

Life on the edge of climate change: the plight of pastoralists in Northern Kenya



We believe in life before death

Introduction

World leaders gather in Nairobi for the United Nations climate change conference in November 2006, their heads full of dire meteorological warnings from climate scientists and predictions of potential financial meltdown from the recently published Stern Review. Christian Aid is adding this report to show the human cost of climate change.

It is worth repeating at the outset that the industrialised world has caused the climate to change and that it is poor people in developing countries who will be hit the hardest. As this study illustrates, poor people – who are least able to protect themselves – are already being seriously affected.

For the 3 million pastoralists of northern Kenya, the situation is now critical. Their whole way of life, that has supported them for thousands of years, could soon fall prey to climate change. This is the first example that Christian Aid has encountered of an entire group of people being threatened in this way.

According to research commissioned by Christian Aid, hundreds of thousands of herders have been forced to forsake their traditional culture and settle in Kenya's North Eastern Province because consecutive droughts have decimated their livestock in recent years. Along the main route to Mandera, the epicentre of the latest drought, new villages have sprung up. With this year's drought, the original roadside settlements have swelled substantially and dozens of smaller camps have appeared.

Earlier this year, Christian Aid commissioned livestock specialist Dr David Kimenye¹ to examine how pastoralists were coping with the recent drought. Over a two-month period, Dr Kimenye talked to more than 200 pastoralists in five areas across Mandera district, home to 1.5 million people. He also spoke to elders in the region, and politicians, academics and civil society organisations across the country.

The study found that:

- Incidence of drought has increased fourfold in the Mandera region in the last 25 years.
- One-third of pastoralists living there – around half a million people – have already been forced to abandon pastoralism due to adverse climatic conditions.
- During the last drought, so many cattle, camels and goats were lost that 60 per cent of the families who remain pastoralists need outside assistance to recover. Their surviving herds are too small to support them.

¹ Dr David Kimenye has worked in the field of livestock development and agriculture for 35 years. He started out as Kenyan government officer and a senior lecturer at the University of Nairobi. Since the 1980s, he has been employed as a consultant and adviser to many international organisations, including the United Nations and the African Union, and the government of Kenya.

In north-east Kenya, nomadic pastoralism has, over the centuries, been shaped by unpredictable weather patterns and regular drought. It is therefore already well adapted to its environment and many still argue that it is the only viable way of life in the region.

But unless decisive action is taken to help these nomadic herders adapt even further to the extremes of climate change, they will no longer be able to sustain their way of life.

It is a cruel irony indeed that a people who have lived for so long in harmony with nature, imprinting the lightest of carbon footprints on the earth, have now become the world's 'climate change canary', suffering and living in abject poverty due to the damaging effects of greenhouse gases emitted by developed countries.

The research demonstrates beyond doubt that the pastoralist way of life is now floundering. Climate change is not the only reason for poverty in the area: over many years the region has seen under-investment in education, health services, roads and other infrastructure.

But it is the increasing frequency and severity of drought in the region, brought on by climate change, that has brought it to its knees. Scientists predict that things will get even worse in the coming years.

Some experts assert that the region must now adapt to a different way of life. But Christian Aid says that there must be a huge programme of investment to enable pastoralists to cope with climate change.

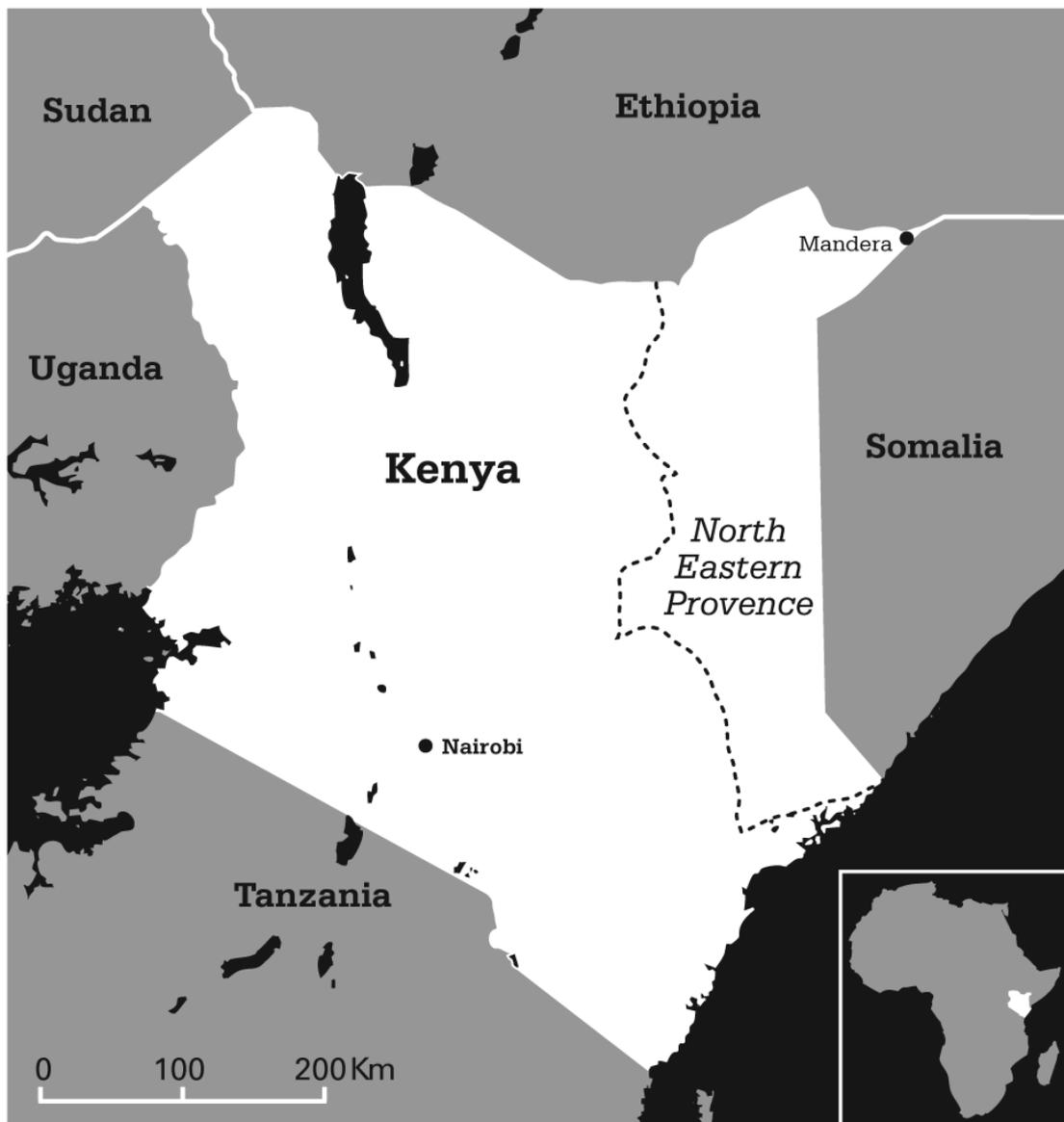
The Kenyan government must embrace its duty to meet the needs of this large section of its population. Those in the international community with the greatest responsibility for the damage wrought by climate change must pay for adaptation.

Front cover photo:

Bishar Sharif, 55, his wife, Abdia, and children Zeitun, 8, and Shinde, 2, outside their makeshift home in Garsesala, near El Wak on the Somali border. The family settled here in January 2006 after drought killed their 150 cattle.

Christian Aid/John Davison

Map



A story from the climate change frontline: what future pastoralism?

'Life is only possible with livestock.'

The stench from the pit is still strong in the sun, with bleached bones and empty eye sockets bearing macabre witness to a local catastrophe. This hole and two others nearby are where the last of once thriving herds were dumped and burned – victims of the worst drought in living memory.

The shocked families who until a few months ago herded these animals across northern Kenya and beyond, now huddle in a riverside settlement, their children prone to malaria and other illnesses, but at least close to a reliable source of water. They depend on aid handouts for most of their food. Their pastoralist way of life, carried on virtually unchanged for more than 3,000 years, is under serious threat.

'Our whole life has been spent moving, but we are desperate people. People who have lost our livelihood,' says Mukhtar Aden, one of the elders at the Quimbiso settlement. 'We didn't settle here by choice, it was forced upon us.'

It is the same story throughout Kenya's North Eastern Province, which borders Somalia and Ethiopia. Along the region's main road, small groups of traditional reed shelters now crop up every few miles. Herders, bereft of the animals that represented their entire wealth, have set up these camps over the past year in order to benefit from boreholes, passing aid convoys or emergency water tankers. Their wandering days, at least for the present, are over. They are known simply as 'drop-outs'.

Everywhere are tales of huge livestock losses. In one road-side settlement, which now depends on selling milk from its few remaining animals to passing trucks, a man produces a book recording the dark days of the drought. One entry, for 15 February, shows that the community lost more than 500 sheep and goats and 250 cattle – in that single day.

Some 25 families have come together here, all of whom used to operate as independent units in the old nomadic way. For most, this is their first experience of settlement. Noorissack Ahmed, who lives here with his two wives and 12 children, says they couldn't have gone to any of the area's towns as they would have found it impossible to fit in with urban life.

'This is a village of destitutes,' he says.

Rain came to the region for the first time in more than a year last month (October), with what some said were the best 'short rains' since 1997. The baked arid landscape turned green – quite literally overnight – and the rain was obviously welcomed. But it also brought sadness to these makeshift communities – they simply do not have the animals any more that could take

advantage of the suddenly rich pasture. They have nothing to hope for, as one elder put it.

Restocking with animals and a return to some form of pastoralism is the future that most want to see. But not even the area's old men can remember a drought as severe as the most recent one. The idea that increasingly unpredictable weather patterns will make such droughts more common is something the people here find difficult to contemplate.

'Only God knows,' is the usual response in this devoutly Muslim area – said with eyes and hands pointed heavenward.

Wargadud is now a sizable community running either side of the region's main road. It has a school, a market, small shops and kiosks selling tea. A few years ago it did not exist at all, until people were attracted to the promise of regular water from the borehole sunk there to facilitate the building of the road. With the influx of people since the drought, it is now home to about 2,000 households. The borehole and its pumps are maintained by the local organisation Northern Aid, which is responsible for a wide range of water projects in the area, with funding from Christian Aid.

The chairman of Wargadud's water users' association is Abdullahi Abdi Hussein. He describes in detail how the periods of rain have got shorter and the dry spells longer – changing the pattern of four seasons on which the pastoralist communities' movements have always depended. There were always droughts, for which people prepared, he says.

'But when you look at the severity, for decade after decade it has been getting more severe. It has only been getting harder and harder and more and more serious,' says Abdullahi.

Leaders here acknowledge that, whatever they might wish, there is unlikely to be a return to the old way of life, with its big herds, in the near future – if ever. And there are real fears about what will happen when the food aid inevitably stops.

'We can't say that pastoralism is going to fail and fold our hands to wait,' says Adaw Abdi Mohamed, the government chief of Wargadud. 'We need to be supported in developing alternatives and in preparation for the changes.'

Exactly what these alternatives will be – better livestock husbandry with smaller herds of more productive animals, better water harvesting to create small-scale farming or developing other forms of business – remains hazy. Most people here maintain that the land in this dry region can only support a pastoralist life and people know nothing else.

Abdullahi Ahmed Bulle, aged 80, stares into the pit of animal carcasses on the edge of Quimbiso.

'I can only live with livestock,' he says. 'Life is only possible with livestock.'

A region neglected

The dry region of northern Kenya covers a vast area, representing roughly half the country's total land mass. It has ten districts within it: Garissa, Ijara, Wajir, Mandera, Moyale, Marsabit, Isiolo, Samburu, Turkana and Tana River. An estimated 3 million people live here, most of whom are either pastoralists or who earn a living by supporting pastoralism.

Historically, it has suffered from years of neglect from central government. During the colonial era, for example, the northern region was seen as so hostile and lawless that British authorities made it a 'closed frontier' where movement was restricted and shut down most economic activity. Successive colonial administrations dealt with the region by backing settlers from elsewhere in the country and investing in only a few high-potential areas at the expense of the rest of the region.

These problems were inherited but not satisfactorily tackled by national governments. Resentments remain against more affluent and influential parts of the country, closer to the capital, Nairobi, and there are still deeply entrenched ethnic allegiances. Above all, however, the region is characterised by a profound poverty that is immediately apparent to any visitor. Infrastructure and industry are virtually non-existent. There are only 10 kilometres of tarmacked road in the entire region. Much of the remaining road network is only passable during dry seasons.

A United Nations Development Programme (UNDP) report in 2005 painted a stark picture of a gaping chasm of poverty opening up between the region and the rest of the country.

When it examined quality of life, for example, the districts of Marsabit, Turkana and Samburu rated the poorest in the country. UNDP measures quality of life using the Human Development Index (HDI). This measures life expectancy, access to education and other 'good life' factors – with 1 being the maximum. Marsabit recorded an HDI of 0.228 compared to Nairobi, with one of 0.748.

Until the 1980s, Kenya sold its meat across the world, with markets in Europe and the Gulf. The government-owned Kenya Market Commission (KMC) provided transport to its abattoirs and fair prices. Crucially, it also acted as a buyer of last resort during droughts, ensuring that pastoralists could always sell their stock when desperate.

When the KMC collapsed in 1987, due to mismanagement and economic liberalisation, pastoralists had to trek for miles to unhygienic abattoirs on the outskirts of Nairobi where they were forced to accept whatever prices the private operators offered them.

Drought

The UK Meteorological Office recently warned that one-third of the planet will be desert by the end of 2100. Its recent study shows that the parts of the world already stricken by drought, such as the Horn of Africa, will be those where the projected increase will have the most severe effects.

The scientists modelled how drought, as measured by the Palmer Drought Severity Index (PDSI), is likely to increase globally during the coming century because of predicted changes in rainfall and temperature around the world. The PDSI shows 25 per cent of the earth's surface is currently susceptible to moderate drought – this will rise to 50 per cent by 2100. The figure for severe drought, currently at about 8 per cent of the earth's surface, will rise to 40 per cent. And the figure for extreme drought, currently 3 per cent, will rise to 30 per cent.

Northern Kenya has often seen drought, but the evidence collated in our report shows that the severity of these droughts has increased swiftly and significantly.

The climate of Mandera

In all the areas where focus-group discussions were carried out, the following consensus was reached:

- Drought occurred in some 10 years out of the last 25. This meant it occurred once in every two and a half years.² Severe droughts occurred once every five years. Earlier studies³ reported severe droughts occurring once every 10 years and thus the frequency of droughts, as perhaps been experienced by the pastoralists, has increased.
- The rainy seasons have become shorter.
- The rains are less widespread.
- General water scarcity has increased.
- On average, rainfall was too low to support good pastures/crop growth.

² See Appendix

³ Pratt, D. J., Le Gall, F. and De Haan, C. Investing in pastoralism: sustainable natural resource use in arid Africa and the Middle East. World Bank technical paper 365. Washington DC: World Bank, 1997.

The impact of climate change on the local environment

Minor droughts have become more frequent in Mandera in recent years. People living in the region have aggravated climate change locally by felling trees for firewood. With deforestation, the climate has become windier, worsening soil erosion and desertification. The winds create dust storms that can potentially increase the incidence of deadly diseases like meningitis.

Other impacts include:

- An increase in the distance to water, especially during the dry season
- A gradual reduction of grass and tree cover
- The formation of localised deserts, in places threatening to engulf villages. In the village of Libehiya, houses are being buried by sand dunes. Perennial plants are also at risk, as sand heaps around them.

The following plants have now become very scarce as a result of climate change:

Local name	Type	Use
Dunsaadro	Tree	Medicine
Darkeen	Tree	Medicine
Daverna	Grass	Good for grazing
Sami	Grass	Makes cattle produce a lot of milk
Haskul	Tree	
Helle	Herb	Human food during drought

Consequences of climate change on flocks

There is a general consensus in Mandera that a family of one man, one woman and four or five children needs at least 40 sheep and goats, 20 cattle or 15 camels to meet their needs.

After the most recent drought, Christian Aid's survey found that 60 per cent of pastoralist families in the district did not have this bare minimum of livestock. In some areas, average cattle losses were as high as 93 per cent. With recurrent and worsening drought, hundreds of thousands of people now depend on aid.

The table below shows changes in average herd sizes in five areas in Mandera due to the last drought:

Area	Libehia	Kalalio	Arabiya	S/Fatuma	Takaba
Cattle before drought	5	21	37	24	41
Cattle after drought	0.3	4	4	2	3
% loss	94	81	89	92	93
Camel before drought	4	3	16	18	13
Camel after drought	0.1	0.3	3.7	5.9	4
% loss	98	90	76	66	69
Sheep and goats before drought	90	47	139	73	40
Sheep and goats after drought	12	9	27	11	7
% loss	87	81	80	85	82.5

Analysis of these statistics shows:

- After the drought, there were no longer large herds in any of the areas surveyed. Drought decimated all types of livestock.
- Cattle suffered most, with losses ranging from 81 to 93 per cent, followed by sheep and goats, with losses of 80 to 85 per cent. Camels suffered least, with 66 to 90 per cent of animals dying.
- The losses in all species were too high for herd recovery without outside assistance.

Consequences of climate change on pastoralists

Migration

Many pastoralists have taken to moving long distances with their livestock. Ethiopia is their preferred destination because the clans there are more accommodating. Unfortunately, disease control in Ethiopia is not strict and most of the livestock that move to Ethiopia don't come back alive. The chief of Wargadud said 47 families took cattle to Ethiopia. No cattle returned, only donkeys. The cattle died due a combination of disease and drought.

Conflict

As climate change intensifies, people are moving further from their traditional grazing routes, on to other people's lands. Pastoralists from North Eastern Province have travelled thousands of kilometres south and west across Kenya in search of water and pasture for their animals. Conflict between pastoralists, who are often heavily armed, and between pastoralists and farmers is becoming a serious problem in many parts of the country, fanned by

opportunistic local politicians. The violence also crosses borders – there have been clashes between Kenyan pastoralists and those of neighbouring countries such as Ethiopia and Uganda.

Settlement in villages and camps

More and more nomads have become sedentary. This is indicated by an increased number of villages in North Eastern Province, especially along the main roads. For example, along the Arabiya-Mandera road, two large villages (Omar Jellhow and Harere Hosle) have sprung up in the past six years. In addition to these new settlements, earlier settlements have grown.

Hungry families shelter in crude camps on the outskirts of most towns in the region, hoping for handouts of food. Unless there is concerted action to create alternative means of making a living, these miserable camps will continue to mushroom.

Deforestation

As one of the few available commodities, more and more pastoralists are cutting down trees to sell as charcoal, firewood and building materials. This further degrades the environment and increases desertification. Vegetation is becoming so scarce in some places that it takes a three-day round trip to gather firewood to sell to town dwellers.

Aid dependency

Year on year, the numbers dependent on handouts of food aid are increasing.

In March this year, 80 per cent of the population in the worst-affected districts were receiving food aid from the World Food Programme (WFP).

The arrival of the October rains has done little to fill their empty stomachs because most of their animals are already dead. At the height of the drought, the WFP was providing food aid to 3.5 million Kenyans. With the rains, this number has fallen to just under 3 million. The WFP says these people will continue to need food aid until March 2007.

Now that the crisis is no longer headline news, donor funds are drying up. In September, the WFP issued an urgent appeal for more aid as it was running out of food.

Clearly this situation is not sustainable. The WFP says governments have 'a humanitarian obligation and economic imperative' to invest in the long-term development of Kenya's arid lands because 'drought will inevitably return'.

Adapt or die?

'Pastoralism is being threatened by stronger forces than known coping mechanisms can withstand in the long term. These threats emanate from climate change, environmental degradation and the general unattractiveness of the pastoral way of life.'

Dr David Kimenye, Christian Aid consultant

Christian Aid's research from Mandera shows that the seriousness of the problems faced by pastoralists has been hugely underestimated by government and non-governmental organisations (NGOs).

The Kenyan government and NGOs must recognise that piecemeal stopgap measures, such as restocking livestock, are no longer sufficient to tackle the profound challenges posed by climate change.

Christian Aid is calling for a massive programme of investment in the region to alleviate the impacts of climate change. International funds for adaptation must be boosted urgently.

What does adaptation mean?

Adaptation can be a loaded term among pastoralists. Historically, it has only served the agenda of outsiders who have been unwilling to support a way of life different to their own.

Adaptation to climate change in northern Kenya cannot be divorced from rearing livestock. The land in northern Kenya is marginal and pastoralism is probably the only livelihood hardy enough to survive in such a harsh climate.

But with the onset of climate change alternative livelihoods must be developed so these people can continue to support themselves.

With the revival of the meat market, a number of related enterprises could develop. With access to affordable loans, known as micro-credit, people could set up businesses to transport livestock and grow and distribute animal fodder. Skins and hides, which currently go to waste, could be tanned into leather and sold.

Microcredit could provide a springboard for many other industries and services. For example, a number of bee-keeping cooperatives have been set up along the Dawa River and proved successful. The transport and sale of water, a valuable commodity in northern Kenya, is also a lucrative business in this parched land.

The Kenyan government needs to find the political will to invest in northern Kenya and reverse the region's rapid decline into a permanent state of crisis.

It must commit itself to dedicating funds to answer the needs of pastoralists. Decades of neglect must end.

Recommendations

To the international community

A mechanism to reduce emissions and fund adaptation

It is incumbent on the rich world, which manufactured climate change in the first place, to assume responsibility and pay for adaptation. Globally, emissions must peak between 2010 and 2013 and then be dramatically reduced by four per cent each year thereafter. In the UK, this will mean annual cuts of five per cent leading to an overall reduction in emissions of 80 per cent on 1990 levels by 2050.⁴

Massive new funds financed from levies on carbon emissions and trading must be injected into countries such as Kenya to help them cope. Otherwise, the potential for human suffering and social upheaval is too overwhelming to contemplate.

To the government of Kenya

Revival of the livestock market

Investment in livestock marketing is key to ensuring that pastoralists can manage in the face of climate change. This includes building roads, improving pastoralists' access to abattoirs, providing veterinary services and opening up overseas markets to trade.

There is some cause for hope with the revival of the KMC in June 2006. But it will not benefit poor pastoralists unless the way that it is currently set up changes. Those selling livestock to the KMC have to be rich enough to pay for vaccination, transport to Nairobi and other expenses, and most Kenyan herders are not. If it is to succeed, the new KMC will require serious investment and good management. Representatives from the pastoralist community must be included at the highest levels.

To the government of Kenya, NGOs and civil society

Environmental regeneration

The Kenyan government and agencies in the region urgently need to embark on large-scale environmental regeneration projects to begin to undo some of

⁴ See Baer, P. and Mastrandrea, M., *High Stakes*, Institute for Public Policy Research, November 2006; Monbiot, G, *Heat*, 2006. Penguin, 2006.

the damage caused by deforestation and to buttress the land from drought, desertification and floods.

Tree-replanting schemes and investment in water resources do not have to be hugely expensive, technical undertakings. Simple rainwater-harvesting programmes can go a long way to helping people cope in times of drought. Managing these schemes also creates jobs.

Christian Aid's partners are already building rain-water harvesting tanks in schools and health clinics and digging protected dams to conserve water.

Irrigation along the rivers could lead to a profitable livelihood from small-scale agriculture for a small percentage of the population. These measures must be paid for and implemented as soon as possible.

To NGOs and civil society

Massive shift from relief to long-term development

Many NGOs still believe that pastoralism is the only viable way of life in northern Kenya. Few are thinking beyond tankering water and restocking after a drought.

Pastoralists are growing increasingly frustrated with the failure of all of the major actors in the region to address the issue of adaptation head on. In Mandera, a third of people have already abandoned pastoralism because their animals have died and they cannot afford to replace them. Alternative livelihoods must be developed to allow these people to support themselves instead of subsisting on handouts.

Appendix:

Timeline

YEAR	EVENTS
1981-82	Good rains
1983	Drought in many parts of the district. Livestock moved to Ethiopia and Moyale. Ethnic clashes between Gare and Murule. Many camels slaughtered.
1984	Severe drought
1985	Moderately good rains
1986	Poor rains in Khalaliyo area
1987	Poor rains in Khalaliyo area
1988	Good rains
1989	Fair rains
1990	Beginning of collapse of the Somalian government. Many refugees came to Mandera. Much tree cutting. Many livestock thieves.
1991	Fair rains
1992	Fair rains
1993	A very good year, plenty of pastures
1994	Fair rains. No drought in Mandera but drought in Ethiopia. Livestock migrated from Ethiopia into Mandera.
1995	Mild drought
1996	Mild drought
1997	El Nino rains. Best for crop – bumper harvest. Best for pastures – plenty of milk. Pastures lasted for three years.
1998	Rains reduced but pastures were plenty
1999	Rains further reduced but pastures were still sufficient
2000	Severe drought. Cattle moved to Ethiopia. Relief food distribution.
2001	Little rain. Continued relief food distribution.
2002	Fair rains but the short rains better than the long rains
2003	Fairly good rains and pasture. No relief food but food for work projects implemented.
2004	Severe drought (sweeper) starts and lasts for four seasons. River Daua floods. Many crocodiles kill people and livestock.
2005	Rains failed in most parts of Mandera. Severe drought. Some livestock moved to Ethiopia but all died due to disease. Floods in Khalaliyo destroyed farms but improved grazing.
2006	It rained heavily in Takaba and Arabiya but sparsely in Khalaliyo and Libehiya.