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SUMMARY OF THE OCTOBER–DECEMBER 2026 SHORT RAINS SEASONAL FORECAST

- **Rainfall Outlook for Nyamira County**

The entire county is projected to experience above-normal rainfall during the October–November–December (OND) season. While the overall distribution will be fair to good across most areas and dates, the season will still be punctuated by occasional dry spells and heavy rainstorms. The seasonal rainfall is expected to peak in **November 2026**.

- **Onset and Cessation (Start and End)**

The rainy period will serve as a continuation of the precipitation experienced in September 2026. These wet conditions are forecast to persist through the end of the year and transition into January 2027, when the seasonal rains are expected to come to an end.

What is El Niño?

El Niño is a naturally occurring climate pattern characterized by the unusual warming of surface waters in the central and eastern equatorial Pacific Ocean. It is the warm phase of a larger phenomenon called the El Niño–Southern Oscillation (ENSO). Under normal conditions, strong trade winds blow from east to west across the Pacific, pushing warm water toward Asia and allowing cold water to rise along the coast of South America. During an El Niño event, these

trade winds weaken or even reverse, allowing the warm western Pacific waters to slide eastward, shifting the ocean's warmest temperatures toward the Americas.

The **October–December (OND) 2026** short rains season in **Nyamira County** will be shaped by a powerful, concurrent alignment of three primary climate drivers: the Intertropical Convergence Zone (ITCZ), a strong El Niño, and a positive Indian Ocean Dipole (+IOD). Together, these systems will significantly alter regional atmospheric dynamics, driving highly enhanced, above-average rainfall across the county.

1. The Intertropical Convergence Zone (ITCZ)

The ITCZ serves as the fundamental seasonal mechanism for rainfall in East Africa. As this low-pressure belt shifts southward across the equator during the October to December (OND) period, it brings convective cloud cover and precipitation. Nyamira County's high-altitude topography naturally intercepts this moisture, resulting in localized orographic lifting. In 2026, the ITCZ provides the baseline structure for the season's rainfall, while its intensity is heavily amplified by oceanic anomalies.

2. Strong El Niño Conditions

An active, strong El Niño in the equatorial Pacific Ocean drastically alters global atmospheric patterns. For East Africa, El Niño weakens the traditional Walker circulation, shifting the zone of rising, unstable air directly over the region. This atmospheric destabilization leads to increased convection and moisture convergence over the western highlands of Kenya, triggering more frequent, intense, and prolonged storm systems across Nyamira's agricultural zones.

3. Positive Indian Ocean Dipole (+IOD)

Simultaneously, a strong positive Indian Ocean Dipole (+IOD) creates a stark sea surface temperature gradient across the Indian Ocean. Warmer-than-average waters near the East African coast accelerate evaporation, while cooler waters near Indonesia suppress it. This temperature differential acts as a massive conveyor belt, pumping vast reservoirs of warm, moisture-laden air inland toward the Kenyan highlands.

The Combined Impact on Nyamira County

When a **strong El Niño** and a **positive IOD** peak together, they supercharge the **ITCZ**. The +IOD supplies an unprecedented volume of atmospheric moisture, while El Niño and the ITCZ generate the intense upward thermodynamic lift needed to precipitate it. For Nyamira County, this tri-factor convergence ensures heavily enhanced seasonal rainfall. Given Nyamira's steep, hilly terrain and high baseline elevation, this atmospheric synergy drastically elevates the seasonal risk of flash flooding, severe soil erosion, and destructive landslides.

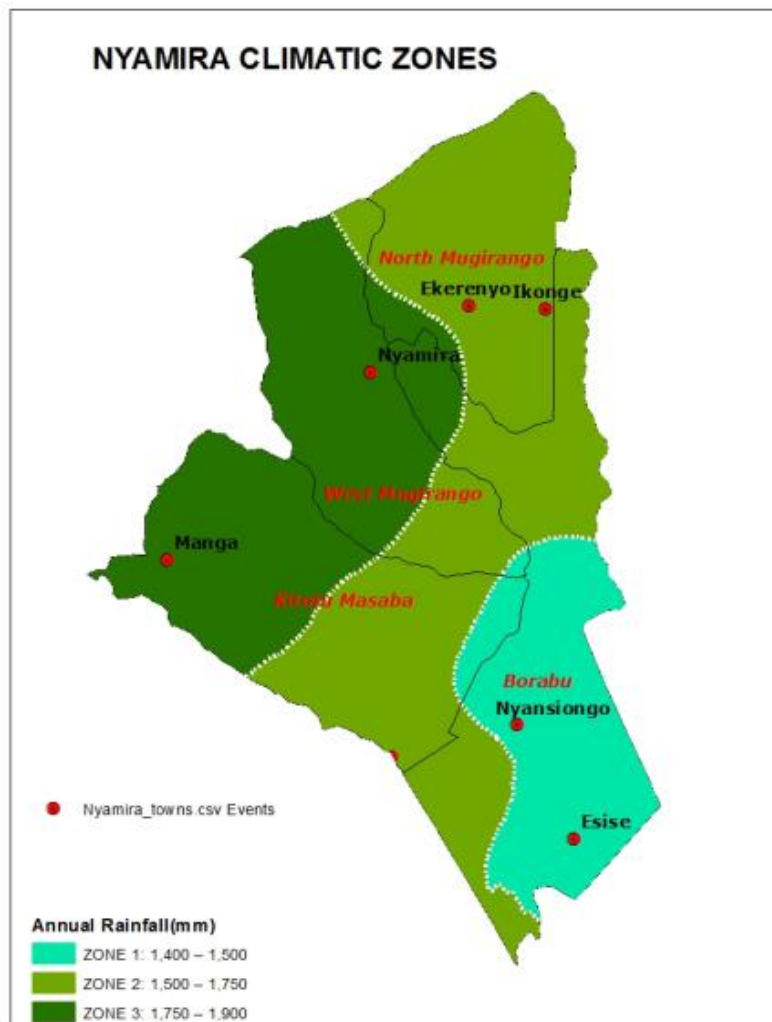


Figure 1: Nyamira County climate zones

As shown in **Figure 1**, Nyamira County is divided into **three distinct climatic zones** based on annual rainfall levels:

- **Zone 1 (1,400–1,500 mm):** This zone comprises the wards of **Borabu, Nyansiongo, Esise, Mekenene, Kajauri, Mwongori, and Kipkebe.**
- **Zone 2 (1,500–1,750 mm):** This zone encompasses wards such as **Ekerenyo, Magwagwa, Ikonge, Kiabonyoru, Nyamusi, Gekendo, and Miruka.**
- **Zone 3 (1,750-1,900 mm):** This zone contains wards including **Nyamira, Nyamaiya, Kebirigo, Sironga, and Tombe, Bosamaro, Gachuba, Rigoma, Manga, Kemera.**

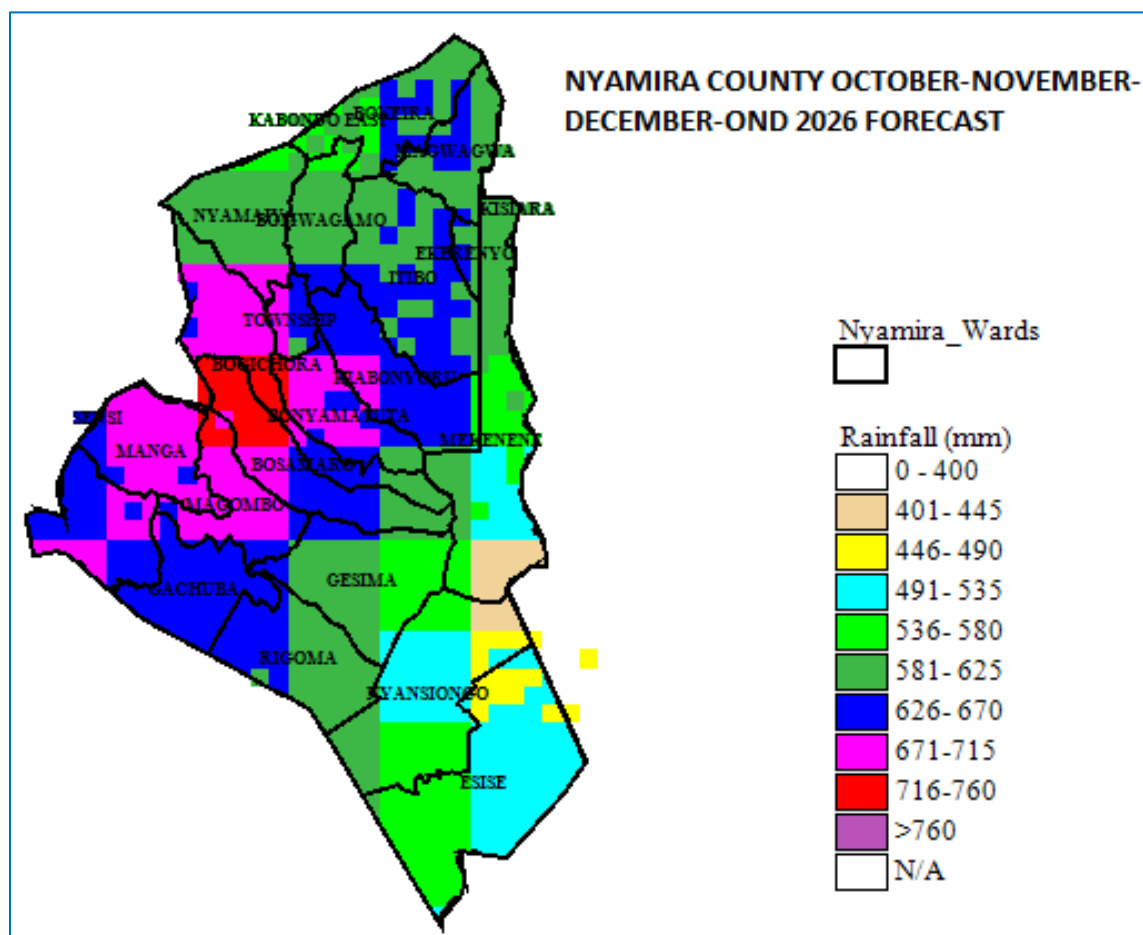


Fig. 2

Figure 2: **Projected rainfall volumes (in mm) across Nyamira County during the October–December (OND 2026) rainy season.**

Seasonal Rainfall Outlook

During the October–December short rains season, **Nyamira County** is projected to experience **above-normal rainfall**. The precipitation is anticipated to be well-distributed in both time and space. The peak of the rainy season is expected in **November 2026**.

Spatial Rainfall Distribution

The map above (**Figure 2**) illustrates the forecasted rainfall volume (in millimeters) for each individual **Ward** across Nyamira County during this season.

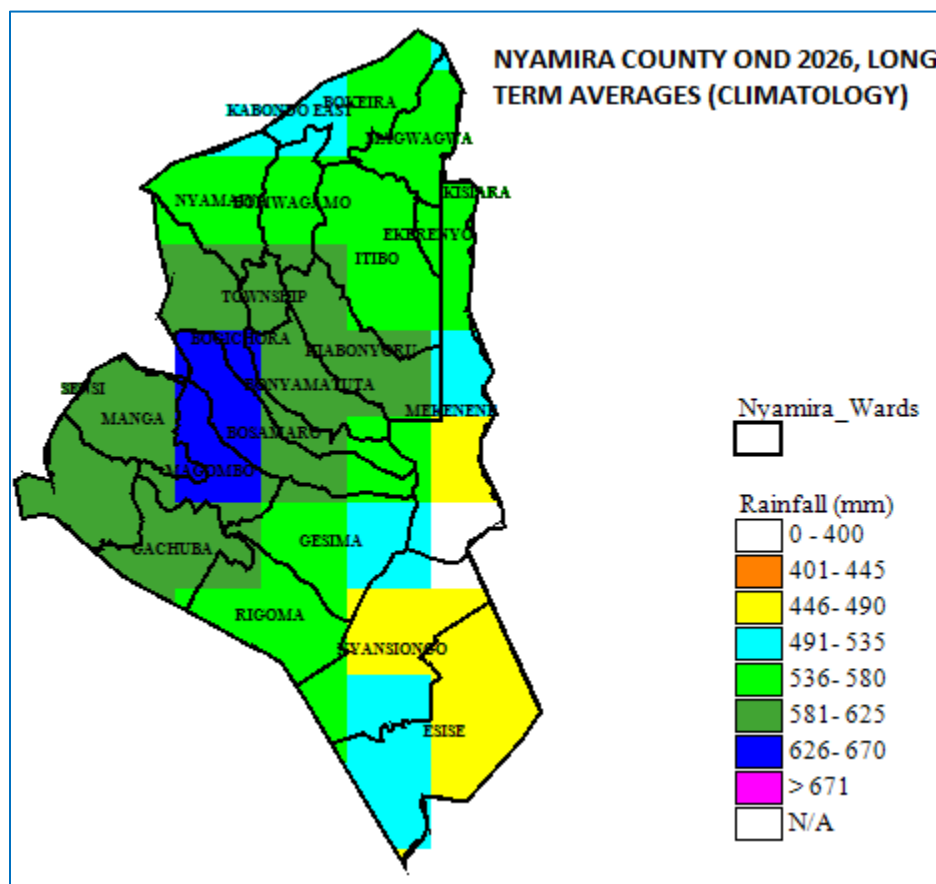


Figure 3: Nyamira October-November-December (OND) Long term average (Climatology) Rainfall Volumes (mm).

The map in **Figure 3** displays the **30-year long-term rainfall averages** for the October–December (OND) season, spanning from **1991 to 2020**. In contrast, **Figure 2** shows the **above-average rainfall projections** (in mm) across all areas of Nyamira County for the upcoming OND season.

To determine whether the forecast for a specific location is higher, lower, or aligned with historical trends, compare the projected rainfall volume in **Figure 2** with the historical baseline in **Figure 3**.

Please note that "**Above-Normal**" rainfall is neither inherently good nor bad. It simply indicates that the forecast exceeds the historical average, which smooths out year-to-year climate variations.

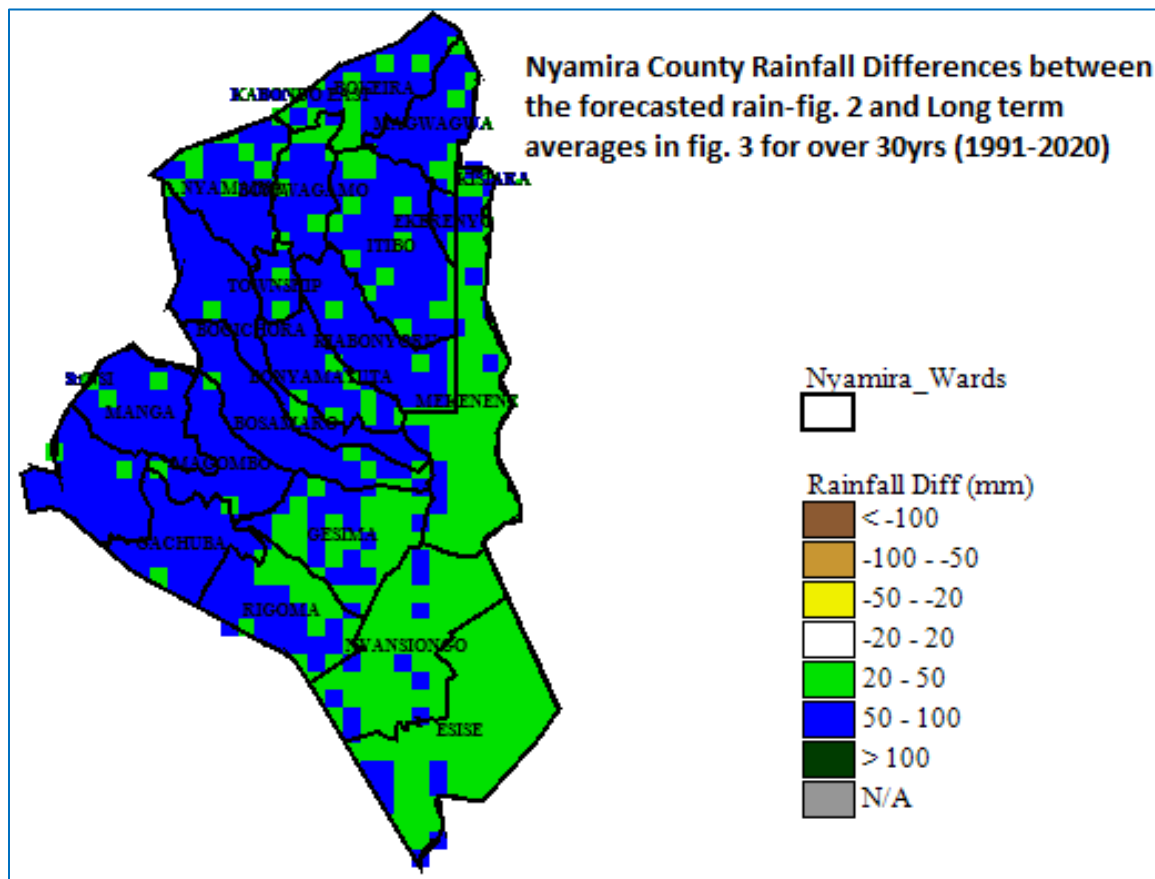


Figure 4: Rainfall Difference between Long term (climatology) and forecasted rainfall in the year 2026.

Figure 4 indicates that the entire Nyamira County is projected to receive **above-average rainfall**. Wards areas shaded in **dark blue** are expected to experience **50 to 100 mm** of rainfall above normal levels, while Wards highlighted in **green** are anticipated to exceed normal amounts by **20 to 50 mm**.

SECTOR-BY-SECTOR IMPACTS AND ACTION PLAN

Below is a comprehensive breakdown of the hazards, high-risk areas, opportunities, and explicit advisories across your specified sectors:

1. Livestock Sector

- **Hazards:** Outbreaks of vector-borne diseases like Rift Valley Fever (RVF) and foot-and-mouth disease; pneumonia from cold conditions; rotting of animal hooves; washing away of animal structures.
- **Areas of Risk:** Low-lying grazing fields near rivers (e.g., banks of River Gucha); poorly ventilated structures on clay soils.
- **Opportunities:** Massive growth of pasture and fodder; high potential to harvest and preserve silage/hay for future dry seasons.
- **Advisories:** Conduct mass vaccinations for RVF ahead of the rains; move livestock to elevated structures; stock up on dewormers and antibiotics.

2. Crops Section (Maize, Beans, Tea)

- **Hazards:** High soil erosion scraping off topsoil; waterlogging choking crop roots; rotting of beans and maize awaiting harvest; severe leaching of fertilizers.
- **Areas of Risk:** Hillside farms without terrace protection; valley bottom farms.
- **Opportunities:** Favorable conditions for moisture-loving perennial crops (like tea); long-term moisture storage in deep soils.

- **Advisories:** Dig cutoff drains and stabilize terraces with nappier grass; harvest current crops immediately and use mechanical or solar dryers rather than sun-drying on wet ground.

3. Bananas

- **Hazards:** Windstorms knocking over heavy banana pseudo-stems; waterlogging causing root rot and "Panama disease" fungal spread.
- **Areas of Risk:** Areas with loose volcanic soils on steep slopes; banana orchards situated in swampy valley edges.
- **Opportunities:** Rapid vegetative growth and increased bunch sizing due to limitless water supply.
- **Advisories:** Support heavy, fruiting banana stems with sturdy props or bamboo poles; ensure deep drainage trenches are dug throughout orchards to channel away standing water.

4. Local Vegetables (Sukumawiki, Managu, Sagaa)

- **Hazards:** Physical damage to soft leaves from heavy rainstorms; high prevalence of fungal blights and dampening-off; rapid spoilage reducing shelf life.
- **Areas of Risk:** Low-lying vegetable gardens; open-field plots lacking windbreaks or drainage.
- **Opportunities:** Potential for high yields if managed inside greenhouses or raised nursery beds.
- **Advisories:** Grow vegetables on raised beds to keep roots clear of water; apply organic mulching gently to protect topsoil from raindrops; use copper-based fungicides proactively.

5. Fisheries Sector

- **Hazards:** Overflowing fish ponds allowing fish to escape; flooding washing silt, agricultural chemicals, and mud into ponds, choking fish.
- **Areas of Risk:** Aquaculture ponds situated adjacent to natural rivers or streams.
- **Opportunities:** Overflowing natural water bodies allow wild fish to repopulate; opportunity to fill and expand inland water retention dams.

- **Advisories:** Install strong overflow mesh screens on pond outlets; build perimeter dykes or earthen walls around fish ponds to prevent runoff contamination.

6. Disaster Management Sector

- **Hazards:** Severe landslides causing fatalities and burying homes; flash floods cutting off entire villages; displacement of large numbers of families.
- **Areas of Risk:** Steep hillsides of Manga Ridge, parts of Nyamira Town on valley slopes, and flat valley floors along major river arteries.
- **Opportunities:** Testing and strengthening localized early-warning networks and multi-agency response protocols.
- **Advisories:** Map out and evacuate high-risk landslide zones immediately; preposition emergency rescue equipment and set up safe temporary displacement camps on high ground.

7. Water and Sanitation Sector

- **Hazards:** Contamination of unprotected springs and shallow wells by surface runoff; collapse of pit latrines due to soil saturation; washing away of water pipelines.
- **Areas of Risk:** Densely populated informal settlements; rural areas reliant on open springs.
- **Opportunities:** Unprecedented rainwater harvesting capacity at household and institutional levels.
- **Advisories:** Distribute water treatment chemicals (Aqua tabs/chlorine) widely; secure the bases of pit latrines; encourage the setup of massive rainwater storage tanks.

8. Public Health Sector

- **Hazards:** Upsurge in waterborne diseases like cholera and typhoid; spike in malaria cases from stagnant pools breeding mosquitoes.
- **Areas of Risk:** Areas with poor sanitation networks; communities surrounding slow-moving water channels.
- **Opportunities:** Launching localized community-health preventative campaigns that improve baseline hygiene behaviors.

- **Advisories:** Stock up local dispensaries with anti-malarial and rehydration salts; distribute treated mosquito nets; urge the public to boil all drinking water.

9. Transport and Safety Sector

- **Hazards:** Mudslides burying roads; bridges washing away; slick, muddy roads causing accidents; poor visibility.
- **Areas of Risk:** Feeder roads connecting rural farms to main markets; bridges over the Gucha and Sondu rivers.
- **Opportunities:** Identifying structurally weak infrastructure for priority upgrading after the season.
- **Advisories:** Enforce strict bans on driving or walking across flooded bridges; clear clogged roadside culverts; advise Boda Boda operators against speeding during heavy storms.

10. Energy Sector

- **Hazards:** Falling trees and mudslides knocking down power lines, causing prolonged blackouts; flooding of local micro-hydro setups.
- **Areas of Risk:** Power grids running through heavily forested or hilly terrains.
- **Opportunities:** Maximum water inflows into national hydro-power dams, lowering broad power-generation costs.
- **Advisories:** Prune or cut down weak trees near power lines; secure emergency backup generators for critical installations like hospitals.

11. Business and Market Sector

- **Hazards:** Interrupted supply chains leading to commodity price inflation; physical flooding of open-air markets; drop in customer foot traffic.
- **Areas of Risk:** Traditional open-air markets located in low-lying urban squares.
- **Opportunities:** High demand for logistics, safety gear (umbrellas, boots), storage facilities, and agricultural drying tech.
- **Advisories:** Shift goods to raised, covered storage units; encourage digital business options (mobile money, remote ordering) to prevent complete supply-chain pauses.

12. People with Disabilities (PWDs) and Vulnerable Groups

- **Hazards:** Extreme physical isolation when paths become mud tracks; inability to flee fast-onset mudslides or flash floods; lack of accessible emergency info.
- **Areas of Risk:** Impoverished households situated on marginal land or steep slopes.
- **Opportunities:** Developing inclusive county disaster maps that permanently register vulnerable citizens.
- **Advisories:** Establish a dedicated, door-to-door community evacuation volunteer network specifically for PWDs; ensure emergency alerts are broad-casted via multiple accessible channels (audio, visual, SMS).

13. Environment and Forestry Sector

- **Hazards:** Massive loss of topsoil down river basins; silting up of wetlands; severe riverbank fracturing.
- **Areas of Risk:** Deforested hillsides; areas where riparian zones have been illegally cultivated.
- **Opportunities:** Perfect seasonal conditions for massive, successful tree-planting campaigns and bamboo propagation on slopes.
- **Advisories:** Distribute thousands of indigenous and bamboo seedlings; restrict any cultivation within 30 meters of riverbanks to let vegetation lock down the soil.

14. County Governments (Nyamira & Kisii)

- **Hazards:** Diverting massive budgeted funds into emergency humanitarian response; public outcry over destroyed infrastructure or delayed rescue.
- **Areas of Risk:** Entire county budgeting, infrastructure planning, and public health setups.
- **Opportunities:** Enhancing inter-county cooperation and pulling national climate-resilience funding.
- **Advisories:** Pass emergency contingency funds immediately; coordinate a multi-sectoral El Niño steering committee; utilize local youth groups to manually clear urban drainage networks ahead of the rains.

[For further information, please contact:](#)

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