Federal Ministry
for Economic Cooperation
and Development

Climate Risk Profile: Burkina Faso*

Summary

This profile provides an **overview of projected climate parameters and related impacts** on different sectors in Burkina Faso until 2080 **under different climate change scenarios** (called Representative Concentration Pathways, RCPs). RCP2.6 represents the low emissions scenario in line with the Paris Agreement; RCP6.0 represents a medium to high emissions scenario. **Model projections do not account for effects of future socioeconomic impacts.**

Agro-ecological zones might **shift, affecting ecosystems, biodiversity** and **crop production**. Models project a decrease in species richness and an increase in tree cover in response to climate change for most areas of Burkina Faso.

Agriculture, biodiversity, health, infrastructure and water are highly vulnerable to climate change. The **need for adaptation in these sectors should be represented in the German development cooperation portfolio** in Burkina Faso.

Per capita water availability will decline by 2080 mostly due to population growth. Model projections indicate that **water saving measures will become particularly important after 2050 in the central and western part of Burkina Faso.**

Depending on the scenario, **temperature** in Burkina Faso is projected to **rise by between 1.9 and 4.2 °C by 2080**, compared to pre-industrial levels, with higher temperatures and more temperature extremes projected for the south-western part of the country.

The **population affected by at least one heatwave per year** is projected to **rise** from 1.7 % in 2000 to 10 % in 2080. This is related to 88 more very hot days per year over this period. As a consequence, **heat-related mortality** is estimated to **increase by a factor of five** by 2080.

Precipitation trends are highly uncertain and project **very little change in annual precipitation sums by 2080**. Nevertheless, future dry and wet periods are likely to become **more extreme**.

Climate change is likely to cause **severe damage to the infrastructure** sector in Burkina Faso. Especially transport infrastructure is vulnerable to extreme weather events, yet essential for trading agricultural goods. Investments will need to be made into climate-resilient roads and other infrastructure.

The models project a possibility of an **increase in crop land exposure to drought**. Yields of heat- and drought-sensitive crops such as maize are projected to decline, while yields of rice are projected to benefit from CO_2 fertilisation. Farmers will need to adapt to these changing conditions.

* Further in-depth information on climate impacts and selected adaptation strategies in the agricultural sector can be found in a complimentary climate risk analysis for Burkina Faso, which will be finalised in spring 2021.

Context

Burkina Faso is a **landlocked country** in Western Africa, **belonging to the Sahel region**. It has a **population of 20 million** with an annual growth rate of 2.9 % [1]. The majority of the inhabitants live in the central and southern parts of the country, while the east and north remain less populated, mainly due to a hotter and drier climate [2]. With a real GDP per capita of 712 USD, Burkina Faso is one of the poorest countries in the world, **counting as a least developed country (LDC)** [1]. Its economy is dominated by the services sector, contributing 43.6 % to the country's GDP in 2018, followed by the agricultural sector with 28.0 % and the industrial sector with 19.5 % [3]. Gold and cotton are Burkina Faso's key exports with coconuts, Brazil nuts, cashews and oilseeds being the most important agricultural exports [4]. Overall, **80–90 % of the population is engaged in smallholder farming and heavily relies on agriculture for food security and livelihoods** [5]. Therefore, concerns are rising about the effects of climate change including the increase of temperature, reduced availability of water and the occurrence of floods and other extreme weather events.

Agricultural production in Burkina Faso is primarily subsistence-based and rainfed. The majority of farms comprise less than 5 ha with the **main staple crops being sorghum, millet, maize and rice** [5], [6]. Especially smallholder farmers suffer from the impacts of climate variability, which can reduce their food supply and increase the risk of hunger and poverty. **Limited adaptive capacity in the agricultural sector underlines the country's vulnerability to climate change**.

Burkina Faso also serves as a destination for approximately 718 000 migrants and refugees, especially from Côte d'Ivoire, Mali and Ghana [7]. Many Burkinabe migrate to neighbouring countries as well, mainly for seasonal employment to Côte d'Ivoire with **total remittance inflows of 445 million USD** in 2019 (3 % of Burkina Faso's GDP) [1], [8]. Migration patterns have also been influenced by intercommunal conflicts and terrorism in the centre and north of the country, which left **838 000 people internally displaced** [9].

Quality of life indicators [1], [10]–[12]

Human Development Index (HDI) 2018	ND-GAIN Vulnerability Index 2017	GINI Coefficient 2014	Real GDP per capita 2018	Poverty headcount ratio 2014	Prevalence of undernourishment 2016–2018
0.434 **182 out of 189** (0 = low, 1 = high)	**35.2** **161 out of 181** (0 = low, 100 = high)	**35.3** (0–100; 100 = perfect inequality)	**712 USD** (constant 2010 USD)	**43.7 %** (at 1.9 USD per day, 2011 PPP) [1]	**20.0 %** (of total population)

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[1] Poverty headcount ratio for the year 2014 adjusted to 2011 levels of Purchasing Power Parity (PPP). PPP is used to compare different currencies by taking into account national differences in cost of living and inflation.

Topography and environment

Burkina Faso is **largely located on a savannah plateau** with altitudes ranging between 250 and 400 m. There are two principal types of climate in the country: **The north, being covered by grasslands, is characterised by semi-arid steppe** with three to five months of often erratic precipitation. Therefore, agriculture is less diversified and people are more vulnerable to food insecurity. In **the south, where vegetation cover is dominated by sparse forests, the climate is more tropical** with greater amounts of precipitation (Figure 1). On average, Burkina Faso receives between **500 and 1 000 mm of precipitation between June and September** with a **mean annual temperature of around 28 °C** [13]. Three major rivers originate in Burkina Faso – the Black, White and Red Volta – being part of the **Volta Basin**. The Volta Basin, which extends to neighbouring Benin, Côte d'Ivoire, Ghana, Mali and Togo, is **an essential lifeline providing natural resources** including water for household use, irrigation, livestock rearing and hydropower, in addition to fish. However, many rivers and streams are intermitted and do not carry water the whole year round. Burkina Faso can be divided into **five major agro-ecological zones** (AEZ): Arid/Sahel, Semi-arid/Sudan Savannah, Northern Gunea Savannah, Southern Guinea Savannah and Derived Savannah (Figure 1) [14].[2] Each of these zones is characterised by specific temperature and moisture regimes and, consequently, specific patterns of crop production and pastoral activities. The country faces major environmental issues including land degradation, soil erosion, desertification and pollution of water from agricultural and livestock activities [2]. Heavier precipitation and drier conditions are expected to intensify in the context of climate change, highlighting the **need for adaptation strategies in order to protect biodiversity and maintain fragile ecosystems and their services**.

Present climate [13]

The climate in Burkina Faso is generally hot and dry. The north is characterised by semi-arid steppe with annual mean temperatures of up to 29 °C and high rates of evapotranspiration. In this part of the country, the annual precipitation sum is around 500 mm. Therefore, people turn to herding rather than farming.

In the south of Burkina Faso, the climate is more tropical: Annual mean temperature is around 27 °C with an annual precipitation sum of around 1 000 mm, which makes this region more suitable for crop production.

Burkina Faso has a single rainy season (unimodal precipitation regime), receiving 80–90 % of its annual precipitation sum between June and September. The length of the rainy season is decreasing towards the north.

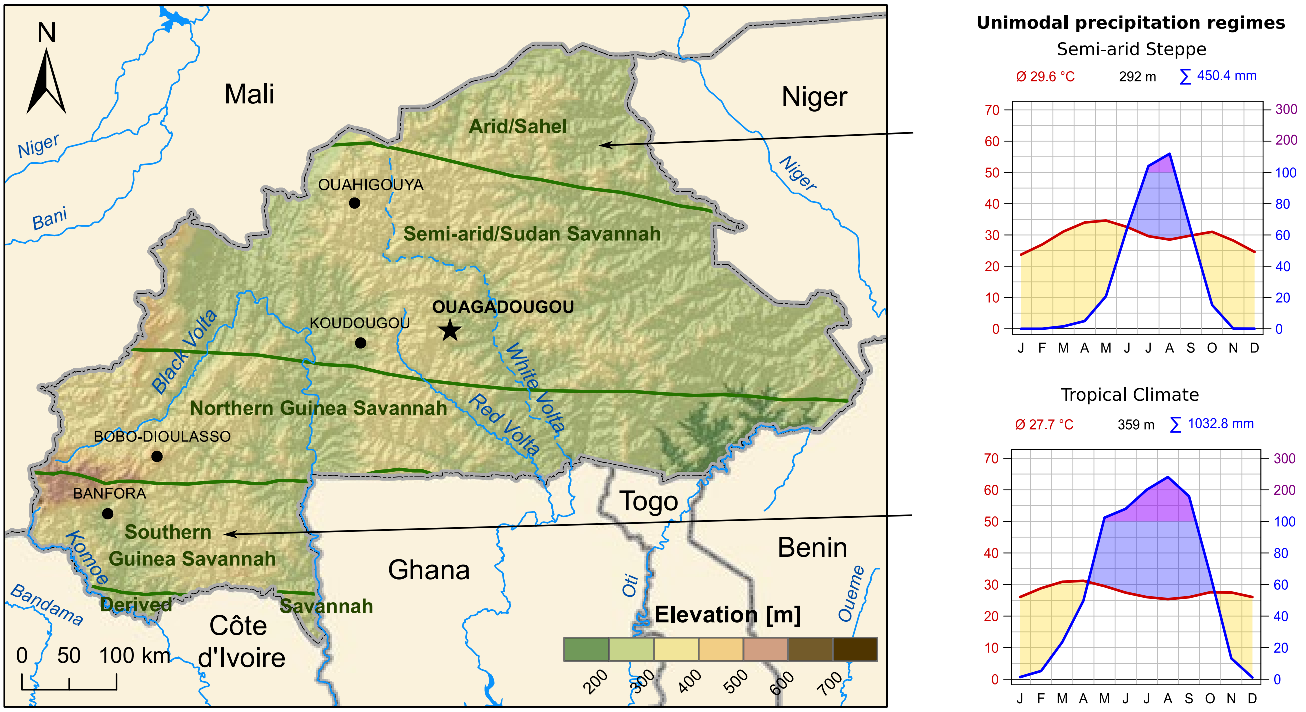


Figure 1: Topographical map of Burkina Faso with agro-ecological zones and existing precipitation regimes.[3]

[2] It should be noted that there are different classifications of AEZs in Burkina Faso. We focused on a commonly used classification of five zones.
[3] The climate diagrams display temperature and precipitation values which are averaged over an area of approximately 50 km × 50 km. Especially in areas with larger differences in elevation, the climate within this grid might vary.

Projected climate changes

How to read the line plots

historical	best estimate	Lines and shaded areas show multi-model percentiles of 31-year running mean values under RCP2.6 (blue) and RCP6.0 (red). In particular, lines represent the best estimate (multi-model median) and shaded areas the likely range (central 66 %) and the very likely range (central 90 %) of all model projections.
RCP2.6	likely range	
RCP6.0	very likely range	

How to read the map plots

Colours show multi-model medians of 31-year mean values under RCP2.6 (top row) and RCP6.0 (bottom row) for different 31-year periods (central year indicated above each column). Colours in the leftmost column show these values for a baseline period (colour bar on the left). Colours in the other columns show differences relative to this baseline period (colour bar on the right). The presence (absence) of a dot in the other columns indicates that at least (less than) 75 % of all models agree on the sign of the difference.
For further guidance and background information about the figures and analyses presented in this profile kindly refer to the supplemental information on how to read the climate risk profile.

Temperature

In response to increasing greenhouse gas (GHG) concentrations, **air temperature over Burkina Faso is projected to rise by 1.9 to 4.2 °C (very likely range) by 2080** relative to the year 1876, depending on the future GHG emissions scenario (Figure 2). Compared to pre-industrial levels, median climate model temperature increases over Burkina Faso amount to approximately 2.0 °C in 2030, 2.3 °C in 2050 and 2.4 °C in 2080 under the low emissions scenario RCP2.6. Under the medium/high emissions scenario RCP6.0, median climate model temperature increases amount to 2.0 °C in 2030, 2.6 °C in 2050 and 3.6 °C in 2080.

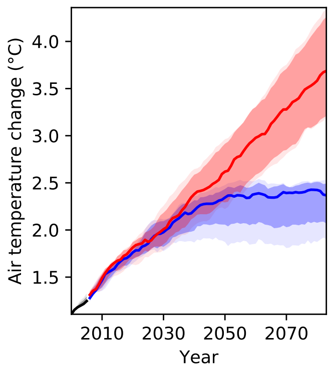


Figure 2: Air temperature projections for Burkina Faso for different GHG emissions scenarios.[4]

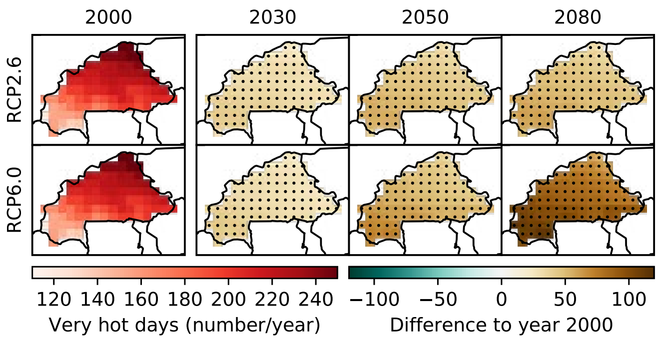


Figure 3: Projections of the annual number of very hot days (daily maximum temperature above 35 °C) for Burkina Faso for different GHG emissions scenarios.

Very hot days

In line with rising mean annual temperatures, the annual number of very hot days (days with daily **maximum temperature above 35 °C**) is projected to rise dramatically and with high certainty all over Burkina Faso (Figure 3). Under the medium/high emissions scenario RCP6.0, the multi-model median, averaged over the whole country, projects **32 more very hot days per year in 2030 than in 2000, 52 more in 2050 and 88 more in 2080**. In some parts, especially in south-western Burkina Faso, this amounts to about 250 days per year by 2080.

[4] Changes are expressed relative to year 1876 temperature levels using the multi-model median temperature change from 1876 to 2000 as a proxy for the observed historical warming over that time period.

Precipitation

Future projections of precipitation are less certain than projections of temperature change due to high natural year-to-year variability (Figure 4). Out of the four climate models underlying this analysis, two models project a decreasing trend in mean annual precipitation over Burkina Faso, while the other two models project an increase. Median model projections show **strong interannual variability but no clear trend in mean annual precipitation until 2080** under either RCP.

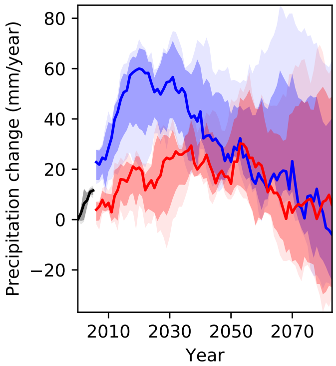


Figure 4: Annual mean precipitation projections for Burkina Faso for different GHG emissions scenarios, relative to the year 2000.

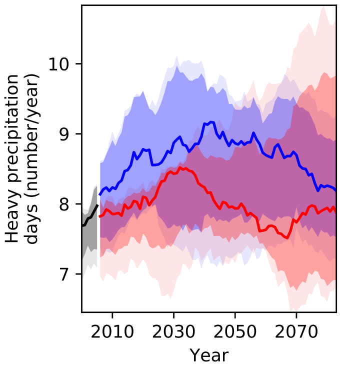


Figure 5: Projections of the number of days with heavy precipitation over Burkina Faso for different GHG emissions scenarios, relative to the year 2000.

Heavy precipitation events

In response to global warming, **heavy precipitation events are expected to become more intense** in many parts of the world due to the increased water vapour holding capacity of a warmer atmosphere. At the same time, the number of days with heavy precipitation events is expected to increase. However, this tendency can only be found in half of the climate projections for Burkina Faso. Median climate model projections show **no change in the number of days with heavy precipitation** under either RCP (Figure 5). The year 2080 is projected to receive 8 days of heavy precipitation, which is equal to the year 2000.

Soil moisture

Soil moisture is an important indicator for drought conditions. In addition to soil parameters and management, it depends on both precipitation and evapotranspiration and therefore also on temperature, as higher temperatures translate to higher potential evapotranspiration. **Annual mean top 1-m soil moisture projections for Burkina Faso show a decrease of 2.5 % for both RCP2.6 and RCP6.0 by 2080** compared to the year 2000 (Figure 6). However, there is considerable modelling uncertainty as different hydrological models project different directions of change, which makes it difficult to identify a clear trend.

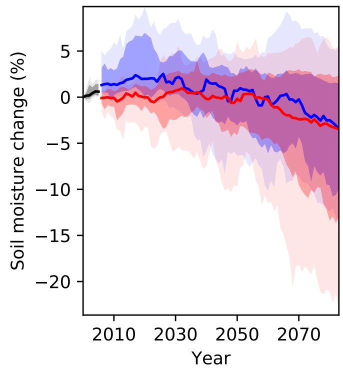


Figure 6: Soil moisture projections for Burkina Faso for different GHG emissions scenarios, relative to the year 2000.

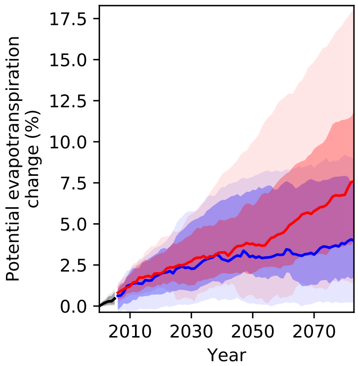


Figure 7: Potential evapotranspiration projections for Burkina Faso for different GHG emissions scenarios, relative to the year 2000.

Potential evapotranspiration

Potential evapotranspiration is the amount of water that would be evaporated and transpired if sufficient water was available at and below the land surface. Since warmer air can hold more water vapour, it is **expected that global warming will increase potential evapotranspiration in most regions of the world**. In line with this expectation, hydrological projections for Burkina Faso indicate a stronger rise of potential evapotranspiration under RCP6.0 than under RCP2.6 (Figure 7). Under RCP6.0, **potential evapotranspiration is projected to increase by 2.7 % in 2030, 3.8 % in 2050 and 6.8 % in 2080** compared to year 2000 levels.

Sector-specific climate change risk assessment

a. Water resources

Current projections of water availability in Burkina Faso display high uncertainty under both GHG emissions scenarios. Assuming a constant population level, multi-model median projections suggest only a minor decrease in per capita water availability over Burkina Faso by the end of the century under RCP2.6 and a decrease of 20 % under RCP6.0 (Figure 8A). Yet, when accounting for population growth according to SSP2 projections[5], **per capita water availability for Burkina Faso is projected to decline by 80 % by 2080** relative to the year 2000 under both scenarios (Figure 8B). While this decline is driven primarily by population growth rather than climate change, it highlights the **urgency to invest in water saving measures and technologies for future water consumption**.

Projections of future water availability from precipitation vary depending on the region and scenario (Figure 9). However, common to all regions is the high modelling uncertainty of the projected changes. This modelling uncertainty, along with the high natural variability of precipitation, in particular in the north of the country, contribute to **uncertain regional future precipitation trends** all over Burkina Faso.

Over the last decades, Burkina Faso has experienced strong seasonal and annual variations in precipitation, which present a major constraint to agricultural production. According to the International Water Association, **drought has affected a cumulative number of about 12.4 million people** between 1969 and 2014 in Burkina Faso [15]. While transhumance used to be an effective way to deal with variations in precipitation and droughts in Burkina Faso, people's reliance on this type of pastoralism has been challenged by increasingly unpredictable precipitation patterns and, consequently, a **lack of good pastures and water**, leading to **increasing competition for limited natural resources.** Other factors include population growth, conflicts between farmers and herders and terrorist activities in the region, making this mode of living less profitable and sometimes even dangerous [16]. Extreme droughts tend to have a cascading effect for farmers: First, lack of water reduces crop yields, which increases

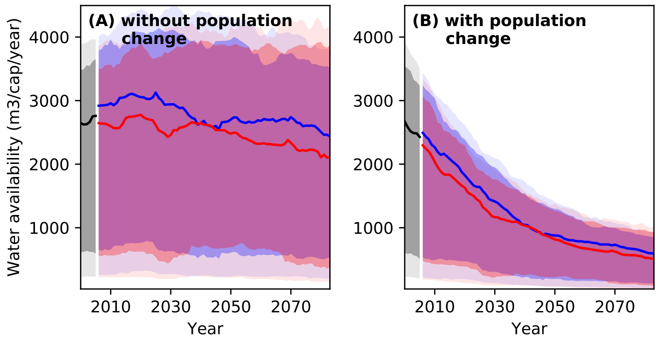


Figure 8: Projections of water availability from precipitation per capita and year with (A) national population held constant at year 2000 level and (B) changing population in line with SSP2 projections for different GHG emissions scenarios, relative to the year 2000.

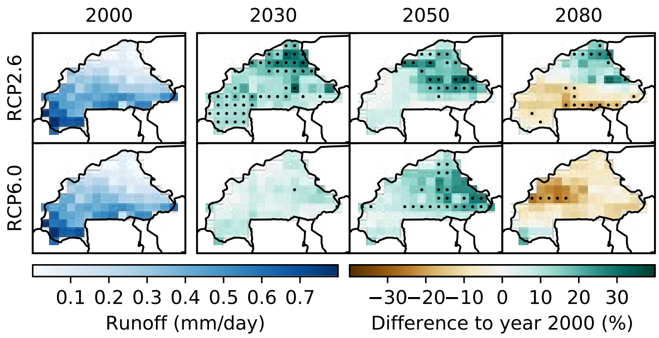


Figure 9: Water availability from precipitation (runoff) projections for Burkina Faso for different GHG emissions scenarios.

the risk of food insecurity for people and their livestock, which in turn limits their capacity to cope with future droughts [16]. Not only rural but **also urban areas experience the consequences of droughts**: Especially Ouagadougou suffers from recurring water shortages, intensified by rapid urban growth and poor infrastructure. During a severe drought in 2016, the local government had to ration the city's water supply to 12 hours a day, affecting more than two million people [17].

[5] Shared Socio-economic Pathways (SSPs) outline a narrative of potential global futures, including estimations of broad characteristics such as country-level population, GDP or rate of urbanisation. Five different SSPs outline future realities according to a combination of high and low future socio-economic challenges for mitigation and adaptation. SSP2 represents the "middle of the road"-pathway.

b. Agriculture

Smallholder farmers in Burkina Faso are increasingly challenged by the uncertainty and variability of weather that climate change causes [18], [19]. Since **crops are predominantly rainfed**, they depend on water availability from precipitation and are prone to drought. However, the length and intensity of the rainy season is becoming increasingly unpredictable and the **use of irrigation facilities remains limited** due to high costs of initial investment, problems regarding the maintenance of the equipment and harsh environmental conditions [20]. Currently, only 0.5 % of the total national crop land and 27 % of the estimated irrigation potential of 233 500 ha are irrigated [21], [22]. Especially in northern Burkina Faso, **soils are poor in nutrients**, sandy and shallow, which makes them **vulnerable to drying, erosion and flooding** [23].

Currently, the high uncertainty of projections regarding water availability (Figure 9) translates into high uncertainty of drought projections (Figure 10). According to the median over all models employed for this analysis, **the national crop land area exposed to at least one drought per year will hardly change in response to global warming.** However, there are **models that project a strong increase in drought exposure.** Under RCP6.0, the likely range of drought exposure of the national crop land area per year widens from 0.07–3.8 % in 2000 to 0.04–16.0 % in 2080. The very likely range widens from 0.01–12.0 % in 2000 to 0.01–29.0 % in 2080. This means that **some models project up to a fourfold increase in drought exposure over this time period, while others project no change.**

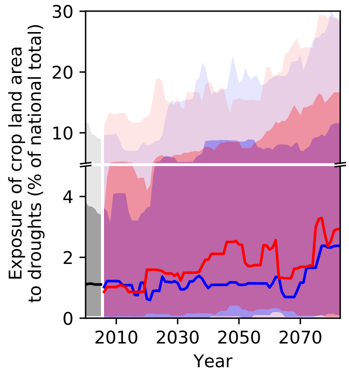
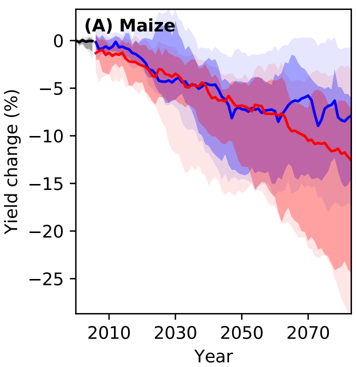


Figure 10: Projections of crop land area exposed to drought at least once a year for Burkina Faso for different GHG emissions scenarios.

Climate change will have a negative impact on yields of maize, millet and sorghum (Figure 11). While maize is sensitive to hot temperatures above 35 °C, millet and sorghum tolerate hot temperatures and dry periods better [24]. Still, model results indicate a **negative yield trend for all three crops under both RCPs** with a stronger decrease under RCP6.0. Compared to the year 2000, amounts are projected to decline by 12.0 % for maize and 7.5 % for millet and sorghum by 2080 under RCP6.0. Under RCP2.6, yields of maize are projected to decline by 8.4 % and yields of millet and sorghum by 5.2 %, **whereas yields of cow peas and rice are projected to gain from climate change**. Under RCP6.0, projections show an increase in yield by 16.2 % for cow peas and 27.0 % for rice by 2080 relative to the year 2000. An explanation for the positive results under RCP6.0 is that cow peas and rice are so-called C3 plants, which follow a different metabolic pathway than maize, millet and sorghum (C4 plants), and benefit more from the CO_2 fertilisation effect under higher concentration pathways. **Yields of groundnuts are projected to decrease under RCP2.6 and slightly increase under RCP6.0**. The decrease under RCP2.6 can be explained by non-temperature related parameters such as changes in precipitation, while the increase under RCP6.0 can be explained by the CO_2 fertilisation effect.

Overall, adaptation strategies such as switching to improved varieties in climate change sensitive crops should be considered, yet carefully weighed against adverse outcomes, such as a resulting decline of agro-biodiversity and loss of local crop types.



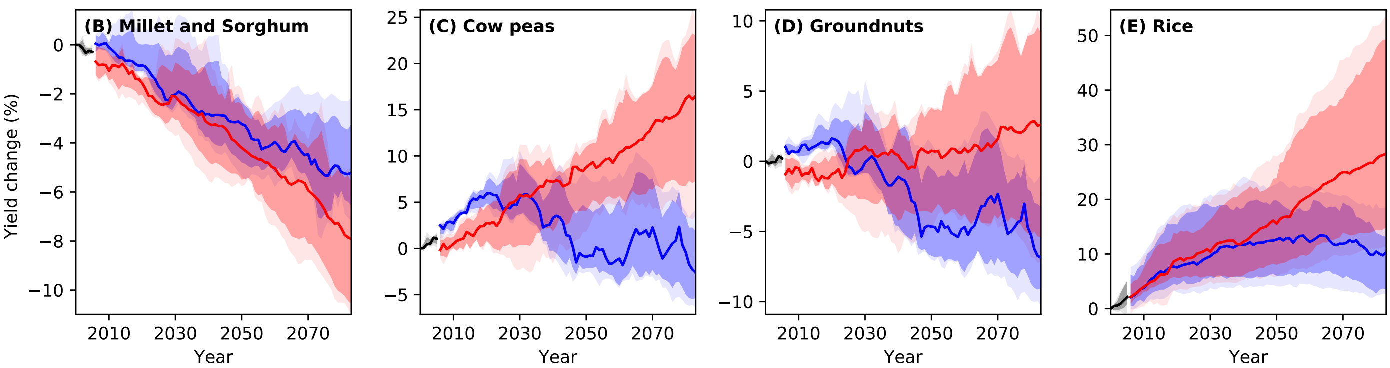


Figure 11: Projections of crop yield changes for major staple crops in Burkina Faso for different GHG emissions scenarios assuming constant land use and agricultural management.

c. Infrastructure

Climate change is expected to significantly affect Burkina Faso's infrastructure sector through extreme weather events, such as flooding and droughts. High precipitation amounts can lead to **flooding of transport infrastructure including roads and railroads**, while high temperatures can cause **roads, bridges and protective structures to develop cracks and degrade more quickly**. Transport infrastructure is very vulnerable to extreme weather events, yet essential for social, economic and agricultural livelihoods. Roads serve communities to trade their goods and access healthcare, education, credit as well as other services, especially in rural and remote areas.

Extreme weather events will also have **devastating effects on human settlements and economic production sites**, especially in urban areas with high population densities like Ouagadougou or Bobo-Dioulasso. **Informal settlements are particularly vulnerable to extreme weather events**: Makeshift homes are often built in unstable geographical locations including river banks, where flooding can lead to loss of housing, contamination of water, injury or death. Dwellers usually have low adaptive capacity to respond to such events due to high levels of poverty and a lack of risk-reducing infrastructures. These challenges are particularly salient in Ouagadougou, where **urban flooding is a major problem during the rainy season**. For example, in 2009, the city experienced torrential precipitation leading to water runoffs and flooding, affecting more than 180 000 people. 41 people died and 33 172 houses were completely destroyed [25].

Despite **the risk of infrastructure damage being likely to increase due to climate change**, precise predictions of the location and the extent of exposure are difficult to make. For example, projections of river flood events are subject to substantial modelling uncertainty, largely due to the uncertainty of future projections of precipitation amounts and their spatial distribution, affecting flood occurrence (see also Figure 4). In the case of Burkina Faso, projections for both RCP2.6 and RCP6.0 show **almost no change in the exposure of major roads to river floods**. In the year 2000, 0.13 % of major roads were exposed to river floods at least once a year, while by 2080, this value is projected to change to 0.14 % under RCP2.6 and to 0.12 % under RCP6.0. In a similar way, **exposure of urban land area to floods is projected not to change under either RCP** (Figure 13).

While all models project **an increase in the exposure of the GDP to heatwaves**, the magnitude of the increase is subject to high modelling uncertainty with two models projecting strong and two models projecting weak increases. Median model projections for RCP2.6 show an increase from 2.0 % in 2000 to 7.0 % by 2080. Under RCP6.0, exposure is projected to increase to 10.5 % over the same time period. It is recommended that policy planners start **identifying heat-sensitive economic production sites and activities, and integrating climate adaptation strategies**, such as improved, solar-powered cooling systems, "cool roof" isolation materials or switching the operating hours from day to night [26].

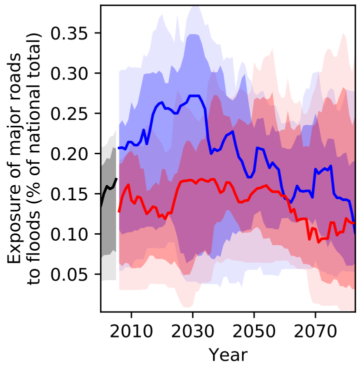


Figure 12: Projections of major roads exposed to river floods at least once a year for Burkina Faso for different GHG emissions scenarios.

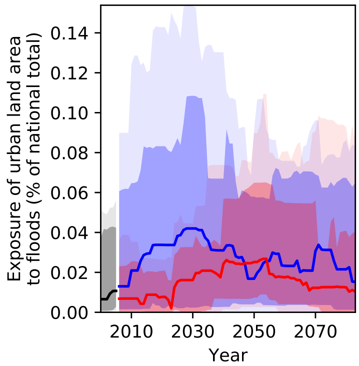


Figure 13: Projections of urban land area exposed to river floods at least once a year for Burkina Faso for different GHG emissions scenarios.

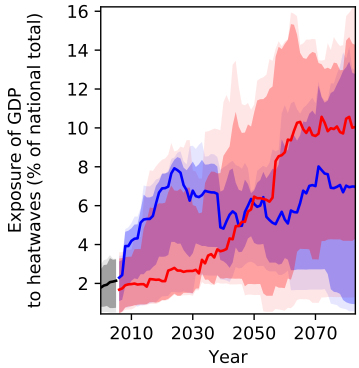


Figure 14: Exposure of GDP in Burkina Faso to heatwaves for different GHG emissions scenarios.

d. Ecosystems

Climate change is expected to have a significant influence on the ecology and distribution of tropical ecosystems, though the magnitude, rate and direction of these changes are uncertain [27]. With rising temperatures and increased frequency and intensity of droughts, **wetlands and riverine systems are increasingly at risk of being converted to other ecosystems**, with plants being succeeded and animals losing habitats. Increased temperatures and droughts can also influence succession in forest systems while concurrently increasing the risk of invasive species, all of which affect ecosystems.

Model projections of species richness (including amphibians, birds and mammals) and tree cover for Burkina Faso are shown in Figure 15 and 16, respectively. The models applied for this analysis show clear patterns of change in species richness across both RCPs: **In most regions, the number of species is projected to decrease in response to climate change** (Figure 15). In 2080, under RCP6.0, this decrease will reach almost 10 % compared to the year 2000. An increase of species richness is only projected for the south-west of Burkina Faso. The opposite gradient is found in **tree cover projections, with increases projected for the north-east and decreases projected for the south-west** (Figure 16). Under RCP6.0, the increase in tree cover in the north-east amounts to about 5 % compared to the year 2000. This can be explained by the increasing precipitation levels in this region.

Although these results paint an overall positive picture for climate change impacts on tree cover, it is important to keep in mind that the **model projections exclude any impacts on biodiversity loss from human activities such as land use**, which have been responsible for significant losses of global biodiversity in the past, and are expected to remain its main driver in the future [28]. In Burkina Faso, the need for new settlements, land for cultivation and for fuel wood threatens tree cover and biodiversity [29]. **Fuel wood covers 85 % of household energy needs** in Burkina Faso, resulting in **ongoing deforestation** [30]. These pressures are likely to intensify due to low agricultural production and population growth, resulting in even higher rates of deforestation, land degradation and forest fires, all of which will impact animal and plant biodiversity.

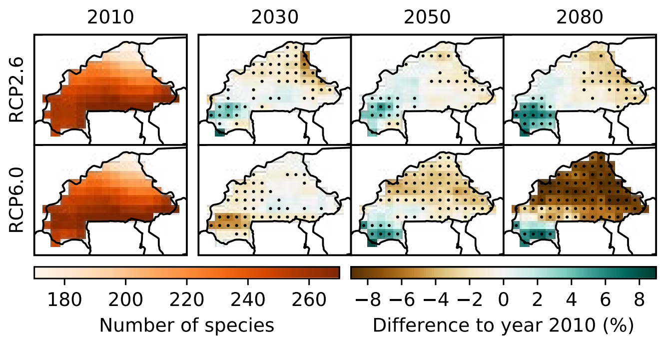


Figure 15: Projections of the aggregate number of amphibian, bird and mammal species for Burkina Faso for different GHG emissions scenarios.

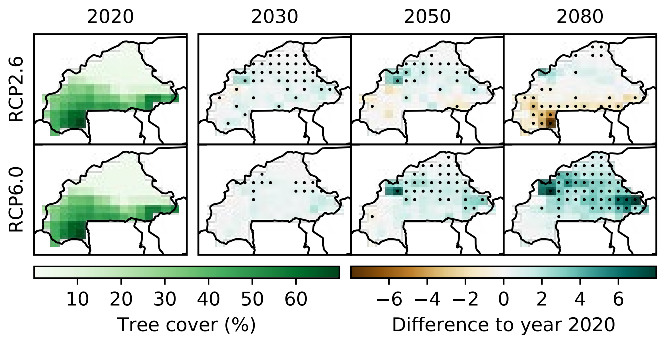


Figure 16: Tree cover projections for Burkina Faso for different GHG emissions scenarios.

e. Human health

Climate change threatens the health and sanitation sector through more frequent incidences of heatwaves, floods, droughts and storms [31]. Among the key health challenges in Burkina Faso are morbidity and mortality through temperature extremes, vector-borne diseases, such as malaria, waterborne diseases related to extreme weather events (e.g. flooding), such as diarrhoea, and respiratory diseases, which are the number one cause of death [32]. According to the Severe Malaria Observatory, malaria is responsible for 61.5 % of hospitalisations in Burkina Faso and the largest contributor to mortality for children under five years of age [33]. Furthermore, extreme weather events as well as **climate impacts on food and water supply are likely to increase the risk of malnutrition, hunger and death by famine**. Scientific investigations found a strong link between extreme weather events and mortality patterns in Burkina Faso [34]. Additionally, climate-induced variations in crop yields were negatively associated with children's nutritional status and child survival in rural areas [35]. Despite increased government funding and expansion of health interventions, **access to health care in Burkina Faso remains limited** and is becoming increasingly difficult: According to the International Committee of the Red Cross (ICRC), more than 500 000 people in Burkina Faso have no access to health care because many health and humanitarian organisations have limited or even closed down their operations due to armed conflicts [36].

Rising temperatures will result in **more frequent heatwaves** in Burkina Faso, leading to **increased heat-related mortality.** Under RCP6.0, the population affected by at least one heatwave per year is projected to increase from 1.7 % in 2000 to 10 % in 2080 (Figure 17). Furthermore, **heat-related mortality will likely increase from approximately 2 to about 10 deaths per 100 000 people per year**, which translates to an **increase by a factor of five** towards the end of the century compared to year 2000 levels, provided that no adaptation to hotter conditions will take place (Figure 18). Under RCP2.6, heat-related mortality is projected to increase to about 5 deaths per 100 000 people per year in 2080.

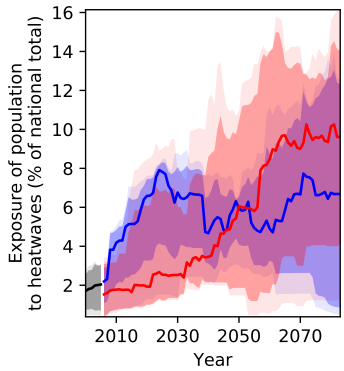


Figure 17: Projections of population exposure to heatwaves at least once a year for Burkina Faso for different GHG emissions scenarios.

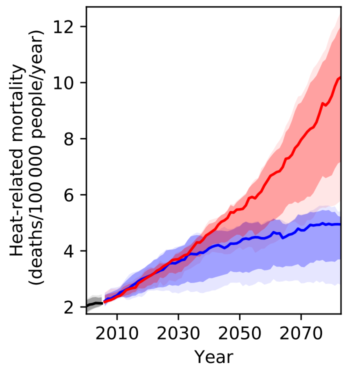


Figure 18: Projections of heat-related mortality for Burkina Faso for different GHG emissions scenarios assuming no adaptation to increased heat.

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