Heavy Rainfall in Trinidad and Tobago (October 2018) Group #11

Group Members

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Description of the Hazard Event

Trinidad and Tobago has a bi-modal climate where there are two distinct seasons; the dry season which occurs from January to May and the wet season from June to December. The county's geographical location falls very close to the North Atlantic Hurricane Basin, which puts it at risk of heavy rainfall events. (Trinidad and Tobago Weather Center 2024).

- Rainfall occurred for three consecutive days (17th - 20th October 2018)
- 80% of the country was affected by flooding
- One months worth of rainfall occurred within those three days
- 13 shelters were opened within the country
- 100 000 to 150 000 person were impacted by the flooding event
- Over 300 person were evacuated from their homes
- The Prime Minister called the event a ***National Disaster***

Impacts of the Rainfall Event

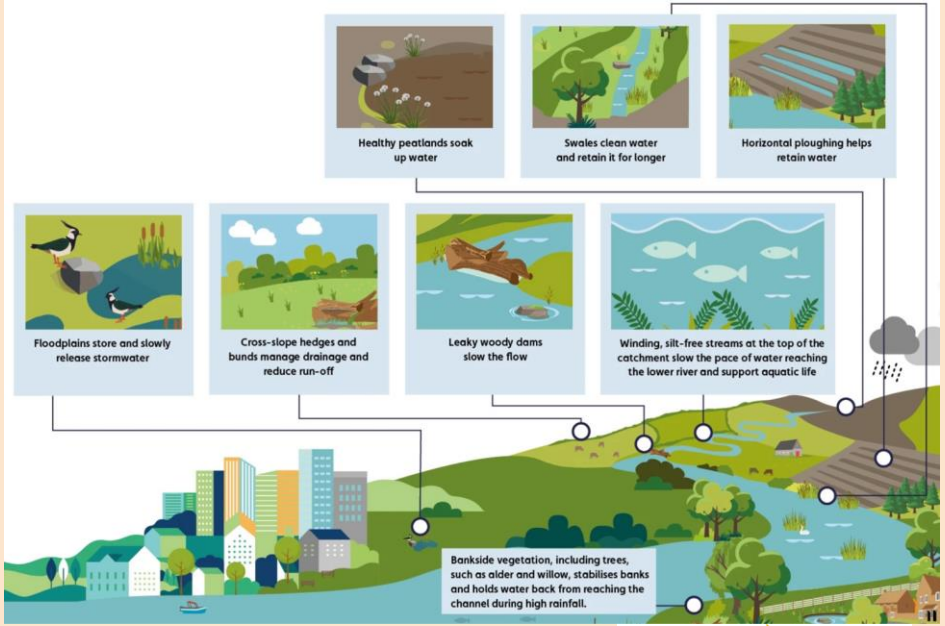
- The highway connecting north to south became impassable
- Communities became marooned and inundated.
- Families were forced to move to their rooftops
- Food crops and livestock were destroyed
- Neighbours became first responders
- Areas had floodwaters from 4 feet upwards.

Four Factors that could have Contributed to the Impacts of the Hazard Event

1. **Frequency and intensity** → While the frequency of rain lasted for some time, the intensity of rainfall was very high, which accounted for one month's worth of rain in three days. Thus the land capacity to hold that amount of rain in such short time frame was maximized, which resulted in intense flooding.
2. **Improper Drainage**→ While Trinidad and Tobago has no shortage of drains or water channels the issues which resulted in large scale flooding during the heavy rainfall event in 2018 was due to poor maintenance of river channels. Dredging was not conducted regularly and improper disposal of waste found its way into water courses and became obstructions (Mendes-Franco 2018).
3. **Illegal dumping of garbage** After the event, significant amount of garbages were found in these areas that were severely affected as well as other areas, thus indicating that is a serious problem for the country.
4. **Improper developmental planning** → Practices such as conducting development in floodplains and developing on hillsides as seen on the Northern range are key factors that contributed to the large scale impact of the rainfall event. These activities increase persons vulnerability to flooding in the event of heavy rainfall. (Trinidad and Tobago Weather Center 2022).For example, Greenvale La Horquetta was one of the most severely affected areas during the floods of 2018. Greenvale is a housing development located in North Central Trinidad. This development was built in close proximity to the Caroni River with its closest point being 100 metres and its farthest point being 500m. The Caroni River is one of the main waterways in Trinidad. During this event the Caroni River burst its banks, which meant that the water had no place to go. This was compounded by the fact that this part of Trinidad recorded the second highest level of rainfall (Trinidad and Tobago Meteorological Service, 2018)

Three Possible Solutions to Reduce Impacts of Future Similar Hazards

1. **Improve Drainage Systems and Infrastructure:** Upgrade drainage networks, construct retention basins, and install barriers.
2. **Implement Sustainable Urban Planning:** Enforce zoning regulations, building codes, promote green infrastructure, restore natural ecosystems.
3. **Enhance Early Warning and Community Preparedness:** Invest in early warning systems, educate communities, and develop emergency response infrastructure.



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