

Caritas

Austria

Climate Change

Framework Paper





Thank you!

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Abbreviations

AGGV	Arbeitsgemeinschaft für Entwicklung und Humanitäre Hilfe – Work Group for Development and Humanitarian Aid
CDM	Clean Development Mechanism
CI-MS	Caritas International Management Standards
CO²	Carbon dioxide
COMPASS	Conjoint multi-actor programme for the advancement of structural solutions to food and nutritional insecurity
COP	Conference of the Parties
CDR	Carbon Dioxide Removal
DRC	Democratic Republic of the Congo
DRR	Disaster Risk Reduction
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
G20	Group of Twenty (important industrial and development countries)
GCF	Green Climate Fund
GEN	Green Energy and Nutrition
GREEN-RE	Graded Response in Energy Efficiency & Nature Conservation for Reducing Emissions
IDMC	Internal Displacement Monitoring Centre
IPC	Integrated Food Security Phase Classification
IPCC	Intergovernmental Panel on Climate Change
MENA	Middle East and North Africa
NEKP	National Energie and Climate Plan
NGO	Nongovernmentalorganisation
NRM	Natural Resource Management
ÖCZ	Österreichische Caritaszentrale/Caritas Austria Centre
OFAR	On-farm adaptive research
PRASA	Regional Programm for Food Security in the Democratic Republic Congo (DRC)
REDD+	Reducing Emissions from Deforestation and Degradation
Ref-NEKP	Reference for the National Energie and Climate Plan
SAFBIN	Smallholder Adaptive Farming and Biodiversity Network
SDG	Sustainable Development Goals
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
UN-REDD	United Nations - Reducing Emissions from Deforestation and Degradation
USA	United States of America

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1 Introduction

Poor countries and their populations, whose part in the emergence of climate change is very minor, are suffering the most from its repercussions and risks, particularly in Africa and Asia. The children of today as well as their desendence will be the ones to suffer most from the future climate chrisis, if the adaption to the changed conditions and the limitation of global warming through a change in the system towards CO² neutrality in the near fututre is not succesful. Considering political and societal indecisiveness this seems likely.

In **humanitarian aid and development assistance**, through which Caritas supports vulnerable people in their partner countries, the effects of climate change have been concretely visible for years. Changed growing seasons, extreme weather events and even weather related natural disasters **threaten or even destroy poor people's livelihood**. Already, the repercussions of climate change have claimed hundreds of thousands of human lives.

In his encyclical Laudato Si'¹ – 'Peace, Justice and Preservation of Creation', **Pope Francis called for climate and environmental friendly conduct**– both in the context of projects and programmes and every day work. According Guidelines by the coordinationpoint of the Austrian Bishops conference² are to be followed by the Caritas **International Programmes** as well. In their **Strategy 2019-2024** the Bischofskonferenz stated, that increased measures would be realised in the areas of humanitarian aid and food security, so that negative repercussions from the climate crisis may be as minor as possible for the affected. In addition to an increase in adaptability of vulnerable homes and communities within the partner countries, the Austrian public shall be mobilized to contribute to a systemic change as well.

This document **aims to:**

- summerize the current stand of (inter-)national **climate politics and scientific reasearch findings** as they pertain to causes, effects and risks of climate change,
- show/present how Caritas Foreign Aid **positions** itself with regards to the climate crisis and climate politics,
- illustrate how Caritas Foreign Aid **supports** partner organisations and **beneficiaries** in projects and programmes, so that they can better adapt to the klimabedingte environmental changes and contribute to climate ...
- work out **forward-looking steps** to support of beneficiaries and for climate protection within the work context of Caritas Foreign Aid,
- connect the work abroad with **sustainability** in daily work e.g. sustainability in aquisiton and mobility, compensation for flying,
- provide **practical tools** for programme- and project work in the work abroad.

The discussion paper is directed towards the employees of Caritas Austria and the interested public. It is meant to be informative and a practical aid within the work environment.

¹ Caritas: "Caritas & Laudato Si'", (27.01.2020)

² Coordination unit of the austrian Bishops Conference (KOO) (2017)

2 Overview: Climate change - challenges & the workings of Caritas Foreign Aid

Focus-Box 1: Climate change – challenges & the workings of Caritas Foreign Aid

The global **challenges of climate change** which Caritas is facing in its work abroad, are in particular:

- **The rapid progression of climate change and its dramatic consequences for the living conditions and living quality of vulnerable people in partner countries**, due to higher temperatures, climate variability, weather extremes, climate shocks, and the rise of the sea level, require drastic climate protection and adjustment measures.
- This increases the **need for disaster prevention, humanitarian aid and long term development cooperation**, in order to protect and restore livelihoods and manners of life, as well as raises adaptability.
- The progress that has been made in **national and international climate politics is sobering** and does not give reason to expect that the aim of limiting global warming to 1,5°C will be reached. Increased **advocacy in** Austria as well as on an international level and in the partner countries will be necessary in order to achieve a systemic change.

What does Caritas do to counter the climate crisis and its effect in poor partner countries?

Caritas provides and supports **Advocacy**,

- to foster **awareness** in Austria for the effect that the climate crisis has on poor countries and to promote a systemic change towards a more sustainable lifestyle.
- by calling for an **active Austrian and international climate policy** and supporting partners in their countries in advocating for effective adaptation strategies and climate protection.

Caritas **performs programme and project work**. It

- supports partners in the advancement and **strengthening of their capacities** in order to support beneficiaries, to adapt to climate change and also protect the climate.
- supports partner organizations and communities in strengthening their humanitarian capacities and **resilience** in order to mitigate the consequences of weather extremes and climate shocks; for example, through a stronger focus on local and regional response mechanisms, the strengthening of self-help capacities, or the improvement of early warning systems
- provides **emergency aid** to people who have been harmed by droughts, storms, floods or other extreme weather phenomena.

- supports people who are affected in **adapting** to new climatic conditions in order to guarantee **food security and dignified living conditions** in a climate-friendly manner.³
- supports **climate protection measures** that avoid, reduce or compensate climate-damaging greenhouse emissions.
- integrates subject matter on climate protection and the adaptation to climate change in **educational projects and programmes**.

Caritas' **method of working**:

- is responsible – we **survey the climate-relevant effects of projects and programmes** to minimise risks and maximize the potential for adapting to climate change and climate protection.
- is **participatory** – in order to be able to respond purposefully to the needs of the affected in adapting to climate change.
- fosters communities (empowerment) to strengthen their **resilience** towards the effects of climate change.
- is **inclusive**, therefore, it gives particular consideration to the needs of especially vulnerable groups, minorities, children and adolescents, and people with disabilities.
- strives for **systemic change** in addition to specific individual projects- 'It also forms **alliances**, for example, within the Caritas network or within science and research, government institutions and specialised agencies in order to reach it.

Looking towards the future:

Programme and Project work:

- Analyse and replicate **good practice**; expand the portfolio of **effective measures of adaptation** (e.g. through digitalisation) and make climate protection measures quantifiable,
- Identify **indicators** for climate protection and adaptation to climate change and make climate protection measurable.
- Develop **climate protection programmes**,
- Mainstream **climate proofing** and **disaster risk reduction**,
- Strengthen **advocacy** through a needs-oriented offers, concrete demands, and budgeting.
- Embed **climate education** in the work with children and adolescents

Programme management:

- **Capacity building** for the effective implementation of climate protection and measures for adaptability towards climate change,
- Strengthen **climate protection** in Austria and with partners,
- Expansion of the **compensation** of CO² emissions for international programmes.

³ Caritas does not support intensive livestock farming or industrial agriculture that uses pesticides and chemical fertilisers, but rather smallholder organic farming.

3 Background information about Climate Change

3.1 Climate policy: International political context and sustainable development goals

The international community is largely⁴ in agreement about the existence and the dangers of the climate crisis and has created international platforms in order to be able to deal with it effectively politically.

The **United Nations Framework Convention on Climate Change** (UNFCCC) is the leading international intergovernmental forum for negotiating a global response to climate change. At the 2015 UN Climate Change Conference, 196 member states, including Austria, decided on the **Paris Agreement on Climate Change** in succession to the Kyoto Protocol, whose Clean Development Mechanism (CDM) expires in 2020. It intends to limit global warming to well below 2 °C. The Paris Agreement has already been ratified by 195 countries, including Austria.⁵ From 2020 to 2025, industrialized countries are expected to make 100 billion US-dollars per year available to poorer countries through the **Green Climate Fund** (GCF), in order to provide climate protection and adaptation measures, and to resolve the damage caused by climate change. Starting 2026, a more highly remunerated climate fund is scheduled, which shall also be endowed by middle-income countries. The UNFCCC had already launched a program to reduce greenhouse gases from deforestation and destructive forest use (Reducing Emissions from Deforestation and Degradation, **REDD +**), which has been supported by UN-REDD since 2008. As part of REDD +, developing countries are supported by market-based trading with emission certificates to reduce CO² emissions from deforestation and to protect forests.⁶

The **2030 Agenda**, the comprehensive global framework for sustainable development, entered into force in 2015. By the 13th development goal (SDG), the member states, including Austria, are committed to taking immediate measures to combat the climate crisis and its effects. SDG13 aims to:⁷

- strengthen the resilience and the adaptive capacities to climate-related risks and disasters in all countries;
- integrate measures against the climate crisis into national policies, strategies and planning;
- improve awareness as well as human and institutional capacities for climate protection, adaptation to climate change and early warning systems;
- fulfill the climate finance commitments under the GCF;
- support mechanisms to strengthen planning and management capacities in relation to the climate crisis in particularly vulnerable countries and population groups.

⁴ Many politically right-wing movements and governments negate climate change, citing pseudo-scientific evidence.

⁵ Stand November 2019

⁶ Food and Agriculture Organization of the United Nations (FAO) (n.d.): REDD+ Reducing Emissions from Deforestation and Forest Degradation.

⁷ Targets and indicators in the original wording can be found in the appendix⁸ Sustainable Development Goals (SDGs) (October 2018):

The goals can be roughly assigned to the categories biosphere, society, and economy and are interdependent (see image 1). There are **overlaps, synergies and conflicting goals** between SDG13 and other SDGs such as poverty eradication (SDG1), agriculture and food security (SDG2), health (SDG3), water (SDG6), responsible consumption and production (SDG12), Life on Land (SDG15) and partnerships for goals (SDG17). This requires a more incorporated approach at policy and project level, particularly in the public sector. The individual sub-goals contain individual indicators and serve as the basis for planning and monitoring at the national level.⁸

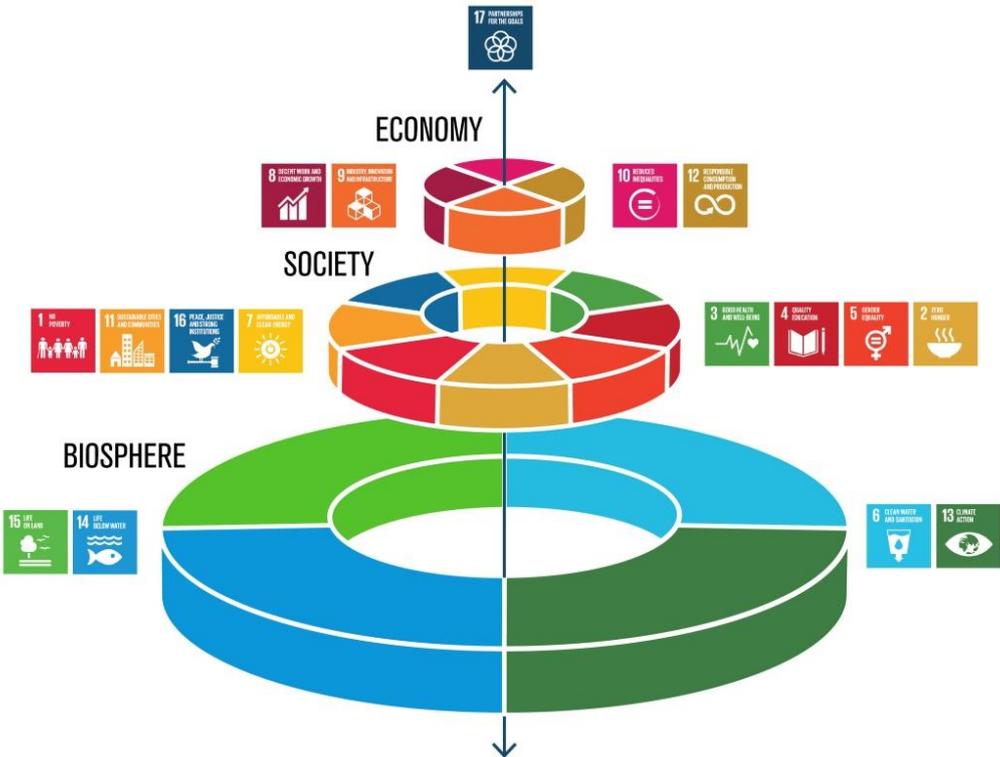


Image 1: Sustainable Development Goals⁹

The **Agenda for Humanity¹⁰**, with its five principles - peacekeeping; adherence to humanitarian standards; inclusion; ending the need for humanitarian aid and investing in humanity - provides an important basis for humanitarian aid work. Considering this content, it has great relevance for climate change and SDG 13, as well as overlaps with SDG 1 (poverty), SDG 10 (reducing inequality) and SDG 16 (peace, justice and strong institutions).

The **successes of global climate policy so far have been sobering**: in its special report from 2018, the Intergovernmental Panel on Climate Change (IPCC), also known as the World Climate Council, warns that even a global warming of 1.5 °C is expected to create irreversible damage. At the same time, the commitments made by the signatories of the Paris Agreement on climate change and adaptation, in order to curb global warming to around

⁸ Sustainable Development Goals (SDGs) (October 2018):
⁹ Stockholm Resilience Center (n.d.): How food connects all the SDGs.
¹⁰ Agenda for Humanity (2016).

1.5 °C, are insufficient, even if fully implemented. The US and Brasil have announced their withdrawal from the Paris Agreement for 2020, while Russia has a ratification in prospect. The G20, which decided to phase out subsidies for climate-damaging raw materials 20 years ago, doubled subsidies for coal-fired power plants between 2014 and 2017 by relocating to poorer countries.¹¹ The UNFCCC member states' annual climate conference (COP24) in December 2018 also failed to produce results that would suggest an effective response to impending threats. Especially human rights, such as the right to appropriate nutrition, still is not bindingly established within the Paris Agreement¹². At the EU summit in June 2019, the 2050 deadline for climate neutrality, which is provided for in the Paris Agreement¹³, dropped, literally and without substitution, into the footnote due to the resistance of some member countries.¹⁴ At the UN Climate Action Summit in September 2019, states, regional authorities, companies and investors agreed to provide extensive funds and initiatives for climate protection and adaptation.¹⁵ How much of this will ultimately be implemented, remains to be seen.

Progress in raising climate funds through the GCF is slow - by mid-2019, only 10% of the 100 billion dollars for the first year were committed. After a rough start with high bureaucratic hurdles, private sector projects and low payments, the GCF was able to gain momentum. Civil society now has greater say and the project quality increases.¹⁶¹⁷ **Within REDD +**, low funds stand opposite by a large range of CO2 certificates, which leads to a decline in the price of the certificates. REDD + is also criticized for the complicated and questionable assessment of the protection of forests and the monetization of nature conservation.¹⁸

Considering the insufficient efforts at a political as well as on an overall societal level to meet the challenges of climate change, there is increasing talk of a **climate crisis or catastrophe**. With their demonstrations of the 'Fridays for Future' movement, young people are calling for global climate justice and a bold policy in line with the 1.5 ° C goal.¹⁹ Civil society as well as communities¹⁹²⁰ are increasingly demanding decisive action from politicians, in Austria even with a petition.²⁰ As part of the **climate referendum**²¹, the constitutional anchoring of climate protection, binding laws to significantly reduce CO2 emissions, such as phasing out fossil fuels, an ecological and social tax and levy reform as well as investments in sustainable transport and energy are required.

In September 2019, the **Austrian** parliament declared **climate emergency**, the European Parliament did so in November. The Austrian government programme 2020-2024²² contains ambitious goals for climate protection, including climate neutrality in 2040, which among

¹¹ Ipek Gencsu et al., June 2019

¹² Ffion Dean (17.12.2018)

¹³ Resistance mainly from: Poland, Hungary, Czech Republic and Estonia.

¹⁴ Der Standard (20.6.2019)

¹⁵ Climate Home News (02.10.2019)

¹⁶ Arkin Fatima (9.5.2018)

¹⁷ Finance & Trade Watch (n.d.): REDD+ Die Finanzialisierung des Waldes¹⁸ Fridays for Future (n.d.): What do we want? Climate Justice!, Fridays for Future

¹⁸ Fridays for Future (n.d.): What do we want? Climate Justice!, Fridays for Future

¹⁹ Tiroler Tageszeitung (27.6.2019); Wiener Zeitung (25.06.2019)

²⁰ Anschober Rudi (n.d.). Heute für Morgen Klimaschutz jetzt

²¹ Klimavolksbegehren (n.d.): Klima Volksbegehren, Unsere Zukunft liegt in deiner Hand

²² Die neue Volkspartei, Die Grünen: Regierungsprogramm 2020 – 2024 (2020)

other things shall be achieved by adhering to a Paris-compatible CO₂ budget and a corresponding emission reduction path. A system for CO₂ pricing as well as an eco-social tax reform are to be developed in working groups. Nevertheless, criticism²³ was raised regarding the often unspecific formulation of goals and activities, such as a lack of intermediate goals, unclear funding, the delayed introduction of measures and unclear responsibility for monitoring the achievement of goals. Other green campaign demands, such as the constitutional anchoring of climate protection, the eco bonus and the abolition of subsidies which are harmful to the climate, are missing.

At the end of 2019, the Austrian government submitted its **national energy and climate plan (NEKP)** for the implementation of the Paris Agreement to the EU. Since it is incomplete and inadequate to achieve the CO₂ reduction target²⁴, according to scientists, NGOs and other environmental organizations, scientists have developed a **reference plan (Ref-NEKP)**²⁵ that outlines effective measures for climate protection. The government plans to improve the NECP with detailed goals, measures, funding plans and responsibilities. A scientifically substantiated impact assessment shall evaluate whether the CO₂ reduction aims can be achieved on the basis of this improved NEKP.

3.2 Scientific Background

3.2.1 What is climate change and how does it emerge?

According to IPCC²⁶ estimates, human activities, especially CO₂ emissions, have caused the climate to warm by around 1 °C compared to pre-industrial times. It is expected that the average global temperature will rise to 1.5 °C between 2030 and 2050 if the temperature continues to increase by around 0.2 °C per decade. In Austria the average temperature has already risen by approximately 2 °C due to the fact that land masses heat up more quickly. The world population and the economy are growing, while politicians are indecisive on taking drastic measures for a systemic change towards a CO₂-neutral development path. Without immediate, large-scale measures, a rise far higher than 1.5 °C is to be expected. Therefore, IPCC has prepared an assessment of the effects and risks with an average temperature rise of 1.5 °C as well as 2 °C and simulated development paths that allow a limitation to a warming of 1.5 °C.

The **greenhouse effect** is composed of the natural and the anthropogenic (human-caused) greenhouse effect. The earth's atmosphere, which contains different gases, partially absorbs the heat radiation emitted from the earth. The **natural** greenhouse effect which is, among other things, influenced by the varying solar radiation due to the inclination of the earth's axis, volcanic activity, etc. warms the earth and thus makes it livable. **Anthropogenic climate change** is a long-term change in the equilibrium of the earth's climate, caused by a changed composition of greenhouse gases that interact with the varying solar radiation and the counterradiation from the earth's surface within the atmosphere. Science considers the contribution from the natural greenhouse effect to current global warming to be very

²³ Laufer Nora, Strobl Günther (2.1.2020)

²⁴ Der Standard (21.6.2019)

²⁵ Climate Change Center Austria : Referenz-Nationaler Energie- und Klimaplan (Ref-NEKP)

²⁶ Intergovernmental Panel on Climate Change (IPCC) 2018

slight. Climate change also overlaps with climate fluctuations, such as cyclical climatic phenomena for instance El Niño and El Niña, which heat up or cool down the Pacific ocean approximately every two to seven years, which leads to changes in air pressure on the tropical and subtropical surface of the earth. Climate change has a strong impact on these phenomena and could upset their balance, with not yet assessable consequences.

Following industrialization, **greenhouse gas emissions** have risen sharply as fossil fuels, plant-bound CO₂ and other greenhouse gases are released into the atmosphere. After a short-term decline as a result of the financial crisis in 2009, emissions are rising again (see Image 2).

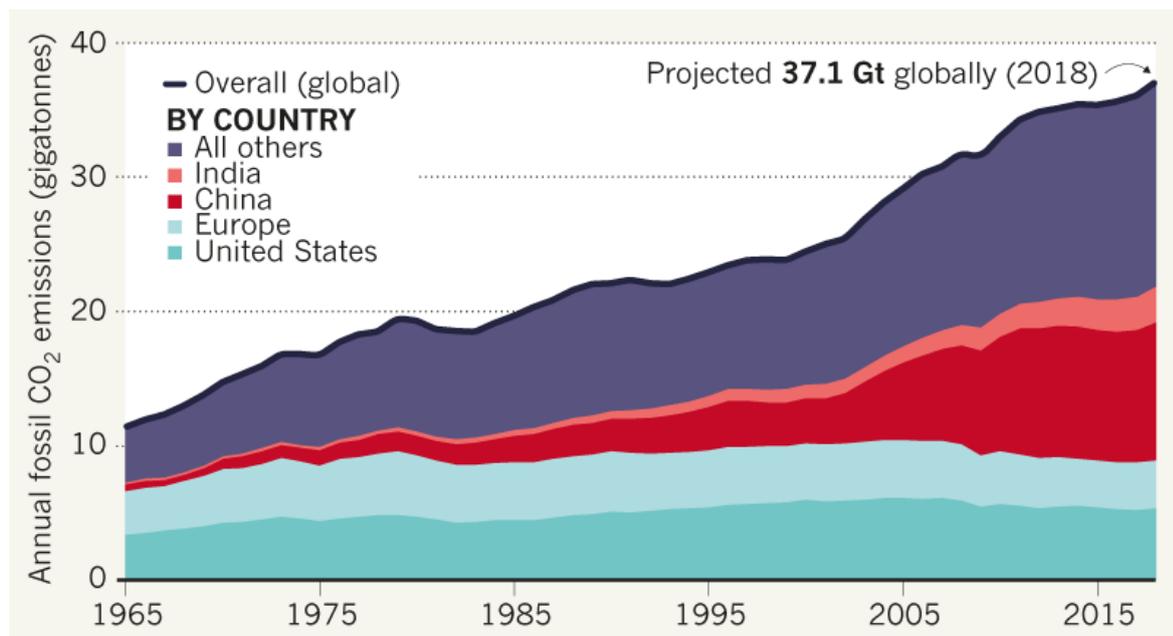


Image 2: CO₂-emissions globally, by region²⁷

Carbon dioxide (CO₂) which ranks among the greenhouse gases, is mainly released during the combustion of fossil fuels and is currently released into the atmosphere mostly through human activities. It is therefore one of the main engines of climate change. Methane, which emerges during the decomposition of organic substances, is emitted by animals and humans and constitutes a significant proportion of emissions from agriculture, is emitted in smaller quantities, but is 30 times the global warming potential of CO₂. Greenhouse and greenhouse gases are converted into CO₂ equivalents so it is possible to represent the total emissions.

Together, the energy and land use sectors, followed by industry and transport, are the **largest emitters of CO₂**. However, the **emission reduction potential** of the six key sectors is large enough to close the emission gap at a cost of less than 100 US dollars per tonne of CO₂ equivalent if measures are implemented immediately and on a large scale.

²⁷ Figures Christina et al. (5.12.2018)

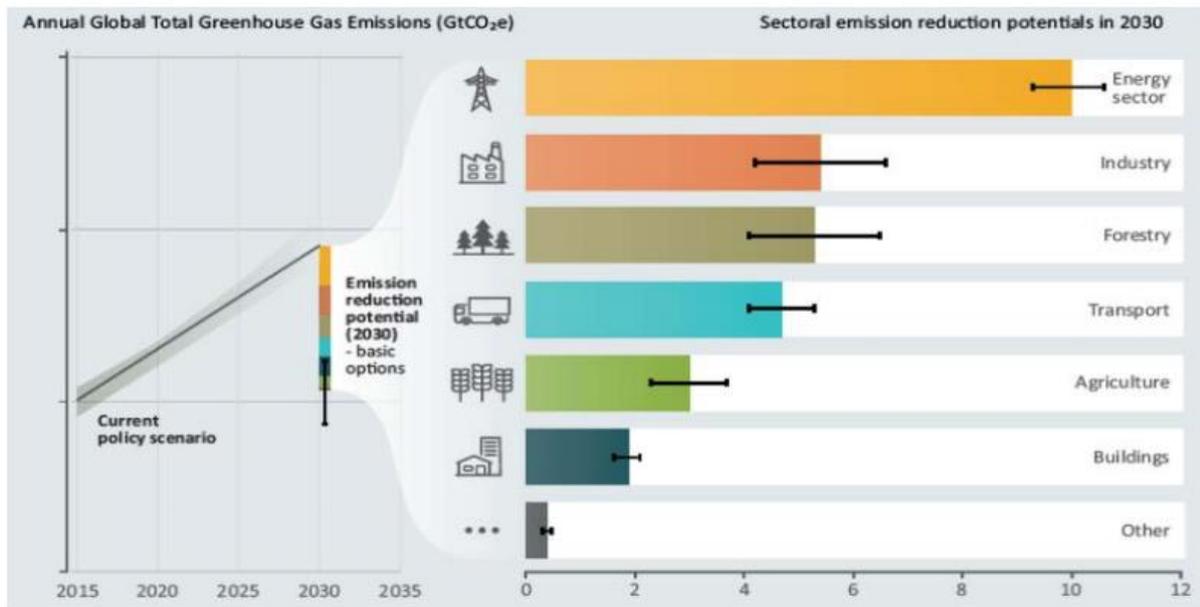


Image 3: Emission reduction potential per sector²⁸

The **IPCC has outlined scenarios and development paths** that lead to a warming of 1.5 or 2 °C. These are particularly dependent on the development of the world population, income levels and (in)equality, intensity of land use, CO₂ intensity of production and consumption – especially concerning food and its waste, free trade, and the environmental friendliness of technologies and lifestyles. Most scenarios for the 1.5 °C also include the use of carbon dioxide removal (CDR) such as CO₂ storage. However, these technologies are still poorly conceived and the possibility of large-scale use is difficult to assess.²⁹

In the concept of planetary boundaries³⁰, climate change is one of the nine planetary processes that regulate the stability and resilience of the earth system. The IPCC scenarios are based on a certain amount of CO₂, the so-called **CO₂ budget**, which is the amount that can be emitted before different **tipping points** of the climate system are reached and the planetary limits are exceeded. Tilting elements are for example: the cryosphere, large (rain) forests, ocean circulations and monsoon systems (see Image 4). It is to be expected that the collapse of these ecological systems and possible domino effects will cause an abrupt, unpredictable change in the system of the world climate with potentially rapidly occurring, catastrophic effects for human society and its living conditions.³¹ Reaching tipping points such as the deaths of coral reefs might happen despite achieving the 1.5-2 °C scenarios.

²⁸ United Nations-Environment (2018)

²⁹ Intergovernmental Panel on Climate Change (IPCC) (2019a)

³⁰ Stockholm Resilience Center: Planetary boundaries research

³¹ Intergovernmental Panel on Climate Change (IPCC) (2018)

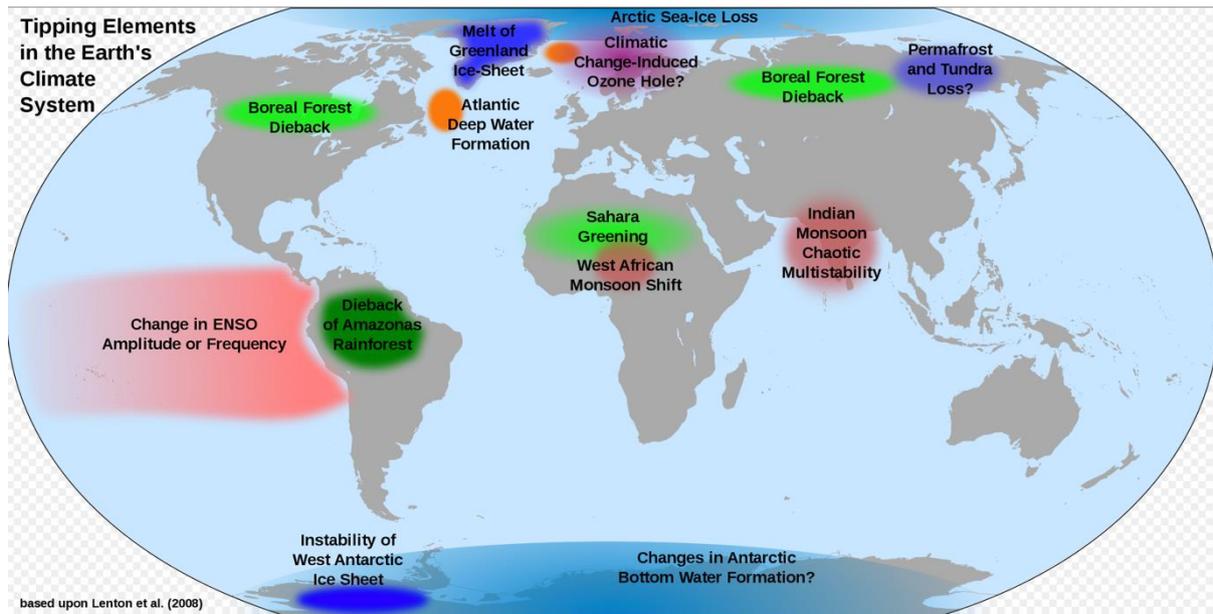


Image 4: Tipping elements in the earth's climate system³²

Nowadays, science is able to explain and predict most phenomena of climate variability and weather events such as heavy rain, heat and cold periods relatively reliably. While it is not possible to attribute individual weather events to climate change, it is possible to estimate how much higher the probability is for these events to occur due to climate change.

Scientists assume that **global warming** caused by anthropogenic emissions will remain for **centuries to millennia** despite countermeasures right up to the complete reduction of anthropogenic greenhouse gas emissions. It is to be expected that they will **entail further long-term changes to the earth system**, such as an increase in sea level.

3.2.2 Consequences and risks

Already, the consequences of the climate crisis can be measured³³ worldwide beyond the current temperature increase of 1.1 °C and it causes considerable risks to health, livelihoods, food security and water supply, human security and economic growth.³⁴ People living in (sub) tropical and low-lying regions and those in poorer countries are particularly affected.

The **change in climatic conditions** encompasses, in addition to the increase in the average global temperature, i.a. an increased climate variability and a more frequent as well as possibly stronger occurrences of climate extremes. **Climate variability** is a statistically significant deviation of the climate from average values or other mean values, on spatial and temporal scales, going beyond individual weather events. An example for what this encompasses are changed seasons. **Climate extremes** include weather and climate variables that exceed the upper and lower threshold values of closely observed values. Therefore, the

³² Lenton Timothy et al. (2008)

³³ and statistically significant at high confidence intervals - these statistical details are omitted in the text for the sake of readability.

³⁴ Intergovernmental Panel on Climate Change (IPCC) (2018)

term does not only encompass extreme weather conditions such as tropical cyclones. A differentiation can also be made between long-term trends, such as reduced rainfall and short-term events such as strong downpours, which may also occur merely locally and have no measurable influence on a national level.

In addition to normal climatic events such as precipitation or extreme temperatures, **climate shocks** also include complex events such as droughts and floods. **The number of climate related disasters has increased globally by at least 60% since 1990 (see Image 5), 80% of disasters today are already climate related.**³⁵

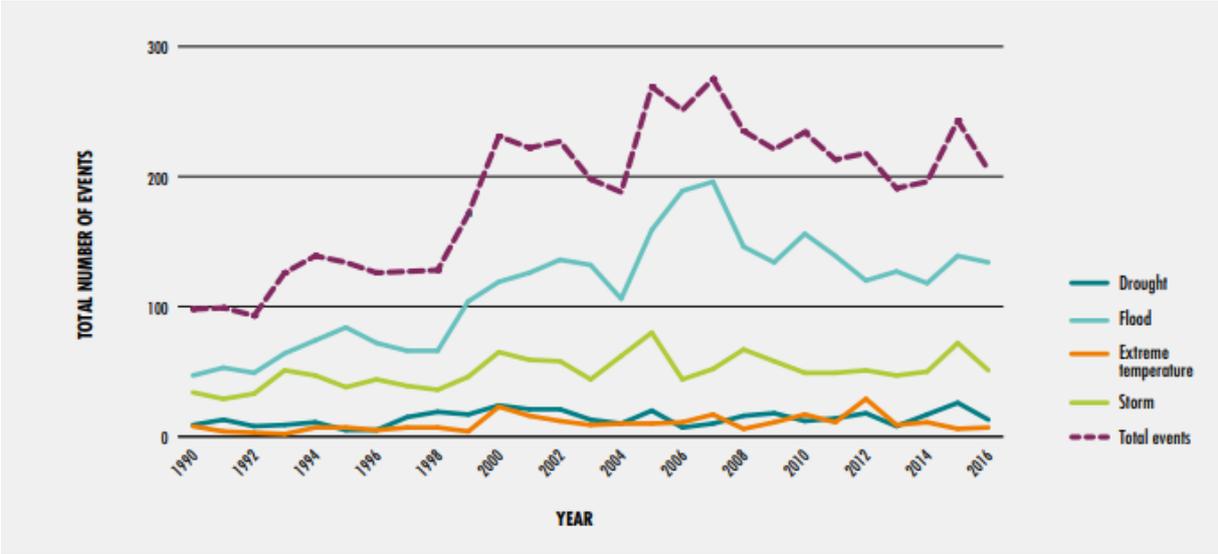


Image 5: Increasing number of climate related catastrophes, 1990-2016³⁶

On land, extreme climatic and weather-related events and changes pose a risk to ecosystems and biodiversity in fauna and flora and agricultural productivity is declining in many countries: traditional harvests no longer produce the usual yields, pastures become less fertile, soils are barren. Many species no longer thrive in their traditional areas and may even be endangered to become extinct. The increases in temperature above land are higher than above water and the change in land use, especially due to **deforestation**, plays a reinforcing role in intensifying climate change.³⁷ **Cities** are major emitters of CO2 and are very vulnerable to extreme weather conditions because they are heavily dependent on their infrastructure. At the same time, they have great climate protection and adaptation potential.³⁸

³⁵ Food and Agriculture Organisation of the United Nations (2018)
³⁶ Food and Agriculture Organisation of the United Nations (2018), Note: Total number of natural disasters in low and middle income countries between 1990-2016. Disasters are defined as medium-sized and large disasters that exceed the registration limits in the EM-DAT International Disaster Database.
³⁷ Intergovernmental Panel on Climate Change (IPCC) (2019a)
³⁸ UN-Habitat, n.d.: Urban Themes: Climate change

Focus-Box 2: Climate Change and different Living spaces

Forests and soils are two of the most important CO² reservoirs on earth. Through changes in land use, particularly through the decrease of forests due to deforestation, CO² is released. Changes in forest cover also have regional effects: while expansions of forests can have a cooling effect during hot seasons, a large reduction in forest areas may, through interaction of water and solar energy, lead to further 'autonomous' reduction and self-destruction of forests. Particularly tropical rainforests such as the Amazon and those in Central Africa, are considered tipping points for an abrupt change in the climate system. It is considered uncertain whether this point has already been exceeded in places like the Amazon, where slash-and-burn farming is politically supported. In Africa, the expansion of smallholder agriculture, which occurs partly due to population growth and the lack of alternative sources of income, is one of the main causes of forest destruction.

Cities only cover about 2% of the earth's surface, but they contribute 71-76% to global CO² emissions.³⁹ Therein lies enormous potential for climate protection through emissions savings. Extreme weather conditions such as heat waves and heavy rain pose challenges for the health of residents and for the urban infrastructure like water supply, sewerage and waste management. Thus, water supplies can be threatened by drought, as in Cape Town in 2018. Dense building development reduces the ability of the soil to absorb water, increasing the risk of flooding. 90% of urban areas are located near coasts and are particularly affected by the consequences of climate change such as rising sea levels, storms and the ingress of salt water into groundwater reserves. More than one billion people live in slums or informal settlements, often along rivers or on slopes, and are particularly exposed to the risks of flooding and landslides. Adapting to climate change is therefore a challenge for urban planning and post-disaster reconstruction, during which the needs of vulnerable groups have to be considered. Disaster preparedness and early warning systems can help reduce the consequences of extreme weather events.⁴⁰

Low-lying coastal areas and islands are particularly affected by the effects of climate variability and extreme weather conditions such as heat waves, high swell or waves and tropical cyclones. Usually, the population and thus the infrastructure are concentrated on the coast and thus immediately exposed to the more frequent and stronger storms and the rising sea level. In river deltas, as in other coastal areas, salt water often seeps into groundwater, which is necessary for drinking water supply and agriculture. Islands are particularly exposed to weather events and the geographical isolation makes it more difficult to provide help and deliver necessary food and materials in case of emergency. By reference to Mauritius and Papua New Guinea, image 9 shows how different the vulnerability and adaptability of such island states can be. Prosperity and political stability influence both aspects.⁴¹

³⁷ UN-Habitat for a better urban future (UN-Habitat) (n.d.): Climate Change, UN-Habitat for a better urban future,

⁴⁰ UN-Habitat for a better urban future (UN-Habitat) (n.d.): Climate Change, UN-Habitat for a better urban future,

⁴¹ Intergovernmental Panel on Climate Change (IPCC) (2019b)

The decline in the cryosphere, which causes the rise in **sea level**, is accompanied by an increase in water temperature, increasing acidification and decreasing oxygen content. In addition to the threat to coastal areas and river deltas from flooding and salinization of land and groundwater, ecosystems such as coral reefs and fish stocks are also affected by the changes. The decline of corals and fish stocks has a negative impact on food security, especially in tropical regions. Similar effects can also be observed in inland waters. Rising sea temperatures lead to the spread of toxic algae, which accumulate in the food chain and thus reach regions whose local communities have not previously been affected.⁴²

In addition to the negative effects on livelihoods, food security (see below) and water supply, there are also other risks to health, human security and economic activities due to heat and extreme weather conditions. Since adhering to the 1.5 °C goal would in all likelihood result in less climate damage and need for adaptation than a scenario with a temperature rise of 2 or more degrees, it would also save costs. However, even in the 1.5 °C scenario, there are limitations to the adaptation and adaptation capacities of some human and natural systems and the associated losses.⁴³

3.2.3 Climate Change and the Erosion of Livelihoods (Poverty, SDG1)

The consequences of climate change can endanger the livelihoods of vulnerable population groups, who often live in rural areas and are directly dependent on agriculture and thus on the weather.⁴⁴ In terms of the **sustainable livelihood approach**, all five types of capital that are necessary for securing the livelihood of individuals or households are affected (see Image 6): natural capital, physical capital, human capital, financial capital and social capital.⁴⁵

Climate-related (natural) disasters contribute to the destruction of the environment, i.e. **natural capital** (land, water, forest, biodiversity, etc.), for example soil erosion, salinization, deforestation, loss of biodiversity, reduction in ecosystem services and deterioration in the quality of pastureland. Climate variabilities and extremes can promote plant and animal diseases, the following economic costs of which are often underestimated, since the connection with agriculture, food security and nutrition is overlooked.

Climate-induced disasters can destroy **physical capital** (infrastructure, food, livestock, housing, means of production, energy, drinking water etc.) including production means in the food value chain, such as seeds and equipment, and thus damage production and consumption, which can lead to food insecurity. Subsistence farmers are particularly at risk of losing their productive capital such as seeds, tools and draft animals and thus, become incapable to produce.

⁴² Intergovernmental Panel on Climate Change (IPCC) (2019b)

⁴³ Intergovernmental Panel on Climate Change (IPCC) (2018)

⁴⁴ Food and Agriculture Organization of the United Nations (FAO) et al. (2018)

⁴⁵ It should be kept in mind that in times of globalization there are three tendencies in relation to the dynamics of securing livelihoods: 1) disintegration of households and changes in community life; 2) economic fragmentation and income diversification; 3) Multi-local live lihoods and transnational networks, i.e. increased temporary mobility through improved communication and transport routes as well as migration. (De Haan & Zoomers 2003)

Heat waves increase morbidity, reduce labour productivity and increase mortality. Vector-borne diseases such as malaria and dengue fever spread increasingly as a result of rising temperatures, rainfall and high humidity. Extreme weather events like storms or climate shocks such as floods can destroy health facilities and educational institutions. When this interrupts health and education services, **human capital** (health, knowledge, skills, experience, etc.) is weakened.

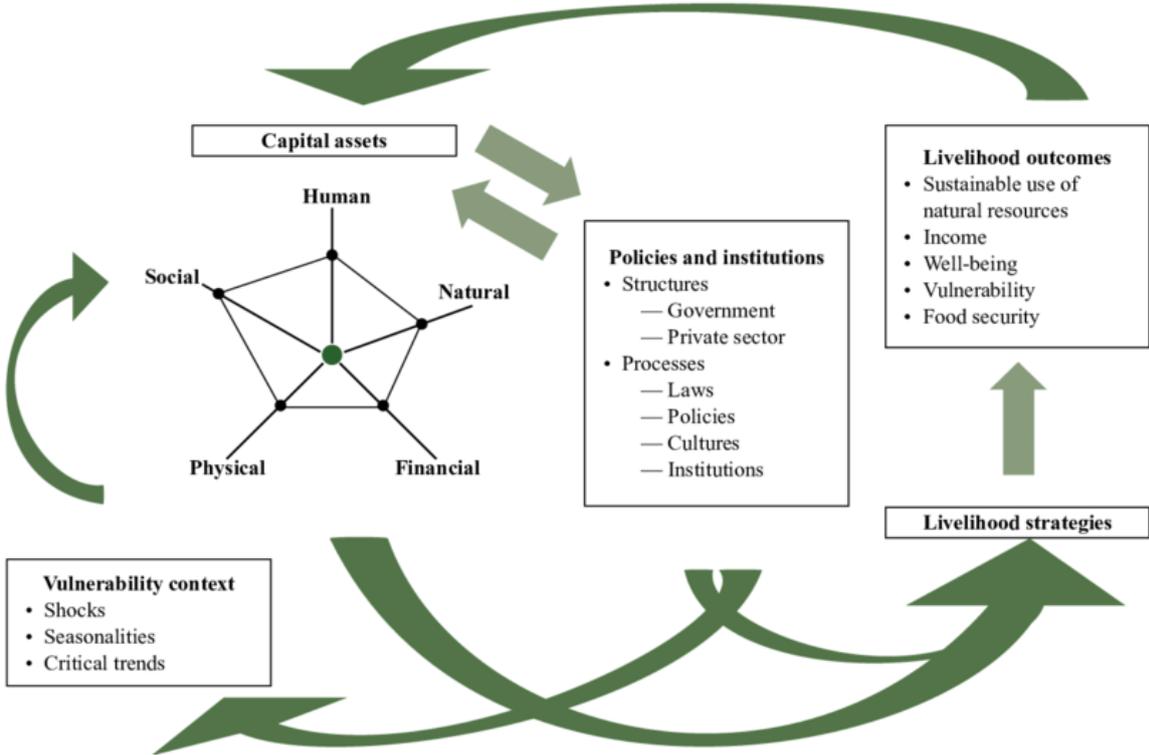


Image 6: Sustainable Livelihood Approach⁴⁶

Climate-induced failed harvests mean a loss of income, the loss of assets or **additional financial requirements for the purchase of food**, which damages the financial capital of households or communities. Poor social classes in developing countries seldom have substantial savings or access to insurance benefits and loans. Insofar as assets exist, they come mostly in the form of livestock, jewellery, or household effects and are sold when necessary (see coping strategies).

There is a high probability that the destruction of the environment and consequentially of livelihoods increases the competitive pressure and thus jeopardizes **social capital** such as social networks, relationships of trust, access to information and lower transaction costs, status etc., and even threaten the social peace.

⁴⁶ Department for International Development, UK (November 2008)

3.2.4 Climate change and its effects on food insecurity and malnourishment

Droughts cause 80% of damages and losses in agriculture, particularly, in animal and grain farming.⁴⁷

The Integrated Food Security Phase Classification (IPC) illustrates how climatic conditions and changes can directly influence the causes for food insecurity and malnutrition (see Image 7).

Most affected by climate change is the **availability** of food. Shortened growing seasons, irregular rainfalls, droughts, heat waves and floods diminish crop yields, food production and stocks. Often, crop failure can only be partially compensated by imports.

Rising food prices and increasing price fluctuations lead to difficulties **accessing** food. People from population strata that rely on buying-in food (net food buyers), such as poor and at-risk households in cities, but also small farmers, ranchers, agricultural workers and other rural, vulnerable groups are particularly affected.

If income or production get lower, food shortages are compensated for by **reducing the amount of food**, which can particularly affect women, children, the elderly, and other vulnerable groups. This indicates a lack of resilience or positive adaptation strategies and increases the seasonal fluctuations in the quality of nutrition, which are common in many regions. It is assumed that the **nutritional value** of food and **food security** are also negatively influenced by climate variability and extremes, but this has not been sufficiently researched yet. Climate fluctuations and extremes can cause the rise, survival and spread of rot, fungi, parasites, viruses and bacteria, such as salmonella. If the food is not already spoiled during production, this has an impact on health as well, since infected food is inedible or pathogenic. Contaminated water is harmful to humans⁴⁸, but also potentially to animals, and can also contaminate crops. Already, **only 3 out of 10 people have access to clean drinking water**. Climate change will dramatically increase water shortages in many countries around the world.⁴⁹

Climate extremes or shocks can destroy transport infrastructure; consequently, products spoil more easily on the way to consumers. When supply conditions are uncertain, vulnerable people tend to consume unsafe food, which often creates a **vicious circle of diarrheal diseases** and, due to the body's reduced ability to absorb nutrients, leads to **malnutrition and undernourishment**. Recurring infections can cause **wasting** and **stunting** in children.

Disasters or repeated occurrences of climate variabilities and extremes can lead to years of recovery periods in affected countries. A dependency on emergency aid, for example food aid, or imports of non-traditional, often processed, food has negative effects on the respective value chains in food production and the national economy.

⁴⁷ Food and Agriculture Organization of the United Nations (FAO) et al. (2018).

⁴⁸ Diseases caused by drinking water after contamination in connection with climate extremes, such as cholera and shigella, could often be linked to the El Niño phenomenon.

⁴⁹ Food and Agriculture Organisation of the United Nations (FAO) et al. (2018)

The related **erosions of traditional eating habits** harbour health risks⁵⁰, especially for the long-term, often lifelong, nutritional situation and health of poor strata of the population.

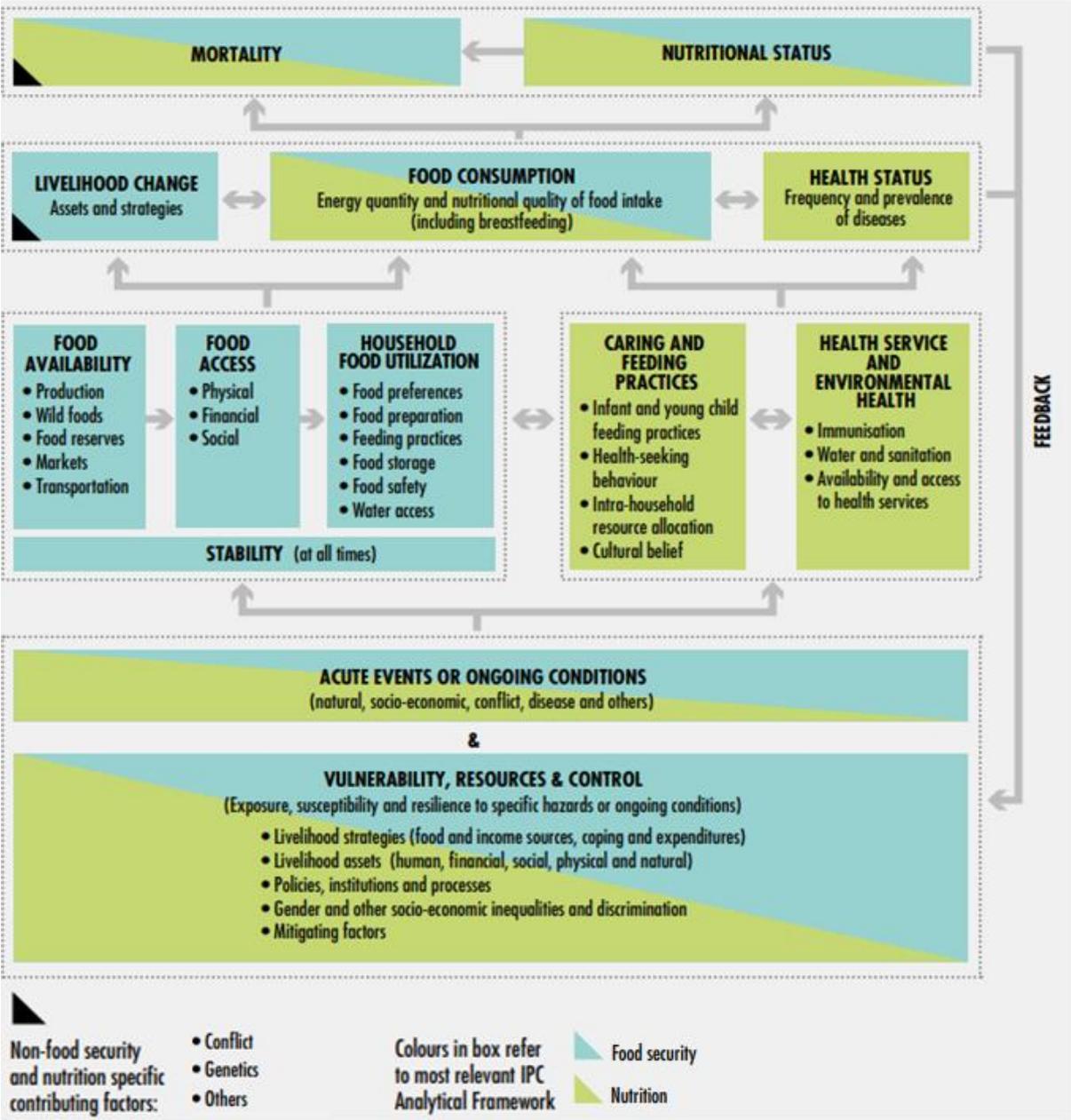


Image 7: Integrated Food Security Phase Classification (IPC) Concept⁵¹

⁵⁰ e.g., risk of malnutrition and, in the longer term, obesity and noninfectious diseases related to nutrition, e.g., heart disease and diabetes.

⁵¹ Food and Agriculture Organisation of the United Nations (FAO) (2018)

3.2.5 Particularly affected population groups

The effects the climate crisis has on people depend on their **exposure and vulnerability**⁵² They are also reinforced by other factors such as

- poverty, inequality and marginalisation,
- economic, social, ecologic and politic stressors,
- repeated climate shocks or long-term, strong climate variability.

These factors restrict options for action and access to resources and capital. The intensity of the effects of climate variability and climate shocks are context-specific and, in addition to the consequences of the respective climate event, also depend on the fragility of a system or the livelihood of individuals, households, communities and institutions. Particularly marginalised groups in systems with high inequality, for instance indigenous communities, are more susceptible to climate shocks than those with less inequality.

Many **smallholder farmers**⁵³ are dependent on a single growing season a year, on one or a few crops, and rainfed cultivation. Because of their seasonal, often informal employment relationships, **farm workers** also depend on relatively stable weather conditions and profitable harvests.

The consequences of the climate crisis for **men and women** are different, because of gender-specific roles, risk assessment, action strategies and other aspects of inequality. Climate variability and extremes can affect labour intensity and gender-specific division of labour.⁵⁴ For example, when bodies of water start to dry up, getting to water points takes longer or agricultural work becomes more intensive, the workload for women gets heavier. When men migrate, women are required to take on all subsistence activities alongside care duties. Women often take on additional responsibilities in caring for family members and wage labour or reduce food intake. Another gender-specific aspect concerns the subject of domestic violence. Women and children are disproportionately affected in that area.

Women, mothers and small children, but also **older, socially isolated people** and those with **disabilities** are particularly vulnerable and less resilient to climate variability and extremes. When dehydration or other circumstances cause women to be unable to breastfeed or comply with hygiene measures, the risk of illness and malnutrition for children increases. **Infants, young children and adolescent girls** are exposed to higher risks and impacts because they are, for instance, less mobile, dependent on care, and more often exposed to infectious diseases.

3.2.6 Coping strategies – from abstention from consumption to migration

Climate shocks can endanger people's livelihood if households cannot access various 'capitals' or if they are not able to reinvest them in productive activities such as agriculture. **Resilience** is an important factor for avoiding long-term consequences of climate variability and extreme weather conditions, such as poverty and food insecurity.

⁵² Food and Agriculture Organization of the United Nations (FAO) et al. (2018)

⁵³ UN Declaration on the Rights of Peasants and Other People Working in Rural Areas (2018)

⁵⁴ If, for example, power-intensive adaptation strategies become necessary in agriculture.

Three abilities determine the nature and extent of how individuals, households, and communities can cope with climate shocks and their consequences ⁵⁵:

- **Adaptive capacity** – Coping strategies, risk management, savings;
- **Absorption capacity** - use of capital, attitude and motivation, diversification of livelihoods (livelihood) and human capital;
- **Transformation capacity** – control mechanisms, strategies and rules, infrastructure, community networks and formal safety nets.

Poor population groups without savings and access to loans are more likely to employ harmful coping strategies if their livelihood is threatened. The type of climate shock and the extent of the consequences also determine which of the feasible **ex-post coping strategies** are employed. Affected people usually apply reversible strategies that have a short-term effect, e.g. **consumption coping** (savings in nutrition), first, before turning to more radical, harmful and less reversible measures, such as the sale of (production-) goods (**livelihood co-ping**), are taken. In extreme cases, a climate shock can lead to the collapse of coping strategies and the loss of livelihoods, which can result in malnutrition, undernourishment, poverty and death.

Smallholders who are affected by climate shocks tend to reduce or avoid investments and try to diversify their income (often outside the agriculture sphere). A lack of access to social and financial services as well as the lack of formal institutions to mitigate risks in agriculture, for example through insurance, impede coping and adaptability capacities, which causes considerable **opportunity costs** of climatic uncertainty.

Farmers who recognize climatic changes often apply **ex ante adaptation measures**: the diversification of production and source of income, or the use of 'climate-smart agricultural practices' can reduce risks and stabilise income over the annual cycle. Government programmes and social capital, such as informal mutual support between farmers or the establishment of cooperatives, can be helpful in these situations.

Migration of individual household members, usually **within national borders**, is another strategy for risk reduction and income diversification, which strengthens the resilience of a household. Especially when climate shocks coincide with other vulnerability factors such as conflict, rising food prices, and other structural factors, other coping and adjustment mechanisms no longer work and the pressure to migrate increases.

There are no established methods, to measure the number of people for whom climate variability and extreme weather events are the main reasons for short or long-term migration.⁵⁶

The term 'climate refugee', which is often used incorrectly in the media, has no binding global basis under international law, since the Geneva Refugee Convention (1951) does not name climate or weather as a reason for flight and the UN Guidelines for Internally Displaced Persons (1998) and the Global Compact on Refugees (2018) do mention climate, environmental degradation or natural disasters, but are not binding. The 'Kampala Convention' (2012), according to which African contracting states are obligated to protect and support persons, who have been displaced due to environmental destruction and climate change, only applies in Africa. As part of the 2030 Agenda and the SDGs, SDG 11 (Reduce

⁵⁵ Food and Agriculture Organization of the United Nations (FAO) et al. (2018)

⁵⁶ Piguet, E. (2010)

Inequality) aims to improve migration policy and enable responsible, safe and regular migration routes.

In **2018, 17.2 million people were considered internally displaced** (displaced within their own country); whereby parts of particularly vulnerable groups, presumably, were forced to leave their homes several times. The main reasons for this were strong storms (9.3 million), floods (5.4 million) and droughts (0.76 million)^{57 58}.

When livelihoods are threatened, climate change, combined with other factors such as population growth, can be one of the reasons for increased competition for resources. Especially in poor countries with weak governments or during periods of political transformation, the effects of climate change can be an indirect driving force for **conflicts**, two examples are West Asia and Syria.⁵⁹

3.2.7 Regional impacts - especially on priority regions of Caritas Austria

The effects of climate change can be demonstrated worldwide. However, they are particularly strong in subtropical and tropical climates, and above all above the oceans. As a result, countries in Asia, Africa and Latin America, and particularly coastal areas, are affected more than Landlocked countries in temperate climates.

The University of Notre Dame's ND-GAIN⁶⁰ Index, a leading data source for assessing the effects of climate change, is composed of a vulnerability score and a readiness score. A country's vulnerability and willingness to adapt are determined from 36 and 9 indicators based on state statistics.

The list of the ten highest and lowest rated countries in Image 8 paints a clear picture: The **'Top 10' are exclusively politically stable countries** with high incomes, **from the 'global west'**, led by Norway and with Austria in eighth place. The **ten lowest rated countries** are almost exclusively those with low incomes and are also politically unstable; **eight of them are in Africa**. Low-income countries are more exposed to extreme weather events and poorly prepared due to bad infrastructure and weak institutions. The countries that are most affected are also the ones that have contributed the least to anthropogenic climate change.

The matrix in Image 9 shows the **(potential) priority countries and Asian partner countries of Caritas Austria**⁶¹ and two island countries to give an example based on their vulnerability and adaptability.

⁵⁷ The Internal Displacement Monitoring Center (IDMC) collects numbers of internally displaced people worldwide each year. The main causes are usually conflicts, wars and generalizable violence as well as displacement due to climate and weather disasters. For the latter, only the annually anew displaced can be calculated and the numbers include evacuation figures and also the number of precautionary evacuated people. People may also be displaced several times or only leave their home for a short period of time. The data cannot be evaluated according to the type and duration of the displacement, which would be important for assessing the scope of the displacement.

⁵⁸ Internal Displacement Monitoring Centre (IDMC) (2018)

⁵⁹ Guy J. Abel et al. (Januar 2019)

⁶⁰ University of Notre Dame (n.d.): Notre dame Global Adaption Initiative

⁶¹ Österreichische Caritaszentrale (2019)

Top 10				Bottom 10			
Rank	Land	Income	Score	Rank	Land	Income	Score
1.	Norway	High	76.1	172.	Guinea- Bis-sau	Low	32.1
2.	New Zealand	High	73.5	173.	Afghanistan	Low	31.4
3.	Finland	High	72.0	173.	Haiti	Low	31.4
4.	Sweden	High	71.3	175.	Niger	Low	31.0
5.	Australia	High	71.0	176.	Sudan	Lower middle	30.4
6.	Swiss	High	70.9	177.	Dem. Rep. of the Congo	Low	29.6
7.	Denmark	High	70.6	178.	Central Afri-can Republic	NA	27.5
8.	Austria	High	70.5	179.	Eritrea	Low	26.3
9.	Germany	High	69.3	180.	Chad	Low	25.7
9.	Iceland	High	69.3	181.	Somalia	NA	20.3
9.	Singapore	High	69.3				

Image 8: The ten highest and lowest rated countries in terms of vulnerability and adaptability ⁶²

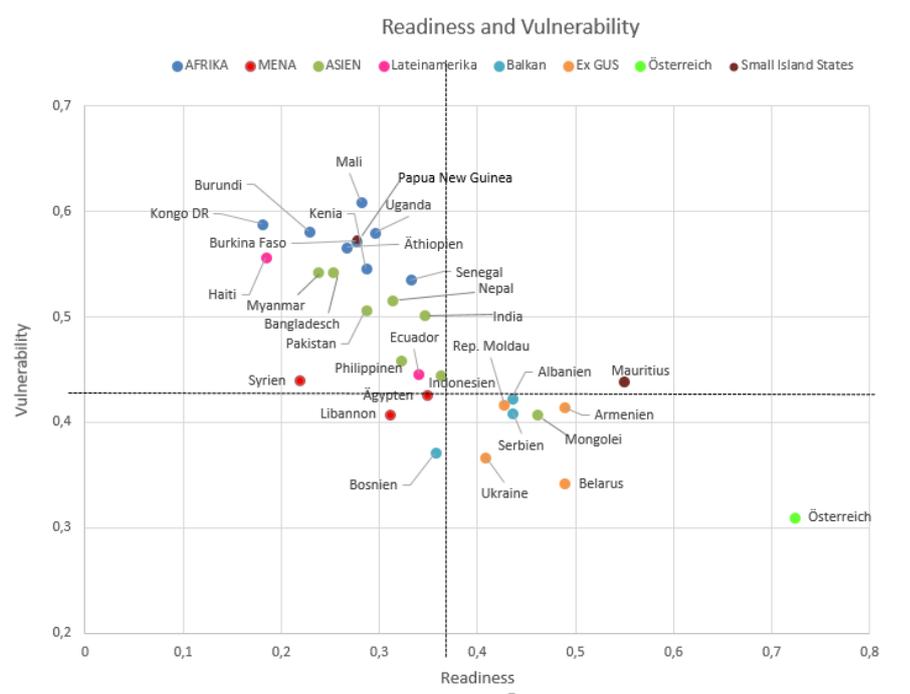


Image 9: Vulnerability and adaptability of the priority and partner countries of Caritas Austria (plus two island states) ⁶³

Looking at the (potential) priority countries, the African countries, Haiti and Pakistan are particularly vulnerable, with very little adaptability. Southern and Eastern European partner countries, on the other hand, are less vulnerable and better prepared for the necessary adaptation measures. Intermediate are countries in the Middle East (Middle East and North

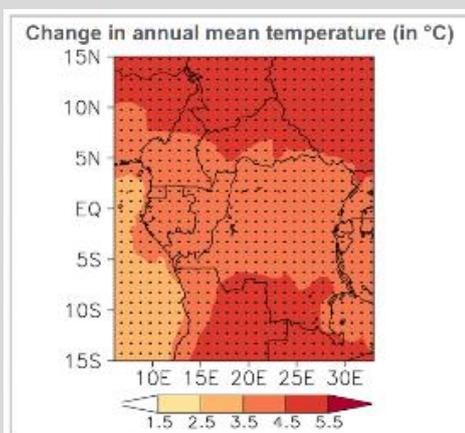
⁶² It. ND GAIN Index, Daten von 2017

⁶³ It. ND GAIN Index, data from 2017

Africa - MENA region) and Ecuador. The graph shows that countries with higher vulnerability are also less adaptable (see Annex 6.5). Caritas partner countries in Asia, where long-term projects or repeated support after weather-related disasters have been provided, tend to be more prosperous than the African focus countries, but their vulnerability is comparable to them and their adaptability only slightly higher. Mongolia is a - positive - exception. The two island states that are included in the graph have strikingly big differences in terms of vulnerability and adaptability.

According to a **survey at Caritas Austria and its partner organizations** most of the projected effects of climate change are already occurring in the focus and partner countries, and temperatures are rising in all of them. This poses a real challenge for everyone involved.

Focus-Box 3: Climate Change in the Democratic Republic of the Congo (DRC)



The DRC, located in the centre of Africa on the equator, causes less than 1% of global CO₂ emissions, but ranks 177th out of 181 countries in the ND Gain Index: it ranks 12th in terms of vulnerability and 5th in terms of adaptability.⁶⁴ Predictions state that the densely populated and crisis-ridden northeast, but also other more peripheral areas of the country, such as Katanga, will be particularly affected by the consequences of the climate crisis such as rising temperatures and variable rainfall patterns. The strong population growth,

combined with limited employment opportunities outside of agriculture, leads to an increase of subsistence and smallholder farming, which is one of the main reasons for deforestation. Due to the effects of the climate crisis an increase in child malnutrition, which cannot be compensated for by increased harvests, is being prognosticated.⁶⁵ Caritas partners in Katanga and Bas-Congo are already reporting such effects.

As part of the PRASA food security program, ÖCZ and Caritas Linz tested Welthungerhilfe's (world-hunger-help's) climate-proofing tool. This identified new potential for adaptation and climate protection measures for the follow-up programme.

In the focus countries in **Africa**, dry seasons are extending, while the rainy seasons in which rain-dependent agriculture is conducted are becoming shorter. **'In northern Burkina Faso, the rainy season has shortened from around five to approximately three months, and the Sahara is gaining space. 85% of the population suffers from the consequences of climate change, as a consequence the harvest of many subsistence farmers is only sufficient for about eight months'**, reports Didier Ouadraogo, project manager at Caritas Burkina Faso in the Compass program. At the same time, the precipitation patterns change in an unpredictable manner and it becomes more difficult to find the right time for sowing: In **Uganda** and the **Democratic Republic of Congo (DRC)** for example, there is often no rain for weeks after the beginning of the rainy season and seeding spoils because irrigation is

⁶⁴ Notre Dame Global Adpatation Initiative (ND-Gain) (2017)

⁶⁵ Ministry of Foreign Affairs of the Netherlands (05.02.2019)

impossible. Droughts, like in northern **Kenya** (2011 and 2014-2019), are also occurring more frequently. If those are followed by heavy rain, the earth only has a low capacity to absorb the water quantities and floods occur. Storms and heavy rain are becoming more frequent and more destructive, as in 2019 in **Mozambique**. The productivity of agriculture is decreasing in all partner countries, there are new diseases in plants and shortages of drinking water, for example due to a falling groundwater level like in the **Senegal**. Meanwhile, heat waves and storms are more common in **Uganda**, the wind damages or completely destroys accommodation and removes the topsoil. For the population, this means increased food insecurity, malnutrition and poverty, which lead to health risks as it can cause a greater susceptibility to diseases such as malaria in the **DRC** or **Burundi**.

Partners also report changes in monsoon rain patterns in **Asia**, e.g. in **Pakistan** and **Nepal**: The rainy season occurs too early or delayed, sometimes with droughts during the rainy season. This leads to irregular water supply for people and agriculture, as well as to more and new plant diseases and pests. Because of the high humidity in **Indonesia**, there are beneficial conditions for the development of bacteria, viruses, fungal diseases and parasites, even in the dry season. Extreme weather conditions, like heavy rain and storms, cause flooding and are hard to predict. Fires become more common during the dry season; biodiversity is declining. This leads to crop losses and thus, lower productivity in agriculture. In coastal areas in **Pakistan** and **India**, the sea level rises, and the salinization of groundwater and soil reduces the areas usable for agriculture and settlements. Caritas Indonesia **fears** increased food insecurity and poverty through rural exodus, rapid urbanization, accompanied by the emergence of slums, diseases and conflicts. **Lebanon** is also reporting increased droughts and flooding, which are causing damage to agriculture.

Partners in **south-east Europe**, like **Serbia** and **Bosnia**, also report heavy rains that cause flooding and damage the infrastructure and agriculture. Unpredictable temperature and precipitation patterns also lead to drought, falling agricultural productivity and increased fires in forests, among other places.

3.3 Costs and co-benefits of climate protection and adaptation measures

According to conservative calculations⁶⁶, current weather and climate-related damages in Austria amount to around 1 billion euros annually; For the middle of the century, annual costs of 3.3 to 8.8 billion euros are expected if no measures for climate protection and adaptation to climate change are taken worldwide. These **high expected costs justify investments in climate protection and adaptation measures**.⁶⁷ Climate protection in one area can have positive effects in other sectors. On one hand, lower CO² emissions in industry and transport are predicted to improve air quality and, as a result, have a positive impact on human health. Organic agriculture, on the other hand, supports biodiversity and thus important ecosystem services such as bee pollination. Such **co-benefits often have local, short-term, and noticeable effects**, while the immediate climate protection measures locally and in the short are imperceptible.

⁶⁶ Conservative calculation means that only the consequences of significant natural disasters and heat-related deaths are included; other impacts of climate change in Austria or effects of global effects such as price increases of foodstuffs are not considered here.

⁶⁷ Cost of Inaction (Coin): Assessing the cost of Climate Change for Austria (2015)

4 The topic of climate change in the programme work of Caritas Austria International Programmes

4.1 How does Caritas support people affected by climate change?

In view of the effects of climate change that can already be observed, the topic is relevant for all aspects of Caritas Austria's work abroad. Starting points are, on the one hand, disaster preparedness and aid as well as reconstruction after catastrophes which has been adapted to changing climatic conditions and, on the other hand, the long-term support of beneficiaries in adapting to the effects of climate change in agriculture, the support of climate-friendly methods in agriculture and in everyday life (climate protection), as well as the increased advocacy in Austria and in partner countries. Therein, the focus lies on enabling partners and beneficiaries to secure their livelihoods and food security in a climate-friendly and thus sustainable manner (**capacity building**).

This chapter describes what Caritas is already doing to help those affected in partner countries to face the challenges of the consequences of climate change. Its intention is to motivate employees to promote the spread of 'good practice' and inspire the interested public.

4.1.1 Advocacy

The advocacy work of Caritas Austria International Programmes is, for one thing, aimed at politicians and decision-makers in Austria and within the Caritas network at a European level. On the other hand, Caritas supports partners in key countries in their advocacy work.

Caritas expects that systemic change is possible if

- awareness for the climate crisis is raised and people's consciousness is sensitised;
- evidence and arguments for the necessary changes are presented;
- people who have the influence to implement or initiate changes are involved.⁶⁸

Caritas Austria International Programmes implements advocacy work

- through continuous **dialogue** with decision-makers, among others through the umbrella organization Global Responsibility - Working Group for Development and Humanitarian Aid (AGGV) in Austria and at European level through the legal work of Caritas Europa;
- through **alliances and strategic partnerships** with other organizations and networks;
- as part **of press and public relations work**, such as the annual hunger campaign, which in 2019 had a climate focus;
- through specific **events**, such as the Humanitarian Congress, and activities to influence certain laws, programs, or other government measures.

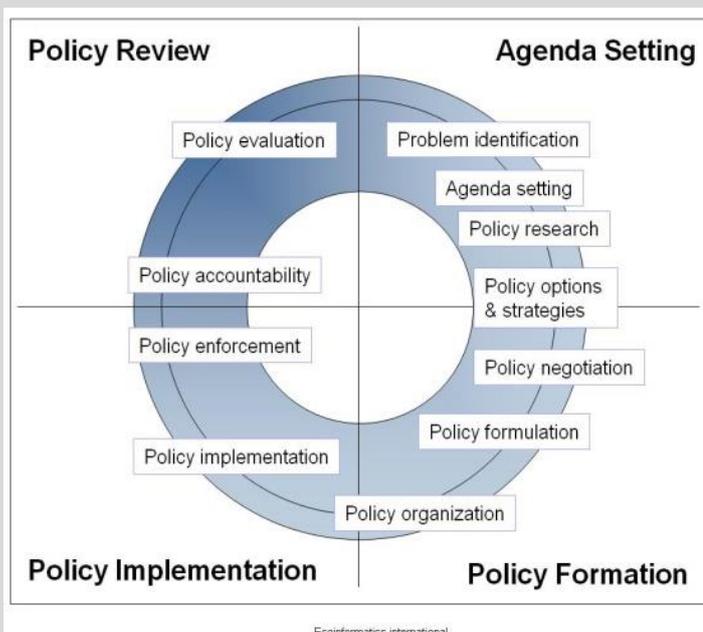
⁶⁸ derived from: Caritas Europa (2018)

Caritas provides and supports **advocacy work** for adapting to climate change in **priority and partner countries** at different levels. Caritas supports:

- The strengthening of capacities as well as the active participation of partners in the **development of strategies and policies of the national or regional government** to adapt to the effects of climate change, for disaster preparedness and for climate protection, for example in Kenya and India;
- The advocacy work in priority and partner countries at **local and regional government level**, e.g. in Kenya, (see Focus);
- Support partners in their public relations work and **awareness raising** about the dangers of climate change, adaptation strategies and climate protection in the **population**, for example, through radio programmes and workshops as part of programmes and projects that promote climate and environmental protection measures such as tree planting, e.g. in the DRC and in the Sahel (see Focus-Box 5).

Focus-Box 4: Advocacy for systemic change in Kenya

In addition to disaster preparedness and humanitarian aid, Caritas supports MIO-NET, a platform of local NGOs that, among other things, do advocacy work. MIO-NET advocates the development of the



MIO-NET advocates the development of the **Marsabit Disaster Risk Management Policy**, which has been approved and signed, as well as the **Marsabit Climate Change Adaptation Policy**, which is available as a first draft. Two more steps are necessary before the laws indeed become effective, but MIO-NET wants to continue to its involvement in the policy dialogue.

In a previous phase, Caritas supported measures for **organizational development and capacity building** for MIO-NET - these measures made it possible for the network to play a key role in this important policy process.

Partner: MIO-NET - www.mio-net.org; Image: European Training Foundation (2015)

Focus-Box 5: Advocacy for climate friendly agroecology in the Sahel region⁶⁹



The awareness for climate change and sustainable resource management is low in the Sahel region, which is strongly affected by climate change and food insecurity. The **programme to promote agroecology raises awareness** among Caritas employees, the rural population, the public and the authorities. It is about the prevention and solutions for these problems and **strengthens the cooperation** between civil society, local networks, universities and other experts. These measures **strengthen the agents' capacities** of to implement innovative practices in the region.

The programme was created through the exchange and coordination of international Caritas organisations as part of the Sahel working-group at Caritas Internationalis. Four European Caritas partners and Misereor support Caritas partners in eight Sahel countries in the implementation process.

⁶⁹ Bild: INKOTA (2016): Ernährungssouveräne Landwirtschaft

4.1.2 Disaster preparedness and humanitarian aid

Extreme weather events are becoming more frequent, have more destructive force and affect more and more people. Caritas International Programmes supports disaster preparedness, provides humanitarian aid after disasters and helps with reconstruction.

Caritas

- supports the **humanitarian capacities** of partner organizations in regions particularly threatened by climate-related disasters. Therefore, as part of programmes in Asia, Africa and Eastern and South-Eastern Europe, Caritas' partners are educated on project management (CI management standards), humanitarian standards (e.g. Sphere; Core Humanitarian Standards⁷⁰) and the organization of volunteer work.
- supports affected communities in **strengthening their resilience** in order to mitigate the effects of climate variability and weather extremes (**disaster risk reduction, DRR**), e.g. by creating pre-season contingency and response plans for tropical storms in the Philippines and Nepal, or creating flood safety and evacuation plans for schools in Serbia and Bosnia (see Focus-Box 6);
- provides **humanitarian emergency aid** when climate variability and/or weather extremes have caused damage, for example:
 - Food distributions during droughts, e.g. in South Sudan;
 - Water deliveries and emergency sales of cattle in droughts, e.g. in Northern Kenya;
 - Distribution of other essential goods such as hygiene articles, medicines, hand pumps for an improved supply of water, building-kits for emergency accommodation, kitchen utensils etc., e.g. in Mozambique;
- supports the **reconstruction** of destroyed infrastructure, houses and livelihoods in way that provides adaptability for the expected future impacts of climate change.
- (re-)builds **infrastructure** in an adapted manner, e.g. schools and kindergartens in Mozambique; schools in Myanmar that can also be used as emergency accommodation during floods (see Focus-Box 7); the construction of hurricane-safe community centers in southern Haiti after Hurricane Mathew (2016);
- rebuilds **destroyed houses and accommodations** in such a way that they can withstand floods or storms, for example, after Typhoon Haiyan in the Philippines (build back better approach);
- supports affected people in **restoring their livelihoods** after they were afflicted by climate-related disasters, for example by distributing seeds, tools for agriculture, and livestock, e.g. in Mozambique (2019); Seed banks, tree nurseries, help with the restoration of home gardens and the breeding of traditional small animals, e.g. in Haiti (from 2009); the replacement of seaworthy fishing boats in the Philippines (from 2014);
- offers measures which generate income e.g. through cash programming such as Cash for Work in the Philippines (from 2014).

⁷⁰ Sphere Standards (n.d): The Sphere Project

Focus-Box 6: Disaster preparedness in schools in Serbia and Bosnia



In the Balkans, floods are becoming increasingly more common. Therefore, Caritas does preventive work to limit the effects and supports communities in repairing damage.

That way, the population is educated on how

to prevent or alleviate damage, proactively e.g. through adapted planning in agriculture with a situation analysis before sowing. In **schools**, **safety training courses** are provided for disaster cases and evacuation plans are drawn up together with young people and other agents. Caritas Serbia developed a board game that children can use to learn how to behave in emergencies. Different NGOs were interconnected and, based on a needs analysis, emergency plans were drawn up to be able to provide help before help outside help arrives.

Partner: Caritas Serbia

Focus-Box 7: Improvement of disaster preparedness in Myanmar



After the tropical typhoon Nargis in 2008, **schools** in Myanmar were rebuilt so that they could be used as **emergency shelters** and places of refuge in the event of a disaster. The schools were designed to better withstand common threats (storms, heavy rain, floods). Therefore, features such as stronger foundations and anchoring were chosen in the construction, buildings were erected at elevated locations and built higher in order to compensate for rising water levels

and flooding. Children can get to school by boat during the rainy season and come to school on foot or by bike in the dry season.

Partner: Metta Development Foundation

4.1.3 Food security – End Hunger (SDG 2)

The effects of climate change have once again increased the number of people affected by food insecurity. This applies particularly to the focus and partner countries of Caritas. Caritas supports smallholder households long-term through **integrated, sustainable agriculture** that enables adaptation to changing climatic conditions and is resource and climate friendly at the same time.⁷¹ The development of **local capacities** of partner organizations and beneficiaries in the planning and implementation of measures for adaptation to climate change and climate protection play a central role.

Farm management and cultivation methods including improvement of soil quality and natural resource management (NRM)

- Adaptation of **strategies or cropping plans** to growing seasons changed by climate change, e.g. time shift of sowing / planting in the Great Lakes Region and in South Sudan, cultivation of crops with a short ripening period in Uganda;
- Improvement of **cropping methods**, e.g. sowing methods (drill seeds instead of broad sowing); space in-between plants; appropriate, ecological fertilization; resource-saving weed control; shading of cultures through mixed cultures with trees or shrubs;
- A wider and improved range of natural **pest control methods**; biological practices such as the use of beneficial creatures/plants (e.g. push-pull in Ethiopia); crop rotation; mixed crops in vegetable growing;
- **Conservation agriculture**, e.g. zero tillage; permanent ground cover, e.g. in the Compass program in Burkina Faso;
- **Diversification** of agricultural production through the introduction of new crops to scatter the risk of climate-related crop failures;
- **Crop rotation / crop rotation economy and mixed crops, cultivation of intermediate crops**;
- **Promoting awareness and information** about ecological correlations and natural cycles as well as the preservation of soil fertility by returning the depleted nutrients; composting etc., e.g. in the Great Lakes Region, West Africa and South Sudan;
- Use of natural, **organic material**, for example, the use of harvest residues or compost, to improve the soil structure and the water holding capacity of the soil;
- **Protection against erosion** through the construction of terraces and stone walls;
- **Rehabilitation of degraded soil** through soil-improving measures to increase organic matter such as green manure, mulching, reforestation etc. and a transition to sustainable use;
- Animal-friendly and efficient **small animal farming**⁷², which generate positive interactions between agricultural and animal farming, within the framework of integrated systems, e.g. the improvement of soil quality. At that, crossing local with other breeds can help improve results and adapt animals to changing climatic conditions. The diversification of income or the strengthening of the capital base through animal farming strengthens the resilience of smallholder households;
- **Capacity building** through the raising of awareness and information on ecological relationships and natural cycles.

⁷¹ Österreichische Caritaszentrale (2017)

⁷² Österreichische Caritaszentrale (2019b)

Focus-Box 8: Plant trees in compost holes



In addition to common methods of ecological agriculture, Caritas also **teaches methods for adapting to climate change: the 'Zai' technique** consists of digging holes in the soil and composting organic waste in them. During the rainy season, grain such as sorghum is planted in the holes, the water is held contained by the walls of earth surrounding it - the

farmer Yacouba Sawadogo from Burkina Faso received the alternative Nobel Prize⁷³ for developing this method. A similar method is used when planting trees and shrubs in compost in crescent-shaped holes on sloping terrain. Additionally, the population is sensitized to climate protection, e.g. for the use of improved energy-saving stoves and for planting trees. A **platform facilitates the exchange of knowledge** between the programme partners in different countries and other interested parties.

Project: COMPASS <https://www.compass-caritas.at/>

Focus-Box 9: On-farm research: rediscovery of old, resistant varieties

To find out which varieties are more resistant to changing climatic conditions, **farmers** in India, Nepal, Bangladesh and Pakistan are now doing their own research. They are testing traditional and conventional varieties and cultivation methods. They

Treatment	Varieties	Plant	No. of	Grain	Straw
1.	Sukha	110	9.03	3.4	7.66
2.	Sukha	117.5	8.82	4	7.98
3.	Sukha	111	10.74	4.1	7.71
4.	Radha-4	98.2	10.41	3.3	6.72
5.	GM	108.1	9.79	3.6	7.49
6.	F-test	Highly	Significant	Not Signif-	Not Signif-
7.	Lsd	6.83	1.154	0.7	1.292

record variables such as weather conditions, problems (diseases, pests, etc.) and yields in diaries in order to be able to compare the efficiency of different varieties.

In their research work, the farmers are supported by scientific institu-

Image10: Comparison table of tests of rice varieties

tions that evaluate the results. These are used to support farmers and the dialogue with political decision-makers to strengthen the role of sustainable agriculture in partner countries. The yields of traditional varieties have increased so much that farmers prefer them for cultural reasons such as eating habits, even if they are inferior to hybrid varieties in terms of productivity.

Programme: Smallholder Adaptive Farming and Biodiversity Network (SAFBIN) in Bangladesh, India, Nepal and Pakistan – <http://www.safbin.org/>⁷⁴

⁷³ The Right Livelihood Award Foundation (2018)

⁷⁴ Additional links: <https://boku.ac.at/en/cdr/forschung/safbin> <https://www.researchgate.net/project/Strengthening-Adaptive-Farming-in-Bangladesh-India-and-Nepal>

Drought and disease resistant varieties or seeds

- Promotion of new and traditional, previously forgotten **varieties** that are resistant to climate-related drought, diseases and pests, e.g. teff in India, highland rice in Nepal;
- **increase** of seeds and collectively organized **seed banks** for drought resistant varieties to increase the availability of seed;
- on-farm **adaptive research** (OFAR) - the farmers themselves research which varieties deliver the best yield under changed climatic conditions, in cooperation with research institutions (see Focus);
- reduction of decline by **optimizing seed storage**.

Water

- Improved **access** to water, e.g., through construction of rainwater catch basins; deepening of wells/pumps;
- efficient **water management**, e.g. water-saving farming methods that retain rainwater; rainwater harvesting; efficient irrigation methods, such as drip irrigation;
- Improving **water quality** to ensure proper hygiene;
- activities for protecting natural resources and refilling **groundwater reservoirs**.

Further measures

Other measures which are not directly related to the effects of climate change can be indirectly connected to or have an impact on them: Within the scope of humanitarian aid, Syrian refugee children are given access to **education** - the effects of climate change are seen as one of the triggering factors of the war. **Income-generating** measures⁷⁵ also strengthen the resilience of the beneficiaries to the effects of climate change.

4.2 Climate protection within programme work

Caritas supports **climate protection measures** which avoid, reduce, and/or compensate climate damaging greenhouse gases.

Practice

- **Raising awareness** for climate and resource protection, climate-friendly methods in household and agriculture among partners as well as on a local level;
- Supporting **energy-saving household practices** such as use of solar lamps, energy saving and biogas stoves (see Focus-Box);
- Support of **resource and climate-friendly methods in agriculture**, e.g. measures to reduce deforestation, prevent fires and promote reforestation;
- **Compensation** of CO² emissions on business trips, especially through Caritas projects/programs;
- **Learning and exchange platforms** on climate protection and sustainability;

⁷⁵ such as microcredit programs e.g. in Egypt; promotion of small/medium sized businesses if they are not climate damaging: Market Access in DRC.

Focus-Box 10: Caritas' climate protection programmes



CO² compensation through the promotion of energy-efficient technologies in rural communities

In Ethiopia, clean, renewable and energy-efficient technologies such as **solar systems for lighting accommodation and energy-efficient cooking stoves** are being introduced.

The reduction in deforestation and CO² emissions contribute to climate protection as follows: In the first five years approximately 25,000 tons of CO² are to be saved. The project complies with the standards for CO² compensation of the University of Natural Resources and Life Sciences, Vienna and is supported by the Vorarlberg climate neutrality alliance.

This means saving time and money for 3,200 households, as well as reducing health risks from burning wood and kerosene. Accompanying measures such as savings groups, vegetable cultivation and the planting and growing of fruit trees improve people's income and quality of life.

Project: Graded Response in Energy Efficiency & Nature Conservation for Reducing Emissions (GREEN-RE)

Climate protection through biogas in Uganda

By **replacing firewood and coal or kerosene with biogas** for cooking and lighting, significant CO² emissions shall be saved in Uganda, which can be sold in Austria. To achieve this, efficient biogas systems are being developed, each of which are available to 5-6 households or a school. After training, they operate the systems independently with the material that are produced by their animals. The fermentation residues from the installations can again be used as fertilizer in agriculture. The Vienna University of Natural Resources and Life Sciences conducted research in collaboration with the University of Gulu, Uganda, to calculate emissions and to develop a monitoring system. The project is to be supported for six years from 2019 in a cooperation between Caritas Upper Austria, Caritas Carinthia and the ÖCZ and thereafter will be self-supporting through the sale of CO² compensation.



Project: Green Energy and Nutrition (GEN)

How economic development can help protect the climate



As part of an economic partnership, bakeries in five countries - Serbia, Albania, Senegal, Congo DRC, Uganda - will be equipped with **energy-efficient baking ovens**. Developed by an Austrian baker, the ovens are not fired with fossil fuels or wood as usual, but **with briquettes which are - among other things- made from agricultural waste**.

In the Democratic Republic of the Congo, the briquettes are produced by socially disadvantaged young people, whereby deforestation and CO² emissions are reduced. In total, about 50 jobs are to be created in the five countries.

Project: Back Ma's, in partnership with the Austrian bakery Gragger

4.3 Climate protection in everyday work at Caritas Austria International Programmes

Caritas protects natural resources and the climate by avoiding, reducing or compensating for climate-damaging greenhouse emissions.

Following the end of the involvement strategy, during which sustainability is anchored, the organization has confirmed its commitment to social, ecological and economic sustainability. In 2019, the status of the formalization and practice of climate protection and adaptation in the sub-organizations was ascertained. In 2020, both a basic obligation based on *laudato Si* and SDGs are to be formulated and specific requirements for practical work and reporting are to be laid down. The framework for this is provided by the official documents of Caritas Internationalis⁷⁶. The focus areas **mobility, buildings** and **energy** as well as **procurement** and **waste management** are highly relevant for climate protection measures.

Individual organizational units⁷⁷ have been **compensating CO² emissions from business trips** via the compensation system of the University of Natural Resources and Life Sciences (BoKu)⁷⁸ in development projects since the beginning of 2019, especially in Africa. Caritas Vorarlberg has been compensating for CO² emissions from flights through the GREEN-RE project since 2016 (Focus-Box), based on a compensation license from the University of Natural Resources and Applied Life Sciences.

⁷⁶ Caritas Internationalis, Guidelines on Environmental Justice, 2005

⁷⁷ ÖCZ, Caritas Klagenfurt, Caritas Linz und Caritas Innsbruck.

⁷⁸ Universität für Bodenkultur (Boku) (n.d.): Boku Co2 Kompensationssystem

5 Looking to the future

This policy paper forms a good basis for informing and sensitizing project partners, interested public and Caritas employees about the current state of climate policy, scientific findings on climate change and the current discourse on climate change in relation to humanitarian aid and food security. The participatory process made it possible to collect information about programmes and projects of Caritas Austria that are relevant to adaptation to climate change and increased climate protection in partner countries; create synergies with the emerging new sustainability strategy; and document the need for action by Caritas International Assistance with regard to adaptation to climate change and climate protection. The commentary on the draft document by the Climate Change Centre Austria (CCCA) of the University of Natural Resources and Applied Life Sciences in Vienna was an essential contribution to quality assurance.

The implementation of the strategy of Caritas International Programs 2019-2024 offers the opportunity to align the programme and project work as well as the daily work of Caritas International Programmes more effectively with efficient climate protection and adaptation to climate change.

6 Annex

6.1 Glossary

Where not otherwise indicated, the concepts are sourced from: FAO et. al., 2018. The State of Food Security and Nutrition in the World 2018. Building climate resilience for food security and nutrition. Rome, FAO.

Absorptive capacity: The capacity to withstand threats and minimize exposure to shocks and stressors through preventative measures and appropriate coping strategies to avoid permanent, negative impacts. The capacity to absorb shocks and stresses by increasing access to climate risk insurance and social protection systems.

Acute food insecurity: Food insecurity found in a specified area at a specific point in time and of a severity that threatens lives or livelihoods, or both, regardless of the causes, context or duration. Has relevance in providing strategic guidance to actions that focus on short-term objectives to prevent, mitigate or decrease severe food insecurity that threatens lives or livelihoods.

Acute malnutrition refers to extreme thinness (low weight-for-height) of individuals reflecting a reduction or loss of body weight. See **wasting**.

Adaptation: The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects.

Adaptive capacity: The ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences. The ability of a system to adjust to climate change (including climate variability and extremes) in order to moderate potential damages, to take advantage of opportunities, or to cope with the consequences. The capacity to adapt to new options in the face of crisis by making proactive and informed choices about alternative livelihood strategies based on an understanding of changing conditions

Anthropogenic: Resulting from or produced by human activities.

Chronic food insecurity: Food insecurity that persists over time mainly due to structural causes. Can include seasonal food insecurity found in periods with non-exceptional conditions. Has relevance in providing strategic guidance to actions that focus on the medium- and long-term improvement of the quality and quantity of food consumption for an active and healthy life.

Chronical malnutrition / Stunting: Low height-for-age, reflecting a past episode or episodes of sustained undernutrition. In children under five years of age, stunting is defined as height-for-age less than -2 standard deviations below the WHO Child Growth Standards median.

Climate change adaptation (CCA): An approach to adaptation (see adaptation definition above) that addresses current or expected climate variability and changing average climate conditions.

Climate change refers to a change in the state of the climate that can be identified (e.g. by using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer.

Climate extreme (extreme weather or climate event): The occurrence of a value of a weather or climate variable above (or below) a threshold value near the upper (or lower) ends of the range of observed values of the variable. For simplicity, both extreme weather events and extreme climate events are referred to collectively as “climate extremes”.

Climate impact / Global Warming Potential describes the intensity with which a greenhouse gas adds to the change in the atmosphere, i.e. is harmful to the climate.

Climate in a narrow sense is usually defined as the average weather, or more rigorously, as the statistical description in terms of the mean and variability of relevant quantities over a period of time ranging from months to thousands or millions of years.

Climate resilience: An approach to building and/or strengthening resilience (see resilience definition below) that addresses current or expected climate variability and changing average climate conditions.

Climate services: Climate services involve the production, translation, transfer and use of

climate knowledge and information to support decision-making by individuals and organizations. Information needs to be easily accessible, timely, easy to understand and relevant to users so they can use it to take action.

Climate shocks: Climate shocks include not only those disturbances in the usual pattern of rainfall and temperatures but also complex events like droughts and floods. Equivalent to the concept of a natural hazard or stress, an exogenous event that can have a negative impact on food and nutrition security, depending on the vulnerability of an individual, a household, a community, or systems to the shock.

Climate variability: Refers to variations in the mean state and other statistics (standard deviations, the occurrence of extremes, etc.) of the climate on all spatial and temporal scales beyond that of individual weather events. Variability may be due to natural internal processes within the climate system (internal variability), or to variations in natural or anthropogenic external forcing (external variability).

Climate-resilient pathways: Iterative processes for managing change within complex systems in order to reduce disruptions and enhance opportunities associated with climate change.

Conservation Agriculture (CA) is a farming system that can prevent losses of arable land while regenerating degraded lands. It promotes maintenance of a permanent soil cover, minimum soil disturbance, and diversification of plant species. It enhances biodiversity and natural biological processes above and below the ground surface, which contribute to increased water and nutrient use efficiency and to improved and sustained crop production.⁷⁹

Coping capacity: The ability of people, institutions, organizations and systems, using available skills, values, beliefs, resources and opportunities, to address, manage and overcome adverse conditions in the short to medium term.

Cryosphere encompasses glaciers and ice at the polar caps as well as permafrost soils.

Disaster risk management (DRM): Disaster risk management is the application of disaster

risk reduction policies and strategies to prevent new disaster risk, reduce existing disaster risk and manage residual risk, contributing to the strengthening of resilience and reduction of disaster losses.

Disaster risk reduction (DRR): Disaster risk reduction is aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development. Disaster risk reduction is the policy objective of disaster risk management, and its goals and objectives are defined in disaster risk reduction strategies and plans.

Disaster: Severe alterations in the normal functioning of a community or a society due to hazardous physical events interacting with vulnerable social conditions, leading to widespread adverse human, material, economic or environmental effects that require immediate emergency response to satisfy critical human needs and that may require external support for recovery.⁸⁰

Drought: A period of abnormally dry weather long enough to cause a serious hydrological imbalance. A period with an abnormal precipitation deficit is defined as a meteorological drought.

Early warning system (EWS): The set of capacities needed to generate and disseminate timely and meaningful warning information so that individuals, communities and organizations threatened by a hazard can prepare prompt and appropriate action to reduce the possibility of harm or loss.

Environmental migration: Human migration involves movement over a significant distance and duration. Environmental migration refers to human migration where environmental risks or environmental change plays a significant role in influencing the migration decision and destination. Migration may involve distinct categories such as direct, involuntary, and temporary displacement due to weather-related disasters; voluntary relocation as settlements and economies become less viable; or planned resettlement encouraged by government actions or incentives. All migration decisions are multi-causal, and hence it is not

⁷⁹ Food and Agriculture Organisation of the United Nations: Conservative Agriculture,

⁸⁰ Intergovernmental Panel on Climate Change, 2018: Annex I: Glossary

meaningful to describe any migrant flow as being solely for environmental reasons.⁸¹

Exposure: The presence of people, livelihoods, species or ecosystems, environmental functions, services and resources, infrastructure, or economic, social or cultural assets in places and settings that could be adversely affected.

Extreme weather or climate event: The occurrence of a value of a weather or climate variable above (or below) a threshold value near the upper (or lower) ends of the range of observed values of the variable. Many weather and climate extremes are the result of natural climate variability (including phenomena such as ENSO), and natural decadal or multi-decadal variations in the climate provide the backdrop for anthropogenic climate changes. Even if there were no anthropogenic changes in climate, a wide variety of natural weather and climate extremes would still occur.

Flood: The overflowing of the normal confines of a stream or other body of water, or the accumulation of water over areas not normally submerged. Floods include river (fluvial) floods, flash floods, urban floods, pluvial floods, sewer floods, coastal floods, and glacial lake outburst floods.

Food insecurity: A situation that exists when people lack secure access to sufficient amounts of safe and nutritious food for normal growth and development and an active and healthy life. It may be caused by unavailability of food, insufficient purchasing power, inappropriate distribution or inadequate use of food at the household level. Food insecurity, poor conditions of health and sanitation and inappropriate care and feeding practices are the major causes of poor nutritional status. Food insecurity may be chronic, seasonal or transitory.

Food security dimensions: Access – If food is actually or potentially physically present, the next question is whether or not households and individuals have sufficient access to that food. **Availability** – This dimension addresses whether or not food is actually or potentially physically present, including aspects of production, food reserves, markets and transpor-

tation, and wild foods. **Stability** – If the dimensions of availability, access and utilization are sufficiently met, stability is the condition in which the whole system is stable, thus ensuring that households are food secure at all times. Stability issues can refer to short-term instability (which can lead to acute food insecurity) or medium- to long term instability (which can lead to chronic food insecurity). Climatic, economic, social and political factors can all be a source of instability. **Utilization** – If food is available and households have adequate access to it, the next question is whether or not households are maximizing the consumption of adequate nutrition and energy. Sufficient energy and nutrient intake by individuals is the result of good care and feeding practices, food preparation, dietary diversity and intra-household distribution of food. Combined with good biological utilization of food consumed, this determines the nutritional status of individuals.

Food security: A situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. Based on this definition, four food security dimensions can be identified: food availability, economic and physical access to food, food utilization and stability over time.

Hazard: A process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation. Natural hazard is synonymous with “climate shock” in this report.

Heatwave: A period of abnormally and uncomfortably hot weather.

Hunger: Hunger is an uncomfortable or painful physical sensation caused by insufficient consumption of dietary energy. In this report, the term hunger is synonymous with chronic undernourishment.

Livelihood assets or capital: The resources used, and the activities undertaken in order to live. These assets are referred to as livelihood assets and in the Sustainable Livelihoods Framework are defined under the following five categories of “capital”: **Economic or financial capital:** capital base (regular inflows of money, credit/debt, savings and other economic assets); **Human capital:** skills, knowledge, labour (includes good health and physical capability). **Physical capital:** produc-

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https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-AnnexII_FINAL.pdf

tive assets, infrastructure (buildings, roads, production equipment and technologies); **Natural capital:** Natural resource stocks (land, soil, water, air, genetic resources, forests, etc.) and environmental services (hydrological cycle, pollution sinks, etc.); **Social capital:** resources (networks, social claims, social relations, affiliations, associations)

Livelihood: „A livelihood comprises the capabilities, assets and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base.”⁸²

Malnutrition: An abnormal physiological condition caused by inadequate, unbalanced or excessive consumption of macronutrients and/or micronutrients. Malnutrition includes undernutrition and overnutrition as well as micronutrient deficiencies.

Micronutrients: Vitamins, minerals and other substances that are required by the body in small amounts; measured in milligrams or micrograms.

Mitigation (of climate change): A human intervention to reduce the sources or enhance the sinks of greenhouse gases that lead to climate change.

Mitigation (of disaster risk and disaster): The lessening of the potential adverse impacts of physical hazards (including those that are human induced) through actions that reduce hazard, exposure and vulnerability.

Readiness score measures a country's ability to leverage investments and convert them to adaptations. ND-GAIN measures overall readiness by considering three components – economic, governance and social readiness.⁸³

Resilience is the ability of individuals, households, communities, cities, institutions, systems and societies to prevent, resist, absorb, adapt, respond and recover positively, efficiently and effectively when faced with a wide range of risks, while maintaining an acceptable level of functioning and without compromising long-term prospects for sustainable

development, peace and security, human rights and well-being for all.

Risk: The probability or likelihood of occurrence of hazardous events or trends multiplied by the impacts if these events or trends occur. Risk to food insecurity is the probability of food insecurity resulting from interactions between a natural or human-induced hazard/shock/stress and vulnerable conditions.

Stunting – see chronic malnutrition.

Tipping point: A level of change in system properties beyond which a system reorganizes, often abruptly, and does not return to the initial state even if the drivers of the change are abated. For the climate system, it refers to a critical threshold when global or regional climate changes from one stable state to another stable state.⁸⁴

Transformative capacity: The capacity to transform the set of livelihood choices available through empowerment and growth, including governance mechanisms, policies/regulations, infrastructure, community networks, and formal and informal social protection mechanisms that constitute an enabling environment for systemic change.

Undernourishment is defined as the condition in which an individual's habitual food consumption is insufficient to provide the amount of dietary energy required to maintain a normal, active, healthy life. For the purposes of this report, hunger is defined as being synonymous with chronic undernourishment.

Undernutrition: The outcome of poor nutritional intake in terms of quantity and/or quality, and/or poor absorption and/or poor biological use of nutrients consumed as a result of repeated instances of disease. It includes being underweight for one's age, too short for one's age (stunted), dangerously thin for one's height (suffering from wasting) and deficient in vitamins and minerals (micronutrient deficiency).

Vulnerability measures a country's exposure, sensitivity and ability to adapt to the negative impact of climate change. ND-GAIN considers vulnerability in six life-supporting sectors – food, water, health, ecosystem service, human habitat and infrastructure. **Readiness**

⁸² Department for International Development 1999

⁸³ Notre Dame Global Adaptation Initiative (ND-Gain)

⁸⁴ Intergovernmental Panel on Climate Change (IPCC) (2018)

measures a country's ability to invest in adaptability, taking into account economic readiness, governance readiness and social readiness.

Vulnerability score measures a country's exposure, sensitivity and ability to adapt to the negative impact of climate change. ND-GAIN measures the overall vulnerability by considering vulnerability in six life-supporting sectors – food, water, health, ecosystem service, human habitat and infrastructure.⁸⁵

Vulnerability: The conditions determined by physical, social, economic and environmental factors or processes that increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards. Vulnerability to food insecurity is the range of conditions that increases the susceptibility of a household to the impact on food security in case of a shock or hazard.

Wasting: Low weight-for-height, generally the result of weight loss associated with a recent period of inadequate calorie intake and/or disease. In children under five years of age, wasting is defined as weight-for-height less than –2 standard deviations below the WHO Child Growth Standards median.

Weather: Weather describes conditions of the atmosphere over a short period of time (minutes to days), whereas climate is how the atmosphere behaves over relatively longer periods of time (the long-term average of weather over time). The difference between weather and climate is a measure of time (see above: climate, climate change, climate variability, and climate extremes).

⁸⁵ Notre Dame Global Adaptation Initiative (ND-Gain)

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6.3 SDG 13 Targets and Indicators

SDG 13: Take urgent action to combat climate change and its impacts

Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

- **Indicator 13.1.1:** Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population
- **Indicator 13.1.2:** Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030
- **Indicator 13.1.3:** Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies

Target 13.2: Integrate climate change measures into national policies, strategies and planning

- **Indicator 13.2.1:** Number of countries that have communicated the establishment or operationalization of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)

Target 13.3: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

- **Indicator 13.3.1:** Number of countries that have integrated mitigation, adaptation, impact reduction and early warning into primary, secondary and tertiary curricula
- **Indicator 13.3.2:** Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions

Target 13.a: Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible

- **Indicator 13.a.1:** Mobilized amount of United States dollars per year between 2020 and 2025 accountable towards the \$100 billion commitment

Target 13.b: Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities

- **Indicator 13.b.1:** Number of least developed countries and small island developing States that are receiving specialized support, and amount of support, including finance, technology and capacity-building, for mechanisms for raising capacities for effective climate change related planning and management, including focusing on women, youth and local and marginalized communities.⁸⁶

⁸⁶ SDGs (Oktober 2018): SDG-Indicators Metadata Repository, Sustainable Development Goals New York, <https://unstats.un.org/sdgs/metadata/>, accessed on 2.9.2019

6.4 Agenda for Humanity

The World Humanitarian Summit 2016 resulted in **five core principles** to guide humanitarian action:

CORE RESPONSIBILITY 1: Global leadership to prevent and end conflict

Preventing conflicts and finding political solutions to resolve them is our first and foremost responsibility to humanity.

CORE RESPONSIBILITY 2: Uphold the norms that safeguard humanity

Every day, civilians are deliberately or indiscriminately killed in wars. We are witnessing the erosion of 150 years of international humanitarian law.

But even wars have limits: leaders must recommit to upholding the rules that protect humanity.

CORE RESPONSIBILITY 3: Leave no one behind

The World Humanitarian Summit is the first test of our commitment to transform the lives of those most at risk of being left behind.

This means reaching everyone and empowering all women, men, girls and boys to be agents of positive transformation. It means reducing displacement, supporting refugees and migrants, ending gaps in education and fighting to eradicate sexual and gender-based violence.

CORE RESPONSIBILITY 4: Change people's lives – from delivering aid to ending need

Success must now be measured by how people's vulnerability and risk are reduced, not by how needs are met year after year. Ending need will require three fundamental shifts in the way we work:

- Reinforce, don't replace national systems
- Anticipate, do not wait for crises
- Transcend the humanitarian-development divide

CORE RESPONSIBILITY 5: Invest in humanity

Accepting and acting upon our shared responsibilities for humanity requires political, institutional and financial investment.

As a shift is needed from funding to financing that invests in local capacities, is risk-informed, invests in fragile situations and incentivizes collective outcomes. We must also reduce the funding gap for humanitarian needs.⁸⁷

⁸⁷ United Nations: One Humanity shared responsibility – Report of the United Nations Secretary- General for the World Humanitarian Summit, <http://sgreport.worldhumanitariansummit.org/>, accessed on 28.01.2020

6.5 Climate change vulnerability and readiness of Caritas focus countries

	Score	Rank	Vulnerability	Readiness
Kongo DR	29.6	177	0,588	0,18
Haiti	31.4	173	0,556	0,184
Burundi	32.3	171	0,581	0,228
Mali	33.6	166	0,609	0,281
Äthiopien	35.0	163	0,566	0,267
Burkina Faso	35.2	161	0,572	0,276
Uganda	35.8	155	0,58	0,296
Kenia	36.9	150	0,546	0,286
Syrien	39.0	139	0,44	0,219
Pakistan	39.0	139	0,507	0,286
Senegal	39.9	131	0,535	0,332
Ecuador	44.7	110	0,446	0,34
Libanon	45.2	105	0,408	0,311
Ägypten	46.1	101	0,426	0,349
Bosnien	49.3	86	0,371	0,357
Rep. Moldau	50.5	79	0,417	0,427
Albanien	50.6	78	0,423	0,435
Serbien	51.4	70	0,409	0,436
Ukraine	52.1	68	0,367	0,408
Armenien	53.8	58	0,414	0,489
Belarus	57.4	40	0,342	0,489
Österreich	70.5	8	0,31	0,723
Kosovo	/			
South Sudan	/			

Image 11: ND-GAIN- Ranking of the (potential) priority countries of Caritas Austria by vulnerability and adaptability

6.6 Climate proofing tools

Climate assessments are decision-making aids and usually consist of a risk and potential analysis in climate protection as well as adaptation to climate change in connection with strategies, programmes and projects, beneficiaries and goods that need to be protected, such as the environment, investments and assets.

Most of the procedures have two-stage, consisting of a simple screening or pre-test, to determine whether a project has significant risks or potential with regard to climate change; if so, a more detailed assessment is carried out with the involvement of the partners and, where appropriate, the beneficiaries. This is intended to identify and analyse different options for action and evaluate and prioritize them according to defining criteria such as technical and financial feasibility (see figure): This serves to minimize risks and promote potentials for climate protection and adaptation.

Climate Proofing of the World Hunger Help (Welthungerhilfe)

The document on Climate Proofing by Welthungerhilfe/World Hunger Help (WHH) provides specific assistance in the development of strategies, e.g. at regional or state level, and individual projects. It is recommended to take climate change into account when creating the concept note and later when planning and implementing detailed projects.

1st STEP: RISK ASSESSMENT				2nd STEP: OPTIONS	3rd STEP: PRIORITISATION	
Identifying effects of climate change: A. Hazards: e.g. rise in sea levels, increase in extreme events B. Opportunities: more rain in dry areas	Identifying affected population groups and assets, such as infrastructure agriculture, etc.	Identifying reasons for vulnerability of these groups and elements, e.g. poverty, unsafe construction, lack of information on climate, including relevant strengths	Description of risks, e.g. loss of life or harvest, and evaluation of risk (high, medium or low)	Identifying options for action A. Adaptation: e.g. early warning, conservation of resources, drought-resistant cultivation methods, consolidating slopes against landslides. B. Contribution to mitigation: e.g. maintaining CO ₂ sinks through nature reserve management	Evaluation of options for action according to degree of effectiveness, feasibility, sustainability, cost-benefit analysis, etc. and its prioritisation	Integration into the project planning, e.g. indicators

Image 1: Overview of working steps of climate proofing

Specific assistance: i.a. need for information and sources for the analysis of the effects of climate change, weather forecasts and early warning systems, options for adaptation, orientation guidance for defining criteria for prioritizing adaptation options; Checklist of possible contributions to climate protection and to the preliminary review of projects with regard to adaptation participatory methods for workshops with partners and at the base.

Note: The English version contains the **method description** including tables and work instructions, but not the assistance contained in the German version (see above).

<https://www.welthungerhilfe.de/aktuelles/publikation/detail/klima-anpassungspruefung/>

<https://www.welthungerhilfe.org/news/publications/detail/climate-proofing/>

Further tools:

https://www.klimawandelanpassung.at/fileadmin/inhalte/kwa/pdfs/HANDBUCH_EN.pdf