

# Kamusi ya Msamiati na Istilahi katika Ripoti za Hali ya Hewa

(Dictionary of Meteorological Terms used in  
Weather Reports)

Tafsiri kutoka Kiingereza hadi Kiswahili

Kenya Meteorological Department



Community of Taita  
Taveta County

## FOREWARD

The Kenya Meteorological Department (KMD) in partnership with the World Meteorological Organization (WMO), Food and Agriculture Organization of the United Nations (FAO), IGAD Climate Prediction and Applications Center (ICPAC), Adaptation Fund and the Local community in Taita Taveta County collaborated in the implementation of a three-year partnership program titled **Agricultural Climate Resilience Enhancement Initiative (ACREI)** from 2018 to 2021. The aim of the ACREI project was to “Develop and implement adaptation strategies and measures that will strengthen the resilience of vulnerable smallholder farmers, agro-pastoralists and pastoralists in the Horn of Africa to climate variability and change”.

To actualize the purpose of the ACREI project, the KMD and collaborators used Participatory Scenario Planning meetings (PSPs) to engage smallholder farmers, pastoralists and other stakeholders in Taita Taveta to strengthen their capacity to access weather and climate information; carry out collective interpretation and understanding of weather and climate forecasts and transforming them into locally relevant information and language for agricultural decision making. To support this objective, government ministries and agencies (Agriculture, Water, Disaster and others) and the media were also involved.

It is in this regard that the KMD in collaboration with the stakeholders undertook the task of translating some of the meteorological terms commonly used in weather forecast reports from English to Kiswahili, which is the national and local language spoken by most of the population in Kenya and the region. The purpose is principally to have a dictionary (**Kamusi** – means dictionary in Kiswahili) of meteorological terms to enhance access, use, uptake and adoption of locally relevant weather and climate information in Taita Taveta County. This dictionary will also be useful in guiding similar initiatives at the national and sub-national levels and provide the opportunity for similar translations of meteorological terms into other community languages to improve ownership, understanding and increased uptake and use of weather information mostly at the sub-national level.

On behalf of the Kenya Meteorological Department, I wish to appreciate all those who participated in the preparation and translation of the meteorological terms to Kiswahili to form this **Kamusi**. I wish to recognise the contributions of the following; Farmer Field School groups in Taita Taveta, Agriculture Department representative-Taita Taveta, Local FM Radio Stations (Mwanedu, Sifa, Msenangu, and Tumaini) and the KMD staff.

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Term	English translation	Swahili translation
<b>Above Normal rainfall</b>	Rainfall amount that is more than the average (mean) amount as observed during the same time or period for the last 30 years or more.	Mvua ya kiwango cha juu ya kawaida au wastani kilichotokana na tathmini ya takwimu za mvua za miaka thelathini au zaidi iliyopita
<b>Agro meteorology</b>	Agrometeorology is the study of weather and use of weather and climate information to enhance or expand agricultural crops or to increase crop production.	Somo la kisayansi linalohusika na maswala ya matumizi ya metiorolojia kwa kupanua na kuendeleza kilimo.
<b>Air</b>	Invisible gaseous substance surrounding the earth, mainly a mixture of oxygen and nitrogen.	Lundiko la hewa lililotapakaa hewani na lenye hali sawa ya joto, unyevu na shinikizo la hewa.
<b>Air mass</b>	A widespread body of air with horizontally uniform temperature, humidity, and pressure.	Anga ambalo lina hewa inayozingira dunia au sayari zingine.
<b>Agriculture</b>	The science or practice of farming, including cultivation of the soil for the growing of crops and the rearing of animals to provide food, wool, and other products.	Kilimo. Kinahusika na kulima ardhi kwa upanzi wa mimea na ukuzaji wa Mifugo ili kukuza chakula, pamba na bidhaa zingine.
<b>Anvil clouds</b>	Cumulonimbus clouds.	Aina ya mawingu yaliyo na umbo la juu linalofanana na kilemba.
<b>Atmosphere</b>	The envelope of gases surrounding the earth or other planets.	Anga ambalo lina hewa inayozingira dunia au sayari zingine.
<b>Anemometer</b>	In meteorology, an anemometer (from 'wind' and 'measure') is a device that measures wind speed and direction. It is a common instrument used in weather stations.	Kifaa cha kupima mwendo kasi wa upepo.
<b>Anabatic wind</b>	Anabatic wind, also called upslope wind on mountains and hills caused by warming of the ground by the heat of the sun.	Upepo unaovuma kutoka bondeni na kuelekea juu (mlimani) na ambao unaumbika kutokana na miale ya jua kupasha joto kwenye uso wa ardhi
<b>Analog Forecasting</b>	Approach of forecasting, which uses previous weather and climate events to forecast the future. This method expects that the previous event mimicks similar event in future	Aina ya njia ya utabiri wa hali ya hewa unaotumia takwimu za hali ya hewa kitambo ili kutabiri hali ya hewa ya siku zijazo. Njia hii ya utabiri huchukulia kwamba hali ya hewa ijayo itachukua mwelekeo sawa na wa hali hewa ya wakati uliopita
<b>Anemometer</b>	An anemometer (from 'wind' and 'measure') is a device that measures wind speed and direction. It's a common	Kifaa cha kupima mwendo kasi na mwelekeo wa upepo.

	instrument used in weather stations	
<b>Arabian High-Pressure System</b>	The high-pressure system situated in the Arabian/Tibetan highland region and is mostly responsible for north eastern wind flow into East African region.	Mfumo wa hali ya hewa wenye shinikizo la juu na ambao uko maeneo ya milima ya Tibetan kule bara la Asia na mara nyingi huhusishwa na upepo mkavu unaotoka kaskazini mashariki na kuingia maeneo ya Afrika ya Mashariki.
<b>Atlantic Ocean</b>	The ocean that lies between Europe and Africa on the East and North and South America on the west. It is divided by the equator into the North Atlantic and the South Atlantic oceans.	Bahari ya Atlantiki. Inapatikana kati ya bara Uropa na Afrika kwa upande wa mashariki na Marekani kwa upande wa magharibi. Imegawanyika sehemu mbili –Atlantiki ya kaskazini na kusini.
<b>Atmospheric circulation</b>	Is a large-scale movement of air and together with ocean circulation causes thermal energy to be redistributed on the surface of the Earth.	Ni mzunguko mkubwa wa hewa ukiungamanishwa na ule mzunguko wa maji ya bahari unaosababisha kusambazwa kwa nguvu za jua duniani.
<b>Atmospheric/Air pressure</b>	Also referred to as barometric pressure, (after the barometer) is the pressure within the atmosphere of Earth where the standard atmosphere is a unit of pressure defined in >1000 Hpa and equal to 760 mm Hg, of mercury column.	Shinikizo ya hewa ambayo hupimwa kwa kutumia kifaa kijulikanacho kama barometa (kipimahewa). Shinikizo la anga ni kanieneo ya hewa kwenye nchi ambayo hupimwa kimo cha juu ya 1000 Hpa ambayo ni sawa na kimo cha miligramu 760 ya zebaki (mercury).
<b>Azores high pressure system</b>	Azores high is a subtropical high-pressure system that extends over the eastern subtropical North Atlantic and western Europe during winter. It is associated with anticyclonic winds in the subtropical North Atlantic.	Mfumo wa hali ya hewa wenye shinikizo la juu la hewa linalopatikana Kaskazini mashariki ya bahari ya Atlantiki na magharibi ya Uropa. Mfumo huu unahusishwa na pepo zinazo zunguka tokea mashariki kwenda magharibi.
<b>Barometer</b>	An instrument measuring atmospheric pressure, used especially in forecasting the weather and determining altitude.	Kifaa cha kupima shinikizo ya hewa.
<b>Below Normal rainfall</b>	Lower than the average (mean) rainfall amount as observed during the same time or period for the last 30 years or more.	Mvua ya kiwango cha chini ya kawaida/wastani.
<b>Breeze</b>	Any generally light wind or local-scale air movement that is convectively forced.	Upepo wowote unauvuma ukiwa umetulia na hasa hushinikizwa na nguvu za miale ya jua.
<b>Broken clouds</b>	Clouds which cover between 6/10 and 9/10 of the sky.	Mawingu ambayo yanagubika sehemu kubwa ya Anga km kati ya 6/10 hadi 9/10.
<b>Carbon sinks</b>	A carbon sink is anything, natural or otherwise, that accumulates or extracts and stores some carbon from a source (e.g. atmosphere) for an indefinite period of time and thereby removes carbon dioxide (CO <sub>2</sub> ) from the atmosphere.	Kitu chochote, asili au cha kujiambia ambacho kinazoa, kurudisha Pamoja au kuhifadhi gesi ya Carbon dioxide kwa muda mrefu na hivyo kuondoa gesi hii kutoka anga hewa. Km. misitu, bahari na vinginevyo ni baadhi tu ya vitu vinavyoweza kupunguza gesi hii kutoka anga hewa.

<b>Chemical precipitation</b>	Rainfall formed through the process of converting solution of chemical substances into insoluble form or making the solution a super saturated one. Chemical precipitation is the most common technology used to remove dissolved metals from solutions e.g., process of cleaning wastewaters containing toxic metals.	Mvua inayo umbika kutokana na mchakato wa kubadilika kwa vitu vyenye kemikali na kusababisha maji yaliyo na ugumu wa kumumunyika.  Mchakato huu ndio unaotumika kuondoa chemikali za chuma zilizo changanyikana na maji na vitu vingine. Aidha inatumika kusafisha maji taka.
<b>Cirrus clouds</b>	Cirrus are wispy clouds made of long strands of ice crystals that are described as feathery, hair-like, or layered in appearance.	Mawingu mepesi yenye umbo ya uzi ndefu yenye chepechepe za barafu na hufananishwa na manyoya.
<b>Climate</b>	The weather variability or conditions prevailing in a region or area in general over a long period of time.	Hali ya hewa inayo tambulisha sehemu fulani kwa muda mrefu. Inatathminiwa kutoka kwa vipimo vya mvua, joto, upepo na viashiria vingine kwa muda mrefu.
<b>Climate change</b>	Commonly, climate change indicates increase in surface temperature leading to global warming and its effects on Earth's climate system over a long period of time and is primarily caused by anthropogenic factors primarily release of green house gases in the atmosphere.	Mabadiliko ya tabia nchi na kwa kawaida huashiria kupanda kwa hali ya joto ambayo inaadhiri hali ya hewa ya ulimwengu baada ya muda mrefu na hasa husababishwa na tabia ya binadamu ya matumizi ya ufuta unaovukisha gesi chafu angani.
<b>Climate hazards</b>	Weather-related, hydrometeorological events which can cause harm to humans, property, livelihoods, resources, and the environment. Climatic hazards are also sometimes called extreme weather events.	Majanga yanayohusishwa na matukio ya hali ya hewa na ambayo husababisha athari kwa watu, maisha, rasilimali na mazingira.
<b>Climate Information Services</b>	Climate Information Services (CIS) are services that entail the dissemination of climate data in a way that aids people and organizations in making decisions associated with a changing and unpredictable climate.	Huduma za hali ya hewa zinazohusika na uandaaji, utabiri na usambazaji na upashaji wa repoti na takwimu za hali ya hewa ili kuwawezesha watu na mashirika kuchukua hatua stahiki kuhusiana na hali ya hewa tarajiwa.
<b>Climate models</b>	Systems that use mathematical equations to characterize how energy and matter interact in different parts of the ocean, atmosphere and land and used in forecasting the state of the atmosphere.	Mifumo ya hali ya hewa ambayo hutumia kanuni za hisabati au mlingano na kutumika katika kutabiri hali ya anga/hewa.
<b>Climate variability</b>	Climate variability is the way aspects of climate (such as temperature and precipitation) differ from an average.	Kubadilika badilika kwa viwango vya viashiria vya hali ya hewa (km. joto na mvua) ikilinganishwa na viwango vya wastani.
<b>Climatology</b>	The scientific study of climate, which provides the different aspects that contribute to the climate of a region.	Somo la sayansi linalohusika na maswala ya hali ya hewa na ambayo hutambulisha hali ya hewa ya muda mrefu ya sehemu Fulani.

<b>Cloud seeding</b>	Modification of weather and particularly related to clouds in order to generate precipitation that falls from clouds by adding chemical substances into the air to enhance cloud condensation or ice nuclei.	Ugeuzo wa hali ya mawingu ili yaweze kuzalisha mvua zaidi kwa kutumia ujuzi wa kemikali ndani ya hewa. Hali hii huwezesha mfinyazo wa unyevunyevu kwenye mawingu ili kuumba mvua.
<b>Cloudy</b>	Condition of cloud cover in the atmosphere /sky.	Hali ya mawingu angani.
<b>Coastal plains</b>	A coastal plain is a flat, low-lying piece of land next to the ocean.	Nyanda za pwani.
<b>Codes</b>	A system of words, letters, figures, or other symbols substituted for other words, letters, etc., especially for the purposes of secrecy.	Mfumo au mkusanyiko wa maneno, sarufi, maumbo au takwimu ili kuficha maana halisi ya jambo na zinatumiwa ili kuweka siri.
<b>Cold Season</b>	The coldest period (season) with the lowest temperatures compared to other periods of the year e.g., Winter in Europe or the period between June and August in East Africa.	Msimu wa - au kipupwe cha baridi na ambacho kinatambulishwa na viwango vya chini vya joto ikilinganishwa na msimu mwingine k.m. msimu wa baridi kule Uropa au joto katika Juni – Agosti katika ukanda wa Afrika mashariki.
<b>Communication</b>	The various methods of sending information between people and places, especially through phones, computers, radio, etc.	Njia mbalimbali za kutuma habari kati ya watu na pia sehemu kwa kupitia matumizi ya simu, kompyuta, radio nk.
<b>Condensation</b>	Condensation is the process of water vapor turning into liquid water, such as in clouds which give rain in the atmosphere. This process leads to water droplets accumulating (clouds) and once they are heavy enough, they form and fall down as rain.	Mchakato wa mvuke au unyevunyevu kugeuka na kuwa maji katika anga, au mawinguni na husababisha mvua. Mchakato huu husababisha majimaji kulundikana na yakiwa mengi na mazito hunyesha mvua.
<b>Condensation level</b>	The atmospheric level at which condensation occurs as a result of convection, the lifting of air (e.g., orographic lifting).	Anga pale ambapo mchakato wa kuumba mvua hufanyika kwa sababu ya joto, na hali hii husababisha kuinuka kwa mshikano wa hewa tokea chini kupanda juu.
<b>Convection</b>	In weather, convection is the process through which heat and moisture are transported vertically in the atmosphere by the movement of a fluid (e.g., air) by updrafts and downdrafts in an unstable atmosphere.	Katika maswala ya hali ya hewa, msamiati huu unaelezea mchakato wa jinsi joto na unyevu unavyo safirishwa kwenda juu hewani kwa kupanda na kushuka kati angahewa iliyo thabiti.
<b>Convergence</b>	The term is used to refer specifically to the horizontal inflow (convergence) where horizontal winds cause air to rise.	Msamati unaotumika kuonyesha hali ya kuvuma kwa upepo unaokutana katika sehemu moja na kusababisha kupaa juu kwa hewa.
<b>Cross winds</b>	A wind blowing across one's direction of travel (perpendicular to the line of travel).	Aina ya upepo unaovuma ukifuata upande mmoja sawa na mahali kitu kinapoelekea (km, Ndege).

<b>Cumulonimbus clouds</b>	Genus of clouds, dense towering vertical cloud associated with thunderstorms and atmospheric instability.	Aina ya mawingu mazito angani na yenye urefu mkubwa ikilinganishwa na upana wake juu angani na ambayo huleta mvua na ngurumo ya radi.
<b>Cumulus clouds</b>	Cloud forming rounded masses heaped on each other above a flat base at fairly low altitude.	Aina ya mawingu yanayolundikana na kupandiana angani na kukalia sehemu iliyo usawa na yako juu karibia kilomita mbili tokea ardhini.
<b>Dam</b>	A barrier constructed to hold back water and raise its level, forming a reservoir used to generate electricity or as a water supply.	Bwawa. Jengo ambalo hutumika kuzalisha umeme na kuhifadhi na kusambaza maji.
<b>Data transmission</b>	Is the process of sending digital or analog data over a communication medium to one or more networks, communication or electronic devices.	Ni mfumo ama njia ya usambazaji wa data ya kidijitali au isiyo ya kidijitali kupitia njia ya mawasiliano kwa mojawapo ya mtandao au kifaa cha elektroniki.
<b>Deforestation</b>	Deforestation or forest clearance is the removal of a forest or stand of trees from land that is then converted to non-forest use.	Tendo la kuondoa misitu au kukata miti katika msitu ili kutoa nafasi ya ardhi itumike kwa mambo mengine yasiyo husu misitu.
<b>Dekadal Agro weather forecast.</b>	Agricultural weather forecast which is normally provided to farmers to help in agricultural planning.	Utabiri wa hali ya hewa wa siku kumi na ambao ni maalum wa kuarifu maswala ya kilimo. Utabiri huu huonyesha hali inayotarajiwa kwa viashiria fulani muhimu kwa kushauri shughuli za kilimo.
<b>Dew</b>	Condensed moisture in the air which forms into droplets of water on the ground at night, Dew is a useful source of moisture for plants.	Umande au matone ya maji ambayo huonekana mida ya usiku na asubuhi mapema juu ya ardhi au sakafu nyingine kama vile juu ya majani au nyasi na paa.
<b>Dew point temperature</b>	Temperature at which air becomes saturated with water vapour, when it is cooled without changing its pressure or vapour content.	Hali ya joto inayosababisha maji kugeuka na kuwa barafu.
<b>Dissemination</b>	Process or act of sharing information such as weather forecast. The word dissemination pre-supposes that there is no feedback.	Usambazaji wa habari au ripoti kama vile utabiri wa hali ya hewa.
<b>Diurnal temp range</b>	The temperature difference between the minimum at night (low) and the maximum during the day (high).	Tofauti ya kiwango cha joto cha chini kabisa (huwa usiku) na kile cha juu zaidi (huwa mchana).
<b>Divergence</b>	In meteorology, divergence is the accumulation or drawing a part of air, as well as the rate at which each takes place due to pressure differences.	Muachano. Katika metiorolojia hii ni sehemu yenye muachano pale pepo za hulka mbili au zaidi zinafuma kwa pande tofauti kutokana na shinikizo la hewa.
<b>Drizzle</b>	Light rain falling in very fine drops.	Mvua nyepesi au manyunyu yanayodondoka kutoka juu na yenye matone madogo mno.

<b>Drought</b>	Abnormally dry weather in a region over an extended period that causes water shortages, pasture shortages and crop damage. Some rain may fall during a drought, but it will be less than usual.	Hali ya ukame katika sehemu kwa muda mrefu na ambayo husababisha ukosefu au kupungua kwa maji, lische na uharibifu wa mimea. Mvua ikinyesha kipindi cha ukame, huwa ni chini ya kiwango cha kawaida.
<b>Dry bulb Thermometers</b>	Instrument that measures the temperature of air measured by a thermometer freely exposed to the air, but shielded from radiation and moisture.	Kifaa cha kupima kiwango cha joto na ambacho kinawekwa uwazi na kimezimikwa na kitambaa kilicholowa maji. Upepo hupitishwa kwenye unyevu huo kabla vipimo kurekodiwa. Unyevu unapovikia asilimia mia moja, ujoto huwa umelingana na ule wa hewa kavu (joto la kawaida).
<b>Dry spell</b>	An unusual long period of several days or weeks during the rainy season when no rainfall occurs. A prolonged dry spell may damage crops and cause water sources to dry up.	Kipindi kirefu na cha siku au wiki kadhaa ndani ya msimu wa mvua pale ambapo hamna mvua yoyote imenyeshwa. Hali hii huenda ikaathiri mimea na kusababisha kukauka kwa chemi-chemi za maji.
<b>Dust Devils</b>	This are strong surface to near-surface short-lived whirlwinds that range from half a metre wide and high to more than 10 metres wide and taller). Its movement is both horizontal with a vertical upward motion.	Upepo wa muda mfupi wenye nguvu na unaovuma ardhini au karibu na ardhi na kufikia mita mbili kwa upana na kimo cha mita kumi au zaidi. Pepo hizi zinafurugika na kusonga kutoka sehemu moja ya mlalo ardhini hadi nyingine na pia ukipaa juu.
<b>Earth quake</b>	A rapid and violent shaking of the ground which can result in great destruction and damages and is caused by movements within the earth's crust or a volcanic eruption.	Tetemeko la ghafla na lenye vurugu kwenye ardhi na ambalo linaweza kuleta uharibifu na maangamizi. Husababishwa na msukusuko ndani ya ardhi au mlipuko wa volcano.
<b>East</b>	This is one of the four cardinal directions of the compass points that are used to define the location of an area or point. East denotes the eastern part of a specific point or area, and country etc.	Mashariki. Mojawapo wa majina yanayotumika kuonyesha sehemu yoyote kwenye ramani ya nchi.
<b>Easterly wind</b>	A wind that comes from the east.	Upepo unaovuma kutoka mashariki.
<b>El Nino</b>	The unusual warming of the surface waters of the Pacific Ocean along the coast of South America. This causes changes in weather patterns across the globe. In Kenya, El Nino increases the likelihood of heavy rainfall, especially during the October, November and December rainy season.	Hali ya ujoto wa maji ya bahari katika bahari ya Pasifiki ya kati inayopakana na pwani ya Marekani ya kusini na inajulikana kama 'El Nino'. Hali hii hubadilisha mwelekeo wa hali ya hewa katika maeneo mengi duniani. Katika nchi ya Kenya, El Nino husababisha uwezekano wa mvua kubwa kunyia hasa katika msimu wa Vuli (Oktoba-Disemba).
<b>Electricity</b>	Physical phenomena associated with the presence and flow of electric charge.	Umeme au tukio linalohusika na kuwepo kwa nguvu za umeme
<b>Encoding</b>	The process of converting data into a format required for a number of information processing needs, including:	Ni mchakato wa kubadilisha data kutoka mpangilio mmoja hadi mwingine ili kuwezesha hiyo data kutumika kwa kufanikisha mahitaji



	converting text, characters or symbols to digital format.	mbalimbali km kubadilisha maandishi kuwa na umbo la kidijitali.
<b>Equator</b>	A narrow band or imaginary line drawn around the earth and dividing the earth equally into northern and southern hemispheres. Winds from the two hemispheres converge at the equator.	Ni mraba mwembamba au mstari unaofikiriwa kuwepo na unaochorwa kuzunguka dunia na kuigawanya vipande viwili vinavyotoshana-au sehemu ya kaskazini na ya kusini. Pepo kutoka sehemu hizi mbili hukutana hapa.
<b>Evaporation pan</b>	Is an instrument that is used to hold water during observations for the determination of the quantity of evaporation at a given location measure.	Kifaa kinachotumika kuhifadhi maji yanayotumika kwa upimaji wa uvukizaji katika eneo Fulani.
<b>Evaporation</b>	The process of liquid water becoming absorbed into the air as water vapour. Evaporation speeds up when temperatures are high, when humidity is low and when there is wind.	Mchakato wa maji kuingia angani yakiwa mvuke. Mchakato huu pia unajulikana kama uvukizaji na hufanyika haraka pale ambapo viwango vya joto huwa ni vya juu na unyevu nyevu mdogo na upepo.
<b>Expected</b>	Anticipated or likely to happen.	Kinachotarajiwa.
<b>Expert Interpretation</b>	Interpretation of weather information such as a forecast by a professional and expert in the field.	Utafsiri au uchanganuzi wa kitaalam.
<b>Extra Tropics</b>	The middle latitudes beyond the tropics.	Maeneo kwenye ramani yaliyo baada ya mraba wa nyuzi 30 tokea ikweta.
<b>Extreme Weather Events</b>	Weather events that are very harsh, unseasonal, or typical for a particular region, especially when attributed to the effects of climate change.	Hali ya hewa yenye makali zaidi, na isiyo ya msimu au sehemu tu na hasa inapohushishwa na athari za mabadiliko ya hali ya hewa.
<b>Few places</b>	In a given forecast, this term is used to refer to the probability of occurrence of a weather event e.g., rainfall, cloudy etc over an area not exceeding 33% of the total area.	Sehemu chache. Katika utabiri, msamiati huu hutumika kumaanisha uwezekano wa tukio la hali ya hewa k.m. mvua, mawingu n.k, katika sehemu isiyozidi asilimia 33 ya sehemu nzima.
<b>Flash floods</b>	Sudden floods occurring in an area that is normally dry and with poor drainage. They can appear within hours of heavy rainfall; sometimes flash floods occur in dry weather after it has rained further up the valley.	Mafuriko ya ghafla yanayotokea katika sehemu ambazo kwa kawaida ni kavu na zenye miundo msingi duni. Mafuriko haya yanaweza kutokea muda mfupi baada ya mvua nzito kunyesha. Mara nyingine mafuriko ya namna hii hutokea katika msimu wa ukame na baada ya mvua katika nyanda za juu.
<b>Flood</b>	Weather phenomenon often caused by rivers bursting their banks after heavy rain. When the sluice gates of dams are opened to release water and when heavy rain falls on city streets and cannot drain away.	Mafuriko. Hali ya athari ya hewa inayoletwa na mvua kubwa inayofuja kingo za mito. Hali hii Wakati mwingine hutokea maji yakifunguliwa kutoka kwenye mabwawa ya kuhifadhi maji yaliyo maeneo ya juu.
<b>Flood plain</b>	Flat land by a river that often becomes covered by water when the river rises	Sehemu tambarare na inayopakana na mto na hufurika maji pale mto unapojaa na kufuja kingo

	and bursts its banks.	zake.
<b>Fog</b>	Ground level cloud that reduces visibility to less than 1km. Fog lowers the air temperature and provides moisture to plants.	Ukungu au aina ya mawingu meupe ambayo yanakaribia au kugusa ardhi na hupunguza uwezo wa kuona mbali hata kufikia chini ya kilomita moja. Ukungu hupunguza kiwango cha joto kwenye hewa na pia huchangia unyevunyevu kwa mimea.
<b>Foggy</b>	A type of weather associated with ground level cloudiness that reduces visibility to less than 1km.	Hali ya ukungu katika hewa na ambayo inahusishwa na mawingu yaliyo karibia ardhini na amabayo yanapunguza uwezo wa kuona mbali kufikia chini ya kilomita moja.
<b>Forecast</b>	Predict or estimate a future event or occurrence.	Tabiri au kadiria tukio au jambo litakalotokea usoni.
<b>Frost</b>	A deposit of small white ice crystals formed on the ground or other surfaces when the temperature falls below freezing point.	Hali ya baridi kali isiyo ya kawaida na inayosababisha mimea kuwa na umbo la kuchomeka na kunyauka hasa kwenye majani.
<b>Geographical Information system</b>	A geographic information system (GIS) is a system that creates, manages, analyzes, and maps all types of data. GIS connects data to a map, integrating location data with all types of descriptive information.	Mfumo unaotumiwa kutengeneza, kutathmini na kubuni ramani kwa kutumia takwimu na data zingine.
<b>Glaciation</b>	Process of making glaciers, or result of being covered by glaciers or masses of ice; the result of glacial action.	Mchakato wa kuumbika kwa barafu juu ya milima, au hali ya kufunikizwa kwa ardhi na barafu.
<b>Glaciers</b>	Slowly moving mass or river of ice formed by the accumulation and compaction of snow on mountains or near the poles.	Lundiko la barafu au mto ulio na barafu uliosababishwa na kukusanyika kwa theluji juu ya milima.
<b>Global Warming</b>	A gradual increase in the overall temperature of the earth's atmosphere generally attributed to the greenhouse effect caused by increased levels of carbon dioxide, chlorofluorocarbons, and other pollutants.	Hali ya kuongezeka kwa viwango vya joto angani (duniani) inayohusishwa na ongezeko la viwango vya juu vya gesi chafuzi ya carbon dioxide na zingine angani.
<b>Green House ases</b>	(GHG or GhG) is a gas that absorbs and emits radiant energy at thermal infrared wavelengths, causing the greenhouse effect. e.g., carbon dioxide and chlorofluorocarbons.	Aina ya gesi zilizomo hewani kama vile CO <sub>2</sub> na ambazo hufungia na kuhifadhi ujoto wa miale ya jua na hivi kusababisha viwango vya joto ardhini kupanda.
<b>Hail</b>	Small lumps of ice that fall from clouds sometimes during thunderstorms.	Vipande vidogo vya barafu kutoka kwa wingu na mara nyingine tokea wingu lenye Dhoruba.
<b>Hailstones</b>	Hail is a form of solid precipitation. It consists of balls or irregular lumps of ice, each of which is called a hailstone. Hail growth is greatly inhibited during low surface temperatures.	Mvua ya mawe au barafu. Hutokea kama vipande au lundiko la barafu. Kukuwa kwa mvua hii hulemazwa wakati wa viwango vya chini vya joto.

<b>Hailstorms</b>	Weather event associated with rain drops that freeze to form pellets of ice that fall from the sky. Hail storms can damage crops.	Dhoruba ya mvua inayo shuka kwa matone ya barafu na yenye mfano wa mawe kutoka angani. Hujulikana sana kama mvua ya mawe. Dhoruba hii inaweza kuharibu mimea.
<b>Hazard forecasts</b>	Hazard forecasts provide information on the physical event characteristics, such as the location, timing, and magnitude of a potentially damaging event. We consider events as natural phenomena with a specific magnitude that unfold with a given space-time footprint and with the potential for adverse consequences.	Utabiri wa janga la hali ya hewa.
<b>Haze</b>	A slight obscuration of the lower atmosphere, typically caused by fine suspended particles.	Hali ya kutoona vizuri na mbali hewani kwa sababu ya kuwepo kwa vumbi na vichafuzi vingine.
<b>Head wind</b>	A wind that blows in the opposite (against) direction of travel of an object.	Upepo unaovuma kinyume na Mwelekeo wa kitu fulani, kwa mfano ndege ikipaa angani kuelekea sehemu Fulani.
<b>Heatwave</b>	A heat wave is a period of unusually hot weather that typically lasts two or more days. To be considered a heat wave, the temperatures have to be outside the historical averages for a given area.	Kipindi cha halijoto ambayo si ya kawaida na inayoweza kudumu kwa siku mbili au zaidi. Ili hali hii ya ujoto kudhirika, ni lazima viwango vya joto viwe zaidi ya vile vya kawaida katika vipimo vya kihistoria katika eneo.
<b>Heavy rains</b>	Rainfall of high intensity.	Mvua yenye uzito mkubwa.
<b>High Clouds</b>	Clouds that occur above about 20,000 feet in the atmosphere.	Mawingu yaliyo juu mno na zaidi ya fiti 20,000 angani.
<b>High Pressure System</b>	This is a weather feature characterized by dense air mass normally cooler and drier than the surrounding air. Areas under high pressure system experience fair weather.	Mfumo wa shinikizo ya hewa au kanieneo ya hewa ya juu na ambao unahusishwa na hewa nzito na iliyo baridi na kavu ikilinganishwa na hewa inayoizunguka. Sehemu zenye mfumo huu wa hali ya hewa hushuhudia hali ya hewa iliyo shwari.
<b>High Tide</b>	Condition of very high-water waves that move through the oceans/sea in response to the forces exerted by the moon and sun and the waves moving toward the coastlines.	Hali ya kujaa kwa mawimbi ya maji ya bahari kwa kiwango cha juu kuendana na msukumo wa nguvu za mwezi na jua na mawimbi haya yanaenda yakikaribia kingo za pwani/bahari.
<b>Highlands</b>	An area of high or mountainous land.	Sehemu za miinuko. K.m., Nyanda za juu.
<b>Humidity</b>	The level of moisture in the air. It is usually expressed as the percentage of air saturated with water. High moisture in the air reduces the rate of soil evaporation.	Kiwango cha unyevunyevu kilichoko katika hewa ikipimwa kama asilimia ya hewa iliyolowa maji. Kiwango cha juu cha unyevunyevu angani hupunguza mvukizo kutoka kwenye udongo.
<b>Hydrology</b>	The branch of science concerned with the	Haidrolojia. Sayansi inayoshughulikia mfumo na

	properties of the earth's water, and especially its movement in relation to land.	masuala ya maji.
<b>Hygrometer</b>	An instrument for measuring the humidity of the air or a gas.	Kifaa kinachopima unyevunyevu kwenye hewa.
<b>Ice</b>	Frozen water that has a solid form. Ice occurs when water cools below temperature of 0°C (32°F).	Barafu au maji yaliyo geuka na kuwa barafu. Barafu huumbika pale maji yanapokuwa baridi chini ya ujoto wa nyusi 0°C.
<b>Icing</b>	It is any deposit or coating of ice on an object, caused by the impingement and freezing of liquid (usually supercooled) and results from the deposition of water vapor.	Lundiko lolote la barafu juu ya sakafu au kitu lililo sababishwa na kuganda kwa maji kutokana na mvuke (wa maji).
<b>Indian Ocean</b>	An ocean in the south of India that extends from the eastern coast of Africa to the East Indies and Australia.	Bahari inayoanzia kusini ya India hadi maeneo ya pwani ya Afrika mashariki na kutanda hadi Pwani ya bara/nchi ya Australia. Hujulikana pia kama Bonde la Ufa.
<b>Indian Ocean Dipole</b>	Denoted as IOD and is an irregular oscillation of sea surface temperatures in which the western Indian Ocean becomes alternately warmer (positive phase) and then colder (negative phase) than the eastern part of the ocean. Sometimes the IOD brings more rainfall across East Africa.	Tabia ya kubadilika badilika kwa joto katika bahari ya hindi ya magharibi (kipindi cha mvua) ikilinganishwa na hali ya baridi katika maeneo ya bahari ya hindi ya mashariki. Kiashiria hiki mara nyingine huleta mvua nyingi katika afrika ya mashariki.
<b>Indigenous forecast</b>	Forecasts that are based on observed bio-physical factors (livestock, insects, birds, trees and wildlife), perceptions, information and behaviors to make predictions about future and current weather.	Utabiri wa hali ya hewa wa sasa na siku zijazo na unaoandaliwa kwa kutumia viashiria vya mazingira na visababishi vingine kama vile tabia za wanyama, wadudu na mimea.
<b>Insolation</b>	Solar radiation that has been received on a horizontal surface.	Mnururisho kutokana na jua ambao unafika kwenye uso wa ardhi.
<b>Inter-Tropical Convergence zone (ITCZ)</b>	The region where the northeasterly and southeasterly trade winds converge, forming an often-continuous band of clouds or thunderstorms near the equator.	Ni sehemu ya mfumo wa hewa ambapo pepo zinazovuma kutoka Kaskazini mashariki hukutana na zile zinazotoka kusini mashariki na mara nyingi kusababisha Kuwepo kwa mraba wa mawingu au tufani.
<b>Inversion</b>	In meteorology, refers to the behavior in the atmospheric layer when the air temperature increases with altitude as opposed to the reverse.	Katika fani ya metiorolojia, msamiati huu hutumika kuonyesha tabia ya kuongezeka kwa hali ya joto kama upandavyo juu hewani. Hii ni kinyume na tabia ya kiwango cha joto kupungua kama mtu anavyo panda juu hewani.
<b>Isolated showers</b>	Isolated showers are those that affect a small area approximately 5% or less.	Mvua chache na inayotarajiwa kunyesha katika maeneo machache tu yanayofikia asilimia 5 au

		chini ya asilimia 5.
<b>Jet stream</b>	Is a weather feature in the atmosphere that is narrow and fast flowing in meandering air currents flowing from west to east in some parts of Earth and other planets. They are normally located near the altitude of the tropopause.	Mfumo mwembamba wa hewa kwenye anga na ambao unavuma kombokombo kutoka magharibi hadi mashariki ya sehemu fulani za dunia. Mfumo huu hasa huwa karibu na sehemu ya anga ilijukanayo kama tropopause.
<b>Katabatic wind</b>	A katabatic wind (named from 'descent') is a drainage wind, a wind that carries high-density air from a higher elevation down a slope under the force of gravity.	Upepo unaovuma kutoka juu (mlima) na kushuka/kuelekea chini (bondeni).
<b>La Nina</b>	A widespread cooling of the surface waters of the eastern Pacific Ocean off the coast of South America. It is the opposite of El Nino. In Kenya, La Nina is often associated with depressed rainfall in October, November, December, followed by dry/drought conditions.	Hali ya ubaridi ya maji katika Pasifiki ya Mashariki inayopakana na pwani ya Marekani ya kusini na inayo julikana kama 'La Nina'. Ni hali kinyume na ile ya El Nino na nchini Kenya huhusishwa na mvua finyo katika msimu wa Vuli, na kufuatiwa na hali ya ukame.
<b>Lake Victoria</b>	The largest lake in Africa, Uganda and Tanzania and bordering on Kenya, drained by the Nile River.	Ziwa lililo kubwa zaidi barani Afrika, na linajumulisha Uganda, Tanzania na Kenya, na linatiririsha maji yake katika mto Nile.
<b>Land breeze</b>	A breeze/wind blowing toward the sea from the land, especially at night, owing to the relative warmth of the sea.	Upepo unaovuma kutoka baharini na kuelekea nchi kavu na hasa usiku kutokana na hali ya joto kwenye Bahari.
<b>Latent Heat</b>	Latent heat (also known as latent energy or heat of transformation) is energy released or absorbed, by a body or a thermodynamic system, during a constant-temperature process — usually a first-order phase transition.	Ni aina ya nishati inayotoka au kuingia kwenye mfumo au kitu baada ya kiwango fulani cha joto kisicho pungua kuwepo.
<b>Latitude</b>	The angular distance of a place north or south of the earth's equator, or of a celestial object north or south of the celestial equator.	Umbali wa eneo au mahali kutoka kaskazini au kusini ya ikweta.
<b>Lee-ward</b>	Situated on or toward the side sheltered from the wind; downwind.	Upande ule mwingine usioangalizana na upepo. Upande wa upepo shuka.
<b>Light rains</b>	Rainfall of minimal intensity.	Manyunyu au mvua nyepesi.
<b>Lightning</b>	The occurrence of a natural electrical discharge of very short duration and high voltage between a cloud and the ground or within a cloud, accompanied by a bright flash and typically also thunder.	Radi au tukio lenye umeme wa muda mfupi na wa nguvu za juu unaotokea kwa wingu na kufika ardhini, na huandamanishwa na mwangaza mwingi wa ghafla na wakati mwingine ngurumo ya radi.
<b>Long rains</b>	Refers to March-May rainfall season.	Ni msimu wa mvua wa Machi hadi Mei au msimu wa masika.
<b>Long range</b>	A forecast for a period greater than seven	Utabiri wa hali ya hewa ambao unanuiwa kutoa

<b>forecast</b>	days in advance.	matarajio ya hali ya hewa zaidi ya siku saba zijazo.
<b>Longitude</b>	Geographic coordinate that specifies the east-west position of a point on the Earth's surface.	Kiratibu cha jiografia kinachotambulisha eneo kwenye ramani aidha iko mashariki au magharibi.
<b>Low Clouds</b>	Clouds occurring below 6500 feet, and normally consist of liquid water droplets or even supercooled droplets. The two main types of low clouds include stratus and cumulus.	Aina ya mawingu yaliyo fiti 6500 juu angani ambayo yana chembechembe za maji baridi zaidi. Aina mbili za mawingu haya ni 'stratus' na 'cumulus'
<b>Low Pressure System</b>	This is a weather feature characterized by less dense air mass that is normally wetter and warmer than the surrounding air. Areas under low pressure system experience cloudy or wet weather.	Mfumo wa shinikizo ya hewa au kanieneo ya hewa ya chini na ambao unahusishwa na hewa nyepesi na iliyo na joto na unyevunyevu ikilinganishwa na hewa inayoizunguka. Sehemu zenye mfumo huu wa hali ya hewa hushuhudia hali ya mawingu na hata mvua.
<b>Low tide</b>	Low tide corresponds to the lowest part of the wave, or its trough. The difference in height between the high tide and the low tide is called the tidal range.	Hali ya maji ya bahari kujaa na kupwa kwa kiwango cha chini.
<b>Lowlands</b>	Low lying areas or regions such as the coastal areas.	Sehemu zilizo chini kama vile maeneo ya pwani.
<b>Marine forecast</b>	Is the forecast of future weather conditions over the Earth's oceans.	Utabiri maalum wa hali ya hewa katika maeneo ya baharini.
<b>Mascarene high pressure system</b>	Is a high-pressure area located between 20°S–40°S and 45°E–100°E near the Mascarene Islands in the Southern Indian Ocean.	Mfumo wa hali ya hewa unaopatikana bahari ya hindi ya kusini na wenye shinikizo ya juu.
<b>Maximum Temperature</b>	Is the temperature used to describe the highest temperature expected or recorded over a specific period of time – usually 24 hours.	Hali joto ya juu zaidi inayotarajiwa au iliyorekodiwa ndani ya muda fulani—mara nyingi katika masaa ishirini na nne.
<b>One (1) mm of rainfall.</b>	One millimetre of rain corresponds to 1 litre per square metre of water on the surface, or approximately 10 millimetres of snow.	Kipimo cha milimita moja (1) ya mvua ni sawa na lita moja (1) ya maji katika sehemu ya ukubwa wa mraba mita moja kwenye sakafu, au mili lita kumi (10) ya theluji.
<b>Medium Clouds</b>	Clouds at medium heights, which occur between 6000 (approximately 1.8 km) and 20,000 ft (6 km). Examples are altocumulus and altocirrus clouds.	Mawingu yaliyo angani umbali wa kati ya fiti 6000 (kilomita 1.8) na fiti 20000 (kilomita 6). Mfano ni mawingu yajulikanayo kama 'altocumulus' na 'altocirrus'
<b>Medium range forecast</b>	A forecast for a period extending from about three days to seven days in advance.	Utabiri wa hali ya hewa ambao unanuiwa kutoa matarajio ya hali ya hewa ya siku tatu hadi siku saba (wiki moja) zijazo.
<b>METAR Weather report</b>	A format of weather report mostly used by aircraft pilots and by meteorologists.	Ripoti fupi na maalum ya muonekano wa hali ya hewa na ambao hutumika sana na marubani wa

		Ndege na watabiri wa hali ya hewa.
<b>Minimum Temperature</b>	Is the temperature used to describe the lowest temperature expected or recorded over a specific period of time – usually 24 hours.	Hali joto ya chini zaidi inayotarajiwa au iliyorekodiwa ndani ya muda fulani—mara nyingi katika masaa ishirini na nne.
<b>Mist</b>	A cloud of tiny water droplets suspended in the atmosphere at or near the earth's surface that limits visibility (to a lesser extent than fog; strictly, with visibility remaining above 1 km).	Wingu la chepechepe za maji zilizo elea hewani au karibia uso wa ardhi na ambao hupunguza uwezo wa kuona vizuri kwa uwazi (sawia na ukungu, na umbali wa kuona ni kama kilomita moja).
<b>Mobile phone</b>	A telephone with access to a cellular radio system so it can be used over a wide area, without a physical connection to a network.	Simu ya rununu au rukono ambayo inatumia mfumo wa redio ili kuweza kutumika katika maeneo makubwa bila ya kuwa na muunganisho wa moja kwa moja na mtandao.
<b>Moderate rains</b>	Rainfall of less intensity.	Mvua yenye uzito wa wastani.
<b>Monsoon</b>	A seasonal prevailing wind in the region of South and Southeast Asia, blowing from the southwest between May and September and bringing rain (the wet monsoon), or from the northeast between October and April (the dry monsoon).	Upepo wa msimu katika maeneo ya kusini na kusini mashariki ya bara Asia, na ambao huvuma kutoka kusini magharibi kati ya mwezi wa mei na Septemba na kusababisha mvua. Unapovuma kutoka kaskazini mashariki kati ya mwezi wa Oktoba na Aprili, upepo huu hauleti mvua.
<b>Monthly forecast</b>	A weather forecast given or updated at a monthly period and gives expected weather in next one month.	Utabiri wa hali ya hewa wa mwezi mmoja na ambao hutolewa kuonyesha matarajio ya hali ya hewa kwa mwezi mzima ujao.
<b>Moon</b>	Terrestrial body of the Solar system. Also known as the earth's only natural satellite visible at night, by reflected light from the sun.	Mwezi. Gimba la angani na ambalo ni sehemu ya sayari jua. Ni mwanga wa asili wa setilaiti unaoangaza usiku kutokana na kumulikwa na Jua.
<b>Most places</b>	In a given forecast, this term is used to refer to the probability of occurrence of a weather event e.g., rainfall, cloudy etc in an area larger than 66% of the total area.	Sehemu nyingi. Katika utabiri, msamiati huu hutumika kumaanisha uwezekano wa tukio la hali ya hewa k.m. mvua, mawingu n.k, kwenye sehemu ya ukubwa wa zaidi ya asilimia 66 ya sehemu nzima.
<b>National Meteorological Centre</b>	It is a center for national weather forecasting, climate prediction, climate change study, meteorological information collection and dissemination	Kituo cha kitaifa cha Meteorolojia kinachohisika na maswala ya utabiri wa hali ya hewa, mabadiliko ya hali ya hewa, usambasaji na utoaji wa taarifa za hali ya hewa, vipimo vya viashiria vya hali ya hewa.
<b>Near Normal</b>	The average (mean) rainfall amount as observed during the same time or period for the last 30 years or more.	Mvua ya kiwango cha wastani kulingana na tathmini ya mvua zilizo rekodiwa katika miaka 30 au zaidi iliyopita.
<b>North</b>	This is one of the four cardinal directions of the compass points that are used to define the location of an area or point.	Kaskazini. Mojawapo ya majina yanayotumika kuonyesha sehemu yoyote kwenye ramani ya

	North denotes the northern part of a specific point or area, and country etc.	nchi.
<b>North East</b>	Also denoted NE, is the point of the horizon midway between north and east.	Kaskazini mashariki na ambayo ni sehemu iliyoko kati ya kaskazini na mashariki
<b>North West,</b>	Also denoted NW, is the point of the horizon midway between north and west.	Kaskazini magharibi na ambayo ni sehemu uliyoko kati ya kaskazini na magharibi
<b>North westerly</b>	A wind that comes from the north west.	Upepo unaovuma kutoka Kaskazini magharibi.
<b>Northerly wind</b>	A wind that comes from the north; for example, the northerly winds from Arabian deserts signal a change in the weather to drier conditions.	Upepo unaovuma kutoka kaskazini. Kwa mfano upepo unaovuma kutoka Kaskazini hutoka jangwa la Uarabuni na huashiria Kuwepo kwa hali ya ukavu.
<b>Nowcasting</b>	Nowcasting is a detailed analysis and description of the current weather and the forecasting ahead for a period from 0 to 6 hours.	Tathmini na maelezo ya hali ya hewa ya sasa hivi na utabiri wa hali ya hewa unaotarajiwa baada ya muda mfupi kuanzia sasa hadi baada ya masaa 6.
<b>Numerical Weather Prediction</b>	A method of weather forecasting that employs a set of equations that describe the flow of fluids and processes in the atmosphere.	Ni njia maalum ya kisayansi ya kutabiri hali ya hewa kwa Kutumia milingano au mifumo ya hisabati kutathmini na kutafsiri viashiria na michakato ya anga.
<b>Orographic rainfall</b>	Which is also called relief precipitation, is the precipitation that is generated by a forced upward movement of air upon a physiographic upland encounter.	Mvua inayotokana na sehemu zenye miinuko kama vile milima na vilima.
<b>Outlook</b>	A generalized weather prediction for a specific region over a longer period, often days to weeks ahead.	Angalizo la hali ya hewa la eneo fulani la kipindi kirefu ambacho kwa mara nyingi huwa ni cha muda wa siku kadhaa hadi wiki kadhaa zijazo
<b>Overcast</b>	Of the sky or weather marked by a covering of gray clouds; dull.	Hali ya anga nzima kugubikwa au kufunikwa na mawingu meusi.
<b>Ozone(O<sub>3</sub>)</b>	A colorless toxic sharp smelling gas with a pungent odour formed from oxygen by electrical discharges or ultraviolet light. It is normally in plentiful in the outer atmosphere and prevents the ultra violet rays of the sun from reaching the earth.	Ozoni au hewa isiyo safi yenye harufu kali inayotokana na gesi ya oksijeni kutokana na miale mikali ya jua. Inapatikana katika sehemu ya anga ya juu na huzuia miale mikali ya jua kufikia ardhini.
<b>Ozone Layer</b>	A layer of ozone molecules in the Earth's stratosphere that absorbs much of the Sun's harmful ultraviolet (UV) radiation.	Utandu au safu ya chembe chembe za ozoni katika anga hewa ambao hufyonza mionzi/miale mikali/hatari ya jua ijulikanayo kama 'ultraviolet (UV)'
<b>Pacific Ocean</b>	The largest of the world's oceans. It lies between America on the east and Asia and Australia on the west.	.Bahari ya Pasifiki ni bahari iliyo kubwa kuliko zingine zote duniani na ambayo iko kati ya Marekani kwa upande wa mashariki na bara Asia na Australia kwa upande wa magharibi.



<b>Partly Cloudy</b>	Partial cloud cover in the atmosphere /sky.	Hali ya mawingu kiasi –huenda pia ikawa na maana ya vipindi vifupi vya jua.
<b>Phases of the moon</b>	The eight distinct phases of the moon which shows different characteristic such as new, waxing crescent, first quarter, waxing gibbous, full, waning gibbous, last quarter, and waning crescent.	Awamu za mwezi. Kuna awamu 8 za mwezi huwa ambazo zinaonyesha tabia tofauti tofauti km awamu mpya, kwanza, awamu pungufu, n.k.
<b>Poor rains</b>	Little rainfall over a season mostly below the expected amount.	Mvua duni au ya kiwango cha chini ya kile cha kawaida katika msimu.
<b>Precipitation</b>	This is any form of moisture from the process of condensation of atmospheric water vapor or clouds which falls down due to gravitational pull. The forms of precipitation consist of drizzle, rain, sleet, snow, ice pellets and hail.	Aina yoyote ya mvua kutokana na unyevunyevu katika anga au mawingu na ambayo inanyesha kutokana na mvuto au gravity ya ardhini. Mvua hizi ni kama vile manyunyu, mvua ya mawe, mvua yenye ngurumo na radi, barafu na nyinginezo.
<b>Pressure Gradient</b>	The rate of change of atmospheric pressure with distance, indicating the strength and direction of winds.	Kiwango cha mabadiliko ya shinikizo la angahewa kwa umbali, kinachonyesha nguvu na mwelekeo wa upepo.
<b>Prevailing Winds</b>	The most common direction from which the wind blows in a particular area over an extended period.	Upande ambao upepe hutokea na kuvuma kwa mara nyingi kwa eneo fulani na kwa muda mrefu
<b>Probability</b>	The likelihood that an expected event will actually occur. Weather forecasters sometimes only can indicate the degree of probability that a forecast event will happen.	Ewezekano kwamba jambo fulani litatendeka. Wataalamu wa hali ya hewa huenda wakatoa tu utabiri unaonyesha uwezekano wa tokeo fulani la hali ya hewa.
<b>Radar</b>	A system for detecting the presence, direction, distant objects (e.g., aircraft) and determining their position, velocity, or other characteristics by analysis of sent radio waves (usually microwaves) reflected from their surfaces.	Chombo kinachotumika kugundua kuweco kwa kitu, umbali wa kitu (km Ndege), mwendo, na hali zingine kwa Kutathmini wimbi la taarifa au tarakimu zinazo dhamiriwa kutoka kwa kitu hicho.
<b>Radio sonde</b>	Equipment containing weather sensors that measure different atmospheric parameters such as wind speed and direction, temperature, atmospheric pressure among others as it ascends into the atmosphere.	Kifaa maalum kinachopima hali ya hewa angani kama vile hali ya mwendo na Mwelekeo wa upepo, hali joto, uzito wa msukumo wa hewa na viashiria vingine huku ikipanda juu anagani/hewani.
<b>Radiation Fog</b>	Fog that forms at night when the ground loses heat by radiation, cooling the air above it to the dew point.	Ukungu unao umbika nyakati za usiku baada ya ardhi kupoteza ujoto wake na hapo kupelekea hewa angani kuwa na umanda.
<b>Radiometer Solarimeter</b>	An instrument for detecting or measuring the intensity or force of radiation.	Kifaa kinachotumika kutanzua au kupima nguvu za miale ya jua.
<b>Rain</b>	Water droplets falling from clouds and reaching the ground, often associated	Matone ya maji yanayoshuka kutoka kwenye mawingu hadi ardhini na kwa mara nyingi

	with wet weather.	huhusishwa na hali ya mvua
<b>Rain gauge</b>	An instrument used to measure the amount of rain that has fallen during a period of 24 hours. The standard rain gauge is a round cylinder, usually made of metal, with a funnel at the top to catch rain water.	Kifaa kinachotumika kupima kiwango cha mvua iliyonyesha kadri ya masaa 24. Kifaa hiki kwa kawaida ni silinda iliyoduara, hutengenezwa kwa chuma, na ina faneli juu ili kunasa maji ya mvua.
<b>Rainbow</b>	A rainbow is an optical phenomenon that can occur under certain meteorological conditions. It is caused by reflection, refraction and dispersion of light in water droplets resulting in an effect similar to a spectrum of light appearing in the sky.	Upinde wa mvua. Ni tukio au kitu kinachoumbika kutokana na hali fulani ya hewa na miale ya jua kumulika na kutawanya matone ya maji (unyevenyevu) hewani na kusababisha kuwepo kwa upinde wenye rangi nyingi.
<b>Rainfall Amount</b>	The amount of water falling in rain, snow, etc., within a given time and area, usually expressed as a hypothetical depth of coverage.	Kiwango cha maji tokea kwa mvua, theluji n.k. kwa muda fulani na sehemu na mara nyingi hutathminiwa sawa na ukubwa wa sehemu iliyopokea mvua.
<b>Rainfall Cessation</b>	The time or date when the seasonal rains are expected to stop.	Tarehe au wakati mvua ya msimu inatarajiwa kukoma.
<b>Rainfall distribution</b>	Refers to how rainfall amounts are spread over time and space.	Mgao wa mvua mara nyingi kwa wakati na kimaeneo.
<b>Rainfall onset</b>	The time or date when the first significant rainfall comes at start of the rainy season.	Tarehe au wakati mvua ya msimu inapoanzia
<b>Rainy</b>	A time/situation with rainfall	Hali ya mvua.
<b>Resilience (To climate change impact)</b>	State of being able to cope with climate change impact.	Hali ya kuwa na ustahimilivu au ustadi dhidi ya athari za mabadiliko ya hali ya hewa.
<b>Relative Humidity</b>	The amount of moisture in the air compared to the maximum amount the air could hold at that temperature, expressed as a percentage.	Kiwango cha unyevu katika hewa ikilinganishwa na kiwango cha juu zaidi cha unyevu ambacho hewa inaweza kuthibiti katika hali ya joto ya wakati huo.
<b>Ridge</b>	An elongated area of high pressure in the atmosphere often associated with fair weather.	Sehemu refu yenye shinikizo ya hewa ya juu katika anga na mara nyingi huhusishwa na hali ya hewa iliyo sawa.
<b>Rift Valley</b>	A large elongated depression with steep walls formed by the downward displacement of a block of the earth's surface between fault systems.	Bonde kubwa ambalo ni refu na lenye kina kirefu, na lilifanyika kwa mabadiliko ya mifumo ya chini ya ardhi.
<b>Rising Air</b>	Air that is moving upward in the atmosphere due to factors such as heating and convection	Hewa inayovuma ikienda juu kwenye angahewa kwa sababu kama vile ujoto wa miale ya jua.
<b>Route forecast</b>	Also codenamed as ROFOR, is an aviation	Ni Utabiri maalum au ripoti ya hali ya hewa

	weather forecast to guide pilots on the air routes being followed to a given destination.	inayotumika na marubani wa ndege na huonyesha hali ya hewa tokea sehemu hadi mwisho wa safari.
<b>Satellite system</b>	A satellite system is a set of gravitationally bound objects in orbit around a planetary mass and used to monitor and map the earth and other objects including weather parameters e.g., clouds.	Mfumo wa setilaiti ambao unazunguka dunia na sayari zingine na kufuatilia na kutoa taswira na picha ya vitu mbalimbali ikiwa ni pamoja na viashiria vya hali ya hewa k.m mawingu.
<b>Saturation</b>	The condition in which the air is holding the maximum amount of water vapor it can at a given temperature, leading to a relative humidity of 100%.	Hali ya hewa yenye uwezo wa kuhifadhi kiasi cha juu zaidi cha mvuke katika hali ya joto ya wakati huo na kusababisha kuumbika kwa unyevu unaofikia asilimia 100.
<b>Scattered showers</b>	Scattered showers are rain showers expected only to affect 10-50% of the named area (e.g., Nairobi).	Mvua iliyotapakaa na inayotarajiwa kuonyesha katika asilimia 10-50 ya eneo (km Nairobi).
<b>Sea breeze</b>	A breeze blowing toward the land from the sea, especially during the day owing to the relative warmth of the land. Temperature measured at the water surface (sea, ocean).	Upepo unaovuma kutoka nchi kavu na kuelekea baharini na hasa mchana kutokana na hali ya joto kwenye nchi. Joto katika bahari inayorekodiwa juu ya uso wa maji ya Bahari.
<b>Sea Level</b>	The average level of the surface of the ocean, used as a reference point for measuring elevation on land.	Kiwango cha wastani cha uso wa bahari, kinachotumiwa kama kipimo cha kurejelea kwa kupima urefu wa ardhi.
<b>Seasonal Changes</b>	Shifts in climate conditions, temperature, and weather patterns that occur with the changing of seasons	Mabadiliko katika hali ya hewa, joto, na muundo wa hali ya hewa yanayotokea wakati wa mabadiliko ya misimu.
<b>Seasonal Forecast</b>	Predictions of weather for upto 1 month or more (mostly upto 6 months) period.	Utabiri wa hali ya hewa wa msimu na ambao ni wa mwezi mmoja (huenda hata ukafikia miezi sita).
<b>Seasons</b>	Each of different climatic periods of the year (spring, summer, autumn, and winter) marked by particular weather patterns and times, and linked with the earth's changing position with regard to the sun.	Vipindi au misimu tofauti tofauti vya hali ya hewa katika mwaka (kiangazi kifupi, Masika, Kipupupwe/baridi, Vuli) na ambayo inatambulishwa na hali ya hewa na nyakati kulingana na kubadilika kwa nafasi ya dunia na sura ya jua.
<b>Several places</b>	In a given forecast, this term is used to refer to the probability of occurrence of a weather event e.g., rainfall, cloudy etc over an area between 33% and 66% of the total area.	Sehemu kadha. Katika utabiri, msamiati huu hutumika kumaanisha uwezekano wa tukio la hali ya hewa k.m. mvua, mawingu n.k, kwenye sehemu ya ukubwa kati ya asilimia 33 na 66 ya sehemu nzima.
<b>Severe Weather</b>	Extreme weather conditions which exceed the expected normal weather conditions and often have negative impact on people and property.	Hali mbaya ya hewa inayozidi hali ya hewa ya kawaida na yenye makali na athari kwa binadamu na mali.

<b>Short /long wave radiation</b>	One of the radiations from the sun.	Mionzi ya jua ya kina kidogo au kile kikubwa.
<b>Short rains</b>	Refers to October to December rainfall season.	Ni msimu wa mvua wa Oktoba hadi Disemba au msimu wa vuli.
<b>Short range forecast</b>	A weather forecast made for a time period generally not greater than 48 hours in advance.	Utabiri wa hali ya hewa wa muda mfupi unaonuiwa kutoa matarajio ya hali ya hewa kwa muda usiozidi masaa 48 yajayo.
<b>Showers</b>	Showers are heavy than usual precipitation characterized by the suddenness with which they start and stop, and by the rapid changes of intensity, and usually by rapid changes in the appearance of the sky.	Mvua nzito kuliko ya kawaida ambayo inahusishwa na kusitisha.
<b>Sinking winds</b>	A downburst or sinking air that after hitting the surface spreads out in all directions and capable of causing damage.	Pepo shuka ambazo baada ya kufika juu ya ardhi hutapakaa pande zote na zina uwezo wa kuleta athari.
<b>Sky</b>	The sky is an unobstructed view upward from the surface of the Earth. It includes the atmosphere and outer space.	Ni sehemu iliyo juu ijulikanayo kama anga. Inajumuisha angahewa na anga ya juu Zaidi.
<b>Sky clear</b>	A sky free of clouds and other obscuration as observed from the point of observation.	Anga wazi bila mawingu wala kitu kingine chochote ikitazamwa tokea sehemu ya chini.
<b>Smog</b>	A type of air pollution that results from a combination of pollutants, often including ground-level ozone and particulate matter.	Aina ya uchafuzi wa hewa unaotokana na vichafuzi mbalimbali, ambavyo kwa mara nyingi hujumuisha gezi ya ozoni na vichafusi vingine.
<b>SMS</b>	Short messaging service is a system that enables mobile phone users to send and receive text messages.	Huduma ya mawasiliano ya jumbe fupi na ambao hufanyika kwa simu za mkononi kutuma au kupokea ujumbe.
<b>Snow</b>	Atmospheric water vapor frozen into ice crystals and falling in light white flakes or lying on the ground as a white layer.	Majimaji katika anga hewa na ambayo yamegeuzwa kuwa barafu na kudondoka toka angani kwa mfano wa vipande vyeupe au kutanda ardhini kama safu.
<b>Soil moisture</b>	Soil moisture is the water content of the soil.	Unyevunyevu ulio udongoni.
<b>Solar Radiation</b>	It is the energy emitted by the Sun in interplanetary space. When we speak about the amount of solar energy reaching the surface of our planet, we use irradiance and irradiation concepts.	Mnururisho au mvuke unaotokana na jua na aina nyingine ya mionzi ya umeme.
<b>South</b>	This is one of the four cardinal directions of the compass points that are used to define the location of an area or point.	Kusini. Mojawapo ya majina yanayotumika kuonyesha sehemu yoyote kwenye ramani ya

	South denotes the southern part of a specific point or area, and country etc.	nchi.
<b>South East</b>	Also denoted SW, is the point of the horizon midway between south and east.	Kusini mashariki.
<b>South West</b>	Also denoted SE, is the point of the horizon midway between south and west.	Kusini magharibi.
<b>South westerly</b>	A wind that comes from the south west.	Upepo unaovuma kutoka kusini magharibi.
<b>Southerly wind</b>	A wind that comes from the south.	Upepo unaovuma kutoka kusini.
<b>Spatial</b>	Relating to or occupying space.	Msamiati unaohusishwa na nafasi au kuchukua nafasi/sehemu.
<b>Spatial Weather Maps</b>	Simple representation of the weather patterns on earth surface, showing the locations and movements of different weather systems such as pressure pattern, fronts, wind direction and speed, and how these will change in future.	Ramani za hali ya hewa zinazo onyeshwa sehemu na mifumo ya hali ya hewa kwenye uso wa nchi kama vile mwenendo wa shinikizo la hewa, mwelekeo na mwendo wa upepo, sehemu za ubaridi na jinsi hali hizi huenda zikabadilika katika siku zijazo.
<b>St Helena</b>	A weather system in the Atlantic Ocean associated with high pressure and influences the weather of Africa.	Mfumo wa hali ya hewa unaojulikana kama 'St Helena' kwenye bahari ya Atlantiki na unaohusishwa na hali ya msukumo wa juu wa hewa na unaoadhiri hali ya hewa barani Africa.
<b>Storms</b>	A violent disturbance of the atmosphere with strong winds and usually rain, thunder, lightning, or snow.	Dhoruba kali inayotambulishwa na pepo zenye nguvu angani na hali ya mvua, ngurumo, radi au theluji
<b>Stratus Cloud</b>	Low-altitude, layered clouds that often cover the sky like a blanket and can bring overcast conditions and light precipitation	Mawingu ya safu yenye kimo cha chini ambayo mara nyingi yanafunikiza anga na yanaweza kugubika nchi na kusababisha mvua nyepesi.
<b>Sun</b>	The Sun is the star at the center of the Solar System. It radiates energy mainly as light, ultraviolet, and infrared radiation, and is the most important source of energy for life on Earth.	Ni mojawapo ya mfumo katikati ya sayari zake na hujulikana kama jua. Jua hutoa mnururisho hasa mwangaza, miale mikali na ni chanzo cha nishati.
<b>Sun rise</b>	The time in the morning when the sun appears or full daylight arrives.	Asubuhi wakati ambao jua linachomoza, pia mawio.
<b>Sun Set</b>	The time in the evening when the sun disappears or daylight fades.	Jioni wakati ambao jua linatua, pia machweo.
<b>Sunny Intervals</b>	Periodic breaks of sunny conditions (without cloud) during the day.	Vipindi vifupi vya jua (bila mawingu) muda wa mchana.
<b>Sunshine recorder</b>	An instrument that measures the periods or number of hours when the sun rays are present.	Kifaa kinachotumika kupima urefu wa vipindi vya jua na pale ambapo miale ya jua inathahirika.

<b>Surface winds</b>	Wind that blows near the earth surface. Normally it is measured using an anemometer for wind speed and wind vane for wind direction at a standard height of 10 m above the ground.	Upepo unaovuma karibu na ardhi. Mwendo wa upepo hupimwa kwa Kutumia kifaa kijulikanacho kama ‘anemometer’ na upande unaovuma hupimwa na ‘wind vane’ mita kumi tokea usawa wa ardhi.
<b>SYNOP</b>	SYNOP stands for surface synoptic observations and is a code used by WMO to report weather observations from manned and automated weather stations. The SYNOP reports are transmitted after every 6 hours. Relating to time.	Ripoti za vipimo vya hali ya hewa kutoka vituo vya upimaji vya kusimamiwa na vile vya kujiendesha. Ripoti hizi hutolewa baada ya kila saa sita.
<b>Synoptic Scale</b>	Atmospheric features or patterns that cover a large geographic area, typically ranging from a few hundred to thousands of kilometers.	Ni viashiria au miundo ya angani inayo eneo kwenye sehemu kubwa ya ardhi, hasa yenye ukubwa kuanzia sehemu ya kilomita mia na hata maelfu
<b>Stevenson Screen</b>	An instrument shelter used to protect meteorological instruments from direct sunlight and precipitation while allowing for air circulation.	Chumba maalum kilichojengwa ili kuhifadhi na kuzuia uharibifu wa vifaa vya kupima viashiria mbalimbali vya hali ya hewa kutokana na miale ya jua na hali ya mvua.
<b>Temporal</b>	Relating to time	Kuhusiani na wakati.
<b>Thermometers</b>	An instrument to measure temperature. Weather forecasts express temperature in degrees centigrade. 0 Centigrade is the temperature at which water freezes to become ice, 100 Centigrade is the boiling point of water.	kifaa cha kupima kiwango cha joto. Utabiri wa hali ya hewa huonyesha joto kwa nyuzi. 0 sentigredi ni hali ya joto ambayo maji huganda kuwa barafu. Kwa upande mwingine, 100 sentigredi ni kiwango cha mchemko.
<b>Thunderbolt</b>	A flash of lightning with a simultaneous crash of thunder.	Mwangaza wa radi unaotokea pamoja na ngurumo.
<b>Thunderstorm</b>	A strong and short-lived weather disturbance linked to cumulonimbus type of clouds and associated with lightning, thunder, dense clouds, heavy rain or hail, and strong gusty winds. The rains are associated with period of high temperature and humidity in the atmosphere.	Mvua yenye nguvu na ya muda mfupi inayohusishwa na ngurumo na radi, mawingu mazito meusi, mvua nyingi au barafu na upepo wenye nguvu. Mvua hii hushuhudiwa hasa nyakati au msimu wenye joto na hewa yenye unyevunyevu mwingi.
<b>Tide</b>	Feature formed by the rise and fall of sea levels which are associated with and caused by joint effects of the gravitational forces from the Moon, Sun, and the Earth’s rotation.	Hali inayo sababishwa na kupanda na kushuka kwa usawa wa bahari unaohusishwa na kusababishwa na nguvu za mwezi, jua, na mzunguko wa sayari ya dunia.
<b>Tides</b>	Rise and fall of sea levels caused by the combined effects of the gravitational forces exerted by the Moon and the Sun and the rotation of the Earth.	Hali ya maji ya bahari kujaa na kupwa kwa kiwango fulani. Pia hujulikana kama mawimbi ya Bahari.

<b>Tornado</b>	A potentially violent and destructive whirling wind system of atmospheric circulation, characterized by a long, funnel-shaped cloud normally originating from the ocean.	Dhoruba kali na inayoleta uharibifu na inayotambulishwa na mfumo wa pepo zinazozunguka angani na mara nyingi huanzia baharini.
<b>Towering Cumulus</b>	When a cumulus cloud is much taller than it is wide, it is often called a towering cumulus (TCU) cloud.	Aina ya mawingu yanayolundikana na kupandiana angani na yenye urefu mkubwa ikilinganishwa na upana wake juu angani na huashiria kuumbika na kugeuka kuwa mawingu yanayoleta mvua na ngurumo ya radi.
<b>Tremor</b>	A relatively small or short-lived movement of the earth's surface caused by the same forces that produce earthquakes.	Tetemeko la muda mfupi la ardhi ambalo linasababishwa na nguvu sawa na zile za tetemeko kubwa la ardhi.
<b>Tropical cyclones</b>	Is a fast-spiraling storm system over subtropical waters and with a low-pressure center It is an atmospheric circulation associated with strong winds and thunderstorms and produce heavy rainfall.	Kibunga au tufani. Mfumo wa hali ya hewa wenye upepo mkali na unaozunguka na kusonga juu ya bahari na wenye shinikizo la hewa ya chini. Pia husababisha mvua nzito, ngurumo na radi.
<b>Tropics</b>	The parallel of latitude 23°26' north (tropic of Cancer) or south (tropic of Capricorn) of the equator.	Sehemu ya tropiki ya Kaskazini au kusini na inayotambulishwa kwenye mstari ulio nyusi 23.5 mbali na Ikweta.
<b>Tropopause</b>	This is a boundary in the atmosphere between the troposphere and the stratosphere and located at average height of 17 Km above the surface in equatorial regions but less over other regions away from the equator.	Ni mpaka angani ambao unagawanya anga la chini na lile la juu na uko kilomita 17 angani juu ya maeneo ya ikweta na chini ya hapo katika maeneo yaliyo mbali na ikweta.
<b>Troposphere</b>	The lowest area of the atmosphere, extending from the earth's surface to about 6–10 km and contains 75% of the total mass of the planetary atmosphere and 99% of water vapor and aerosols, and is where most weather phenomena occur.	Angatropo. Ni sehemu ya anga iliyo chini ya anga kuu karibia kilomita 6-10 tokea uso wa dunia na nafasi ya asilimia 75(%) ya angahewa na hubeba asilimia 99(%) ya unyevu na vumbi/ukungu na ndiyo sehemu mwenendo wa hali ya hewa hutokea.
<b>Tsunami</b>	High sea wave caused by an earthquake, submarine landslide, or other disturbance:	Mawimbi makubwa na makali yanayosababishwa na tetemeko la ardhi ndani ya bahari, maporomoko ya mfumo mwingine wowote
<b>Turbulence</b>	This is a weather feature characterized by irregular movement of the air in the atmosphere and resulting from eddies and vertical currents. It is often the one that causes bumpy conditions/feeling when the airplane passes through an area with the turbulence.	Huu ni msukosuko wa hali ya hewa unaotambulika kwa harakati isiyo ya kawaida katika anga. Mara nyingi ndio inayosababisha hali/hisia ya mdundo wakati ndege inapita kwenye eneo lenye msukosuko angani.
<b>Upper air winds</b>	Winds measure at a higher altitude or	Upepo unaovuma katika sehemu iliyo juu ya

	height above the earth surface generally 2000 feet or more above the surface.	ardhi na hasa angani karibia fiti 2000 au zaidi juu ya uso wa dunia.
<b>Very Heavy rains</b>	Rainfall of extremely high intensity.	Mvua yenye uzito mkubwa Zaidi.
<b>Visibility</b>	Visibility is a measure of the horizontal opacity of the atmosphere at the point of observation and is expressed in terms of the horizontal distance at which a person should be able to see and identify.	Ni hali ya uwezo wa kuona /kutoona mbali na kwa uwazi/vizuri katika upeo wa anga ikiangaliwa kwa mstari wa mlalo. Hali hii hupimwa kulingana na umbali wa mtu kuona na kutambua jambo/kitu.
<b>Warning</b>	An urgent message advising that severe weather is likely to occur soon which may endanger life or damage property.	Ujumbe wa dharura na unaotoa tahadhari ya hali ya hewa yenye makali na ambayo huenda ikahatarisha Maisha ya watu au uharibifu wa mali.
<b>Weather</b>	The state of the atmosphere at a place and time as regards temperature conditions, wind, pressure, fog, cloudiness, rainfall, etc.	Hali ya hewa. hutambulishwa na viashiria vya anga/hewa kama vile hali joto, upepo, uzito wa hewa, mvuke, hali ya mawingu, mvua na vinginevyo.
<b>Weather Advisory</b>	Special weather information provided for early warning and requires special attention and response.	Ushauri wa hali ya hewa na ambao kwa mara nyingi hutolewa kipindi chenye hali ya hewa dharura inayohitaji hatua mwafaka kuchukuliwa. Pia inajulikana kama angalizo.
<b>Weather Alerts</b>	A weather alert is a warning generally issued to more local areas mostly to communities about expected severe weather such as flash floods.	Tahadhari ya hali ya hewa ya dharura na ambayo hutolewa kwa sehemu wanamoishi Jamii ilhali athari tarajiwa huwa Majanga kama vile mafuriko ya ghafla.
<b>Weather messages</b>	Is information on weather and packaged in short coded or uncoded texts and describing or giving the expected weather conditions.	Ni taarifa ya hali ya hewa na ambayo imeandaliwa kwa nambari zilizo fiche au maandishi yanayo elezea hali ya hewa inayotarajiwa.
<b>Weather Modification</b>	Is the process of intentionally altering the weather so that it provides suitable outcome such as more rainfall. One of the common forms of weather modification is cloud seeding, which increases rain or snow to improve water supply or availability.	Ugeuzo wa makusudi wa hali ya hewa ili kuleta hali inayofaa kuboresha tukio la hali ya hewa kama vile Kuwepo kwa mvua. Moja wapo ya ugeuzo huu ni ule wa kubadilisha hali ya mawingu ili kuongeza kiwango cha mvua na hivyo kuwepo kwa maji ya matumizi mbalimbali.
<b>Weather Uptake</b>	Action of making use of weather information.	Hali ya upokeleaji na matumizi ya ripoti ya hali ya hewa.
<b>Weekly Forecast</b>	Weather prediction that covers a period of 5-7 days	Utabiri wa hali ya hewa wa siku tano au saba zijazo.
<b>West</b>	This is one of the four cardinal directions of the compass points that are used to define the location of an area or point. West denotes the western part of a	Magharibi. Mojawapo ya majina yanayotumika kuonyesha sehemu yoyote kwenye ramani ya nchi.



	specific point or area, and country etc.	
<b>Westerly wind</b>	A wind that comes from the west.	Upepo unaovuma kutoka magharibi.
<b>Wet bulb Thermometers</b>	Instrument that measures the temperature read by a thermometer covered in water-soaked cloth (wet-bulb thermometer) over which air is passed. At 100% relative humidity, the wet-bulb temperature is equal to the air temperature (dry-bulb temperature	Kifaa cha kupima kiwango cha joto na ambacho kimezimikwa na kitambaa kilicholoweshwa maji. Upepo hupitishwa kwenye unyevu huo kabla vipimo kurekodiwa. Unyevu unapofikia asilimia mia moja, ujoto huwa umelingana na ule wa hewa kavu (joto la kawaida).
<b>WhatsApp</b>	WhatsApp (also called WhatsApp Messenger) is an internationally available freeware, cross-platform for communication.	Ni mfumo wa kijamii na wa kimataifa unaotumika kwa mawasiliano.
<b>Wind Channeling</b>	The phenomenon of channeling refers to the tendency for the winds within a valley to blow more or less parallel to the valley axis for a variety of wind directions above ridge height.	Tukio ama tendo la upepo ulioko mabondeni kuvuma sambamba na mwelekeo wa upepo ulio juu ya bonde.
<b>Wind Direction</b>	The direction from which the wind is blowing e.g., easterly wind flows from east to west.	Upande ambao upepo unatoka. Km upepo wa mashariki huvuma tokea mashariki kuelekea magharibi
<b>Wind flow</b>	Wind orientation when air is in motion and caused by differences in air pressure within our atmosphere. Wind flows from the high air pressure area to the low air pressure area.	Hali ya upepo au hewa kuwa inatiririka au kuvuma na hali hii inasababishwa na hali tofautitofauti ya msukumo wa hewa katika anga. Upepo huvuma tokea sehemu yenye msukumo wa juu hadi ule wa msukumo wa chini.
<b>Wind vane</b>	A wind vane (also known as a weathervane) is an instrument that tells you the wind direction.	Kifaa cha kupima Mwelekeo wa upepo.
<b>Wind ward</b>	Facing the wind or situated on the side facing the wind: upwind.	Upande ambao unaangalizana na upepo. Upande wa upepo panda.
<b>Windy</b>	Of weather, a period of time, or a place, marked by or exposed to strong winds.	Hali ya upepo katika sehemu na ambapo una nguvu.
<b>Zonal direction</b>	Is the direction of the air flow that is near or parallel to the latitude.	Upande na mwelekeo wa hewa ambao unavuma sambamba na ukanda au mstari wa mlalo.

Kamusi hii ni mojawapo ya matunda ya mradi wa “Agricultural Climate Resilience Enhancement Initiative (ACREI)” ambao unafanyika kupitia muungano wa mashirika matatu ambayo ni; Shirika la Metiorolojia Duniani (World Meteorological Organization, WMO), Shirika la Chakula na Kilimo la Umoja wa Mataifa (Food and Agriculture Organization of the United Nations, FAO) na Kituo cha Utabiri wa Hali ya Hewa na Matumizi yake cha IGAD (IGAD Climate Prediction and Applications Center, ICPAC). Mradi huu ulifadhiliwa na ‘Adaptation Fund’ kupitia mipango ya miradi katika eneo la Afrika inayolenga nchi za Ethiopia, Kenya na Uganda kwa lengo la kusaidia Jamii kujidhibiti dhidi ya makali na adhari za mabadiliko ya hali ya hewa kupitia mikakati na mifumo kabambe na kuchukua hatua stahiki zenye manufaa kwa jamii.

Lengo kuu la mradi wa ACREI ni “Kubuni na kuweka mipango na kuchukua hatua zinazoweza kuimarisha ustahimilifu na uthabiti wa kupambana na athari za hali ya hewa kwa wakulima wadogo na wafuga katika upembe wa Afrika” kulingana na kauli ya Shirika la muungano wa maendeleo wa nchi za Afrika (IGAD) la mpango wa kuthibiti janga la ukame, hatua za kuimarisha usalama dhidi ya athari, na mikakati ya maendeleo ya nchi husika.

Mradi huu wa ndio wa kwanza katika eneo hili kufadhiliwa ili kuleta na kuunganisha jitihada na nguvu za huduma za hali ya hewa na kuwezesha wakulima katijka jamii kuimarisha udhabiti wao dhidi ya athari za hali ya hewa kwa ngazi ya eneo la Afrika na kitaifa. Nchini Kenya, mradi huu ulitekelezwa katika Kaunti ya Taita Taveta..

#### **Faida:**

1. **Kiuchumi:** mradi huu ulileta kuimarika kwa kujumuishwa kwa mikakati ya kudhibiti athari za hali ya hewa kwenye mipango ya maendeleo katika Kaunti na pia kuwezesha matumizi bora ya huduma na Ripoti za hali ya hewa; ongezeko la Riski kwa wakulima kupitia mauzo ya mafuno yao; na kuwezesha kwa wakulima kufikia masoko na huduma za fedha.
2. **Kijamii:** Kuimarika kwa usalama wa/Kuwepo kwa chakula na lishe; kuimarika kwa umoja wa Jamii mbalimbali kupitia mbinu zilizoletwa na Jamii; Kuweza kuhusika katika miradi na huduma za kilimo kama kile cha ‘farmer field schools’.
3. **Kimazingira:** Kuwepo kwa mbinu na mikakati ya kudhibiti mabadiliko ya tabia nchi ambayo ni yenye unafuu na utekelezaji; kuimarika na kuondoka kwa uharibifu wa mazingira na kuwpanuka kwa hali ya jangwa ikiwa ni Pamoja na kuimarika kwa uhifadhi wa udongo na utumiaji wa maji kutokana na kilimo bora.

Idara ya Utabiri wa Hewa ya Hewa nchini Kenya, ambayo ni mdau mtekelezaji wa mradi huu, uliunganika na kuchangia katika “Kusambaza taarifa za hali ya hewa Pamoja na athari husika za hali ya hewa Pamoja na tabiri kupitia vituo vya redio na mitandao ya kijamii, na viruo vya uchapishaji wa habari.

**Haki zote zimehifadhiwa. Hairuhusiwi kuiga, kunakili, kutafsiri, kuchapa au kutoa muhtasari huu kwa jinsi yoyote bila idhini ya Idara ya Utabiri wa Hali ya Hewa**