



# Climate change and noncommunicable diseases in small island developing states

**SIDS Ministerial Conference on NCDs and Mental Health**

14–16 June 2023

**Policy brief**



**World Health  
Organization**

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### Policy brief

“ In the absence of ambitious human intervention to reduce emissions, climate change impacts are likely to make some small islands uninhabitable in the second part of the 21st century. By protecting and restoring nature in and around small islands as well as implementing anticipatory adaptation responses, humans can help reduce future risks to ecosystems and human lives on most small islands. ”

“Intergovernmental Panel on Climate Change, 6th Assessment Report, 2022 (1)”

#### Health impacts of climate change in SIDS

Small island developing states (SIDS) (2) have made minimal contributions to global emissions of greenhouse gases but are among the countries hardest hit by climate change and natural disasters. Most SIDS are already experiencing severe health effects from climate change, with an increasing incidence of infectious diseases such as malaria, dengue fever, diarrhoea and Zika virus disease. (3) There is increasing strong evidence for a relation between increased morbidity and mortality from noncommunicable diseases (NCDs) and extreme weather events, including heat waves, and also increasingly unhealthy diets and food and water insecurity. (1) Climate change also poses serious risks to mental health. (4) SIDS are disproportionately represented among the countries with the highest estimated risk of dying prematurely from any of the four main NCDs, cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases. Eight of the 15 countries in the world with over 30% risk of premature death from NCDs in 2019 were SIDS.

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## Key messages

- Two major global crises of our time, climate change and the epidemic of noncommunicable diseases (NCDs), are intertwined. They erode gains in health and development and the quality of life, hitting poor and marginalized people the hardest. (5) Action to manage them both should be aligned (6) in synergistic interventions that can address both.
- The mean global temperature has increased by 1.15 °C since pre-industrial times, (7) and the mean global sea level has risen by 20 cm, (8) which contribute to an increased frequency and greater intensity of extreme weather events. NCDs – primarily cardiovascular diseases, cancer, diabetes and chronic respiratory diseases – cause 74% of deaths in the world, (9) including 8 million deaths linked to unhealthy diets. (10)
- Small island developing states (SIDS) are among the countries most severely affected by climate change, as rises in sea levels and extreme weather pose existential risks. SIDS also have high burdens of NCDs, mental health conditions and other diseases that are exacerbated by climate change.
- SIDS make up two thirds of the countries that suffer the greatest relative losses from climate disasters each year, although they contribute less than 1% of global greenhouse gas emissions. (11)
- SIDS are disproportionately represented among countries with the highest risks of premature death from any of the four main NCDs, including very high rates of diabetes and overweight, and obesity. The 10 countries with the highest obesity rates globally are all in SIDS in the Western Pacific, and the highest rates of childhood and adolescent obesity are also found in SIDS. (12)
- The challenge to responding to NCDs is significant, as the epidemic has grown earlier and faster among SIDS than elsewhere in the world due to commercial determinants of health. In particular, climate- and trade-related challenges related to the small populations of SIDS, their geographical isolation and their market vulnerability have eroded local food production capacity, resulting in significant dependence on importation of ultra-processed foods, sugary drinks and other unhealthy foods. At the same time, SIDS continue to demonstrate global leadership in promoting awareness and actions to address the NCDs epidemic and the climate crisis.

### Failure to meet the 1.5 °C target of the Paris Agreement

According to the Intergovernmental Panel on Climate Change (IPCC), the world will most likely exceed the 1.5 °C target for global warming of the 2015 Paris Agreement during the next decade (8) as a consequence of the continued growth in anthropogenic greenhouse gas emissions. This growth has occurred despite the Paris Agreement and, before that, the commitments made by countries more than 30 years ago when they adopted the United Nations Framework Convention on Climate Change. (13)

- There is clear evidence that global warming beyond 1.5 °C will have devastating health impacts all over the world; however, the consequences will be worst in regions and areas that are highly vulnerable to climate change, such as SIDS. (14) In most SIDS, the rise in temperature will result in increased morbidity and premature mortality from NCDs and from other climate-sensitive infectious diseases; some SIDS will become unliveable. (1)
- To avoid the most severe health impacts, climate adaptation efforts must be scaled up by the health sector and related sectors. Short-term measures can be taken according to health vulnerability and adaptation assessments. In the long term, all SIDS will require health systems that are more resilient to climate and emergencies and that ensure access to prevention and care for NCDs and mental health to increase health longevity and sustainability, and more robust surveillance and early warning systems for extreme weather events, including effective response measures, such as heat action plans.
- Well-designed climate mitigation measures can also reduce NCD risk factors in SIDS, as well as show leadership. For instance, measures to ensure clean energy and transport will reduce air pollution; policies to promote walking and biking may reduce weight and lower blood pressure. Policy for the production and consumption of healthy, locally produced fresh foods, particularly plant-based foods, and discouraging excessive red meat consumption, would lower greenhouse gas emissions in agriculture and result in healthier diets. (15) In addition, planting trees and shrubs with crops could both increase the resilience of crops to droughts and excessive rainfall run-off, reduce CO<sub>2</sub> emissions as well as improve health. (1)

### Climate change and NCDs affect poor and marginalized populations

Both climate change and NCDs disproportionately affect poor and marginalized groups who lack the resources to respond adequately, in both SIDS and most other countries. Out-of-pocket spending for NCDs and mental health care are often high and can lead to impoverishment. (16,17) In order to respond comprehensively and coherently to these multifaceted challenges, the approach must be anchored in human rights. Such approaches include those to health, food, adequate housing, water and sanitation, addressing both determinants and services, placing people, particularly those in situations of vulnerability or marginalization, at the centre of relevant policies.

To reduce inequalities and make populations more resilient by 2030, all people in SIDS should have effective, affordable, climate-resilient health services and essential medicines, vaccines, diagnostics and health technologies for the prevention and control of NCDs, fully integrated into primary health care and universal health coverage.

### Climate change and mental health

Climate change also impacts mental health and psychosocial well-being, due to both stressors and risks posed by extreme weather events and longer-term environmental change such as rising temperatures, rising sea levels, air pollution, prolonged droughts and the gradual spread of climate-sensitive diseases. These effects can be widespread and devastating to communities and societies. Certain groups are at disproportionate risk, including people with pre-existing mental health conditions. The WHO policy brief on mental health and climate change (4) describes these impacts and proposes five recommendations and guidance for action:

1. Integrate climate change considerations into policies and programmes for mental health, including mental health and psychosocial support in emergencies, to better prepare for and respond to the climate crisis.
2. Integrate mental health and psychosocial support into policies and programmes for climate change and health.
3. Build on global commitments.
4. Use multisectoral, community-based approaches to reduce vulnerability and address the mental health and psychosocial impacts of climate change.
5. Address the large gaps in funding both for mental health and for responding to the health impacts of climate change.



A fisherman releasing fishing net into the sea, Pante Kelapa, Dili, Timor-Leste  
Source: WHO / João Soares Gusmão

# 1 Climate change and NCDs in SIDS: intertwined challenges

“Climate change is a threat to human well-being and planetary health. There is a rapidly closing window of opportunity to secure a liveable and sustainable future for all.”

Intergovernmental Panel on Climate Change, 6th Assessment Report, Synthesis Report, 2023 (8)

## Climate and NCDs: the global picture

Climate-related illnesses, premature deaths, malnutrition in all its forms, and threats to mental health and well-being are increasing all over the world with the rising temperatures and related climatic changes. According to the IPCC, the number of deaths related to climate change may reach 9 million per year by the end of the century. People living with NCDs are especially vulnerable to many climate-related risks. (1)

- The mean increase in global temperature is expected to surpass the Paris Agreement target of 1.5 °C in the next decade and will also pass the 2 °C limit, unless greenhouse gas emissions are reduced meaningfully. (8) The average sea level has risen by about 20 cm, at a rate that has doubled over the past 30 years (6). It is expected to rise by a further 10–25 cm by 2050, even if we manage to cut greenhouse gas emissions. (1)
- NCDs – primarily cardiovascular diseases, cancer, diabetes and chronic respiratory diseases – cause 74% of deaths in the world, (9) including eight million deaths linked to unhealthy diets. (10) More than 75% of all deaths due to NCDs and 86% of the 17 million premature deaths (before the age of 70 years) occur in low- and middle-income countries. (9)



Arlene and her mother walking along the beach in the fishing village of Belle Garden, Tobago. Arlene took part in a chronic disease self-management course where she learnt about various aspects of managing NCDs

Source: WHO / Alasdair Bell

- Adverse impacts and related losses and damages due to climate change increase with every increment of global warming. The combined effects of global warming and sea-level rise will be widespread and devastating, with extreme weather events of unprecedented intensity and frequency. This will increase morbidity and premature mortality from NCDs in SIDS, as well as from other climate-sensitive diseases. (8,18)
- The impacts of climate change on vulnerable low-lying and coastal areas seriously threaten the ability of land to support human life and livelihoods. Consequently, several islands in SIDS may become unliveable, and climate-related migration is expected to increase. (1)

### *SIDS are especially vulnerable to climate change, with high burdens of NCDs*

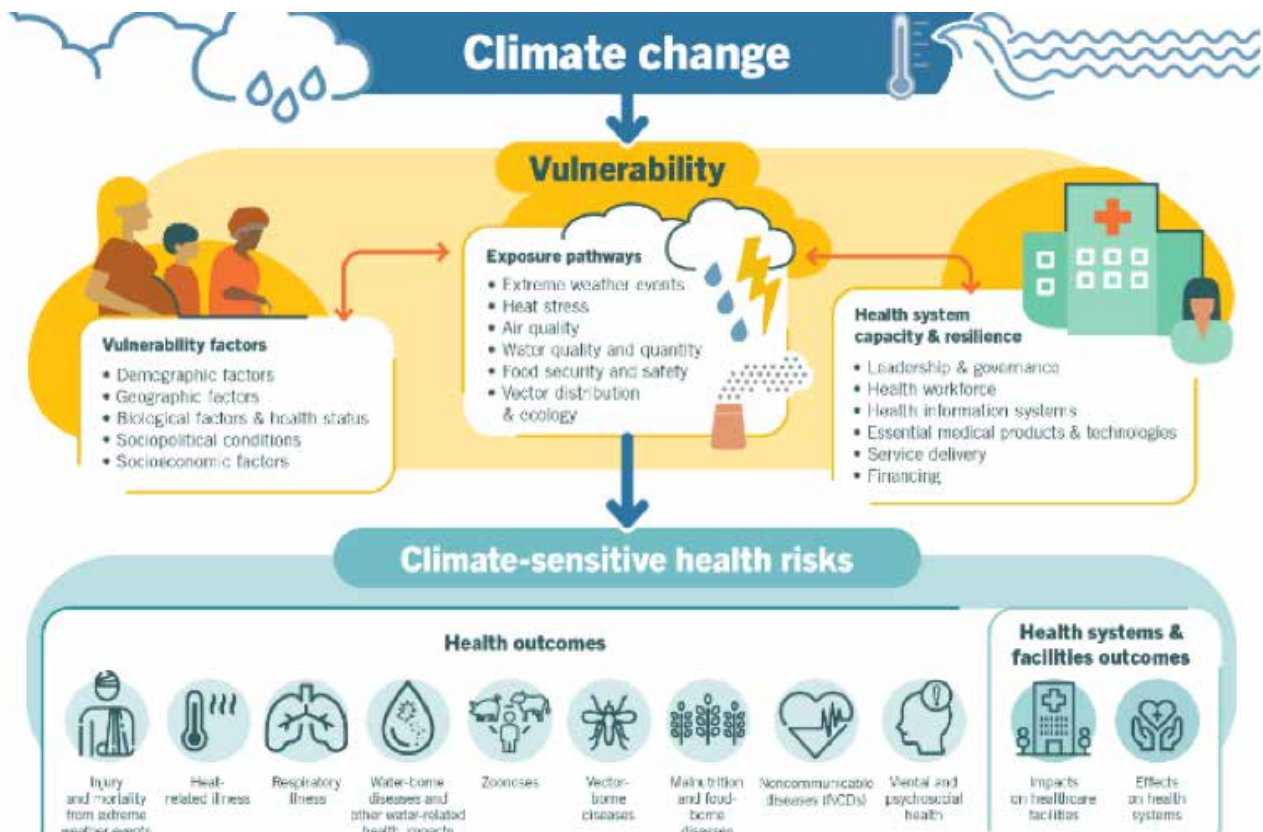
SIDS are a distinct group of 39 states located in the Caribbean, the Pacific and the Atlantic, Indian ocean and South China Sea (AIS). (2) SIDS are especially vulnerable to climate change because of their coastal geography and because many SIDS consist of low-lying islands. People live mainly near the coast, at low altitudes, which increases their exposure to extreme weather events and other climate hazards. Poor and marginalized people living in informal settlements along the coast are among the most severely affected by climate change. (1)

- Eight SIDS are among the 10 countries at greatest risk of disasters caused principally by extreme weather events. Between 1970 and 2018, nine of the ten most severe disasters caused by climate change in the world, in terms of damage to gross domestic product, occurred in SIDS. (11)
- NCDs represent a major challenge in most SIDS, which are among the countries with the highest estimated probability of dying prematurely from any of the four main NCDs, (12) including very high rates of overweight and obesity.
- Over half of deaths in SIDS are “premature”, occurring before the age of 70 years, and most are due to NCDs. In most SIDS countries, over 30% of the population suffers from hypertension, and 10 of the countries globally with the highest rates of obesity are SIDS. The highest prevalence of diabetes among adults in the world is also projected to be in SIDS. People living with chronic NCDs are more vulnerable to the health effects of climate change, including heat waves and other extreme weather events. (12,19,20)
- Responding to NCDs is a significant challenge, as the NCD epidemic has grown earlier and faster in SIDS than elsewhere in the world due to commercial influences and trade challenges, which undermine access to fresh, nutritional food. Negative commercial influences are also driving high rates of smoking, obesity and sedentary behaviour in these countries.
- Changing dietary preferences, increasing reliance on imports and an exponential rise in the consumption of highly processed food and drink products, which are often energy dense and high in saturated fats, free sugars or salt, are exacerbating dietary risk factors for NCDs. (21) In the majority of SIDS, over 80% of food is imported. Local food production continues to be challenged by the vulnerability of SIDS to the impacts of climate change.
- Many SIDS have weak health systems that are not adequately prepared for the added burden of climate change and NCDs. Health care facilities in SIDS are often located in low-lying areas that are subject to flooding and storm surges. Many facilities lack a functioning infrastructure and a trained health workforce and have inadequate energy supplies and water, sanitation and waste management services. (1)
- In addition to the effects of climate change, the coronavirus disease (COVID-19) pandemic caused major disruptions to health care services, which disproportionately affected people living with NCDs. (22)



SIDS disproportionately face health risks associated with changes in temperature and precipitation and extreme weather events, such as heat waves, cyclones, floods and droughts. Human beings and ecosystem vulnerability are interdependent, and extreme events of increasing frequency and magnitude have exposed SIDS populations to acute food insecurity and compromised water security. (1)

- **Extreme heat.** Heat waves pose a particular threat to human, animal and plant health, resulting in loss of life, livelihoods, socioeconomic output and reduced labour productivity. Extreme heat directly affects human health through heat-sensitive physiological mechanisms. Exposure may lead to kidney disorders, stroke, adverse pregnancy outcomes and aggravation of underlying cardiovascular and respiratory diseases. (23,24) In the worst cases, extreme heat leads to organ failure and death. (25) Heat-related mortality from NCDs such as cardiovascular and kidney diseases in SIDS is projected to increase with higher temperatures. The elderly, children, pregnant women, outdoor workers, the poor and marginalized and people living with NCDs and obesity are among the worst affected. (26)
- **Lack of clean drinking-water.** Freshwater systems in SIDS are among the most threatened on the planet because of climate hazards such as sea-level rise, extreme weather events and reduced precipitation. The scarcity and pollution of water can have serious health impacts. Salinity of groundwater may increase salt intake of affected populations, which may lead to hypertension and increased risks of cardiovascular diseases or aggravation of pre-existing NCDs. (1) These risks add to those of infectious diseases such as diarrhoea from contaminated water.
- **Food insecurity and malnutrition.** Climate change affects food production and supply in many ways, (27) threatening food security and food sovereignty in SIDS. Damage to crops and livestock from rising sea levels and extreme weather events and reduced fish catches because of higher ocean temperatures and acidity contribute to food insecurity and dependence on imported food. Most SIDS have a triple burden of malnutrition, with concurrent undernutrition, micronutrient deficiency and overweight and obesity, and increasing rates of diet-related NCDs. (21) Reduced access to nutritious, locally produced, fresh foods and increased dependence on imported processed foods may exacerbate the burdens of malnutrition and of NCDs. (1)
- **Extreme weather events.** People with NCDs are at particular risk during and after extreme weather events such as floods and storms, which interrupt routine treatment and reduce access to life-saving medication. (28) For example, people with diabetes are at increased risk of morbidity and mortality from extreme events. (1)



Source: WHO (29)



Women working on nutritional projects with fruits and vegetables as part of an education programme to prevent NCDs by promoting healthy diets in Tulagi, Solomon Islands

Source: WHO / Blink Media, Neil Nuia



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## 2 Critical actions to address the double crises of climate change and NCDs in SIDS

“ The parallels between NCDs and climate change go beyond statistics to causal factors. Both are preventable. Both are caused to a large degree by human behaviour. And both require a multisectoral response. Yet neither is prioritised by responsible global and national policy-makers. (30) ”

NCDs and climate change interact and threaten people's lives and livelihoods. A range of national actions, policies and strategies is necessary to address the health impacts of climate change, including morbidity and mortality from NCDs in SIDS. The policies and actions should be aligned and mutually reinforcing. The need for assistance and financing to address these challenges must be recognized, and international action to address the two crises is essential. SIDS have demonstrated global leadership in promoting awareness and necessary actions to combat the NCD epidemic and the climate crisis.

### National action to reduce exposure to the impacts of climate change and the risks of NCDs

- SIDS' health systems must be strengthened to enhance their resilience and better prepare them for the rising burden from climate change and NCDs. (30) This could include: ensuring that health facilities are protected against extreme weather events; training the health workforce and including mechanisms to guarantee retention; ensuring adequate sustainable energy supplies and water, sanitation and waste management services; enhancing health security; and reinforcing the prevention, detection and control of NCDs. These are integral components of primary health care and universal health coverage.
- To address the increasing rate of premature NCD mortality, cost-effective interventions to reduce exposure to specific risk factors, prevention and disease-specific management should be implemented at the same time as scaling up of cross-cutting measures to improve the commercial determinants of health. Most premature deaths from NCDs could be prevented by enabling health systems to respond more effectively and equitably to the health care needs of people living with NCDs and by influencing public policies in sectors outside health to tackle shared risk factors. (23)
- SIDS populations should be protected by reducing their exposure to extreme events such as cyclones, floods, heat waves and droughts, including through early warning and response systems and heat action plans. The early warning and response systems should include instructions for governments, communities and individuals on actions to minimize the impacts of extreme weather events, including those related to NCDs. (24)
- National assessments of vulnerability to health risks from climate change should be conducted, and the necessary adaptation measures for preventing climate-related diseases and death should be implemented. The assessment should include vulnerability to NCDs and action to increase resilience, such as improving access to healthy, nutritious food, clean drinking water and hygiene and sanitation services.
- SIDS should invest in policies to reduce greenhouse gas emissions with co-benefits for health, such as measures to establish clean energy and transport to improve air quality; clean cooking options; transform food systems to make them more sustainable and resilient, providing healthy diets for all; and walking and cycling to reduce NCDs such as heart disease, stroke, diabetes, respiratory diseases and several cancers.
- SIDS should develop or update national food-based dietary guidelines with full integration of considerations of environmental sustainability with respect to human, animal and environmental health in each recommendation, according to the national context.
- Furthermore, policies should be implemented to ensure healthy, safe, sustainable food environments, including schools, such as strengthening food control systems; restricting marketing of foods that contribute to unhealth; policies for sustainable diets, nutrition labelling, fiscal measures and public food procurement; gradual reformulation of foods and beverages to reduce their content of saturated fat, sugars, salt/sodium and trans fat from foods and beverages.

### Health-based climate adaptation

To reduce the increasing risks to ecosystems and human lives in SIDS from climate change, nature in and around the islands must be protected and restored, and health-related adaptation responses must be identified through assessments of health vulnerability and adaptation. (1) Work with local communities and use of local knowledge may provide additional benefits. Human health will also benefit from integrated options for mitigation and adaptation, in which health is mainstreamed into food, infrastructure, social protection and water policies. SIDS will require external financial support to plan and implement adaptation responses so that they can survive and thrive.

### Climate-resilient health systems

Climate change and NCDs pose serious challenges to health systems in SIDS, which are often not prepared to address them. Health care facilities in SIDS are often located in low-lying areas, exposed to extreme weather events such as flooding and storm surges. Health care facilities may also be exposed to heat waves, droughts, excessive rainfall and storms. Many facilities lack a health workforce that is trained to address the health impacts of climate change, NCDs and mental health conditions, and many have inadequate energy supplies and water, sanitation and waste management services. Urgent action is necessary to strengthen both the resilience of health systems to climate hazards so that they can maintain operations during extreme events and their capacity to meet climate change health and NCD challenges with adequate services, including prevention, detection and control of NCDs. (18) The entire health system must be covered, including leadership and governance, the health workforce, health information systems, essential medical products and technologies as well as service delivery and financing.



Rafuel, his wife Janella and their son Jemuel. Rafuel is a nurse at a health centre in Tobago. He participated in an NCD self-management course run by PAHO/WHO with the support of the UHC Partnership.

Source: WHO / Alasdair Bell

### National policies and strategies to reduce vulnerability

- Within national policies on climate change, SIDS should identify and prioritize climate action with health benefits, including that related to NCDs. This could include removal of harmful subsidies, such as on fossil fuels and some agricultural commodities (e.g. sugar, and intensive livestock production); and promotion of policies to reduce NCD risk factors (e.g. measures to reduce air pollution, increase physical activity and promote healthier diets).

- SIDS should integrate climate change considerations into their policies and programmes on NCDs and work across sectors. For example, climate change should be considered when developing and implementing policies and actions to prevent NCDs and their risk factors, such as unhealthy diets, physical inactivity and air pollution. A multistakeholder approach is important, and people with lived experience should be included.
- SIDS should incorporate or strengthen considerations of health and nutrition in their nationally determined contributions under the Paris Agreement, including the estimated health benefits of climate change mitigation and adaptation, which are also related to the burden of NCDs.
- SIDS should ensure that health is integrated into their national adaptation plans, including for resilient health systems, prevention and control of NCDs, and food and water security. The national adaptation plan should also include longer-term actions such as early warning and response systems for climate-sensitive health risks and improving data collection and information flow.
- SIDS should improve storage, preservation, transport and distribution technologies and infrastructure to reduce seasonal food insecurity and food and nutrient loss and waste. Furthermore, they should consider strengthening local food production and processing, especially by smallholder and family farmers, and preserve fish habitats to promote sustainable fisheries. (27)
- NCDs should be included in SIDS' plans for emergency preparedness and response and disaster risk management, with surveillance systems for climate-related diseases, early warning systems and heat action plans. Despite the heavy burden of extreme weather events in most SIDS, many are lagging in building and sustaining integrated, people-centred, end-to-end early warning systems. (1)

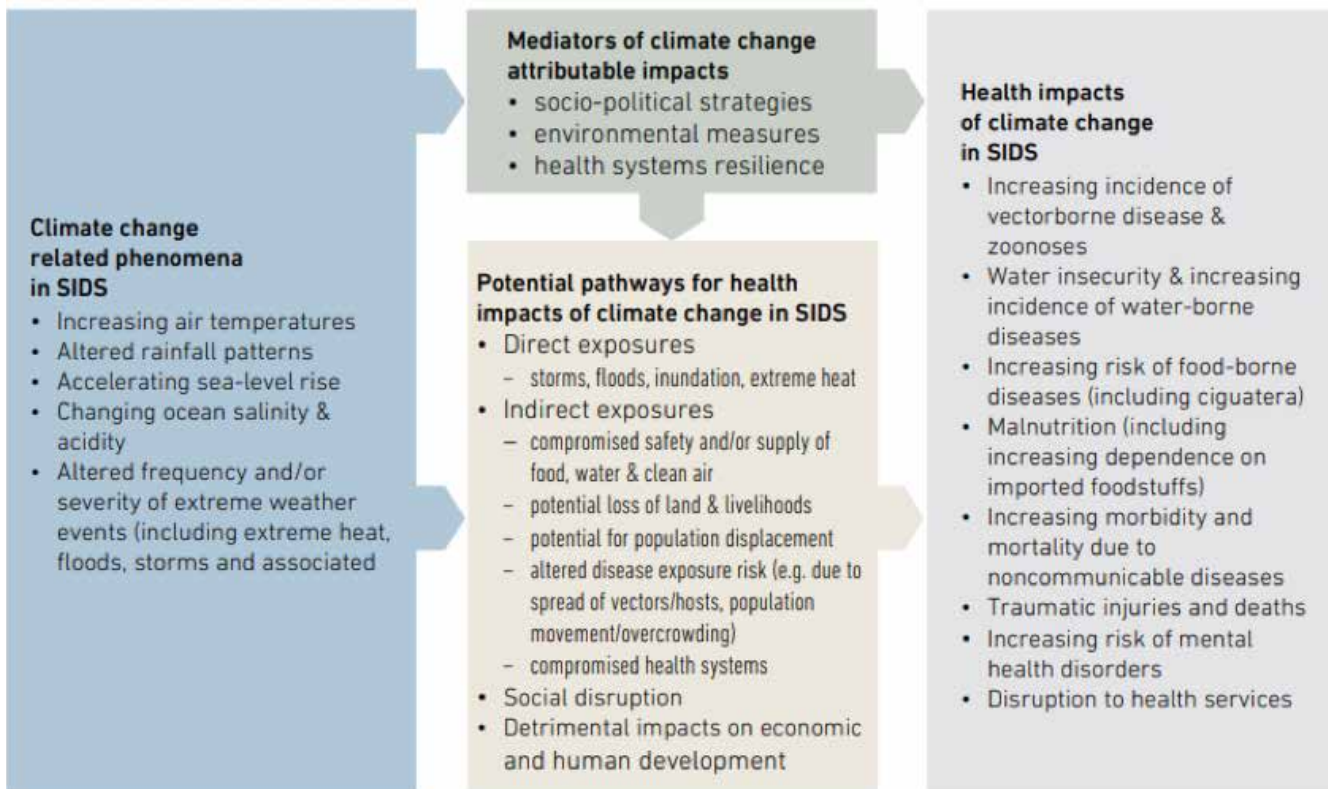
### External financing for national action

- Financing to support SIDS action to address the health impacts of climate change and reduce premature mortality from NCDs must be scaled up, through national health taxes, removal of fossil fuel subsidies and other health-harming subsidies, and increased access to international climate financing, such as the Global Environment Facility, the Adaptation Fund, the Green Climate Fund, and the Loss and Damage Fund, as well as through the World Bank and regional development banks.
- In order to access international climate funds, SIDS countries should increase awareness of the links between health and adaptation and mitigation of climate change, and facilitate cross-sectoral collaborations between health and other sectors. The health benefits of investments in all sectors should be maximized, which will enhance synergy among climate funding portfolios. (31) The international community and the multilateral financial institutions need to address access to development financing for SIDS and support the Bridgetown initiative as well as the development of a multidimensional vulnerability index applicable to SIDS.
- SIDS should consider using trade policy, including instruments such as tariffs and quotas, to ensure a sustainable, healthy food supply.

### International action by SIDS and WHO to mobilize health- and NCD-related climate action

- Despite clear evidence of the negative impacts of climate change on human health, with increasing morbidity and mortality, global awareness on the links between health and climate change is limited. SIDS and WHO should continue to advocate for action to improve public health and strengthen people's climate resilience by integrating policies on climate change and health.
- At Conferences of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) and other arenas on global climate change, SIDS and WHO should call for increased attention to countering the rising burden of disease and death from climate change, including from NCDs. Such emphasis would be in line with the objectives of the UNFCCC and the Paris Agreement to limit the adverse effects of climate change on human health and welfare and to respect, promote and consider obligations for human rights and the right to health when addressing climate change.
- Heads of State and governments of SIDS should become members of the Global Group of Heads of State and Government for the Prevention and Control of NCDs and commit themselves to strengthen work to protect their populations from NCDs, including assessing the links with climate change.
- Understanding of the health impacts of climate change in SIDS should be improved, including vulnerability, e.g. to the large NCD burden, health-related adaptation options and the co-benefits of mitigation. Data on health and climate change are also incomplete, including on NCDs. SIDS and WHO must contribute to and advocate internationally for filling of these gaps in knowledge and data.





Source: WHO (32)



Virginia meets with NCD patient Jane at the NCD clinic in Tulagi, Solomon Islands.

Source: WHO / Blink Media, Neil Nuia



### 3 Commitments and progress

“The two great and urgent contemporary human challenges to improve global health, especially the control of NCDs, and to protect people from the effects of climate change-would benefit from alignment of their policy agendas, offering synergistic opportunities to improve population and planetary health. Well-designed climate change policy can reduce the incidence of major NCDs in local populations. (6) ”

Agenda 2030 for Sustainable Development was adopted by the United Nations General Assembly in 2015. It includes Sustainable Development Goals (SDGs) on health (SDG 3: Ensure healthy lives and promote well-being for all at all ages) and climate change (SDG 13: Take urgent action to combat climate change and its impacts). It also includes a specific target on NCDs; SDG target 3.4: one third relative reduction in premature mortality due to NCDs by 2030.

- Under the UN Framework Convention on Climate Change. (13) Parties to the Convention are committed to take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. The definition of “adverse effects of climate change” includes effects on human health and welfare.
- The Paris Agreement under the UNFCCC (33) states that the Parties to the agreement should respect, promote and consider their respective obligations on, inter alia, human rights and the right to health when taking action to address climate change.
- Following the three high-level meetings on NCDs in 2011, 2014 and 2018, United Nations Member States adopted political declarations that committed them urgently to address NCDs in the context of health and sustainable development.
- During the High-level meeting on universal health coverage in 2019, world leaders pledged “to progressively cover 1 billion additional people by 2023 with quality essential health services and quality, safe, effective, affordable and essential medicines, vaccines, diagnostics and health technologies, with a view to covering all people by 2030.”
- The SAMOA Pathway, (34) adopted by United Nations Member States in 2014, provides modes of action on various issues, including sustainable, inclusive, equitable economic growth; climate change, health and NCDs; disaster risk reduction; and sustainable use of marine resources and the means for implementing those objectives.
- In 2008, Member States of WHO, including SIDS, committed themselves to the Libreville Declaration on Health and Environment in Africa, (35) which inter alia provides guidance on addressing climate change.
- The COP26 Health Initiative on Building Climate Resilient and Sustainable Low Carbon Health Systems was launched during the 26th UNFCCC Conference of the Parties in 2021. (36) Commitments were made by 65 countries, and a road map will be developed for future investment in climate-resilient, low-carbon, sustainable health systems and facilities.



Christon sits with his family during a meal at home in Trinidad and Tobago. Like many other countries, Trinidad and Tobago is facing a growing burden of NCDs such as heart disease, stroke, cancer, diabetes and chronic lung disease, which account for over 62% of deaths each year, most of which are in people under 70 years old.

Source: WHO / Alasdair Bell

- The Alliance for Transformative Action on Climate and Health (36) monitors and supports countries in fulfilling their commitments to build climate-resilient health systems while reducing the health sector's carbon footprint and promoting integration of climate change and health into national, regional and global plans.
- During COP27 of the UNFCCC in 2022, the Egyptian Presidency and WHO launched the Initiative on Climate Action and Nutrition (I-CAN) (37), in partnership with the Food and Agriculture Organization of the United Nations, the UN Nutrition secretariat, GAIN, the SUN Movement and other partners. The initiative draws current global attention to transformation of food systems for healthy people and a healthy planet by fostering collaboration to accelerate transformative action on climate change and nutrition.

## 4 Recent and ongoing frameworks for action

“Future health risks will be determined not just by the hazards created by a changing climate but also by the sensitivity of individuals and communities exposed to these hazards and the capacity of health systems to prepare for and effectively manage the attendant risks. (16) ”

- The Global Action Plan for the Prevention and Control of NCDs 2013–2030, (38) sets out actions to address the leading risk factors for NCDs and strengthening of national health system responses. It also provides nine voluntary global targets to help countries in identifying priorities for reducing mortality from NCDs and improving health care services.
- The Implementation Roadmap for the Global Action Plan on the Prevention and Control of NCDs 2023–2030, (39) offers additional guidance and support for countries to accelerate progress and reorient domestic action plans. It includes country groupings such as SIDS and provides guidance on implementation and support for achieving Sustainable Development Goal (SDG) target 3.4 during the next decade.
- The WHO Special Initiative on Climate Change and Health in Small Island Developing States was launched in November 2017 in collaboration with the UNFCCC secretariat and the Fijian Presidency of COP23, with the vision that, by 2030, all health systems in SIDS will be resilient to climate variation and change.



A fresh fruit and vegetable stall in Bon Accord, Tobago.  
Source: WHO / Alasdair Bell

- The UN Decade of Action on Nutrition (2016–2025) (37) is a commitment by United Nations Member States to undertake 10 years of sustained, coherent implementation of policies and programmes and to increased investment to eliminate malnutrition in all its forms, everywhere, leaving no one behind. It highlights the urgency of action within the next 10 years to achieve impact at country level and an accessible, transparent global framework for tracking progress and ensuring mutual accountability for the commitments made.

- The aim of the Global Action Programme on Food Security and Nutrition (41) is to support SIDS in achieving the goals of the SAMOA Pathway. (34) It will “create sustainable and local food value chains” and shift the SIDS food environment away from unhealthy import-based food chains.
- In the Health System Strengthening for Universal Health Coverage Partnership 2020–2023, a proposal of the African, Caribbean and Pacific group of states, with WHO, the European Union has supported 79 of these countries, 38 of which are SIDS, in strengthening their health systems to deliver NCD services.
- The WHO Global Action Plan for Healthy Lives and Well-being for All (42) brings together multilateral health, development and humanitarian agencies to support countries in accelerating progress towards achieving the health-related SDGs. The Action Plan is also relevant for reducing the health impacts of climate change, including in SIDS.
- The strategic action plan to scale up health and environment interventions in Africa (2019–2029) (43) and the framework on public health adaptation to climate change in the African Region (Sixty-first Regional Committee meeting, 2011) were developed to accelerate implementation of the Libreville Declaration on health and environment. (35) They are both fully relevant to SIDS.
- The Regional Plan of Action for SIDS in the African and South-East Asian regions for the period 2019–2023 (44) provides strategic lines of action for addressing the effects of climate change on health. The action plan is based on four pillars: Empowerment (supporting health leadership in SIDS to engage nationally and internationally), evidence generation (building the business case for investment), implementation (preparedness for climate risks, adaptation and health-promoting mitigation policies) and resources (facilitating access to financing for climate and health).
- The seventh African SIDS health ministers’ forum held in Cabo Verde in December 2019 (45) led the pace to a coordinated response to and action on the effects of climate change on health in the African Region. SIDS have continued to show leadership on the global stage, for example, in leading the launch of the new UNFCCC COP26 initiative on “Building climate-resilient health systems”.



Primary school students in Timor-Leste dressed in traditional attire for a special event at their school (Children dressed in traditional clothes in Timor-Leste)

Source: WHO / João Soares Gusmão



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## References

1. Climate change 2022, impacts, adaptation and vulnerability. Intergovernmental Panel on Climate Change; 2022 (<https://www.ipcc.ch/report/sixth-assessment-report-working-group-ii/>).
2. United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (<https://www.un.org/ohrlls/content/about-small-island-developing-states>).
3. Tukuitonga, C, Vivili, P. Climate effects on health in small islands developing states. *Lancet Planet Health*. 2021;5(2):e69–70. doi:10.1016/S2542-5196(21)00004-8.
4. Mental health and climate change: policy brief. Geneva: World Health Organization; 2022 (<https://www.who.int/publications/i/item/9789240045125>).
5. Deivanayagam TA, English S, Hickel J, Bonifacio J, Guinto RR, Hill KX et al. Envisioning environmental equity: climate change, health, and racial justice. *Lancet*. 2023;S0140-6736(23)00919-4. doi:10.1016/S0140-6736(23)00919-4.
6. Frumkin H, Haines A. Global environmental change and noncommunicable disease risks. *Annu Rev Public Health*. 2019;40(1):261–82. doi:10.1146/annurev-publhealth-040218-043706.
7. State of the global climate 2022. Geneva: World Meteorological Organization; 2022 ([https://library.wmo.int/doc\\_num.php?explnum\\_id=11593](https://library.wmo.int/doc_num.php?explnum_id=11593)).
8. Synthesis report of the IPCC sixth assessment report (AR6). Geneva: Intergovernmental Panel on Climate Change; 2023 (<https://www.ipcc.ch/report/ar6/syr/>).
9. Invisible numbers: the true extent of noncommunicable diseases and what to do about them. Geneva: World Health Organization; 2023 (<https://www.who.int/publications/i/item/9789240057661>).
10. WHO accelerates work on nutrition targets with new commitments. Geneva: World Health Organization; 2021 (<https://www.who.int/news/item/07-12-2021-who-accelerates-work-on-nutrition-targets-with-new-commitments>).
11. World Bank, OECD. Climate and disaster resilience financing in small island developing states. Paris: Organisation for Economic Co-operation and Development; 2016 (<http://dx.doi.org/10.1787/9789264266919-en>).
12. Noncommunicable diseases and mental health in small island developing states. Geneva: World Health Organization; 2023 (<https://www.who.int/publications/i/item/9789240072213>).
13. United Nations Framework Convention on Climate Change. New York: United Nations; 1992 (<https://unfccc.int/resource/docs/convkp/conveng.pdf>).
14. Thomas A, Baptiste A, Martyr-Koller R, Pringle P, Rhiney K. Climate change and small island developing states. *Annu Rev Environ Resources*. 2020;45(1):1–2 doi:10.1146/annurev-environ-012320-083355.
15. Haines A, Ebi K. The imperative for climate action to protect health. *NEJM*. 2019;380(3){263–73. doi:10.1056/NEJMra1807873.
16. Ebi K, Hess J. Health risks due to climate change: inequity in causes and consequences. *Health Affairs*. 2020;39(12):2056–62. doi:10.1377/hlthaff.2020.01125.
17. Health and noncommunicable diseases (Pacific possible background paper No. 5). Washington DC: The World Bank; 2016. (<https://documents1.worldbank.org/curated/en/991041503690161370/pdf/119110-WP-P154324-PUBLIC-47p-pphealthNCDsbackgroundfinal.pdf>).
18. Khraishah H, Alahmad B, Ostergard RL Jr, AlAshqar A, Albaghdadi M, Vellanki N et al. Climate change and cardiovascular disease: implications for global health. *Nat Rev Cardiol*. 2011;19:798–812. doi:10.1038/s41569-022-00720-x.
19. Salas R, Jha A. Climate change threatens the achievement of effective universal healthcare. *BMJ*. 2019;366:15302. doi:10.1136/bmj.l5302.
20. Climate change and the health of people with chronic medical conditions. Washington DC: Environmental Protection Agency; undated (<https://www.epa.gov/climateimpacts/climate-change-and-health-people-chronic-medical-conditions>).
21. Hickey GM, Unwin N. Addressing the triple burden of malnutrition in the time of COVID-19 and climate change in small island developing states: what role for improved local food production? *Food Secur*. 2020;12(4):831–5. doi:10.1007/s12571-020-01066-3.
22. Abdulkadri A, Floyd S, Mkrtychyan I, Marajh G, Gonzales C, Cunningham-Myrie C. Addressing the adverse impacts of non-communicable diseases on the sustainable development of Caribbean countries (Studies and Perspectives series – ECLAC Subregional Headquarters for the Caribbean, No. 100) (LC/TS.2021/4-LC/CAR/TS.2021/2), Santiago: Economic Commission for Latin America and the Caribbean; 2021 ([https://www.cepal.org/sites/default/files/events/files/s2000964\\_en.pdf](https://www.cepal.org/sites/default/files/events/files/s2000964_en.pdf)).
23. The 2022 report of the Lancet Countdown on health and climate change: health at the mercy of fossil fuels. *Lancet*. 2022;400:1619–54. doi:10.1016/S0140-6736(22)01540-9.
24. Trotman A, Mahon R, Shumake-Guillemot J, Lowe R, Stewart-Ibarra A. Strengthening climate services for the health sector in the Caribbean. *World Meteorol Organ Bull*. 2018;67(2) (<https://public.wmo.int/en/resources/bulletin/strengthening-climate-services-health-sector-caribbean>).

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25. Mora C, Counsell CW, Bielecki CR, Louis LV. Twenty-seven ways a heat wave can kill you: Deadly heat in the era of climate change. *Circ Cardiovasc Qual Outcomes*. 2017;10(11): e4233. doi:10.1161/CIRCOUTCOMES.117.004233.
  26. Vicedo-Cabrera AM, Scovronick N, Sera F, Royé D, Schneider R, Tobias A et al. The burden of heat-related mortality attributable to recent human-induced climate change. *Nature Climate Change*. 2021;11:492–500. doi:10.1038/s41558-021-01058-x.
  27. Swinburn BA, Kraak VI, Allender S, Atkins VJ, Baker PI, Bogard JR et al. The global syndemic of obesity, undernutrition, and climate change: the Lancet Commission report. *Lancet*. 2019;393(10173):791–846. doi:10.1016/S0140-6736(18)32822-8.
  28. Ryan B, Franklin RC, Burkle FM Jr, Aitken P, Smith E, Watt K et al. Identifying and describing the impact of cyclone, storm and flood related disasters on treatment management, care and exacerbations of non-communicable diseases and the implications for public health. *PloS Curr Dis*. 2015;7. doi:10.1371/currents.dis.62e9286d152de04799644dcca47d9288.
  29. COP26 special report on climate change and health: the health argument for climate action. Geneva: World Health Organization; 2021 (<https://www.who.int/publications/i/item/9789240036727>).
  30. Nugent R, Fottrell E. Non-communicable diseases and climate change: linked global emergencies. *Lancet*. 2019;394:622–3. doi:10.1016/S0140-6736(19)31762-3.
  31. Beyeler N, Schäferhoff M. Improving investments in climate change and global health. Barriers to and opportunities for synergistic funding. San Francisco (CA): UCSF Institute for Global health Sciences and Open Consultants; 2023 ([https://globalhealthsciences.ucsf.edu/sites/globalhealthsciences.ucsf.edu/files/climate\\_and\\_health\\_finance\\_final.pdf](https://globalhealthsciences.ucsf.edu/sites/globalhealthsciences.ucsf.edu/files/climate_and_health_finance_final.pdf)).
  32. Climate change and health in small island developing states: a WHO special initiative, Pacific island countries and areas. Geneva: World Health Organization; 2018 (<https://www.who.int/publications/i/item/9789290618669>).
  33. Paris Agreement. New York: United Nations Framework Convention on Climate Change; 2015 ([https://unfccc.int/files/meetings/paris\\_nov\\_2015/application/pdf/paris\\_agreement\\_english\\_.pdf](https://unfccc.int/files/meetings/paris_nov_2015/application/pdf/paris_agreement_english_.pdf)).
  34. SIDS Accelerated Modalities of Action (SAMOA) Pathway. New York: United Nations; 2014 ([https://www.un.org/ohrlls/sites/www.un.org.ohrlls/files/samoa\\_pathway.pdf](https://www.un.org/ohrlls/sites/www.un.org.ohrlls/files/samoa_pathway.pdf)).
  35. Libreville Declaration on Health and Environment in Africa. Brazzaville: WHO Regional Office for Africa; 2008 (<https://www.afro.who.int/sites/default/files/2017-06/declibrevilleDeclaration.pdf>).
  36. COP26 Health Programme. Alliance for Transformative Action on Climate and Health. Geneva: World Health Organization; undated (<https://www.who.int/initiatives/alliance-for-transformative-action-on-climate-and-health/cop26-health-programme>).
  37. Decade of Action on Nutrition (2016–2025). New York: United Nations; 2016 (<https://www.un.org/nutrition/>).
  38. Global action plan for the prevention and control of NCDs 2013–2020 (<https://www.who.int/publications/i/item/9789241506236>).
  39. Implementation roadmap 2023–2030 for the Global action plan. Geneva: World Health Organization; undated (<https://www.who.int/teams/noncommunicable-diseases/governance/roadmap>).
  40. Special initiative on climate change and health in small island developing states. Geneva: World Health Organization; 2017 (<https://www.who.int/news/item/06-11-2017-special-initiative-on-climate-change-and-health-in-small-island-developing-states>).
  41. Global action programme on food security and nutrition in small island developing states. UN Food and Agriculture Organization 2021. (<https://www.fao.org/publications/card/en/c/3d8e376e-5e6d-43c3-bca6-09d11cba4fd1>).
  42. WHO Global Action Plan for Healthy Lives and Well-being for All. World Health Organization 2019. (<https://www.who.int/initiatives/sdg3-global-action-plan>).
  43. The strategic action plan to scale up health and environment interventions in Africa (2019–2029) UN Environment Programme; 2018. (<https://wedocs.unep.org/handle/20.500.11822/33169;jsessionid=295D66C55DC5F559B3A8C9FFC2386E72>)
  44. Climate change and health in small island developing States – Regional Plan of Action for SIDS in the African and South-East Asian regions for the period 2019–2023, World Health Organization. Regional Office for Africa. Regional Office for South-East Asia; 2019 (<https://apps.who.int/iris/handle/10665/311185>).
  45. The seventh African SIDS health ministers’ forum held in Cabo Verde, December 2019. World Health Organization. Regional Office for Africa (<https://www.afro.who.int/countries/cabo-verde/news/african-island-nations-commit-strengthen-health-systems-and-cooperation>).

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## Annex

# Background documents, resolutions, policy briefs and other documents

### Climate change, health and SIDS

- The special initiative to protect people living in small island developing states (SIDS) from the health impacts of climate change, launched by the UNFCCC secretariat, the Fijian COP Presidency and the WHO during COP23 in 2017. (<https://www.who.int/news/item/06-11-2017-special-initiative-on-climate-change-and-health-in-small-island-developing-states>).
- Third Global Conference on Climate and Health 2018, organized as three separate events with a focus on SIDS. Regional plans of action were adopted. Third Global Conference on Health and Climate Change. Geneva: World Health Organization; 2018 (<https://www.who.int/news/item/16-10-2018-third-global-conference-on-health-and-climate-change>).
- Plan of action on climate change and health in SIDS (WHA72/16) to increase support for SIDS for implementing their regional plans of action; a response to the call for urgent action made by the health ministers of SIDS. Health, environment and climate change. Geneva: World Health Organization; 2019 ([https://apps.who.int/gb/ebwha/pdf\\_files/WHA72/A72\\_16-en.pdf](https://apps.who.int/gb/ebwha/pdf_files/WHA72/A72_16-en.pdf))
- WHO global strategy on health, environment and climate change. Geneva: World Health Organization; 2020 (<https://www.who.int/publications/i/item/9789240000377>).

### NCDs and SIDS

- Agenda 2030 for Sustainable Development adopted by the United Nations General Assembly in 2015. SDG target 3.4: one third relative reduction in premature mortality due to NCDs by 2030. The contribution of this target to achieving SDG 3.8 on universal health coverage is inextricably linked. Transforming our world: the 2030 Agenda for Sustainable Development. New York: United Nations; 2015 (<https://sdgs.un.org/2030agenda>).
- The Global Action Plan for the Prevention and Control of NCDs 2013–2020 (WHA64.11), extended to 2030 by the World Health Assembly in 2021. Global action plan for the prevention and control of NCDs 2013–2020 (<https://www.who.int/publications/i/item/9789241506236>).
- The implementation road map 2023–2030 (7) for the Global Action Plan for the Prevention and Control of NCDs adopted at WHA75 (A75/10 add.8) Implementation roadmap 2023-2030 for the Global action plan. Geneva: World Health Organization; undated (<https://www.who.int/teams/noncommunicable-diseases/governance/roadmap>).
- Resolution A/RES/69/15 (SIDS Accelerated Modalities of Action [SAMOA] pathway), which includes a commitment to “enable cooperation among small island developing states (SIDS) on diseases by using existing international and regional forums to convene joint biennial meetings of ministers of health and other relevant sectors to respond in particular to NCDs”.
- SIDS Summit for Health: For a healthy and resilient future in small island developing states, hosted by WHO as a virtual event in June 2021. Climate change and NCDs were central topics on the agenda, with an agreed outcome document SIDS Summit for Health – final outcome statement. Geneva: World Health Organization; 2021 ([https://cdn.who.int/media/docs/default-source/sids-summit/sids-summit-for-health---final-outcome-statement.pdf?sfvrsn=7a5db89f\\_5](https://cdn.who.int/media/docs/default-source/sids-summit/sids-summit-for-health---final-outcome-statement.pdf?sfvrsn=7a5db89f_5)).
- WHO SIDS high-level technical meeting on NCDs and mental health, January 2023, in preparation for the ministerial conference in Barbados in June 2023. Meeting report Noncommunicable diseases and mental health in small island developing states. Geneva: World Health Organization; 2022 ([https://cdn.who.int/media/docs/default-source/ncds/sids-event/sids-report-final-dec2022.pdf?sfvrsn=34f38e87\\_4](https://cdn.who.int/media/docs/default-source/ncds/sids-event/sids-report-final-dec2022.pdf?sfvrsn=34f38e87_4)).

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## WHO reports, policy briefs and other documents

- Checklists to assess vulnerabilities in health care facilities in the context of climate change (<https://www.who.int/publications/i/item/checklists-vulnerabilities-health-care-facilities-climate-change>).
- Climate change and health in small island developing states: a WHO special initiative, Pacific island countries and areas (<https://www.who.int/publications/i/item/9789290618669>).
- Climate change and health in small island developing states — Regional Plan of Action for SIDS in the African and South East Asian Regions (<https://www.who.int/publications/i/item/WHO-AF-CDS-PHE-05-2019>).
- COP26 Health Programme (<https://www.who.int/initiatives/alliance-for-transformative-action-on-climate-and-health/cop26-health-programme>).
- Climate change and health: vulnerability and adaptation assessment (<https://www.who.int/publications/i/item/9789240036383>).
- Framework for the quantification and economic valuation of health outcomes originating from health and non-health climate change mitigation and adaptation action, 2023 (<https://www.who.int/publications/i/item/9789240057906>).
- WHO guidance for climate resilient and environmentally sustainable health care facilities, 2020 (<https://www.who.int/publications/i/item/9789240012226>).
- Health and climate change country profiles (<https://www.who.int/teams/environment-climate-change-and-health/climate-change-and-health/evidence-monitoring/country-profiles>).
- Mental health and climate change, policy brief 2022 (<https://www.who.int/publications/i/item/9789240045125>).
- Outcome of the Fourteenth Pacific Health Ministers Meeting, 2022 (<https://www.who.int/publications/i/item/WPR-2022-DPS-001>).
- Preventing non-communicable diseases (NCDs) by reducing environmental risk factors, 2017 (<https://www.who.int/publications/i/item/WHO-FWC-EPE-17.01>).
- Review of IPCC evidence 2022, climate change, health and well-being ([https://cdn.who.int/media/docs/default-source/climate-change/who-review-of-ipcc-evidence-2022-adv-version.pdf?sfvrsn=cce71a2c\\_3&download=true](https://cdn.who.int/media/docs/default-source/climate-change/who-review-of-ipcc-evidence-2022-adv-version.pdf?sfvrsn=cce71a2c_3&download=true)).
- SIDS Summit for health 2021:
  - policy brief SIDS and NCDs ([https://cdn.who.int/media/docs/default-source/sids-summit/sids-ncds-policy-brief.pdf?sfvrsn=bc82e209\\_5](https://cdn.who.int/media/docs/default-source/sids-summit/sids-ncds-policy-brief.pdf?sfvrsn=bc82e209_5))
  - policy brief SIDS, climate change and health ([https://cdn.who.int/media/docs/default-source/sids-summit/sids-climate-policy-brief.pdf?sfvrsn=c1536f14\\_5](https://cdn.who.int/media/docs/default-source/sids-summit/sids-climate-policy-brief.pdf?sfvrsn=c1536f14_5)).
- Noncommunicable diseases and mental health in small island developing states. Geneva: World Health Organization; 2023 (<https://www.who.int/publications/i/item/9789240072213>)
- Invisible numbers: the true extent of noncommunicable diseases and what to do about them. 2022 (<https://www.who.int/publications/i/item/9789240057661>).
- Toolkit for developing a multisectoral action plan for noncommunicable diseases, 2022 (<https://apps.who.int/iris/handle/10665/353163>).
- Time to deliver: report of the WHO Independent high-level commission on noncommunicable diseases, 2018 (<https://apps.who.int/iris/handle/10665/272710>).
- WHO framework for meaningful engagement of people living with noncommunicable diseases, and mental health and neurological conditions (<https://www.who.int/publications/i/item/9789240073074>)
- WHO manifesto for a healthy recovery from COVID-19 (<https://www.who.int/news-room/feature-stories/detail/who-manifesto-for-a-healthy-recovery-from-covid-19>).
- Guidance on mainstreaming biodiversity for nutrition and health. 2020 (<https://www.who.int/publications/i/item/guidance-mainstreaming-biodiversity-for-nutrition-and-health>).
- Food systems for health: information brief, 2021 (<https://www.who.int/publications/i/item/9789240035263>).