



Flooding In Trinidad and Tobago

GROUP 10

Flooding



Trinidad has experienced significant flooding over the years as a result of heavy rainfall and poor drainage systems. Recently, parts of South Trinidad (Moruga, Penal, Barrackpore) experienced severe flooding as a result of the heavy rainfall associated with a passing tropical wave.

Flooding occurs when the amount of rainfall exceeds the capacity of the drainage systems or the natural absorption capacity of the soil is exceeded, resulting in the accumulation of water on the surface. This results in streets becoming impassable due to high water levels, property damage, loss of agriculture and livestock and in more severe cases, the loss of lives.

Factors that contributed to Flooding



- **Heavy rainfall** is the main factor that leads to flooding. When there is heavy rainfall, drainage capacities become exceeded and the soil becomes saturated resulting in rapid surface runoff.
- **Infrastructure limitations** such as inefficient drainage systems can contribute to flooding. These limitations include blocked or poorly maintained drains and channels which can cause the removal of water to be reduced.
- **Deforestation** particularly in the watershed areas (North Coast – Yara, Marianne; Nariva – Guayamare, Cunupia) greatly reduces the volume of water the soils can absorb and retain, thereby increasing runoff and the likelihood of flooding.

Continued....

- **Pollution** results in the accumulation of garbage and debris within drains, causing them to become blocked. Due to this, water is not able to flow freely, resulting in overflow and the flooding of the surrounding area.
- **Topography** plays a role in flooding since some areas are naturally prone to flooding due to their low-lying nature or poor soil drainage characteristics.
- **Urbanization** alters natural drainage patterns since paved surfaces like roads and buildings increase runoff, directing more water into drainage systems that may already be inadequate.

Possible Solutions To Reduce the impact of Flooding



- Enhance drainage infrastructure by doing regular drain maintenance to ensure that it is not compromised and enhance the current drainage systems' capacity so they can facilitate more water.
- Develop flood awareness programs to help raise awareness about flood risks, mitigation measures and individual preparedness actions.
- The Government can employ measures to help reduce the impacts of flooding such as issuing sandbags to citizens in flood-prone areas thereby potentially reducing the amount of property damage.

Continued...

- Use of Underground Storage Tanks which can capture excess water that can then be treated and reused.
- Permeable parking lots can be utilized by using porous materials such as porous concrete which enables infiltration, leading to a reduction in runoff and pressure on drainage systems.