1 INTRODUCTION: MONITORING THE IMPACT

What became of the rain?
It weeps differently
Arrives as a tantrum
That tears mountains
And turns villages
Into gravestones

From *The Changing Sky*, translated from Tagalog by Romulo P. Baquiran Jr and Renato Redentor Constantino.[1]

The 70 Member States of the CVF-V20[a]

Afghanistan, Bangladesh, Barbados, Benin, Bhutan, Burkina Faso, Cambodia, Chad, Colombia, Comoros, Costa Rica, Côte d'Ivoire, Democratic Republic of the Congo, Dominica, Dominican Republic, Eswatini, Ethiopia, Fiji, Ghana, Grenada, Guatemala, Guinea, Guyana, Haiti, Honduras, Jordan, Kenya, Kiribati, Kyrgyzstan, Lebanon, Liberia, Madagascar, Malawi, Maldives, Marshall Islands, Mongolia, Morocco, Mozambique, Namibia, Nauru, Nepal, Nicaragua, Niger, Pakistan, Palau, Palestine[b], Papua New Guinea, Paraguay, Philippines, Rwanda, Saint Lucia, Samoa, Senegal, Sierra Leone, South Sudan, Sri Lanka, Sudan, Suriname, Tanzania, The Gambia, Timor-Leste, Togo, Tonga, Trinidad and Tobago, Tunisia, Tuvalu, Uganda, Vanuatu, Vietnam, Yemen.

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[a] As of October 2024.
[b] As a UN non-member observer state.

In southwest Colombia, facing the wild Pacific Ocean to the west, is the Cauca Department. Far removed both culturally and geographically from the picture-postcard Caribbean coast a thousand kilometres to the north, here mangroves, steep cliffs, and jungle greet an untamed sea. Inland, up on the mountains of the Colombian Massif, the climate is typically cold and wet. The valleys below are perfect for agriculture, while precious metals are found here too, including gold, silver, and platinum. If Mother Nature placed her heart upon the surface of the planet, it would surely be here. It has everything she has to offer. And yet the region is now suffering in a way that feels both intimately local, and familiarly global.

Víctor Yalanda is an indigenous leader or 'Taita' of the *Ampiuile* people, one of a number of indigenous communities in Cauca, including the nearby people of the *Guambía*, the *Misak* and the *Totoró*. Their histories in the region, says Yalanda, go back to before the Spanish invasion. 'We call ourselves the *Ampiuile* people, which comes from the Spanish term *ámbalo*, which means *am*, spirit, *pi*, water, and *le*, which means descendants,' he explains. 'So we are descendants of the spirit of water.'

For hundreds of years, his people have lived accustomed and attuned to a reliable, predictable, and wet environment. 'The territory where we live is a territory where the cold climate predominates, the moorland climate,' says Yalanda. 'The biodiversity of the territory in plants and animals is characterised by species of moorland and mountain climates, here.' Because of this, the crops that they plant have barely changed: 'potatoes of many varieties, corn, beans, arracachas, yukka, alberjas, and other legumes.'

But within Yalanda's lifetime – barely a blink of an eye in the community's history – familiarity has been replaced by uncertainty and catastrophe. 'I can remember the time of my childhood, when I was able to observe the natural times . . . 20, 30 years ago, the seasons were almost fixed.' His people refer back to them as 'the proper times' or 'the proper calendar', he says, to anchor themselves to a reality they once knew. 'Those

manifestations of the four seasons or the Way of the Sun had a natural order,' he says. Winter or *Nu sre* came towards the middle or end of September. *Nu sre* literally means 'the big downpour', with rains that would last three months through to December. 'The beginning of the rains determined the planting of corn, our essential food,' he recounts. January to March was the *Lame kuare* or 'small summer'; April to May the *Lame sre* or 'small downpour'; and then June to August was the 'great summer' or *Nu kuare*, 'which was the time when the crops reached their final cycle of drying up the corn, wheat, beans, many other cereals and grains. For at that time they ripened and were ready to harvest. When the crops were harvested, then began the preparations of the land to wait again for the beginning of the cycle in September. The seasons were fixed in that way.'

Yalanda shouldn't be talking in the past tense. This cycle, this climate, this way of life, had been unchanged since pre-Columbian times. And Yalanda is not an old man – only 48 years old. Yet, he says, 'Today, it must be said that those seasons that nature manifested are totally changed . . . right now, we are in the season of the *Nu sre*, that is, we should have had almost three moons of intense downpour. But we have received barely a week, perhaps 10 days of rain. It hasn't rained any more. You now feel intense suns during the day.' The impact of this has been devastating, says Yalanda, who is also a leader within the Consejo Regional Indígena del Cauca (CRIC), fighting to protect and preserve the cultural heritage of the indigenous peoples and their ways of life – a fight once made hard by civil war and racist persecution, but now facing the ultimate existential threat of all: the climate itself. 'These changes generate effects on crops, on sowing, on planting. They affect the formation of flowers, and if there is no formation of flowers, then there is no crop.' When the rain does come, it is too hard, or it is hail, which flattens crops, he says. 'In other words, all these phenomena are changes that we have been feeling, facing, in what has

been called at a global level "climate change" ... that is exactly what is happening here'.

Some 2,000 kilometres away lies the small Caribbean Island of Saint Lucia. Jevanic Henry was born there in 1997. But even in his relatively brief time on Earth, he has seen the climate change beyond the older islanders' comprehension. 'The climate is disrupting what we consider normal,' he says. 'The impact is three-fold: the climate crisis has affected lives and livelihoods on land, in the ocean, and in the atmosphere.' For an island heavily dependent on tourism, a healthy marine ecosystem plays a critical role in both the island's economy and its cultural identity. 'Now we face issues like coral bleaching. The coastline is eroding, making many beaches inaccessible, impacting tourism and fisheries. Our fishermen report dwindling stocks, making it harder for them to make a living. This all has significant socio-economic implications.' Caribbean islanders tend to live by the coast, culturally attached to their beach or bay, says Jevanic. Yet the beach he used to walk along as a child is no longer there, eroded away in barely a decade by sea-level rise and ever-more intense hurricane seasons – both known symptoms of climate change. To see it disappear within a generation has consequences beyond just the financial, he says. Some coastal graveyards and cemeteries have fallen into the sea. 'The climate crisis is not just threatening the living, now it's even threatening the dead,' he says. 'Small island states, like ours, contribute minimally to the crisis but are greatly affected.'

The turning point for Jevanic was the Christmas Eve storm – a time of year that should be safely past the hurricane season – that hit the island in 2013, when he was a teenager. On becoming a UN Secretary-General Youth Adviser on Climate Change in March 2023, Jevanic said, 'In less than a decade, we've witnessed drastic changes. I'm only 26, and I can already pinpoint significant changes during my lifetime ... the climate crisis is now a daily reality which

negatively impacts our lives and livelihoods. With our survival now dependent on a global community which is unified in urgently advancing the climate agenda, the power of young people is crucial in being a catalyst to drive this much needed accelerated action.' In 2022, Saint Lucia suffered from flash floods, 'a new phenomenon for our island.' Within hours, parts of the island were underwater. 'With rising sea levels, many residents are wondering if they can keep their homes in the next 20 years. Building resilience on our coastline is essential, but the need for adaptation financing remains a challenge. While we have national adaptation plans, the financing gap limits what we can do, which is a concern for our communities.'[2]

Halfway across the world, entirely landlocked and at 1,400 m elevation, Kathmandu, the Himalayan capital city of Nepal, is as safe as you can be from the threat of sea-level rise. Yet even here, medical doctor Sweta Koirala has seen significant climate change in her lifetime, too. 'I have always lived and worked in this city. I had a 30-minute walk from the school bus stop to my house, carrying heavy bags full of books, and it was fine. Houses didn't even have fans, let alone AC [air conditioning]. But now, cooling systems are essential, due to the increased heat. And the winters here are not as cold as they used to be.' In 2015, she visited the remote Himalayan region of Mustang, 'once famous for its lack of rainfall – the houses stockpile wood on their rooftops to dry out for fire, they are so sure of it never raining. However, recent years have suddenly seen unexpected rainfall there, leading to houses collapsing due to their sandy foundations.' While heavy rain and landslides are a new issue, this hasn't boosted the local water supply. The region's rivers and streams used to flow with pristine, reliable snowmelt from the mighty Himalayan mountain peaks. But now, as Koirala describes, 'the snow on the mountains is decreasing and the rivers have shrunk. The mountains used to always be snow-capped – now they reveal bare grey rock.'

All these stories are typical amongst the group of countries that form the Climate Vulnerable Forum (CVF). Founded in the Maldives in 2009, the CVF serves as a platform for member countries to come together and advocate for stronger global action on climate change through different international arenas such as United Nations Framework Convention on Climate Change (UNFCCC) negotiations. CVF discussions to strengthen the economic and financial response to climate change led to the creation of the V20 – a grouping of finance ministers akin to the G20. When the V20 was formed ahead of COP21[c] in Paris in 2015, it was initially 20 low- and middle-income countries, from Africa, Asia, the Caribbean, Latin America, and the Pacific – with a combined population of over 700 million people highly vulnerable to climate change. Today, it has grown to encompass all 70 CVF countries, representing some 1.75 billion people worldwide. In September 2023, the CVF-V20 became a fully independent intergovernmental organisation headquartered in Ghana. The distinction now is that the CVF is formed by the heads of state, with the V20 as its grouping of finance ministers, both aiming to deliver climate-resilient economic investments which these climate-vulnerable member countries have long deserved. With a two-year rolling presidency, most recently Ghana from 2022 to 2024, and now Barbados spanning 2024–2026, the unified message of the CVF-V20 has remained constant: merely surviving the climate crisis is not enough; climate action must pave the way from climate vulnerability to climate prosperity. Since 2020, the CVF-V20 has been supported by a Joint Multi-Donor Fund (JMDF) managed by the United Nations Office for Project Services (UNOPS). This fund is designed to boost South–South cooperation among

[c] The annual Conference of the Parties or 'COP' is the main decision-making body of the United Nations Framework Convention on Climate Change (UNFCCC). Typically held in December, each COP includes representatives of all country signatories to the UNFCCC to decide on measures to limit climate change and address its impacts.

the CVF-V20 member states and strengthen collective capacities to achieve their respective and common climate action priorities, with respect to mitigation, adaptation, and loss and damage.

Since April 2023, the V20 Finance Ministers have been advocating to be an official intergovernmental group within the Bretton Woods system—which established the International Monetary Fund (IMF)—to represent nations that typically lack voice and representation on monetary and development issues. It's time to enable the voice of the most vulnerable not only to be heard, but to help drive the global agenda.

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Nakeeyat Dramani Sam was just 10 when she addressed COP27, in Sharm El-Sheikh, Egypt, on behalf of the Ghana delegation. The majority of the 1.75 billion people who live in CVF countries are 'young people like me,' she said in a quiet, yet firm, voice, over the microphone. 'Many of us see dark clouds gathering on the horizon of Mother Earth. Last month in Accra where I live in Ghana, there was a heavy rain that burst a dam on the River Densu. Cars were underwater, people were paddling canoes where there had been streets. Thousands fled their houses. It was very scary. If it is going to get much worse, then we fear how much of our future is on the line.' There was a clear culprit. 'The communities in my country Ghana are paying heavy prices since our planet was lit on fire . . . This puts a simple question on the table of these fire-starters: when can you pay us back? Because payment is overdue.' One year on, now 11, she remembers Sharm El-Sheikh as a positive experience. 'It was amazing and fun,' she says. She felt heard. And yet, little has changed for her country. 'The Volta region not long ago had a flood which was terrible – people lost their homes, their livelihoods and everything that belongs to them. Ghana is already experiencing climate change. The weather patterns are changing.' Her mother Mariama's childhood was very different: 'When she was a child, it was okay. It was lovely. They knew when rain

was about to fall, they knew when the sunshine was coming, they knew when to make preparations for harvest time . . . But now you can't. You might be making preparations for the harvest and then you just see rain. Compared to the olden days, a lot has changed.' And what Nakeeyat refers to as 'the olden days' is barely 30 years ago.

Now a CVF Thematic Ambassador for Youth, Nakeeyat's message remains unchanged. She is not yet a teenager but already a COP veteran, used to the same messages repeated and kind words exchanged, but little in the way of reparation or action. 'The CVF consists of 70 vulnerable countries – and in these countries a lot of damages have already happened to them,' she says. 'So the industrialised nations have to pay their dues, have to pay for the mess they have caused.' But this is not just about reparation or justice. It is now in the interest of developed countries, too. Vulnerable countries are vulnerable because climate change bludgeoned them early and hardest. Early impacts on resources and infrastructure impaired their ability to cope with climate change, which in turn generated a feedback loop of vulnerability. This is too little acknowledged by developed nations who talk, often patronisingly, of aid and handouts. But as this book will show, climate change will negatively affect (or has already affected) all the countries of the world. Vulnerable countries have today become the experts in climate resilience. Nakeeyat, who has since added performance poetry to her repertoire to deliver this message, agrees: 'The fate of the most vulnerable nations will be the fate of the world. Because we are experiencing climate change now. But looking at maybe 30 years from now, everyone will be affected. So they can learn from us, from our experience. By helping us they will also protect their own. Because as I said, the fate of the vulnerable countries may be their fate too.'

In April 2023, the V20 released a statement expressing 'grave concern at the continuous failure and delays of the G7 and G20 to align their policies with Paris Agreement goals.' This delay risks 'forgoing what is needed in this critical

decade, beyond which the planet will reach and exceed 1.5 degrees Celsius, in addition to multiple and cascading risks now and in the future for the world economy as a whole.' What's needed on the ground, they stressed, 'is to urgently draw up economy-wide investment strategies and financing plans focused on delivering resources in the remaining years of this decade.'

These words were backed up with new data. To compile a comprehensive scientific overview, the CVF-V20 commissioned a Third Edition of the *Climate Vulnerability Monitor Report*, with the stated aim to 'make the numbers of science visible in people's lives'.[d] The Third Edition of the *Climate Vulnerability Monitor*, entitled *A Planet on Fire* (also known as '*CVM3*', but hereafter in this book we will refer to it as *The Monitor*) is a unique global assessment of vulnerable countries, showing the present and potential future climate change impacts on their environment, economy and health.[3] *The Monitor* compares the impacts being felt now – and predicts how they will evolve throughout the twenty-first century under three scenarios of climate change: one where a successful global effort limits warming to 1.5 °C; one where that target is missed but warming kept just below 2 °C; and a high emissions scenario without climate action, which leads to warming of around 3.6 °C by the end of the century.

In addition, *The Monitor*'s data was turned into an online interactive global map known as the 'Data Explorer'. Split into three parts, covering *The Monitor*'s main sections, the first – the 'Biophysical Data Explorer' – offers an interactive tool designed to illustrate the impacts of climate change on environmental factors. The tool presents data on changes in

[d] The First Edition of the *Climate Vulnerability Monitor* was launched in December 2010 during COP16 to provide the first comprehensive overview of climate change vulnerability across 184 countries worldwide. The Second, published in 2012, provided a reassessment of the human and economic costs. The Third, a decade on, was the most comprehensive to date.

Figure 1.1 (a) Change in winter wheat yields in percentage between 2021 and 2040 with no policy action (*CVM3* Biophysical Data Explorer. 2022).[4]

key indicators such as near-surface air temperatures, precipitation, runoff, drought, soil moisture, and crop yields. Users can analyse and download data by country, comparing the effects of the 3.6 °C, 2 °C, and 1.5 °C scenarios across three future timeframes (2021–2040, 2041–2060, and 2081–2100). The 'Health Data Explorer' then focuses on the relationship between climate change and global health, with indicators such as heat and health, wildfires, infectious diseases, and