



Persatuan Pengguna Pulau Pinang Consumers Association of Penang

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Letter to the Editor

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Mitigating Flash Floods: Better Urban Planning Needed

The flash flood in Putrajaya on December 8 caused by an hour of heavy rain that led to water rising in Sungai Anak Gajah, resulted in significant damage, with 20 vehicles submerged. This incident highlights the urgent need to enhance flood mitigation measures and urban infrastructure against climate-induced challenges.

Despite Putrajaya's reputation as a meticulously planned city with extensive green spaces and a systematic drainage system, an hour-long downpour led to severe flooding. This raises critical questions about the adequacy of current urban planning and infrastructure to handle extreme weather.

Recent data from the Malaysian Meteorological Department indicates that rainfall intensity has surged by 40% over the past five years due to global warming and climate change. Rising sea temperatures accelerate evaporation, leading to intense, short-duration rainfall with devastating consequences for urban areas. However, heavy rainfall is not the sole contributor to urban flash floods. Other contributing factors include:

- Uncontrolled Urbanisation:** Rapid development replaces natural permeable surfaces with concrete, preventing water absorption and overloading drainage systems.
- Waste Management Issues:** Improper waste disposal has led to clogged drains, intensifying flooding in residential and commercial areas.
- Aging Infrastructure:** Outdated drainage systems are inadequate to handle the increased volume of rainfall, worsening the risk of flooding.
- Deforestation and Vegetation Loss:** The removal of trees reduces water retention, accelerating runoff into urban areas.
- Loss of Natural Waterways:** Encroachment on rivers and streams reduces their capacity to carry excess rainwater, often diverting water to urban areas.

Putrajaya, with its significant green infrastructure, such as the 600-hectare man-made Putrajaya Lake, should serve as a model for balancing development and environmental sustainability. However, urban sprawl and inadequate waste management have strained these systems, leaving the city increasingly vulnerable.

The Consumers' Association of Penang (CAP) urges immediate action from all stakeholders, including local authorities, urban planners and the public to address the root causes of flash floods. A holistic approach is crucial:

- Strengthening Urban Planning:** Prioritize sustainable development by integrating green spaces and infrastructure, such as green roofs and permeable pavements, to absorb excess rainwater.
- Enhanced Waste Management:** Implement stricter waste management practices and raise public awareness about the consequences of improper waste disposal on drainage systems.

3. **Upgrading Drainage Systems:** Improve and regularly maintain drainage infrastructure to manage increased water volumes effectively and clear blocked drains.
4. **Restoration of Natural Waterways:** Prevent encroachment on natural flood plains, river reserves and rehabilitate rivers and streams to improve their capacity to manage excess water.
5. **Reforestation and Vegetation Programmes:** Protect existing forests and vegetated areas near cities. Plant trees and create urban green spaces to increase water retention.

The National Green Technology Policy (2009) provides a foundation, but its implementation must expand to encompass more urban areas and address the challenges presented by urbanisation and climate change.

Flash floods are no longer isolated incidents but warnings of a changing climate that we can no longer ignore. Decisive action is imperative to prevent further damage. Collaborative efforts between the government, private sector and communities are essential to building resilient cities capable of withstanding the effects of climate change.

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