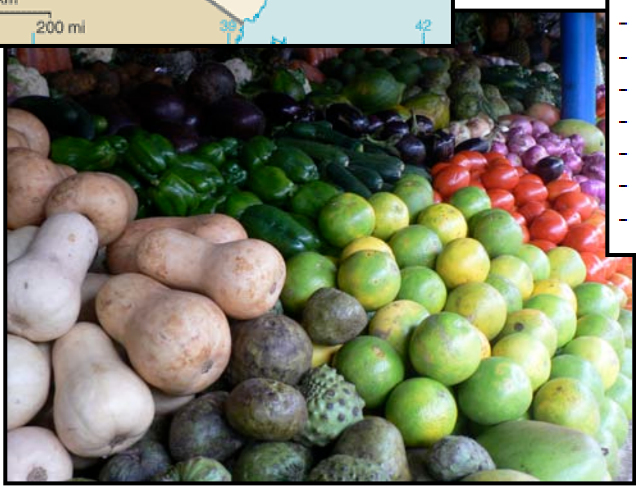
Climate Change Profile

tearfund

Kenya



Contents

General Climate[1]

Sitting astride the equator, at latitudes of 6°S to 6°N, Kenya's topography rises from the coastal plains by the Indian Ocean to the eastern edge of the East African Plateau and the Great Rift Valley. Kenya's climate is tropical but is moderated by its diverse topography towards the west. The central highland regions are substantially cooler than the coast, with the coolest regions in the highest altitudes at 15°C on average compared to 29°C on average at the coast.

Kenya experiences a bimodal pattern of rainfall (i.e. two rainy seasons). The first, the 'long rains', occurs over March, April and May ('MAM'), while the second, the 'short rains', occurs over October, November and December ('OND'). The wettest areas of Kenya are on the border of Lake Victoria and the central highlands to the east of the Rift Valley (1200-2000mm per year), while the driest are in northwestern and eastern parts with as little as 200mm per year of rainfall (RoK, 2002). More than two-thirds of Kenya receives less than 500mm of rainfall per year, and almost 80 percent receives less than 700mm (ibid).

---

[1] McSweeney, C. *et al.* (2008) unless otherwise stated

The characteristics of the two wet seasons are determined primarily by the movements of the Inter-Tropical Convergence Zone (ITCZ). The ITCZ is the point of convergence of easterly trade winds from the northern hemisphere (north-east trades) and the southern hemisphere (south-east trades) in a zone of low pressure (Godwin, 2005). During the course of a year, the ITCZ migrates between the northern and southern tropics, bringing rain to the countries over which it passes (Marchant *et al*., 2007). During MAM, the ITCZ tends to be very broad and moves north slowly, causing consistent heavy rainfall; whereas it moves much more swiftly on its return during OND, and so the rains tend to be less reliable (McGregor & Nieuwolt, 1998).

Rainfall amounts are affected by climate phenomena, such as the El Niño-Southern Oscillation (ENSO) and the Indian Ocean Dipole (IOD) (Tierney *et al*., 2008). ENSO is the collective term for the coupled ocean-atmosphere phenomenon of El Niño and the Southern Oscillation Index (SOI). Warm ENSO events ('El Niños') are identified by a reversal in prevailing trade winds in the Pacific Ocean and warm sea-surface temperatures (SSTs) off the coast of Peru and Ecuador. The warm phase of ENSO (El Niño) is associated with wetter conditions in the OND season, while the opposite cool phase of ENSO (La Niña) is associated with less OND rainfall.

Key climate vulnerabilities: Drought; flooding; infectious disease epidemics; food insecurity

Observed Climate Changes[2]

Temperature

- Mean annual temperature has increased by 1.0°C between 1960 and 2003; this increase in temperature has been most rapid in MAM.
- Daily temperature observations show increasing trends in the number of hot[3] days and nights, increasing by 57 days (equivalent to +16 percent) and 113 nights (equivalent to +31 percent). These increases are seen most strongly in the MAM and OND seasons for hot days and hot nights respectively.
- The frequency of cold[4] days and nights has decreased in all seasons, and most rapidly in OND and December-January-February ('DJF') respectively.

Precipitation

- Rainfall over Kenya has a high interannual variability and observed records show no long-term trend.
- There is an increasing trend in the proportion of rainfall occurring in heavy events[5], but this is not statistically significant.

Current Climate Vulnerability

Table 1 lists the natural hazards that have affected Kenya over the past 20 years. Kenya suffers from too much and too little water, with flooding and drought occurring regularly. These events also have knock-on effects for health through infectious disease outbreaks and food shortages, and also on electricity generation and the economy.

The drought in 2009, for example, resulted in a maize crop of less than two thirds of the annual requirement (Wachira, 2009). Maize is the staple crop for 96 percent of Kenya (Ngirachu, 2009). The central and northern areas of the country, which are usually very productive, struggled to produce maize after the failure of the long rains and the poor short rains from 2008, with many farmers in the northern Rift Valley not planting for fear of losing their crop (Daily Nation, 2009).

The drought affected other sources of food, including a reduced harvest of wheat, and the loss of around 130,000 cattle (Rugene, 2009). The drought triggered an appeal by the UN World Food Programme (WFP) for food aid for 3.8 million Kenyans, while the WFP were already providing food aid to 2.6 million people (IRIN, 2009a). Droughts of a similar scale were also experienced in 2000 and 2008 (ibid).

---

[2] McSweeney, C. *et al.* (2008) unless otherwise stated

[3] 'Hot' day or 'hot' night is defined by the temperature exceeded on 10% of days or nights in current climate of that region and season.

[4] 'Cold' days or 'cold' nights are defined as the temperature below which 10% of days or nights are recorded in current climate of that region or season.

[5] A 'Heavy' event is defined as a daily rainfall total which exceeds the threshold of the top 5% of rainy days in current the climate of that region and season.

With a largely hydropower-based electricity generation programme, drought also has implications for the provision of electricity in Kenya. In the drought of 2009, hydropower capacity was cut by 46 percent, and power rationing was introduced as a result (Rugene, 2009).

Flooding and mudslides are also hugely damaging, often sweeping away people, crops, livestock, roads and buildings. Flooding in northern Kenya during the long rains in 2010, for example, killed 100 people and displaced at least 10,000 more (Bii, 2010; IRIN, 2010). The district of Turkana was one of the worst affected, with flooding from the Kerio River destroying roads, bridges, irrigation schemes and maize and sorghum crops (Kiio, 2010). The implications of such events are displacement, disease outbreaks and food shortages, with poor hygiene conditions in displacement camps a contributing factor (Bii, 2010). In Turkana, for example, the Red Cross reinforced the river bank, reinstalled five water hand pumps to provide access to clean drinking water, and supplied seeds, so that farmers can re-plant lost crops (Kiio, 2010). Extreme rainfall and flooding is also associated with El Niño events; the 1997-98 event, for example, resulted in damage estimated to cost over $20million (RoK, 2002).

Hazard	Number of Events	Deaths	Total of Population Affected
Drought	7	196	38,100,000
Average per event		28	5,442857
Epidemic (unspecified)	4	1,273	22,538
Average per event		318	5,635
Epidemic (bacterial)	16	1,356	45,694
Average per event		85	2,856
Epidemic (parasitic)	5	1,595	6,807,533
Average per event		319	1,361,507
Epidemic (viral)	4	503	2,350
Average per event		126	588
Flood (unspecified)	3	128	910,200
Average per event		43	303,400
Flood (flash)	5	25	45,000
Average per event		5	9,000
Flood (general)	23	530	1,201,107
Average per event		23	52,222
Landslide	3	46	26
Average per event		15	9

Table 1 – Natural Hazards in Kenya (1991-2010) (CRED, 2010)

Climate Change Projections[6]

Temperature

- The mean annual temperature is projected to increase by 1.7 to 2.4°C by the 2060s, and 2.0 to 3.7°C by the 2090s. Increases are projected to be largest in the northwest (Figure 1).
- Projected rates of warming are greatest in the summer season, June through to September ('JJAS'), increasing by 2.1 to 3.9°C by the 2090s, with the maximum projection of 4.7°C.
- All projections indicate increases in the frequency of days and nights that are considered 'hot' in current climate.
- Annually, projections indicate that 'hot' days will occur on up to 45 percent of days by the 2060s, and up to 75 percent of days by the 2090s.
- 'Hot' nights are projected to increase more quickly that hot days, occurring on up to 75 percent of nights by the 2060s and up to 95 percent of nights by the 2090s. These changes are largest in JJAS (Figure 2).
- All projections indicate decreases in the frequency of days and nights that are considered 'cold' in current climate. These events are expected to become exceedingly rare, and do not occur at all by the 2090s in any projections under some climate change scenarios.

[6] McSweeney, C. *et al.* (2008) unless otherwise stated

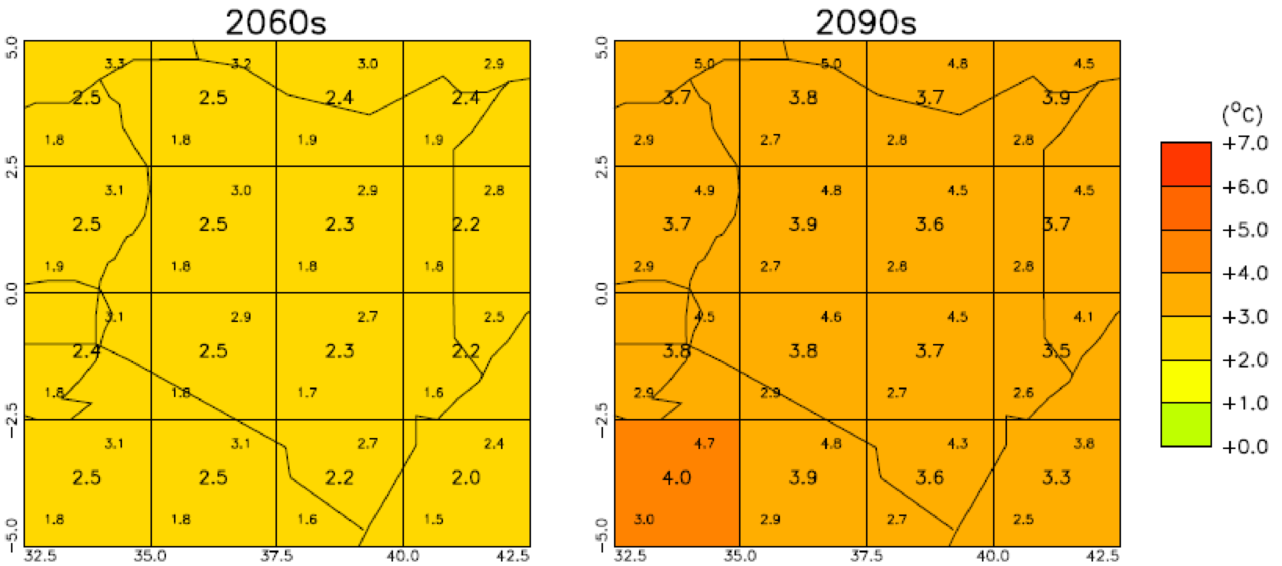


Figure1 – Projections of mean annual temperature for Kenya for the 2060s and 2090s (the central value in each grid box gives the central estimate of the model projections, and the values in the upper and lower corners give the maximum and minimum) (McSweeney *et al.*, 2008). See 'A note on the projections' at the end of this document for more information on these maps.

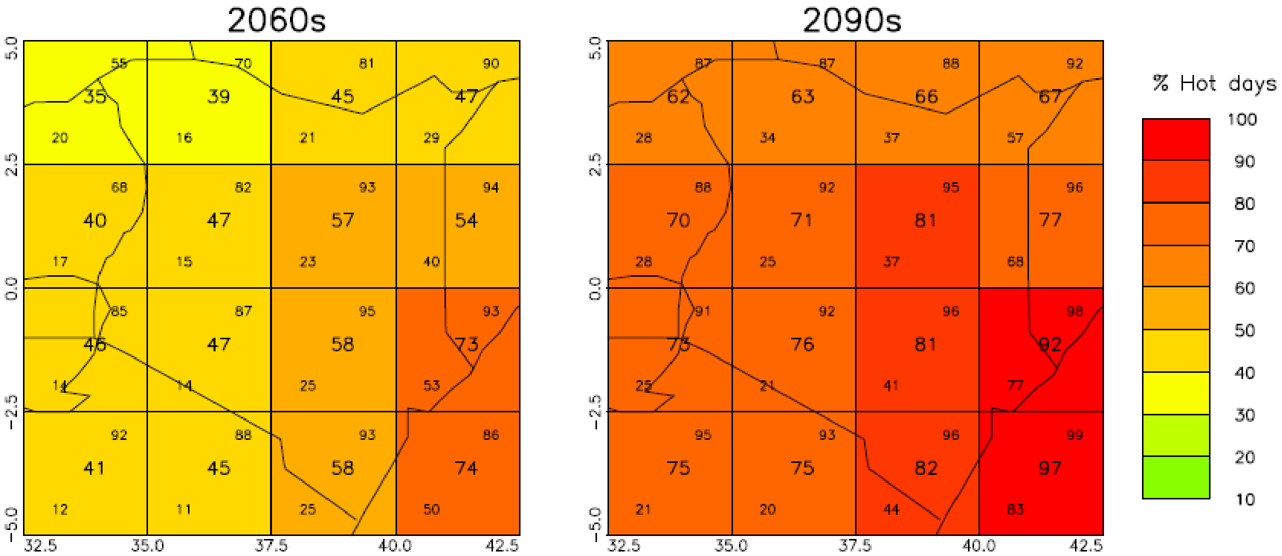


Figure 2 – Projections of percentage of number of days classed as 'hot' during JJAS for Kenya for the 2060s and 2090s (see Figure 1 for details) (McSweeney *et al.*, 2008).

Precipitation

- Projections of mean rainfall show increases in annual rainfall and in all seasons – particularly the two rainy seasons of MAM and OND. The increases are projected to be largest in the west and the north (see Figures 1 and 2).
- The largest increase in rainfall is projected for OND, with increases of 12 to 13 percent (equivalent to 9 to 12mm per month) and 14 to 27 percent (13 to 29mm per month) for the 2060s and 2090s respectively. The upper end of the projections show maximum increases of 48 percent by the 2090s, equivalent to 49mm per month of extra rainfall.
- The proportion of rainfall that falls in heavy events is projected to increase, from 4 to 8 percent in annual rainfall by the 2090s, to a maximum of 13 percent. These increases are largest in the OND season, with increases of up to 17 percent by the 2090s (Figure 4).
- Maximum 1- and 5-day rainfall totals are projected to increase for annual and seasonal rainfall; by up to 25mm in 1-day events, and up to 33mm in 5-day events annually by the 2090s.

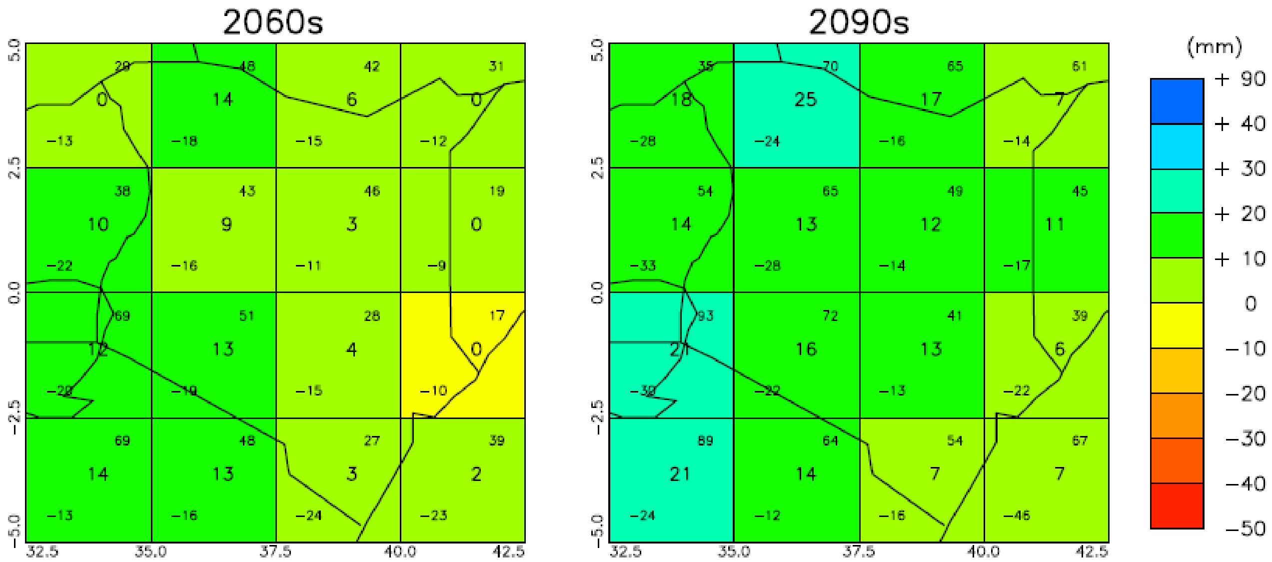


Figure 2 – Projections of changes in MAM rainfall (in mm) for Kenya for the 2060s and 2090s (see Figure 1 for details) (McSweeney *et al*., 2008).

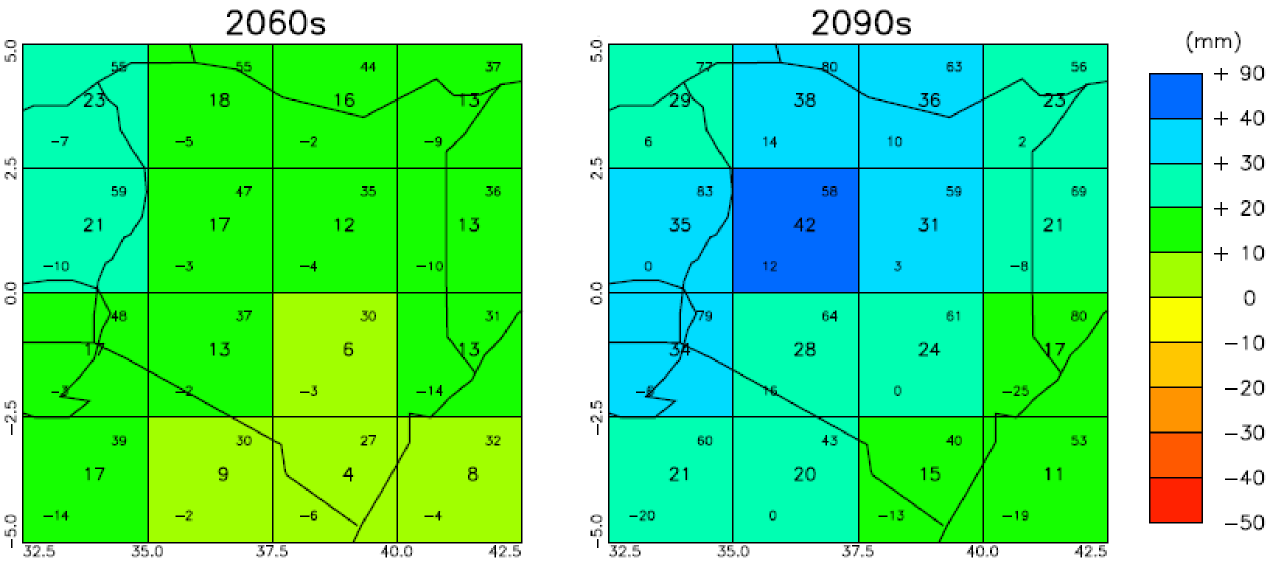


Figure 3 – Projections of changes in OND rainfall (in mm) for Kenya for the 2060s and 2090s (see Figure 1 for details) (McSweeney *et al*., 2008).

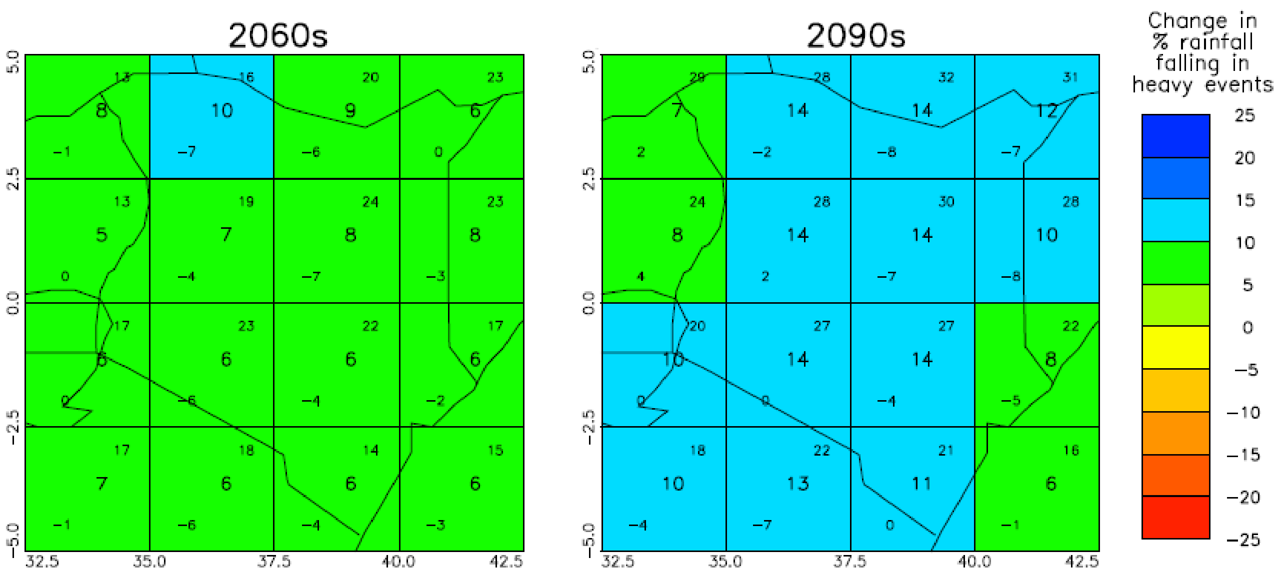


Figure 4 – Projections of percentage changes in the amount of rainfall falling in 'heavy' events during the OND season for Kenya for the 2060s and 2090s (see Figure 1 for details) (McSweeney *et al*., 2008).

Climate Change Impacts

Flooding

The risk of flooding in Kenya is likely to increase under climate change as a direct result of the projected increases in both mean and extreme rainfall. Increases rainfall is projected for both the long and short rainy seasons, but more so in the short rains. Projections also show increases in heavy rainfall events, and maximum 1- and 5-day rainfall totals, which will increase the risk of flash flooding as the quantity of rainfall and runoff over short periods overwhelms river systems.

Water Resources

Water availability could increase under climate change in Kenya as a result of increasing rainfall; however, droughts will still occur and water resources have to be managed to ensure that there is sufficient storage to take advantage of any increase in rainfall. Glacier retreat from rising temperatures will also affect rivers such as the Tana and Nzoia, which rely on melt water to support dry season flows, keeping their flow perennial rather than seasonal. Increasing glacier melt may result in greater flows initially, though these will reduce as the glacier reduces in size.

Demand for water is also likely to increase with rising temperatures, in addition to other factors such as rising population, hydropower development and agriculture. Climate change is therefore only one of many elements to the management of water resources in Kenya.

Agriculture & Food Security

In general under climate change, yields of the staple crop maize are likely to increase for highland areas up to an average temperature of 18-20°C, whereas lowlands, semi-arid areas will see reductions in yield as average temperatures rise above 20°C (Thornton *et al*., 2009). This decrease is likely to be in response to increasing water stress (ibid). Although projections indicate an increase in rainfall (though these increases are smaller in semi-arid areas), benefits to soil moisture may be offset by increasing evapotranspiration as a result of warmer temperatures. There is also the increasing risk to the damage to crops and loss of livestock through heavy rainfall and flooding.

The cash crop coffee is also at risk from the impact of climate change. A small black beetle, *Hypothenemus hampei* (or 'Coffee Berry Borer'), causes millions of dollars of damage to coffee producers worldwide – particularly in East Africa. Rising global temperatures may increase the populations of the beetle, expanding its habitat and putting wider areas of coffee crops in danger (Bosire, 2009).

Public Health

Public health in Kenya is closely linked to climate, with extremes in rainfall (both dry and wet) associated with disease outbreaks and malnutrition. During the drought in 2009, for example, the number and size of meals were reduced in many communities as food shortages followed the poor rains (IRIN, 2009b).

Infectious diseases such as cholera, dysentery and typhoid are often present in the aftermath of droughts or flooding, with clean drinking water and appropriate sanitation in short supply (IRIN, 2009c). Cases of other infectious diseases, including measles and polio, can often feature during and after extreme events in displacement camps or spread by the movement of refugees (ibid).

Insect-borne diseases are closely related to rainfall patterns, with outbreaks of malaria and Rift Valley fever following periods of heavy rain, which provides standing water in which mosquitoes breed. With the projected increase in mean temperatures, the potential habitat for mosquitoes may move into highland areas that are currently not endemic for malaria. Increases in heavy rainfall events may also result in greater opportunities for mosquitoes to breed and hence increase disease incidence.

Housing & Communities

Homes, schools and community buildings and infrastructure will be at increasing risk from flooding and mudslides as a result of an increase in heavy rainfall events under climate change.

Biodiversity & Conservation

Kenya's wildlife is at risk from variability in rainfall; during the drought in 2009, for example, the rivers feeding into Lake Nakuru National Park dried up, and water for the animals had to be brought in by water bowser (Macharia, 2009). Many of the biodiversity issues in Kenya are brought about by deforestation for settlements, logging and charcoal burning. Climate change has the potential to worsen the damage this causes in terms of desertification and soil erosion.

Livelihoods

Livelihoods are strongly linked to agriculture, with over 80 percent of the population directly dependent on it – from subsistence farming to industry and manufacturing, which are largely agro-based (RoK, 2002). Kenya's exports are also largely agriculture-based, with over half of export revenue generated from primary agriculture, namely coffee, tea, wheat sisal, pyrethrum, sugarcane and cotton (RoK, 2002). Kenya is also the world's largest exporter of fresh flowers, and is the largest supplier for Europe, providing 25 percent of the EU's imported flowers (SomaliPress, 2009). Horticulture is also an important contributor to export earnings; output of crops, fruits and vegetables will be affected by changing climate. The drought in 2009, for example, saw output in horticulture drop by 15 percent; however, rising prices kept export earnings similar to 2008 (Reuters, 2010). Horticulture is particularly at risk from extreme weather conditions as, unlike flowers, they tend to be grown on a small-scale by local farmers without the benefit of irrigation systems (ibid).

Energy

At over 65 percent, the largest portion of Kenya's electricity is generated from hydropower (Wahome, 2010). This is largely from 5 installations along the Tana River, and is supported by various smaller installations across the country. Electricity supply is therefore dependent on sufficient water in reservoirs to allow power to be generated and so power is often rationed during drought periods as demand on reservoirs is divided with other water demands. With increasing rainfall under climate change, there may be more water available for energy generation, but this will depend heavily on capacity of hydropower installations, and how competing demands for water are managed.

Transport

Flooding associated with the extreme rainfall in the short rains in 1997 resulted in the destruction of approximately 100,000km of roads and several bridges, at a cost of $670,000 (Wesangula, 2009). Some aviation and shipping services were also disrupted by flooded runways and shipyards (ibid). With the projected increase in mean and heavy rainfall, there is an increase in the risk to Kenya's transport systems. This has the secondary effect of restricting the distribution of aid during and after such events.

Government Response

Kenya's Ministry for Environment and Natural Resources published Kenya's First Communication on climate change to the UN Framework Convention on Climate Change (UNFCCC) in 2002 (RoK, 2002); however, they have not yet produced a National Adaptation Plan of Action (NAPA).

In recent years the early warning system in Kenya has been well developed and functions efficiently. The IGAD climate prediction and application centre (ICPAC) and the Kenya Meteorological Department are charged with issuing warning especially of impending droughts and floods. The Arid Lands Resource Management Project (ALRMP) collects data and information on early warning at the community level in 22 districts and issues monthly bulletins.

Various government initiatives are planned or already underway for coping with climate change. In 2009, for example, the government announced that 1.5 trillion shillings will be invested in a climate change response plan for the next 20 years (Ochieng, 2009). As part of the plan, 35,000 schools and over 20,000 community groups will be involved in tree planting (ibid). The government also has a National Malaria Strategy to provide an evidence-based plan of action for tackling malaria. The Minister of Public Health and Sanitation also announced a commitment to eliminate malaria in Kenya by 2017 (Njagi, 2009).

Likely Adaptation Options

The following are a selection of possible adaptation options for Kenya:

- Move to crops that can withstand drought periods more readily or those that mature more quickly to allow more than two harvests a year. Options include cassava, sorghum, sweet potatoes, green grams, grain amaranth and cow peas.
- 'Micro-insurance' for individual farmers who can insure their crops as and when they plant them.
- Provision of advice on land preparation and soil conservation, use of fertilisers, and suitable seed varieties for famers, as well as supporting farmers financially for fertilisers and irrigation schemes.
- Combining seasonal weather forecasting with indigenous knowledge before dissemination through local radio, village meetings and word of mouth.
- Implementation of flood prevention schemes that increase water storage through small dams and rainwater harvesting, while reducing soil erosion and runoff through afforestation.

- Installation of water radar sensors on rivers (upstream of settlements) to provide alerts about water levels in real-time, helping in disaster preparedness.
- Incorporation of climate change as a factor in national plans, such as the National Biodiversity Strategy Action Plan (NBSAP) and the National Action Programme (NAP) on desertification.
- Policies to protect key natural resources, such as the Mau Forest Complex, which are particularly important for water availability and mitigation of flood risks.
- Expand access to electricity in rural areas to reduce reliance on biomass, thus conserving forests and vegetation cover that are important for water resources and flood control (RoK, 2002).

Useful Websites

- UNDP Climate Change Country Profiles: http://country-profiles.geog.ox.ac.uk/
- UNFCCC NAPAs from Non-Annex I Countries: http://unfccc.int/national_reports/napa/items/2719.php
- UNFCCC First Communications on Climate Change for Non-Annex I Countries: http://unfccc.int/national_reports/non-annex_i_natcom/items/2979.php
- Adaptation Learning Mechanism: http://www.adaptationlearning.net/
- IPCC Reports: http://www.ipcc.ch/publications_and_data/publications_and_data_reports.htm

References

Bii, B. 2010. Floods Death Toll Rises to 100, *Daily Nation*, [internet] 23 May, Available at http://allafrica.com/stories/201005240024.html [Accessed 03/08/10].

Bosire, J. 2009. Kenya: Climate Change Favours Coffee Pest, *The East African*, [internet] 10 August. Available at http://allafrica.com/stories/200908101181.html [Accessed on 09/09/09].

CRED. 2010. *EM-DAT: Emergency Events Database*. Available at http://www.emdat.be/ [Accessed 6/06/10].

Daily Nation. 2009. Food crisis worsens as rains fail, *Daily Nation*, [internet] 9 July, Available at http://www.nation.co.ke/News/regional/-/1070/621790/-/7kesvp/-/index.html [Accessed 03/08/10].

Godwin O. 2005. The impacts of ENSO in Africa. *In*: Low P. S. (Ed). Climate change and Africa, Cambridge University Press, Cambridge, 369pp.

IRIN. 2009a. WFP food appeal for 3.8 million in need, *IRIN*, [internet] 25 August, Available at http://www.irinnews.org/Report.aspx?ReportId=85847 [Accessed 03/08/10].

IRIN. 2009b. KENYA: Massive crop failure in "grain basket", *IRIN*, [internet] 20 August, Available at http://www.irinnews.org/Report.aspx?ReportId=85788 [Accessed 03/08/10].

IRIN. 2009c. KENYA: Water shortages lead to cholera outbreaks, *IRIN*, [internet] 10 September, Available at http://www.irinnews.org/Report.aspx?ReportId=86095 [Accessed 03/08/10].

IRIN. 2010. Kenya: Thousands hit by flooding, *IRIN*, [internet] 10 March, Available at http://allafrica.com/stories/201003100888.html [Accessed 03/08/10].

Kiio, M. 2010. Kenya: Trying to Rebuild Communities After Floods, *IPS*, [internet] 19 March, Available at http://allafrica.com/stories/201003200003.html [Accessed 03/08/10].

Macharia, W. 2009. Wild animals at risk as rivers dry up, *Daily Nation*, [internet] 11 August, Available at http://www.nation.co.ke/News/-/1056/638302/-/uln98b/-/index.html [Accessed 03/08/10].

Marchant, R., Mumbi, C., Behera, S. and Yamagata, T. 2007. The Indian Ocean Dipole – the unsung driver of climatic variability in East Africa, *Afr. J. Ecol*., 45, 4–16.

McSweeney, C., New, M. and Lizcano, G. 2008. *UNDP Climate Change Country Profiles: Kenya*, Available at http://country-profiles.geog.ox.ac.uk/index.html?country=Kenya&d1=Reports [Accessed 30/06/10].

McSweeney, C., Lizcano, G, New, M. and Lu, X. 2010. The UNDP Climate Change Country Profiles: Improving the accessibility of observed and projected climate information for studies of climate change in developing countries, *Bulletin of the American Meteorological Society*, 91(2): 157-166.

Nakićenović, N. & Swart, R. (eds). 2000. Special Report on Emissions Scenarios. A special report of the Intergovernmental Panel on Climate Change. IPCC, Cambridge University Press, Cambridge, UK, 5099pp.

Ngirachu, J. 2009. Experts warn of low maize crop. *Daily Nation*, [internet] 4 September, Available at http://www.nation.co.ke/News/-/1056/644922/-/item/0/-/10usdppz/-/index.html [Accessed 03/08/10].

Njagi, D. 2009. Kenya hopeful it can eliminate malaria, *SciDev.Net*, [internet] 9 November, Available at http://www.scidev.net/en/sub-suharan-africa/kenya-hopeful-it-can-eliminate-malaria.html?utm_source=link&utm_medium=rss&utm_campaign=en_subsuharanafrica [Accessed 04/08/10]

Ochieng, L. 2009. A thousand billions to be spent on trees, *Daily Nation*, [internet] 11 August, Available at http://www.nation.co.ke/News/-/1056/638300/-/uln989/-/index.html [Accessed 04/08/10].

Reuters. 2010. *Vegetables save Kenya horticulture earnings in 2009*, Reuters, [internet] 19 March, Available: http://af.reuters.com/article/investingNews/idAFJOE62I0CU20100319?pageNumber=2&virtualBrandChannel=0&sp=true [Accessed 03/08/10].

Rugene, N. 2009. Kenya moves to deal with drought crisis, *Daily Nation*, [internet] 12 August, Available at http://www.nation.co.ke/News/-/1056/638770/-/ulncja/-/index.html [Accessed 03/08/10].

RoK. 2002. *First National Communication of Kenya to the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC)*, Republic of Kenya Ministry of Environment and Natural Resources, Nairobi, 155pp.

SomaliPress. 2009. Kenya Economy - Agriculture & Energy, *SomaliPress.com*, [internet] 24 November, Available at http://www.somalipress.com/guides/finance/kenya-economy-agriculture-energy.html [Accessed 03/08/10].

Thornton, P.K., Jones, P.G., Alagarswamy, G. and Andresen, J. 2009. Spatial variation of crop yield response to climate change in East Africa, *Global Environmental Change*, 19: 54-65.

Wachira, M. 2009. Food: Kenya's next crisis after water and electricity, *Daily Nation*, [internet] 9 August, Available at http://www.nation.co.ke/News/-/1056/637224/-/ulmj6i/-/index.html [Accessed 03/08/10].

Wahome, M. 2010. Rains to Cool Down Energy Cost, *Daily Nation*, [internet] 13 April, Available at http://allafrica.com/stories/201004130976.html [Accessed 03/08/10].

Wesangula, D. 2009. Why Kenyans must be ready for El Niño, *Daily Nation*, [internet] 5 September, Available at http://www.nation.co.ke/News/-/1056/653586/-/item/0/-/oniuhaz/-/index.html [Accessed 03/08/10].

A note on the projections…

The climate change projections used in this profile were developed as part of a UNDP project, carried out by McSweeney *et al.* (2008), to produce a series of climate change projections for individual developing countries. The study uses a collection, or 'ensemble', of 15 General Circulation Model (GCM) runs to produce projections of climate change for three of the SRES emissions scenarios (see Nakićenović & Swart (2000) for more details on emission scenarios). The three emissions scenarios used in the study were 'A2', 'A1B' and 'B1', which can be broadly described as 'High', 'Medium' and 'Low' respectively (McSweeney *et al*., 2010).

The figures quoted here refer to the 'central estimates' (i.e. the median results) from the 15 GCMs across the 3 emissions scenarios. Where maximum figures are also quoted, they refer to the 'High' (A2) scenario model results. The maps shown are for just the 'High' scenario. Both figures and maps are described for two future 'timeslices' – i.e. decadal averages for the 2060s and 2090s.

For a more detailed description of the UNDP Climate Change Country Profiles, please see McSweeney *et al*. (2010). Complete projections (with maps, plots, supporting text and data files) for all 52 countries are available to download via the website at http://country-profiles.geog.ox.ac.uk/.

Note: This profile is designed to give a brief, non-technical overview of the current and future climatic conditions of Kenya; this should not be considered as a country strategy. The key climate impacts are summarised by sector; however, this should not be taken as an exhaustive list, and the corresponding list of adaptation options are as a guide of likely or possible alternatives.

tearfund

Written by Robert McSweeney

Edited by Mike Wiggins and Liu Liu

www.tearfund.org

100 Church Road, Teddington, Middlesex TW11 8QE

0845 355 8355 (ROI: 00 44 845 355 8355) enquiry@tearfund.org

Registered Charity No. 265464