IT WILL BE TOO LATE TO HELP US ONCE WE ARE DEAD

THE HUMAN RIGHTS IMPACT OF CLIMATE CHANGE IN DROUGHT-STRICKEN SOUTHERN MADAGASCAR

AMNESTY INTERNATIONAL

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GLOSSARY

ACRONYM	DESCRIPTION
CFSAM	FAO/WFP Crop and Food Security Assessment Mission
CPIA	Country Policy and Institutional Assessment
ECDCASA	Evaluation du Démarrage de la Campagne Agricole et de la Sécurité Alimentaire
FAO	Food and Agricultural Organization of the United Nations
FEWS	Famine Early Warning Systems Network
GHGS	Greenhouse Gases
IOM	International Organization for Migration
IPC	Integrated Food Security Phase Classification
IPCC	Intergovernmental Panel on Climate Change
UN	United Nations
UNEP	United Nations Environment Programme
WFP	United Nations World Food Programme

DEFINITIONS

Adaptation (climate change adaptation): changes in processes, practices and structures to moderate potential damages or to benefit from opportunities associated with climate change.[1]

Carbon emissions: emissions of carbon dioxide (CO_2) caused primarily by the burning of fossil fuels (oil, natural gas and coal), solid waste, trees and wood products. Changes in land use can also contribute. Deforestation and soil degradation add carbon dioxide to the atmosphere, while forest regrowth takes it out of the atmosphere. According to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, CO_2 emissions from fossil fuel combustion and industrial processes contributed about 78% to the total greenhouse gas emission increase between 1970 and 2010.

Climate change: a change of the climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.[2]

Climate finance: the term is applied both to the financial resources devoted to addressing climate change globally and to financial flows to developing countries to assist them in addressing climate change.

Common but differentiated responsibilities and respective capabilities (CBDR–RC): a principle within the UN Framework Convention on Climate Change that acknowledges the different capabilities and differing responsibilities of individual countries in addressing climate change. Parties who met in Lima at the COP20 in 2014 agreed to formulate the principle as "common but differentiated responsibilities and respective capabilities, in light of different national circumstances." This formulation was adopted in the Paris Agreement. The principle of CBDR-RC is also implicitly reflected under human rights law.

Deforestation: the conversion of forested areas to non-forest land use such as arable land, plantations, urban use, logged area, or wasteland. The major driver of deforestation is industrial agribusiness, in particular, that of palm, soy, meat and dairy. According to FAO, deforestation is the conversion of forest to another land use or the long-term reduction of tree canopy cover below the 10% threshold. Deforestation implies the long-term (>10 years) or permanent loss of forest cover

Developing countries: this document uses the term "developing countries" to refer to all countries that are not included in Annex 1 of UNFCCC.[3]

Drought: (1)Prolonged absence or marked deficiency of precipitation. (2) Period of abnormally dry weather sufficiently prolonged for the lack of precipitation to cause a serious hydrological imbalance.[4]

Extreme weather and climate events: the Intergovernmental Panel on Climate Change defines an extreme weather or climate event as "the occurrence of a value of a weather or climate variable above (or below) a threshold value near the upper (or lower) ends ("tails") of the range of observed values of the variable." It also explains that some climate extremes (e.g. droughts, floods) may be the result of an accumulation of weather or climate events that are, individually, not extreme themselves (though their accumulation is extreme). As well, weather or climate events, even if not extreme in a statistical sense, can still lead to extreme conditions or impacts, either by crossing a critical threshold in a social, ecological, or physical system, or by occurring simultaneously with other events. A weather system such as a tropical cyclone can have an extreme impact, depending on where and when it approaches landfall, even if the specific cyclone is not extreme relative to other tropical cyclones. Conversely, not all extremes necessarily lead to serious impacts. Extreme weather and climate events are generally divided into rapid-onset events, and

[1] UNFCCC definition, http://unfccc.int/focus/adaptation/items/6999.php
[2] Article 1, UNFCCC.
[3] See: Parties & Observers | UNFCCC
[4] World Meteorological Organization (WMO), 1992: *International Meteorological Vocabulary* (WMO – No. 182). Geneva, World Meteorological Organization, https://library.wmo.int/doc_num.php?explnum_id=4712

slow-onset events (see definitions below). The Intergovernmental Panel on Climate Change has concluded that current rates of climate change are leading to "changes in the frequency, intensity, spatial extent, duration and timing of weather and climate extremes, and can result in unprecedented extremes."[5]

Famine: The Integrated Food Security Phase Classification (IPC) uses the following definition of famine: the absolute inaccessibility of food to an entire population or sub-group of a population, potentially causing death in the short term. The IPC has a standardized scale categorizing the severity of acute food insecurity – the highest phase is Famine (Phase 5). Other phases are Emergency (Phase 4), Crisis (Phase 3), Stressed (Phase 2) and Minimal (Phase 1). By definition famine applies to a population. The Phase 5 Famine is used for the area classification only, whereas for the classification of a household group Phase 5 is Catastrophe. If at least 20 percent of the households in a given area are facing IPC Phase 5 Catastrophe conditions, the area is classified and mapped as IPC Phase 5 Famine. In this report Catastrophe is also referred to as famine-like conditions.

Global warming: the long-term heating of the Earth's climate system observed since the pre-industrial period (between 1850 and 1900) due to human activities. The term global warming is not interchangeable with the term climate change since the latter is more comprehensive. Climate change encompasses not only rising average temperatures (global warming) but also other impacts such as extreme weather events, sea-level rise etc. (see "rapid-onset events" and "slow-onset events"). Global warming is most commonly measured as the average increase in the Earth's global surface temperature.

Greenhouse gas (GHG) emissions: a group of compounds that are able to trap heat (longwave radiation) in the atmosphere, keeping the Earth's surface warmer than it would be if they were not present. The emissions of these gases resulting from human activity are the fundamental cause of the greenhouse effect, leading to the warming of the planet. Increases in the amount of GHG emissions in the atmosphere enhance the greenhouse effect, which is creating global warming and consequently climate change. Carbon dioxide is the most important GHG emitted by human activity. Other major GHGs are methane and nitrous oxide. Less prevalent but very powerful GHGs are hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride.

Mitigation (climate change mitigation): efforts to reduce or prevent emission of greenhouse gases in order to curb climate change. Examples include phasing out fossil fuels and shifting to renewable energy, improving energy efficiency, changing management practices or consumer behaviour, insulating buildings, investing in low-carbon public transportation, promoting sustainable agricultural practices such as agro-ecology and protecting, restoring and expanding forests and other carbon "sinks".

Nationally determined contribution (NDC): submissions by countries that have ratified the Paris Agreement indicating the nationally determined target for emission reductions and the actions each national government intends to take to meet that target. Under the Paris Agreement, governments are due to submit new NDCs to the UNFCCC Secretariat every five years with each revision representing a progression beyond the target included in the previous NDC.[6]

Paris Agreement: The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at COP21 in Paris, on 12 December 2015, and entered into force on 4 November 2016. Its goal is to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels. To achieve this long-term temperature goal, countries aim to reach global peaking of greenhouse gas emissions as soon as possible to achieve a climate neutral world by mid-century.

Rapid-onset event: an extreme weather and climate extreme event defined by the UN Framework Convention on Climate Change as "a single, discrete event that occurs in a matter of days or even hours."[7] Examples of rapid-onset events include extreme heat, wildfires and extreme rainfall from tropical storms.

Slow-onset event: an extreme weather and climate event that "evolve(s) gradually from incremental changes occurring over many years or from an increased frequency or intensity of recurring events" such

[5] IPCC, *Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation, Summary for Policymakers*, p. 5.
[6] Article 4.2 and 4.9, Paris Agreement.
[7] UNFCCC, Slow Onset Events: Technical Paper, 26 November 2012, UN Doc. FCCC/TP/2012/7, para. 20.

as sea-level rise, increasing temperatures, ocean acidification, glacial retreat and related impacts, salinization, land and forest degradation, loss of biodiversity and desertification.[8]

United Nations Framework Convention on Climate Change (UNFCCC): the Convention, adopted in 1992 and which entered into force two years later, which sets an overall framework for intergovernmental efforts to tackle the challenge posed by climate change. It recognizes that the climate system is a shared resource whose stability can be affected by industrial and other emissions of carbon dioxide and other greenhouse gases. It also recognizes the importance of fully considering "the specific needs and special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change, and of those Parties, especially developing country Parties, that would have to bear a disproportionate or abnormal burden under the Convention." The Convention enjoys near universal membership.

Wealthy industrialized countries: this document uses the term "wealthy industrialized countries" to refer to countries included in Annex 1 of the UN Framework Convention on Climate Change.[9]

[8] UNFCCC, Slow onset events. Technical paper, 26 November 2012, UN Doc FCCC/TP/2012/7.
[9] See: Parties & Observers | UNFCCC

EXECUTIVE SUMMARY

“We have no choice but to stay here and wait for death to take us away”-

Joséphine, southern Madagascar

Southern Madagascar is in crisis. The southern region of the country, commonly referred to as *Le Grand Sud* (the Deep South) is currently experiencing its worst drought in 40 years, with more than a million people on the brink of famine and thousands more already facing catastrophic famine-like conditions. This emergency has prompted the United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA) to say, “The humanitarian crisis in the far south of Madagascar - which has experienced the most acute drought since 1981 - is deteriorating rapidly.” Currently, over 1.1 million people are experiencing severe food insecurity and the situation is expected to worsen in the coming months. Evidence suggests that several people have already died from hunger.

The drought has had a disastrous impact on the enjoyment of human rights for people in the region. The World Food Programme (WFP) has observed that as a direct consequence of the ongoing drought, malnutrition in the region is increasing, while access to water, sanitation and hygiene are becoming ever more precarious. 75 percent of the population of the districts of Amboasary and Atsimo are facing “severe hunger”, with the latest Integrated Food Security Classification (IPC) analysis for Madagascar indicating that parts of the region have reported catastrophic conditions of phase 5 classified food insecurity (or famine-like conditions for some households). Over one quarter of the children in the Ampanihy and Ambovombe districts are currently suffering from acute malnutrition and the number of children admitted for treatment for life-threatening severe acute malnutrition during the first three months of 2021 has been quadruple the national five-year average.

Existing scientific evidence suggests that the climate crisis currently facing the world is contributing to the severe climate conditions being experienced by the country. Situated in the tropics, Madagascar is susceptible to tropical cyclones and heavy rainfall events, as well as droughts. Current data strongly suggests that climate change has likely contributed to an increase in temperatures in the southern part of the country, while at the same time reducing rainfall; conditions which elevate the likelihood of droughts.

This report examines the human rights impact of climate change aggravated drought in southern Madagascar. While the report primarily exposes the grave consequences of the recurring drought in the country’s Deep South on the population’s human rights, it also aims at calling on the international community to take urgent action to tackle the crisis that is global climate change. Because according to current climate projections, it is likely to make such climatic events more frequent and more severe, with dramatic consequences on human rights.

METHODOLOGY

Amnesty International undertook a research mission in the Southern region of Madagascar in March 2021. Researchers collected information from women, children and men affected by the drought and food insecurity. Amnesty International carried out focus group discussions and individual interviews in 17 towns

and villages most affected by hunger with a total of 82 people, including southern Malagasy people, community leaders, healthcare providers, the United Nations Country Team and civil society representatives.

In addition Amnesty International undertook extensive desk research to understand the impact of the drought and extent of food insecurity.

BACKGROUND

While extreme poverty affects all places in Madagascar, there are notable regional disparities. The southern part of the country experiences significantly higher rates of poverty in comparison to the central and northern regions. An estimated 91 percent of the population in the Deep South live below the poverty line and the region is historically underfunded and under resourced. The people of the Deep South face multi-faceted disadvantages in accessing and retaining opportunities as their livelihoods are limited primarily to subsistence farming and fishing, which are vulnerable to repeated natural shocks, drought and famine.

The significant proportion of people living below the poverty line in southern Madagascar means that the majority of the population have extremely limited capacity to cope with the immediate negative impacts associated with extreme weather and climate events. They also have a limited ability to adapt to the long-term livelihoods impacts and the knock-on effects that climate change may have on the economy through impacts on agricultural production, fisheries, and tourism.

Thus, although the climate crisis is a global problem, it disproportionately affects certain groups of people who are subjected to multiple and intersecting forms of discrimination and to structural inequalities. As such, the climate crisis disproportionally disfavours people in developing countries, especially in low-lying small island states and least developed countries – such as Madagascar – due not only to their exposure to climate-related disasters, but also to underlying political and socio-economic factors which amplify the impacts of those events. It is a grave injustice that impacts of climate change are felt by people in developing countries the most considering that they have contributed the least to the climate crisis.

DROUGHT AND CLIMATE CHANGE

Although there is no specific scientific attribution study that directly links climate change to the drought in Madagascar, there is some climate data and evidence which suggests a relationship. For instance, the average annual rainfall in the Deep South has been declining over the last century and the region has much lower rainfall than other parts of the country. It has been reported that the 2020/2021 rainfall was the fifth successive year of below average rainfall in the island's semi-arid south. People in the region confirmed this, with one respondent telling Amnesty International:

> **"I've noticed a lot of changes. Before, the rain would fall from September to December, and we would start cultivating in February. This year, the rain only fell in February. It's been two years that there is nothing growing in our fields."**

Further, the character of rainfall across Madagascar has changed significantly, with the World Data Atlas stating that "it tended to decrease through 1963 – 2017." Concomitantly, long-term trends across all regions show strong increasing temperatures over the period 1979 –2015. This has been confirmed by the World Bank who, stated, "due to global warming, average temperatures for both the dry and rainy seasons have clearly increased over the past 15 years."

Additionally, while there is little scientific evidence available which conclusively indicates how climate change has impacted Madagascar so far, the country was ranked among the 20 most vulnerable countries to climate change between 2000 and 2019. There are also sufficient scientific projections to highlight that Madagascar will likely be disproportionately affected by climate change in the future – despite it having contributed only minimally to climate change itself. Current climate projections indicate that droughts are expected to become more severe in the southern part of the country because of climate change in the upcoming decades, raising serious concerns for the protection of human rights.

HUMAN RIGHTS IMPACT

Extreme weather and climate events, such as the severe drought occurring in southern Madagascar, impact a wide spectrum of human rights. Additionally, the human rights impact of climate-change related extreme events disproportionately impacts the poorest and most marginalized.

This report documents how the Malagasy peoples' inability to enjoy the internationally recognized right to a clean, healthy and sustainable environment leads to a myriad human rights impacts occurring in drought stricken southern Madagascar, including on their right to life, right to health, right to food and rights to water and sanitation.

Children are especially impacted, and the drought has further limited their access to education as many children were reported to be skipping school either to take up wage paying employment to support families, or because parents felt they could not send their children to school unfed. Additionally, people in the area are increasingly engaging in survival migration to other regions to escape their current living conditions.

Women are also disproportionately affected by the human rights impact of climate change linked to the drought. Women-headed households, who often rely on agriculture as their main source of livelihoods and have few productive assets and limited access to or control over land (due to discriminatory traditional practices and norms), are among the most vulnerable to poverty and food insecurity. They are also considered the primary caregivers for children in southern Madagascar and bear the responsibility of having to feed their children and so they are more likely to engage in negative coping mechanisms.

NATIONAL AND INTERNATIONAL OBLIGATIONS

As a state party to the International Covenant on Economic, Social, and Cultural Rights, (ICESCR) Madagascar is bound to taking steps, individually and through international assistance and co-operation, especially economic and technical, with a view to achieving progressively the full realization of the rights recognized in the Covenant, which include the right to an adequate standard of living, the right to food and right to water. Despite these obligations, access to water and adequate food remain restricted in Madagascar, particularly for people living in rural areas, and particularly in the southern part of the country. People in southern Madagascar continue to have limited access to water and sanitation, due to a number of factors including disparities in the availability and quality of water resources, isolation, and lack of infrastructure.

However, in the context of least developed countries such as Madagascar, although the primary duty and responsibility to provide assistance and protection to the victims of a natural or human-made disaster is held by the national authorities of the affected countries, where provision of such support is beyond its capacity to provide, the State must seek international assistance that is needed to fulfil minimum essential levels of economic, social and cultural rights. To this effect, all states in a position to do so must provide international assistance and cooperation. This is an obligation under human rights law and even more necessary in the context of human rights crises which are linked to climate change where harm cannot be solely attributable to the State in question or any single State.

Under international human rights law, *all* states have obligations to protect the enjoyment of human rights from environmental harm caused by conduct or omissions within their territory or jurisdiction, whether committed by state or non-state actors. States must also take all necessary steps to help everyone within their jurisdiction to adapt to the foreseeable and unavoidable effects of climate change, thus minimizing the impact of climate change on human rights.

Despite all states having these obligations, states who have contributed the most to the climate crisis and those with most available resources have heightened obligations, particularly to decarbonize their economies more quickly than other countries and providing support to developing countries for human rights-consistent climate mitigation and adaptation measures, including to Madagascar. They are also obliged to provide financial means, technical support and access to remedy, including compensation, to Madagascar as the result of loss and damage caused by the climate crisis. This includes ensuring that new and additional finance is mobilized specifically to support and compensate people in in the Deep South for the losses and damages suffered as well as providing immediate humanitarian aid to address the current crisis.

RECOMMENDATIONS

The situation in southern Madagascar is a stark reminder that climate change is already causing great suffering and, in some cases, death. As such Amnesty International calls on the international community, particularly wealthier states and those most responsible for the climate crisis, to take immediate action to fulfil their human rights obligations by urgently reducing emissions, and providing the necessary financial and technical assistance to the government of Madagascar and local civil society to support impacted communities.

Malagasy authorities and the international community must ramp up their relief efforts, including providing sustained and regular emergency food assistance and access to clean and safe water for domestic use and consumption in the rural areas of the Deep South.

METHODOLOGY

This report is based primarily on field and remote desk research undertaken between December 2020 and May 2021 by Amnesty International delegates and researchers. Amnesty International delegates travelled to the south of Madagascar from 4 to 13 March 2021, to gather testimonies from women, children and men affected by the drought, in 17 towns and some of the villages most affected by hunger. Delegates also collected photos and audio-visual footage. Researchers visited the following research sites: Maroalopoty, Ambanisarika, Maroalomainty, Haboabo Nord, Ambazoa, Ambovombe, Ambondro, Mitsangana Ambovombe, Beagnantara, Vahavola Amboropotsy, Tanambao, Amboasary, Ranomainty, Androvavo, and Fort Dauphin.

Amnesty International met with community leaders to learn about how the drought had affected specific villages, and to request authorization to conduct interviews with inhabitants. During the research mission, the delegates held focus group discussions with 50 people, and 32 individual interviews to explore the lived experience of rightsholders affected by the drought and food insecurity in southern Madagascar. Participants included rightsholders impacted by the drought and other actors with expert knowledge on the ground, including local CSOs and the UN Country Team. They visited the WFP local office in Ambovombe and the Ambondro health centre which provides food supplements to malnourished children, as well as the Ambovombe health centre, and met with nuns from the 'Les Filles de la Charité' who work at a church in Ambovombe that distributes food to people in need in the region.

The interviews were conducted with interpretation from Malagasy to French, and generally took more than an hour per interview. The principles of informed consent and do no harm were respected at all times. Prior to the interviews, delegates explained the purpose of the interview and how the information would be used, secured informed consent, and took into account the interviewees' mental and physical well-being. Interviewees and focus group participants were explicitly informed that they could end the interview at any time and could choose not to answer specific questions. They could also choose to answer the questions but to remain anonymous, which some people chose to do. No incentives were provided to interviewees in exchange for interviews.

Amnesty International complemented field research with extensive desk research which included a thorough review of policy documents, government statements, and literature - including literature on climate change and food insecurity, reports, and international recommendations of regional and international human rights bodies. Statistical data and development indicators were extracted from various national and international databases such as those of the World Bank, the African Development Bank and the United Nations Food and Agriculture Organization.

In October 2021, Amnesty International sent letters to Madagascar's President, Mr. Andry Rajoelina, the Prime Minister, Mr Christian Ntsay, and to the Minister for the Environment and Sustainable Development, Madam Baomiavotse Vahinala RAHARINIRINA. The letters detailed the research's main findings and sought responses to questions related to those findings.

Amnesty International thanks delegates, local civil society and other stakeholders who enabled us to carry out this research, and most importantly, the rightsholders who took the time to share their lived experiences with us, because without them, this report would not be possible.

1. BACKGROUND

Madagascar is an island nation located in southern Africa off the eastern coast of Mozambique, in the Indian Ocean. The country has a population of 26 million inhabitants, of which approximately 65 percent live in rural areas. Madagascar is one of the poorest countries in the world. Of all African countries, Madagascar has the highest proportion of people living below the poverty line of USD 1.90 a day, and the sixth highest percentage of the population undernourished, at 33 percent.[10]

The country's human development index remains one of the lowest in the world,[11] and Madagascar has the world's fourth highest rate of chronic malnutrition.[12] In a 2017 report, the World Bank highlights that by its definition of USD 1.90 a day, poverty was higher in 2010 with 82 percent of the population considered poor compared to approximately 70 percent in the 1990s.[13]

Over the last decade, Madagascar has experienced a rise in absolute poverty, limited economic growth and political instability. It ranked 116 out of 119 countries on the 2017 Global Hunger Index, with a score of 38.3, classified as "alarming". This constituted a 1.5-point deterioration from 2016.[14]

As Madagascar is situated in the tropics, the country is exposed to tropical cyclones and heavy rainfall events, as well as droughts. Known for its unique mega-biodiversity, Madagascar and its people have increasingly faced the impacts of climate change. According to the Notre Dame Global Adaptation Initiative (ND-GAIN) Index,[15] Madagascar scores high for vulnerability to climate change and other global challenges and low for readiness to improve resilience, with overall one of the lower scores in Africa.[16] While there is little scientific evidence available on how climate change has impacted Madagascar so far, there is sufficient scientific evidence to highlight that Madagascar will likely be disproportionately affected by climate change in the future – despite it having contributed only minimally to climate change itself.

[10] African Development Bank Group: Madagascar - National Climate Change Profile, 16 September 2019, https://www.afdb.org/en/documents/madagascar-national-climate-change-profile
[11] The World Bank: The World Bank in Madagascar, https://www.worldbank.org/en/country/madagascar/overview
[12] The World Bank: The World Bank in Madagascar, https://www.worldbank.org/en/country/madagascar/overview
[13] The World Bank: The deep south, Constraints and opportunities for the population of Southern Madagascar towards a sustainable policy of effective responses to recurring droughts/emergencies, p. 15, https://documents1.worldbank.org/curated/en/587761530803052116/pdf/127982-WP-REVISED-deep-south-V27-07-2018-web.pdf (Hereinafter referred to as *The deep south, Constraints and opportunities for the population of Southern Madagascar towards a sustainable policy of effective responses to recurring droughts/emergencies, The World Bank)*
[14] World Food Programme; Country Programme-Madagascar(2015-2019) Standard Project Report 2017, https://docs.wfp.org/api/documents/WFP-0000070044/download/
[15] The ND-GAIN Country Index summarizes a country's vulnerability to climate change and other global challenges in combination with its readiness to improve resilience.
[16] African Development Bank Group: Madagascar - National Climate Change Profile, October 2018 also, https://gain-new.crc.nd.edu/country/madagascar

"Madagascar is one of ten countries considered most vulnerable to climate risks. It is regularly subject to powerful cyclones that damage ecosystems and infrastructure, particularly in the coastal regions, and climate change is predicted to increase both their number and severity. Rainfall patterns are already becoming ever more erratic and intense, leading to frequent flooding and erosion in some areas, while radically decreasing in others. In particular, prolonged drought in the already more disadvantaged southern regions has put a strain on the livelihoods, incomes and food security of local communities. The toll of climate change on Madagascar's biological resources has yet to be fully assessed. Increased carbon dioxide levels in the atmosphere are leading to rising sea temperatures and ocean acidity levels, which threaten coral ecosystems and other marine habitats of high economic and ecological value. Finally, sea level rise around the island – which possesses the longest coastline in Africa – will subject communities and habitats to increased damage from cyclonic and flooding events and may permanently force many people from their homes."[17] Food and Agriculture Organization of the United Nations

In its 2018 national climate change profile on Madagascar, the African Development Bank highlights that the majority of the population, who live below the poverty line, have very limited capacity to adapt to increase in extreme temperatures and rainfall events, as well as to the slower knock-on effects that climate change may have on the economy through impacts on agricultural production, fisheries, and tourism.[18]

> "Given Madagascar's extensive coastline, where just under half of the country's population is located, a large portion of the human settlements and associated developments are vulnerable to sea-level rise and associated stresses. The large proportion of the urban population living in slums further exacerbates this vulnerability, as well as vulnerability to extreme weather events. The island experiences regular tropical storms and the occasional tropical cyclone, whose future trajectory of change is as of yet unknown yet whose increasing intensity and frequency could have devastating consequences."[19]

While this report exposes the consequences of the recurring drought in the deep south of Madagascar on the population's human rights, it also calls on the international community to take urgent action to tackle the grave human rights crisis that is the climate emergency, as according to current climate change projections, it is likely to make such climatic events more frequent and more severe, with dramatic consequences on human rights.

The anthropogenic causes of climate change have been known for decades, with warnings starting to make headlines in the 1980s. In 1992, 165 nations signed an international treaty, the UN Framework Convention on Climate Change (UNFCCC), and have held negotiations annually ever since (called "Conference of the Parties" or COP), with the aim of developing goals and methods to mitigate climate change as well as to adapt to its already visible effects. Today, 196 nations and the European Union are parties to the UNFCCC, which means that they are legally bound by it.[20] In 2015, at the 21st COP (or COP21) the parties adopted the Paris Agreement, which is aimed at strengthening the global response to the threat of climate change by keeping a global temperature rise this century well below two degrees Celsius (2°C) above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C.[21] The Paris Agreement enjoyed a quick rate of ratification, entering into force on 4 November 2016. At the time of writing, 190 nations and the European Union were parties to the Paris Agreement.[22]

Despite these commitments, in practice, states' efforts to tackle climate change remain far below what is required to avoid the most devastating impacts for ecosystems and humanity. Global emissions of greenhouse gases, the atmospheric gases responsible for causing global warming and climate change, continued to grow between 2010 and 2019.[23]

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[17] Food and Agriculture Organisation of the United Nations: The impact of disasters and crises on agriculture and food security, 2021, p. 147, https://reliefweb.int/sites/reliefweb.int/files/resources/cb3673en.pdf
[18] African Development Bank Group: Madagascar - National Climate Change Profile, 16 September 2019, https://www.afdb.org/en/documents/madagascar-national-climate-change-profile
[19] African Development Bank Group: Madagascar - National Climate Change Profile, 16 September 2019, p. 10, https://www.afdb.org/en/documents/madagascar-national-climate-change-profile
[20] This is more than the number of UN Member States, which is 193. For a list of UN member states, https://www.un.org/en/member-states/
[21] UNFCCC, *What is the Paris Agreement?*, https://unfccc.int/process-and-meetings/the-paris-agreement/what-is-the-paris-agreement#:~:text=The%20Paris%20Agreement's%20central%20aim,further%20to%201.5%20degrees%20Celsius.
[22] For updates on the status of ratifications, https://unfccc.int/process/the-paris-agreement/status-of-ratification
[23] UNEP, Emission Gap Report 2020, Executive Summary, 2020, unenvironment.org/emissions-gap-report2020); World Meteorological Organization (WMO) and others, "United in science", 2019; WMO and others, "United in science", 2020. Both available at: public.wmo.int/en/resources/united_in_science

The climate emergency threatens the environment, the enjoyment of all human rights for present and future generations, and the future of humanity. The climate crisis is also the manifestation of deep-rooted injustices. Although the climate crisis is a global problem affecting everybody, it disproportionately affects certain groups of people who are subjected to multiple and intersecting forms of discrimination and to structural inequalities. The climate crisis also disproportionally affects people in developing countries, especially in low-lying small island states and least developed countries - such as Madagascar - due not only to their exposure to climate-related disasters, but also to underlying political and socio-economic factors which amplify the impacts of those events. It is a grave injustice that impacts of climate change are felt the most by people in developing countries considering that they have contributed the least to the climate crisis.

When the Amnesty International research mission took place, in March 2021, the southern region was starting to get its first rainfall for the year, after months of completely dry conditions. The ongoing drought in southern Madagascar is proof that we cannot fully enjoy human rights in a world in which extreme weather and climate events are becoming more frequent and intense: safe water and adequate food is becoming increasingly inaccessible for more than a million Malagasy people, and many other of their human rights are being violated, including the right to life, to education, and to live in dignity.

Amnesty International found that the drought has exacerbated pre-existing inequalities, and increased vulnerabilities of at-risk and marginalized groups. Those less able to cope with the negative impacts of the drought are the most likely to be severely impacted by them, as well as the most likely to resort to negative coping mechanisms such as limiting food intake, restricting adult intake to provide for children, eating cheaper and less nutritious food, borrowing food, and relying on debt,[24] which are likely to have long-term consequences. The regions most affected by the drought in Madagascar are also among the poorest across the country, where the majority of the population is unable to prepare and cope with events such as the drought, because they don't have the resources to compensate the loss of livelihoods, food insecurity, and increased food prices, in the absence of social protection[25] and safety nets. Women, children, indigenous peoples, persons with disabilities, older persons and minorities are disproportionately affected by human rights impacts linked to the drought.

Women-headed households, who often rely on agriculture as their main source of livelihood and have few productive assets and limited access to or control over land (due to discriminatory traditional practices and norms), are among the most vulnerable to poverty and food insecurity.[26] They are also considered the primary caregivers for children in southern Madagascar and bear the responsibility of having to feed their children. As one respondent told us:

> **"People here are in need of everything. Everybody suffers: children, adults, youth. But I think it is people who have a lot of children who suffer most. And women too: because if there is nothing to cook, they need to go looking for food everywhere."[27]**

According to the UN Flash Appeal, undernutrition is affecting not only children under age 5, but also pregnant and lactating women, school-age children, and older people.[28] The poorest parts of the population are likely to be the most impacted by the drought, now and in the long-term, as they are totally destitute, without assets, sources of income or food stocks. Many have been forced to sell their assets, including cattle, kitchen utensils, and clothes, and say that they hardly have any possessions left, not even a cooking pot.

30-year-old Soamomeie, who migrated to Ambovombe with her eight children when the drought became too hard to bear, explained how it plunged her further into the cycle of poverty. Her only remaining possessions are two kitchen utensils.

> **"I used to own land, but we sold most of it because of the drought, and all our possessions: our pots and spoons, we sold most of them. I left everything behind and everything I had at home I sold, so I could buy food and medicine for the children. All I have left now is this, a kapoaka [small tin can] to cook with, and only one spoon."[29]**

Specific groups of people, such as children, face additional risks in the context of drought, because of their particular vulnerabilities.

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[24] livelihood-related coping mechanisms.
[25] Madagascar only contributes 0.3% of its PNB to social protection, https://blogs.worldbank.org/fr/nasikiliza/grand-sud-malgache-de-lurgence-la-resilience
[26] Country Programme-Madagascar (2015-2019), Standard Project Report 2017, World Food Programme in Madagascar.
[27] Amnesty International interview with Oline Ampisoa, Ambazoa, 06 March 2021.
[28] Flash Appeal, Grand Sud, January – May 2021, p. 14, https://reliefweb.int/sites/reliefweb.int/files/resources/MDG_20210118_Grand_Sud_Flash_Appeal_English.pdf
[29] Amnesty International interview with Soamomeie, Ambovombe, 06 March 2021.

"I think everyone here is in difficulty. But those, for me, who are most in need, are those with several children, because we just don't know how to raise our children with this drought."[30]

1.1 UNDERPRIVILEGED AND UNDER-FUNDED SOUTH

The southern part of Madagascar, commonly referred to as the *Grand Sud*, or Deep South, is a very large and arid area. It includes 3 regions (Atsimo Andrefana, Androy and Anosy) with a population of 3,5 million people.[31]

While extreme poverty affects all provinces within Madagascar, there are notable regional disparities, and the southern part of the country is significantly poorer compared to central and northern Madagascar. Southern Madagascar has the highest concentration of poverty, with an estimated 91 percent of the population living below the poverty line.[32] In the region, families with many children and female headed households are in deeper poverty. The World Bank observes that "Women, in particular, face multi-faceted disadvantages in accessing and retaining opportunities. Livelihoods are limited primarily to subsistence farming and fishing, which are vulnerable to repeated natural shocks, including famine and drought."[33]

The most recent national poverty census, *Enquête Nationale sur le Suivi des indicateurs des Objectifs du Millénaire pour le Développement (ENSOMD)*, shows that poverty incidence and poverty intensity rates for 2012 were higher in the South than the national average.[34] Data from 2013 indicates that 43.5% of the population living in the capital city (Anamalanga region) are considered poor, compared to nearly 97% of the population living in the southern region Androy.[35] In 2013, the two regions with the highest extreme poverty occurrence were both located in the south.[36]

[30] Amnesty International interview with 20 year old Miza Rasoanirina, Ambazoa, 06 March 2021.
[31] ReliefWeb: Madagascar: Food Insecurity Emergency Plan of Action (EPoA) Operation n° MDRGM017, 1 December 2020, https://reliefweb.int/report/madagascar/madagascar-food-insecurity-emergency-plan-action-epoa-operation-n-mdrgm017
[32] The World Bank: World Bank Provides $100 Million to Support Resilient Livelihoods in the South of Madagascar, 10 December 2020, https://www.worldbank.org/en/news/press-release/2020/12/10/world-bank-provides-100-million-to-support-resilient-livelihoods-in-the-south-of-madagascar
[33] The World Bank: World Bank Provides $100 Million to Support Resilient Livelihoods in the South of Madagascar, 10 December 2020, https://www.worldbank.org/en/news/press-release/2020/12/10/world-bank-provides-100-million-to-support-resilient-livelihoods-in-the-south-of-madagascar
[34] (85.9% poverty incidence in the south versus 71.5% across the country, 50% poverty intensity in the south versus 32.8% across the country) The deep south, Constraints and opportunities for the population of Southern Madagascar towards a sustainable policy of effective responses to recurring droughts/emergencies, The World Bank p. 15.
[35] The African Development Bank Group: Dynamique de la pauvreté à Madagascar de 2005 à 2013, p. 12, https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/Dynamique_de_la_pauvrete%CC%81_a_Madagascar.pdf
[36] These are the Androy and Atsimo Atsinanana regions: The African Development Bank Group: Dynamique de la pauvreté à Madagascar de 2005 à 2013, p. 13, https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/Dynamique_de_la_pauvrete%CC%81_a_Madagascar.pdf

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According to the World Bank the main challenges to people's livelihoods include persistent water scarcity, lack of access to water and basic infrastructure, and limited adaptability of agriculture to climate shocks.[37] The road network in the south is very poor and not uniformly distributed, and there has been little investment in the road network since French-colonial times,[38] which means that districts are hard to physically access, especially during the rainy season from November to April. People interviewed by Amnesty International complained about the impact that the lack of infrastructure had on their lives. One man said that he felt completely forgotten by the state. He told researchers,

> **"If they rehabilitated the roads, we could go to another village to buy something when we have a bit of money. We could also do other things. We could transport fish and sell it, make money. There are plenty of fish in the sea, but no roads to go there. But with the current state of the roads, even a car can't use it. This is why we are poor, because of this indifference. And I'm not the only one suffering – we all are."[39]**

The regional disparities are visible through a number of specific development indicators, including education and health. While about 44 percent of the country's population has had some education, the number is only 20 percent in the Deep South, with literacy rates for over-15 year olds at 44 percent, against the national average of 72 percent.[40] Across the three southern regions of Atsimo Andrefana, Androy and Anosy, 43.9 percent of children aged 6 to 10 years do not have basic education, this against the 20.3 percent in the whole of Madagascar.[41]

[37] The World Bank: World Bank Provides $100 Million to Support Resilient Livelihoods in the South of Madagascar, 10 December 2020, https://www.worldbank.org/en/news/press-release/2020/12/10/world-bank-provides-100-million-to-support-resilient-livelihoods-in-the-south-of-madagascar

[38] The deep south, Constraints and opportunities for the population of Southern Madagascar towards a sustainable policy of effective responses to recurring droughts/emergencies, The World Bank p. 15.

[39] Amnesty International interview with Mosa, Mistangana Ambovombe, 8 March 2021.

[40] The deep south, Constraints and opportunities for the population of Southern Madagascar towards a sustainable policy of effective responses to recurring droughts/emergencies, The World Bank p. 1.

[41] The deep south, Constraints and opportunities for the population of Southern Madagascar towards a sustainable policy of effective responses to recurring droughts/emergencies, The World Bank, p. 14.

About 12 percent of Madagascar's population live in the three regions of the South.[42] The majority of these people are subsistence farmers, fishers or cattle herders, already living on the verge of food insecurity.[43] Multidimensional poverty[44] in children is higher in the southern and western parts of the country.[45]

The south is also prone to insecurity, instability, and banditry. Northern sectors of the South are known as "zones rouges", or no-go zones, and encompass large areas of the Deep South. Cattle rustling is the most persistent source of insecurity.[46] Stemming from an ancient tradition, cattle theft was historically associated with young men being expected to engage in cattle raiding as a rite of passage to adulthood, but it has evolved in more recent times into organized criminal rustling activities.[47] The lack of policing, including limited investigative capacity and means of transportation for the security forces, is the main impediment to tackling cattle theft – as well as a lack of political will.[48] In January 2021, the UN Flash Appeal noted: 'Poor security conditions, especially in the north of the Anosy region, may impact the effectiveness of responses and the population's ability to adapt to this crisis. More than 1,000 cattle raiders (dahalo) and 85 rustlers were arrested in the Grand Sud in 2020, highlighting the precarious security situation in the region.'[49]

1.2 VULNERABILITY TO CLIMATE CHANGE

Madagascar is one of the most climate vulnerable countries in the world,[50] with a poor and predominantly rural population, a high geographical exposure to climate events, and a lack of readily available resources to respond to and recover from natural hazard-induced disasters.[51]

According to the 2020 Global Climate Risk Index Madagascar is one of ten countries considered most vulnerable to climate risks, the country is among the 20 most impacted countries between 2000-2019 and the fourth most impacted in 2018.[52]

The World Bank noted that households in Madagascar are subject to "an unusual degree of weather-related and other risks which can push households deeper into poverty in any given year."[53]

The agricultural sector is particularly vulnerable to natural hazards and disasters.[54] FAO notes: "agriculture on its own bears the disproportionate share of 63 percent of damage and loss from disasters,"[55] which has drastic consequences for low income countries such as Madagascar, where agriculture is a mainstay of the economy.[56] "Drought has been established as the single greatest culprit of agricultural production loss."[57] Droughts affect the crops and livestock domain disproportionately relative to all other sectors of the

[42] The deep south, Constraints and opportunities for the population of Southern Madagascar towards a sustainable policy of effective responses to recurring droughts/emergencies, The World Bank p. 5.
[43] DEVEX: WFP Madagascar calls for urgent action to support 1.35 million people in need of food aid, 12 January 2021, https://www.devex.com/news/wfp-madagascar-calls-for-urgent-action-to-support-1-35-million-people-in-need-of-food-aid-98877
[44] Multidimensional poverty encompasses the various deprivations experienced by poor people in their daily lives – such as poor health, lack of education, inadequate living standards, disempowerment, poor quality of work, the threat of violence, and living in areas that are environmentally hazardous, among others, https://ophi.org.uk/policy/multidimensional-poverty-index/
[45] UNICEF: Les privations multiples des enfants à Madagascar, Octobre 2020, https://www.unicef.org/madagascar/media/4701/file/MODA%20-%20UNICEF%202020.pdf
[46] The deep south, Constraints and opportunities for the population of Southern Madagascar towards a sustainable policy of effective responses to recurring droughts/emergencies, The World Bank p. 24.
[47] The deep south, Constraints and opportunities for the population of Southern Madagascar towards a sustainable policy of effective responses to recurring droughts/emergencies, The World Bank p. 17.
[48] The deep south, Constraints and opportunities for the population of Southern Madagascar towards a sustainable policy of effective responses to recurring droughts/emergencies, The World Bank p. 24.
[49] United Nations Office for the Coordination of Humanitarian Affairs, FLASH APPEAL MADAGASCAR - Grand Sud, January-May 2021, p11, https://reliefweb.int/sites/reliefweb.int/files/resources/MDG_20210118_Grand_Sud_Flash_Appeal_English.pdf
[50] Global Climate Risk Index 2020, https://germanwatch.org/en/17307
[51] The World Bank: Madagascar Systematic Country Diagnostic August 25, 2015 p89, http://documents1.worldbank.org/curated/en/743291468188936832/pdf/99197-CAS-P151721-IDA-SecM2015-0168-IFC-SAecM2015-0123-Box393189B-OUO-9.pdf
[52] Global Climate Risk Index 2020, https://germanwatch.org/en/17307
[53] The World Bank: Madagascar Systematic Country Diagnostic August 25, 2015 p. 13, http://documents1.worldbank.org/curated/en/743291468188936832/pdf/99197-CAS-P151721-IDA-SecM2015-0168-IFC-SAecM2015-0123-Box393189B-OUO-9.pdf
[54] Food and Agriculture Organization of the United Nations; The impact of disasters and crises on agriculture and food security, 2021 p. 40, https://reliefweb.int/sites/reliefweb.int/files/resources/cb3673en.pdf
[55] Food and Agriculture Organization of the United Nations; The impact of disasters and crises on agriculture and food security, 2021 p. 40, https://reliefweb.int/sites/reliefweb.int/files/resources/cb3673en.pdf
[56] Agriculture accounts for over one-fourth of Madagasacar's GDP and employs about 64 percent of the population, https://reliefweb.int/sites/reliefweb.int/files/resources/cb3673en.pdf, p 147.
[57] Food and Agriculture Organization of the United Nations; The impact of disasters and crises on agriculture and food security, 2021 p. 63, https://reliefweb.int/sites/reliefweb.int/files/resources/cb3673en.pdf

economy, meaning its impact will be felt mostly by those who rely on agriculture for survival, often the poorest individuals. As further noted by FAO's representative in Madagascar, 95 percent of people facing acute food insecurity in southern Madagascar live on crop farming, livestock and fishing.[58] The drought caused water shortages and extreme heat stress on livestock and crops, which was detrimental to yields. In the case of prolonged or recurring droughts, longer-term impacts can be felt, such as land subsidence, seawater intrusion along river systems with reduced water flow, and ecosystems damage.[59]

Over the past six years, southern Madagascar has experienced below-average rainy seasons, and the last two have led to a severe reduction in staple food production, including rice and cassava, as well as declined livestock herd size and body conditions.[60]

Most of the rural population in the southern region is dependent on subsistence agriculture and rain-fed crops, with water resources replenished during the rainy season from November to March.[61] But after a 2019/2020 below average rainy season , the first part of the 2020/2021 rainy season was very poor, with the months of November and December having less than half the expected rainfall compared with the long-term average for these months, and well below the natural variability.[62] The impact on food security is poignant. According to preliminary results from the rapid-CFSAM and ECDCASA[63] results, more than half of both planted and stored cassava were destroyed by the heat and dry conditions from October 2020 to January 2021. Many households have had to sow maize and pulses several times with the onset of rainfall, but because of insufficient rainfall, crops did not develop, and many no longer have additional resources to replant.[64] This was confirmed through testimonies collected by Amnesty International, where people we spoke with explained that even as the first rains were starting to fall, they no longer had any grains to plant, and could not afford to buy anymore.[65]

In addition, research indicates that climate change also leads to an increase in agricultural pests, which negatively impact production, livelihoods, and food security. Locust invasions are the single greatest agricultural threat to Madagascar, according to FAO. There is emerging scientific consensus that climate change contributes to locust outbreaks: "changes in plant growth caused by higher carbon dioxide levels, as well as heat waves and tropical cyclones with intense rains, can lead to more prolific and unpredictable locust swarming, making it harder to prevent future outbreaks."[66]

1.3 DEFORESTATION AND SANDSTORMS

It is estimated that since the arrival of humans 2000 years ago, Madagascar has lost more than 90% of its original forest.[67] According to the National Aeronautics and Space Administration (NASA's) Land-Cover / Land-Use Change Program, almost 40% of forest cover disappeared from the 1950s to 2000, accompanied by a reduction of almost 80% in "core forest".[68] The main causes are small-scale agriculture using slash-and-burn agricultural practices,[69] wildfires and lands burned for grazing.[70] The deforestation in Madagascar

[58] World Food Programme: Southern Madagascar: Government and UN sound the alarm on famine risk, urge action, 11 May, 2021, https://www.wfp.org/news/southern-madagascar-government-and-un-sound-alarm-famine-risk-urge-action
[59] Food and Agriculture Organization of the United Nations; The impact of disasters and crises on agriculture and food security, 2021 p. 40, https://reliefweb.int/sites/reliefweb.int/files/resources/cb3673en.pdfhttps://reliefweb.int/sites/reliefweb.int/files/resources/cb3673en.pdf
[60] Relief Web Madagascar Food Security Outlook, February to September 2021, 05 March 2021, https://reliefweb.int/report/madagascar/madagascar-food-security-outlook-update-february-september-2021 A deterioration in livestock conditions subsequently leads to lower milk production and terms of trade, https://fews.net/southern-africa/madagascar/food-security-outlook-update/december-2020
[61] Copernicus, Global Drought Observatory (GDO) Analytical report, Drought in southern Madagascar, January 2021, p. 2, https://reliefweb.int/sites/reliefweb.int/files/resources/GDODroughtNews202101_Madagascar.pdf
[62] Copernicus, Global Drought Observatory (GDO) Analytical report, Drought in southern Madagascar, January 2021, p. 2, https://reliefweb.int/sites/reliefweb.int/files/resources/GDODroughtNews202101_Madagascar.pdf
[63] Evaluation du Démarrage de la Campagne Agricole et de la Sécurité Alimentaire
[64] Famine Early Warning Systems Network: Second consecutive below-average season in southern Madagascar drives high 2021 needs, February 2021, https://fews.net/southern-africa/madagascar/food-security-outlook/february-2021
[65] Amnesty International interview with Razainarisoa, Ambanisarika, 6 March 2021
[66] Climate Signals: Locust Swarms, Some 3 Times the Size of New York City, Are Eating Their Way Across Two Continents, 23 March 2021, https://www.climatesignals.org/headlines/locust-swarms-some-3-times-size-new-york-city-are-eating-their-way-across-two-continents
[67] Land Cover and Land Use Change Program: Deforestation in Madagascar, https://lcluc.umd.edu/hotspot/deforestation-madagascar
[68] Land Cover and Land Use Change Program: Deforestation in Madagascar, https://lcluc.umd.edu/hotspot/deforestation-madagascar
[69] Slash and burn agriculture is a widely used method of growing food in which wild or forested land is clear cut and any remaining vegetation burned, https://www.lcluc.umd.edu/hotspot/deforestation-madagascar
[70] The FAO estimates 33,000 hectare of forest and 839,000 hectare of other wooded land was disturbed by fire in 2000, https://lcluc.umd.edu/hotspot/deforestation-madagascar

is a contributing factor to the recurring food insecurity that occurs in the country, as one of the impacts of deforestation is that it exhausts the soil, increases erosion, and contaminates water supplies.[71]

While deforestation and the loss of forest habitats has occurred in the south of Madagascar for a long time, it has become more profound over the past few decades.[72] There are also strong indications that deforestation could be contributing to increasing sandstorms.

The natural phenomenon of sandstorms is locally known as "tiomena": which means "red winds" in Malagasy. According to Rivo Randrianarison, a weather forecast specialist at the national meteorology service in Antananarivo, while tiomenas can occur almost anywhere in Madagascar, the deep south is especially prone to them, being a particularly dusty area with poor vegetation cover, and in the midst of a persistent drought.[73] He also suggested that climate change could be a factor, because soils become drier in the area as temperatures have risen, and that when you add deforestation, "the chances of more tiomenas occurring obviously increases accordingly."[74]

The high levels of soil erosion, deforestation and "unprecedented drastic sandstorms" have covered croplands and pasture with sand and transformed arable land into wasteland across the region.[75] "In addition to drought, there are also sandstorms engulfing farmland and destroying livelihoods among a population already especially vulnerable to climatic hazards. In the Androy region, where more than 95% of the population lives below the poverty line and depends exclusively on agriculture, this is having devastating effects," explains Valérie Ceylon, Action Against Hunger's Regional Operations Director for Southern Africa.[76]

Deforestation and slash-and-burn farming expose the soil to the risk of erosion, which in turn results in sandstorms when strong trade winds are present. This year, the phenomenon has reached new intensity levels over a longer duration. These factors will severely impact future agricultural production. Action Against Hunger already fears a severe hunger season in the fourth quarter of 2021.[77]

> **"There's this very strong wind. We can't find each other anymore. When the wind blows, everything is red and even if there are passers-by on the road, you can't tell who it is."[78]**

Amnesty International's interviews with people affected by the drought all showed that the strong winds occurring in the south of Madagascar are negatively impacting the population's right to food, and the overwhelming majority of interviewees mentioned the sandstorms as being a major driver of hunger.

> **"The wind did not stop blowing, and the sky was always red."[79]**

Amnesty International visited Vahavola Amboropotsy, a village located between Ambovombe and Amboasary, which is partly covered by sand dunes that have been brought by strong winds. 60-year-old Joséphine lives there with her four children, and fears that her home will be engulfed by sand. The enclosure, where she normally keeps the cattle, was completely covered by sand, putting her and her family in a state of despair (see photo below).

> **"The climate has really changed; the wind has not stopped blowing and we have not been able to cultivate. Sometimes when the children are starving in the house, we have to go and sell the pots and spoons at the market. It is this terrible wind that brought this sand dune to the zebu (cattle) pen. It was blowing very hard. When we went outside, we couldn't even open our eyes. Even the cars on the road had to turn on their headlights because you couldn't see anything. Even the cactus were buried by the sand."**

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[71] Land-Cover and Land-Use Change Program: Deforestation in Madagascar, https://www.lcluc.umd.edu/hotspot/deforestation-madagascar

[72] The deep south, Constraints and opportunities for the population of Southern Madagascar towards a sustainable policy of effective responses to recurring droughts/emergencies, The World Bank.

[73] Mongabay Series: Dusty winds exacerbate looming famine in Madagascar's deep south, 29 January 2021, https://news.mongabay.com/2021/01/dusty-winds-exacerbate-looming-famine-in-madagascars-deep-south/

[74] Mongabay Series: Dusty winds exacerbate looming famine in Madagascar's deep south, 29 January 2021, https://news.mongabay.com/2021/01/dusty-winds-exacerbate-looming-famine-in-madagascars-deep-south/

[75] Relief Web: Southern Madagascar on brink of famine, warns WFP, 29 April 2021, https://reliefweb.int/report/madagascar/southern-madagascar-brink-famine-warns-wfp

[76] Relief Web: Madagascar: Climate Crisis in Grand Sud Causing Alarming Increase in Malnutrition, 10 March, 2021, https://reliefweb.int/report/madagascar/madagascar-climate-crisis-grand-sud-causing-alarming-increase-malnutrition

[77] Relief Web: Madagascar: Climate Crisis in Grand Sud Causing Alarming Increase in Malnutrition, 10 March, 2021, https://reliefweb.int/report/madagascar/madagascar-climate-crisis-grand-sud-causing-alarming-increase-malnutrition

[78] Amnesty International interview with Razainarisoa, 54 year old, in Ambanisarika, 5 March 2021.

[79] Amnesty International interview with Oline, mother of 3 children and grandmother to 9 grandchildren, in Ambazoa, 6 March 2021. The colour of the soil is red, which is why sandstorms make the sky look red.

When asked whether this phenomenon happened before, she replied:

> **"There has been wind before, but this year it was worse, and unbearable. We have had this wind for about a year now. We can't afford to remove the sand from our zebu pen, because we have no money, and we have almost no zebus left because of the drought. The sand is approaching our houses because of the wind. But we don't know where to go, so we have to stay here."[80]**

© Pierrot Men for Amnesty International, Madagascar, March 2021

The director of a company which grows and sells Sisal in Amboasary explained that the sandstorms are affecting his business: **"In 10 years, I've never seen this – so little rainfall. This year, we had a lot of wind, every day, including at night. The sand even gets into the sisal. This is not normal. Sisal is a robust plant, which is meant to grow here."**[81]

1.4 COVID-19 PANDEMIC

"…the Covid-19 pandemic and related containment measures have exacerbated pre-existing drivers of fragility, widened inequalities and exposed structural vulnerabilities of local and global food systems, hitting the most economically vulnerable households particularly hard. The shocks come amid the frequent threat of weather extremes that result in crop and livestock losses, destroy homes and displace people. Together and separately, such shocks – especially when persistent or recurrent – drive millions of people to lose their livelihoods and lack adequate food. These shocks also increase the risk of all forms of malnutrition, and, in the most extreme cases, cause death." Global Report on Food Crises (GRFC 2021)

Like most countries around the world, Madagascar's economy was hard hit by the Covid-19 crisis. The first Covid-19 cases were officially confirmed by Madagascar on 20 March 2020.[82] The government imposed measures to curb the spread of Covid-19 in three cities: Antananarivo, Tamatave, and Fianarantsoa, which

[80] Amnesty International interview with Joséphine, Vahavola Amboropotsy, 06 March 2021.
[81] Amnesty International interview with Pascal* whose name has been changed, in Amboasary, 6 March 2021.
[82] Orange: Its Official, first three cases of Coronavirus in Madagascar, 20 March 2021, https://actu.orange.mg/officiel-trois-premiers-cas-de-coronavirus-a-madagascar/

included a ban on movement and curfew, considerably reducing livelihood activities and income opportunities.[83]

Covid-19's socioeconomic impact has made the hunger situation worse.[84] Covid-19 related restrictions on the movements of people and goods resulted in widespread income losses, especially for those reliant on informal work. In Madagascar, it is estimated that more than 80 percent of the urban population is employed in the informal sector.[85]

Because of the pandemic, there was less demand for both domestic and international economic activities. The implementation of lockdown measures led to a reduction in key sectors including tourism, transport, textiles and the informal sector.[86] Macroeconomic indicators from the National Institute of Statistics (INSTAT) reported that export revenues had fallen by 20 percent compared to 2019. This was driven by a drastic fall of revenues from mining exports (-53 percent) and textile exports (-12 percent), as well as a complete reduction in tourism (-100 percent).

Before Covid-19, farmers were able to migrate temporarily to urban areas to make a living from piecemeal jobs to survive between harvests. However due to the pandemic, this option was no longer available to drought-affected farmers from the Deep South, who were either unable to migrate because of restrictions on movement, or, when they were able to migrate, could not find work because of the recession that hit the informal sectors in urban areas.[87] As a result, unemployment was high, and there were fewer opportunities for seasonal migrants to earn income.[88] Production deficits in early 2021 compounded the effects of several consecutive poor harvests and reduced incomes due to Covid-19 restrictions.[89]

Not only has the Covid-19 pandemic compounded people's inability to find alternative employment to compensate their loss of revenue due to the drought, it has also hampered humanitarian efforts to deliver live-saving food stocks, as travel restrictions have halted all flights into the island, meaning humanitarian cargo is limited to access by boat, increasing lead times for delivering aid.[90]

[83] FEWS NET, Staple food prices will likely remain above average in COVID-19 locked down cities, April 2020, https://fews.net/southern-africa/madagascar/food-security-outlook-update/april-2020
[84] When comparing seven southern districts in both lean seasons 2019/2020 and 2020/2021, the IPC found that the number of people in Crisis or worse almost doubled, mainly as a result of recurrent weather extremes, notably droughts, but also the socioeconomic impact of Covid-19, see World Food Organization Global Report on Food Crises – 2021 p38, https://www.wfp.org/publications/global-report-food-crises-2021
[85] World Food Organization Global Report on Food Crises – 2021 p172, https://www.wfp.org/publications/global-report-food-crises-2021
[86] United Nations Madagascar: Immediate Socio-Economic Response To Covid-19 In Madagascar, July 17, 2020, https://madagascar.un.org/fr/94746-reponse-socio-economique-immediate-au-covid-19-madagascar
[87] DEREX: WFP Madagascar calls for urgent action to support 1.35 million people in need of food aid, 12 January 2021, https://www.devex.com/news/wfp-madagascar-calls-for-urgent-action-to-support-1-35-million-people-in-need-of-food-aid-98877
[88] FEWS NET: Second consecutive below-average season in southern Madagascar drives high 2021 needs, February 2021, https://fews.net/southern-africa/madagascar/food-security-outlook/february-2021
[89] Relief Web: GIEWS Update: The Republic of Madagascar - Drought curbs 2021 production prospects, heightening the risk of a sharp deterioration in food insecurity, 9 February 2021, https://reliefweb.int/report/madagascar/giews-update-republic-madagascar-drought-curbs-2021-production-prospects
[90] Food and Agriculture Organization, Southern Madagascar: Government and UN sound the alarm on famine risk, urge action, 11 May 2021, https://www.wfp.org/news/southern-madagascar-government-and-un-sound-alarm-famine-risk-urge-action

2. DROUGHT AND CLIMATE CHANGE

Madagascar is currently going through the worst drought it has known in the past 40 years. In May 2021, the World Food Programme and FAO warned that around 1.14 million people in the south of Madagascar were facing high levels of acute food insecurity, of which nearly 14 000 people were in a state of "Catastrophe" – the highest type of food insecurity in the five-step scale of the Integrated Food Security Phase Classification (IPC). According to the two UN agencies, this is the first time that people have been recorded in Phase 5 since the IPC methodology was introduced in Madagascar in 2016.

It must be noted from the onset that droughts in the south of Madagascar are chronic.[91] Indeed, famine and periods of hunger form part of the collective memory of the region, and many of the most significant crises of the past century are even referred to by local epithets which denote the impact the disasters had.[92] However, the current drought has been particularly severe.

It is acknowledged that it is difficult to conclusively state that this specific extreme event is caused by climate change, in the absence of a specific climate attribution study[93] which links climate change to this particular drought. However, researchers have pointed out that the conditions underpinning this drought are consistent with known climate change impacts.[94]

It is therefore clear that climate change poses further risks, as it has likely contributed to the worsening of droughts such as those we are seeing in the south of Madagascar, and will continue to make such weather events more severe and recurrent. This is acknowledged by the Intergovernmental Panel on Climate Change (IPCC) who stated in a 2019 report that the "frequency and intensity of droughts has increased in some regions" including in southern Africa since pre-industrial levels due to global warming and that "the frequency and intensity of droughts are projected to increase particularly in the Mediterranean region and southern Africa."[95]

[91] The deep south, Constraints and opportunities for the population of Southern Madagascar towards a sustainable policy of effective responses to recurring droughts/emergencies, The World Bank p. 1.
[92] For instance, 1941-1944 is referred to as 'maro taola', meaning a lot of human bones, 1980 is referred to as 'santira vy', or iron belt , 1982 as the 'malalak'akanjo' drought, which can be translated loosely to 'our clothes are too big for us', or 1989-1992 as 'tsy mitolike', or 'we eat without looking back' referring to the individual fight for survival, https://horizon.documentation.ird.fr/exl-doc/pleins_textes/divers19-11/010047769.pdf p. 3.
[93] Climate change attribution is the science of determining the causes of unusual climate trends and climate-related events. Attribution studies can help us understand how humans are influencing the climate, https://library.wmo.int/index.php?lvl=notice_display&id=6205#.YTcwt44zZPY
[94] The Conversation: How climate change contributed to Madagascar's food crisis, 9 September 2021, https://theconversation.com/how-climate-change-contributed-to-madagascars-food-crisis-167370
[95] IPCC, Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse gas fluxes in Terrestrial Ecosystems - Summary for Policymakers, August 2019, https://www.ipcc.ch/site/assets/uploads/2019/08/4.-SPM_Approved_Microsite_FINAL.pdf

2.1 SCALE OF THE DROUGHT

The drought that struck the south of Madagascar from November 2020 to January 2021 has had huge impacts. WFP explained that nearly double the number of people were affected compared with the same period last year.[96] It follows three straight years of drought, which have wiped out harvests and hampered people's access to food.[97] Estimates of population exposed to acute food insecurity vary from one million[98] to one and a half million.[99] According to the WFP, half the region's population, 1.5 million people, were in need of immediate emergency food assistance as of November 2020,[100] and in its July Food Security and Nutrition Snapshot the IPC warned that 1.14 million people of the Deep South of Madagascar are estimated to be in high levels of acute food insecurity (IPC Phase 3 or above) during the current period (April - September 2021), of which nearly 14,000 people are in Catastrophe (IPC Phase 5).[101]

The most affected regions of this current drought were Anosy, Androy, and Atsimo Andrefana: 85 percent of people in crisis were located there.[102] Generally, these three regions, in addition to Analanjirofo, are also the most vulnerable to the health impacts of climate change: according to the World Bank, they have the weakest adaptive capacity, characterized by isolation, poor access to health services, insufficient health providers per capita, and low incomes.[103]

This is corroborated by information from humanitarian organization Action Against Hunger. The organization has been operating in Madagascar since 2012, and states that it has treated double the number of children under five for severe malnutrition in 2021 than they did during the same period in the previous year.[104]

Children and women form the majority of those experiencing the severe hunger conditions. According to a WFP assessment in Amboasary in October 2020, three out of four children had to quit school, often to help their parents find food,[105] and more than 135,000 children are likely to suffer from acute malnutrition.[106]

A preliminary evaluation led jointly by WFP and government ministries in February 2021 showed a 60 percent loss for the April and May harvests, compared to the average over the five past years and in 2016, the El Nino effect[107] had already caused rainfall to drop 75 percent compared to the past 20-year average in the southern part of the country, causing soil infertility and harvest losses of up to 95 percent, and bringing food insecurity to more than 1 million people.[108]

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[96] World Food Programme: Humanitarian crisis looms in Southern Madagascar as drought and pandemic double number of hungry people, 12 January 2021, https://www.wfp.org/news/humanitarian-crisis-looms-southern-madagascar-drought-and-pandemic-double-number-hungry-people

[97] Relief Web: Madagascar: Drought – 2018 -2021, https://reliefweb.int/disaster/dr-2018-000141-mdg

[98] Integrated Food Security Phase Classification, Madagascar Grand South And Grand South East October 2020 - April 2021 Issued December 2020, http://www.ipcinfo.org/fileadmin/user_upload/ipcinfo/docs/IPC_Madagascar_AFI_AMN_2020Oct2021April_English_summary.pdf

[99] World Food Programme: Madagascar: Drought and COVID-19 push 1.5 million people to the brink, 18 November 2020, https://www.wfp.org/stories/madagascar-drought-and-covid-19-push-15-million-people-brink

[100] World Food Programme: Southern Madagascar: Hunger looms as climate change destroys crops,12 January 2021, https://www.wfp.org/stories/southern-madagascar-hunger-looms-climate-change-destroys-crops

[101] IPC, MADAGASCAR [GRAND SOUTH] : Food Security and Nutrition Snapshot | July 2021, https://reliefweb.int/sites/reliefweb.int/files/resources/IPC_Madagascar_FoodSecurity_NutritionSnapshot_2021July_English.pdf

[102] World Food Organization Global Report on Food Crises – 2021 p171, https://www.wfp.org/publications/global-report-food-crises-2021

[103] The World Bank: Madagascar - Climate Change and Health Diagnostic, p. 17, http://documents1.worldbank.org/curated/en/936661516004441146/pdf/121945-12-1-2018-11-21-5-WorldBankMadagascarClimateChangeandHealthDiagnosticJan.pdf

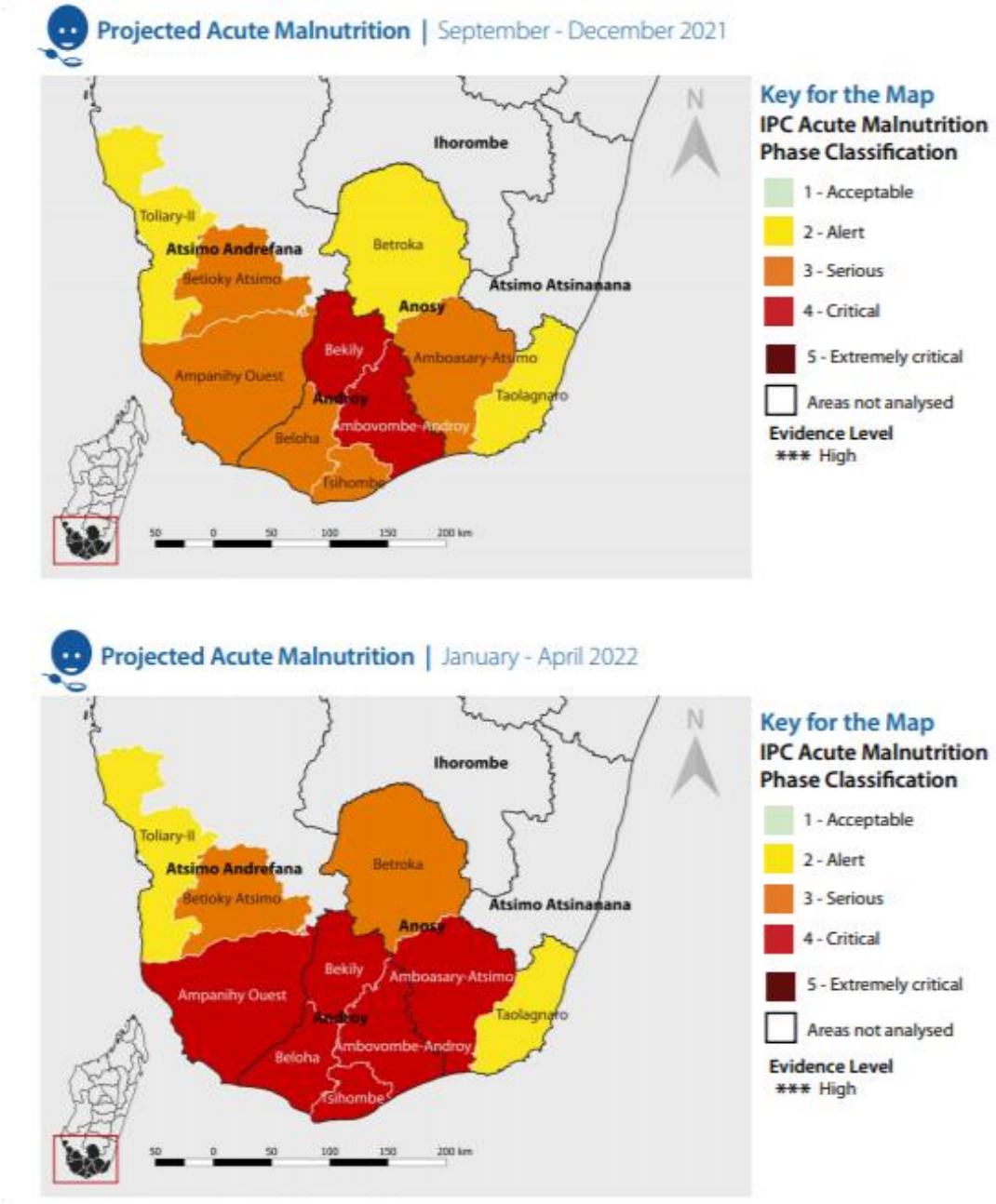
[104] Relief Web, Madagascar: Climate Crisis in Grand Sud Causing Alarming Increase in Malnutrition, 10 March 2021, https://reliefweb.int/report/madagascar/madagascar-climate-crisis-grand-sud-causing-alarming-increase-malnutrition

[105] Relief Web, Madagascar: Drought - 2018-2021, https://reliefweb.int/disaster/dr-2018-000141-mdg

[106] World Food Programme, Humanitarian crisis looms in Southern Madagascar as drought and pandemic double number of hungry people, 12 January 2021 https://www.wfp.org/news/humanitarian-crisis-looms-southern-madagascar-drought-and-pandemic-double-number-hungry-people

[107] El Niño is a climate pattern that describes the unusual warming of surface waters in the eastern tropical Pacific Ocean, https://www.un.org/sustainabledevelopment/blog/tag/el-nino/#:~:text=%EF%84%85-,WHO%3A%20El%20Nino%20threatens%20at%20least%2060%20million%20people%20in,year%20due%20to%20El%20Ni%C3%B1o.

[108] The World Bank: Madagascar - Climate Change and Health Diagnostic, p. 14, http://documents1.worldbank.org/curated/en/936661516004441146/pdf/121945-12-1-2018-11-21-5-WorldBankMadagascarClimateChangeandHealthDiagnosticJan.pdf



Map reference: © IPC_Madagascar_FoodSecurity_NutritionSnapshot_2021July_English.pdf

2.2 HISTORICAL CLIMATE TRENDS

> **"…there is clear evidence that temperatures have increased, following the global trend and that the character of rainfall has changed appreciably"[109]**
>
> Tadross, Mark & Randriamarolaza, Luc & Rabefitia, Zo & Yip, Zheng. (2008)

As there has not been a climate attribution study there is little scientific data available on the direct impact of climate change in Madagascar, but it is clear from the data that is available that the character of rainfall has changed with the World Data Atlas stating that "it tended to decrease through 1963 – 2017"[110]; at the same time temperatures have increased, significantly, over the last decades.[111] Such changes are consistent with climate change-induced variability.

As data displayed by the World Bank indicates:

- The character of rainfall across Madagascar has changed significantly, although no obvious trend in rainfall can be surmised from available records.
- A reduction in winter and spring rainfall has been detected in most parts of the country.
- In the central and east coastal regions, rainfall was on a steady decline between 1961 and 2005, accompanied by increases in the length of dry spells.[112]

This USAID report corroborated this when it stated that: "Annual rainfall has decreased across most weather stations in Madagascar, although this trend is weak compared to interannual variability."[113]

More specifically to the Deep South, the average annual rainfall in southern Madagascar has been declining over the last century, and the region has much lower rainfall than other parts of the country.[114] It has been reported that the 2020/2021 rainfall was the fifth year of below average rains in the island's semi-arid south.[115] As one respondent told Amnesty International:

> **"I've noticed a lot of changes. Before, the rain would fall from September to December, and we would start cultivating in February. This year, the rain only fell in February. It's been two years that there is nothing growing in our fields."[116]**

Concomitantly, long-term trends across all regions show strong increasing temperatures over the period 1979 –2015.[117] As the World Bank has stated, "due to global warming, average temperatures for both the dry and rainy seasons have clearly increased over the past 15 years."[118]

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[109] Tadross, Mark & Randriamarolaza, Luc & Rabefitia, Zo & Yip, Zheng. (2008). Climate Change in Madagascar, Recent Past and Future. Meteo Malgasy. A., https://www.researchgate.net/publication/266244734_Climate_Change_in_Madagascar_Recent_Past_and_Future
[110] World Data Atlas: The national rainfall index in Madagascar, https://knoema.com/data/madagascar+national-rainfall-index
[111] Tadross, Mark & Randriamarolaza, Luc & Rabefitia, Zo & Yip, Zheng. (2008). Climate Change in Madagascar, Recent Past and Future. Meteo Malgasy. A., https://www.researchgate.net/publication/266244734_Climate_Change_in_Madagascar_Recent_Past_and_Future
[112] World Bank Group, Madagascar: Climate Data Historical, https://climateknowledgeportal.worldbank.org/country/madagascar/climate-data-historical
[113] USAID: Climate Change Analysis, https://www.climatelinks.org/sites/default/files/asset/document/2021-03/2021_USAID_CDC%20Annex-Madagascar.pdf
[114] The deep south, Constraints and opportunities for the population of Southern Madagascar towards a sustainable policy of effective responses to recurring droughts/emergencies, The World Bank p. 23.
[115] Southern Madagascar: Government and UN sound the alarm on famine risk, urge action, WFP and FAO, 11 May 2021, https://www.wfp.org/news/southern-madagascar-government-and-un-sound-alarm-famine-risk-urge-action
[116] Amnesty International interview with Nathier Remanavotse, mayor of Maroalomainty, 6 March 2021.
[117] Hunter, Roland; Christopher, Jack; New, Mark; Aardenne, Lisa van; McClure, Alice; Steynor, Anna; et al. (2019): National Climate Change Profiles:Enhancing the capacity of African countries to use climate information to inform decision making. University of Cape Town. Dataset. p8, https://doi.org/10.25375/uct.7946000.v1
[118] The deep south, Constraints and opportunities for the population of Southern Madagascar towards a sustainable policy of effective responses to recurring droughts/emergencies, The World Bank p. 24.

Additionally, between 1961 and 2005, 17 of the country's 21 weather stations recorded statistically significant increases in daily minimum temperatures across all seasons, and several stations indicated increased daily maximum temperature trends.[119]

Researchers from the University of California Santa Barbara have pointed out that the current drought in Madagascar results from the combination of poor or very bad rainy seasons and warmer air temperatures over the last six years. These conditions are consistent with climate change impacts.[120]

2.3 CLIMATE PROJECTIONS FOR MADAGASCAR

According to projected future climate change trends, Madagascar is likely to be more severely affected by droughts in the future: "rainfall projections across the Madagascar region show a pattern of potential decreased rainfall emerging from about the 2060s."[121] Projections also indicate that the decrease in rainfall could be strongly associated with decrease in the rainfall events, but that high intensity rainfall events are projected to increase.[122] In January 2021, an interdisciplinary team of environmental engineers, Earth system scientists and data science experts published a new study in which they highlight that the tropical rain belt is predicted to move north, which will make droughts more common and longer-lasting in regions such as southeastern Africa and Madagascar.[123] In addition, it is predicted that in some areas of the country, rainfall patterns will intensify, leading to increased flooding and erosion, while rainfall in the south will lessen and become unpredictable.[124]

The African Development Bank states that air temperature is projected to increase by 0.5 to 1°C in all the Madagascar regions by the 2050s, and by 1.5 to 2.5 °C by 2100.[125] Similarly according to the World Bank Group Climate Change Knowledge Portal, temperatures are projected to increase by between 1.1°C and 2.6°C by 2060,[126] with the highest projected increases in the southern part of the country[127] which is already most affected by the recurring drought. Such projections are particularly alarming, as we know that any increase in temperature can have devastating impacts on the environment, people and the enjoyment of their human rights, particularly affecting health, livelihoods, food security, water supply, and human security.

Further, increased carbon dioxide levels in the atmosphere are leading to rising sea temperatures and ocean acidity levels, threatening the coral ecosystems and other marine habitats of high economic and ecological value.

Additionally, an average sea level rise of 7 to 8 mm per year in Madagascar is leading to coastal erosion and the progression of receding shorelines around it,[128] with some predictions stating a sea level rise of between 19cm-47cm in parts of the country by 2056.[129] This has grave consequences for Madagascar, the country with the longest coastline in Africa, and will likely subject communities and habitats to increased damage from cyclones and floods, and possibly forcing people to permanently move from their homes.[130]

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[119] World Bank Group, Madagascar: Climate Data Historical, https://climateknowledgeportal.worldbank.org/country/madagascar/climate-data-historical
[120] The Conversation: How climate change contributed to Madagascar's food crisis, 9 September 2021, https://theconversation.com/how-climate-change-contributed-to-madagascars-food-crisis-167370
[121] National climate change profile, Madagascar, African Development Bank, 2018, https://www.afdb.org/en/documents/madagascar-national-climate-change-profile
[122] National climate change profile, Madagascar, African Development Bank, 2018, https://www.afdb.org/en/documents/madagascar-national-climate-change-profile
[123] Zonally contrasting shifts of the tropical rain belt in response to climate change, Nature climate change, Antonios Mamalakis, James T. Randerson, Jin-Yi Yu 2, Michael S. Pritchard, Gudrun Magnusdottir, Padhraic Smyth, Paul A. Levine, Sungduk Yu and Efi Foufoula-Georgiou, https://doi.org/10.1038/s41558-020-00963-x
[124] USAID, Madagascar: Environment And Climate Change, https://www.usaid.gov/madagascar/environment
[125] Madagascar, African Development Bank, 2018, https://www.afdb.org/en/documents/madagascar-national-climate-change-profile
[126] USAID: Climate Risks in Food for Peace Geographies Madagascar, https://www.climatelinks.org/sites/default/files/asset/document/2019_USAID_ATLAS_Madagascar_FFP_CRP.pdf
[127] World Bank Group Madagascar: Climate Data Projections, https://climateknowledgeportal.worldbank.org/country/madagascar/climate-data-projections
[128] See: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Madagascar%20First/Madagascar%20INDC%20Eng.pdf, p. 6.
[129] See: https://www.climatelinks.org/sites/default/files/asset/document/2019_USAID_ATLAS_Madagascar_FFP_CRP.pdf
[130] USAID, Madagascar: Environment And Climate Change, https://www.usaid.gov/madagascar/environment

3. HUMAN RIGHTS IMPACT

Extreme weather and climate events, such as the severe drought occurring in Madagascar, affect the full spectrum of human rights.

The large proportion of people living below the poverty line in Madagascar means that the majority of the population have very limited capacity to adapt to increase in extreme climatic events, as well as to the slower knock-on effects that climate change may have on the economy through impacts on agricultural production, fisheries and tourism.[131] Climate-change induced extreme weather events disproportionately impact the poorest and most marginalized people.

All states have obligations under international human rights law to respect, protect and fulfil all human rights for all persons without discrimination in line with various international and regional human rights treaties they have ratified. This obligation includes protecting the enjoyment of human rights from environmental harm caused by conduct or omissions within their territory or jurisdiction, whether committed by state or non-state actors, including businesses. The current and foreseeable adverse effects of climate change on the enjoyment of human rights of present and future generations therefore gives rise to states' duties to take all reasonable steps to the full extent of their abilities to prevent this harm.[132]

3.1 RIGHT TO LIFE

> **"Every human being has the inherent right to life. This right shall be protected by law. No one shall be arbitrarily deprived of his life."**
>
> Article 6, ICCPR

Worldwide, the WHO estimates that between 2030 and 2050, climate change will cause approximately 250,000 additional deaths per year, from malnutrition, malaria, diarrhoea and heat stress.[133] Areas with

[131] Hunter, Roland; Christopher, Jack; New, Mark; Aardenne, Lisa van; McClure, Alice; Steynor, Anna; et al. (2019): National Climate Change Profiles:Enhancing the capacity of African countries to use climate information to inform decision making. University of Cape Town. Dataset.p10, https://doi.org/10.25375/uct.7946000.
[132] Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, 1 February 2016, UN Doc. A/HRC/31/52, para. 33.
[133] World Health Organisation, Climate change and Health, https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health

weak infrastructure, such as Madagascar, will be the least able to cope without assistance to prepare and respond.[134]

There are no comprehensive official statistics about drought-related deaths. However, Amnesty International research found anecdotal evidence that the recurrent and protracted drought has already caused deaths. In October 2020, a 14-year-old boy was reported to have died from hunger, taking the number of official deaths linked to lack of food in the same locality to nine.[135] Witnesses interviewed by Amnesty International often spoke of people they knew who according to them, had died because of the drought, but information on the exact causes of death could not be verified. However, these testimonies were consistent in the different areas that researchers visited. Votsora, a farmer in his 50s told Amnesty International that 10 people had died a month earlier in his village, and that on one day, five people from the same household died of hunger.[136]

↑@Pierrot Men for Amnesty International, March 2021

Amnesty International gathered additional testimonies from people who said they lost their children because the drought had made it impossible for them to get any food.

> **"I have ten children who are alive, and five who died."**

said Georgeline, who believes she is around 36 years old,[137] and who lives in the Ambondro village. She used to work as a farmer but was no longer able to do so because of the drought.

> **"Some of my children died because of diarrhoea after the drought. (…) People in the Androy region die because there is no more food, and because the rain doesn't fall anymore."[138]**

Misa, a mother of six, also told Amnesty International that two of her children died because of hunger: **"They suffered from hunger, so they ate red cactus, and they died. I brought them here, to the doctor's, but it was too late already. We hardly eat anything because we don't earn anything. Some people pity us and give us a**

[134] World Health Organisation, Climate Change and Health, https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health
[135] Tribune Madagascar: Kere: a ninth death reported in Ankilimarovahatse, 12 October 2020, https://www.madagascar-tribune.com/Kere-un-neuvieme-deces-signale-a-Ankilimarovahatse.html
[136] Amnesty International interview with Votsora Rambelo, 06 March 2021, Ambazoa, Madagascar.
[137] Many of the people interviewed by Amnesty International were not able to give their specific age, as they did not know exactly what year they were born, but had an approximate idea.
[138] Amnesty International interview with 36 old Georgeline Zemasinae, Ambondro, 07 March 2021.

bit of food, for example one can of rice when they receive donations from the WFP. I don't want my other children to die too."[139]

Fred* another person interviewed, said that he too lost children because of the drought. **"Two of my children died. One was one year and two months old, and the other was eight months old. They died a year ago. We always have stomach diseases. Because we were not eating anything, we always had stomachache, and when we go to the hospital, the doctors say it's the malaria. They gave us medicine, but my children were too thin, they did not cope, and they died."**[140] As Fred spoke, one of his children came back with little cactuses in his hand, and he said: **"This is the cactus we eat. This is what kills us. It hurts our stomachs. And this is what we give to children."**

Victims of the drought told Amnesty International that either they were not given any advance notice of the upcoming drought, or when they were, that they could not prepare for it anyway:

> **"The drought was a surprise for us. I don't have a radio to hear the news. When it happened, we wondered 'what's going on?' But we couldn't have prepared ourselves anyway. I don't even have the means to stock food."[141]**

60-year-old Joséphine and mother of four said that she had heard warnings that the drought was coming but had nowhere to go: **"we have no choice but to stay here and wait for death to take us away,"** she said.[142]

> "The obligation to respect and ensure the right to life, and in particular life with dignity, depends, inter alia, on measures taken to preserve the environment and protect it against harm, pollution and climate change caused by both public and private actors"[143]
>
> Human Rights Committee, revised General Comment on the right to life, 2018

States have a positive obligation to protect individuals from deprivation of life, and this implies that "States parties should take appropriate measures to address the general conditions in society that may give rise to direct threats to life or prevent individuals from enjoying their right to life with dignity."[144] It is the responsibility of states to ensure the adequate conditions are met to protect the right to life, and the right to live in dignity, including access to adequate food and water. The HRC also highlighted that it is states parties' responsibility to develop, when necessary, contingency plans and disaster management plans designed to increase preparedness and address natural and human-made disasters, which may adversely affect enjoyment of the right to life.[145]

3.2 RIGHT TO ADEQUATE FOOD

"We are hungry all the time."[146]

Mahontanae, Maroalapoty, 07 March 2021

According to the WFP, in 2020 Africa was the most affected continent in terms of food crises, accounting for 63 percent of the global total number of people in crisis or worse, an increase from 54 percent in 2019.[147] Central and Southern Africa are the most affected regions in Africa: the number of people in crisis, worse or equivalent, in Central and Southern Africa was the highest on the continent at 40.2 million, a sharp increase

[139] Amnesty International interview with Misa, Ambondro, 07 March 2021.
[140] Amnesty International interview with Fred*, whose name has been changed upon his request, Ranomainty, 11 March 2021.
[141] Amnesty International interview with Razainarisoa, 05 March 2021, Ambanisarika, Madagascar.
[142] Amnesty International interview with Joséphine, Vahavola Amboropotsy, 06 March 2021.
[143] UN Human Rights Committee, General Comment 36, para. 62, https://tbinternet.ohchr.org/Treaties/CCPR/Shared%20Documents/1_Global/CCPR_C_GC_36_8785_E.pdf#page=14
[144] UN Human Rights Committee, General Comment 36, https://tbinternet.ohchr.org/Treaties/CCPR/Shared%20Documents/1_Global/CCPR_C_GC_36_8785_E.pdf
[145] UN Human Rights Committee, General Comment 36, https://tbinternet.ohchr.org/Treaties/CCPR/Shared%20Documents/1_Global/CCPR_C_GC_36_8785_E.pdf p. 26,
[146] Amnesty International interview with Mahontanae, 05 March 2021, Maroalapoty.
[147] World Food Organization Global Report on Food Crises – 2021 p16, https://www.wfp.org/publications/global-report-food-crises-2021

from 32.2 million in 2019.[148] "The majority of hungry children[149] (90 percent) are found in six countries in the region – Angola, the Democratic Republic of the Congo, Mozambique, Madagascar, the United Republic of Tanzania and Zambia."[150]

Climate change is expected to make things worse, with research showing that 20% more people could suffer from hunger and malnutrition by 2050.[151] If states fail to meet their human rights obligations to urgently address climate change, the number of people without access to adequate food, worldwide, could explode. At 2°C of global warming, 189 million people could experience levels of vulnerability to food insecurity greater than in the present day. And at 4°C, the figure would rise to 1.8 billion people.[152]

According to the IPC, at the end of 2020 in Madagascar, more than one million people were facing high levels of acute food insecurity[153] during the period October to December, and this number was expected to rise even further to 1.35 million people likely to face high levels of acute food insecurity.[154]

Much of the local population of the Deep South relies on subsistence agriculture and livestock. The water shortages due to the drought has significantly reduced their yields and in some instances their ability to continue with their farming. Lack of water has also led to extreme heat stress on livestock and crops. Lower production has also led to increased food prices. The monitoring of food markets has shown that as of December 2020, staple food prices remained above previous year and average levels: for example, cereal prices were found to be between 30 to 50 percent above average, and tubers, 30 to 40 percent above average due to below normal supply.[155]

The women and men interviewed by Amnesty International all talked about the food being more expensive than before, preventing them from buying as much as they would have before.

Amnesty International met 23-year-old Sambesoa, in Amboasary. She used to earn a living for her husband and three children by selling chicken and water, but no longer works and could hardly afford to eat. **"It's been a year now that everything is more expensive at the market, and there's hardly any choice anymore. Since the drought, all the prices in the market have increased because people could not cultivate and there has been no harvest. Before, a can of rice was 800 Ariary (USD 0.21), now it is 1000 ariary (USD 0.26). So we buy less rice, and we put more water in it."**[156]

In addition to it being more expensive, there was also less choice available on the markets.

> **"Before the drought, there were many products sold at the market: all kinds of dry vegetable, fruit, corn, beans, sweet potatoes niébé and dolique.[157] But this year, there's nothing. The only people who were able to cultivate are those that live next to the river and can water their harvests. So, all the prices have gone up. For example, pumpkins we buy them for 2000 Ariary (USD 0.52) each, before it was 500 (USD 0.13). Dry vegetables were 300 (USD 0.07) to 400 Ariary (USD 0.10) the can, now it's about 1500 Ariary (USD 0.40)", she continued.[158]**

The green harvest of pumpkin, watermelon, muskmelon, cassava/sweet potatoes leaves were below average because of drought conditions at the end of 2020, and yellow cactus fruit was also reported to be less available. As a result, poor households had to resort to consuming atypical wild foods like wild nuts, cactus leaves, tamarind and wild tubers, which are considered less edible and more dangerous for children as well as for pregnant and lactating women.[159] In May 2021, the WFP and FAO warned that the 2021 harvest of

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[148] World Food Organization Global Report on Food Crises – 2021 p. 16, https://www.wfp.org/publications/global-report-food-crises-2021
[149] See Annex 1.
[150] World Food Organization Global Report on Food Crises – 2021 p. 37, https://www.wfp.org/publications/global-report-food-crises-2021
[151] World Food Programme: Climate action, https://www.wfp.org/climate-action#:~:text=With%20the%20vast%20majority%20of,to%2020%20percent%20by%202050.
[152] World Food Programme: What a 2°C and 4°C warmer world grant agreement n° 603864 could mean for global food insecurity, https://docs.wfp.org/api/documents/WFP-0000072935/download/?_ga=2.104228995.204655107.1621419120-630311497.1620209089
[153] Corresponds to IPC Phase 3 or above, see Annex 1.
[154] Integrated Food Security Phase Classification: Madagascar Grand South And Grand South East, http://www.ipcinfo.org/fileadmin/user_upload/ipcinfo/docs/IPC_Madagascar_AFI_AMN_2020Oct2021April_English_summary.pdf p 1
[155] Famine Early Warning Systems Network, https://fews.net/southern-africa/madagascar/food-security-outlook-update/december-2020
[156] Amnesty International interview with Sambesoa, Amboasary, 11 March 2021.
[157] Local fruits.
[158] Amnesty International interview with Sambesoa, Amboasary, 11 March 2021.
[159] FEWS NET: MADAGASCAR Food Security Outlook February to September 2021, https://fews.net/sites/default/files/documents/reports/Madagascar%20Outlook_Feb2021_Final_EN_1.pdf p. 3.

crops like rice, maize, cassava and pulses was expected to be less than half the five-year average, thus "laying the ground for a prolonged and severe lean season, starting in October 2021."[160]

Photo of a cactus plant, which households rely on to survive during the drought © Pierrot Men for Amnesty International, Ambovombe, March 2021

[160] World Food Programme: Southern Madagascar: Government and UN sound the alarm on famine risk, urge action, 11 March 2021 https://www.wfp.org/news/southern-madagascar-government-and-un-sound-alarm-famine-risk-urge-action

In normal times, studies show that households in the southern regions spend, on average, 75 to 80 percent of their resources on food, and are also heavily dependent on subsistence agriculture, meaning there is little left to sell for income.[161] This is why in times of drought, it is particularly difficult for them to cope: They were unable to put money or food aside to plan for any emergencies.

The testimonies gathered by Amnesty International all paint the same picture: extremely poor access to food, both in quantity, but also in quality. The children, women and men all said that they eat less than before; smaller quantities, less often in the day, and with less diversity as before. Most households eat once a day, some try to make a second meal out of cactus leaves during the day, others have to go without eating for more than a day at a time.

> **"Before, when it was the time of sweet-potato harvest, we would eat twice or three times a day. But now, we only eat in the evening, if we find something to cook. And if we don't, we sleep on an empty stomach."[162]**

the majority of people interviewed told Amnesty International that they used to have regular meals during the day; more often three, and times at least two. It is only since the severe drought that they have been forced to drastically reduce their food intake. Mosa is a 46-year-old father of 8 children, between 14 and 2 years old. He told Amnesty International he couldn't sleep at night, as the thought of what he could give his children to eat the following day haunted him. Like many others, he resorts to diluting the little food he is able to provide his children with water.

> **"When we could cultivate the lands, we would eat well in the mornings, at lunch, and in the evening. We ate sweet potatoes, manioc, corn, and rice. But now, at lunch, we just drink hot water, and in the evening, three cans of rice amongst us. We are twelve at home, so when we cook three cans of rice, we put a lot of water so we can share it with everyone."[163]**

Oline Ampisoa, 63 years old, is a mother of three children, and a grandmother to nine. Her husband died a few years ago and, despite being unemployed, she tries to provide for her family.

> **"We used to eat three times a day. We would eat corn, sorghum, sweet potatoes, and manioc, but right now, you can hardly find anything. In the morning and at lunchtime, we either don't eat anything, or we eat young cactuses. We remove the thorns and then we boil them, and we give that to the children. I even cry when I watch the children eat sometimes, but there's nothing more I can do."[164]**

[161] The deep south, Constraints and opportunities for the population of Southern Madagascar towards a sustainable policy of effective responses to recurring droughts/emergencies, The World Bank p. 44.
[162] Amnesty International interview with 36 old Georgeline Zemasinae, Ambondro, 07 March 2021.
[163] Amnesty International interview with 46-year old Mosa, Mistangana Ambovombe, 8 March 2021.
[164] Amnesty International interview with Oline Ampisoa, Ambazoa, 06 March 2021.

Oline Ampisoa in her house, in Ambazoa, Pierrot Men for Amnesty International, Ambovombe, March 2021

A boy picking cactus. © Pierrot Men for Amnesty International, Ambovombe, 31 March 2021

The food situation is particularly dire for children, as shortages of safe drinking water and food staples can result in long-lasting and even irreversible impacts on cognitive and physical growth.[165] According to the IPC, approximately 27,100 children required lifesaving treatment for severe wasting at the end of the year 2020, and 135,476 children under 5 were wasted.[166] The prevalence of stunting in Madagascar is considered "very high," at 42 percent, placing the country 10th among the most-affected countries in the world. According to UNICEF, malnutrition is associated with at least 44% percent of deaths among children under 5 years old in Madagascar.[167] In 2020, the Covid-19 public health and social measures have further complicated the early detection and treatment of child wasting and Vitamin A supplementation, because of the disruption of essential health and nutrition services.[168] Nearly half of the country's children suffer anemia, and micronutrient deficiencies are prevalent.[169]

Amnesty International spoke to 11-year-old Philibert, who is the eldest amongst his siblings, and dreams of becoming a farmer. Philibert stopped going to school, to spend his time begging in order to fend for his family. For him, hunger is particularly difficult for children. **"Children suffer a lot, because they are tiny, and can't stand hunger. When I managed to earn 200 Ariary (USD 0.05) (after begging), I went to buy food for my little brothers and sisters, I got them bread and tea. I help them because they are my little brothers and sisters"**, he said as he pointed towards his siblings. **"When they see food on the market, they cry. That's why I must help them."**[170]

[165] OHCHR, *Analytical study on climate change and the rights of the child,* para. 13, https://www.ohchr.org/EN/Issues/HRAndClimateChange/Pages/RightsChild.aspx
[166] Integrated Food Security Phase Classification: Madagascar: Acute Food Insecurity and Acute Malnutrition Situation for October - December 2020 and Projection for January - April 2021, http://www.ipcinfo.org/ipc-country-analysis/details-map/en/c/1152969/?iso3=MD
[167]World Food Organization Global Report on Food Crises – 2021, https://www.wfp.org/publications/global-report-food-crises-2021
[168] World Food Organization Global Report on Food Crises – 2021 p. 173, https://www.wfp.org/publications/global-report-food-crises-2021
[169] World Food Organization Global Report on Food Crises – 2021 p. 173, https://www.wfp.org/publications/global-report-food-crises-2021
[170] Amnesty International interview with Philibert, Ambovombe, 07 March 2021.

© Pierrot Men for Amnesty International, Ambovombe, 31 March 2021

Amnesty International met with Amélie, 28-year-old, who heads the Ambondro health centre, which distributes "Plumpy Nut"[171] to children in a state of severe malnutrition once a week, every Friday. Researchers witnessed queues of dozens of people waiting to receive assistance. Amélie told Amnesty International that the drought did not compare with previous ones, and children paid the ultimate price: **"This year, there are many children in a state of severe and moderate acute malnutrition because of the drought and the very strong winds, the sandstorm. People can no longer cultivate because of the drought. The earth is dry and the rain doesn't fall. Here, 54 children are in severe acute malnutrition, and between 300 and 400 are in moderate acute malnutrition. Here at the health centre, all we have is Plumpy Nut and amoxicilline for children who suffer from malnutrition, but we don't have anything else. A lot of things are missing. We don't have enough beds, mattresses."**[172]

The sudden reduction in food production has contributed to increased food prices, affecting accessibility of food, and leading to food insecurity, especially for people already living in poverty.

Seventeen-year old Mosa told Amnesty International how he and his six siblings survive:

> **"We used to eat well, three times a day. We would eat corn, manioc, but now is the first time that we eat wild fruit, and wild tubers. The wild fruit we eat is tamarind, mixed with ashes or white clay. We take the tamarind seeds, and we mix them with white clay, the one we find in the forest, and we add water. When we eat that, we often have stomach aches and diarrhoea. But that's what we eat to resist hunger. These last few days, we ate rice because there was food distribution by the WFP. But otherwise, we eat the tamarind mixed with clay."**[173]

[171] Plumpy Nut is a peanut based paste for the treatment of severe acute malnutrition.
[172] Amnesty International interview with Amélie Zafretifa, Ambondro, 07 March 2021.
[173] Amnesty International interview with Mosa Valisoa, 17 year old, 10 March 2021.

Picture of Mosa © Pierrot Men for Amnesty International, March 2021

> **"There are times when I can't see anything anymore, and I have the feeling that I am going to faint because I get weaker and weaker. In the evening, I can't sleep anymore, because I think about what we are going to eat tomorrow, and I hardly sleep. I wake up in the morning with my eyes red. Some of the children cope better with the drought than others; some can't cope at all: they have stomachache, and parasites. Even when I take them to the hospital, it does not help."[174]**

As a state party to the International Covenant on Economic, Social and Cultural Rights, Madagascar is bound to ensuring the realization of the right of everyone to an adequate standard of living, including adequate food (Article 11).

CATTLE AND LIVELIHOODS

Cattle are of utmost importance for the Tandroy and other peoples in the south, both as a secular means of accruing wealth, for agricultural and transport purposes, and also for cultural and spiritual reasons, as "assurance of a comfortable afterlife."[175] Owning cattle is hence a social safety net in Madagascar, where there are no other real safety nets provided by the government. People use cattle for a number of reasons, including for agricultural purposes, to sell, or for food.

Because of the ongoing drought, poor households have had to sell their livestock and other productive assets for income, in order to purchase food.[176] But humans are not the only ones affected by the drought: animals are too, and cattle were often thinner and in substandard condition, resulting in their price being lower than usual on the markets. The poorest households who sold their cattle not only got less money than they expected for their sell, they are also likely to be negatively impacted by the loss for years to come due to the productive value of livestock.

The Famine Early Warning Systems Network (FEWS) reported in February 2021 that in the south, herd sizes were about 40 percent lower than the previous year: "several households prefer to sell their small ruminants rather than to pay 3,000 Ariary (approximately USD 0.80) per day per head to feed them. As a result, the supply of small ruminants has increased on markets and the price has decreased 75 percent compared to

[174] Amnesty International interview with Mosa, Ambovombe, 07 March 2021.
[175] The deep south, Constraints and opportunities for the population of Southern Madagascar towards a sustainable policy of effective responses to recurring droughts/emergencies, The World Bank p. 16.
[176] Famine Early Warning Systems Network, https://fews.net/southern-africa/madagascar/food-security-outlook/february-2021

the baseline year."[177] Unfortunately, selling was sometimes the only option, as the animals also die from hunger.

Mosa is one of the people who was forced to part with his valuable cattle. Despite the important asset it represented for his family, he told Amnesty International that after most of his herd died from hunger, and once he sold nearly all the remaining ones, he still does not have enough money left to feed his family:

> **"There have been droughts before, but we made do because we had some food remaining from our past harvests. This year however, we had nothing left in stock. We have had to sell our zebus, and we only sold them 100,000 ariary (approximately USD 26). That's not even enough to buy a bag of rice of 50 kg, and even if we managed to buy that rice, it would not last us one month. I used to have 50 zebus. But I've nearly lost all my cattle because of the drought. They nearly all died of hunger because there was no more cactus to feed them. I had 50 and now I have four left. And for my goats, I had 120, and 80 of them died of hunger. There was nothing left to eat. It is my whole future which is destroyed. I used to be amongst the rich people, and now, I am like a homeless person, I have nothing left, and my children suffer."[178]**

Cattle were also a very useful means of transportation, and enabled people to travel long distances, including to fetch water. Thus, the fact that the poorest people were forced to sell their cattle also had an impact on their access to water, as they told Amnesty International, they could no longer travel the same distances as before without cattle and carts.

↑ *© Pierrot Men for Amnesty International, Ambovombe, 31 March 2021*

[177] https://fews.net/sites/default/files/documents/reports/Madagascar%20Outlook_Feb2021_Final_EN_1.pdf p 3
[178] Amnesty International interview with 46-year old Mosa, Mistangana Ambovombe, 8 March 2021.

3.3 RIGHTS TO WATER AND SANITATION

> **"The drought has really affected people here. It's rain that helps us survive and cultivate. When there is no rain, water is very expensive here."[179]**
>
> Miza Rasoanirina, Ambazoa, 06 March 2021

Madagascar ranks among the countries with the lowest access to drinking water and sanitation, and significantly below the Sub-Saharan Africa average. Despite some progress in improving access to potable water, through the development of a Sanitation and Water Policy in 2006, Madagascar fell short of its target of enabling access to potable water for 68 percent of its population by 2015.[180]

Nearly 2 million people are without access to drinking water services in the districts of the Grand Sud.[181]

Because of the recurring droughts, the price of water has increased, making it extremely difficult for the poorest households to access safe water. The UN Flash Appeal for 2021 notes that in 2020, since the drought was declared in February in the Androy region, the price of 20 litres of water had reached 2,250 Ariary (about USD 0.60) and declined to 1.250 (about USD 0.33), but without ever reaching the approved price of 900 Ariary (about USD 0.24).[182]

"In all of the eight most affected districts by drought in the Grand Sud, the proportion of people with access to improved drinking water sources is still low, forcing the majority of the population to use surface water. This situation is due to the absence or insufficiency of infrastructure in certain areas (sedimentary and coastal) and/or the faulty operating status of the water points (insufficient flow, lack of maintenance)."[183]

The availability of water has been a long-standing challenge for the people of the south of Madagascar, due to a combination of factors, which include management and capacity challenges in water administration, as well as the fact that many potable water and irrigation schemes over the years never came to fruition due to the political and economic marginalization of the people of the Deep South.[184]

Our research found that people drank water from muddy puddles, but these puddles had now run dry due to the drought.

Water and sanitation-related illnesses are a major driver of disease in Madagascar: in 2012, less than 14 percent of the population had access to safe sanitation, meaning that more than 19 million Malagasies did not have access to adequate sanitation in 2012.[185]

Interviews conducted by Amnesty International all highlighted people's distress due to insufficient access to water. With no access to free water, even the poorest individuals have to pay for water, water which many people interviewed complained was unclean, or salty.

Oline told Amnesty International that because she is too poor to afford water, she's had to sell her belongings, and then get a loan from acquaintances, in order to buy some.

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[179] Amnesty International interview with 20 year old Miza Rasoanirina, Ambazoa, 06 March 2021.
[180] The World Bank: Madagascar Systematic Country Diagnostic, http://documents1.worldbank.org/curated/en/743291468188936832/pdf/99197-CAS-P151721-IDA-SecM2015-0168-IFC-SAecM2015-0123-Box393189B-OUO-9.pdf
[181] 68 percent, 62 percent and 70 percent respectively for Atsimo Andrefana, Androy, and Anosy, Flash Appeal, Grand Sud, January – May 2021, p. 22, https://reliefweb.int/sites/reliefweb.int/files/resources/MDG_20210118_Grand_Sud_Flash_Appeal_English.pdf
[182] Flash Appeal, Grand Sud, January – May 2021, p. 7 https://reliefweb.int/sites/reliefweb.int/files/resources/MDG_20210118_Grand_Sud_Flash_Appeal_English.pdf
[183] Flash Appeal, Grand Sud, January – May 2021, p. 22, https://reliefweb.int/sites/reliefweb.int/files/resources/MDG_20210118_Grand_Sud_Flash_Appeal_English.pdf
[184] The deep south, Constraints and opportunities for the population of Southern Madagascar towards a sustainable policy of effective responses to recurring droughts/emergencies, The World Bank, p. 41,
[185]The World Bank: Madagascar - Climate Change and Health Diagnostic, http://documents1.worldbank.org/curated/en/936661516004441146/pdf/121945-12-1-2018-11-21-5-WorldBankMadagascarClimateChangeandHealthDiagnosticJan.pdf p 33

And even then, the water she buys for her family is of poor quality:

> **"Access to water is our worst problem, because there hasn't been any rain for nearly two years, and so we only use water that comes from the wells, near the sea. Even that water is for sale: 2000 Ariary (about USD 0.50) for a 20L water can, and we did not have enough money to buy it. So we borrowed money. We asked other families: please lend us some money and we will pay you back little by little. We sold the kitchen utensils at the market, and then we paid back the other families. But that water is very salty, it's the same water that the cattle drink. Before the drought, it was easier: there were wells that belonged to the communities and we could buy that water, but now there is no more water in them."[186]**

Poor access to safe drinking water and sanitation facilities also contributes to increasing levels of acute malnutrition,[187] and health concerns. All the people interviewed by Amnesty International said that they did not drink enough, according to their thirst or needs. Despite always having been in a poor region, people interviewed said that they used to have better access to water. Since the drought struck, they have had to reduce their consumption of water, which violates the right of everyone to sufficient, safe, acceptable and physically accessible and affordable water for personal and domestic uses.[188]

80-year-old Mahontanae told Amnesty International that she uses three times less water than what she would want.

> **"We buy a 20L water can, for 1000 to 2000 ariary (from USD 0.27 to USD 0.54). I only drink one water can a day, but it is not enough. I need three a day. Those who have children send them to fetch some next to the sea, because there is water on the beach, you can dig wells. And then drink it, after you've heated it. But we cannot cook with it, there's nothing to cook."**

Access to water and sanitation is crucial for global health, as it prevents diseases directly caused by unsafe water, inadequate sanitation and poor hygiene practices, while drastically reducing child malnourishment, and helps alleviate physical and mental under-development.

Mahontanae explained that the lack of water was having an impact on her overall health:

> **"I have diarrhoea at the moment and it still has not stopped. My stomach hurts because I don't eat. My stomach hurts because I eat nothing. All I do is drink water."[189]**

Women often suffer disproportionately from water scarcity, as in many societies, including in Madagascar, women typically bear the burden of spending much of their time and energy collecting water. Amnesty International interviewed 54-year old Razainarisoa who explained that she walks for three hours each way to get to the town of Ambovombe, the closest place where she has been able to find water since the drought struck: "there are puddles of water, so we take it from there," she said. Despite the long trek, Razainarisoa was unwell, with headache, coughing, and a stomachache.[190]

Children are also disproportionately impacted from the lack of access to water, sanitation and hygiene. According to the UN, 50% of today's child malnutrition is associated with unsafe water, inadequate sanitation and poor hygiene.

The right to water is essential for a dignified life and is vital for the realization of many other rights, including the rights to life, to health, and to an adequate standard of living. It entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses,[191] and has been recognized in a wide range of international documents, including treaties.[192] In its General Comment No. 15, the Committee on Economic Social and Cultural Rights (CESCR) noted the importance of ensuring sustainable access to water resources for agriculture to realize the right to adequate food, and specified: "Attention should be given to ensuring that disadvantaged and marginalized farmers, including women

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[186] Amnesty International interview with Oline Ampisoa, Ambazoa, 06 March 2021.
[187] Integrated Food Security Phase Classification, Madagascar Grand South And Grand South East October 2020 - April 2021 Issued December 2020, http://www.ipcinfo.org/fileadmin/user_upload/ipcinfo/docs/IPC_Madagascar_AFI_AMN_2020Oct2021April_English_summary.pdf
[188] General Comment No. 15, Committee on Economic, Social and Cultural Rights
[189] Amnesty International interview with Mahontanae, 05 March 2021.
[190] Amnesty International interview with Razainarisoa, Ambanisarika, 6 March 2021.
[191] General Comment No. 15 (2002) The right to water (arts. 11 and 12 of the International Covenant on Economic, Social and Cultural Rights)
[192] See art. 14, para. 2 (h), Convention on the Elimination of All Forms of Discrimination Against Women; art. 24, para. 2 (c), Convention on the Rights of the Child; arts. 20, 26, 29 and 46 of the Geneva Convention relative to the Treatment of Prisoners of War, of 1949; arts. 85, 89 and 127 of the Geneva Convention relative to the Treatment of Civilian Persons in Time of War, of 1949; arts. 54 and 55 of Additional Protocol I thereto of 1977; arts. 5 and 14 Additional Protocol II of 1977.

farmers, have equitable access to water and water management systems, including sustainable rain harvesting and irrigation technology."[193]

The right to water contains entitlements including the right to a system of water supply and management that provides equality of opportunity for people to enjoy the right to water.[194] States must ensure that the allocation of water resources, and investments in water, facilitate access to water for all members of society.[195]

The Committee identified a number of typical examples relating to the levels of states' obligations in relation to the right to water, and have included the following examples of violations of the obligation to fulfil the right to water through the failure of States parties to take all necessary steps to ensure the realization of the right to water:

"Violations of the obligation to fulfil occur through the failure of States parties to take all necessary steps to ensure the realization of the right to water. Examples includes, inter alia: (i) failure to adopt or implement a national water policy designed to ensure the right to water for everyone; (ii) insufficient expenditure or misallocation of public resources which results in the non-enjoyment of the right to water by individuals or groups, particularly the vulnerable or marginalized; (iii) failure to monitor the realization of the right to water at the national level, by identifying right-to-water indicators and benchmarks; (iv) failure to take measures to reduce the inequitable distribution of water facilities and services; (v) failure to adopt mechanisms for emergency relief; (vi) failure to ensure that the minimum essential level of the right is enjoyed by everyone (vii) failure of a State to take into account its international legal obligations regarding the right to water when entering into agreements with other States or with international organizations."[196]

3.4 RIGHT TO HEALTH

"The implications of climate change for a global population of 9 billion people threatens to undermine the last half century of gains in development and global health."[197]

The Lancet, Health and climate change: policy responses to protect public health

The human rights to food, water and sanitation are essential for the enjoyment of all other human rights, including the right to health. The lack of access to adequate food and water, both in water and in quantity, poses a devastating risk to the health of people living in the drought-stricken southern regions of Madagascar. People met by Amnesty International during the organization's field visit were often in visibly poor health, thin, and the majority complained of suffering from chronic diarrhoea, headaches, and generally feeling sick. One man told Amnesty International: "I used to be in good health. But at the moment, this is why I wear this big coat: to hide that I'm skinny."[198] Because the drought exacerbates the situation of severe poverty, and in light of an absence of universal health coverage and social safety nets in Madagascar, the population in the south do not have the financial resources to consult a doctor, nor to pay for medication. Even in "normal" times, only a very small part of the population use health facilities for treatment. So, in times of severe drought and related increased poverty, consultation rates drop dramatically.[199]

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[193] General Comment No. 15 (2002) The right to water (arts. 11 and 12 of the International Covenant on Economic, Social and Cultural Rights), Article 7.
[194] General Comment No. 15 (2002) The right to water (arts. 11 and 12 of the International Covenant on Economic, Social and Cultural Rights).
[195] General Comment No. 15 (2002) The right to water (arts. 11 and 12 of the International Covenant on Economic, Social and Cultural Rights).
[196] General Comment No. 15 (2002) The right to water (arts. 11 and 12 of the International Covenant on Economic, Social and Cultural Rights).
[197] The Lancet, Health and climate change: policy responses to protect public health, https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(15)60854-6/fulltext
[198] Amnesty International interview with Votsora, Ambazoa, 6 March 2021
[199] Flash Appeal, Grand Sud, January – May 2021, p. 7, https://reliefweb.int/sites/reliefweb.int/files/resources/MDG_20210118_Grand_Sud_Flash_Appeal_English.pdf

"Everyone in our village has been sick: we all had stomach-ache and were vomiting. We had diarrhoea."[200]

Amelie, 28-years old, works in a health centre in the village of Ambondro, which caters for 45 surrounding villages, some as far as 16 kilometers away. She told Amnesty International that in January 2021, she saw an increasing number of people coming into the health centre for diarrhoea, vomiting and epigastralgia.

"Those are the diseases that people here suffer from, because the water is dirty, and the food isn't enough. Everyone suffers, but it's worse for the children under five years old, for women, and people living with a handicap. The worst is that people don't have enough money to buy medicine, and so they self-medicate."[201]

Children are disproportionately affected by the health impacts of the drought. The UN Flash Appeal for 2021 notes that according to the weekly monitoring report, the number of diarrhoea cases among children age 5 increased from 10,021 to 16,374 between 2018 to 2020, and that there has also been a countrywide resurgence of malaria which has affected the Deep South, aggravated by food insecurity. Furthermore, use of health services has declined by more than 40 percent in 2020 compared to the same period in 2019 in three districts of the Deep South (Betrioky, Amboasary and Ambovombe), and the decline is attributed to the reduction in household income caused by the harvest decrease, which cannot cover health expenses. Parents told Amnesty International that their children suffered from hunger, diarrhoea, vomiting, and headaches. They often were not able to explain precisely what condition their children were suffering from. For example, one mother told Amnesty International delegates: "my children are nearly all sick. For example, this one has liquid coming out of his ears, and the other one often suffered from crises – like in a coma. One of my daughters was also like that, but I managed to see a doctor, and she's a bit better know."[202]

In Madagascar, according to a report published by the UN Resident Coordinator in Madagascar, in the Deep South, where more than 91 percent of the population lives on less than USD 2 per day, households relegate health (including reproductive health) to the bottom of their spending priorities, especially in times of crisis.[203]

"During this drought, we have all fallen sick. For example, I had diarrhoea. There was blood. And it was the same thing for my children. Before the drought, my children were healthy. They would eat sweet potatoes. But now, they have become skinny, and people are surprised to see them like this, because they used to be healthy, a bit plump. Now, they are weak. They have nothing to eat, they are very skinny, and cough a lot."[204]

In addition to stomach aches, diarrhoea and vomiting linked to undernutrition, the people living in southern Madagascar face other risks to their human right to health related to climate change impacts, including greater risk of injury, disease and death due to more intense heat waves, increased injury and ill-health triggered by extreme weather events and increased risks of food and water-borne diseases such as cholera and other diarrhoeal illnesses and vector-borne diseases such as malaria.[205]

Amnesty International's research also found that women's health had been disproportionately negatively affected. A healthcare worker, Amelie, told Amnesty International that there had been a decrease in the number of babies being delivered in the health centre, linked to the worsening insecurity caused by changes in climatic conditions in the region that had increased the incidence of cattle banditry: according to her, mothers were scared to come all the way to the health centre, and were giving birth at home.[206]

Other impacts on the sexual and reproductive health rights of women and girls have been documented. The 2021 UN Grand Flash Appeal states that previous rapid assessments carried out during former episodes of drought in the Grand Sud have "clearly demonstrated that drought exacerbates the food and nutritional insecurity issues of families, leading them to adopt negative coping mechanisms affecting specific groups at risk, including the children, women and adolescent girls."[207] Among the main risks aggravated by the drought, are gender-based violence and sexual violence, child labour and child marriage, to compensate for

[200] Amnesty International interview with Votsora Rambelo, Ambazoa, 06 March 2021.
[201] Amnesty International interview with Amélie Zafretifa, Ambondro, 07 March 2021.
[202] Amnesty International interview with Soamomeie, Ambovombe, 6 March 2021.
[203] Flash Appeal, Grand Sud, January – May 2021, p. 7, https://reliefweb.int/sites/reliefweb.int/files/resources/MDG_20210118_Grand_Sud_Flash_Appeal_English.pdf
[204] Amnesty International interview with 36 old Georgeline Zemasinae, Ambondro, 07 March 2021.
[205] IPCC, *Fifth Assessment Report: WGII*, p. 713; WHO, *Climate Change and Infectious Diseases*, 2003, www.who.int/globalchange/climate/en/chapter6.pdf
[206] Amnesty International interview with Amelie Zafretifa, Ambondro, 07 March 2021.
[207] [207] Flash Appeal, Grand Sud, January – May 2021, p. 20, https://reliefweb.int/sites/reliefweb.int/files/resources/MDG_20210118_Grand_Sud_Flash_Appeal_English.pdf

the lack of household income - the Grand Sud is among the regions with the highest child marriage rates in the country.[208] Reports also indicate an increase in reported cases of child abuse and exploitation.[209]

There are also fears that the extreme weather events are likely to have severe impacts on mental health, including for children, such as post-traumatic stress disorder, anxiety and depression, triggered by loss of family members, property or livelihoods.[210]

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3.5 RIGHT TO A SAFE, CLEAN, HEALTHY AND SUSTAINABLE ENVIRONMENT

On October 8, 2021, at the Human Rights Council's 48th session, forty-three nations adopted resolution 48/13,[211] recognizing the right to a safe, clean, healthy, and sustainable environment as a human right. The constitutions of 110 countries include this right,[212] and a number of regional human rights instruments also recognize it.[213]

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[208] 58 per cent of women aged 20-49 in the Atsimo Andrefana region get married before the age of 18, 55 per cent in the Androy region and 45 per cent in the Anosy region, against a 37 per cent national rate, Multiple Indicator Cluster Survey (MICS), 2018, http://ghdx.healthdata.org/record/madagascar-multiple-indicator-cluster-survey-2018

[209] United Nations: Madagascar - Grand Sud Humanitarian Key Messages, https://reliefweb.int/sites/reliefweb.int/files/resources/ROSEA_20210506_KeyMessages_MadagascarGrandSud.pdf

[210] OHCHR, *Analytical study on climate change and health*, para. 21; OHCHR, *Analytical study on the relationship between climate change and the full and effective enjoyment of the rights of the child*, 4 May 2017, UN Doc. A/HRC/35/13, para 21

[211] See: https://undocs.org/a/hrc/48/l.23/rev.1

[212] Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, 30 December 2019, UN Doc. A/HRC/43/53, para. 10.

[213] See Article 24, African Charter of Human and People's Rights; Article 18, Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa; Article 11, Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights (more commonly known as the "Protocol of San Salvador"); Article 38, Arab Charter on Human Rights, which includes the right to a healthy environment as part of the right to an adequate standard of living that ensures wellbeing and a decent life; Para. 28(f) of the Human Rights Declaration adopted by the Association of Southeast Asian Nations in 2012 incorporates a "right to a safe, clean and sustainable environment" as an element of the right to an adequate standard of living. See also Article 1, Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention) of 1998, drafted under the auspices of the UN Economic Commission for Europe, which refers to "the

For example, the African Charter on Human and Peoples' Rights, provides in its Article 24: "All peoples shall have the right to a general satisfactory environment favourable to their development"

The Malagasy Environmental Charter, in its Article 6, provides: "Everyone has the fundamental right to live in a healthy and balanced environment."[214]

The UN Special Rapporteur on human rights and the environment has clarified that the substantive components of the right to a safe, clean, healthy and sustainable environment are: clean air, a safe climate, healthy and sustainably produced food, access to safe water and adequate sanitation, non-toxic environments in which to live, work and play, healthy ecosystems and biodiversity.[215]

The ongoing drought highlights very clearly that a healthy environment, including a safe climate, is indispensable for a life of dignity and security. If climate change were to worsen the future droughts in Madagascar, as the projected trends suggest, it will further impact the right of all Malagasy people to live in a safe, clean, healthy and sustainable environment.

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3.6 ACCESS TO EDUCATION

As illustrated in the chapters above, children are amongst those who are most impacted by the drought, because of their specific metabolism, physiology and developmental needs.[216] Their rights to life, food, water and sanitation are particularly threatened by the drought, and compared to adults, they are disproportionately impacted by the consequences of the drought. In addition to suffering from the same

right of every person of present and future generations to live in an environment adequate to his or her health and well-being"; and Article 4, Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (Escazú Agreement), concluded under the auspices of the UN Economic Commission for Latin America and the Caribbean and opened for signature in 2018, which requires that "each Party shall guarantee the right of every person to live in a healthy environment".

[214] Law n°2015-003 of 20 January 2015 on the updated Malagasy Environmental Charter.

[215] Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, 30 December 2019, UN Doc. A/HRC/43/53; Framework Principles on Human Rights and the Environment: The main human rights obligations related to the enjoyment of a safe, clean, healthy and sustainable environment: Report of the Special Rapporteur on human rights and the environment, 24 January 2018, UN Doc. A/HRC/37/59.

[216] World Health Organization, *Inheriting a Sustainable World? Atlas on Children's Health and the Environment,* 2017, www.who.int/ceh/publications/inheritinga-sustainable-world/en/

human rights impacts as adults, the drought also impacts their age-specific human rights, such as the right to education.

This situation is particularly concerning as the Deep South was already affected by particularly low rates of school enrolment. While school enrolment rates are low throughout Madagascar, with an adjusted net enrolment rate in primary education of 76 percent,[217] strong disparities across regions mean that children living in the southern parts of the country are less likely to attend school: for example, elementary school attendance is of 95 percent in the Anamalanga region, where the capital city Antananarivo is situated, whereas in the southern regions of Anosy and Atsimo Andrefana, it is around 50 percent only.[218] Similar disparities are found when looking at the primary completion rate, and first cycle of secondary school.[219]

Amnesty International met with a number of parents who explained that they had stopped sending their children to school since the start of the drought, either because they needed them to work or beg for money because of the family's loss of revenues, or because they were worried about their children going to school on an empty stomach. Others migrated since the drought struck in search of better opportunities and could no longer put their children in school. Amnesty International also interviewed a smaller number of parents who said that they continued to send their children to school no matter the circumstances, because of how important they knew education to be.

A WFP assessment in Amboarsary, the epicentre of the 10 hardest-hit southern districts,[220] found three out of four children had quit school, mostly to help their parents forage for food.[221] It is estimated that about 300,000 school-age children living in the nine districts of the Grand Sud most affected by the drought currently do not go to school.[222]

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[217] Madagascar 2018 Multiple Indicator Cluster Survey (MICS), http://ghdx.healthdata.org/record/madagascar-multiple-indicator-cluster-survey-2018
[218] Flash Appeal, Grand Sud, January – May 2021, p. 13, https://reliefweb.int/sites/reliefweb.int/files/resources/MDG_20210118_Grand_Sud_Flash_Appeal_English.pdf p. 13.
[219] Flash Appeal, Grand Sud, January – May 2021, p. 13, https://reliefweb.int/sites/reliefweb.int/files/resources/MDG_20210118_Grand_Sud_Flash_Appeal_English.pdf
[220] World Food Organization Global Report on Food Crises – 2021 p173, https://www.wfp.org/publications/global-report-food-crises-2021
[221] World Food Programme: WFP Global Update on COVID-19: November 2020, https://www.wfp.org/publications/wfp-global-update-covid-19-november-2020
[222] Flash Appeal, Grand Sud, January – May 2021, https://reliefweb.int/sites/reliefweb.int/files/resources/MDG_20210118_Grand_Sud_Flash_Appeal_English.pdf p. 13.

Amnesty International spoke to a teacher and farmer, Soja Tamesoa, who lives in the commune of Erada. She told us about the impact of the drought on their right to education:

> **"Children who go to school are not well. They always want to sleep. They are tired and the classes don't last long. And there are children who had to stop their studies, and migrate with their parents somewhere else."[223]**

Because of the hunger, some parents have had to make difficult choices, sometimes deciding not to send their children to school when they believe they are in too poor health to attend classes. Amnesty International spoke with one such father of 12, Votsora: **"Many of our children are skinny because of hunger and the drought. Those who have enough strength left still go to school. But I don't send those who are too skinny, I don't want them to faint there."**[224]

For 63-year-old Oline, who takes care of her three children and nine grandchildren however, hunger cannot be a reason to miss school:

> **"All of my grandchildren go to school, and even if they are hungry. They pick whatever they can eat on the way, like cactus leaves and little fruit that have just grown. The school is far, it's 8km away. But I cannot accept that they stop their studies, because I know how important it is to study."[225]**

The impact of months or years of missed education will probably have an impact on children's entire lives.

11-year-old Philibert used to go school before the drought struck but had to stop in order to beg for money for his family and himself. He is the oldest of his siblings. **"When the drought started, I stopped going to**

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school, and started begging." He told Amnesty International he would use the money earned to buy food for his brothers and sisters. And that he hoped he could return to school, one day. **"It's been a long time now that I have not been to school. When the drought ends, I hope to go back to school."**[226]

[223] Amnesty International interview with Soja Tamesoa, Erada, 6 March 2021.
[224] Amnesty International interview with Votsora Rambelo, Ambazoa, 06 March 2021.
[225] Amnesty International interview with Oline Ampisoa, Ambazoa, 06 March 2021.
[226] Amnesty International interview with Philibert, Ambovombe, 07 March 2021.

Another child explained to Amnesty International why he stopped going to school. 17-year old Mosa said: "I don't go to school at the moment, but when I feel better, I will go back. When I eat tamarind mixed with clay, my stomach hurts, and that's why I don't go to school anymore. Because of hunger, when I get to school, I'm not at ease, and when the teachers explain the class, my head is always elsewhere."[227]

Children's right to education has also been put in jeopardy because of the loss of employment that the drought has brought upon their parents. 36-year-old Georgeline is a mother of ten children. She was a subsistence farmer, until the drought struck. She now tries to make a living by cleaning clothes, but her earnings do not compare with before, when she could cultivate the land and earn ten times what she now earns:

> **"Sometimes, people call me to wash clothes. But often, I stay here doing nothing. When there are no clothes to wash, I do nothing, and we eat nothing. That's why I go looking for cactus leaves, to feed my children. When I was a cultivator, I was earning more money. During the harvest season, I would earn a lot of money. But now, I only earn 500 or 1000 ariary (USD 0.13 or USD 0.26), and it's not enough, because all I can buy with that is one or two cans of rice. Before, during the harvest season, I would earn 5000 to 10 000 (USD 1.3 or USD 2.6) ariary per day."**

Thus, one of the impacts of this loss of employment is that her children can no longer go to school: "Some of my children were in the 3rd, 5th and 9th grade, but since the drought, I don't have the means to pay, and so they have quit school."[228]

Another mother, Sambesoa, told Amnesty International that her children have had to stop going to school when she stopped earning money because of the drought: "I used to earn money by selling chicken – I would sell 5 or 6 a day. But now, I hardly sell anymore. People have no money to buy them. Some days, I sell nothing. Some days, I will sell one, and I've had to lower the price. So I cannot pay for my children to go to school anymore. They've stopped going for a year."[229]

Other parents interviewed explained that while they could still continue working, the drought-induced hunger made it impossible for them to continue earning a living. "The worst for me, with this drought, is the hunger. I am defeated. I can't work anymore. I have no more strength. Sometimes, I turn around because I have no more strength to walk. Even if I want to go and work, I don't have the strength. I must go and cut wood in the forest, but I can't, because I am dying of hunger."[230]

The fact that so many people in Madagascar's Deep South work in agriculture, which is heavily impact by extreme weather events, means that their children's right to education is at risk.

[227] Amnesty International interview with Mosa Valisoa, 17-year-old, 10 March 2021.
[228] Amnesty International interview with Georgeline, Ambondro, 07 March 2021.
[229] Amnesty International interview with Sambesoa, Amboasary, 11 March 2021.
[230] Amnesty International interview with 21-year old Maramahalanja, Androvavoa, 11 March 2021.

3.7 MIGRATION AND FORCED DISPLACEMENT

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According to the International Organization on Migration (IOM), in a context of recurring drought, migration has been and continues to be a commonly relied on strategy in the Androy region. They state: "the harsh climatic conditions, notably the frequency of drought, but also the larger structural issues pertaining to the lack of employment and absence of infrastructural inputs such as irrigation all act as push factors for migration from the region towards urbanized regions, frequently located in the north."[231] In its 2017 report, the IOM noted that despite being commonplace, there has been an exceptional increase in current migration trends in response to the drought, with communities in the selected study sites reporting the departure of at least 35 percent of their populations. Furthermore, the report explains that from the perception of the communities, this movement is coerced, and that households resort to migration as a survival strategy.[232]

Amnesty International spoke to several families who migrated to other regions because of the drought, to survive. For all of them, it was their first time engaging in migration, and they all expressed the hope that they would return home once the situation becomes more livable. Unfortunately, this survival strategy, of heading towards cities in search of better outcomes, comes with risks for those who engage in it, particularly for young girls and children who may face specific protection risks.[233] Many of the families who had migrated said that they now slept on the streets, or in "caves" near marketplaces.

Soamomeie, 30 years old, takes care of her eight children by herself. She used to be a subsistence farmer, but the last time she worked in the fields was two years ago, before the severe drought. At the end of 2020, she and her children left their village, Ankilemamy, in search of a better future in Ambovombe. She told Amnesty International : **"I don't have a job anymore. I used to have fields, but I sold them all because of the drought, as well as all our belongings: our pots and spoons. We came here because we were suffering too**

[231] IOM Madagascar: Evidencing the Impacts of the Humanitarian Crisis in Southern Madagascar on Migration, and the Multisectoral Linkages that Drought-induced Migration Has on Other Sectors of Concern, 2017, https://www.iom.int/sites/default/files/country/docs/Madagascar/IOM-Madagascar-Southern-Madagascar-Assessment-Report-EN.pdf

[232] IOM Madagascar: Evidencing the Impacts of the Humanitarian Crisis in Southern Madagascar on Migration, and the Multisectoral Linkages that Drought-induced Migration Has on Other Sectors of Concern, 2017, https://www.iom.int/sites/default/files/country/docs/Madagascar/IOM-Madagascar-Southern-Madagascar-Assessment-Report-EN.pdf p. 26.

[233] United Nations: Madagascar - Grand Sud Humanitarian Key Messages, https://reliefweb.int/sites/reliefweb.int/files/resources/ROSEA_20210506_KeyMessages_MadagascarGrandSud.pdf

much from hunger at home. The rain never fell. So we decided to come to Ambovombe, to beg. But here we don't have a house, we sleep next to the road. We used to eat twice a day, at lunch and in the evening. But it's been a long so we no longer eat like that, this drought has been going on for two years. I hope to go back to my village. If it rains, I will be able to go back home and work on people's fields."[234]

↑ *© Pierrot Men for Amnesty International, Ambovombe, Madagascar, March 2021*

20-year-old Tirisoa also left her hometown to search for a better future in Ambovombe, with her eight children and her mother. Her husband left her at the beginning of the drought, when the situation got difficult, alone with their children. "I left my village because of the drought. My children were dying of hunger there, and I was scared they were going to die. So we came here. I used to cultivate the lands, but the wind has not stopped blowing, and so I cannot work anymore. It's been a year. It's the first time that we have left our village, and that we are begging. But it was too difficult for us in the village, we couldn't find anything to eat. My children would only eat the red cactuses and started getting weak. Here, at least, people give us 200 ariary and we can buy a bit of food. With 200 ariary, I can buy a donut and some tea. Most people in my village are cultivators like me, and a lot of them have come to Ambovombe, like us. What I really want is to have some seeds, that I can grow and so my kids can eat. If I could get seeds, I would go back home."[235]

Health worker Amélie, who spends her day assisting patients affected by malnutrition, estimated that a quarter of the inhabitants of her village, Ambondro, have left, either to the capital city Antananarivo, or to Mahajanga, in search of a new life. She explained that long-term migration is not a traditional practice for the people living in the south of Madagascar, but that because of the severity of this crisis, it was their measure of last resort. "Before, people would only leave for holidays. Now, they leave completely, with their families. In our customs, the Antandroy (ethnic group) hate leaving their village. But because of the drought, they have to."[236]

Damy is 16 years old, and migrated with his parents, to the big city of Fort-Dauphin. Like many others, his family has had to sell many of their belongings to afford the travel to escape poverty in their home village. He

[234] Amnesty International interview with 30 year old Soamomeie, Ambovombe.
[235] Amnesty International interview with Tirisoa, Ambovombe, 6 March 2021.
[236] Amnesty International interview with Amélie, Ambrondo, 07 March 2021.

has been forced into child labour, mining mica, which involves smashing large mica blocs to break them down, and is considered a difficult and dangerous job.

However he earns 1,000 ariary (USD 0.26) a day – more than what he could earn back at home.

> **"I was nearly dying of hunger there. I could not take it anymore. So I've been here for three months, and we came because the rain stopped falling at home. My parents could not pay for my school, and decided to send me here to earn a bit of money. I came with my mother. It's the first time that we've migrated. Our village is not a place we want to leave, but because of the drought, we had no choice. Now, we work here, hitting on mica. It's better here than back home, because I can find some money. I make around 1000 ariary a day (USD 0.26). At home, all we did was wait for the rain. We took nothing with us, just a few clothes that were left. We sold nearly all our fields to pay for the trip to here."**[237]

[237] Amnesty International interview with 16-year old Damy, in Fort Dauphin, 11 March 2021.

4. NATIONAL AND INTERNATIONAL RESPONSE AND OBLIGATIONS

4.1 RESPONSE TO THE ONGOING CRISIS

4.1.1 NATIONAL RESPONSE AND OBLIGATIONS

> **"I made the fight against famine and malnutrition in southern Madagascar a State priority. This is a fight that I am leading at the same time with the mobilization of the entire Malagasy government and the support of various international and national partners, whom I thank warmly. For too long, the State has been absent from this southern region, and the population has been left behind and put aside. It is now time for this to change, and the objective we have set ourselves is the total and complete eradication of the drought-induced famine throughout Madagascar through the implementation of emergency medico-social solutions but also and above all economic solutions in the long term"**
>
> Andry Rajoelina, President of the Republic of Madagascar.[238]

[238] The World Bank: World Bank Provides $100 Million to Support Resilient Livelihoods in the South of Madagascar, 10 December 2020, https://www.worldbank.org/en/news/press-release/2020/12/10/world-bank-provides-100-million-to-support-resilient-livelihoods-in-the-south-of-madagascar

"Avant d'être un problème exacerbé par le changement climatique, le kéré est avant tout un problème politique, analyse Mahatante Tsimanaraoty Paubert.[239] *Le gouvernement savait que ça allait arriver et n'a pas apporté les solutions attendues – tout comme les gouvernements précédents d'ailleurs."* ("Before being a problem exacerbated by climate change, famine is above all a political problem," Mahatante Tsimanaraoty Paubert said. "The government knew this was coming and did not improve on the expected solutions - just like the past years.") [240]

As a state party to the International Covenant on Economic, Social, and Cultural rights, Madagascar is bound to taking steps, individually and through international assistance and co-operation, especially economic and technical, with a view to achieving progressively the full realization of the rights recognized in the Covenant,[241] which include the right to an adequate standard of living, the right to food and water.

In 1994, the Malagasy government developed a series of reforms in the water and sanitation sector, aiming at increasing access of rural populations to drinkable water, from 13% in 2000 to 56% in 2010.[242] Despite this a 2020 USAID report states that "WASH sector funding is insufficient to meet targets" going on to say that during the period of 2015-2019, public sector funding for the water and sanitation sector was only 15 percent of what was needed according to official plans. Additionally in 2015, the World Bank reported that government allocations to nutrition (and health) seemed inadequate and had declined since the 2009 crisis,[243] indicating that there has been a failure by the government to mobilize resources to realize rights under the Covenant.

As a result access to water and adequate food remains very scarce in Madagascar, particularly for people living in rural areas, and in the southern part of the country. There are important regional disparities, with the "Hautes Terres" having better access to water and sanitation than the coastal regions, due to a number of factors including disparities in the availability and quality of water resources, isolation, and lack of infrastructure.[244]

It is the responsibility of the state to ensure that everyone, no matter where they live, have access to human rights, including the right to adequate food and water. The government of Madagascar has failed to develop a systemic approach to address the water shortages in the Deep South. The country's infrastructure and urban zones, particularly in coastal areas, have not been developed to cope with the effects of existing and future weather and climate events. Historically, the disaster risk management in Madagascar had focused on ex post response and recovery efforts, but there had been a growing recognition that it is important to give equal attention to pre-disaster planning and preparedness, by taking a resilience-building approach.[245]

A National Response Plan was developed under the leadership of the National Disaster Risk Management Bureau (BNGRC) for a multisectoral response until May 2021, but the plan remains very under-funded, with an unmet need of USD 81.3 million.[246]

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[239] Mahatante Tsimanaraoty Paubert is a research professor at the University of Tulear and specialist in climate change.
[240] Le Monde: In Madagascar, famine victims massively leave the south of the island, 20 January 2021, https://www.lemonde.fr/afrique/article/2021/01/19/a-madagascar-les-victimes-de-la-famine-quittent-massivement-le-sud-de-l-ile_6066842_3212.html
[241] ICESCR Article 2.
[242] African Development Fund : Rapport D'evaluation Alimentation En Eau Potable Et Assainissement En Milieu Rural Dans Le Grand Sud Republique De Madagascar, January 2001, https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Madagascar_-_Projet_d_alimentation_en_eau_potable_et_d_assainissement_en_milieu_rural_dans_le_grand_sud_-_Rapports_d%E2%80%99%C3%A9valuation.pdf
[243] The World Bank Group : Madagascar Systematic Country Diagnostic August 25, 2015, http://documents1.worldbank.org/curated/en/743291468188936832/pdf/99197-CAS-P151721-IDA-SecM2015-0168-IFC-SAecM2015-0123-Box393189B-OUO-9.pdf
[244] Ran Eau: Guide pratique pour les acteurs de la coopération décentralisée et non gouvernementale Agir pour l'eau et l'assainissement à Madagascar, https://www.pseau.org/outils/ouvrages/raneau_agir_eau_assainissement_madagascar_fr_mai2011.pdf p. 12
[245] UNISDR Working Papers on Public Investment Planning and Financing Strategy for Disaster Risk Reduction: Review of Madagascar, 2015, UNISDR. Geneva, http://pure.iiasa.ac.at/id/eprint/11652/1/XO-15-004.pdf
[246] Flash Appeal, Grand Sud, January – May 2021, p. 4, https://reliefweb.int/sites/reliefweb.int/files/resources/MDG_20210118_Grand_Sud_Flash_Appeal_English.pdf

4.1.2 RESPONSE BY THE INTERNATIONAL COMMUNITY

Generally, Madagascar receives little financing from development partners, and much less than its Country Policy and Institutional Assessment (CPIA) and development level would suggest.[247] Despite the current drought being a humanitarian crisis putting the lives of hundreds of thousands Malagasy people at risk, it has still not received sufficient attention by the international community. Whereas the primary duty and responsibility to provide assistance and protection to the victims of disasters is held by the national authorities of the affected countries, where provision of such supports is beyond its capacity to provide, the state must seek international assistance that is needed to address the needs of victims and it must facilitate that assistance.[248] In response, other States in a position to do so are obliged to provide such assistance through international cooperation and assistance.[249] The international community must support and supplement the efforts of the authorities of the affected country to the maximum of their capacities and provide scientific, technical, logistical and other cooperation, as appropriate.[250] Economically developed States have a special responsibility to assist the poorer developing States.[251]

On 18 January, the UN Resident Coordinator for Madagascar, together with the Malagasy Minister of Foreign Affairs, launched an urgent Flash Appeal worth USD 75.9 million, to gather the resources required to "respond to the most urgent needs in the Grand Sud"[252] The Flash Appeal indicated that it will need to be complemented "by other forms of interventions which tackle the root causes of the crisis and the underlying vulnerabilities of the communities affected, linking to the medium and long-term priorities led by the Government in the affected areas, including implementation of an integrated development strategy that addresses the root causes of the cyclical crisis in the Grand Sud."[253] In early May 2021, the WFP had received a total amount of USD 6,127,000 for the 2020/2021 drought period, from the following donors, ranking from the biggest donations to the smallest: Japan, ECHO, AfDB,[254] Switzerland, Germany, Monaco, and Austria. In addition, they received 8,300 tons of food from the United States.

4.2 CLIMATE CHANGE RESPONSE AND OBLIGATIONS

4.2.1 INTERNATIONAL OBLIGATION TO RESPOND TO CLIMATE CHANGE

Under international human rights law, states have obligations to protect the enjoyment of human rights from environmental harm caused by conduct or omissions within their territory or jurisdiction, whether committed by state or non-state actors, including businesses.[255] The foreseeable adverse effects of climate change on the enjoyment of human rights give rise to states' duties to prevent this harm by mitigating climate change, and specifically by tackling its cause: emissions of greenhouse gases (GHGs) and the accumulation of GHGs in the atmosphere.[256] States therefore must minimize the harmful effects of climate change on human rights by taking all feasible steps to the full extent of their abilities to reduce GHG emissions within the shortest possible time-frame, both nationally and through international co-operation.

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[247]The World Bank Group : Madagascar Systematic Country Diagnostic August 25, 2015, http://documents1.worldbank.org/curated/en/743291468188936832/pdf/99197-CAS-P151721-IDA-SecM2015-0168-IFC-SAecM2015-0123-Box393189B-OUO-9.pdf p. 38.
[248] Report of the Secretary General on International cooperation on humanitarian assistance in the field of natural disasters, from relief to development. A/60/227, August 2005
[249] See Article 2(1) of the ICESCR and CESCR General Comment 3 on the Nature of States Parties Obligations paras. 13 and 14.
[250] International Law Commission, Fifth report on the protection of persons in the event of disasters. 9 April 2012, UN Doc. A/CN.4/652
[251] See Article 2(1) of CESCR as well as the ensuing General Comment 14 at paragraph 40: "States parties have a joint and individual responsibility, in accordance with the Charter of the United Nations and relevant resolutions of the United Nations General Assembly and of the World Health Assembly, to cooperate in providing disaster relief and humanitarian assistance in times of emergency"
[252] Flash Appeal, Grand Sud, January – May 2021, p. 4, https://reliefweb.int/sites/reliefweb.int/files/resources/MDG_20210118_Grand_Sud_Flash_Appeal_English.pdf
[253] Flash Appeal, Grand Sud, January – May 2021, p. 9, https://reliefweb.int/sites/reliefweb.int/files/resources/MDG_20210118_Grand_Sud_Flash_Appeal_English.pdf p. 9.
[254] It aimed at targeting some 72,222 beneficiaries, or 14,444 households in total, for three month, http://apanews.net/en/news/afdb-provides-aid-to-drought-stricken-madagascar
[255] For extensive analysis on states' human rights obligations related to climate change, Amnesty International, Stop Burning Our Rights! What States and Corporations Must Do to Protect Humanity from the Climate Crisis. 7 June 2021 (Index: POL 30/3476/2021)
[256] CEDAW Committee, General Recommendation 37, paras 43 & 46(a); OHCHR, *Treaty bodies' joint statement on human rights and climate change, 2019.*

The transboundary nature of climate change requires all countries to reduce emissions and to achieve zero carbon emissions as soon as possible to the full extent of their abilities. However, countries are not equally responsible for the climate crisis. G20 countries[257] are responsible for 78% of current global annual emissions, with some having a heightened responsibility because of the emissions they have historically produced since the beginning of the industrial revolution. In addition, all of the highest historical emitters are also among the wealthiest states. As a consequence, according to the principle of common but differentiated responsibilities and respective capabilities (CBDR-RC – see Definitions), a principle that is also implicitly reflected in international human rights law,[258] countries that are more developed must take the lead in climate mitigation efforts.[259] In particular, they have obligations to decarbonize their economies more quickly than developing countries, including by stopping the expansion of fossil fuel production, and to provide assistance, including through funding and technology transfer, to developing countries to undertake ambitious and human rights-consistent mitigation and adaptation measures.

States must also take all necessary steps to help everyone within their jurisdiction to adapt to the foreseeable and unavoidable effects of climate change, thus minimizing the impact of climate change on their human rights.[260] This is true irrespective of whether the state is responsible for those effects, because states have an obligation to protect people from harms caused by third parties. In addition, States must ensure adaptation measures give priority to the most marginalized groups, communities and individuals, address gender imbalances, and seek to be informed by the traditional knowledge of Indigenous peoples and other local communities.[261]

While calling for all states to urgently step up actions to mitigate and adapt to climate change, it is widely recognized that some consequences of climate change are effectively "locked-in" and inevitable because of historical emissions, the slow pace of mitigation and adaptation thus far, and limited adaptive capacity particularly in developing countries. However, loss and damage, which encompasses inevitable and irreversible residual effects that we have begun to see, and which will continue occur exponentially if climate mitigation and adaptation efforts do not match the urgency of the current crisis, includes loss of life or income, degrading health, damage to infrastructure, displacement, inability to continue living on ancestral land and to maintain the associated identity and the cultural traditions. Based on the obligation to provide an effective remedy, all states that have failed to take steps within their ability to limit emissions or to adapt to climate change are collectively responsible for the loss and damage resulting in human right violations within their territory and abroad in accordance with their respective contribution to the harm caused.[262] Therefore, based on the duty of international co-operation and on the duty to provide remedy for human rights violations (in this case, the failure to prevent foreseeable human rights harm), wealthy industrialized countries must provide financial means, technical support and access to remedy, including compensation, to people in developing countries whose rights have been negatively affected as the result of loss and damage caused by the climate crisis. This includes ensuring that new and additional finance is mobilized specifically to support and compensate people in developing countries for the losses and damages suffered.

Under the Paris Agreement, states committed to: "Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change".[263] We now know that every further increase of global average temperature will aggravate the impacts of climate change for people and the planet. In a special report issued in October 2018,[264] the Intergovernmental Panel on Climate Change (IPCC) showed the difference that limiting global warming to 1.5°C will make to peoples' lives and ecosystems, compared to a 2°C rise.[265] Analysing new scientific

[257] The Group of Twenty, or the G20, is the premier forum for international economic co-operation. The G20 brings together the leaders of both developed and developing countries from every continent.
[258] Under human rights law implicitly, responsibilities are differentiated in that states in a position to do so are required to provide international assistance where required for the realization of human rights (Article 2(1), ICESCR). Nevertheless, lack of sufficient international assistance does not excuse any state from complying with its human rights obligations, and in the case of economic, social and cultural rights, from realizing these rights to the maximum of available resources. See also Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, 1 February 2016, UN Doc. A/HRC/31/52, para. 46.
[259] Article 4.4, Paris Agreement.
[260] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy, and sustainable environment, Report, 1 February 2016, UN Doc. A/HRC/31/52, para. 68.
[261] For full references, see Amnesty International, Stop Burning Our Rights! What States and Corporations Must Do to Protect Humanity from the Climate Crisis. 7 June 2021 (Index: POL 30/3476/2021), pp. 90-91.
[262] For more details about the human rights obligations related to loss and damage, see Amnesty International, Stop Burning Our Rights! What States and Corporations Must Do to Protect Humanity from the Climate Crisis. 7 June 2021 (Index: POL 30/3476/2021), pp. 107-110.
[263] Article 2(1)(a), Paris Agreement
[264] The report was requested by states at the time of the adoption of the Paris Agreement. See UNFCCC Decision 1/CP.21, 29 January 2016, UN Doc. FCCC/CP/2015/10/Add.1, para. 21.
[265] IPCC, *Special Report on Global Warming of 1.5°C* ,https://www.ipcc.ch/sr15/

evidence that had been made available since their last assessment report in 2014, the IPCC showed that an increase in the global average temperature of 2°C above pre-industrial levels would be much more dangerous than had been believed in 2015 when states adopted the Paris Agreement. In particular, the IPCC stressed that while an increase of 1.5°C will still have very serious effects, these would be far less devastating to human health, livelihoods, food security, water supply, human security and economic growth than an increase of 2°C.[266]

Regrettably, the the first round of governments' emissions reduction plans (Nationally determined contributions – NDCs) made by governments between 2015 and 2016 were completely inadequate, as they would lead to a catastrophic 3°C increase in average global temperatures over pre-industrial levels by 2100.[267] Under the Paris Agreement, state parties were due to submit new, more ambitious NDCs for 2030 and long-term strategies by 31 December 2020. By the end of July 2021, only 113 countries had submitted new plans,[268] with most of the G20 countries having yet to submit a new NDC or failed to set an emission reduction target for 2030 aligned with their level of responsibility and capacity or compatible with the imperative to keep the increase of global average temperature as low as possible and no higher than 1.5°C above pre-industrial levels.[269] Based on all current pledges, average global temperatures are still estimated to rise by 2.7°C.[270] The current gap between emission reduction pledges and what is needed to keep temperature rise below 1.5°C is a major concern from a human rights perspective, as the impacts associated with the predicted level of global warming would be catastrophic for the enjoyment of human rights. In addition, failure to take adequate action to support people to adapt to the unavoidable effects of climate change and to provide remedy to those whose rights have been violated as a result of the loss and damage resulting from climate-related impacts, represents a violation of millions of people's human rights.

With climate change projected to worsen the severity and occurrence of droughts in the Deep South, it is urgent for the international community to respond to the current emergency, and also to provide financial, material and technical support to the government of Madagascar to prevent future droughts from violating human rights of the Malagasy people.

4.2.2 NATIONAL RESPONSE AND OBLIGATIONS ON CLIMATE CHANGE

Madagascar is a signatory to both the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto protocol, and it ratified the Paris Agreement on 21 September 2016. As indicated in its NDC, Madagascar is a least developed country, with non-significant greenhouse gas emissions.[271] The country bears a very low responsibility in terms of global carbon emissions, as national emissions represent 0.2 % of global emissions.[272] According to its NDC, Madagascar's total emissions of CO_2 have so far been lower than the total absorptions, which makes the country a carbon sink.[273]

In 2010, Madagascar developed a National Policy to Combat Climate Change which has as its primary goal to strengthen adaptation to climate change. The country submitted its first Intended Nationally Determined Contribution (INDC) to the UNFCCC in September 2015[274] and has committed to enhancing the ambition of

[266] IPCC, *Special Report on Global Warming of 1.5°C, Summary for Policymakers*, p. 9, https://www.ipcc.ch/sr15/
[267] IPCC, *Special Report on Global Warming of 1.5°C, Summary for Policymakers*, p. 18, https://www.ipcc.ch/sr15
Also World Meteorological Organization United in Science 2020 A multi-organization high-level compilation of the latest climate science information, https://public.wmo.int/en/resources/united_in_science, p. 18.
[268] UNFCCC, *Nationally determined contributions under the Paris Agreement, Synthesis Report by the Secretariat*, 17 September 2021, UN Doc. FCCC/PA/CMA/2021/8
[269] Climate Action Tracker, *Global Update: Climate Target Updates Slow as Science Ramps Up Need for Action*, September 2021, https://climateactiontracker.org/documents/871/CAT_2021-09_Briefing_GlobalUpdate.pdf
[270] UN News: Paris climate deal could go in smoke without action: Guterres, 17 September 2021, https://news.un.org/en/story/2021/09/1100242
[271] UNFCCC: Madagascar's Intended Nationally Determined Contribution p. 1, https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Madagascar%20First/Madagascar%20INDC%20Eng.pdf p 1
[272] Climate Watch: Madagascar, https://www.climatewatchdata.org/ndcs/country/MDG/overview?document=first_ndc&section=fairness_and_ambition
[273] Republic of Madagascar, Madagascar's Intended Nationally Determined Contribution, https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Madagascar%20First/Madagascar%20INDC%20Eng.pdf
[274] Most states parties to the UNFCCC submitted Intended National Determined Contributions in preparation for the adoption of the Paris Agreement. At the moment of ratifying or accessing the Agreement, a state's INDC was converted in its first NDC, unless they chose to submit a revised NDC. Madagascar INDC submitted in 2015 became its first NDC.

its NDC by 2020.[275] At the time of writing however, Madagascar had not yet submitted its updated NDC to the UNFCCC Secretariat nor made a draft publicly available for consultation.[276]

Despite bearing very low responsibility for climate change, Madagascar's early policy on climate change and its NDC highlighted its ambition to fight climate change, by contributing to greenhouse gas emissions reduction and absorption. Madagascar aims to reduce greenhouse gas emissions 14 percent by 2030 compared to a Business-as-Usual scenario, conditional upon financial support from the international community. Investment costs for the implementation of Madagascar's NDC priorities are estimated to be about USD 42.099 billion, more than half of which would be allocated to adaptation actions. Of the total amount of investments needed, Madagascar indicated that only around 4% could be met by domestic resources. This highlights the urgency for wealthy industrialized countries to urgently increase their respective contribution to climate finance to support climate action in developing countries. Despite their commitment in 2009 to jointly mobilize 100bn a year by 2020 to address the needs of developing countries,[277] this pledge remains still unmet.[278]

The current drought in Madagascar and its impacts should not be treated by the Malagasy government and the international community just as a humanitarian emergency. Given the fingerprints of climate change on a number of factors that have contributed to the magnitude of this crisis, it should also be seen as a manifestation of "loss and damage" caused by the climate emergency. As such, the Malagasy government should assess, including through international cooperation, the losses and damages caused by the drought and other climate-change related factors that are contributing to its intensity. In doing so, it must consider the adverse effects of the drought on the enjoyment of human rights, such as the rights to life, health, water and sanitation, food, education, culture. Globally, all states in a position to do so have the obligation to provide adequate resources (such as funds, technology transfer and technical advice) for loss and damage related to the drought in Madagascar. In addition, based on the obligation to provide an effective remedy, all states that have failed to take steps within their ability to limit emissions must provide resources to redress loss and damage suffered by people in Madagascar as a result of the drought.

Nevertheless, the lack of sufficient international assistance, nor its lower responsibility in relation to climate change, does not excuse Madagascar from taking steps to comply as far as it can with its human rights obligations, and from realizing economic, social and cultural rights to the maximum of available resources. In the context of climate change, even in the absence of sufficient international assistance, Madagascar must take the most ambitious measures possible to the full extent of its abilities to reduce greenhouse gas emissions in the shortest practical time-frame and to support people under their jurisdiction, and particularly those living in poverty and most marginalized, to adapt to the effects of climate change. For example, crucial measures include: livelihood diversification,[279] and improving infrastructure to enable access to water, sanitation and hygiene. Madagascar must make it a priority to protect people living in poverty and those most marginalized against disasters and related shocks, especially as the impact of climate change is expected to worsen the intensity of such events, including by requesting international assistance and cooperation, as per its human rights obligations. International co-operation and assistance is indeed crucial to facilitate fulfilment of human rights of people in Madagascar, especially in the context of the climate crisis.

[275] COP25: Annex I: Enhanced ambition in national climate plans, 11 December 2018, https://s3-sa-east-1.amazonaws.com/cop25.cl/documents/eng/1312+Annex+Alliance+ENGLISH.pdf
[276] See: https://www4.unfccc.int/sites/NDCStaging/Pages/All.aspx
[277] At COP15 in 2009, "developed" countries committed to "mobilizing jointly $100bn a year by 2020 to address the needs of developing countries". This was reaffirmed by the decision accompanying the Paris Agreement extends the USD$100 billion-a-year goal through to 2025 and calls for a new more ambitious goal "from a floor of $100 billion a year", although without specifying the final target (see UN Doc. FCCC/CP/2015/10/Add.1, para. 53).
[278] Climate Home News, Latest data shows rich countries little closer to $100bn climate finance promise, 17 September 2021, https://www.climatechangenews.com/2021/09/17/latest-data-shows-rich-countries-little-closer-100bn-climate-finance-promise/
[279]The World Bank Group : Madagascar Systematic Country Diagnostic August 25, 2015, http://documents1.worldbank.org/curated/en/743291468188936832/pdf/99197-CAS-P151721-IDA-SecM2015-0168-IFC-SAecM2015-0123-Box393189B-OUO-9.pdf p. 91.

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5. CONCLUSION AND RECOMMENDATIONS

The severe drought ongoing in southern Madagascar has impacted a wide range of human rights for the people affected, including the right to life, to food, water, and health. More than a million people are at risk of hunger, and the UN and other humanitarian partners have issued an urgent appeal for funds to avert what could become a humanitarian catastrophe. Existing scientific research suggests that climate change has likely contributed to an increase in temperatures in the southern part of the country, while at the same reducing rainfall, conditions which elevate the likelihood of droughts. Furthermore, current climate projections indicate that droughts in that part of the country are expected to become more severe because of climate change in the coming decades, raising serious concerns for the protection of human rights.

Despite this, the vast majority of states are failing to phase out emissions fast enough to limit the increase of global average temperatures to below 1.5°C. Without more ambitious steps, urgently, situations like the ongoing drought in Madagascar are likely to become more recurrent, and more severe.

In light of the grave threat that global heating poses to human rights, states must adopt and implement all feasible and human rights-consistent steps to the full extent of their abilities to reduce GHG emissions within the shortest possible time-frame and in a manner compatible with the imperative of keeping the global average temperature rise as low as possible and no higher than 1.5°C above pre-industrial levels. An increase of 1.5°C is not a ceiling for what is required under human rights law; the current global temperature rise of 1.1°C is already causing major detriment to people's human rights. Rather, the 1.5°C threshold represents a feasible limit that states can still meet under current circumstances. Once carbon emissions are reduced to zero, states will need to establish a further, lower threshold for the global average temperature that is consistent with the protection of human rights.

Human rights must be a central consideration in all climate policies, measures and initiatives taken by states. In particular, they must ensure that the transition to decarbonized economies and resilient societies is just and fair for all, in line with states' human rights obligations, creating opportunities to combat existing inequalities both within and between countries, including promoting gender, racial, ethnic, disability and inter-generational equality. In holding states to these obligations Amnesty International recommends:

5.1 TO THE INTERNATIONAL COMMUNITY

- Increase humanitarian relief efforts to southern Madagascar, including providing sustained and regular emergency food assistance and access to clean and safe water for domestic use and consumption, prioritizing those who are most marginalized.
- Adopt ambitious new Nationally Determined Contributions (NDCs) and national long-term emission reduction strategies ensuring these plans are aligned with the imperative to keep the increase of global average temperature as low as possible and no higher than 1.5°C above pre-industrial levels, and reflect each state's responsibility for the climate crisis and their full ability to reduce emissions in the shortest timeframe possible.

TO WEALTHY INDUSTRIALIZED STATES:

- Adopt the most ambitious emission reduction targets that would enable them to reduce GHG emissions by 50% well before 2030 and reach zero carbon emissions by 2030 or as soon as feasible after that while ensuring a just transition that enhances human rights.
- Substantially increase their respective contributions to climate finance to support reaching the internationally agreed target of jointly mobilizing the USD 100billion annually for climate action in less wealthy countries.

TO ALL OTHER WEALTHIER STATES IN A POSITION TO PROVIDE INTERNATIONAL COOPERATION AND ASSISTANCE:

- Make available to the Government of Madagascar climate finance that is new and additional to existing commitments for overseas development assistance, through multilateral and bilateral channels, to the scale outlined as the required investment for the implementation of Madagascar's NDC and national climate policy priorities, in the form of grants, not loans, and towards a balanced mitigation and adaptation response.
- Provide financial, technological and technical support to Madagascar to ensure sufficient climate change adaptation measures in a manner that would ensure at least minimum essential levels of economic, social and cultural rights for people in the Deep South, and other affected areas.
- Provide adequate resources, such as funds, technology transfer and technical advice to address and provide remedy for climate change-induced economic and non-economic loss and damage (at individual, community and economy-wide scales) across Madagascar, with urgent action in the more vulnerable Deep south.

5.2 TO THE GOVERNMENT OF MADAGASCAR

- Increase humanitarian relief efforts to southern Madagascar, including providing sustained and regular emergency food assistance and access to clean and safe water for domestic use and consumption, prioritizing those who are most marginalized, and seeking assistance from the international community where necessary.
- Take the most ambitious and human rights-consistent measures possible to the full extent of its abilities to reduce greenhouse gas emissions in the shortest practical time-frame.
- Take the most ambitious and human rights-consistent measures possible to the full extent of its abilities to support people in Madagascar, and particularly those living in poverty and most marginalized, to adapt to climate change and become more resilient in the face of adverse weather events and avert a prolongation and intensification of acute food insecurity.
- Ensure crucial infrastructure, such as water, sanitation, health and education, is resilient to climate impacts,[280] particularly in the less-developed southern regions of the country, seeking assistance from the international community where necessary.
- Develop, adequately fund and implement disaster risk reduction and management strategies, early warning systems and emergency response plans, while ensuring that early warning information is provided in a timely, culturally appropriate, accessible and inclusive manner and the needs of most impacted groups are taken into account.
- Support agricultural practices and other approaches capable of making food systems and livelihoods more resilient to climate change impacts, while adopting public policies that promote and facilitate sustainable agriculture, food systems and human rights-consistent agricultural land use and management practices.[281]

[280] Report of the Special Rapporteur on the right to adequate housing, 6 August 2009, UN Doc. A/64/255, para. 51; Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, 15 July 2019, UN Doc. A/74/161, para. 86(b).
[281] Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, 15 July 2019, UN Doc. A/74/161, para. 86(e).

- Invest in social protection and social services to reduce vulnerability to and mitigate the risks of disasters and climate-induced stresses, ensuring that men and women have equal access to them and that the needs of women and marginalized groups are taken into account.[282]
- Address climate change and disasters as drivers of migration and displacement, prevent and reduce the risk of climate change-related displacement, including by facilitating safe and regular migration as an adaptation strategy.[283]
- Work with local and community media to ensure frequent and clear messaging on weather and risk related issues, recommended actions and available assistance, with particular attention to ensuring access to such information by groups most vulnerable to the impacts of disasters, including persons with hearing, visual and other disabilities, older people, and those with limited access to sources of information – with specific interventions designed to reach, protect and empower remote and marginalized communities to build their resilience to natural hazard-induced disasters.
- Seek international assistance and co-operation to take sufficient adaptation measures, informed by an assessment of the losses and damages caused by the drought and other climate-change related factors that are contributing to its intensity. In doing so, it must consider the adverse effects of the drought on the enjoyment of human rights, such as the rights to life, health, water and sanitation, food, education, culture.
- Adopt and implement forest and other natural ecosystems conservation laws and policies. Such laws and policies must avoid a forest-centric or a fortress-conservation approach or any other approach which can result in human rights violations and should be developed with the full and meaningful participation of all affected people.
- Provide alternative, renewable and safe sources of energy for cooking, heating, other household and domestic energy needs.

[282] Report of the Special Rapporteur on the right to food, 5 August 2015, UN Doc. A/70/287, para. 89(k); CEDAW Committee, General Recommendation 37, para. 64(a); Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, 15 July 2019, UN Doc. A/74/161, para. 86(c).
[283] OHCHR, *Treaty bodies' joint statement on human rights and climate change*, 2019, https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=24998

ANNEX 1: IPC DEFINITIONS

The Integrated Food Security Phase Classification (IPC) defines famine as an extreme deprivation of food. Starvation, death, destitution and extremely critical levels of acute malnutrition are or will likely be evident.

There are three IPC scales: Acute Food Insecurity, Acute Malnutrition, and Chronic Food Insecurity. Each scale classifies a specific condition that is linked to particular response. The definitions of each scale can be found below:

- Acute Food Insecurity: Food insecurity found at a specific point in time and of a severity that threatens lives or livelihoods, or both, regardless of the causes, context or duration.
- Chronic Food Insecurity: Food insecurity that persists over time mainly due to structural causes, including intra-annual seasonal food insecurity.
- Acute Malnutrition: Global Acute Malnutrition (GAM) as expressed by thinness of individuals or presence of oedema.

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IT WILL BE TOO LATE TO HELP US ONCE WE ARE ALL DEAD

THE HUMAN RIGHTS IMPACT OF CLIMATE CHANGE IN DROUGHT-STRICKEN SOUTHERN MADAGASCAR

This report examines the human rights impact of climate change in drought-stricken southern Madagascar. The southern region of the country, commonly referred to as *Le Grand Sud* (the Deep South) is currently in the grips of famine and its worst drought in 40 years. Over 1.1 million people in the Grand South are experiencing severe insecurity and the situation is expected to deteriorate in the coming months.

This report has found that as a direct consequence of the ongoing drought, malnutrition in the region is increasing, while access to water, sanitation and hygiene are ever more precarious, resulting in negative human rights impacts on southern Malagasy communities.

This devastating drought is proof that Madagascar and its people have increasingly faced the impacts of climate change, as evidence suggests that the climate crisis currently facing the world is contributing to the severe weather conditions being experienced by the country.

While this report primarily exposes the consequences of the recurring drought in *Le Grand Sud* of Madagascar on the population's human rights, it also aims at calling on the international community to take urgent action to tackle the grave crisis that is climate change, as according to current climate projections, without action, it is likely to make such climatic events worse and more severe, with dramatic consequences on human rights.

This report also calls on Malagasy authorities and the international community to ramp up their relief efforts, including providing sustained and regular emergency food assistance and access to clean and safe water for domestic use and consumption in the rural areas of the Deep South.

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