HEAR OUR CALL
Climate Change Testimonies from Kenya's Dry Regions of Wajir And Turkana

Compiled by Linda Ogwell

Oxfam
Writers:  Fatuma Mohamed
         Abdirizak Adow
         Francisca Rionkou
         Linda Ogwell
         Stephen Mutiso

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Oxfam has been implementing a community disaster risk reduction project in Turkana and Wajir with the support of ECHO. In this project, communities are facilitated to develop community disaster management plans focusing on drought hazards. The ongoing community disaster risk analysis and existing scientific information indicate a correlation between worsening drought events in Arid and Semi Arid areas and the phenomenon of climate change. For this reason, climate risks identification has become an important aspect of any community drought risk management efforts.

Climate change in the ASALs is manifested through recurrent and prolonged drought events, extreme rainfall variability and increasing temperatures. These are scientifically proven attributes of climate change but communities have their own understanding of how climate change has occurred in their localities. They are able to explain what they see as climate change through the changes in observable weather conditions as well as changes in their production systems and lifestyles. To enhance dialogue between communities and other actors in the climate change sector, Oxfam has facilitated communities in Wajir and Turkana to undertake climate change hearings. The purpose of conducting hearings is to facilitate a common understanding on how the climate is changing, how it affects people and what people can do at different levels to mitigate and adapt to the changes. In this respect, such hearings bring together climate experts, experts in livestock and crop production, policy makers and community members in one discussion forum.

In terms of drought occurrence, community climate hearings have documented testimonies of increased frequency and duration of drought events. Using frequency timelines, major drought events have been found to have increased since 1970s and the frequency has an upward trend. Indeed, Wajir and Turkana are facing a major drought event every 2-4 years compared to a major event every 5-10 years in the past. In some cases, droughts are lasting for over 12 months. According to communities, they have less time to recover before another drought occurs. This has interfered with their livestock systems since as per ILRI estimates, pastoralists may lose up to 50% of their livestock during a major drought in Kenya. Using average mortality rates of 50%, 30%, 24% and 17% for cattle, sheep, goat and camel herds respectively, and computer models based on Dahl and Hjort’s herd growth theory, the estimated required recovery period is 10, 2, 1.5 and 4 years respectively. This continuous diminution of livestock assets is documented in some of the testimonies in this publication.

Although community testimonies indicate lack of rains as one of the impacts of climate change, there is little scientific evidence to suggest reduced annual precipitation in Wajir and Turkana. However, although the amounts may not have drastically reduced as suggested by communities, variability has increased affecting important precipitation aspects such as seasonal distribution, onset and cessation dates. All these interfere with the livestock production systems in these areas specifically poor recharge of water sources and poor regeneration of pasture resources. It is the duty of those with scientific information to pass the correct rainfall information to communities through these hearings in order to assist them to take the appropriate adaptation measures.

Further, community testimonies also documented climate change impacts related to rising temperatures. There is scientific evidence of temperature increases in Wajir and Turkana and projected increase in monthly temperatures of +1.0 to 3.20 C by 2080. Increases in temperatures in already hot ASALs means major impacts to pasture and water resources as well as interference with the ideal livestock production temperatures for the different species. Further, increased loss of soil moisture impacts negatively on pasture regeneration and surface water. As indicated in the testimonies, lack of pasture and water resources forces communities to migrate to dry season grazing zones or better areas. This mobility is a necessary livestock management component in the ASALs but it has also created conditions for conflict over scarce resources.

Apart from community education on trends on climate change and their role in climate mitigation and adaptation, these hearings also presents an important avenue through which Oxfam and other actors can illustrate the impact of climate change to policy makers. In this respect, the community voices in this publication are aimed at policy makers at the national level as well as supporting advocacy campaigns within the UNFCCC negotiations. A summary of community adaptation measures and policy advocacy measures is given in the last part of the publication. This publication is part of a series of Oxfam publications on climate change and disaster risk reduction which can be found in disasterriskreduction.net
Kenya has increasingly become prone to drought - over the last 25 years, the country has experienced at least seven major drought seasons. The increasing occurrence of droughts in the country has further aggravated the food security situation.

Currently about 4 million Kenyans, majority being from the Arid and Semi Arid Areas (ASALs) are staring hunger in the face as a result of failed or poor rainfall among other factors.

Over the last seven years, Wajir County, situated in Northeastern Kenya has been experiencing chronic drought as a result of inadequate rains leading to death of livestock and massive food security. This loss of livestock - the main source of livelihood, has reduced the resilience, traditional coping mechanisms and depleted the community’s purchasing power resulting to 75 percent of the population being totally dependent on relief food. Some of the areas worst affected by drought in Wajir include Mansa and Buna.

**Mansa Location:**
Mansa covers an estimated area of 2,052 kms2 with a population of 16,500 people. The community members rely on seasonal pans and shallow wells for both domestic use and for livestock. They have a borehole that is located nine kilometers from the settlement.

Frequent droughts in the area has created competition for the already scarce water and pasture around the location among the community members. The prolonged drought has also triggered unusually high population movements in search of water and pasture, leading to high pastoral dropouts.

**Buna Location:**
Buna covers an area estimated to be 3,232 kms2 with a population of 11,372. The location has one low yielding borehole that serves both the livestock and the human populations. The main source of livelihood for this community is pastoralism. Land is owned communally with no specified settlement schemes. The prevailing land issues include unplanned settlements, conflict over water and pasture.

Oxfam, together with local partners, WASDA and ALDEF, conducted climate changes in Mansa, Buna and other locations in Wajir and documented community voices on climate change.
Mansa village of Wajir district in Northern Kenya was once known as bai, Somali word for place of abundant rain and pasture. However, over the years the village has been reduced to one of the driest locations in Wajir.

“I last saw good rains here in 1997 when it rained for almost a month. After that it has been raining for a maximum of four days” explains 63 years old Ibrahim Mohammad Hussein, a village elder and chairman of Water Users Association of Mansa.

As a boy, Hussein remembers his village as a place where elephants came to quench their thirst. He recalls the day when his late father pulled him aside and told him that in 30 years the elephants would be all gone and the rains would subside because human kind was abusing nature.

“My father’s predictions came to pass, it barely rains here and the elephants are no more, further we have cut down trees, overused the little remaining pasture because we own more animals than the land can take and so our livestock are dying and we shall follow soon if nothing is done” says Hussein.

Hussein adds that the rainy season known as Jilali used to last for about three to four months. But now rain only comes for about 4-5 days then disappears. This has affected their source of livelihood.

“Keeping livestock can no longer sustain us especially during the drought seasons. We have been forced to take up activities like burning charcoal and trading in gum Arabica to earn a living, activities that are not good at all for our environment” he explains.

According to Hussein, all stakeholders should meet and come up with policies on finding a long term solution to drought. “Our story should not always be about starvation, we need help so that we can be able to provide for ourselves even when the rains don’t come.”

Omar also want the world leaders to come up with ways of addressing problems related to weather changes. “Our leaders cannot bury their heads in the sand and pretend that there are no changes in the weather. With every New Year the dry seasons are longer and hotter, if it isn’t climate change, then I don’t know what is. Do we have to die for them to act?” Hussein concludes.

OUR LIVESTOCK IS OUR BANK ACCOUNT, WITHOUT THEM WE HAVE NOTHING
By Linda Ogwell

When 37 years old Halima Abdulahi Bardad was growing up, there was always a lot of milk and meat, never did she ever imagined that one day she would be forced to go to bed without food.

“Food was always available when I was a child and I took it for granted. I never thought that one day we would not be able to afford food, not even the maize that we all looked down on then” explains the mother of eight children.

On a normal day, Halima has to walk about eight kilometers to get water for both domestic use and for her small animals. But with the drought she has to walk longer distances as most water points are now dry.

“When there is drought like now, I am away from home for the whole day searching for water, this means that my children stay home alone as my husband migrated with the animals to go look for pasture, it also means that I can’t do anything else as all the time is spent looking for water” says Halima.

Livestock is the only source of income for this family of 12 people. “Our livestock is our bank account, we depend on them to meet our basic needs, without them, we cannot eat, dress or even take our children to school” explains Halima.

Halima believes that man has contributed greatly to the change in climate. “We are cutting off trees at a very fast pace, everything around us is built from trees and with no trees we know very well we will not have any rains” explains Halima. Halima concludes that everyone must change their lifestyle and try much harder to take care of the environment. “If we don’t care for the environment then how do we expect it to take care of us” concludes Halima.
Fifty years old Omar Hussein Hassan remembers the good days when grazing land was vast and settlements were far and wide. “Wajir had very few settlements because the population was small. I would run for almost ten kilometers before seeing a settlement but now there is a settlement after every few kilometers” says Omar.

Omar who comes from Mansa village of Wajir district in Northeastern Kenya believes that the rise in population has contributed to environmental degradation. “We continue to demand more from the environment than it can give us” asserts Omar.

Omar also believes that the world must be serious about environmental conservation and make it a priority. “World leaders have to be serious about taking care of this earth, it is the only one we have and if we destroy it then we destroy ourselves” concludes Omar.

“My name is Omar Isaak Hassan and I am 50 years old. During my childhood, there was no settlements here and there was a lot of wildlife especially lions, hyenas and elephants. There was a lot of tall grass that could cover above your knees. This place was a jungle. In those days one dairy cow could comfortably feed four or five children. Even the camels had a lot of milk. We took milk with every meal.

In those days whenever we saw lightening, we were sure that it is going to rain. Rain was reliable, and sufficient. These days rain is not reliable, we rarely receive it. Now there are several small settlements in this area making pastoralism difficult. The population of people and livestock has increased exerting pressure on the natural resources leading to depletion of pasture. Livestock rearing is no longer viable.

IMy plea to the world is for the developed countries to stop the manufacturing of things that emit gases that are causing climate change. This industrial waste has polluted the air, land and sea there by endangering our lives by affecting us with several diseases.

Plastic bags are also a major problem here. The plastic waste has killed the few animals that survived the drought. We ask for a stop to the production and use of these killer bags.”

Sixty years old Abdurrahman Hussein has over the years seen and experienced drastic climatic changes in his home district of Buna in Northern Kenya.

“I have been living in Buna since I was born and I have experienced different climate changes ranging from very good rains to severe droughts that killed hundreds of livestock and for this reason I believe climate change exists” says Hussein.

According to Hussein, the drought seasons have now become drastic and more frequent thus severely affecting their means of survival. “I don’t know what will become of pastoralists as we are losing a lot of animals, our means of livelihood is becoming extinct” he says.
"We used to have dry spells once after four years, now they are yearly and very extreme" explains Hassan.

Hassan believes that these changes in climate are due to Allah’s will. However, he feels that the emergence of many new settlements has accelerated the speed at which the climate is changing.

According to Hassan, these factors have led to the disappearance of some species of grass, dwindling grazing lands, frequent drought and eventually resource based conflicts. Hassan also names plastic bags as a big menace “since there is no grass to feed on, animals are feeding on plastic bags and dying. I think all the factories producing these bags should be closed. Grass cannot grow where these bags are dumped” assets Hassan.

Hassan adds with concern “the craziest thing I ever saw was cows eating tree barks. I believe this is because we no longer have grass as a result of overstocking and watering holes in the grazing fields attracting people from different corners of Wajir.” Over the last five years alone Hassan has lost 90 heads of cattle.

To cope, Hassan and his family have resorted to unconventional measures “In order to overcome the effects of the drought especially on livestock, we are feeding the cows and goats with maize (mainly from relief food). We also sell a few livestock and use the money to feed the remaining livestock. When there is no maize in the market, we collect bird nests and tree barks to feed the livestock. I am also looking into keeping camel since they can cope with drought. I will sell the remaining cattle and substitute with camel” concludes Hassan.
LOCAL SOLUTIONS TO CLIMATE CHANGE

Despite the challenges of climate change, many pastoralist communities are striving to cope. Pasture establishment and preservation is one of the solutions in use by some women so that they can get pasture throughout the season for small stocks.

Hamara Kusa, 42 years old and mother of nine children from Buna believes in working in a group.

"The only long term solution to drought is formation of self help women groups. “When we form groups, we can harvest water from seasonal streams here and engage small scale farming to curb food insecurity”

Hamara Kusa. Photo and text by Abdurizak Adow

CLIMATE CHANGE LEFT ME POOR

Samoy Hussein is nostalgic about the good old days when she used to run a small shop near a shallow well that was used by many pastoralists. Then drought became more frequent and she lost her source of income.

“When the shallow well near my shop dried, I lost all my customers who were pastoralists since they all migrated to Ethiopia” explains Samoy “to make matters worse, I also lost the few animals I had. That is the impact climate change has had on my life and family.”

Samoy Hussein, Buna Village, Wajir District, Kenya. Photo by Fatuma Mohamed

Mama Nathifa jibril 55yrs resident of Biyamathow said

“A lot of trees have been cut for firewood this has caused desertification contributing to frequent droughts. This is why the poverty level are high in these area.”
ANXIOUS ABOUT THE FUTURE

Many pastoralists are anxious about the future. Trends like population growth, overgrazed range lands and new settlements seem to be worsening environmental degradation and exacerbating drought.

“I cannot predict the future but the consequences of the ever changing weather patterns will be tragic if nothing is done. In the next few years, I am afraid that our nomadic way of life will become extinct since we will be forced to settle in towns as our livestock will all be dead.”

Ahmed Abdi, 30 years old, resident of Ajawa, Wajir, Northern Kenya. Photo and text by Abdirizak Adow

WE HAVE NO OPTION BUT TO ADAPT

Many communities in Kenya’s dry region believe there is no single answer for climate change; they have to learn to adapt to the situation as it unfolds.

Farah Hussein, 55 year old, resident of Ajawa village in Wajir, Northeastern Kenya, explains

“We do all we can to survive drought, we share our little food (mainly maize) with the livestock, sell off the weak ones to buy pasture for the strong ones and most of us have taken to keeping hardy animals like goats.”
Climate change affects different groups of people differently. For a long time, children’s voices have been ignored in this whole debate and yet they are also affected as they have to walk distances to look for water for both the small animals and domestic use taking them away from learning. They are also constantly on the move with their families as they migrate to look for greener pastures hence miss out on education not to mention the high malnutrition rates among children during drought.

Eighteen years old, Mohamed Ali, believes “climate change affects us in the form of frequent droughts which results to huge loses of our livestock every year. In addition schools are also experiencing high numbers of drop outs and underperformance by pupils and this has contributed to dismal performance by the schools in the region in the National exams year in and year out.”

In addition students whose families have lost most of their livestock are traumatized by the loss of livestock at their homes adversely affecting their concentration in class or some times forcing them out of schools due to lack of school fees.

Abdullahi Hassan, seventeen years old from Wajir in Northern Kenya thinks he is lucky to be still in school after his dear friend had to drop out. “My friend was very bright and able to make a difference given the chance but unfortunately could not continue his studies due to lack of school fees after his family lost all their livestock to drought.”

Given the fact that the hazard has become recurrent and cyclic therefore overstretched the coping capacities of the communities, some young people believe that the communities need to diversify their sources of livelihood and explore different options such agricultural farming as was narrated by Osman a form four student “we need to break from the tradition that says we can only rely on livestock for a living limiting other alternatives. We need to embrace agricultural farming using drought resistant crops because we have a vast land that is good for farming” says Osman Mohammad.

Fatuma Bulle is 18 years old and a form four student at Hon. Khalif Girls Secondary School. Her parents are pastoralist and have been adversely affected by drought which is as a result of change climate.

Fatuma believes that the change in climate has led to lack of water and pasture in her hometown. She feels that the change in climate is as a result of cutting down trees, coming of many factories that emit harmful gasses and overstocking.

“Girls are equally affected by drought; we walk long distances in search of water, firewood and to look after goats. Once our parent’s livelihood perishes, our food security will be at risk, payment of school fees becomes difficult and forcing as to go out of school. One of my classmates was married off because her parents lost all their cattle and they could not pay her fees.”
TURKANA

Kenya’s Turkana region Kenya is one of the areas that always experiences severe drought that has been linked by many to Climate Change. It is situated in the Northern part of the country. The frequent droughts have seen massive loss of livestock which is the main source of livestock for many in this region. Some of the areas worst affected by drought include;

Lomewki Location:
Lomewki is a settlement found the Northern part of Turkana, Kenya. The residents are a mixed group of pastoralists who rely largely on livestock for a living and fishermen who derive their livelihood from the famous Lake Turkana. The area experiences extreme hot temperatures resulting to drought.

Nadunga Location:
This is a settlement in Kaaing Division of Turkana North District. It is one of the drought prone areas of Turkana. Nadunga has a very poor infrastructure in terms of transport and communication, the people are mainly pastoralists and less exposed to information that is necessary for disaster preparedness.

Riokomor Location:
This is a settlement situated 25kilometers from Lokitaung, the District headquarter for Turkana North District. The residents are pastoralists from nearby mountain ranges. The scenery is a vivid indicator of the harsh weather conditions that the people and their livelihoods battle with daily.

Lokangai Location:
This settlement is situated about 50 Kilometers from Kakuma town in Turkana. It is a pastoral community who have experienced several cycles of severe drought.

Pastoralists Voices

We are forced to look for other alternatives
By Linda Ogwell

When it comes to climate change, seventy years old Ekope Imo has experienced and seen it all. From the time when it was all green and wet in the 60s to the recent extreme dry seasons. “The change in weather conditions from good to worse has also forced us to change our lifestyle” says Ekope.

According to Ekope, the 70s and 80s saw to the worst droughts in his area. “In the 70’s we had Lapini meaning complete destruction of our livestock ad come the 80’s we were once again struck by Lopiar that swept all our remaining animals” he explains.

In total Ekope has lost over 100 heads of cattle, and several goats and sheep. But he hasn’t given up. “I have now resorted to keeping camel and a small number of goats as they are hardier than cattle” says Ekope.

According to Ekope, most Turkana’s who have always been pastoralists are now looking into other alternatives like small scale businesses. “The logical thing to do now, is to try and settle down and look for other means of feeding our children” explains Ekope.

To cope with drought Ekope burns and sells charcoal while his wives make beads and baskets for sale. “I know burning charcoal contributes more to environmental degradation but I have no choice, I have to make a living” says Ekope.
People cope with drought by migrating their livestock and retaining a small breeding/milking stock behind, eating wild fruits where available, burning charcoal, searching for relief food among others.

We are forced to migrate but the migration corridor is becoming narrower

By Stephen Mutiso

Mobility of livestock is one of the most important rangeland management practices by pastoral communities throughout history. For long, this practice helped in reducing degradation of rangelands while at the same time managing vagaries of weather. Under the practice, livestock is moved to dry season grazing reserves only when there is scarcity of pasture and removed once the situation improves to allow for regeneration of grass and browse resources. With the increased occurrence and duration of drought events, this mobility pattern has been interfered with leading to conflict over scarce dry season grazing and browse resources as noted by Joseph Eg’olan;
“Climate change is no grass, no water, migration and a lot of insecurity.....the enemy(meaning neighbouring communities) has come nearer (referring to dry season grazing reserves)”

Although Turkana used to share the dry season grazing zones with their neighbours in Ethiopia, Uganda, and Sudan, this harmonious sharing of resources has been replaced by periodic conflict in the Karamoja triangle. The Turkana fault the continuous habitation of these grazing reserves by the Pokots, Karamojong, Toposa, and Merile communities. As climate change impacts deepen, these communities rarely move their livestock from these reserves and more importantly make them inaccessible by the different users as noted by Christine Ateru; “the dry season grazing lands are inaccessible, they are smaller today and no pasture regeneration”. Ekope laments the poor access to grazing reserves “the enemy resides in our traditional dry season grazing zones” Ekope lmo

With climate change, cross-border mobility of livestock is likely to increase and this is likely to be accompanied by increased conflict over resources unless communities and governments ensure well planned and negotiated passage and resource access rights. Further, mobility also leaves behind vulnerable women and children without the much-needed milk and blood as noted by Christene; “Climate change has changed the lives of women, we are now unable to feed our children once the livestock migrate or dies!” Christine Ateru.
Maraka adds; “Years have changed! Bad things are drawing closer to us. The sun is too much, rain is gone, food is gone," Maraka Areman, 66 years, Lomekwi village, Turkana, Kenya

Despite the high reliance on relief food and continued depletion of their livestock herds, communities are willing to look for viable options outside the livestock system as noted by john:

“You’ve killed us as Turkanas with your pollution, we are also people who want to live, stop pollution and assist us. When we cry for lack of food, they say Turkanas like relief food, give us alternatives like farming and businesses” John Losikire
Is Climate Change a reality?
By By Linda Ogwell

Most Turkanas believe that indeed there has been a change in the weather from very cool to extremely hot over the years. For them Climate change is indeed a reality.

“We have not had proper rains in the last one and a half years. I see dark rain clouds every time. They hover above us and thunder, and then they disappear. They never release water,” Lokol Nakali, 61years, Lokalale, Turkana, Kenya.

“The Pastoralisms is dying and will soon become extinct. The people that will survive are those that drop out and go to live in the urban centers.” Maraka Areman, 66years, Lomekwi, Turkana, Kenya.

“The heat from the sun is unbearable, rain is gone and food is rare. We used to survive on livestock and wild fruits, these are not reliable today. I was one of the people that resisted moving to the urban centers because I had my own food but I moved here last year without any persuasion,” Akure Lorot, 60years old widow from Lomekwi, Turkana, Kenya.

“I remember when I was young, life was good. These days the lake has no fish, livestock are gone, wild fruits are no more, water has become a problem and we are using the salty lake water to survive. Something is not right” Lokoriye Musa, 47 years old, Turkana, Kenya.
This year is bitter! Bitter with everything we have. We had our hopes on the camels but they are also dying like sheep and goats” Ikimat Ekwar, 77 years old, elder from Lomekwi, Turkana, Kenya.

“This bad trend began in 1999 when we experienced another severe drought. Form then it has been worsening with every year. There is no rich person amongst us anymore. In fact, the rich men of yesteryears are the ones on food aid,” Ayepio Lokele, 46 year old, Kaamorungole, Turkana, Kenya.

What is the impact of Climate Change?
By Francisca Riokonou

Climate change contributes to poverty and poverty feeds into climate change through unsustainable production practices.

“Everybody is now poor. There is hardly any food because the drought is more frequent before. I used to hear people say that pastoralists would migrate towards the lake when hit hard by drought and they would survive and return. This is not so anymore; they survive because of food aid” Fredrick Ekakutan, 24 years, Turkana, Kenya.

“There used to be two categories of people in our land; the rich and the poor who lived as servants for the rich. The community ties were strong and the sharing culture was a cushion against hunger for the less fortunate. There is no clear distinction these days. You cannot separate the rich from the poor; they are one and the same,” Justus Nakeor, 34 years old, Turkana, Kenya

“We used to enjoy communal living. We were united and there was a lot of sharing. Food has become so scarce that it is now everyone for himself and God for us all,” Veronica Ekiru, 39 years old, Turkana, Kenya.
Climate change is also affecting people’s livelihoods and mainly livestock.

“Before we had few and less complex diseases affecting both people and livestock; new diseases have now emerged and are killing many,” Cornelius Ekitela, 39 years old, Turkana, Kenya.

“Our livestock are dying. I had four donkeys, two are dead and the other two are very weak. People are dying. I am a witness to this change in climate. I have lived both lives; the good old and the current bad. Malnutrition cases are many and our livestock have also stopped producing sufficient milk; they do not get fat and there is no blood,” John Edome, 61 years old, Turkana, Kenya.

“Where is pasture? Our livestock are feeding on anything now from polythene papers to human waste. They are starving, just like the owners,” Ekiru Adung, 61 years, Turkana, Kenya.

How are you coping with Climate change?

By Francisca Riokonou

“I left fishing in the year 2000 and chose to follow my livestock. It is over now and am back to fishing. I cannot leave myself to die while I have eyes” Lokoriye Musa, 47 years. Turkana, Kenya

“We rely on basketry and weaving. We sell charcoal and do petty business and we also do manual labour whenever it is available to feed our families,” Selina Asinyen, 36 years, Lomekwi, Turkana, Kenya.
“A lot of activities have been adopted. People here burn charcoal and sale firewood. Some people harvest and sale Aloe Vera. Some weave sisal ropes and sale sisal for thatching houses. I have even been to the lake and tried fishing. I am alert to know where I can provide cheap labour and life goes on,” John Edome, 41year, Turkana, Kenya.

Advocacy Asks

“If you are not willing to cut down on emissions, come and give us skills to survive the harsh effects of climate change,” Ayepio Lokele, 46 years.

“Pastoralist like us need exposure. We don’t understand things in one day. Train us again and again so that we can understand what is actually happening,” John Edome, 41years.
**Options for community and policy level action on climate change.**
In order to facilitate climate change mitigation and adaptation, community and policy level action is required. Some of these actions include:

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<td>Establishment of accurate and well-coordinated early warning systems with seasonal climatic forecasts for droughts and rainfall</td>
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<td>Reseeding pasture lands through pasture seed banks and pasture seed broadcasting</td>
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<td>Improvement on rain water harvesting systems and policies</td>
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<td>Promotion of opportunities for harnessing natural resources for generating renewable sources of energy such as solar and wind</td>
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<td>Support effective public awareness and information campaigns on climate change</td>
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<td>Develop and implement comprehensive climate change policy and legislative frameworks entrenched within the broader NCCRS in line with the regional and international policy frameworks</td>
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<td>Promote participatory risk analysis including climate risk identification and programming</td>
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<td>Promote livelihood diversification for pastoralists and ex-pastoralists including opportunities for entrepreneurship on livestock products, nature-based enterprises and crop farming</td>
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<td>Establish workable pastoral institutions to manage peaceful mobility of pastoralists through peaceful negotiation of passage rights or access to shared resources/ ecosystems</td>
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<td>Organized grazing patterns and regulation of access to dry season grazing land</td>
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<td>Promotion of drought tolerant, early maturing varieties and breeds. Enabling communities to adapt production systems based on observed and projected climate trends. Conservation agriculture practices such Tripozodal bands can be used to harvest water for crop farming</td>
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<td>Develop suitable social safety net programmes for pastoralists in the form of cash for assets/work instead of food aid</td>
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<td>Invest more in development initiatives that integrate climate change adaptation in pastoral areas through better markets access, human and livestock health, education, community empowerment and climate risk analysis and forecasting in development planning</td>
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<td>Reward pastoralist financially for all the environmental services they supply through well managed pastoralist grasslands and making them custodians of the rangelands</td>
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<td>Harness existing opportunities for renewable energy generation as part of the clean development mechanisms and carbon finance within dry lands and up scaling successful community based adaptation projects</td>
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<td>Utilize existing knowledge from participatory risk analysis to address climate risks as differentiated by men and women.</td>
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<td>General infrastructural/service development of the ASALs or climate-proofing development</td>
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