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# Rapid Impact & Needs Assessment On Caana-yaskax Flash Floods

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**Document Title:** Rapid impact & needs assessment on  
Caana-yskax flash floods.

This assessment report data was collected from Cana-yaskax village which was affected by spring flash floods.

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# Executive summary

In the aftermath of the devastating flash floods in Caana-yaskax on May 4-5, 2024, this rapid assessment has revealed alarming statistics. 70 farms have been damaged, significantly affecting the cultivation of vital crops such as onions, tomatoes, spinach, papayas & melons. Moreover, 20 out of 31 shallow wells used for irrigation in Caana-yaskax have been impacted, with ten made completely inaccessible to farmers. Additionally, 5 out of 7 greenhouses dedicated to tomato cultivation have been completely destroyed.

The reduction in available fresh produce has led to crop price hikes and supply shortages, exacerbating the economic condition of the community. Furthermore,

farm laborers have been left without jobs, compounding the economic challenges faced by the community. The flash floods have resulted in the destruction of approximately 583.75 square kilometers of arable land, causing the formation of carved channels and gullies in the landscape of Caana-yaska & its surroundings.

The estimated overall financial loss resulting from this flash flood stands at \$150,000. Immediate financial assistance is crucial to aid farmers in their recovery efforts & to rebuild agricultural infrastructure.

Collaborative action is needed, including the construction of flood barriers and the

installation of rainwater harvesting systems, to mitigate future risks and ensure the resilience of the community against similar incidents.

# 1. Introduction

Caana-yaskax is an agropastoral village under the Garowe district, located at Latitude 8.836583 and Longitude 48.747163. It was significantly affected by flash floods resulting from rainfall on May 4-5, 2024, which continued for 15 consecutive hours. The floods impacted a total of 250 households, causing substantial damage to farms, greenhouse farming technology, water infrastructure, and arable land.

As reported by the FAO-Somalia Water and Land Information Management (FAO-SWALIM), Puntland received light to moderate rainfall between late April and early May. This weather event exacerbates the region's existing climate-related challenges, posing additional threats to food security and community resilience, which are already critically weakened by a recurrent drought.

This report presents a comprehensive assessment of the impact of these recent flash floods by identifying the extent of the damage, determining immediate repair and rehabilitation needs, recommending improvements in agricultural and land practices & proposing long-term strategies for effective flood management. This assessment is crucial for informing stakeholders about the magnitude of the impact of flash floods on the community in Caana-yaskax.

## 1.2 Objectives of the assessment

- To assess the extent of the impact of flash floods as a result of heavy rains in Caana-yaskax.
- To identify the immediate needs of impacted communities that require urgent action.
- To propose a long-term, sustainable strategy for managing the impact of flash floods in Caana-yaskax.

## 2. Methodology

The assessment was jointly conducted by KAALO's WASH engineers and the agronomist team. The team employed a combination of Key Informant Interviews (KIIs) with community members, including village leaders in Caana-Yaskax & observational methods to evaluate the impact of the flash flooding on farms, water infrastructure & the affected areas. KIIs served as the primary data source, while observations were utilized to validate findings and address any issues requiring clarification.

## 3. Findings



### 3.1 Food Security and Livelihood

According to observations made by the assessment team, a total of 70 farms in Caana-yaskax were damaged due to recent flash floods. Medium-height crops, short crops and ground cover crops, including onions, tomatoes, spinach, papayas & melons, were destroyed to varying extents.

In the medium and short-height crops, all papaya trees, hot peppers, tomatoes & nearly 90% of melon crops were washed away. Furthermore, 70% of the onions cultivated in the flooded area and some lemon trees were uprooted. The average estimated financial loss to total crops being washed away is as follows: \$10,000 worth of papayas, \$15,000 worth of hot peppers & \$600 worth of onions. Furthermore, 5 out of the 7 greenhouses used for tomato cultivation were completely destroyed by the recent flash floods.

In light of this agricultural infrastructure destruction, farmers are facing significant financial losses. Subsis-

tence farmers affected by flash floods are now seasonally unemployed as their main income source was destroyed. Without immediate assistance, affected farmers may fall into debt or deeper poverty as they struggle to recover from the loss of their primary source of income.

Crop price hikes and supply shortages were reported due to the reduction in available fresh produce & reduced supply. Furthermore, as per the village community leaders, farm laborers who relied on agricultural work find themselves without jobs, further exacerbating the economic situation of the community. The average estimated financial loss for farms is estimated to be \$70,000.00.



### **3.2 Water Sanitation and Hygiene (WASH)**

A recent flash flood in Caana-yaskax has also significantly impacted the irrigation infrastructure in the area. Field observations made by the team reveal that 20 out of 31 shallow wells used for irrigation were affected. This includes 10 shallow wells that were severely destroyed, making them inaccessible to farmers. The flood in Caana-yaskax also caused damage to the Earth dam, resulting in the removal of protective soil and rock embankments. This may increase the risk of future flooding. Additionally, the HDPE plastic sheet, silt trap & inlet canals of the dam sustained damage.

The flash flood not only caused damage to physical water infrastructure but also disrupted shallow well solar services. Runoff and debris carried by the flood made solar pumping systems and pipes out of service. The floodwater also poses a potential health risk, as it can carry contaminants such as sewage, remnants of chemical fertilizers & pesticides.

This contaminated water can infiltrate wells and treatment facilities, making it unsafe for drinking by children and animals. A significant number of flies and mosquitoes, which may carry malaria, have been observed, as the stagnant water creates a breeding environment & families don't have means to protect themselves.

The destruction of shallow wells has severely impacted access to irrigation for local communities. An estimated 50 households are now without irrigation, as each destroyed shallow well was relied upon by approximately 5 farming households. Some of the damaged water infrastructures in Caana-yaskax was constructed, rehabilitated & equipped with solar power by KAALO Aid & Development Organization with funding from NORAD through the Development Fund. Other water infrastructures & greenhouses established by NGOs such as NRC were also badly damaged and destroyed.

No destruction of public infrastructure, such as schools, latrines or health facilities was reported. The impact of the flash flood was mainly limited to the farming areas in Caana-yaskax. The total financial loss for water infrastructure in Caana-yaskax is estimated to be around \$80,000.00.



### **3.3 Immediate & long-term Environmental impact**

A total of 583.75 square kilometers of arable land was destroyed by the flash floods, resulting in the creation of carved channels and gullies in the landscape of Caana-yaskax and its surroundings. This phenomenon further accelerated erosion, rendering the land unsuitable for farming. Additionally, the runoff caused by the flash floods resulted in soil erosion and changes in land structure within the farming area of Caana-yaskax. The flash floods also badly damaged the existing gabion structures in Caana-yaskax. These alterations pose an increased risk of recurrence of future floods. Furthermore, the recent flash floods severely damaged gravel roads connecting Caana-yaskax to the major markets of Garowe & Gardo.

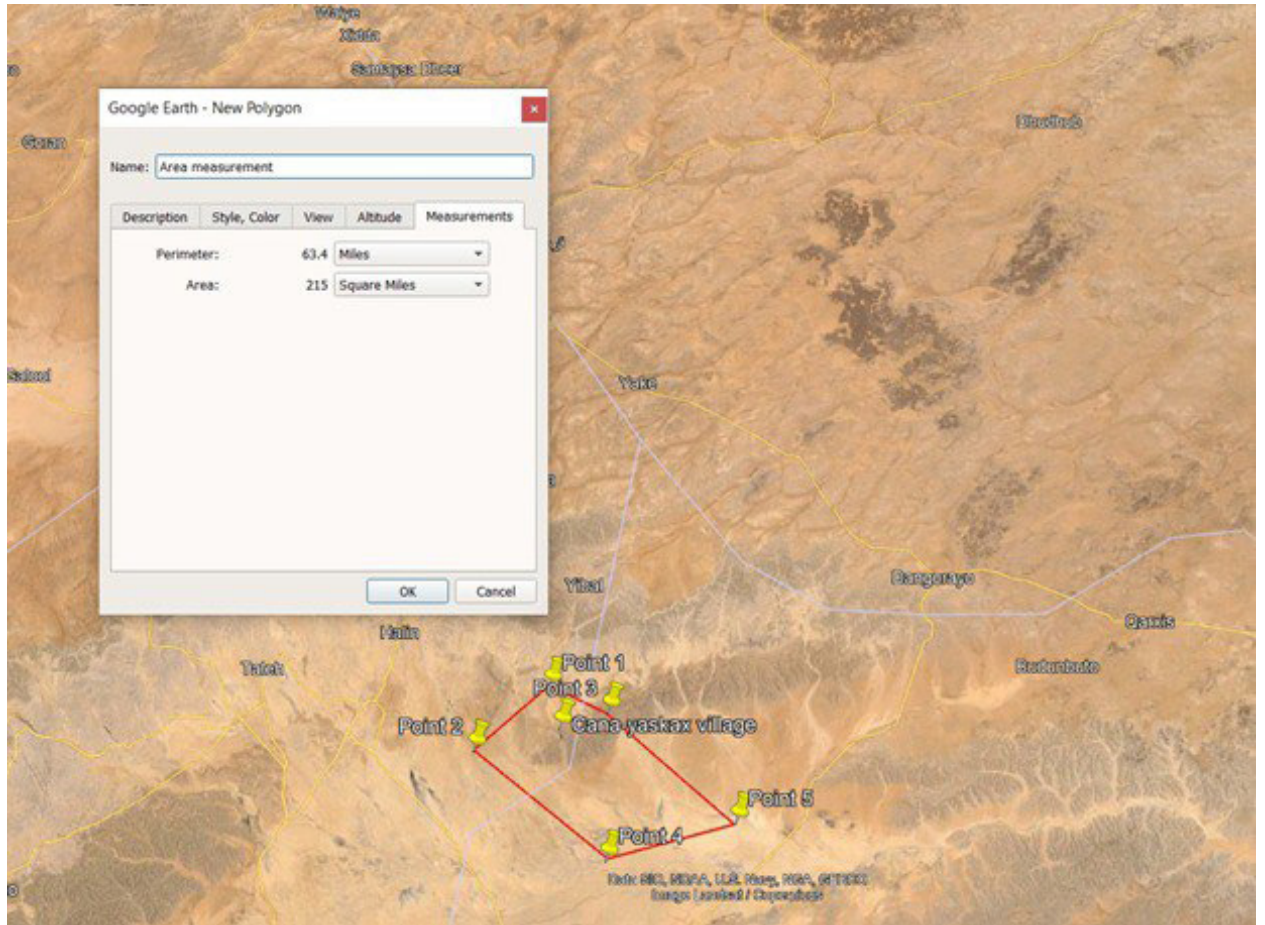


Figure1: Total Area Affected by the floods



## 4.Immediate Needs



Farmers in Caana-yaskax require immediate financial assistance to recover from their substantial losses and to invest in rebuilding their agricultural & irrigation infrastructure. This support is essential for restoring livelihoods and ensuring the economic stability of affected households.

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Provision of seeds, fertilizers & essential farming tools is critical to enable farmers to resume their farming. These inputs are necessary to kickstart agricultural activities and restore productivity to the affected farmlands.

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Provision of health kits to flood-flash effected community of Caana-yaskax by providing Water purification tablets or water filters, Mosquito nets & Personal hygiene items.

# 5. Recommendations for Sustainable Flash Flood Management



The community of Caana-yaskax, with the assistance of stakeholders including the government & NGOs, should construct flood barriers along the seasonal riverbanks (Tog) such as gabion baskets and soil bands. This will help prevent floodwaters from directly impacting farmlands and residential area.

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Plant native Somali trees and vegetation along the dry riverbanks to stabilize the soil and reduce runoff velocity, which helps to minimize the impact of flash flood.

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Install rainwater harvesting systems such as check dams & soil bands to capture and store runoff during heavy rains, which later be used for irrigation during dry periods.

# Coordinates Of The Damaged Water Infrastructure

*Based on the findings outlined in this report, the estimated total immediate funding required to address the urgent needs and respond effectively to the flash flood impact in Caana-yaskax amounts to **\$170,600.00**.*

Shallow well 1	Latitude:8.834091° , Longitude: 48.744076°
Shallow well 2	Latitude:8.835677° longitude: 48.742714°
Shallow well 3	Latitude: 8.836092° longitude: 48.744270°
Shallow well 4	Latitude: 8.836167° longitude: 48.744102°
Shallow well 5	Latitude: 8.841919° longitude: 48.740744°
Shallow well 6	Latitude: 8.837576° longitude: 48.751634°
Shallow well 7	Latitude: 8.836905° longitude: 48.752261°
Shallow well 8	Latitude: 8.838629° longitude: 48.752038°
Shallow well 9	Latitude: 8.832983° longitude: 48.747674°
Shallow well 10	Latitude: 8.831628° longitude: 48.747251°
Earth Dam	Latitude: 8.858035° longitude: 48.730915°



*Figure 2: Destroyed Shallow well.*



*Figure 3: Damaged Shallow well.*



*Figure 4: Damaged greenhouse farming technology*



*Figure 5: Damaged HDPE sheet for the earth Dam.*



*Figure 6: Formation of gully erosion.*



*Figure 7: Ruined papaya plantation.*



*Figure 8: Damaged check dam.*



*Figure 9: Uprooted Papaya tree.*



*Figure 10: Assessment team conducting KII interviews.*

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