



REPUBLIC OF KENYA
MINISTRY OF ENVIRONMENT, CLIMATE CHANGE AND FORESTRY
KENYA METEOROLOGICAL DEPARTMENT

OCTOBER–NOVEMBER–DECEMBER (OND) 2026
CLIMATE OUTLOOK

BUSIA COUNTY

Re- Issued on 19th October 2026

1. SUMMARY OF THE RAINFALL OUTLOOK

Rainfall in **Busia County during the October–November–November (OND) 2026 rainy season** is expected to be **higher than the long-term average** over the past 30 years. The season is likely to experience an **early onset**, with rains continuing from **late September into October**. They are very likely to extend into **January 2027**.

Rainfall distribution over time is expected to be fair to good. Few dry spells are expected in October, November and December.

November is expected to be the peak rainfall month.

There is an increased likelihood of **heavy to very heavy rainfall events**. These may result in **flooding in low-lying areas and in valley bottoms where rivers overflow their banks**.

The River Nzoia valley is especially vulnerable to flooding, particularly in the **Budalang'i floodplain** in Bunyala sub-county. **Flooding is also expected in the catchment areas of the rivers Sio, Malaba and Malakisi.**

Lightning strikes, occasional strong winds, and, on rare occasions, hailstorms may accompany some rainfall events.

The rainfall map below (Fig 1) shows the cumulative amount of rain that is forecast to fall in each part of Busia County between the start of October and the end of December. Rainfall amounts are shown in millimetres (mm). Darker shading indicates higher expected rainfall totals.

Rainfall will be heaviest in west-central areas of the county. Many parts of Busia, Butula, Nambale and Teso South sub-counties are expected to receive more than 660 mm. Rainfall will be lightest in the south of Busia County. Most of Bunyala sub-county is forecast to get less than 650 mm.

Compare the expected rainfall amounts shown on this map with the rainfall amounts that are normally received by Busia County during the OND rainy season, shown in Fig 2.

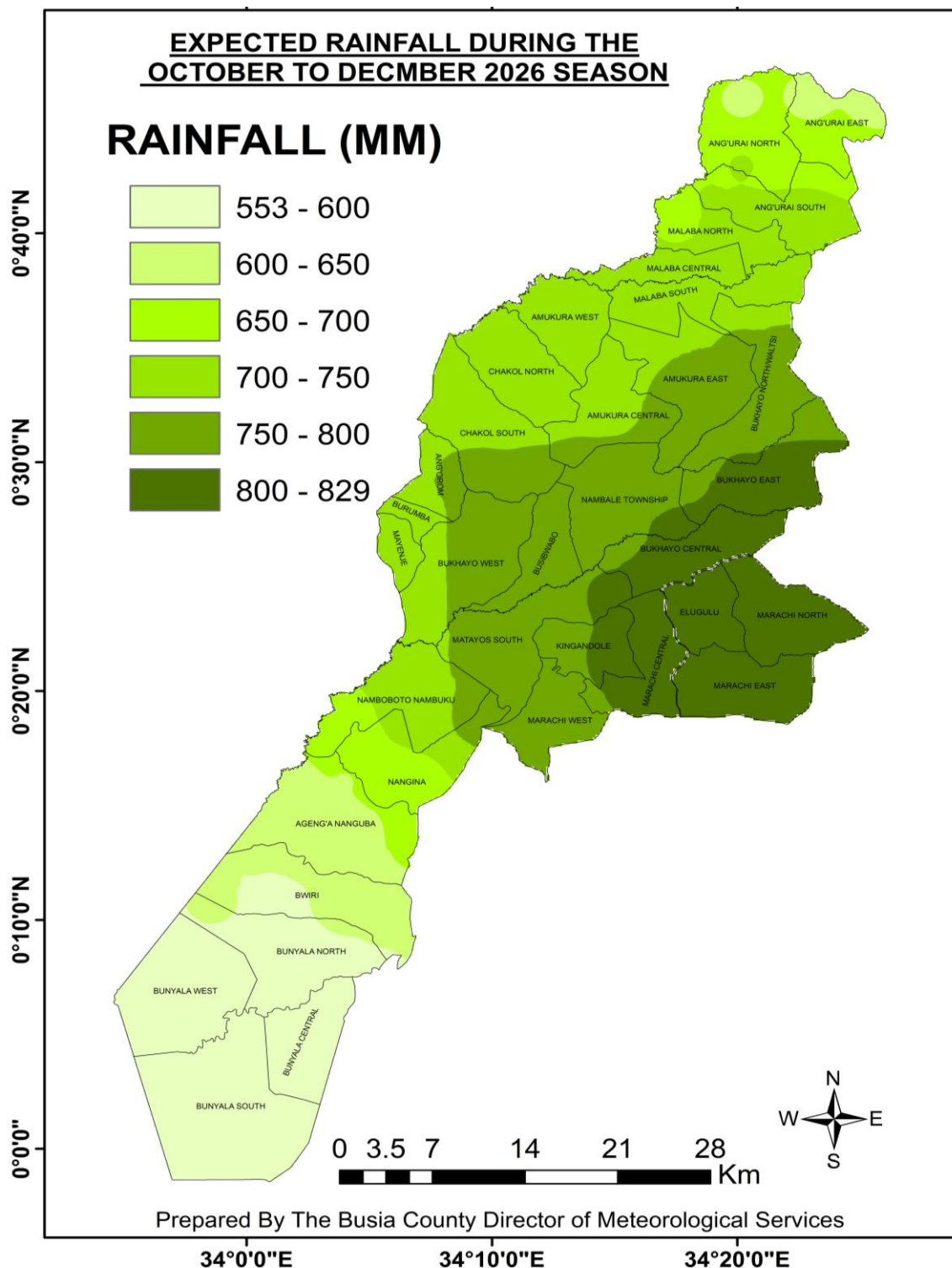


Fig 1. Forecast rainfall in Busia County during the October, November, December 2026 rainy season

The rainfall map below (Fig 2) shows normal rainfall amount received in each part of Busia County during the OND rainy season. Normal rainfall means the average amount received in October, November and December over the last 30 years.

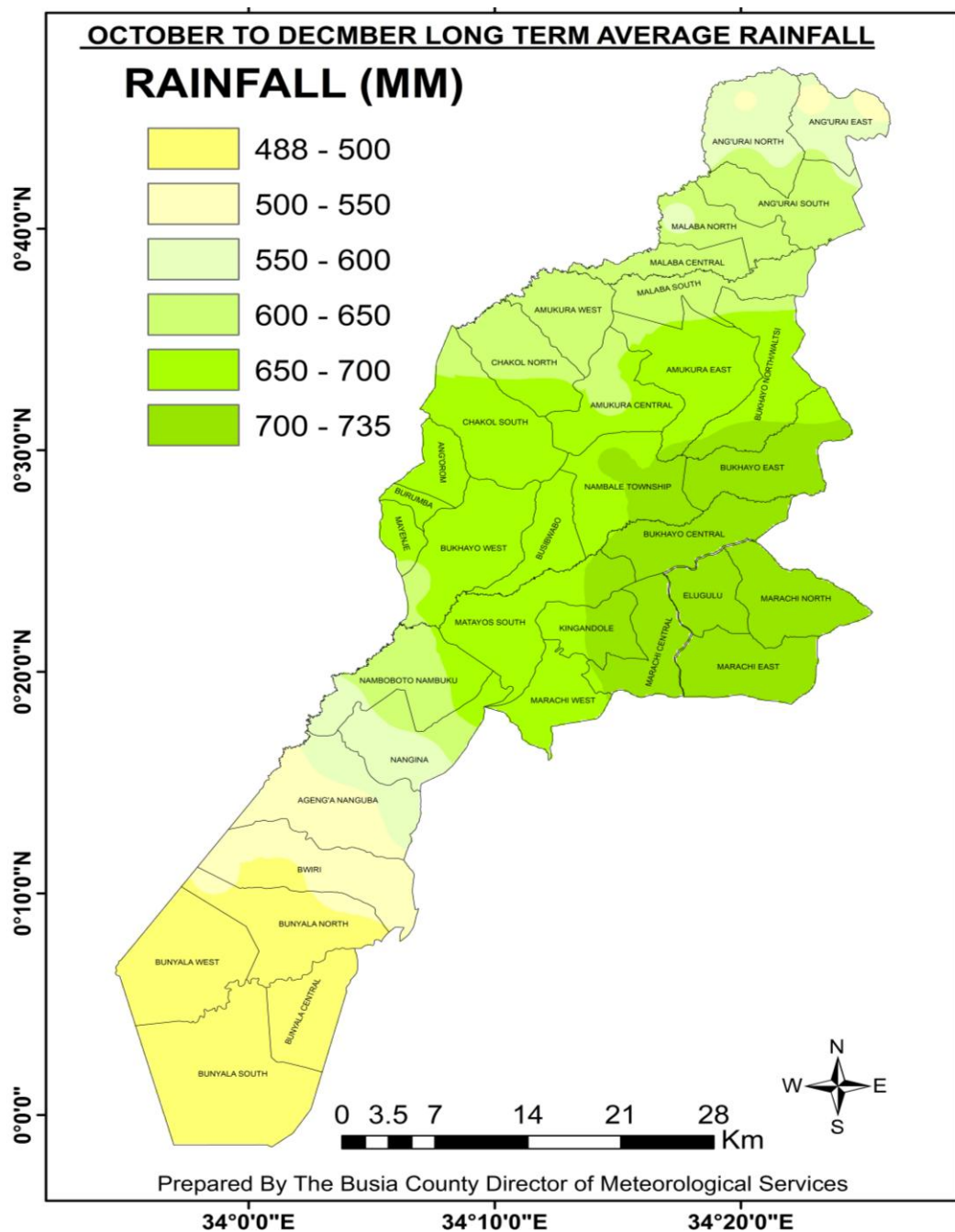


Fig 2. Normal (average) rainfall in mm in Busia County during the October, November, December rainy season – the average amount of rainfall received during this three-month period between 1991 and 2020.

2. RAINFALL OUTLOOK BY CLIMATIC ZONE

This section shows more precisely the rainfall outlook for each of the four climatic zones of Busia County during the 2026 OND rainy season.

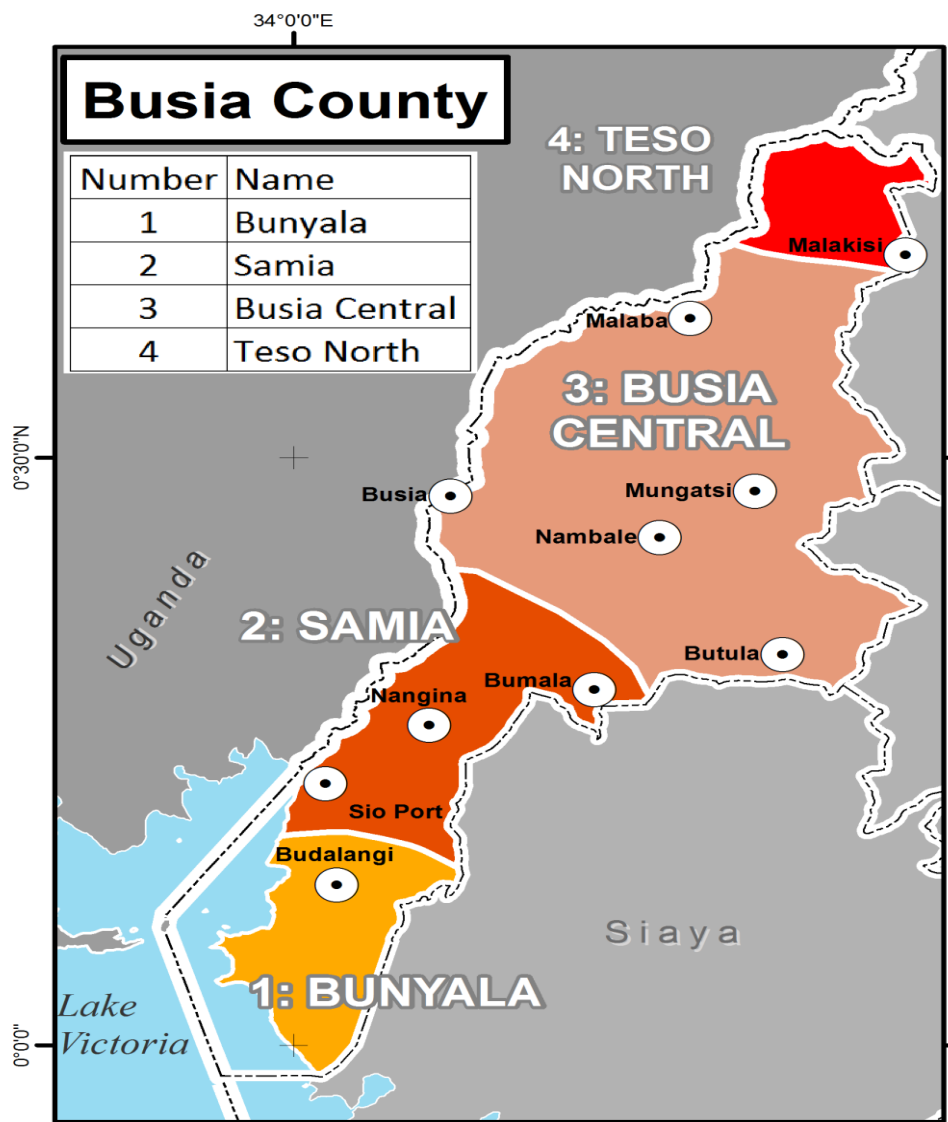


Fig 3. The main climatic zones of Busia County. These are the zones referred to in the local forecasts for each area of the county below.

Zone 1: Bunyala

- **Onset (start) of rains:** Early onset, continuing from late September into October 2026, with minimal dry spells in October.
- **Cessation (end) of rains:** Rains are likely to extend into January 2027.
- **Expected rainfall amount:** 550–650 mm, above the long-term average.
- **Rainfall distribution:** Fair to good distribution.
- **Peak rainfall month:** November

Zone 2: Samia

- **Onset (start) of rains:** Early onset, continuing from late September into October 2026, with minimal dry spells in October.

- **Cessation (end) of rains:** Rains are likely to extend into January 2027.
- **Expected rainfall amount:** **550–800 mm**, above the long-term average.
- **Rainfall distribution:** Fair to good distribution.
- **Peak rainfall month:** November

Zone 3: Busia Central

- **Onset (start) of rains:** Early onset, continuing from late September into October 2026, with minimal dry spells in October.
- **Cessation (end) of rains:** Rains are likely to extend into January 2027.
- **Expected rainfall amount:** **700–830 mm**, above the 30-year average.
- **Rainfall distribution:** Fair to good distribution.
- **Peak rainfall month:** November

Zone 4: Teso North

- **Onset (start) of rains:** Early onset, continuing from late September into October 2026, with minimal dry spells in October.
- **Cessation (end) of rains:** Rains are likely to extend into January 2027.
- **Expected rainfall amount:** **600–750 mm**, above the long-term average.
- **Rainfall distribution:** Fair to good distribution.
- **Peak rainfall month:** November

3. WHAT THE CLIMATE OUTLOOK MEANS FOR OUR COMMUNITY

3.1 Rainfall and Associated Hazards

Most parts of Busia County are likely to experience **above-average rainfall**. During the OND 2026 season:

- The **enhanced rainfall** should allow **a bumper harvest in Busia County** if farmers plant appropriate crop varieties and tend them well and all the rain water is well utilized.
- **Heavy and very heavy rainfall events** may cause:
 - Flooding in low-lying and riverine areas
 - River overflows
 - Soil erosion and crop damage
- **Lightning strikes, occasional strong winds, and some hailstorm events** may pose risks to:
 - Human life
 - Livestock
 - Crops
 - Houses, schools, and other infrastructure

Communities are advised to **avoid open fields during the rains, secure rooftops and farm structures, and stay away from swollen rivers.**

3.2 Temperature Outlook

Temperatures during the OND 2026 season are expected to be **warmer than usual**. This may:

- Increase soil moisture loss
- Raise water requirements for crops and livestock
- Cause heat stress (discomfort) to people and animals

4. FLOOD SAFETY ADVICE BY ZONE

Zone 1: Bunyala (River Nzoia – Budalang'i Floodplain)

Heavy rainfall in upstream counties may cause **River Nzoia flooding**. Residents are advised to:

- **Listen daily to local radio**, especially **Bulala FM (107.5 FM)**
- **Consult local WhatsApp groups** for real-time information
- **Subscribe to the Nzoia Flood Early Warning WhatsApp Platform**
 - Send a message to **+254 722 225 268** to join
 - Ensure data bundles are available
- **Maintain close contact with community leaders**, including administrators, chiefs, religious leaders, teachers, and village leaders
- **Attend barazas** and follow guidance from chiefs and assistant chiefs

Zones 2 and 3: Samia and Busia Central

Exercise caution whenever water levels in the rivers rise. **Keep well away from swollen waters** in the **River Sio and its tributaries** to avoid drowning and injuries.

Zone 4: Teso North and parts of Busia Central

Exercise caution whenever the water level in rivers starts to rise. **Keep well away from swollen waters** in the **Malakisi and Malaba rivers and their tributaries** to remain safe.

*Note: Parts of Busia Central lie within both the **River Sio** and **Malaba/Malakisi** catchments and both river systems should be monitored.*

5. SECTOR-SPECIFIC IMPACTS AND ADVICE

BUSIA COUNTY OND 2026 – SECTOR ACTION SUMMARIES

For every farmer, resident, leader, and official in all 35 wards.

5.1 EDUCATION

Summary

WEATHER OUTLOOK — WHAT TO EXPECT	OPPORTUNITIES — MAKE THE RAINS WORK FOR SCHOOLS	RISKS — WHO AND WHAT IS IN DANGER	PREPAREDNESS AND PREVENTION — BEFORE THE RAINS COMMENCE	RESPONSE MEASURES — DURING AND AFTER THE RAINS
<p>Rainfall outlook: Above-average rainfall is expected, with an early onset from late September into October and possible continuation into January 2027. November is expected to be the peak month, with fair-to-good distribution and few or no dry spells.</p> <p>Hazards: Heavy to very heavy rainfall may cause flooding, especially in low-lying areas and valley bottoms. Lightning, occasional strong winds and rare hailstorms are also possible. Temperatures are expected to be warmer than usual.</p> <p>Implications: Prepare early for school access disruptions, infrastructure stress, flood risks, lightning and wind hazards, and possible disease and heat-related concerns.</p>	<p>Greening: Use the rains for tree planting and school afforestation, including indigenous and fruit trees, and maintain seedlings through the season.</p> <p>Food and nutrition: Expand school kitchen gardens and link produce to school feeding programmes; monitor learner attendance and nutrition.</p> <p>Water and learning: Harvest and store rainwater safely, improve classroom weatherproofing and ventilation, and plan indoor activities for rainy days.</p> <p>Resilience: Document infrastructure needs and seek support for hazard-resilient school facilities and mitigation measures. The source advisory also recommends considering soil testing after the season.</p>	<p>Learner safety and access: Flooding may displace learners, cut off roads, cause waterlogging and absenteeism, disrupt lessons and examinations, and create drowning risks when rivers or streams are crossed.</p> <p>Facilities and property: Classrooms, kitchens, latrines, furniture, learning materials and records may be damaged. Strong winds and falling trees may damage roofs and power lines. Schools used as evacuation centres may experience disruption.</p> <p>Health and wellbeing: Contaminated water, sanitation failure and water-related disease outbreaks may affect learners and staff. Displacement and loss may also cause psychosocial stress.</p> <p>Priority locations: Bunyala, Teso North and Teso South as high-risk sub-counties, and names specific schools in Bunyala and Teso North for heightened preparedness.</p>	<p>Secure school facilities: Install lightning arrestors in exposed areas; clear and improve drainage; construct culverts or cut-off drains where needed; and address obvious roof, tree and structural hazards.</p> <p>Prepare people: Brief learners, teachers and parents on flood, lightning, strong-wind and hail safety. Follow official warnings and plan early movement to safe, higher ground when advised.</p> <p>Protect health and water: Improve hygiene and sanitation, safely harvest, store and disinfect rainwater, and seek prompt medical attention when illness occurs.</p> <p>Protect continuity: Back up learner records digitally and keep school communities informed through official KMD alerts, radio, local administration and approved communication channels.</p>	<p>During hazardous weather: Never cross swollen rivers or streams. Do not shelter under trees during thunderstorms or strong winds. Follow official instructions and coordinate emergency assistance with local authorities.</p> <p>Maintain continuity and safety: Consider suitable backup power for critical needs. Inspect trees near buildings and safely prune hazardous branches or remove dangerous trees with appropriate expertise.</p> <p>Support affected learners: Provide psychosocial or trauma support following displacement or loss, and coordinate safe, dignified evacuation arrangements with disaster management authorities.</p> <p>Recover and rebuild: Assess damage promptly, document repair needs and prepare bills of quantities where required. Address erosion through suitable measures, including tree planting and gabions where appropriate.</p>

ADVICE FOR SCHOOLS

Introduction

This guidance for school authorities, teachers, young learners and their parents has been issued jointly by the Busia County Director of Education and the Kenya Meteorological Services Authority (KMSA) County Director.

It provides practical advice about how to cope with the impact of exceptionally heavy rainfall expected during the October, November, December (OND) 2026 rainy season. The rains, which have already started in Busia County, are expected to continue into January 2027.

The KMD seasonal forecast for this period warns of heavy rainfall events, flooding, lightning strikes, strong winds and hailstorms.

The advice is divided into three main categories:

- **ANTICIPATORY ACTION** — Useful preparatory steps to take as soon as possible before severe weather strikes
- **RESPONSE ACTION** — Adaptive actions to take during severe weather to keep schools and young learners safe
- **ACTION TO IMPROVE LONG-TERM RESILIENCE** — Steps to build the resilience of schools to future weather impacts.

Use it. Share it. Act on it.

THE WEATHER OUTLOOK — WHAT TO EXPECT

Rainfall in Busia County during OND 2026 is expected to be **higher than the 30-year long-term average**. It started early in mid-September and will most likely extend into **January 2027**. Rainfall distribution over time is likely to be **fair to good**, with few dry spells. **November** is expected to be the peak month, when rainfall amounts will be highest.

There is an increased likelihood of **heavy to very heavy rainfall events**, causing **flooding** in low-lying areas and valley bottoms where rivers overflow. **Lightning strikes, occasional strong winds and rare hailstorms** may accompany some rainfall events. Temperatures are likely to be **warmer than usual**.

Temperatures during the rainy season are likely to be warmer than usual.

This situation is likely to generate the following serious threats to schools and their ability to operate safely without disruption.

- **Floods caused by heavy rain are the biggest single threat to schools and their ability to operate safely.** Heavy rainfall and flooding may damage school buildings and latrines, making them unusable
- **Lightning, strong wind and hailstones** pose direct physical dangers to learners travelling to and from school and to all those practicing outdoor sports
- **The large number of rainy days** may disrupt travel to and from schools, leading to higher rates of absenteeism.
- **The extended length of the rainy season** will put sustained pressure on roads, buildings and sanitation, making damage to infrastructure more likely.

- **The combination of warmer than usual temperatures and very wet conditions** is likely to promote insect breeding and increase the incidence of common insect and water-borne diseases, such as malaria, diarrhoea and cholera.



Picture 1: Pupils struggling to get to school in floods

Picture 2: A flooded school in western Kenya

OPPORTUNITIES — HOW THE RAINS CAN HELP SCHOOLS

The expected heavy rains present opportunities as well as threats.

Schools can harness significant benefits if they take appropriate action in good time.

Here are some tips:

1. **Water Harvesting and Storage.** Heavy rains are an opportunity to harvest and store large amounts of rainwater for future use. This will cut water bills and ensure water supplies remain available during drier periods ahead.

Install gutters and pipes to capture rainwater from the roofs of school buildings and tanks to store the water collected in this way.



Picture 3: Harvesting rainwater from a sloping roof into a tank

2. **School Kitchen Gardens.** Above-average rainfall means school kitchen gardens can grow more fresh food. This will improve pupil nutrition and reduce food costs. Abundant and nutritious school meals will encourage pupil attendance and help to reduce absenteeism

Action: Expand school gardens and diversify the types of crops grown. Involve learners in gardening clubs.

3. **Tree Planting** – Trees provide welcome shade in hot weather and windbreaks that protect buildings from damage. They can also provide fruits for school consumption. Furthermore, planting trees helps to restore and protect the natural environment.

Action: Organize tree-planting days with learners, parents and local environmental groups in October at the start of the rainy season. The heavy rainfall expected in November will help the saplings to become well established and grow strongly.

4. **Disaster preparedness funding.** The Government of Kenya, NGOs and other organizations are making additional funds available to help prepare for severe weather impacts during the months ahead. Projects to strengthen and repair school buildings and sanitary facilities may be eligible for some of this money.

Action: School authorities should actively explore opportunities to access this additional funding to undertake improvements. Engage with county government and development partners to do this. Document infrastructure needs and submit proposals.

RISKS — WHO AND WHAT IS IN DANGER

These are the most serious threats this season poses to learners, staff and schools.

1. **Household displacement by flooding** – This may disrupt or prevent school attendance by affected children. Learners in Bunyala, Teso South and Teso North sub-counties are at high risk of drop-out and protection risks.
2. **Drowning** - Pupil and teachers may be swept away while attempting to cross swollen rivers as they travel to and from school.
3. **Wind Damage** - Strong winds may tear off roofs, especially in schools with weak roof structures. Flying debris from damaged buildings may injure or even kill people who are out in the open.



Picture 4: Wind damage to a school building

4. **Lightning Strikes** may lead to death and injury to people and livestock; damage to buildings and trees and may cause fires.
5. **Disease Outbreaks** may lead to the closure of schools. There is an increased risk of water-borne and water-related diseases such as malaria and cholera, which can cause fatalities.
6. **Damaged Infrastructure**
Classrooms, latrines and kitchens may be damaged or destroyed by floods, especially in low-lying areas. Repairs may take weeks or months.
7. **Water contamination and sanitation failure** – Sources of drinking water in schools, such as boreholes, may become contaminated. Latrines may overflow or collapse as the water table rises. Such impairments pose a major health hazard. Girls and very young children are particularly at risk if pit latrines are damaged or become totally unusable.
8. **Blocked roads and paths** - Roads and paths to schools may be cut by flooding, erosion or the collapse of bridges, preventing learners and teachers from reaching schools safely. This may lead to absenteeism and missed examinations, particularly in Bunyala sub-county.
9. **Psycho-Social Stress** on displaced learners. Displaced learners, or those who lose property or family members as a result of weather-related impacts, may require sustained counselling and support.
10. **Loss of school property.** Books, certificates, furniture and other valuables may be damaged or destroyed by flooding and waterlogging.
11. **Power outages.** Falling branches or trees may damage power lines, affecting lighting, internet access and security.
12. **Use of schools as emergency shelters.** Some schools may be used as refuges for people displaced by flooding. This would disrupt normal classroom activities.

Schools Most at Risk of Flood-Related Disruption

Sub-county	Schools named as most at risk
Bunyala	Maduwa, Musoma, Runyu, Buongo, Sibuka, Bubamba, Mukhobola, Rugunga, Budala, Makunda, Igigo, Busagwa,
Teso South	Okiporo, Palama, Osipata, St. Joseph Irukana, Aburi, Alupe Special, Odiria (Amukura).
Teso North	Kaukotoit, Kamunyel, Onyunyur, Amoni, St. James Osia, Akudiet, Kidek, Kajei, Akadoot, Akibui, Kaejo.

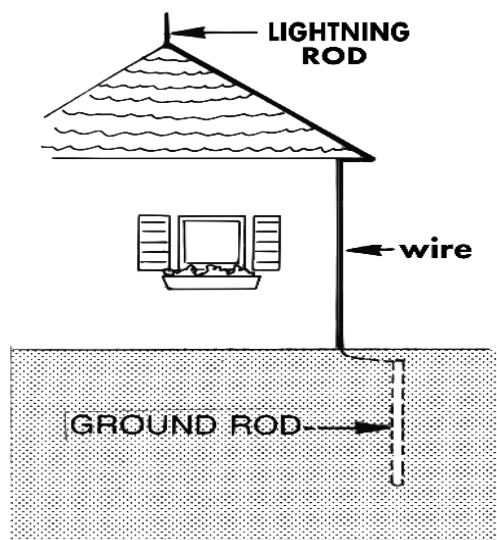
Action: School heads in these areas must prioritize preparedness and coordinate closely with local authorities.

ANTICIPATORY ACTION – WHAT TO DO IMMEDIATELY TO MITIGATE OR AVOID NEGATIVE IMPACTS

1. Install Lightning Arrestors.

Install lightning arrestors on the roofs of school buildings. Lightning is a direct threat to life; arrestors protect learners, staff and infrastructure.

Action: School management, Ministry of Education, county government.



This is the lightning rod (metal spike) at top of a building that attracts lightning strikes and the wires connected to it channels electric discharges safely into the

Picture 5: How lightning arresters protect people inside buildings from electrocution. The metal spike on the roof attracts lightning strikes and the wire connected to it channels any discharges safely into the ground

2. Raise Awareness in the School Community - informed communities act faster, save lives and mitigate loss and damage to property. Brief learners, teachers and parents on how to prepare for and respond to floods, lightning, strong wind and hailstones. **Publicize the appropriate safety measures within one week of receiving this advisory.**

Action: School heads, teachers, parent-teacher associations.

3. Improve Drainage Works - prevent water logging and structural damage.

Construct culverts and cut-off drains before the first heavy rains to prevent water logging, erosion and infrastructure damage.

Action: School management, county public works, parents.

4. Relocate Early - Move learners and teachers from buildings at risk of flooding to a safe area on higher-ground areas in an orderly manner as soon as flood warnings are issued. Act before the floodwaters arrive to prevent loss of life.

Action: School heads, local administration, disaster management.

5. Improve Hygiene and Sanitation to prevent disease outbreaks. Improve school hygiene by ensuring the latrines are in good working order and deworm learners regularly to prevent disease outbreaks.

Action: School health clubs, health workers, parents.

6. Harvest, Store and Disinfect Rain Water.

Harvest and store rain water. Boil the water before drinking it or sterilize it with the appropriate dose of water sterilization chemicals.

Action: *School management and water committees, as soon as the rains begin.*

7. Protect Records.

Back up learners' records digitally immediately to prevent loss of critical academic records during floods.

Action: *School administration, ICT teachers.*

8. Create school WhatsApp and SMS Groups

Create a school WhatsApp group, if you do not already have one, that includes all school staff and the parents of all pupils who have smartphones. Use this to alert the entire school community to any fast-moving developments and give appropriate and timely advice. Establish a separate SMS group to reach parents who do not have a smartphone with mobile internet access.

9. Stay Informed by monitoring KMD weather forecasts and alerts.

Get KMD alerts via WhatsApp, radio, [the KMD website](#), local chiefs and other communication channels — timely information enables timely action.

Action: *School heads, teachers, parents.*

10. Disinfect Classrooms Weekly.

Mop classroom floors with disinfectant at least once a week to eliminate jiggers and other pests and maintain a healthy learning environment.

Action: *Support staff, learners, teachers.*

11. Encourage Early Medical Treatment for illness and disease.

Teachers, learners and parents should visit the nearest health facility as soon as they feel unwell — early treatment prevents complications and outbreaks.

Action: *All school community members*

RESPONSE MEASURES — DURING AND AFTER THE RAINS

Adaptive actions to take once the rains have started, to limit loss and speed recovery.

1. Avoid walking or driving in a vehicle through floodwater and swollen rivers.

Only take safe routes to and from school in flood-affected areas to avoid the risk of drowning.

Action: Teachers, parents and learners.



Picture 6: school going age children risking walking in flood waters

2. **Stay safe from lightning strikes** – Shelter inside a strong building whenever you hear thunder nearby or see lightning flashes. Stay away from the walls and windows. You are safer in the middle of the room. Stay 2 metres from the nearest person. Keep children dry and indoors. Being wet and bare feet increases the risk. Avoid contact with water (no bathing, washing dishes, swimming, boating). Avoid all outdoor activities. Wear shoes. Do not shelter under trees. Switch off mobile phones and other electronic equipment. Avoid touching metal objects. Avoid using umbrellas – metal spike at the top of the umbrella attracts lightning. Keep livestock safe in their shed.
Action: Teachers, parents and learners.
3. **Provide immediate trauma support for learners displaced by flooding** to support their mental health and recovery.
Action: School counsellors, health workers, community volunteers.
4. **Coordinate school actions closely with the disaster management authorities** to ensure a more effective and inclusive response to any emergency situations that may arise.
Action: School heads, local administration, disaster management workers
5. **Plan and Equip Evacuation Centres** to provide safe, dignified shelter for learners and their families who are likely to be displaced by any anticipated emergencies.
Action: School management, county disaster management and other stakeholders.
6. **Prune or Remove Trees near Buildings** to prevent falling branches and entire trees causing damage to buildings and injuries to people during high winds.
Action: School management, grounds staff.
7. **Conduct a Detailed Damage Assessment** after any structural damage to buildings to facilitate rapid repairs. Submit this rapidly to the Busia County government and other potential funders, along with a detailed bill of quantities for the materials and specialist labour inputs that will be required.
Action: School management, county engineers.

- 8. Install Backup Electricity Generation** to maintain power and avoid disruptions to leading learning during mains power outages. Install solar solar panels in preference to a diesel or petrol generator to avoid the ongoing financial burden of fuel costs.

Action: School management, development partners.

- 9. Control Soil Erosion** to protect the school grounds. Plant trees and build gabions to stop gullies from forming on roads and on slopes.

Action: School management, county agriculture and environment departments, after the rains as part of recovery.

Source of Advice

Busia County OND 2026 Participatory Scenario Planning (PSP) Workshop — Education Sector. Adapted for public use by the Busia County Education Sector Working Group.

Compiled by: Isaac Wang'ele, for County Director of Education, Busia County.

Date of issue: September 2026.

For the latest updates: Follow official alerts from the Kenya Meteorological Department (KMD) and Busia County Government.

Key Contacts and Sources

Who	For what
Busia County Director of Meteorology: Benjamin Bahati Mobile Phone: 0722 225 268	Weather forecasts and alerts
Busia County Director of Education: Mary Oichoe Mobile phone: 0720 641 443	Education sector guidance and awareness creation
Sub-county Education offices	Reporting of any incidents and guidance

This guide is part of a series of sectoral advisories produced for the Busia County OND 2026 Participatory Scenario Planning process. It is designed to be shared freely with schools, institutions of higher learning, parents, teachers and education stakeholders.

5.2 PUBLIC HEALTH

OPPORTUNITIES (POSITIVE IMPACTS)

1. **Improved Hygiene and Sanitation:** Enhanced rain is likely to lead to increased availability of water for domestic use, hence improved hygiene and sanitation.
2. **High-Nutrient Top-Soil Deposits:** Flooding may leave deposits of top soils with high nutrients in lowlands for the growth of vegetables which are a good source of vitamins.
3. **Better Nutrition:** Enhanced rainfall may provide good crop prospects for maize and beans hence improved nutrition.
4. **Enriched Air quality and Human Reproduction:** Rainwater improves air quality by cleaning air particles. Prolonged rain and low temperature encourages human reproduction.

NEGATIVE IMPACTS (RISKS)

1. **Damages and Losses of Floods:** Enhanced rainfall is expected to cause flooding in low-lying areas like Bunyala, Teso South, and Teso Central Sub-Counties. Floods may put people's health at risk and destroy crops and livestock leading to famine and malnutrition.
2. **Human Displacement:** Due to damaged homes in flooded areas, a number of people are likely to be evacuated to higher grounds, ending up in camps. Displaced populations would be exposed to various health hazards. Children may suffer from malnutrition due to poor diets in the camps.
3. **Destruction of Infrastructure and Contamination of Water Sources:** Floods may destroy several infrastructures including water points and health facilities. Fresh water sources could also be contaminated as floodwaters wash waste into wells, boreholes, and rivers. Access to health facilities may be curtailed due to damaged infrastructure, such as roads and bridges.
4. **Disease Outbreaks:** As mosquitoes and other disease carriers breed in stagnant water, there is likely to be an increase in incidences of diseases like malaria, cholera, typhoid, and diarrhoea.
5. **Accidents and Trauma:** Deaths and injuries may occur due to drowning, hailstones, lightning strikes and destruction of built infrastructure, as well as when fishing and transport boats capsize in water bodies because of strong winds.

PREPAREDNESS AND PREVENTION MEASURES — BEFORE THE RAINS COMMENCE

These are useful preparatory steps to take **as soon as possible**.

1. Know Your Risk

- **Hazard Mapping:** Know which areas in your community are prone to flooding. Work with community leaders to **map out safe high-ground areas** for evacuation.
- **Identify Vulnerable People:** Identify elderly persons, pregnant women, and people with disabilities who may need help during an emergency.

2. Prepare Your Home and Family

- **Protect Your Water Source:** Ensure your latrine is **at least 30 metres away** from any water source (well, borehole). This prevents contamination.
- **Clear Your Compound:** **Clear bushes near your house** to remove mosquito hiding places. **Drain any stagnant water** around your home to stop mosquitoes from breeding.
- **Store Clean Water:** Harvest and store rainwater for future use. Always **boil or treat drinking water** before use.
- **Prepare an Emergency Kit:** Have a family plan. Pack a bag with essential items: water purification tablets, soap, a first aid kit, and important documents in a waterproof bag.
- **Secure Your Home:** Prune or remove trees near your house that could fall during strong winds.

3. Prepare as a Community

- **Set Up Camp Committees:** In flood-prone areas, set up committees to manage displacement camps and rescue teams.
- **Exercise Flood Drills:** Practice what to do in an emergency. Know the safe routes to higher ground.
- **Stock Supplies:** Work with public health officers to ensure health facilities and community health units are stocked with medicines and water purification supplies.

4. Take the following precautions to keep you and your family safe from Bilharzia:

- **Avoid bathing in stagnant dirty water** or wading through it. Wear protective clothing e.g. gloves and gumboots while working in fluke-infested areas.
- Kill freshwater snails.
- **Avoid walking barefoot** in swampy or flooded areas.
- **Only drink safe water** which has been boiled or chemically treated.
- Maintain proper sanitation.
- **Drain stagnant water.**

5. To keep you and your family safe from Cholera and Typhoid:

- Keep water sources free from contamination.

- Build or maintain clean a pit latrine that is at least 30 metres from the nearest water source.
- Avoid open defecation. Always use a pit latrine or toilet while answering nature's call. Cover the pit after use.
- Wash your hands thoroughly with soap and running water after you visit the toilet, before you prepare or eat food and before you feed a baby or young child. If you do not have soap, use ash.
- Thoroughly wash foods that are eaten raw such as fruits and vegetables with safe water before eating them.
- Ensure food is properly cooked and still hot when served.
- Boil or chemically purify drinking water to make it safe for use.
- Seek vaccination against typhoid from medical facilities.
- Avoid raw milk and products made from raw milk. Drink only pasteurized or boiled milk.
- Seek medical treatment for the infected person as soon as possible.

6. Anticipated Outbreak of Malaria:

- Sleep under a chemically treated mosquito net at night so that you and your family are not bitten by mosquitoes while you sleep.
- Cover water containers in the house so that mosquitoes do not breed inside them.
- If possible, drain puddles and pools of stagnant water that form near your house so that mosquitoes do not breed in them.
- Keep your compound clean from empty containers.
- Clear bushes near your house so that mosquitoes do not hide in them.
- Put wire gauges (net) on windows and all ventilations to prevent entry of mosquitoes into your house.
- Regularly spray your house using insecticides to kill mosquitoes.
- Vaccinate children under five years against malaria.

RESPONSE MEASURES — DURING AND AFTER THE RAINS

These are adaptive actions to take during severe weather to keep you and your family safe.

1. Protect Yourself from Floods

- **NEVER walk or drive through floodwater or swollen rivers.** The water can be deeper and faster than it looks. You can be swept away.
- **Move to higher ground immediately** if you are in a flood-prone area. Act before the floodwaters arrive.
- **Follow instructions from local authorities and disaster management teams.**
- **Stay away from fallen power lines** and report them immediately.

2. Prevent Waterborne Diseases (Cholera, Typhoid, Diarrhoea)

- **Always drink safe water. Boil it** for at least one minute or **treat it with water purification chemicals** (like chlorine). This is the most important step.
- **Practice good hygiene. Wash your hands thoroughly with soap and running water** after using the toilet, before preparing food, and before eating.

- **Wash all fruits and vegetables with clean, safe water** before eating them raw.
- **Cook food thoroughly and eat it while it is still hot.**
- **Do not open defecate.** Always use a latrine or toilet.
- **Keep water containers covered** to prevent contamination.

3. Prevent Mosquito-Borne Diseases (Malaria, Rift Valley Fever)

- **Sleep under a treated mosquito net** every night.
- **Drain stagnant water** around your home and clear bushes.
- **Cover water containers** so mosquitoes cannot breed in them.
- **Use insecticide sprays** in your house.
- **Report any unusual sickness in animals or humans** to health officers or local authorities immediately.

4. Stay Safe from Lightning and Strong Winds

- **When you hear thunder or see lightning, go inside a strong building immediately.**
- **Stay away from walls** and **switch off mobile phones and other electronics.**
- **Avoid touching metal objects.**
- **NEVER shelter under a tree during a thunderstorm.**
- **During strong winds, stay indoors** and away from windows. Be careful of flying debris.

5. Protect Yourself from Accidents and Injuries

- **Avoid walking near flooded pits or water pans** to prevent drowning.
- **Adhere to maritime safety regulations** when using boats. Do not overload boats.
- **Look out for falling trees or water tanks** during strong winds.

6. Seek Medical Help Early

- **Visit the nearest health facility as soon as you feel unwell.** Early treatment prevents complications and saves lives.
- **Report any suspicious disease outbreaks** to health authorities immediately.

7. Take Care of Your Mental Health

- It is normal to feel stressed or traumatized after a disaster.
- **Seek counselling and support** if you or a family member is feeling overwhelmed. **Trauma support is available** through health workers and community volunteers.
- **Support displaced families** with kindness and understanding.

5.3 WATER AND IRRIGATION

OPPORTUNITIES (POSITIVE IMPACTS)

The expected heavy rains present opportunities as well as threats. Residents and communities can harness significant benefits if they take appropriate action in good time.

1. Water Harvesting and Storage: Heavy rains are an opportunity to harvest and store large amounts of rainwater for future use. This will cut water bills and ensure water supplies remain available during drier periods ahead.

Action: Install gutters and pipes to capture rainwater from the roofs of homes, schools, churches and other buildings. Install tanks to store the water collected. Communities should consider constructing communal water pans and dams where appropriate.

2. Improved Groundwater Recharge: Above-average rainfall will refill groundwater sources. Wells and boreholes that have been dry or low-yielding may recover.

Action: Protect recharge areas. Avoid dumping waste in areas where water seeps into the ground. Desilt existing wells and boreholes before the peak rains.

3. Increased Water Availability for Irrigation: More water will be available for irrigation, reducing the need for pumping and lowering operation costs. More land can be brought under irrigation.

Action: Expand irrigation command areas where safe to do so. Repair and maintain irrigation canals, pipes and intakes before the peak rains. Plant crops that can benefit from the increased water availability.

4. Reduced Water Use Conflicts: With more water available, conflicts over water access between different users and communities are likely to decrease.

Action: Use this period of abundance to strengthen community water management agreements and plan for dry seasons.

5. Improved Localized Water Quality Through Dilution: Flowing water can dilute pollutants, improving water quality in some rivers and streams.

Action: Monitor water quality regularly. Do not assume all surface water is safe. Always treat drinking water.

6. Disaster Preparedness Funding: The Government of Kenya, NGOs and other organizations are making additional funds available to help prepare for severe weather impacts during the months ahead. Projects to strengthen water infrastructure and improve sanitation may be eligible for some of this money.

Action: Community leaders and water committees should actively explore opportunities to access this additional funding. Engage with county government and development partners. Document infrastructure needs and submit proposals.

NEGATIVE IMPACTS (RISKS)

These are the most serious threats this season poses to water supply, sanitation, irrigation and livelihoods in Busia County. Besides pointing out the threats, possible actions that can be taken have been indicated.

1. Flooding of Water Sources and Infrastructure: Heavy rainfall and flooding may damage water treatment facilities, inundate intakes and boreholes, wash out pipelines, and cause sewerage and sanitation systems to overflow or fail. This can lead to complete disruption of water services.

Action: Water service providers and community water committees must inspect and protect infrastructure before the peak rains.

2. Dam and Water-Retaining Structure Failure: There is a high likelihood of dam and water-retaining structure failure during heavy rains. This poses a direct threat to lives and property downstream.

Action: Communities living around dams and water pans must be on the lookout for any signs of breaching of embankments. Report any cracks, seepage or unusual water levels immediately to local authorities.

3. Contamination of Water Resources: Water sources may become contaminated from agricultural activities, informal sanitation, and floodwater carrying waste and pollutants. High turbidity (muddiness) makes surface water difficult and expensive to treat.

Action: Boil or treat all drinking water. Use chlorine dispensers where available. Protect wells and boreholes from floodwater entering them.

4. Increased Waterborne Diseases: There is an increased risk of waterborne and water-related diseases such as cholera, typhoid, diarrhoea and malaria. These can cause fatalities if not treated early.

Action: Seek medical treatment immediately if you feel unwell. Practice good hygiene. Wash hands with soap and clean water. Keep latrines clean and covered.

5. Submergence of Wells and Boreholes: Rising water tables and flooding may submerge wells and boreholes, making them unusable and contaminating the water.

Action: Raise the headworks of wells and boreholes where possible. Seal them properly to prevent floodwater entering.

6. Damage to Irrigation Infrastructure: Dams, reservoirs, canals, pipes and intakes may be destroyed by flooding. This can ruin livelihoods and set back food production for months or years.

Action: Inspect and repair irrigation infrastructure before the peak rains. Allocate funds for rehabilitation.

7. Flooding and Waterlogging of Productive Land: Farmland may flood and become waterlogged, destroying crops and degrading arable land through erosion.

Action: Construct drainage channels. Build soil conservation structures such as terraces and gabions. Plant cover crops to protect the soil.

8. Risk to Lives and Property Downstream of Dams: Communities living downstream of dams and reservoirs face serious risk if these structures fail or overflow.

Action: Move to safe areas on higher ground before flooding starts. Follow instructions from local administration and disaster management officials.

9. Loss of Livelihoods: Flooding, waterlogging, and destruction of infrastructure can cause farmers and water-dependent businesses to lose their livelihoods.

Action: Diversify income sources where possible. Participate in community preparedness

planning. Access available support from county government and development partners.

10. Increased Operation and Maintenance Costs: Water treatment, pumping, drainage and infrastructure repair costs will rise significantly during and after the rains.

Action: Budget for increased costs. Allocate funds for rehabilitation of water supply and irrigation infrastructure. Reduce costs by harvesting rainwater and reducing waste.

11. Blocked Roads and Paths: Roads and paths may be cut by flooding, erosion or the collapse of bridges, preventing access to water points, farms and markets.

Action: Clear drainage on roads and paths. Report blocked roads to local authorities. Use alternative safe routes.

COMMUNITIES MOST AT RISK OF FLOOD-RELATED DISRUPTION

The following sub-counties and areas are identified as most at risk of flood-related disruption to water supply and irrigation.

Sub-county	Areas named as most at risk
Bunyala	Low-lying areas along rivers and valley bottoms, areas near dams and water pans
Teso South	Areas along riverbanks, flood-prone valley bottoms
Teso North	Low-lying areas, areas downstream of water-retaining structures
Samia	Areas near rivers and wetlands
Butula	Areas with poor drainage and low-lying farmland
Nambale	Areas along rivers and flood plains

Action: Residents in these areas must prioritize preparedness and coordinate closely with local authorities and community water committees.

PREPAREDNESS AND PREVENTION MEASURES — BEFORE THE RAINS COMMENCE

- 1. Drink Safe Water:** Always boil or treat water with chlorine. If you cannot boil, decant (let it settle) and then disinfect with the appropriate dose of water sterilization chemicals. Use chlorine dispensers where available.

Action: All residents, parents, teachers, community health workers.

- 2. Rainwater Harvesting and Storage:** Harvest and store rainwater from roof catchments for use during scarcity. Ensure tanks are covered to prevent contamination. Clean gutters and tanks before the rains begin.

Action: All households, schools, institutions, community water committees.

- 3. Safety of Dams and Water Pans:** Population living around dams and water pans must be on the lookout for any signs of breaching of their embankment to avoid loss of lives and destruction of properties. Report any cracks, seepage or unusual water levels immediately.

Action: Community members, dam management committees, local administration.

4. **Desiltation and Other Infrastructure Preparations:** Desilt water reservoirs and carry out river training to minimize the effects of flooding prior to the onset of *El Niño*. Inspect and repair water supply and irrigation infrastructure.

Action: Water service providers, community water committees, county public works, farmers.

5. **Drainage Management:** Open and keep free debris drainages and trenches both on farm and on roads. Construct culverts and cut-off drains before the first heavy rains to prevent water logging, erosion and infrastructure damage.

Action: All residents, farmers, county public works, schools.

6. **Soil and Land Conservation:** Construct and structurally rehabilitate degraded landscape using gabions, terraces, check dams and other soil conservation structures. Plant trees to stabilize soil and protect water sources.

Action: Farmers, community groups, county agriculture and environment departments.

7. **Raise Awareness in the Community:** Informed communities act faster, save lives and mitigate loss and damage to property. Brief residents, farmers and water users on how to prepare for and respond to floods, lightning, strong wind and hailstones.

Action: Community leaders, chiefs, village elders, community health workers, water committees.

8. **Protect Water Infrastructure:** Rehabilitate existing and create new storage facilities. Protect intakes, boreholes and pipelines from flood damage. Raise headworks where possible.

Action: Water service providers, community water committees, county government.

9. **Rehabilitation Funds Allocation:** Allocate funds for rehabilitation of water supply and irrigation infrastructure. Document infrastructure needs and submit proposals to county government and development partners.

Action: County government, water service providers, community water committees.

10. **Plan for Water Trucking:** Identify populations that may lose access to water and plan for water trucking. Priority should be given to women, children, persons with disabilities and the elderly.

Action: County government, disaster management, water service providers, local administration.

11. **Hygiene and Sanitation Improvement:** Improve community hygiene by ensuring latrines are in good working order. Keep latrines clean and covered. Wash hands with soap and clean water. Deworm regularly.

Action: Community health workers, schools, all residents.

12. **Stay Informed:** Monitor KMD weather forecasts and alerts. Get KMD alerts via WhatsApp, radio, the KMD website, local chiefs and other communication channels. Timely information enables timely action.

Action: All residents, community leaders, water committees.

RESPONSE MEASURES — DURING AND AFTER THE RAINS

Adaptive actions to take once the rains have started, to limit loss and speed recovery.

- 1. Floodwater Caution:** Avoid walking or driving through floodwater and swollen rivers. Only take safe routes. Do not attempt to cross flooded roads or bridges.
Action: All residents, parents, children.
- 2. Lightning Strikes:** Shelter inside a strong building whenever you hear thunder nearby or see lightning flashes. Stay away from walls and keep children dry. Switch off mobile phones and other electronic equipment. Avoid touching metal objects. Never try to seek shelter from the rain under trees during a thunderstorm.
Action: All residents.
- 3. Drinking Water Treatment:** During and after floods, always boil or treat drinking water. Use chlorine dispensers where available. Do not drink untreated surface water.
Action: All residents.
- 4. Infrastructure Damage:** Report any damage to water supply, sanitation or irrigation infrastructure to local authorities and water service providers immediately. This enables rapid repairs and prevents further damage.
Action: All residents, community water committees, local administration.
- 5. Support for Displaced Persons:** Provide immediate trauma support for persons displaced by flooding. Ensure access to safe water, sanitation and hygiene facilities in evacuation centres.
Action: Community health workers, volunteers, county disaster management.
- 6. Disaster Management Authorities:** Coordinate community actions closely with disaster management authorities to ensure a more effective and inclusive response to any emergency situations that may arise.
Action: Community leaders, local administration, disaster management workers.
- 7. Evacuation Centres:** Plan and equip evacuation centres to provide safe, dignified shelter for persons and their families who are likely to be displaced by any anticipated emergencies. Ensure water and sanitation facilities are available.
Action: County government, disaster management, community leaders.
- 8. Damage Assessment:** Conduct a detailed damage assessment after any structural damage to water or irrigation infrastructure to facilitate rapid repairs. Submit this to the Busia County government and other potential funders, along with a detailed bill of quantities for materials and specialist works.
Action: Water service providers, community water committees, county government.
- 9. Control Soil Erosion:** Plant trees and build gabions to stop gullies from forming on roads and on slopes. Protect water sources and recharge areas.
Action: Farmers, community groups, county agriculture and environment departments.
- 10. Desiltation and Rehabilitation:** Desilt water reservoirs, canals and drainage channels after the rains. Rehabilitate damaged infrastructure as part of recovery.
Action: Water service providers, community water committees, farmers, county government.

ACTION TO IMPROVE LONG-TERM RESILIENCE

Here are some steps that can be taken to build the resilience of households, communities and water systems to future weather impacts.

- 1. Build and Maintain Water Storage:** Construct and maintain water pans, dams, tanks and other storage facilities. This ensures water availability during dry seasons and reduces dependence on unreliable sources.
Action: County government, community water committees, development partners.
- 2. Protect and Restore Catchment Areas:** Plant trees, protect wetlands, and restore degraded landscapes. Healthy catchments absorb rainfall, reduce flooding and recharge groundwater.
Action: County government, community groups, farmers, schools.
- 3. Strengthen Community Water Management:** Strengthen community water management agreements and committees. Plan for both wet and dry seasons. Ensure equitable access to water for all.
Action: Community water committees, local administration, county government.
- 4. Improve Infrastructure Standards:** Build water and irrigation infrastructure to higher standards that can withstand heavy rainfall and flooding. Use appropriate designs and materials.
Action: County government, water service providers, engineers.
- 5. Diversify Livelihoods:** Support farmers and water-dependent businesses to diversify income sources. This reduces vulnerability to weather-related shocks.
Action: County government, development partners, community groups.
- 6. Strengthen Early Warning Systems:** Improve early warning systems for floods, dam failure and waterborne disease outbreaks. Ensure warnings reach all residents in a timely manner.
Action: KMD, county government, disaster management, local administration.
- 7. Improve Sanitation Infrastructure:** Improve sanitation infrastructure to withstand flooding. Raise latrine floors, seal pits, and construct flood-resistant sanitation facilities.
Action: County government, community health workers, schools, households.

WHO GETS HELP FIRST?

In emergencies such as water trucking, priority will be given to:

- Women
- Children
- Persons with disabilities
- The elderly

REMEMBER

El Niño is not just a disaster - it is also an opportunity. With the right preparation, we can save lives, protect property, and store water for the dry season.

Stay informed. Stay prepared. Stay safe.

5.4 AGRICULTURE (CROPS) SECTOR

Coffee, Fruit Trees and African Leafy Vegetables (ALVs)

OPPORTUNITIES (POSITIVE IMPACTS)

A) Coffee and Fruit trees

1. **Improved Yields:** Adequate and evenly distributed rainfall provides favorable moisture conditions for growth, flowering and development for fruit trees and coffee potentially improving yields across the sub counties of Busia County.
2. **Establishment of Nurseries and New Orchards:** Availability of the good rains and the anticipated wet season are conducive for nursery owner to establish coffee and tree nurseries. Farmers should take advantage of these conditions to plant and establish coffee and fruit tree seedlings reducing the need of supplementary irrigation in Matayos, Nambale, Teso South, Teso North and Butula sub counties.
3. **Water Harvesting and Storage:** There will be excess rainwater. Farmers should harvest and store in tanks to be used during dry spells.
4. **Higher Production:** Bumper harvests of fruits and coffee are expected. Farmers' cooperatives and local aggregation centers should devise ways for processing and value addition and marketing.

B) African Leafy Vegetables

1. **Seedling Establishment:** Better moisture conditions improve survival of transplanted seedlings and newly established plots. Farmers are therefore urged to transplant their vegetable seedling at the onset of the rains.
2. **Increased Production:** Improved soil moisture supports germination and vigorous growth of vegetables such as spider plant, amaranth, black night shade, and cowpea thus increased production.
3. **Free Nitrogen Fixation:** Flashes especially in high areas like Kakapel, Rwatama Changara and Chelelemuk will fix nitrogen in the soils. Other areas in Matayos, Nambale, Butula and Teso South are likely to also benefit from the lightning.
4. **Stager Planting and Harvesting:** Continuous harvest of different varieties /species are expected due to the fact that most farmers are doing stager planting hence more yields and income.
5. **Increased Production:** The rains are likely to bring about more produce. The improved volumes will be available for sale and create opportunity for aggregation value addition and marketing in the entire county, hence strengthening collective production and marketing.

NEGATIVE IMPACTS (RISKS)

A) Coffee and Fruit trees

1. **Pests and Diseases:** The hot and humid climate triggers infestation of pests and outbreak of crop diseases.
2. **Nutrients Leaching and Roots Rotting:** Excess rainfall can leach nutrients particularly in poorly managed soils, waterlogging will result to rotting of roots of trees and bushes.

3. **Damage of Trees and Low Production:** Strong winds accompanied by storms may break branches, uproot young trees and damage fruit bearing trees. Rains accompanied with hailstones will lead to premature fruit or flower drop hence low production. Soil erosion will carry away the top soil resulting to exposing the roots reducing crop growth hence poor crop performance.

B) African Leafy Vegetables

1. **Soil Erosion and Infertility:** Heavy rainfall results in soil erosion and leaching hence the top fertile soil and nutrients are washed away from vegetable plots thus reducing soil fertility in all zones of Busia county.
2. **Damage on Roads:** Heavy rainfall and flooding can damage rural roads in Teso North, Teso South, Nambale, Butula sub counties making them impassable hence delayed transportation of vegetables to market therefore resulting to spoilage.
3. **Pests and Diseases:** High moisture and warmer temperature may create favorable conditions for pest, fungal and bacterial diseases affecting productivity in ALVs.
4. **Roots Rot and Crop Damage:** Waterlogging especially in low land areas like Amoni, Aterait, Onyunyur results to rotting of the roots hence resulting to low production. Damage to the crops from hailstones reduces quality and value of ALVs.

PREPAREDNESS AND PREVENTION MEASURES — BEFORE THE RAINS COMMENCE

Coffee and Fruit trees

1. **Declutter and Clean Water Harvesting Systems:** Before onset of the rains, decluttering of the water gutters, cleaning of the water storage equipment, such as the water tanks. Farmers should also improve on the drainage system that include trenches, cutoffs, etc.
2. **Preparation of Holes and Manure:** Before onset of rains, the farmers should prepare planting holes and apply manure
3. **Improve Aeration and Production:** Prune coffee and fruit trees to remove dead, diseased and overcrowded branches to improve air circulation for better production. To overcome the effects of strong winds, the farmers should do pruning on the fruit trees and coffee bushes. Farmers should also prop their crops such as banana to prevent the effects of strong winds.
4. **Fill Gaps and Establish New Trees:** Prepare seedlings and planting materials to fill gaps and establishment of new bushes and trees when adequate moisture is available.

A) African Leafy Vegetables

1. **Improve Fertility and Retain Moisture:** Apply organic manure around trees and bushes to improve soil fertility and moisture retention.
2. **Stagger Planting:** Plan staggered planting so that a variety of vegetables are available continuously.
3. **Pest and Disease Management:** Prepare pest and disease management measures including regular scouting and use of appropriate control methods.

RESPONSE MEASURES — DURING AND AFTER THE RAINS

A) Coffee and Fruit trees

1. **Harvest Rainwater:** Whenever it rains ensure water harvesting is done for future use, i.e. for irrigation in the nursery and orchards and household consumption
2. **Close Monitoring:** Scout farms regularly for fungal diseases, pests and diseases. This increased surveillance should reduce risks of attacks and diseases associated with wet conditions. Farmers should therefore frequently visit the farms and closely monitor their crops.
3. **Improve Air Circulation:** Continue with appropriate pruning and shade management to improve aeration and reduce disease pressure.

B) African Leafy Vegetables

5. **Adopt Regenerative Production Technologies:** Vegetable farmers should adopt regenerative production technologies, such as raised beds, conical gardens to avoid incidence of water logging, soil erosion and leaching. They are also urged to select high quality certified seeds and those that have cooling equipment should do bunching to enhance the shelf life of the vegetables.
1. **Timely Application of Fertilizers:** Apply recommended fertilizer or well decomposed manure on vegetables when conditions are suitable, avoiding application immediately before heavy rainfall to reduce nutrient losses.
2. **Staggered Planting and Harvest:** Stagger planting and harvest regularly to take advantage of favourable moisture conditions.

SUMMARY MESSAGE FOR THE CROPS SECTOR

1. The OND 2026 rains are likely to be heavier and longer than usual. This brings opportunities — for planting, water harvesting and stronger yields — but also serious risks: flooding, erosion, pests, diseases and disrupted transport.
2. **Before the rains:** Prune, mulch, dig drainage, prepare seedlings, apply manure, clean water harvesting infrastructure such as gutters and storage tanks, and spray fungicide with a sticker.
3. **During the rains:** Scout daily, harvest ripe coffee immediately, plant new trees after the first heavy rain, stagger ALV planting, harvest rainwater and monitor pests and diseases.
4. **After the rains:** Assess damage, repair drainage, replant gaps, and continue value addition and marketing.
5. **Ensure Gender Equality, Disability and Social Inclusivity (GEDSI):** Deliberate efforts should be made to ensure that women, men, and people living with various disabilities have equitable access to weather information and intervention measures.
6. **Stay informed. Stay prepared. Stay safe.**

5.5 LIVESTOCK SECTOR

OPPORTUNITIES (POSITIVE IMPACTS)

1. **Abundant Pasture and Fodder Regeneration:** Natural grass, napier, brachiaria, pakchong, and desmodium will grow faster, providing plenty of cut-and-carry forage. This benefits dairy cows, shoots, dual-purpose cattle, and dairy farmers in Teso North (Malaba, Angurai, and Kakapel hills), Teso South (Amukura, Chakol), Butula (Marachi), and Matayos (Nasewa) — areas with good soils and upland conditions.

Expect **rapid pasture growth and abundant natural forage**.

Advisory/Action: Conserve surplus as hay and silage for the dry season.

2. **Increased Milk Production and Better Animal Body Condition:** Animals will be better fed, experience less heat stress, and have more water, leading to more milk. This benefits women dairy groups, milk vendors, and the Busia Dairy Cooperative in Matayos (Mayenje), Butula (Elukhari), Nambale town, and Teso South (Adungosi) — zero-grazing zones.

Improved nutrition will lead to increased milk yields.

Advisory/Action: Link farmers to milk coolers, cooperatives, and markets.

Carry out strategic deworming and vaccination as disease incidence increases with rain.

3. **Best Time for Fodder Establishment:** Good moisture for planting fodder, hay, and silage making benefits KALRO demo farms, Benga University, and fodder bulking groups in KALRO Alupe, Busia ATC, Butula (Benga University), and Teso North (Angurai).

This is the **ideal time to establish high-value fodders**.

Advisory/Action: Source certified seeds from KALRO or the County. The County should support farmer field schools on fodder establishment and management.

4. **Improved Livestock Breeding and Reproduction:** Improved heat signs and conception rates — less heat stress. Cool, wet conditions improve animal comfort, cows show heat clearly, and AI success is higher. This benefits AI service providers, dairy cows, shoots (more pregnancies), and bull owners in Matayos (Mayenje), Butula (Marachi), Teso South (Adungosi), and Teso North (Malaba border breeding stock).

Animals will **come on heat faster and conception rates will improve** due to **good animal body condition**.

Advisory /Action: Plan breeding programs — AI for improved breeds. Provide housing and shelter for newborn calves, lambs, and kids to prevent pneumonia and cold during heavy rains.

- 5. Increased Water Availability for Livestock:** Water pans, rivers, and boreholes will be full for 5 to 6 months. Animals will no longer trek long distances, water intake will improve, and less energy will be wasted. This benefits all livestock, women, and youths — reduced labour fetching water and easy cleaning of zero-grazing dairy units in Bunyala (Budalangi, Sisenye, Makunda), Samia (Sio Port, Agenga, Nangina — Lake Victoria backflow, pans full), Teso South (Amukura, Adungosi — valley pans at Obekai, Kotur), Teso North (Malaba, Angurai, Kakapel — seasonal streams flow), and Nambale (Kisoko, Nambale town — shallow wells recharge).

Water pans, dams, rivers, and boreholes will recharge, and trekking distance will be reduced.

Advisory /Action: Farmers should **practice water harvesting and treatment.**

NEGATIVE IMPACTS (RISKS)

- 1. Increased Incidences of Foot Rot, Foot and Mouth Disease (FMD), Lumpy Skin Disease (LSD), and Mastitis Due to Waterlogging:** Dairy cows under zero grazing, tethered shoots, and women dairy groups are at risk in Nambale, Butula (Elukhari, Marachi), Matayos (Mayenje), and Samia (Nangina, Agenga) — poorly drained zero-grazing units — and Bunyala lowland — permanent mud.

Wet, muddy conditions increase disease pathogens.

Advisory /Action: **Avoid grazing animals in waterlogged fields. Vaccinate against FMD and LSD before the rains peak and report any disease outbreak to the sub-county vet immediately.**

- 2. Feed Contamination and Collapse of Livestock Housing:** Dairy meal, maize germ, hay, and poultry feeds stored in homes and weak shades are at risk in Butula, Matayos, and Nambale — intensive dairy feed stored in grass-thatched stores — and Bunyala — hay rots in dykes.

Damp feeds develop moulds causing aflatoxicosis. Weak structures may collapse.

Advisory/ action: **Store hay, silage, and dairy meals on raised pallets in dry, well-ventilated stores. Strengthen and repair animal sheds and poultry houses using strong poles.**

- 3. Drowning, Displacement, and Livestock Death from Floods:** Tethered shoots, calves, indigenous chicken, and poor households — especially homes headed by women and the elderly — are at risk in Bunyala (Mudembi, Makunda, Bulemia along River Nzoia) and Samia (Funyula, Sio Port backflow areas) — low-lying areas near River Nzoia are at high risk of floods.

Low-lying areas near River Nzoia are at high risk of floods.

Advisory/ Action: **Avoid grazing in low-lying, marshy, and flood-prone areas. Relocate animals to higher grounds when a flood alert is issued.**

- 4. Calf, Kid, Lamb, and Chick Mortality from Cold, Pneumonia, and Coccidiosis:** Calves, kids, and chicks kept on cold floors, and youth and women poultry groups are at risk in all 7 sub-counties, but worse in Teso North (Kakapel), Teso South (Adungosi), and Samia (Nangina).

Cold stress and wet conditions kill young stock quickly.

Advisory /Action: Provide warm, dry housing for young ones — use dry bedding and brooders for chicks.

- 5. Disruption of Markets, Veterinary Services, and Milk Collection:** Livestock traders, milk cooperatives, agrovets, and extension officers are at risk in Amukura Livestock Market (Teso South), Bumula and Nambale markets, Funyula–Budalangi road (Ruambwa bridge off), and milk coolers in Matayos and Butula — inaccessible.

Poor roads may disrupt access to markets, cause milk spoilage, and prevent vets from reaching farms.

Advisory /Action: Farmers should form groups or cooperatives to bulk milk and arrange shared transport before roads become worse. Farmers should practice value addition — mala, yoghurt — to reduce losses. Avoid selling stressed or sick animals in flooded markets to prevent disease spread.

PREPAREDNESS AND PREVENTION MEASURES — BEFORE THE RAINS COMMENCE

- 1. Vaccinate Livestock Against FMD, LSD, and Other Endemic Diseases:** Vaccinate all cattle against FMD and LSD before the rains peak. Deworm strategically and treat for external parasites before the wet season begins. Consult the sub-county veterinary officer for a vaccination schedule.
- 2. Repair and Strengthen Animal Housing:** Repair and strengthen animal sheds and poultry houses using strong poles. Raise floors to prevent waterlogging. Ensure roofs are leak-proof. Provide warm, dry bedding areas for young stock.
- 3. Construct and Clear Drainage Channels Around Livestock Units:** Open clogged channels and trenches around zero-grazing units, poultry houses, and feed stores. Direct runoff away from animal housing. Use raised platforms for feed storage.
- 4. Harvest and Store Feed Safely:** Harvest and conserve surplus pasture as hay and silage. Store hay, silage, and dairy meals on raised pallets in dry, well-ventilated stores. Use hermetic storage bags where possible. Test stored feed for aflatoxin before use.
- 5. Establish Fodder and Source Certified Seeds:** Source certified fodder seeds from KALRO or Busia County Department of Agriculture and Livestock development and veterinary services. Plant high-value fodders — napier, brachiaria, pakchong, desmodium — during the early rains. Participate in farmer field schools on fodder establishment and management.

- 6. Plan Breeding and AI Programs:** Plan breeding programs around improved body condition. Schedule AI for improved breeds. Prepare shelter for newborn calves, lambs, and kids to prevent pneumonia and cold.
- 7. Arrange Market and Transport Logistics:** Form groups or cooperatives to bulk milk and arrange shared transport before roads become impassable. Identify alternative market routes. Coordinate with agrovets for feed and veterinary supplies.
- 8. Harvest and Store safely rain water:** Practice water harvesting and treatment. Clean and repair water pans, dams, and boreholes. Ensure water storage for livestock during peak rains.

RESPONSE MEASURES — DURING AND AFTER THE RAINS

- 1. Avoid Grazing in Waterlogged and Flood-Prone Areas:** Avoid grazing animals in waterlogged fields, low-lying marshy areas, and flood-prone areas near rivers. Relocate animals to higher grounds when a flood alert is issued. Monitor weather forecasts and flood warnings.
- 2. Maintain Dry, Clean Animal Housing:** Keep animal houses dry and clean. Use dry bedding for young stock. Provide brooders for chicks. Ventilate houses well to prevent respiratory diseases. Remove wet bedding and manure regularly.
- 3. Continue Strategic Deworming and Vaccination:** Carry out strategic deworming and vaccination as disease incidence increases with rain. Report any disease outbreak to the sub-county vet immediately. Isolate sick animals to prevent spread.
- 4. Store Feed Safely and Test for Aflatoxin:** Store hay, silage, and dairy meals on raised pallets in dry, well-ventilated stores. Test stored feed for aflatoxin before use. Avoid feeding mouldy or damp feed to animals.
- 5. Practice Value Addition and Bulk Marketing:** Practice value addition — mala, yoghurt — to reduce losses. Bulk milk through groups or cooperatives. Arrange shared transport before roads become worse. Avoid selling stressed or sick animals in flooded markets.
- 6. Conserve Surplus Pasture as Hay and Silage:** Conserve surplus pasture as hay and silage for the dry season. Harvest at the right maturity stage. Dry thoroughly before storage. Use hermetic storage bags where possible.
- 7. Monitor Animal Health and Body Condition:** Monitor animals for signs of foot rot, FMD, LSD, and mastitis. Check body condition regularly. Adjust feeding based on animal condition and production stage.
- 8. Ensure Water Quality and Availability:** Ensure livestock have access to clean water. Treat water where necessary. Clean and maintain water pans, dams, and boreholes. Avoid stagnant water sources that may harbour disease.

SUMMARY STATEMENT FOR THE LIVESTOCK SECTOR

The OND 2026 season in Busia County is expected to bring above-average rainfall, an early onset, and warmer-than-usual temperatures, with November as the peak rainfall month. For the livestock sector, this forecast presents significant opportunities — abundant pasture and fodder regeneration, increased milk production, improved breeding and reproduction, and increased water availability — alongside serious risks — foot rot, FMD, LSD, mastitis, feed contamination, flooding, young stock mortality, and market disruption.

Farmers, dairy groups, and livestock traders should prepare now: vaccinate against FMD and LSD, repair animal housing, clear drainage channels, harvest and store feed safely, establish high-value fodders, and plan breeding programs. During and after the rains: avoid waterlogged grazing areas, maintain dry housing, continue strategic deworming and vaccination, store feed safely, practice value addition, and bulk milk through cooperatives.

By taking these actions, Busia County's livestock sector can maximize the benefits of the OND 2026 rains while minimizing losses and damage — protecting livelihoods, food security, and household incomes across all seven sub-counties.

5.6 DISASTER RISK MANAGEMENT

OPPORTUNITIES (POSITIVE IMPACTS)

1. **Enhanced rains** promote **increased preparedness activities** which provide an opportunity for the department to **mainstream DRR in budgeting**. Such opportunities help enhance DRR activities at the **county, sub-county and local levels** (CMDRR in **Teso North, Teso South, Teso Central, Bunyala and Samia Sub County communities**).
2. **Enhanced rains** are also a **wake-up call** for the Disaster management department to explore ways of **building resilience** among vulnerable community members in the aforementioned sub-counties. The department should assess the situation and preparedness, engage the community on mechanisms through which **community resilience** can be strengthened.
3. **Increased rains** also provide an opportunity for the Disaster management department to **review its response and sectoral plans** regarding possible impacts such as **floods** in the sub-counties above and related hazards such as **lightning strikes, hailstorms, and strong wind** in the entire County.
4. **Increased rains** are an opportunity to promote **water harvesting** for future use, especially in areas that are worst hit by prolonged dry spells such as **Budalangi, Samia, and Teso North Sub Counties**. Harvesting and storing water may help **reduce the impact of dry spells** in future.
5. **Enhanced rains** may help in **identification of resource gaps** at the county and local offices in vulnerable sub-counties and wards, provide an opportunity for **job creation**, and create avenues for **collaboration** with other departments and organizations — **livestock, crop environment, water and irrigation, fisheries, and the Kenya Meteorological Department** as well as **CBOs, CSOs, NGOs and Church-Based organizations**.
6. **Enhanced pasture and browse regeneration** due to increased moisture may lead to **increased livestock performance**.
7. **Enhanced recharge of ground water** may lead to **increase in availability of water** for homesteads.
8. **Increased food production and improved livelihoods** due to favourable agricultural conditions.

NEGATIVE IMPACTS (RISKS)

1. **Increased rainfall** may cause **flooding** in low-lying areas of **Teso North, Teso Central and Bunyala** (Bunyala South, Bunyala Central, Bunyala North, Bwiri, Ang'urai North, Ang'urai South, Malaba Central, Amukura West, Amukura East, and Chakol North wards), which in turn increases the risk of **loss of lives, death to animals, and property destruction and loss of livelihoods**.
2. **Increased rains** may cause **excess moisture in the soil** leading to **waterlogging** in the aforementioned wards, especially areas along rivers **Malakisi, Walatsi, Malaba,**

Sio and Nzoia and as well areas bordering **Lake Victoria**. This may lead to **flooding (run-off, riverine, flash floods, back flow)** and cause **displacement of people**.

3. **Enhanced rain waters**, which may be coupled with **strong winds** in the county. The effect may be more severe especially in Busia, Butula, Nambale, and Teso South sub counties that are expected to receive the highest rainfall amounts. This could cause **damage to transport and communication infrastructure** — damage to roads cutting off movement, damage to electricity systems, etc. Damage to transport and communication services may make access to goods and services difficult.
4. **Increased rains** may lead to **large-scale effects** across the four vulnerable sub-counties, causing **significant strain to equipment and material resources** such as fire equipment, rescue boards, safety jackets, etc. Widespread effects may render **prompt responses difficult** as resources may be committed in more critical areas.
5. **Human resource strains** to verify reports and respond to calls from different sub-counties. This may affect **evacuation** as the few available emergency workers and responders are forced to work in expansive areas and round the clock. This may result in **fatigue and gaps in local responses**.
6. **Increased loss of human lives** due to floods causing **drowning and travel accidents**.
7. **Increase in disease outbreaks** due to increase in breeding because of **waterlogging and high temperatures** — **water-related diseases**.
8. **Disruption of school learning calendar and exams** due to **flooding of schools**.
9. **Increased incidences of lightning strikes** may cause **loss of life, property and livelihood**.
10. **Displacement of families** due to **flooding and landslides**.

PREPAREDNESS AND PREVENTION MEASURES — BEFORE THE RAINS COMMENCE

1. **Desilt and unclog drainage systems** in urban areas and along roads in all the 35 wards of Busia. **Desilt** (dredge) and **straighten (river train) lower courses of River Malakisi, River Malaba, River Sio, and River Nzoia** and their tributaries to avoid accumulation of water in rivers prior to the enhanced rains. This will help prevent **flooding** caused by increased water volumes downstream.
2. **Construct new dykes and rehabilitate existing ones** along the aforementioned rivers to prevent **overflows** from river water. Enhanced rains could cause increase in water volumes which may **break banks and flow into settlements**. Strong and high dykes will help prevent floods that may lead to **displacements**.
3. **Disseminate early warnings** and creating **awareness** among vulnerable populations on possible actions to take by the community members. Share information early to help the community prepare for **evacuation**.
4. **Develop evacuation plans and map out evacuation centers** in high-risk areas (wards mentioned above). Identify **safe meeting points, assess vulnerability, safe escape routes, and disseminate /communicate alerts** (emergency contacts) to the community members.

5. **Resource mobilize and preposition relief items. Restock food items, non food items (NFIs) including shelter, water treatment chemicals, and critical medications. Train volunteers and emergency responders and set up multi-sectoral teams.**
6. **Assess structures and rehabilitate** dykes, water level meter gauge, Automatic weather stations, and houses) before and after the rains to determine capacity to prevent floods and assess damage after the rainy season.
7. **Monitor and heed to flood warning alerts** (including media bulletins). **Evacuate early** to safer and higher grounds. Ensure that early warning, evacuation, and emergency response systems are **gender responsive and disability inclusive**. Make communication accessible, evacuation routes and shelters safe. Make sure **GEDSI** participate in disaster preparedness and response.
8. **Avoid crossing or walking through flooded roads and swollen rivers** during the rainy season.
9. **Prune heavily branched trees** close to power lines. Have **automatic cut outs** by KPLC when it rains and shows signs of danger.
10. **Sensitize communities** on how to stay safe from strong winds and lightning strikes.
11. **Use of screen nets** in high value crops to minimize impacts of hailstones;
12. **Keep livestock in their shed** before rain commences.
13. **Inspect, repair and reinforce maintenance** of key infrastructures e.g. roads, railways, bridges.
14. **Adhere to strict inspection** of constructed houses especially in high risk areas.
15. **Clear culverts, drains and bridge openings** before intense rainfall; **repair critical drainage failures**, damaged approaches and erosion points where immediate works are feasible; **reinforce water pan embankments; enforce waste disposal & management laws.**
16. **Activate the Search and Rescue Teams (SART)** and emergency responders prior and during the rains in high-risk areas. Action: government and partners

RESPONSE MEASURES — DURING AND AFTER THE RAINS

1. **Evacuate early** to safer and higher grounds when flood warnings are issued. **Avoid flooded roads and swollen rivers.**
2. **Monitor and heed to flood warning alerts** (including media bulletins) and ensure that early warning, evacuation, and emergency response systems are **gender responsive and disability inclusive**.
3. **Harvest rainwater** whenever it rains for future use, i.e., for irrigation, livestock, and household consumption.
4. **Closely monitor** flood levels and early signs of mass movements (e.g., tilting of poles, cracks in walls). **Report** any emerging risks to relevant authorities.

5. **Timely apply fertilizers** — apply recommended fertilizer or well decomposed manure on crops when conditions are suitable. Avoid application immediately before heavy rainfall to reduce nutrient losses.
6. **Stagger planting and harvest** — stagger planting and harvest regularly to take advantage of favourable moisture conditions.
7. **After the rains:** Assess damage, repair drainage, replant gaps, and continue value addition and marketing.
8. **Ensure Gender Equality, Disability and Social Inclusivity (GEDSI):** Deliberate efforts should be made to ensure that women, men, and people living with various disabilities have equitable access to weather information and intervention measures.

SUMMARY MESSAGE FOR THE DISASTER RISK MANAGEMENT SECTOR

1. The **OND 2026 rains** are likely to be **heavier and longer than usual**. This brings **opportunities** — for preparedness, resilience building, water harvesting and collaboration — but also **serious risks**: flooding, displacement, disease outbreaks, infrastructure damage, lightning strikes and transport disruption.
2. **Before the rains:** Desilt and unclog drainage systems, construct/rehabilitate dykes, disseminate early warnings, develop evacuation plans, preposition relief items, train volunteers, and conduct structural assessments.
3. **During the rains:** Monitor flood warnings, evacuate early to safer grounds, avoid flooded roads and swollen rivers, harvest rainwater, and report emerging risks.
4. **After the rains:** Assess damage, repair drainage, rehabilitate infrastructure, and continue community sensitization.
5. **Ensure Gender Equality, Disability and Social Inclusivity (GEDSI):** Deliberate efforts should be made to ensure that women, men, and people living with various disabilities have equitable access to weather information and intervention measures.
6. **Stay informed. Stay prepared. Stay safe.**

For more information about Disaster Risk Reduction, please contact:

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For more information weather, please contact:

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5.7 ENVIRONMENT AND NATURAL RESOURCES

OPPORTUNITIES FOR ENVIRONMENTAL GAINS

1. **Water harvesting and storage.** Heavy rains are an opportunity to harvest and store large amounts of rainwater for future use. This cuts water bills and keeps supplies available during drier periods. It also increases underground water recharge and raises the water table.
2. **Home kitchen gardens.** Above-average rainfall means homestead kitchen gardens can produce more fresh food, improving nutrition and reducing food costs. The expected rains are a chance to expand gardens, diversify the crops grown, and involve all household members in farming.
3. **Tree planting.** Trees provide welcome shade in hot weather, windbreaks that protect buildings, and fruit for household consumption. Planting trees also helps restore and protect the natural environment. OND 2026 offers the best time to plant tree seedlings: organize tree-planting days in October at the start of the rains, so that the heavy November rainfall helps saplings establish well and grow strongly.
4. **Building sand deposition.** Building sand is likely to be deposited in the beds of Rivers Sio, Nzoia, Malaba and Malakisi and their tributaries, making sand readily available to builders after the rains.
5. **Vegetation growth and primary productivity.** Increased growth in forests and grasslands drives wetland resurgence, flushes out pollutants and expands vital breeding grounds. It improves carbon sequestration, increases soil nutrients, helps control invasive species, and enhances soil moisture and plant transpiration.
6. **Disaster preparedness funding.** The Government of Kenya, NGOs and other organizations are making additional funds available to prepare for severe weather impacts. Projects to strengthen and repair institutional buildings and sanitary facilities may be eligible. Community authorities should engage with the county government and development partners, document infrastructure needs, and submit proposals.
7. **Medicinal and food plants.** The rains will promote the growth of terrestrial and aquatic plants used for food and medicine.
8. **Soil deposition and farm productivity.** Soil carried by river water from upstream areas is likely to be deposited in flat, low-lying areas, which may increase farm productivity in the floodplain and enhance agricultural production on lowland farms.
9. **Stakeholder strengthening.** The rainy season is an opportunity for relevant stakeholders to strengthen coordination and preparedness for future weather impacts.

PRIMARY ENVIRONMENTAL THREATS

1. **Flooding** is the biggest single threat. Heavy rainfall and flooding may damage farmland and ecosystems, making them unusable. Communities in Bunyala, Teso South and Teso North sub-counties are at high risk of displacement and loss of farm produce.
2. **Soil erosion.** Large amounts of surface run-off may cause severe erosion, especially on bare ground where trees have been cut, leading to loss of soil fertility, reduced crop yields and land degradation.

3. **Water pollution** may occur when floodwater carries solid waste, sewage, agricultural chemicals, animal waste and other pollutants into rivers, wetlands and wells. Pit latrines in flood-prone areas may be swept away, contaminating water sources. Factory effluent may reach Lake Victoria through the rivers, damaging fish stocks.
4. **Riverbank destabilization, landslides and mudslides** may occur on Rivers Nzoia, Sio, Malakisi and Malaba, and in hilly areas. Saturated soils and strong run-off may destabilize riverbanks, drainage channels and exposed slopes, damaging roads, bridges, buildings and public facilities, displacing people, and causing loss of agricultural and forest land.
5. **Ecosystem destruction** may occur when floods cause excessive growth of water hyacinth in Lake Victoria, destroying fish breeding grounds.
6. **Vector breeding** may increase when abandoned quarry sites and borrow pits fill with stagnant water and become mosquito breeding grounds.
7. **Waste management problems** may arise from standing water, blocked drainage and poorly managed solid waste, creating conditions for disease-causing vectors and foul odours.
8. **Wind damage** may occur when strong winds cause trees to fall on houses and block roads, causing deaths, injuries and destruction of property.
9. **Increased disease incidence** may result from warmer temperatures and wet conditions that promote insect breeding and water-borne diseases such as malaria, diarrhoea and cholera.

ANTICIPATORY ACTIONS (BEFORE SEVERE WEATHER STRIKES)

Water and soil conservation

- Install gutters and pipes to capture rainwater from rooftops and store it in tanks. This may cut water bills, ensure water is available during drier periods, increase underground water recharge and raise the water table.
- Construct cut-off drains and culverts before the first heavy rains to prevent waterlogging, erosion and infrastructure damage.
- Practice soil conservation measures, including fanya juu, terraces, gabions, cut-off drains and strip grass planting along steep slopes. Stabilize all degraded areas within the county.
- Avoid cultivation, settlement and vegetation clearance within wetlands, riverbanks and hilly areas.
- Plant vetiver grass, bamboo and indigenous trees along riverbanks to stabilize loose soil and prevent erosion as water levels rise and rivers flow faster.
- Practice agroforestry, mulching and cover cropping on farms at all times to minimize soil erosion and increase soil fertility and crop yields.
- Consult agricultural extension officers about the most effective soil conservation measures for your shamba.

Tree planting and windbreaks

- Plant trees to the east of buildings during this rainy season for higher chances of survival and to act as windbreaks. Plant them at least 20 metres away from buildings to prevent property destruction and loss of lives should the trees fall over.

- Plant mango trees in shelter belts. Their strong roots make them resistant to being blown over, and their thick branches and dense leaves help break the force of the wind.
- Organize tree-planting days in October, at the start of the rainy season, with community members, schools and local environmental groups. The heavy rainfall expected in November will help saplings establish well and grow strongly.
- Prune heavily branched trees to reduce their weight. Remove tall trees situated to the east of buildings and less than 20 metres away. Tall, shallow-rooted trees are dangerous to buildings, livestock, property and human life.

Drainage and waste management

- Clear and maintain drainage channels, culverts and waterways by removing solid waste and other blockages, to prevent flooding and waterlogging.
- Backfill abandoned borrow pits and plant them with vegetation to stabilize the ground. Fence them off before they fill with water to prevent accidents.
- Convert large abandoned borrow pits into fish ponds or water pans for watering livestock, income generation and extra water storage.
- Fence off water sources to prevent animals from polluting them.

Infrastructure, health and preparedness

- Install lightning arrestors on public buildings such as schools, hospitals and halls, as well as on homes, to protect against lightning strikes.
- Improve hygiene and sanitation by ensuring latrines are in good working order, and deworm learners regularly to prevent disease outbreaks.
- Harvest, store and disinfect rainwater. Boil water before drinking, or sterilize it with the appropriate dose of water sterilization chemicals.
- Back up community and institutional records digitally now, to prevent the loss of critical academic and community records during floods.
- Create community and institutional WhatsApp and SMS groups to alert the whole community to fast-moving developments and give timely advice. Set up a separate SMS group to reach people without smartphones.
- Stay informed by monitoring KMD weather forecasts and alerts through WhatsApp, radio, the KMD website, local chiefs and other communication channels.
- Disinfect classrooms and houses at least once a week by mopping floors with disinfectant, to eliminate jiggers and other pests.
- Seek early medical treatment for illness and disease. Visit the nearest health facility as soon as you feel unwell.
- Document infrastructure needs and submit proposals to the county government and development partners to access additional disaster preparedness funding.

Community awareness and inclusion

- Raise community awareness on how to prepare for and respond to floods, lightning, strong wind and hailstones. Publicize appropriate safety measures within one week of receiving this advisory.
- Coordinate community actions closely with disaster management authorities to ensure a more effective and inclusive response to emergencies.
- Plan and equip evacuation centres to provide safe, dignified shelter for community members likely to be displaced.
- Conduct community awareness in flood-prone areas of the county, ensuring that women, children, youth, elderly persons, people living with disabilities and other vulnerable groups are represented.

RESPONSE ACTIONS (DURING AND AFTER SEVERE WEATHER)

Immediate safety

- Avoid walking or driving through floodwater and swollen rivers. Use only safe routes in flood-affected areas to avoid the risk of drowning.
- When thunder is nearby or lightning flashes, shelter inside a strong building. Stay away from walls, keep children dry, switch off mobile phones and other electronic equipment, avoid touching metal objects, and avoid any contact with water. Never shelter under trees when it is raining.
- Evacuate early. As soon as flood warnings are issued, move community members from buildings at risk of flooding to safe, higher ground in an orderly manner. Act before the floodwaters arrive to prevent loss of life.
- Heed alerts and advisory messages from KMD, radio stations, extension services and local leaders.
- If you live in a flood-prone area, make a household plan to evacuate quickly to higher ground when water rises to dangerous levels.

Health and sanitation

- Purify all drinking water by boiling it until bubbles rise to the surface, or by sterilizing it with the correct dose of purification drops or tablets, to avoid water-borne diseases.
- Provide immediate trauma support to community members displaced by flooding, to support their mental health and recovery.
- Report effluent discharge incidents to the nearest sub-county and county environment office for a quick remedy.

Infrastructure and recovery

- Conduct a detailed damage assessment after any structural damage to buildings, to enable rapid repairs. Submit it promptly to the Busia County government and other potential funders, together with a detailed bill of quantities for the materials and specialist labour required.
- Install backup electricity generation to maintain power during mains outages. Choose solar panels in preference to diesel or petrol generators to avoid the ongoing cost of fuel.
- After the rains, control soil erosion to protect grounds: plant trees and build gabions to stop gullies from forming on roads and slopes.
- After the rains, clear and maintain drainage channels, culverts and waterways of solid waste and other blockages to prevent flooding and waterlogging.
- Rehabilitate degraded areas through tree planting and the restoration of wetlands and riparian vegetation.
- Build houses on strong foundations with strong wall materials, and place doors and windows on the long sides of the house that face north.

Environmental enforcement

- Inspect and fine factories that fail to comply, or to make their effluent systems compatible, with government regulations. *Responsible: Environment officers.*

- Monitor pollution and contamination of water sources from septic tanks and open defecation, and report it to environment officers.

KEY SAFETY MESSAGES

1. **Expect a wetter, warmer season.** Rainfall is likely to be above average, peaking in November, with heavy rain, lightning, strong winds and rare hailstorms.
2. **Prepare early in flood-prone areas.** Bunyala, Teso South and Teso North sub-counties are at highest risk. Move to higher ground as soon as flood warnings are issued.
3. **Stay out of floodwater.** Never walk or drive through floodwater or swollen rivers, and never shelter under trees during rain or lightning.
4. **Protect your health.** Boil or treat all drinking water, keep latrines in good order, and visit a health facility as soon as you feel unwell.
5. **Plant and drain.** Plant trees in October, at least 20 metres from buildings, and clear drains, culverts and waterways before the heavy rains.
6. **Stay informed.** Follow KMD forecasts and alerts through WhatsApp, radio, local chiefs and other channels.

About this advisory

Compiled by: Shadrack Maloba, County Director of Natural Resources, Busia County

Adapted for public use by: Busia County Environment Sector Working Group

This guide is part of a series of sectoral advisories produced for the Busia County OND 2026 Participatory Scenario Planning process. Share freely with schools, parents, teachers, community members and environment stakeholders.

Issued by: Busia County Director of Environment, Director of Natural Resources, and the Kenya Meteorological Department (KMD) County Director of Meteorology

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Key Contacts and Sources

Who	For what
Busia County Director of Meteorology: Benjamin Bahati; Mobile Phone: 0722225568	Weather forecasts and alerts
Busia County Director of Environment: Dennis Chirande; Mobile phone: 0704622028	Environment sector guidance and enforcement
Busia County Director of Natural Resources: Shadrack Maloba Mulanya; Mobile Phone: 0722478546	Natural resources sector guidance
Sub-county environment offices	Reporting effluent discharge
Local chiefs and administration	Community alerts
Agricultural extension officers	Soil conservation advice

6. KEEP UP TO DATE WITH THE LATEST WEATHER INFORMATION

Weather forecasts and outlooks are always being updated as new information becomes available. This seasonal outlook should be used **together with KMD's monthly, weekly, 5-day, and daily forecasts**, as well as **ad hoc severe weather warnings** from **KMD** and advice messages from the relevant authorities to support:

- Safe farming decisions
- Travel planning
- Community safety and preparedness

All Climate information stakeholders are encouraged to **share practical, timely advice** to protect lives and livelihoods.

FURTHER INFORMATION AND ADVICE

For sector-specific advice, contact your **Ward or Sub-County, or County Officer** for crops, livestock, health, water, education, or environment.

For weather updates, call **County Director of Meteorology: Mr. Benjamin Bahati** on:

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