

Environmental Impact of Bushfires



Background

- AMCHAM T&T is a private sector organization representing approximately 310 members from various sectors
- ARISE T&T is a private sector network under AMCHAM Trinidad & Tobago that engages businesses in implementing the Sendai Framework for Disaster Risk Reduction.
- ARISE is made up of Private sector, Government and Civil Society
- One of the AMCHAM T&T's most active HSE working groups in the Health Working Group

Our Purpose

EDUCATE – *meaning to
nourish and to bring forth potential*

- *The Latin root words used to the word **Educate** are “educare and educere”*

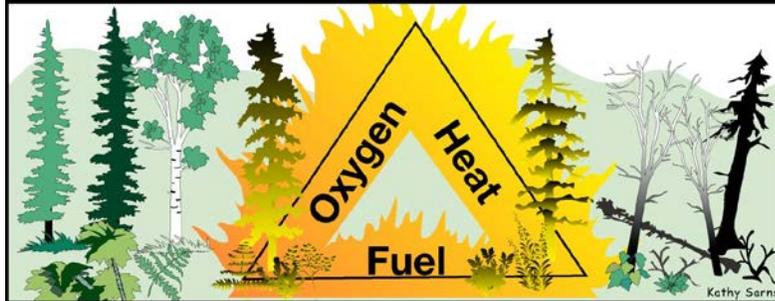
***Educare** implies training from the outside, while **Educere** focuses on drawing out latent abilities*

Summary

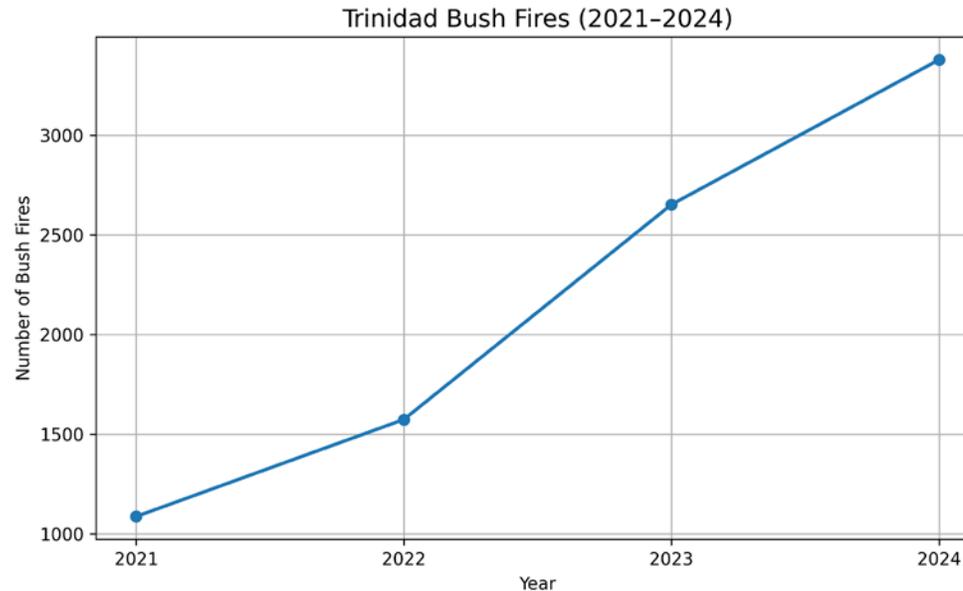
In Summary; **Bush fires** in Trinidad and Tobago are a **Problem** and all of **us** are the only **Solution**

Bush fires are no longer isolated incidents. With **climate change** increased industrial activities, construction, larger scale recreational activities, bush fires have increased in frequency and intensity. Affecting public health, infrastructure, biodiversity, and industrial operations across Trinidad and Tobago.

Summary



90% of bushfires are a direct result of human negligence
either deliberate or otherwise
only approximately 10% happen naturally



Lighting outdoor fires without a permit during the fire season carries a Legal penalty of a \$20,000 fine and six months imprisonment



In case of any emergency call the Fire Service immediately

Call 990

PRIMARY CAUSES

- **Human Causes (Majority):**

- Agricultural slash-and-burn
- Land clearing for development
- Illegal dumping & burning
- Discarded cigarettes

- **Contributing Factors:**

- Prolonged dry conditions
- Higher temperatures
- Wind spread

Impact on Man made Environments and Conveniences



Man Made Environments

- **Communication-** Bushfires scorch everything in their path, including utility poles with important telecommunication and fibre optic lines.
 - **Most recently, on March 11, 2025 a Telecom company reported a service disruption “due to burnt fibre lines along the South Trunk Road.” During the 2024 dry season, bushfires accounted for approximately 10% of fibre cable breaks across the another Telecom network.**
- **Industrial Establishments –**
 - **2019-** Bush fire sets alight bio-hazardous waste pits at Guapo landfill.
 - **2024-**Fire officers said a nearby bushfire spread to the debris on the compound of the scrap metal yard. They said the fire was at the core of the mound and would take a lot of water to extinguish. According to the Fire Service, it may burn for some time before the blaze subsides.

Man Made Environments

- **Other Conveniences impacted includes:**
 - Pipe Borne water
 - Logistics / Roadways
 - Food Security
 - Insurance
 - Business Continuity Impacts

Impact on Natural Environments



ENVIRONMENTAL IMPACTS

- 1 **Air Quality Degradation**
- 2 **Biodiversity & Habitat Loss**
- 3 **Soil Degradation & Erosion**
- 4 **Water Resource Impact**
- 5 **Carbon Emissions**

AIR QUALITY

Poor air quality can disrupt logistics, reduce workforce productivity, increase healthcare costs, affect wildlife and plants.



BIODIVERSITY IMPACT



Wetland and protected areas are especially vulnerable. Fire recovery in tropical ecosystems can take years. Fires in these habitats result in :

- **Habitat destruction/ fragmentation**
- **Wildlife displacement**
- **Increased human-wildlife conflict**
- **Loss of Biodiversity**

SOIL & WATER IMPACT



Loss of vegetative cover increases erosion resulting in sediment runoff into rivers, potentially contaminating the water systems:

- **Impacts water treatment costs**
- **Affects agriculture & food supply chains**

Carbon Emissions

A cyclic impact:

- Climate change impacts the heat intensity during the dry season resulting in more fuel (dried vegetation) for fires
- Burning forest release their captured CO₂ into the atmosphere
- Loss of forest vegetation then reduces the CO₂ capturing.





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What can be Done ?

What Can be Done

- Most literature indicates that 90% or more of bush fires in T&T are caused by human activities. Therefore the human factor must be managed.
- **Some basic control measures are:**
 - Buffer / Fire break zones
 - Controlled burning
 - Adhere to the Legal requirements
 - Having an Emergency Management plan for Bush fires

What Can be Done

- Data-driven fire prediction- Use of Technology and AI
- Weather-based early warning systems
- Working together with regional neighbours to learn and share best practice
- Community/ School based training programs
- Industry and Workforce based programs
- Public Private Partnership



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