

# Kuala Lumpur must overcome flooding challenges

COMMENT  
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**KUALA LUMPUR**, Malaysia's vibrant capital, is facing an increasing threat from flash floods that seem to worsen with every monsoon season.

The heavy rain that hit the city recently turned roads into rivers of murky yellow water – disrupting lives, damaging properties and leaving many stranded. With rivers overflowing and sinkholes emerging, this recurring situation is alarming for residents and businesses.

As we head deeper into the monsoon season, the government and Kuala Lumpur City Council should take decisive action to prevent further paralysis of our transportation network and protect the economy.

## Rivers are the heart of the issue

Central to the flooding problem in Kuala Lumpur are its rivers, particularly the Klang and Gombak rivers. These rivers have overflowed time and again, turning streets into temporary waterways and causing widespread disruption.

While the deepening of these rivers has been part of long-term flood mitigation plans, progress seems to be slow. Other rivers, such as Batu River, Kerayong River and Ampang River, have also contributed to the overflow during heavy rainfalls.

To bring the situation under control, immediate and long-term actions need to be taken. Understanding the state of these rivers and enhancing their capacity to cope with heavy rainfall is crucial.

## Measures to mitigate flooding

### ➤ Expanding drainage capacity

The drainage systems in Kuala Lumpur are not able to handle the current volume of rain, particularly during the monsoon. Immediate measures should include the clearing and desilting of drains to increase capacity. Blocked drains – dogged by debris – contribute to flash floods. Kuala Lumpur City Hall and local authorities need to prioritise maintaining these drainage networks, especially in flood-prone

areas. Deploy teams from enforcement or the military to check every drain, monsoon drain, stream and river. They should also conduct physical and drone checks to ensure the city's capillaries are clean and clear.

### ➤ Flood barriers and mobile pumps

Temporary flood barriers can be installed in strategic locations to prevent rivers from overflowing into the streets. Mobile pumps can also be stationed in vulnerable areas to drain water from roads and low-lying areas, preventing water from accumulating. The Drainage and Irrigation Department and Kuala Lumpur City Hall, with the help of the military platoon, can address and mark these points to prevent the overflowing of flood waters.

### ➤ Early warning systems

An efficient early warning system can alert residents and commuters in advance of potential flooding, allowing them to take preventive actions. While there are warning systems in place, these need to be improved to cover more areas. Communication with the public must be clear and more frequent, particularly through mobile apps and social media platforms. The Meteorological Department must be proactive and issue daily notices of potential flooding at least three days in advance.

### ➤ Traffic and public transport management

During heavy rainfall, traffic management becomes crucial. Immediate traffic diversion plans must be in place to prevent congestion. Improving public transport options during floods will help ease the pressure on the city's roads. Deploy more traffic police and military personnel to control the chaos during floods.

### ➤ Public awareness and preparedness

Citizens should be educated on flood preparedness, such as keeping their vehicles safe, avoiding flood-prone areas or knowing where to seek assistance. Public campaigns can help reduce the overall impact of floods. Encouraging the public to report blocked drains or overflowing waterways can

help authorities act faster. Social media, radio and television stations should work hand-in-hand to ensure the awareness level is heightened.

### Long-term flood mitigation strategies

#### ➤ River deepening and widening

The Klang River and Gombak River have been undergoing deepening projects to increase their capacity to handle floodwaters. However, more needs to be done, and the project timelines should be expedited. In addition to deepening, widening certain sections of these rivers can prevent them from overflowing during heavy rain.

Other rivers in Kuala Lumpur, including Batu River, Kerayong River and Ampang River, should be included in these efforts to ensure that flood mitigation plans are comprehensive and address the interconnectedness of the city's waterways. The river beautification programme has been delayed. This project must be hastened to ensure that our rivers are not a dump yard but a treasure trove of our city.

#### ➤ Building retention ponds

Retention ponds play a critical role in absorbing excess rainwater. More of these ponds need to be built in flood-prone areas to prevent rainwater from overwhelming the city's drainage systems. These ponds can also be integrated with green spaces and parks, creating dual-purpose recreational areas that can serve as a flood management feature.

#### ➤ Smart city infrastructure

Kuala Lumpur needs to embrace smart city technologies to better manage floods. Real-time monitoring of river levels and rainfall data through sensors can help authorities respond swiftly to rising waters. Cities around the world are already using artificial intelligence to predict flood patterns and make informed decisions about flood management. Kuala Lumpur should also follow suit.

#### ➤ Revitalising urban planning

Urban sprawl and overdevelopment have worsened the flood situation in Kuala Lumpur.

The loss of natural floodplains and green areas means rainwater has fewer places to go. Revamping urban planning policies is a long-term solution that will address the root cause of the problem. Future developments should incorporate flood mitigation designs, including permeable pavements, green roofs and rain gardens, that allow water to seep into the ground rather than run off into drains.

#### ➤ Community involvement

Building a resilient city requires the involvement of local communities. Empowering communities to adopt flood mitigation strategies, such as setting up neighbourhood water management systems or engaging in tree planting to enhance green areas, can create a long-lasting impact.

Involve companies by assigning sections of the Klang and Gombak rivers to each company and organise a competition to see who can best beautify the riverbanks.

#### Climate change adaptation

The monsoon seasons are expected to become more intense due to climate change. Addressing the impact of these changes on Kuala Lumpur's flood patterns is vital. Climate adaptation strategies, including redesigning infrastructure to withstand extreme weather events and creating nature-based solutions, are crucial components of any long-term flood management strategy. No development should be approved without considering the impact on climate.

#### Time for swift and coordinated action

Kuala Lumpur cannot afford to be submerged every monsoon season. Flooding affects not just infrastructure but also the economy, livelihoods and the well-being of citizens.

While short-term measures can help in the immediate future, long-term solutions are essential to ensure the city remains resilient against future floods.

The government, local authorities, companies and citizens must jointly work to safeguard Kuala Lumpur against flooding.