



NATURE MONITORING DEVICE

Mankind Adaptation Towards Nature Starts Here

ABSTRACT

According to Taylor Covington, an authoritative researcher, approximately over 60,000 lives has been lost due to natural disasters. It is shown that humanity have not yet adapt with natural disaster and most of the devastating aftermath happen due to unpreparedness to face this disaster. This brand-new innovative internet of Things technology, **Nature Monitoring Device (NMD)** was invented to become device that can predict natural disasters. NMD is equipped with a soil moisture sensor, water level sensor and an IoT attachment. There sensors allow the NMD to collect the real-time data of its environment and upload it to the ThinkSpeak IoT server. This allows the user to monitor the real-time condition of nature's environment. NMD can detect early-sign of natural disasters by cross-referencing the data that are collected. Thus this would allow the disasters to be predicted and authorities can take further action to reduce the casualties and avoid catastrophic aftermath due to the imminent disaster

OBJECTIVE



Cost-effective and affordable

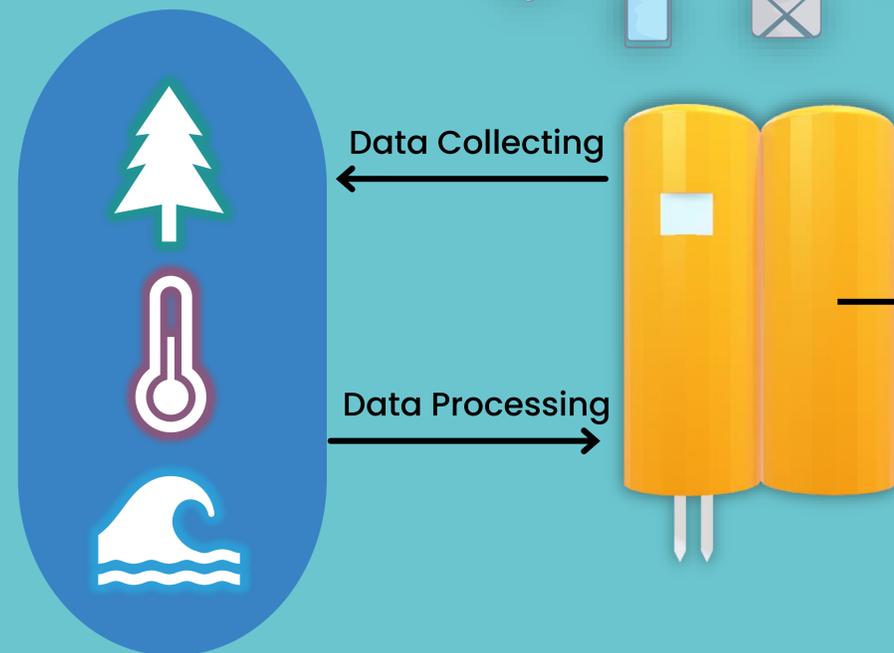
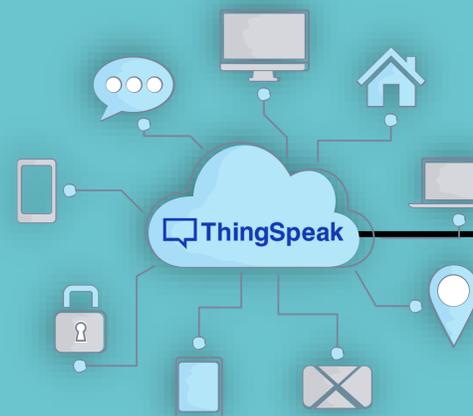


Provide real-time data on hazard and act as an early-warning system

CONCLUSION

In conclusion, this device can be very beneficial to people, not only the scientist and authorities but also civilians. NMD is sophisticated and efficient as it also applies the Internet of of Things technology in observing nature and prevent the destruction of ecosystems. In the end, we believe this project is the key to solve our unreadiness in facing natural disaster in the future.

Nature Monitoring Device is equipped with multiple sensors and attachment along with the IoT Technology featured making it effective in observing the nature



RESULT AND ANALYSIS

Based on our research, the global death toll of natural disaster has skyrocketed since 2018 passing the 10,000 bar. Particularly, the death cause are mainly because of four major natural disaster which is flood, storms, landslides and wildfires. On the contrary, these natural disaster caused huge death toll due to mankind's unpreparedness in facing the disaster

As of 2021, Natural disaster has caused a total loss of RM6.5 Billion (1,433,269,800 USD) yet, The National Disaster Management Agency (NADMA) had only able to provide RM26.9 Million (5,931,643 USD) in order to assist restoring the damaged caused. However, these costs of destruction can be reduced by preparing ourselves to face the disasters ahead.

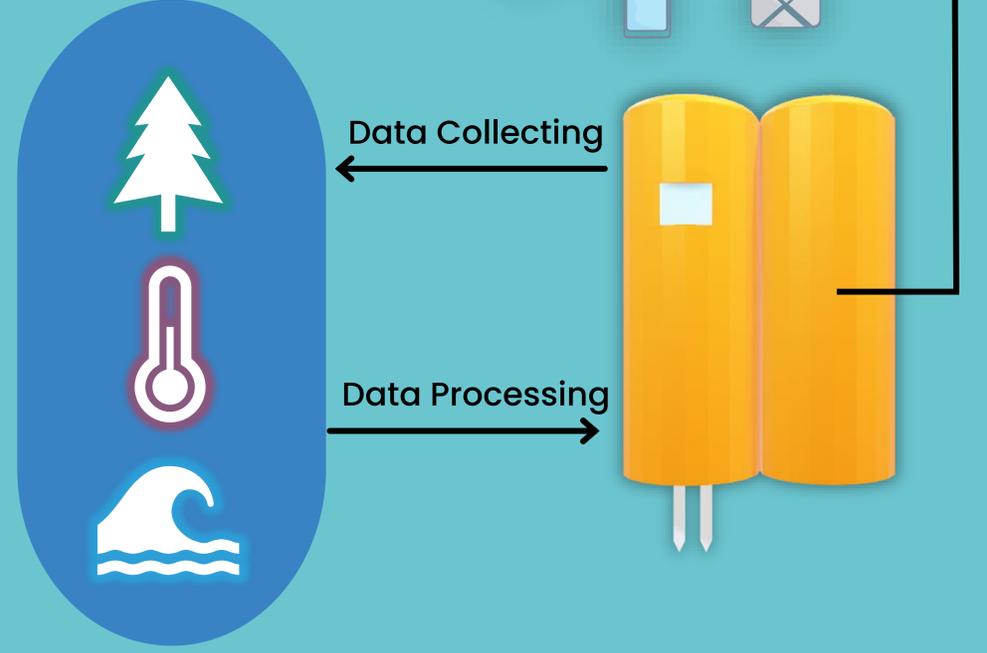


Phase	Material	
Data Collecting	Temperature	Integrated Thermomete on micro:bit
	Water Level	Water level sensor
	Soil Moisture	Soil Moisture Sensor
Data Processing	Micro:bit	
Data Transfer	IoT:bit	Upload data to the ThinkSpeak IoT server
	Mini OLED Display	Display real-time data condition



METHODOLOGY

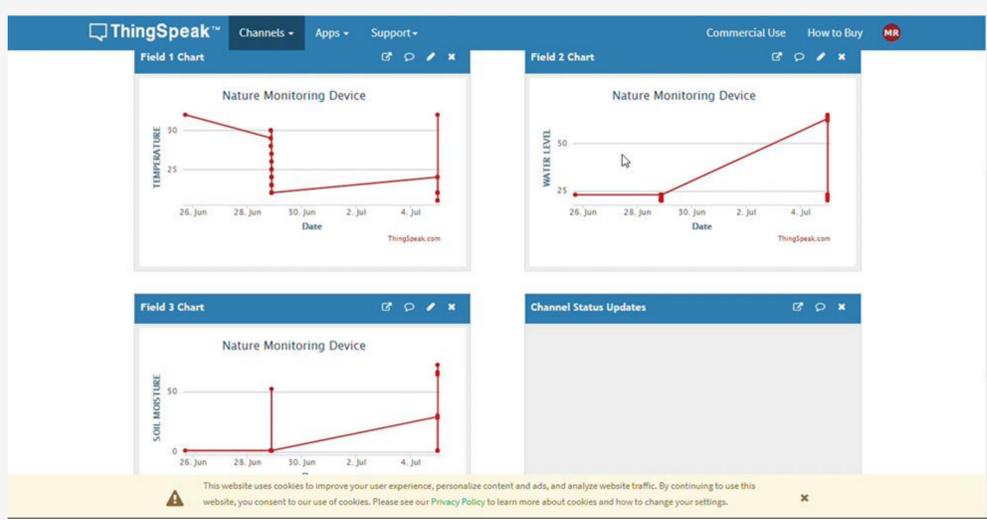
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IoT or Internet of Things is the internet connected to objects, but it's terminal is no longer a computer, but an embedded computer system that is integrated in the internet and support sensors and actuators.

PROTOTYPE TRIAL

Phase	Material	
Data Collecting	Temperature	Integrated Thermometer on micro:bit
	Water Level	Water level sensor
	Soil Moisture	Soil Moisture Sensor
Data Processing	Micro:bit	
Data Transfer	IoT:bit	Upload data to the Thinkspeak IoT server
	Mini OLED Display	Display real-time data condition



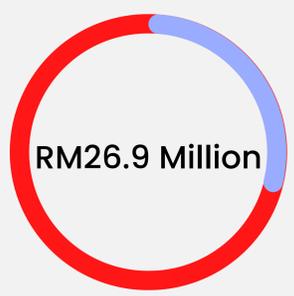
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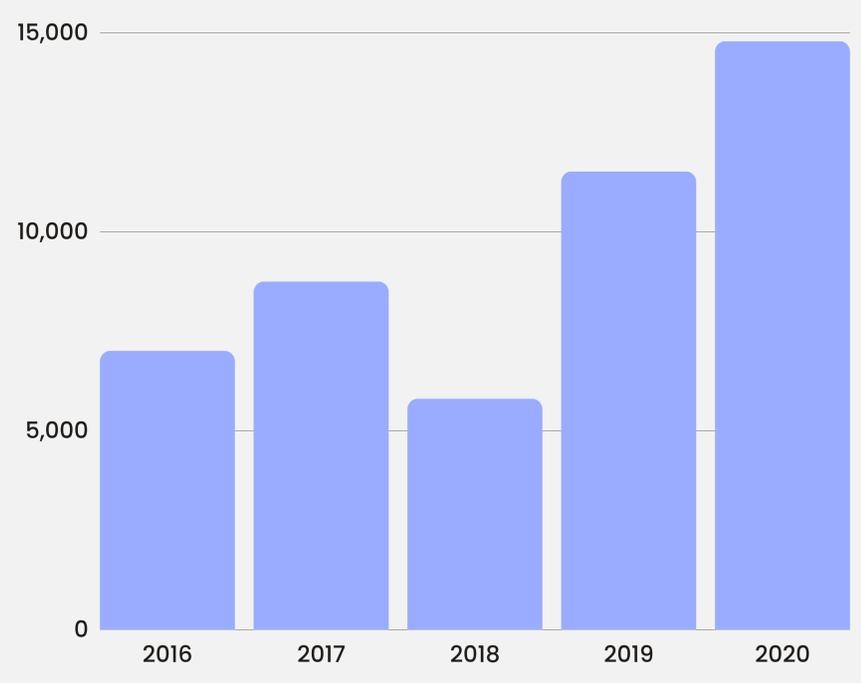
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Total of destruction in 2021



The funds provided for compensation (11 state)

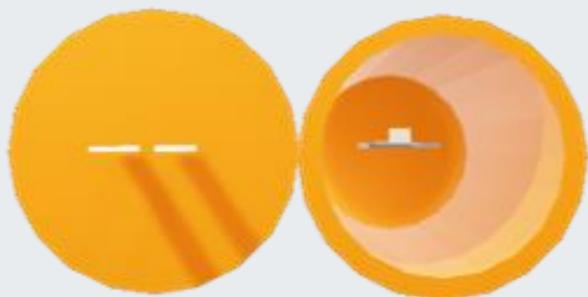




3D DESIGN



FRONT PERSPECTIVE



BOTTOM PERSPECTIVE

COMPONENT CONFIGURATION

