritative enforcement - "If citizens do not follow these regulations, they will have to pay \$10,000 or spend 6 months in prison (or both)."

But still, as review of Facebook comments during that time in Antigua and Barbuda, suggests that these regulations were being broken by some of the public. On August 1st, the policy force posted about beaches being closed for public holidays. One person said, "This is so wrong, Market Street has more people walking up and down today than all beaches put together." Other people said they went into the market and saw people everywhere and not one policy officer was present. COVID-19 exposed a simple regulatory maxim - enforcement is key and if regulations cannot be enforced, they become unnecessary burdens on government.

In Trinidad and Tobago, new mandates have also been put in place. For example, they created a Quarantine Act that fines violators \$6,000 or allows for 6 months in prison. In September, the Trinidad and Tobago Police Services issued a media statement saying, "It has come to the attention of the TTPS that persons who have tested positive for the virus and placed in home quarantine, have been breaking the Public Health Ordinance Regulations." Because of this, the Commissioner advised that the Police Services will be monitoring persons in home quarantine, especially those who have tested positive for the virus. There has been backlash to this because citizens of TT believe the TTPS need to be available for crime and serious calls. Ideas of a "COVID tracker on phones" has been brought up. Others said, "where are the health inspectors in all of this" as well as concerns about 'overworking' the police services. These ideas should be taken into consideration in the event of a second wave or if another event occurs. If a designated sector of the police force or specific members of the health sector were in charge of enforcement, then the TTPS needed for other instances would be free to do so.

Public Health must be integrated into the modern Tourism and Hospitality Industry

In March when COVID-19 was ramping up, countries began to close their borders to travelers. This left a big problem to those who were already traveling abroad. Many would-be vacationers had to cancel and re-book with travel agencies at the last minute. Others upon arriving at their island paradise destination found that their Resort was on lock-down and alternative lodging was scarce. Charter flight companies offered tourists flights back home....at triple the regular rates. For some, a planned five-day business trip ended up being five weeks or more.

Typically, Caribbean authorities managed foreign travelers stuck in their countries by providing clear quarantine mandates that would ensure travelers stayed safe before they were allowed to head home and ensured their own citizens would stay safe as well. Once travelers were allowed back home, most countries had to decide whether or not to maintain travel restrictions for new travelers wanting to return. Indeed, a quite public dispute emerged between the governments of Barbados and Trinidad & Tobago where, with travel restrictions in both countries, Trinidad nationals were quarantined in Barbados at that government's expense when their Trinidad counterparts declined to fund the expense when they disallowed their return during their lock-down.

The Bahamas indecisively contended with multiple border openings and closings. In early July, they came up with a five-point plan for reopening, which was going well until cases began to increase. At this point they decided to shut their borders again to U.S. travelers, since U.S. cases were rising faster than most other countries. Just days later, this decision was reversed and borders were re-opened to U.S. travelers, but they had to quarantine for 14 days and get a COVID -19 test at the end of the 14 days. Government declared that they were "closely monitoring the situation and evaluating protocols" and that "travel permissions for foreign visitors, namely those from the U.S., were changed to create a singular protocol for all visitors."

Some SIDS saw a unique opportunity. Antigua and Barbuda created the Digital Nomad Residence which allows recipients to reside in the country for two years while maintaining home country employment. The program aims to increase foreign spending in the country at a point where the tourism industry is suffering." Because of new programs like this, more travelers are expected to start coming. Barbados created a similar program called Barbados Welcome Stamp program, which invites remote workers to come live and work on the island for up to an entire year. The Cayman Islands now has the Global Citizen Concierge Program, Bermuda's "Work from Bermuda" visa and Anguilla's "Digital Nomad" visa all with the same concept. These programs are promising new tourism alternatives to stem the economic losses from the industry.

Taking heed for the next time and building on what we've done right

Creating "A Healthy Caribbean" as proclaimed in alignment to the Sustainable Development Goals and the SAMOA Pathway specifically aims at universal access to quality healthcare services with the improvement of healthcare systems. Administration of public health systems has been forced to confront itself, its weaknesses and faults and reckon with how to remedy deficiencies brough to light in this pandemic. But it has also been a testing ground for the resources, rules and professionals that are part and parcel of these vital systems. Testing the limits and boundaries of what is required in a pandemic situation must serve to strengthen resolve to change deleterious public management histories including thinking about public health as secondary to clinical medicine; modernize service delivery with information and technology innovations; reconsider and replace old policies, regulations and ordinances with fresh, new, flexible ones that are implementable in today's society; and integrate public health and pandemic preparedness into vital economic sectors including tourism and hospitality on which our SIDS depend.

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Gender Empowerment: Preventing climate change through education

The importance of women and girls' education in preventing climate change with particular attention paid to the challenges facing those of the Pacific Islands.

he link between climate change and gender empowerment is too often overlooked. Gender inequality and education for women is frequently mentioned through the lens of human rights, without explaining how achieving this goal would benefit everyone. The Sustainable Development Goals recognise, 'that eradicating poverty in all its dimensions' is an 'indispensable requirement for sustainable development' (UN, 2015). Educating girls should be viewed in a similar light. Gender inequality and climate change are mentioned several times in the same paragraph throughout the Sustainable Development Agenda, but they are consistently perceived as separate issues. Although it is noted in Paragraph 20 that, 'the achievement of full human potential and of sustainable development is not possible if one half of humanity continues to be denied its full human rights and opportunities', women and girls' contribution to preventing one of the 'greatest challenges of our time' is not recognised. Andrews regards it as 'farcical that this isn't forming a major part of the debate over climate change mitigation' (2018). The Agenda speaks of supporting smallholders and women farmers but not what this support would mean for the environment. The same shortcomings are present in the Paris Agreement, while it acknowledges that we need to strive for gender equality, the importance of gender equality in ensuring the success of the Paris Agreement is never recognised. We believe that if there was more focus on the results of achieving gender empowerment, universal education, and their contribution to slowing climate change, it would motivate a greater global response.

How educating girls and women impacts climate change?

'Project Drawdown', published in 2017, has outlined the most effective actions we can take to prevent climate change. Their research places the education of girls high on the list. There are three components to this strategy. Educating girls on family planning and birth control gives them more control of their future. Earth's increasing population, along with current patterns of consumption, is putting demands on the biosphere at a rate that cannot be sustained. The second element that must be considered is women's education in a broader sense. It is proven that women who have more years of education have less children and can contribute to society in more impactful ways. This element is often considered in conjunction with family planning as their contribution to climate change is difficult to measure separately.

> Based on the difference in how much energy, building space, food, waste and transportation would be used in a world with little to no investment in family planning, compared to one in which the projection of 9.7 billion is realised. The resulting emissions reductions could be 123 gigatons of carbon dioxide... Because educating girls has an important impact on the use of family planning, we allocate 50 percent of the total potential emissions reductions to each solution (Hawken, 2017)

Finally, women smallholders have a huge impact on climate change. The effect of agriculture on climate change is well documented. 43% of agricultural workers worldwide are women (FAO, 2011); the right knowledge would enable these women to become better stewards of the land. More effective farming reduces the amount of land required to produce adequate volumes of food and prevents more land being cleared for agriculture. Thus, educating women and girls must be considered as important for the environment and climate change as transitioning to renewable energy or stopping deforestation. By educating a girl or a woman, you educate more than one individual, as 'she'll go on to educate her family and her community - and she'll break the cycle of poverty' (Plan International, 2020).

While developing countries face the greatest challenges in terms of resources for family planning education it is also true that children born in developing countries do not carry the same weight in terms of emissions as children born in developed countries like the USA (Hawken, 2017). The USA is considered a developed country, but it is also a country of huge inequality; there is a great divide in terms of education, and the number of teenage pregnancies occurring there reflect this failure. Jeffrey Sachs argues while there are too many countries being left behind, there are also too many people in rich countries being left behind (2020).

Thus, family planning is not just an issue that the developing world needs to tackle, it is as much of an issue, if not more of an issue in developed countries considering the significantly higher contribution per person to climate change.

Girls make up 49.6% of the population on this planet, and in countries where resources are scarce, many girls are confined to staying at home and doing essential chores that will be of immediate benefit to the family, like fetching water. Meanwhile the education of male members of the family is prioritised.

'The agricultural sector is underperforming in many developing countries, and one of the reasons is women do not have equal access to the resources and opportunities they need to be more productive' (FAO, 2011). The connection between improving resources available to women farmers and climate change needs to be emphasised. Land worked by women is 20-30% less productive than the same area of land worked by men, and it has been proven that this is not because they are incompetent farmers but because the same resources available to their male counterparts are not available to them. 'If women managing 98 million acres receive equal assistance and achieve that 26 percent gain [yield per plot can rise by 26 percent, if women's access to finance and resources comes closer to parity with men's], this solution could reduce 2.1 gigatons of carbon dioxide by 2050' (Hawken, 2017).

Education in SIDS: Pacific Islands

Small Island Developing States are at the frontline of climate change; the islanders are at risk of losing their homelands to rising sea levels because of their 'small geographical area, isolation and exposure' (UNDP, 2010). This brief will focus on the Pacific Islands. Investing and prioritising girls' education around the world as a measure of preventing climate change is as helpful to these islands as investing in education on the islands. The approach must be global to be as effective as possible. As a collection of islands, they contribute to less than 1% of emissions but are extremely vulnerable to the actions of the rest of the world (Matagi Mālohi: Strong Winds, 2020). This concern is supported by Walsh, Murphy and Horan, as they report that 'high-income countries generate significant environmental, economic and security spill over effects that undermine other countries' efforts to achieve the SDGs' (2020). While the Sustainable Development Agenda and Paris Agreement fail to acknowledge the importance of gender empowerment in preventing climate change, the SAMOA Pathway has a better grasp of its importance. Paragraph 76 is especially poignant: 'We recognise that gender equality and women's empowerment and the full realisation of human rights for women and girls have a transformative and multiplier effect on sustainable development and is a driver of economic growth in small island developing States' (UN-OHRLLS, 2014).

The neighbouring governments of Australia and New Zealand have pledged their support to the Pacific Islands, financially and otherwise. Pacific Women: Shaping Pacific Development is an Australian program set up to engage with the women of the Pacific islands. In their most recent Annual Progress Report they acknowledge the impact that the COVID-19 pandemic will have for gender equality on these islands: 'Early research into the gendered effects of COVID-19 suggests: there will be a reduction in spending on family planning and sexual health; the burden of care will be even greater for women intimate partner violence will increase; and there will be a toll on women who play a disproportionate role in the health system and as carers' (2020). We cannot permit these predicted results to play out, we must act to ensure that family planning and girls' education remains a priority. Wenham, Smith and Morgan report that: 'Experience from past outbreaks shows the importance of incorporating a gender analysis into preparedness and response efforts to improve the effectiveness of health interventions and promote gender and health equity goals' (2020). The goal that they neglect to mention is climate change.

TO THE WAY TO SHE STORY

The challenges that we must overcome to achieve global education for girls are, unfortunately, prevalent in the Pacific Islands. 'Fewer than one in ten adolescent girls (7%) in Solomon Islands graduate from high school – one of the lowest rates in the world' (Phillips, 2019). A study carried out by a group of girls from the Solomon Islands found that the main reasons for these statistics are unaffordable school fees. 'social stigma around premarital relationships and pregnancy', difficulties with traveling to and from school and gender inequality (Plan International, 2019). The research also 'indicates that adolescent girls spend 75% more time than boys on household chores, which is significantly higher than the global average' (Phillips, 2019). A similar situation is present in Tuvalu, where 'women are expected to adopt a subordinate role' (Dooley, 2018). The Lowy Institute, part of the Pacific Research Program, calls on Australia's position as a 'donor partner' to ensure that girls of the Solomon Islands, among other Pacific islands, are not left behind.

Closing the Digital Divide

Although there have been many negative impacts of COVID-19, one that might be considered a positive, if we succeed in 'building back better', is the acceleration toward an online learning environment. Jeffrey Sachs believes that COVID-19 accelerated the transition to a digital world by about ten years (2020). Teachers and schools have been forced to adapt their teaching to be compatible with distance-learning. Minister Audrey Tang, the Digital Minister of Taiwan, emphasised the importance that they place on ensuring access to an efficient internet connection is available on every point of their island (Tang, 2020). Taiwan views broadband as a human right. This ensures that those living in cities are not at an advantage over those in more rural areas in terms of access to internet resources. This movement can be replicated to ensure that those living on small islands or in more remote parts of the world have access to educational resources that may not be physically present in their locality. Thus, investment in the internet and technology on these islands would also be an investment in education. Dr lyengar argues in favour of this: 'The Digital Divide is real, but digital technologies can be a great unifier if there is universal access to connectivity and digital tools' (2020a). We must ensure that the financial aid pledged to the islands is used effectively.

Community Learning

The education that the women of the islands receive must be relevant and impactful. Iyengar has expressed frustration that children living in the city of Bhopal are not being educated in school on the 1984 Bhopal Gas Tragedy, where 20,000 people died and many were left with devastating injuries because of an extreme incident of air pollution (2020b). Many children only learned of the tragedy from their parents. While Iyengar sees this as a failure of the traditional school system, she is a strong advocate of community learning and using the resources within one's community to develop a system for education. Iyengar has suggested the concept of older students taking a year to tutor younger students and thereby plugging 'the learning lag' created by COVID-19. 'A year of learning from the field, as is present in Nigeria, could help connect youth with their communities and improve the learning curve for children of schoolgoing age' (Iyengar, 2020a). This solution could also be utilised in the Pacific Islands, if enough older students were willing to give back, a program could be established with the aid of existing supports like Pacific Women. It could also alleviate some of the issues with education on these islands, like travel, if students from the same area were matched. The benefits of educating girls to people, planet, and prosperity must be acknowledged; educate girls not only because it is their human right but because it will help change the world for the better.

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References:

- Andrews, R.G. (2018), 'To Stop Climate Change, Educate Girls and Give them Birth Control', Wired Magazine. 18 February 2018. Available at: https://www.wired.com/story/to-stop-climate-change-educate-girls-and-give-thembirth-control/ (Accessed 24 November 2020)
- 2. Dateline Pacific, (2013). 'Barriers remain in Pacific for girls' access to education', Radio New Zealand. 25 October 2013. Available at: https://www.rnz.co.nz/international/programmes/datelinepacific/audio/2574008/barriersremain-in-pacific-for-girls-access-to-education (Accessed 24 November 2020)
- Dooley, J. (2018) 'Girls' Education in Tuvalu', The Borgen Project. 08 September 2018. Available at: https:// 3. borgenproject.org/girls-education-in-tuvalu/ (Accessed 24 November 2020)
- 4. Food and Agriculture Organisation of the United Nations (2011), "The State of Food and Agriculture 2010-2011: Women in Agriculture: Closing the gender gap for development'. Available at: http://www.fao.org/3/ i2050e/i2050e.pdf (Accessed 24 November 2020)
- 5. Hawken, P. (2017), Drawdown: The most comprehensive plan ever proposed to reverse global warming. Available at: https://www.academia.edu/40148623/Drawdown Paul Hawken?email work card=view-paper (Accessed 24 November 2020)
- 6. Iyengar, R. (2020a). 'Education as the path to a sustainable recovery from COVID-19', Prospects, 1-4. 12 July 2020. Available at: https://link.springer.com/article/10.1007/s11125-020-09488-9 (Accessed 24 November 2020)
- 7. Iyengar, R. (2020b) 'Lecture 10: Dr. Radhika Iyengar', POL42080: Global Classroom. University College Dublin. 10 November 2020. Available at: https://wordpress.lehigh.edu/globalclassroom/lecture-10-dr-radhika-iyengar/ (Accessed 24 November 2020)
- 8. Molendijk, S.J., Coombs, S.J., Bhattacharya, M. 'Bridging the gap between education policy, planning and practice: establishing and effecting minimum quality service standards for effective schools in Pacific Island countries', UNICEF. 19 December 2017. Available at: https://www.unicef.org/pacificislands/media/606/file/Bridgingthe-Gap-2017.pdf (Accessed 24 November 2020)
- Pacific Women, (2020). 'Shaping Pacific Development: Annual Progress Report 2019'. July 2020. Available at: https://pacificwomen.org/wp-content/uploads/2020/09/Pacific-Women-Annual-Progress-Report-2019.pdf (Accessed 24 November 2020)
- 10. Phillips, K. (2019). 'A chance to "step up" to support girls' education in Solomon Islands', The Interpreter. 12 June 2019. Available at: https://www.lowyinstitute.org/the-interpreter/chance-step-support-girls-education-solomonislands (Accessed 24 November 2020)
- Plan International (2019), 'Solomon Islands Girls' Education Reports'. 13 June 2019. Available at: https:// 11. www.plan.org.au/news/education/solomon-islands-girls-education-reports/ (Accessed 24 November 2020)

- 12. Plan International (2020), 'The benefits of an education last beyond her lifetime'. Available at: https:// www.plan.org.au/why-girls/our-work/education/ (Accessed 24 November 2020)
- 12. Rapid Transition Alliance, (2020) 'Educating Girls is More Effective in the Climate Emergency than Many Green Technologies', Resilience.org. 24 February 2020. Available at: https://www.resilience.org/stories/ 2020-02-24/educating-girls-is-more-effective-in-the-climate-emergency-than-many-green-technologies/ (Accessed 24 November 2020)
- Sachs, J. (2020) 'Lecture 1: Professor Jeffrey Sachs', POL42080: Global Classroom. University College Dublin. 08 September 2020. Available at: https://wordpress.lehigh.edu/globalclassroom/2020-lecture-1-professorjeffrey-sachs/ (Accessed 24 November 2020)
- 15. Tang, A. (2020) 'Lecture 3: Minister Audrey Tang', POL42080: Global Classroom. University College Dublin. 22 September 2020. Available at: https://wordpress.lehigh.edu/globalclassroom/2020-lecture-3-minister-audreytang/ (Accessed 24 November 2020)
- 16. United Nations Framework Convention on Climate Change (2015), 'Adoption of the Paris Agreement'. Available at: https://unfccc.int/files/essential_background/convention/application/pdf/ english paris agreement.pdf (Accessed 24 November 2020)
- 17. United Nations (2015b), 'Transforming Our World: The 2030 Agenda for Sustainable Development.' Available at: https://sustainabledevelopment.un.org/content/documents/ 21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf (Accessed 24 November 2020)
- 18. United Nations Development Programme (2010), 'Responding to Climate Change in Small Island Developing States'. 27 September 2010. Available at: https://sustainabledevelopment.un.org/content/documents/ 960SIDS_Flyer_SEPT_27_09[1].pdf (Accessed 24 November 2020)
- 19. United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (2014), 'SIDS Accelerated Modalities of Action (S.A.M.O.A.) Pathway'. Available at: https://unohrlls.org/custom-content/uploads/2015/01/SAMOA-Pathway.pdf (Accessed 24 November 2020)
- Walsh PP, Murphy E, Horan D. (2020) 'The Role of Science, Technology and Innovation in the UN 2030 Agenda', May 2020, Technological Forecasting and Social Change. Available at: https://cpb-us-w2.wpmucdn.com/ wordpress.lehigh.edu/dist/2/432/files/2020/09/The-role-of-science-technology-and-innovation-in-the-UN-2030agenda-_-Elsevier-Enhanced-Reader.pdf (Accessed 24 November 2020)
- 21. Wenham, C., Smith, J., Morgan, R. 'COVID-19: the gendered impacts of the outbreak'. 06 March 2020. Available at: https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(20)30526-2.pdf (Accessed 24 November 2020)
- 22. Woodward, Forest & Woodward, Canyon, Director [Haley, Aidan], (2020). Matagi Mālohi: Strong Winds. Available at: https://350.org/matagimalohifilm/#poem (Accessed 24 November 2020)

The war against biological invaders - tackling invasive species as part of building back better in the Pacific and beyond

ither willingly or accidently, humans have introduced many pests, predators and plant species into new environments, beyond their natural distribution ranges. In the absence of natural enemies, these "invasive species" thrive and lead to significant environmental, social and economic losses.

Linkages between environmental degradation, climate crisis and zoonoses are receiving renewed attention through the COVID-19 pandemic lens, with general agreement that reversing environmental degradation is key to building back better. However, the risk posed by invasive species in this equation remains largely unknown, and mostly neglected, including their potential to introduce new pathogens, breach the wildlife-human barrier and intensify the spread of new and existing pathogens.

The present paper highlights the importance of preventing and controlling invasive species in the Pacific Small Island Developing States (SIDS) and worldwide as a key element towards building back better in the aftermath of COVID-19 - and preventing future pandemics. It emphasizes the need to mainstream invasive species prevention and control into national sectoral policies to create more resilient ecosystems and mitigate the impact of infectious diseases. It also draws attention to an ongoing initiative in the Pacific as an opportunity for scaling up in the region and beyond.

Environmental and economic impacts of invasive species in the Pacific SIDS

SIDS are extremely important for global biodiversity, harbouring 20% of all plant, bird and reptile species within approximately only 3% of the Earth's land surface. At the same time, Pacific islands are particularly vulnerable to biological invasions because of their isolation and relatively recent human occupation, with native species not having evolved to effectively cope with introduced predators, pests, competitive weeds and diseases. As a result, Pacific islands face some of the highest extinction rates and threats to endemic species globally, with invasive species as the most pervasive threat to single-country endemic species in the region.²

The Pacific is also extremely vulnerable to climate change. According to the World Risk Report of 2019, five countries in the region are among the 15 countries with the highest disaster risk worldwide. There is strong co-dependence between climate events and species invasiveness leading to environmental degradation - as climate change facilitates the spread and establishment of many invasive species and creates new opportunities for them to become invasive.

Climate change, sea level rise and extreme weather events will exacerbate the impact of invasive species in the Pacific and other SIDS. Preventing the introduction and spread of invasive species is key to improving resilience to climate change in SIDS.

The estimated damage from invasive species worldwide is enormous, totaling more than US\$1.4 trillion or 5% of the global GDP. SIDS local livelihoods and economies, which are highly dependent on natural resources, are particularly susceptible to the impacts of invasive species, though the overall cost of biological invasions in Pacific SIDS is not known. In terms of agricultural losses, the cost of invasive species in Vanuatu and Fiji amounts to 5.8% and 3.3% of their GDP, respectively. However, it is difficult to assess the indirect costs of invasive species on tourism, public health, infrastructure and other sectors, or to assign monetary values to species extinction and the loss of ecosystem services.6

Zoonotic diseases and

invasive species

The COVID-19 pandemic has renewed the urgency to understand the mechanisms of animal to human infection, as well as the impacts of ecosystem degradation and biodiversity loss on the emergence and transmission of zoonoses. Evidence links the transmission of zoonotic diseases to deforestation and land degradation, and momentum is gathering to put nature at the centre of the COVID-19 recovery. This also makes sense from an investment perspective, because significantly reducing transmission of new diseases from tropical forests would cost up to \$30.7 billion, globally each year while the COVID-19 pandemic will likely cost up to \$15.8 trillion globally.°

Exploring the relationships between invasions and infections has long been an interest of ecologists. However, invasive species have yet to gain the attention of animal and public health experts and policy makers. As such, the need to address invasive species has so far been largely excluded from post COVID-19 recovery strategies, except for the few cases where governments are investing in invasive species removal to help communities build back better.¹⁰

Invasive species and new diseases are often one and the same problem - they are both a new species with the potential to modify existing ecosystems upon which people rely - and have both affected human health throughout history in several ways. Undoubtedly, species invasiveness is a key driver in the spread of diseases within and between wildlife species and can also help bridge pathogen transmission between animals and humans.

The Black Death is the most infamous historical example of a zoonosis spread by invasive species. In the Pacific, invasive species spread several diseases, including dengue, leptospirosis and filariasis. Recent introduction of the giant African snail to various Pacific islands is linked to the rare but deadly human eosinophilic meningitis.

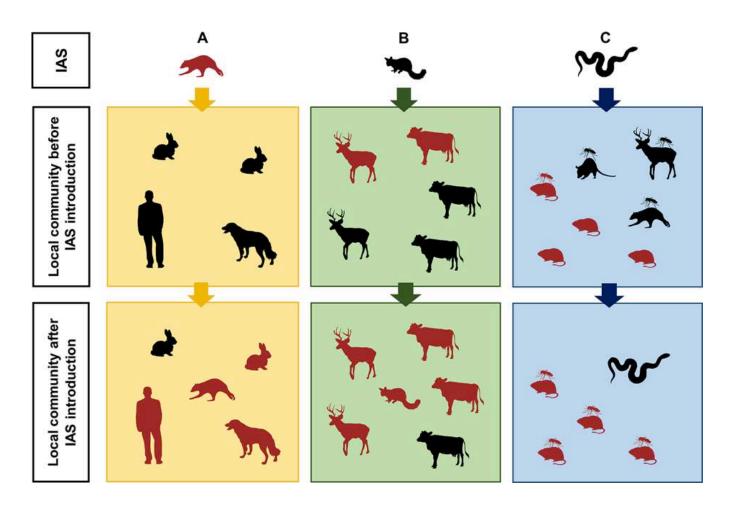


Figure 1. Mechanisms through which invasive species may increase disease risk: Real-case examples. Dark red silhouettes represent infected hosts, and black silhouettes represent uninfected hosts. (A) IAS as sources of new pathogens: the north American raccoon, Procyon lotor, introduced the nematode, Baylisascaris procyonis, into central European countries. Raccoons are the definitive host for B. procyonis and they contaminate the environment by shedding parasite eggs through faeces. Small mammals and birds may serve as paratenic hosts, while domestic dogs may rarely act as alternative definitive hosts. Humans, which acquire the infection as accidental hosts, can develop severe symptoms, caused by larval migration to tissues. (B) IAS as amplifiers of local pathogens: the invasive Australian possums, Trichosurus vulpecula, became the main reservoir host for bovine tuberculosis in New Zealand. Despite Mycobacterium bovis being introduced to New Zealand via cattle in the 1800s and possums in the 1850s, the disease was detected in possum populations only in the 1970s, in locations occupied by wild deer, when decapitation of deer was a common hunting practice. Intensive possum control actions, which cost the country approximately \$NZ50 million per year, have so far produced huge reductions in the number of infected cows and deer, but New Zealand is not yet free from the disease. (C) Indirect mechanisms by which IAS can disrupt local infection dynamics: in Florida, the invasive python, Python bivittatus, reduced the abundance of several large and medium-sized mammals, indirectly causing the redirection of the mosquito vectors for the zoonotic Everglades virus from low-competent hosts, like deer, raccoons, and opossums, to the main reservoir host, the hispid cotton rat, Sigmodon hispidus. Further research is needed to assess if the increased abundance of infectious vectors corresponds to an increase of disease risk for local human populations. Source: Chinchio et al. (2000; www.doi.org/10.1371/journal.ppat.1008922).

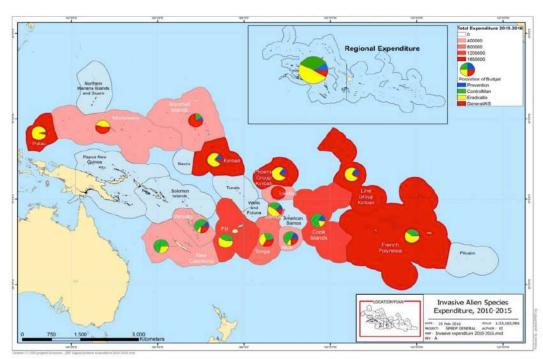
The linkages between invasiveness and zoonoses operate through various direct and indirect mechanisms, each contributing to increasing the risk of human exposure to pathogens. The risk pathways mediated by invasive species include: (i) direct introduction of a new pathogen: (ii) spread and amplification of existing local pathogens; and (iii) increased incidence of the pathogen in host species that are closely associated with humans following the loss of diversity and abundance of competent hosts (Figure 1).

Owing to the effects of climate change, population growth, ecosystem degradation and rising international travel and trade, the threat of new zoonotic diseases will increase. Without transformative action, these complex global challenges will continue to amplify the impacts of dangerous and costly biological invaders.

Barriers to effective prevention and management of invasive species in the Pacific SIDS

The Sustainable Development Goals, S.A.M.O.A. Pathway and Aichi Biodiversity Targets represent major international commitments in the fight against invasive species. However, they are yet to translate into effective action and the overall rate of biological invasions show no sign of slowing down. In 2020, the COVID-19 pandemic and the global failure to achieve SDG target 15.8 and Aichi Biodiversity Target 9 put a spotlight on the threat of current and future biological invasions and make the call for transformative action more urgent and compelling.

Figure 2. Investments to prevent, control and eradicate invasive species in the pacific region from 2010 to 2015. From a total of US\$ 13 million spent during this period over an area of 40 million square kilometers, more than three quarters of the investments were used for eradication and control of invasive species while very little was invested in biosecurity and other preventive measures. Source: UNEP (2019) Project Document (GEF 9410).



A total of US\$13 million was invested in addressing invasive species across the entire Pacific between 2010 and 2015. While invasive species eradication was prioritized, not enough emphasis was placed on preventing new invasions (Figure 2).

Biosecurity, including risk mitigation, prevention and Early Detection and Rapid Response (EDRR) measures, have been poorly supported. As a result, there remains very limited practical experience with biosecurity measures in the region and invasive species continue to enter and spread within the Pacific SIDS at an alarming rate.

In many Pacific SIDS, the legal framework for preventing and controlling invasive species is either deficient or is poorly implemented, and decision makers lack information to influence policy development. Poor coordination at the national level is both cause and effect for weak policy frameworks.

National laws contain elements applicable to invasive species, but are fragmented and highly variable between countries. The problem of poor legal and policy frameworks is compounded by inadequate monitoring and enforcement.

Indirect economic and health impacts of invasive species are not widely known, and prevention mechanisms receive low priority in local governance structures, which need to address more immediate challenges such as poverty, lack of infrastructure and underfunding for basic services. Compounding these challenges is weak to non-existent coordination and collaboration between the public and private sectors.

Tackling invasive species as part of building back better in the Pacific

Mainstreaming biosecurity and invasive species management into national policies and plans across sectors will increase the chances of ensuring ongoing commitment by governments. New policy frameworks must also recognise transboundary challenges and encourage countries to cooperate and collaborate.

The intrinsic factors that predispose the Pacific region to biological invasions include large border to land mass, high volume of tourism and trade, insufficient capacity and poor coordination. These multiple risks make it imperative that Pacific countries collaborate in a manner that will build capacity, create greater awareness and lead to sustainable actions for preventing further negative impacts and economic losses.

Since 2019, UNEP and the Secretariat of the Pacific Regional Environmental Programme have joined forces to implement a 5-year project funded by the Global Environment Facility to demonstrate the most efficient and cost-effective ways to mitigate the threats and impacts posed by invasive species in the Marshall Islands, Niue, Tonga and Tuvalu.

The project is developing a proof of concept for a sustainable framework to improve biosecurity and mitigate the impacts of invasive species by addressing some of the root causes of environmental degradation and increasing resilience through policy advice and community-level action.

The project focuses on developing in-country capacity through a regional coordinated technical support mechanism - the Pacific Region Invasive Species Management Support Service (PRISMSS) - to provide coordinated, collaborative and integrated responses that will guide and inform national actions while ensuring the sharing of best practices and knowledge within and outside of the region. The PRISMSS mechanism enables donors to invest in invasive species management across this vast and diverse region, to address complex global challenges in a manner that is aligned with donors' requirements.

Through the PRISMSS, investment is leveraged to maximise value, contributing to tangible outcomes of ecosystem recovery, improved health and livelihoods. At the same time, a comprehensive training scheme for all aspects of biosecurity will enable target countries to grow their capacity to prevent the introduction and establishment of new invasive species. The project is supporting efforts that will help build back better after COVID-19 by enhancing resilience through initiatives that will lead to flood control, coastal zone management, and water and food security through improved agriculture, with strong community engagement and benefits for women and youth.

The project will contribute to building a case for increased funding for governments and other partners for the prevention and early management of invasive species. Understanding the true costs of invasive species on livelihoods, production sectors, human health and ecosystem services will help Pacific SIDS access sustainable investments. Likewise, creating cost analyses for the prevention, EDRR and control of species that may spread zoonoses and severely impact ecosystem resilience will allow countries to compare different approaches and make informed decisions and, hopefully, minimize the risk of future pandemics.

Conclusion

In addition to other efforts to improve the resilience of Pacific SIDS to future pandemics – such as food security, climate adaptation and diversified economies - the prevention and management of invasive species is an essential component of any comprehensive strategy to build back better in the aftermath of COVID-19.

In SIDS and globally, building back better in the aftermath of the COVID-19 pandemic - and any long-term integrated efforts to create societal, economic and environmental benefits - will only be complete if positive transformative actions to prevent and manage alien species are included.

Governments and all sectors of society and economy must move towards implementing a global strategy to address the continued threat of biological invasions. This will require systems thinking and a continuous and predictable funding stream, possibly through the creation of an intergovernmental framework. Ramping up the war against invasive species worldwide, in a coordinated and inclusive manner, will lead to substantial economic savings, increasing the potential for more funds to be reallocated to support sustainable development.

Only through concerted effort will the future health impacts of invasive species be fully appreciated and mitigated. In the aftermath of COVID-19, it is high time to mainstream invasive species into public policies and wider strategies to build back better – benefitting societies, economies and the environment.

Author

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Notes:

- 1. A zoonosis is an infectious disease that has jumped from animals to humans (for the sake of simplicity, in this paper the term "animals" refers to non-human animals, either wild or domesticated). Zoonoses comprise a large percentage of all newly identified infectious diseases as well as many existing ones (WHO website; www.who.int/news-room/fact-sheets/detail/zoonoses).
- 2. https://www.sprep.org/publications/framework-for-nature-conservation-and-protected-areas-in-the-pacific-islands-region-2014-2020.
- 3. Vanuatu, Tonga, Solomon Islands, Fiji and Papua New Guinea (World Risk Report 2019, ISBN 978-3-946785-08-8).
- 4. https://www.sciencedirect.com/science/article/abs/pii/S016788090000178X.
- 5. https://www.pnas.org/content/113/27/7575.
- 6. https://www.nature.com/articles/ncomms12986.
- 7. E.g. www.doi.org/10.2305/IUCN.CH.2020.PARKS-26-1MH.en and www.wri.org/news/coronavirus-nature-based-solutions-economic-recovery.
- 8. https://www.weforum.org/agenda/2020/08/pandemic-fight-costs-500x-more-than-preventing-one-futurity.
- 9. www.doi.org/10.1371/journal.ppat.1008922.
- 10. https://www.wri.org/news/coronavirus-nature-based-solutions-economic-recovery and https://archive.news.gov.bc.ca/releases/news_releases_2017-2021/2020AEST0036-001185.htm.
- 11. Black Death was the deadliest pandemic recorded in human history and is estimated to have killed 30 to 60% of Europe's population in the 14th century. Invasive fleas and, to some extent, invasive rats were involved in spreading the disease.
- 12. E.g. www.doi.org/10.1515/reveh-2014-0028; 10.1080/03949370.2013.863225; 10.1038/ncomms12986.
- 13. The SIDS Accelerated Modalities of Action (S.A.M.O.A.) Pathway.
- 14. The Aichi Biodiversity Targets under the Convention on Biological Diversity (www.cbd.int/sp/targets).
- 15. https://unstats.un.org/sdgs/report/2018.
- 16. UNEP (2019) Project Document (GEF 9410), United Nations Environment Programme.
- 17. https://www.sprep.org/gef6-rip.

Five ways to future-proof tourism in Small Island **Developing States**

"The beach is just the beginning ..." is a well-known tagline linked to the tourism sector in Antigua and Barbuda. It is also an apt introduction to a discussion on futureproofing Small Island Developing States' (SIDS) tourism industry. Although sand, sea and sun are unquestionably essential for booming and sustainable tourism, they are not enough to futureproof the sector from global health pandemics or other unfolding crises.

The United Nations estimates that tourism represents more than 30% of total exports in the majority of the 38 SIDS; accounting for as much as 80% of exports in some cases. The unprecedented impacts of COVID-19 on the sector may likely lead to up to a 3.6 percent decline in GDP in SIDS. a rate much greater than the global average.

Globally, the financial loss experienced in the first five months of the COVID-19 pandemic was already three times the amount experienced in the entire economic crisis of 2009, coupled with about 120 million tourism-linked jobs being put at risk.

These statistics highlight the importance of tourism to SIDS. It also underscores the urgency for these countries to prioritize action that enhances their competitiveness and leads to a tourism sector that is more resilient to future shocks. Here are five actions. linked to enhancing the competitiveness of the sector, which can lead to the recovery and continued resilience of the tourism sector in SIDS:

Go Digital

Addressing the digital divide should be at the forefront of the agenda for all SIDS where an average of 50 percent of the population of SIDS has internet usage. Singapore has long been touted as the SIDS economy which other SIDS should mirror, due to its strong economic prowess in the face of a lack of natural resources. Notably, Singapore's internet economy is on track to reach US\$22 billion by 2025 and is supported by government efforts to attract the best and brightest in technology. As a result, similar to the Barbados Welcome Stamp, Singapore has launched a two year Tech Pass which seeks to attract top-tier foreign professionals and experts interested in launching start-ups, lead corporate teams or train ICT professionals. The program is expected to help elevate the country's technological capacity as well as develop its high-potential "tech" ecosystem. SIDS, not generally known for tech start-ups and often lagging in the digital economy, should consider a similar approach because many are ripe for investment.

The World Economic Forum indicates that SIDS in Latin America and the Caribbean scored 5.6 percent below the global average for human resources and labour market readiness for the technology adoption.

In the Caribbean, broadband and internet speeds are relatively slow with the highest speed of 56.9 Mbps originating in Barbados compared to Singapore, which has an average broadband speed of 218.07 Mbps. Meanwhile, countries like Guyana have the land space and human capital which can allow burgeoning technology-based start-ups to thrive. These statistics illustrate the potential for SIDS to do more in digitalization.

An innovative approach which could be adopted by SIDS may be found in a recent Call for Proposals by the European Union, wherein business incubators, accelerators and other business support organisations provide skills training to tourism SMEs on the use of digital technologies and platforms. In collaboration with providers of travel technologies, data processing and similar services, digital solutions, research and education institutes and professional associations, beneficiary tourism SMEs will be better able to develop and implement innovative and "smart" approaches, services and operations with the help of digital technologies.

Given estimates that the digital transformation market is poised to be valued at \$3,294 Billion by 2025 it is imperative that SIDS go digital.

If there is one thing we all gained from the COVID-19 lockdowns, it is a deeper appreciation for the beauty of "local" - both in terms of the target market, i.e. national and regional tourists as well as branding content, i.e. national culture, food, heritage and history.

The over-dependence on traditional international markets clearly illustrated the importance of stimulating a pipeline of domestic tourists. For example, despite a contribution of 30.9% from tourism to the Barbados economy, the Barbados Central Bank noted a 16% decline in the sector's activity as at September 2020. The decline was attributed to deteriorating conditions in the traditional foreign source markets.

Looking ahead, it is important to improve the balance between "them" and "us" tourist strategies. The "us" tourists, those within and near SIDs' borders should be better targeted. This should involve better and more distinctive and authentic packaging of tourism products - tapping into national pride and loyalty as part of the motivation for increasing local tourist engagement and spend. Such an approach can be a gateway to attracting untapped markets locally, regionally as well as from among SIDS' diaspora, which can create a new profile of tourists that are longer-term and repeat consumers. Other targeted branding examples which should be adapted to respective country-contexts and replicated include the Maldives' branding as the international dive market, St Lucia as the honeymoon destination and Antigua and Barbuda as the emerging sustainable destination for tourists.

Some SIDS, such as those in the Caribbean Community (CARICOM), have tried "travel bubbles" which can be a testing ground for the feasibility of building up infrastructure and incentivising regional and domestic tourism. These travel bubbles are special arrangements made within CARICOM that had less restrictive border requirements for those inside the "bubble" relative to the international travellers that were deemed high risk. This arrangement could generate more exposure and interest to intra-regional travel since this is essentially advertising directly to regional and local potential tourists.

Essentially, diversification of both the target market as well as the tourism offer itself will allow SIDS to create a tourism industry, which is less vulnerable to exogenous shocks and elicits more recirculation of the industry's economic returns to the domestic socio-economic system.

Close Skill Gaps

If we consider the level of investments in research and development as a measure of investments in skills and innovation, then SIDS have some way to go. The UN indicates that while the world average investment in R&D is 1.7 percent, the Latin America and Caribbean region invests only about 0.7 percent, while SIDS like Cape Verde invest 0.1 percent. The seasonality of the tourism industry may provide one explanation for this as it creates a situation of lowered incentives for investing in the up-skilling of employees or specialist skills.

SIDS must however look at the bigger picture and provide all its citizens with the opportunity to master the 21st century skills needed to succeed in the rapidly evolving global digital economy. Too many students are not getting the training that corresponds with current and future market demands and trends. This results in opportunity-busting shortfalls in skilled workers to compete in an innovation-driven society.

As articulated in international development-centred agendas like the SAMOA pathway and the Sustainable Development Goals, there is need to enhance human resources with appropriate focus on vocational skills, youth, women and the differently abled. This will ensure that those employed in the tourism industry are equipped to meet the evolving needs of the market and perhaps create the possibility for hosting outsourced business processes.

In recognition of the importance of human resource to the competitive advantage of the country's tourism product, the Jamaican government has highlighted the need to re-skill and upskill their tourism human resources from high school until tertiary education. Investing in new digital skills; enhancement of capacity to manage and revamp the tourism industry; and accommodating those operating in the informal economy are some of the areas of focus for the government.

Aside from needing the best and brightest to keep the sector innovative and professional, closing the skills gaps in SIDS is key to ensuring better pay to skilled nationals as a means of incentivizing them to remain serving in the country and serving the sector.





Seek Economies of Scale

Given the common inherent challenges which SIDS face with respect to high transportation and communication costs, disproportionately expensive public administration and infrastructure. limited financial resources and limited access to development finance, it will be important to undertake tourism sector improvement initiatives which create economies of scale. One such approach could be through better leveraging of national and regional sector associations like the Caribbean Tourism Authority and the South Pacific Tourism Authority. Additionally, the International Trade Centre, the UN development agency mandated to enhance the competitiveness of enterprises in developing countries has had significant success working through a network of business support organizations, including in the tourism sector to achieve scale and connectedness.

Leveraging a platform or a consortium of tourism-based institutions would allow for more efficient pooling of good practices, lessons learned and knowledge to ensure that businesses and policymakers in the sector have better access and opportunities to benefit from a wide range of services from these institutions.

This will allow SIDS to benefit from economies of scale in operation and strategic alliances as well as the prevention of "race to the bottom strategies" that emerge from directly competing against each other. This is especially important in light of the increasing financial constraints amongst traditional aid funders who are battling with the economic fallout of COVID-19.

Give MSMEs a Boost

Micro, small and medium-sized enterprises (MSMEs), including travel agents, tour operators, tour guides, event planners, Airbnb operators and tourist transporters, form the backbone of the tourism sector in SIDS. These small businesses not only manage, operate, and facilitate tourism activities along the entire value chain; they also use locally grown or made inputs in their business and are the main source of local jobs for many poor households, including in rural areas. Unfortunately, approximately 67% of MSMEs surveyed during 2020 by ITC indicated that the COVID-19 pandemic strongly negatively affected their operations.

Strengthening MSME competitiveness and resilience, in line with their respective areas of competitive advantage along the value chain, will be crucial to the recovery and future resilience of tourism in SIDS. Using a value chain approach, it will be worthwhile for SIDS, in collaboration with development partners where possible, to invest in product and service creation and development: quality management of tourism services; strengthening branding and market linkages; and generally professionalizing local tourism entrepreneurs.

Other strategies to improve the competitiveness of MSMEs include using the current social distancing requirements as an incentive to decentralise tourism infrastructure into the less populated rural areas where small domestic firms may be more present; supporting the creation of platforms to facilitate the pooling of the outputs of local entrepreneurs, farmers or artisans which supply larger hotels, restaurants, museums, art galleries and other tourism establishments; exploring the agritourism niche markets; and offering practical insights and expert guidance to assist tourism businesses.

SIDS are no strangers to crises. In fact, cascading and unrelenting crises are all too much a regular occurrence from the health pandemic ravaging all corners of the globe to severe drought conditions in the Eastern Caribbean to serial cyclones in the Pacific - both linked to climate change. Action in the five critical areas highlighted above, if fully taken on board, can place SIDS on higher and safer ground for when, not if, the next crisis hits.

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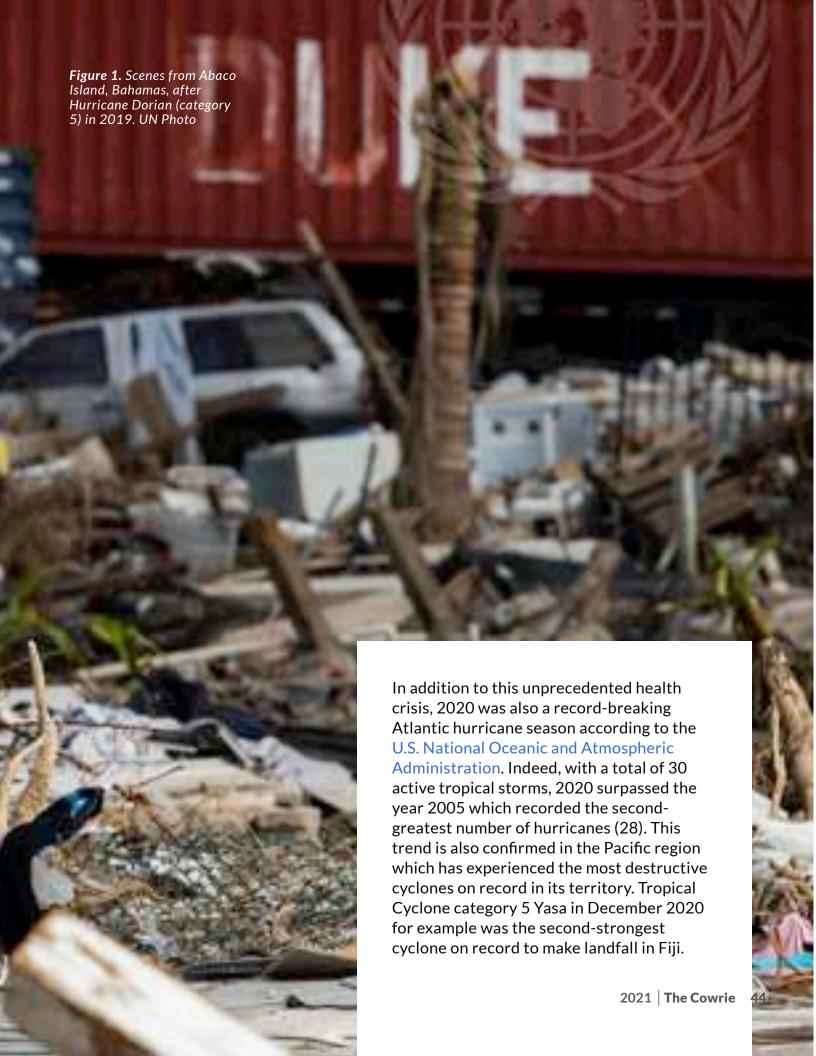
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The internationally agreed Declaration of the Small Island Developing States (SIDS) Accelerated Modalities of Action, the so-called S.A.M.O.A Pathway, recognizes that SIDS remain a special case for sustainable development in view of their unique and particular vulnerabilities. Due to their specific common development challenges, SIDS are on the frontline of the multiple climate and nature crises which are now being amplified by the global COVID-19 pandemic and subsequent economic shutdown. All the ingredients for a "perfect storm" had been in play in SIDS in 2020 and most still remain active in 2021.

Global decline in international travels, in commodity prices as well as the overall disruptions in worldwide trade and supply chains directly resulting from the pandemic are hitting SIDS disproportionately in a multitude of sectors: health system, tourism revenues, remittance flows, food security, commodities, trade as well as the existing debt situation. With tourism representing 80 per cent of total export revenues in SIDS, globally, exceptional reduction in this sector due to the pandemic severely decreased external income in SIDS ("Financing for Sustainable Development", UNDESA, 2021). Data on tourism arrivals for the second guarter of 2020 in the Pacific Islands for example, shows that the arrival number had dropped by 99.3% as compared to 2019 for the same period (Secretariat of Pacific Community, 8 December 2020). Also, the escalating debt service (median debt service is of about 30 per cent of revenue in SIDS) is rerouting public expenditure and foreign currency from the COVID-19 recovery, and from investments in resilience. Furthermore, recent studies show that SIDS with higher GNI per capita levels are not more resilient to face the present crisis ("Mapping the Economic Consequences of Covid-19 in Small Island Developing States" OECD, 2020).



The 38 SIDS represent over 30% of countries with the highest relative annual losses due to disasters (OECD 2016). According to the World Bank, annual damages to infrastructure from natural disasters in the Caribbean region are estimated at US\$0.5-1 billion/year. In the Pacific Islands, the value of infrastructure and cash crops at risk from natural disasters are estimated at US\$112 billion (World Bank, 2013). The 2019 Global Assessment Report on Disaster Risk Reduction points out that while Jamaica's economy has grown up to 0.8% annually over the past 4 decades, it would have grown by about 4% without the economic losses and damage caused by tropical cyclones. Some other examples: In 2015, cyclone Pam impacted Vanuatu with 449.4 million USD reported in losses for an economy with a GDP of 758 million USD (Post-Disaster Needs Assessment in Vanuatu 2015); In 2016, cyclone Winston resulted in losses of more than one third of Fiji GDP (Government of Fiji, 2016); In 2017, hurricane Maria caused total damages estimated at 226% of Dominica GDP (Post-Disaster Needs Assessment for Dominica, 2017); In 2018, cyclone Gita hit Tonga and resulted in 165 million USD of losses for a national GDP of 461 million USD (Government of Tonga, 2018). For SIDS, due to their small geographic size and small economies, what were one-off events with contained impacts are now having significant systemic implications



Figure 2. On September 14th, 2020, this satellite image captured 5 tropical systems (2 Hurricanes and 3 Tropical storms) in the Atlantic Ocean at the same time. September 2020 experienced the formation of a total of 10 named storms - the highest number for any month on record according to NOAA.



Figure 3. Secretary-General António Guterres looks out over the ocean in Tuvalu (2019). UN Photo/Mark Garten

With more than 80% of small island residents living near the coast, the rise of sea level combined with storm surges, tides and waves for example is of extreme concern. In Tuvalu, the length of the coastline compared to the landmass is one of highest ratio in the world. Disaster losses are not only severely threatening the achievement of the SDGs but represent an existential threat for many SIDS.

The Case of Vanuatu: The Impossible Equation

The case of Vanuatu in 2020 is a clear example of the constant and complex challenges faced by SIDS. It shows how SIDS are dealing with multiple crises at the same time and how COVID-19 has particularly exposed SIDS' extreme and interlinked vulnerabilities. On one side, with cyclone Pam (2015) and Harold (2020), Vanuatu has experienced two major cyclones category 5 - the highest measurement on the cyclone intensity scale- in less than 5 years. On the other side, the country has faced the paralyzing circumstances and economic insecurity brought on by the COVID-19 pandemic.

In April 2020, Cyclone Harold compounded the already adverse economic impacts of COVID-19, by lashing four Pacific Island nations -Solomon Islands, Fiji, Vanuatu, and Tonga-leaving destruction in its wake. As a matter of fact, the combined effects of the climate hazard and COVID-19 intensified the magnitude, and widened the scope of the social, economic and environmental impacts. According to the Cyclone Harold and COVID-19 Post Disaster Needs Assessment (PDNA) conducted in Vanuatu (2020), the overall physical damage and economic losses caused by both shocks correspond approximately to 61 per cent of the Gross Domestic Product (GDP) in 2020. This alarming figure does not even factor the disaster effects on the environment sector on which Islands intrinsically depend for transformative recovery and sustainable development. The 2020 PDNA estimated the total cost of the recovery and reconstruction activities in Vanuatu at 36 percent of the 2020 GDP.

Even though a disaster-prone country like Vanuatu has been preparing for major cyclones, preparedness, relief and recovery efforts have been particularly challenged by COVID-19. Facing two large-scale emergencies at the same time. Vanuatu had to take difficult and sometimes counterproductive but legitimate decisions to address the very complex situation. On one hand, the immediate closing of international borders was a vital decision to prevent the COVID-19 contamination spread and manage the absorption capacity of national health facilities. On the other hand, these pandemic related travel restrictions (together with damaged supply routes by the cyclone) have significantly obstructed the post-cyclone humanitarian response and jeopardized national economy. In addition, traditional relief support in the form of remittances for example have also been considerably limited due to pandemic related unemployment and resultant financial constraint among family members abroad.

The case of Vanuatu is not an exception. In July 2020, in the middle of the pandemic, the Mauritius Government declared a state of environmental emergency following a devastating oil spill impacting the country's southeast coast with the potential of resulting widespread impacts. As the case for the majority of SIDS, Mauritius depends on its coast for food and livelihoods. National nature-tourism accounts for 36% of the country's GDP and generates about USD 4.3 billion a year (UNEP, August 2020). Again, the example of Mauritius shows how SIDS are often battling on several fronts with significant financial implications.

Short recovery intervals and large financial gaps

In order to support countries with a concerted approach for an inclusive, and government-led assessment of post-disaster damages, losses, and recovery needs, as well as the development of a comprehensive recovery plan, the European Commission, the World Bank and the United Nations adopted the Post Disaster Needs Assessment (PDNA) process in 2008. Since 2009 and as mentioned above, several PDNAs have been conducted in SIDS. One of the latest PDNA conducted was actually the one in Vanuatu (October 2020).

From a lesson learned perspective and using World Bank data, it is interesting to note the large financial gaps between the planned recovery needs estimated in PDNAs and the actual financial resources mobilized to support SIDS in implementing the PDNA based recovery plans. Official PDNA recovery needs for Haiti (2016), Fiji (2016) and Vanuatu (2020) amount to USD 2.7 billion, USD 1.9 billion and USD 358 million, respectively (cf. Respective PDNAs). Regarding the Haiti PDNA recovery needs (2016), only 3.16% of financial resources have been mobilized. In Fiji (2016), only 8.03% have been raised. In Vanuatu (2015), 27.74% have been mobilized (World Bank, 2018).

In some cases, such as Vanuatu and Haiti, political transitions in the middle of disasters have undermined the intended translation of PDNA recommendations into effective recovery outcomes. Even if the above percentages are not exhaustive, they still provide an interesting order of magnitude and indicate the large financial recovery gaps that feed the "vulnerability trap" and the short versus long-term objectives dilemma which SIDS development agenda is often subject to. Indeed, without predictable, secure and robust fiscal revenues, domestic savings, and sufficient contingency funds, SIDS governments often need to reduce already limited public investments in critical socio-economic development and environmental sustainability in order to address direct disaster-related needs.



Another aspect that is of concern is the repeated disasters at short intervals hitting the same SIDS combined with lack of time and resources for effective postdisaster recovery processes. Not only recurrent disasters contribute to high debt levels over time but non-addressed issues by too short and unfunded recovery processes will accumulate and gradually deepen vulnerabilities, amplify risk profiles, affect policy coherence and social cohesion at national and regional levels with risks for domestic and regional stability. According to ECLAC 2019, between 1990 and 2017. Jamaica experienced 26 natural disasters, making it the hardest hit nation in the Englishspeaking Caribbean. Cyclone Harold (2020) hit Vanuatu only five years after Cyclone Pam (2015) which had only mobilized less than 30% of the financial resources required for recovery. Only 5 years after the devastating Category 5 Cyclone Winston, the tropical Cyclone category 5 Yasa struck Fiji in December 2020 and was followed by Tropical Cyclone Ana which pummeled Fiji's northern islands. Being the 2nd in a month, Cyclone Ana is "leaving behind a difficult recovery", Fiji's ambassador to the United Nations, Satyendra Prasad told The Guardian in January 2021.

Both the frequency and magnitude of those disasters poses major concerns for the leaving no one behind principle; humanitarian support to the most vulnerable and marginalized communities as well as recovery dimensions related to health, social services or the environment per se are being challenged at an alarming scale and rate within these extremely short and limited "recuperation" phases.

SIDS natural capital and disasters: interlinkages, challenges and opportunities

With 50% of the Caribbean population living within 2 kilometers from the sea for instance, the high level of exposure resulted in record economic losses during the 2017 catastrophic hurricane season. Considering the importance of natural capital in SIDS, the threefold disaster-environment nexus is particularly pronounced in SIDS:

Natural hazards can alter critical ecosystems services by increasing the vulnerability level of the populations relying on nature.

A well-managed and healthy environment can prevent and control natural hazards by building natural protection against natural disasters.

Resilient economic growth depends on the sustainable use of natural resources by enhancing nature-based livelihoods

The need for strategic risk-informed sustainable

finance & investments in resilience

As stipulated in the UN Secretary General's 2020 report on the Implementation of the Sendai Framework, the current approach to funding disaster risk reduction is lagging behind the alarming rate of formation and increasing complexity of disaster risk. Disaster financing focusing on preparedness, response and risk transfer is simply insufficient to deal with the increasing economic, social, and environmental impacts of disasters in SIDS. The large financial gaps during short term recovery intervals in SIDS demonstrate how exorbitant is the cost of absence of preventive measures. SIDS cannot afford inaction and the current disaster financing approach is inappropriate for the execution of multi-hazard, prevention-oriented disaster risk reduction plans and strategies.



Figure 5. A small island along the Southern coast of Haiti. The community living on the island relies mainly on ocean resources, already overexploited, for livelihoods. Access to social services is a challenge. While early warning systems need to be strengthened, a one-km barrier reef located near the island is currently the only natural protection mechanism against wave surge and hurricanes. Photo by Maximilien Pardo.

In order to break the cycle of disasterresponse-disaster in SIDS, and in view to address the underlying social, economic, and environmental drivers of risk, a new approach to financing is urgently needed; an approach that focuses on disaster prevention and risk reduction. Data shows that it is more cost effective to invest in prevention than paying for reconstruction. Indeed, the costs of recovery generally includes replacement costs plus quality enhancements and technological innovation (to build back better), plus relocation to safer areas (if required), plus disaster risk reduction standards and plus multiannual inflation (World Bank, 2013). As pointed out by the Global Commission on Adaptation (2019)¹ for example, returns on investment in climate resilience have projected benefit-cost ratios going from 2:1 to up to 10:1 for investments in early warning systems. Also, benefits of investing in disaster risk reduction cost up to four times less than possible recovery cost (Mechler, R. 2016). In Dominica for example, after the impact of Hurricane David, 4.2% of the original cost for the construction of the Seaport was used to repair it; had mitigation measures been considered during the initial construction, for an additional 1.9% of the original cost, the losses could have been avoided. (ODI and GFDRR, 2013). Similarly, the economic and social costs resulting from COVID-19 could have been considerably reduced with relatively small and targeted investment in prevention and preparedness.



Figure 6. Aerial view of one islet along the coastline of Southern Haiti. It shows the high exposure of a community living without protection at sea level. Photo by Antonio Perera.

pathways that are not risk-informed are neither sustainable nor Indeed, considering that over 55% of the Pacific SIDS population lives in less than 1 km from the sea for example, investing in multi-hazard risk assessments for example are of paramount

importance to discourage businesses from investing in locations that provide short-term gains but expose them to medium- or long-term disaster risks.

Despite those facts, the World Bank reports that from 1999 to 2010, only 10% of the total disaster-related global aid to SIDS went towards prevention and preparedness. Approximatively US\$1 billion a year is spent by Caribbean countries to maintain operational their disaster-prone 75,000 km road network for example. According to the Financing for Sustainable Development (UNDESA, 2021), climate finance to SIDS has firmly increased between 2016 and 2018 but represent only 2 per cent of total climate flows.

The 2020 Independent Evaluation of the Relevance and Effectiveness of the Green Climate Fund's Investments in SIDS

highlights critical set of implementation barriers drawing attention on adaptation finance needs for SIDS. Also, how much climate finance contributes to debt sustainability, a key challenge in SIDS, very much depends on how much the investments contribute to SIDS' growth and sustainable development.

In the Outcome Document of the 2021 ECOSOC Forum on Financing for Development, Member States called to urgently reverse the balance from financing for disaster response towards financing for resilience, prevention and risk reduction.

Recommendations and

Conclusion

COVID-19 and the climate, nature and economic crises highlight the systemic characteristic of risk and the potential for spill-over effects across systems and borders. They reiterate the importance of developing and implementing multihazard national and local disaster risk reduction strategies and the need to reinforce SIDS capacity to better understand systemic risk and to apply risk information in policy and investment decisions in all sectors.

Despite the disproportionate challenges they face due to their unique features, SIDS have shown an extraordinary leadership in focusing on prevention and building resilience to move away from their unique slow growth and high vulnerability spiral.

Following cyclone Winston, Fiji has extended the use of its 2016 PDNA data to complete a multiyear strategic national development plan that was being developed when the disaster struck. After Hurricane Pam in 2015, Vanuatu built on its PDNA analysis to improve national disaster preparedness policies. However, it is also important to note that in some countries like in Haiti, the lack of monitoring mechanism to track in a systematic manner PDNA recovery financial flows is an issue (World Bank, 2018). Following recent national post-disaster financing gaps assessments in Caribbean countries (e.g. Jamaica, Grenada and Saint Lucia), the development of comprehensive Disaster financing strategies is underway. The Government of Jamaica for instance has recently embarked in the development of a Policy on National Disaster Risk Financing.

Many other risk-informed sustainable finance initiatives led by SIDS are ongoing. In a nutshell and in view to bridge the financial gaps faced by SIDS, it is important to further encourage initiatives aiming at:

Integrating disaster risk in economic and development policy and in public and private investment decisions in all sectors to build resilience to future shocks and crises, integrating climate and disaster risk into national planning and budgeting and providing predictable and more programmatic funding. International support measures must also be aligned with national disaster risk reduction strategies. Integrated National Financing Framework (INFFs) could play a major role in this context. Currently INFFs is being implemented through UN support in Cabo Verde, Comoros, Barbados, Haiti, Jamaica, Suriname, Fiji and Timor-Leste.

- (ii) Facilitating access to innovative financing -e.g. blue bonds- and risk transfer systems. It is worth mentioning that Seychelles has launched in 2018 the world's first sovereign "blue bond". Seychelles' Sovereign Blue Blond mobilizes resources for empowering local communities and businesses in achieving a transition to sustainable fisheries and ocean conservation.
- (iii) Promoting financing instruments assisting SIDS at risk of debt distress to improve risk-informed debt management and the overall debt situation through e.g. debt swap for climate resilience. On the later, the Economic Commission for Latin American and the Caribbean (ECLAC) has proposed a Caribbean Resilience Fund under its Debt for Climate Adaptation Swap initiative. The idea behind this option is that instead of debt-service payments, countries would make payments into the resilience fund.

As ultimate bearer of risks, Governments need to ensure sufficient investments in prevention, strengthening social protection systems, risk reduction, build resilience into public budgets and play a central role in shaping the risk landscapes for investors. However, it is equally important that private investors in SIDS not only further consider climate risks with appropriate long investment time horizon but also routinely measure other SDG-related risks (e.g. threats to ocean and land resources - SDGs 14 and 15), often underestimated for short-term opportunities in SIDS (e.g. mangrove clearance for construction). Under these perspectives, policies and regulations that incentivize the private sector to factor those SDG related risks (that do not directly affect their short-term financial returns) are essential.

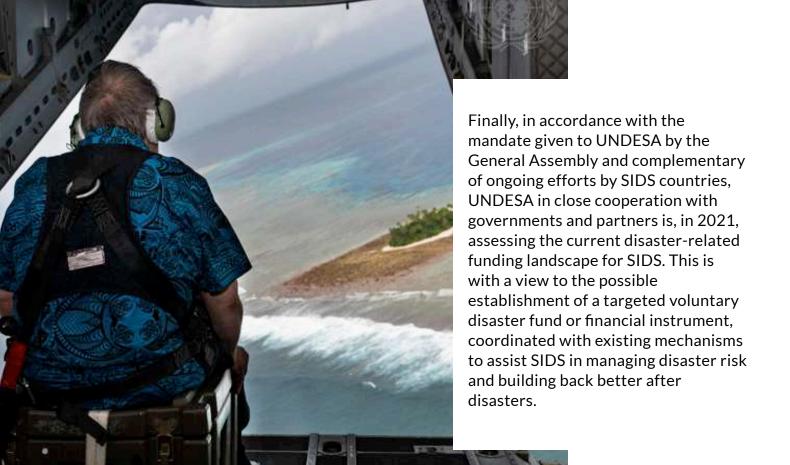


Figure 8. Secretary-General António Guterres looks out over the islands of Tuvalu from the back of the plane during his flight there in 2019. UN Photo/Mark Garten

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Notes:

- 1. Global Commission on Adaptation. 2019. Act Now: A Global Call for Leadership on Climate Resilience. Global Center on Adaptation and World Resources Institute.
- 2. Mechler, R. 2016. Reviewing estimates of the economic efficiency of disaster risk management: opportunities and limitations of using risk-based cost-benefit analysis. Natural Hazards, 81(3), 2121-2147.

An Urban Resilience Agenda

for Asia Pacific SIDS

he Paris Agreement process requires all countries to submit new and updated national climate plans this year. The plans will demonstrate collective commitment to building resilience and averting the critical 1.5-degree warming threshold. The Marshall Islands, the first country in the world to submit its commitments, is ambitiously pursuing an economy-wide low emission development pathway. This is leadership to be emulated by all, especially small island developing states (SIDS) that have been relatively timid about embracing economy-wide strategies due to cost and capacity limitations. The Marshall Islands plan is especially important for clarifying a framework to address a peculiar systemic challenge facing SIDS in the Asia Pacific: rapid urbanization alongside disproportionate climate risk. It paves the way for an urgently needed urban resilience agenda for Asia Pacific SIDS.

This agenda offers the region a pathway to robustly pursue post-COVID economic recovery while advancing its climate priorities in a crucial year for climate action. While the geographic isolation and preemptive efforts of Pacific governments have largely held infection rates enviably low, the economic fallout, which Fiji's economy ministry describes as exceeding the costs of recovering from a significant hurricane, has undermined policy ambition by narrowing political priorities and resources to health and economic concerns.



However, an Asia Pacific Urban Resilience Programme for SIDS tailored to local peculiarities is a necessary 'win-win' strategy. The region is urbanizing at the fastest rate in the world. The economic benefits urbanization portends for the region's mega mainland cities command headlines and policy agendas. However, rapid urbanization alongside compelling and disproportionate exposure to climate impacts are profound and distinct threats to the development gains and prospects of Asia Pacific SIDS. SIDS are effectively coastal entities with greater infrastructural and population exposure to current and projected climate impacts, including sea level rise and erosion. This heightened exposure demands an urban resilience programme of action that prioritises energy, waste, infrastructure, and the related challenges in agriculture and water sectors to address inevitable food security issues.

Energy must be at the core of the Asia Pacific urban resilience agenda because the climate crisis is primarily a fossil fuel induced challenge that demands comprehensive transition to renewable energy sources. All Asia Pacific SIDS. except Papua New Guinea, are entirely dependent on fossil fuel imports, which means expending a great share of critical hard currency on fossil fuel imports at the expense of investment in critical infrastructure such as hospitals, schools and overall resilience building. During the turbulent period 2000 to 2007 when oil prices tripled, fossil fuel imports cost Fiji as much as a fifth of Gross Domestic Product. Transitioning to renewable energy sources is a double opportunity for Asia Pacific SIDS.

Chiefly, it directly tackles the climate crisis by reducing carbon emissions while boosting urban resilience in contexts where demand is trending upwards because of urbanization and industrial expansion. But it also opens up economic opportunities through job creation, reallocation of state savings into new services and infrastructure, which will in turn respond to growing demand for jobs and infrastructure alongside rapid urbanization. This means Asia Pacific SIDS must articulate bolder plans to increase the use of renewables (solar, wind, geothermal etc), particularly in the provision of electricity. The optimization of energy efficiency should therefore become a complementary guiding principle.

Rapid urbanization in Asia Pacific SIDS means the often overlooked issue of waste management is now a top priority in urban resilience building. There is a need for more studies, projects and actions to support the implementation of waste-toenergy initiatives, including from landfills. The region's SIDS should robustly reduce solid waste and methane emissions. Achieving these goals requires strengthening oversight in the waste sector. The likelihood that rapid urbanization in these small states that are disproportionately exposed to climate risks means waste management should command attention on par with infrastructure in the climate and urban resilience agenda. The latter is chiefly concerned with mitigating issues of drought, flooding,

cyclones, and other extreme weather events, early warning systems, improved building codes and other national priorities -- all of which require continued monitoring, expansion and improvement.

With only a decade left to safeguard the sustainable development of the most vulnerable from the most dangerous impacts of climate change, 2020 is a period of reckoning for SIDS and for the world. Building resilience to climate change in small, rapidly urbanizing and disproportionately climate exposed Asia Pacific states warrants strong and special support for low emission development pathways that will provide a firm basis for continued growth and sustainable development. Asia Pacific SIDS will need special support spanning concessionary finance, technology transfer and codevelopment, and complementary capacity support to bring about systemic transitions that are reflective of their peculiar urban resilience challenges.

As internal institutions pivot to provide resources to stimulate economic recovery, this Asia Pacific SIDS agenda offers a unique opportunity to simultaneously tackle our two biggest challenges: the pandemic and the unremitting climate emergency. The economic benefits we seek will be inevitable by-products.

Author

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5 things we can do today to help
SIDS fight world hunger and
decrease CO2 emissions
(and they're not difficult)

Policy Roadmap & Citizen's Mini-Guide for a Sustainable Future People around the globe are starving and CO2 levels are rising. Sadly, these are not new headlines: both have been occurring relentlessly for decades.

If we do not make significant changes TODAY... in 10 years, these will still be headlines. (Just like they were 10 years ago.)

These headlines are lives lost, extreme pollution, and the depletion of vital resources necessary for the survival of our shared planet and for us all. There is ample, scientific data to illustrate extreme poverty. massive forest degradation, increased CO2 emissions, and freshwater scarcity, among so many others. Time is running out. We must evaluate how we interact with one another and this planet; she is the only one we have.

But first, a thank you. There are many excellent reports based on exhaustive research, and lifesaving and environmental protection efforts by thousands of dedicated citizens - in all sectors - around the globe. Many of us thank you and beg you to continue, please.





We are in a new era, one that must be firmly based in science. Because the planet is telling us – screaming at us – we must all do better.

For Small Island Developing States (SIDS), their unique borders place food security and economic needs in the spotlight. In addition, many SIDS nations are the victim of CO2 emissions, in terms of shifting weather patterns and increased climate disasters. As we look to a future beyond COVID-19, we must include sustainability at the heart of EVERY DECISION.

We, global citizens, must educate ourselves on our shared planetary boundaries and rethink how we do things.

Sustainability is as much a mindset as it is in action. If we are to reach the United Nations (UN) 17 Sustainable Development Goals (SDGs) by 2030, or ever, this will require "Team Earth" to suit up.

But how do we do this? We must ask questions, gather with urgency, share, and take meaningful action.

SUSTAINABLE POLICY

"Good" policy is critical for a functioning government. Responsible, ethical, inclusive, "sustainable" policy, however, is required for healthy populations and a healthy planet.

Sustainability is achieved when every nation and its people both survive and thrive.

Sustainable policy should not require years of protests or a whistleblower from within. Equitable policies should easily manifest through responsible, global stewards in both government and corporations to help inform the choices we all make daily. To tackle the many social, environmental, and economic needs of people, nations, and the planet...

Sustainable policy MUST be rooted in honesty, transparency, and inclusivity.

CITIZENS:

- Is your government creating policies that protect you, your families, and our shared planet?
- Have you been consulted regarding the policies shaping your future?
- Are you included within those policies? Fellow women and girls?? All marginalized groups?
- Have these policies been evaluated through a lens of sustainability?

It is your right to ask these questions and be included in the process. If additional action is needed, below are excellent resources for peaceful, civic organizing:

• NDI - National Democratic Institute - ndi.org • Indivisible.org To learn more about the SDGs, the UN has a vast network both within the Sustainable Development Solutions Network (SDSN) platform and

We need more meetings, dialogue, action, and money to achieve the SDGs!



THE BASICS

For every nation (ironically)... we must prepare as though we are an island. BASICS: Fresh Water and Food Security

We all require basics for survival. Both fresh water and food security may require new technologies and infrastructure to create and maintain capacity. While some islands may already incorporate the suggestions below, in light of COVID-19's global reach, every island may want to consider the following as initial builds and/or upscaling with sustainability and resilience in mind:

Fresh Water

Desalinization Plant and/or Pumps.

While this may have high initial costs, the benefit in times of crisis (epidemics, climate disaster) will be invaluable if access to an island is deferred for any number of reasons. If an entire plant is not needed, perhaps only pumps are required for fresh drinking water and for agriculture.





Food Security

Vertical Agriculture, Aquaponics, and Seawater Veggies

Vertical agriculture, aquaponics, and farming with seawater – will help increase food stocks. Researchers are discovering that certain varieties of tomatoes, potatoes, carrots, beetroots, and strawberries have a high tolerance for salt.iii These activities will promote business and employment, in addition to providing additional food without additional land. Both will address food security and social security (via income); food harvested will increase food quality and, therefore, health; and agriculture utilizing seawater will decrease the use of fresh water – which may already be scarce – in addition to halting deforestation for agriculture.

5, TODAY!

The environment is our starting place. If we do not protect her, the rest of our endeavors may be moot; especially for island nations with more complicated, limited access routes to resources compared to nations who share borders. As all countries continue to implement SDG targets, below are suggestions to achieve IMMEDIATE, impactful change including actions within Climate Change, Food Security, Resource Scarcity, Good Governance, and Inclusivity.

CLIMATE CHANGE

1. Halt Deforestation. (Full stop.)

All forests must have a sustainable policy.

Simply put, if we clear it all, ecosystems will be destroyed and take hundreds of years to revive. Trees down mean soil erosion, mud slides, lost agriculture, reduced biodiversity, lost beauty and spiritualty, as well as an impact on global climate... deforestation is a major contributor to CO2 emissions as it eliminates an important carbon sink. And... at some point the trees will be gone. Then what? Whatever answer came to mind is the answer that must be put into action today. New forms of export and/or financial input... mind exports - technology jobs. Let's give the planet a breather. Map and utilize the land that has already been cleared, and replant everywhere where we can. SIDS Specific: Solomon Islands "A recent report commissioned by the Solomon Islands' Ministry of Finance

Solomon Islands' Ministry of Finance suggested that if logging activities continue at their current pace, natural forests will be exhausted by 2036" (Yin, 2018)iv Timber can be a lucrative, readily available option, but this will be short-lived if not done sustainably. In addition, the immediate effects can include polluted water and soil erosion which affects access and harvests.



SUGGESTIONS:

- REDD+ Expedited entry into the REDD+ program for all developing countries.
- Plant Trees Employ citizens to do so via PES programs.
- Vertical Agriculture and Aquaponics
- Non-Product Jobs Tech Corporations: bring more tech jobs and training so economic inputs do not involve a tangible, environmental, resource-dependent output.



FOOD SECURITY

2. Go Flexitarian, at Minimum.

Cut meat consumption by 50%.

Go vegan, if you are able. If you are not ready for this leap, then flexitarian is the first, mandatory step for us all.

Vegan – person who does not eat any food derived from animals and does not use other animal products. Flexitarian – person who has a primarily vegetarian diet but occasionally eats meat or fish. The Lancet medical journal published a study calling for a reduction in red meat consumption by half to avoid "catastrophic damage to the planet" (Wolfson, 2019).v With so many stats to include, I refer you to an excellent article in The Guardian, by Damian Carrington, 'New plantfocused diet would 'transform' planet's future, say scientists' published online 19 January 2019.vi

BENEFITS:

Land, oceans, and aquifers will receive a muchneeded opportunity to breathe and revive... restore balance. Incorporating these measures will have profound implications for climate, human health, and a shift to create more diverse and healthy meals. In addition, this will allow more crops to be grown and used for people, not as animal feed, thereby reducing global hunger. Fewer cattle on the planet will help reduce methane emissions, soil erosion, freshwater consumption, and many human-health issues. (Your heart and waistline will be grateful, too.)





RESOURCE SCARCITY

3. 2 Each.*

Our planet cannot sustain her current populations, let alone 9.8 billion predicted by 2050. (*Each woman.) If you already have 6 kids, please know there is absolutely no judgement. However, this is a new era and when considering current population and resource scarcity, sustainable families are necessary. Moving forward, this delicate request of 2 children per woman will benefit the planet and us all. This request is to both women and men... well, you know why...

GOOD GOVERNANCE

4. Be Honest and Transparent.

We need our political leaders to govern with integrity. (Seems simple enough.)

EQUITABLE

5. Personal opinions should NOT dictate policy.

Sustainable policy must be inclusive. (Okay... I did try to sneak two in there, but they are related.) All voices must be heard, all perspectives considered, and all needs satisfied.

Your opinion is not necessarily fact - leave it out of policy. If your opinion is that gravity is real, well, in that case you have "fact" on your side. However, your choices about religion, culture, food preference, attire and such are just that - your choice. Choices can be changed and there is no barometer for right or wrong, better or worse; each are opinion, each are a choice. In addition, the characteristics we are born with are not an indicator for our capacities - ex., gender and race. These, too, should not be judged and should not be exclusionary in policy or societal relations.



The 5 items above would dramatically improve 15 of the 17 SDGs. (That's pretty good.)

MARKETING

Global Education

Like any new product, the SDGs need marketing. A global, citizen-focused marketing campaign regarding planetary boundaries and our relationship with the environment is desperately needed to convey the urgency of climate change and resource scarcity, as well as our individual responsibilities as her steward. Understanding the significance of every choice we make is no longer an option. (A great opportunity for social media giants to help the planet!)

SUGGESTON:

• Small, bite-size videos (30 sec. – 2 min.) and posters for workplaces focused on individual and/or clusters of SDGs and their global importance – emphasizing individual and government responsibility. (This will require translations.)



MONEY



Calling all funders!

World Bank, donors/foundations, large corporations, microloans (Kiva), Office of Development Assistance (ODA), blue/green funds, social impact funding (Sir Ronald Cohen)... the money and strategies are out there. Some countries, SIDS included, still cannot seem to gain access due to risk. Is there a way to put funders at ease? Perhaps solicit citizen input? Ask for suggestions from locals, glean their islandspecific innovations, ask if there is citizen buy-in and commitment, and offer profitsharing. With inclusivity - from the beginning - there will be a sense of shared responsibility, opportunity to benefit, and, thus, thrive. Risk will no longer be an issue for these beautiful islands and their smart, hard-working citizens!

Because even if...

... you are a large company, already making millions (or billions) and you just break even for the next 5 years... you are still making money in other spaces. However, you will have provided an alternative path for hundreds of thousands of people... lifechanging. Refrigeration for food and medical supplies, light for clinics and studying, communications, employment, and, perhaps, even the opportunity for people to have a secure future.

Author: Anonymous

SIDS communities – all communities – would like stability and opportunity. Achieving this, and all SDGs, will require an integrated and global effort. We must all choose sustainability... so all people can thrive.

Notes

i I don't deserve any credit. Penning an article is nothing near what a humanitarian worker is doing on the ground, or the thousands of various sustainable professionals are working on day in and day out. Grateful to them... ii FAO, (2020). Home Gardens/Vertical Farming, Hydroponics and Aquaponics, FAO, 2020. Available at: http://www.fao.org/land-water/ overview/covid19/homegardens/en/ iii Euronews, (2020). Growing vegetables in seawater could be the answer to feeding billions.' Euronews, 14 October 2020. Available at: https:// www.euronews.com/living/2020/10/14/growingvegetables-in-seawater-could-be-the-answer-tofeeding-billions iv Yin, B. (2018). Paradise Lost, Global Wotness, 18 October 2018. Available at: https:// www.globalwitness.org/en/campaigns/forests/ paradise-lost/ #:~:text=A%20recent%20report%20commissione d%20by,long%20as%20the%20Yangtze%20River. v Wolfson, S. (2019). Could flexitarianism save the planet?, The Guardian, 29 January 2019. Available at: https://www.theguardian.com/environment/ 2019/jan/19/could-flexitarianism-save-the-planet vi Carrington, D. (2019). New plant-focused diet would 'transform' planet's future, say scientists', The Guardian, 16 January 2019. Available at: https://www.theguardian.com/environment/2019/ jan/16/new-plant-focused-diet-would-transformplanets-future-say-scientists vii UN DESA, (2017). World population projected to reach 9.8 billion in 2050, and 11.2 billion in 2100. UN DESA, 17 June 2017. Available at: https://www.un.org/development/desa/en/news/ population/world-populationprospects-2017.html

Mahalo, Aloha & Lana 'i'o

ka Mana'o Bill!

Although belated, the Cowrie wishes to express its deepest gratitude and sincere thanks to our Hawaiian colleague, a fellow islander, a dedicated international civil servant, and an excellent professional photographer, Mr William Bly, who is now enjoying his well-earned retirement at Fairfield Glades in Tennessee. Bill was primarily responsible for designing the Cowrie. His departure at the end of 2019, left a lacuna which we are still desperately trying to fill. Enjoy your well-earned retirement Bill from your colleagues at the UNDESA SIDS Unit - Aloha!



Mr Sai S. Navoti, Chief, UNDESA SIDS Unit & Mr Bill Bly at HLPF 2019 Photo credit: IISD

