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## Early warning system needed for floods

THE Association of Water and Energy Research Malaysia (AWER) supports the call by the Deputy Prime Minister to set up an early warning system to detect floods.

Based on research projections, Malaysia will face extreme drought and floods due to climate change, rapid development and loss of forest cover.

A 10% increase in rainfall intensity will raise flood occurrence tremendously due to increase in surface run-off and reduction in carrying capacity of both natural and man-made drainage.

The second part of flood management is mitigating the flood and this needs a lot of technical input and design work.

AWER would like to suggest the following for more effective mitigation works:

- (i) Analysis between loss of forest cover and flood occurrence must be done. There is a definite link as loss of forest cover causes loss of natural water retention ability;
- (ii) Old settlements and townships have old designs for drainage. With rapid development around these areas, the carrying capacity of drainage systems will reduce. Redesigning these drainage systems is vital to prevent floods;
- (iii) Minimum permeable surface by design for new townships as well as retention ponds with bigger capacity must be made mandatory. Permeable surface will absorb rainwater and reduce surface water flow. Retention ponds will be able to delay surface water flow to drainage systems;
- (iv) Local government land use needs to be audited. This is to ensure there is no over-development in lowlands or flat land areas;
- (v) There should be an audit to all flood prevention projects implemented and planned for future to ensure its planning and execution meets the intended target.

Root cause analysis is important for us to plan ahead.

Careful planning can prevent wastage of public funds.

**PIARAPAKARAN S.,**  
**President, AWER.**