SESSION 2:
THE ROLE OF EMERGING TECHNOLOGIES IN CLIMATE CHANGE ADAPTATION

MALAYSIAN COMMUNICATIONS AND MULTIMEDIA COMMISSION
SUSTAINABILITY DIVISION



1. Climate Adaptation Is Also a Digital Challenge

323 telecommunications transmission sites **affected** by floods across four Malaysian states, late 2024.



COMPOUND INFRASTRUCTURE THREATS

Vandalism, equipment damage and cable theft — **separate from flood losses.**

Sabah
RM17.3m
losses
(2025 – Jun 2026)

Sarawak
RM11.34m
losses
(2025)

KEY MESSAGE

Digital infrastructure must withstand climate shocks — and other disruptions — **while enabling communities to respond.**

2. Climate Adaptation in Practice: Malaysia's ICT Response

Building a more resilient digital infrastructure to protect networks, sustain communications and reach communities.

01 PROTECT | Site Hardening

Stronger and more resilient infrastructure in flood-prone areas.



- Elevated platforms to reduce flood risk
- Flood-resistant designs
- Improved power backup and site resilience

446 transmission sites hardened

including 110 elevated platforms (as at Dec 2024)

02 SUPPORT | PRIME

Deployable communications for emergency response and network recovery.



Satellite · Cellular · Radio · Wi-Fi · Drones

Launched **June 2025**

Supports emergency communications and network recovery.

03 WARN | EWS – Cell Broadcast System

Location-targeted disaster alerts to keep communities safe and informed.



- Location-targeted alerts to affected areas
- No internet connection required
- Inclusive design (e.g. audio and vibration alerts)
- Under development and testing (final phase)

Requires functioning mobile networks and compatible devices

KEY MESSAGE

These initiatives strengthen **climate adaptation and resilience** in the ICT sector — while **LESTARI 2030** also drives longer-term **climate mitigation** and a sustainable digital ecosystem.





LESTARI 2030 FRAMEWORK

Three strategic pillars, four flagship programmes, across our three sectors.

CLIMATE ACTION

Decarbonise operations and build resilience.

SOCIAL IMPACT & INCLUSION

A connected, safe and inclusive society.

TECHNOLOGY & INNOVATION

Enable solutions for a sustainable future.

FOUR FLAGSHIP PROGRAMMES

Net Zero & Circularity Alliance (NZCA)

Sector action on emissions and circularity.

KITAR 2.0

Device circularity and responsible consumption.

Alliance for Social Impact & Inclusion

Inclusion, safety and future skills.

Climate Technology Foundry

Sandbox and solution matching for real-world impact.

OUR THREE SECTORS

TELECOMMUNICATIONS

Networks for people and possibilities.

BROADCASTING

Information, education and culture for all.

POSTAL & COURIER

Enabling a more connected economy.

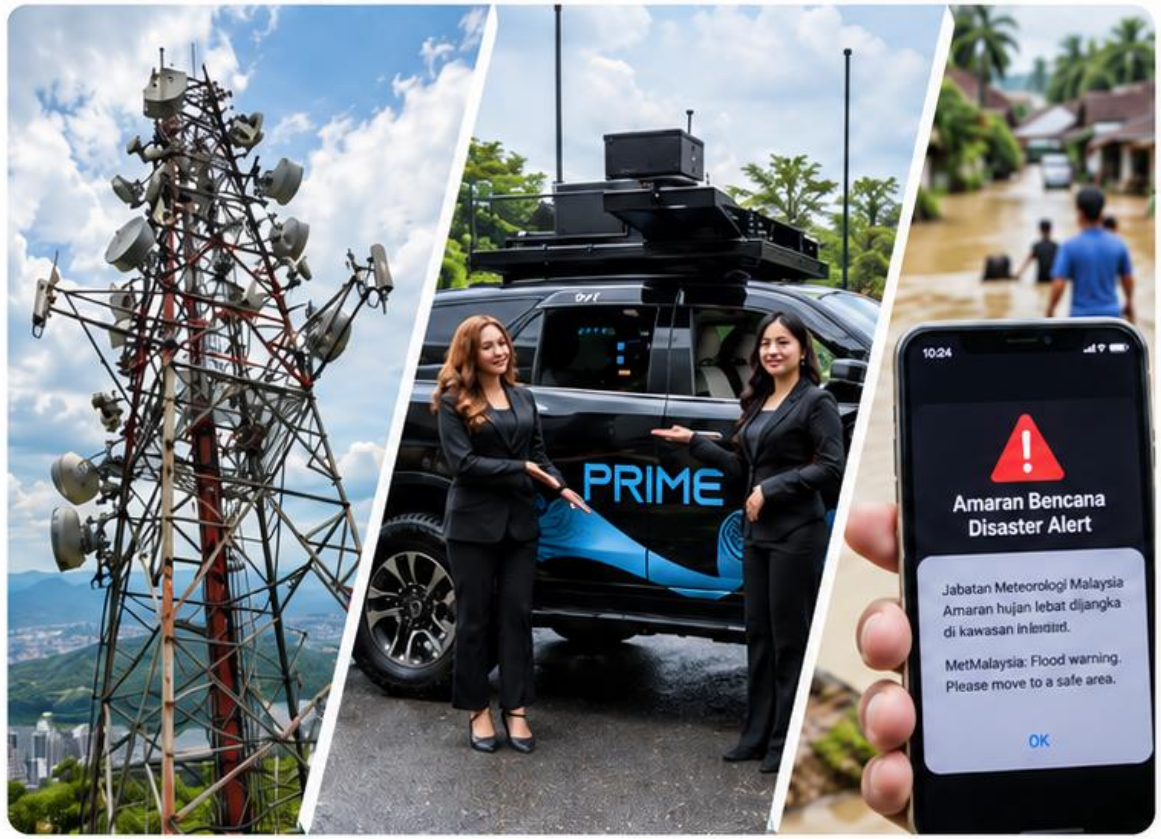
KEY MESSAGE

LESTARI 2030 brings our sectors together to drive **climate action, stronger resilience,** and a **more inclusive and innovative digital future** for Malaysia.

4. Climate Technology Foundry:
From Innovation to Real-World Impact

Connecting industry sustainability challenges with emerging technologies and solution providers.

A FLAGSHIP PROGRAMME UNDER
LESTARI 2030
Planned for 2028–2029 | Exploring collaboration with industry, technology innovators and international partners.



PURPOSE

To help catalyse and scale climate and sustainability solutions for the telecommunications, broadcasting, and postal & courier sectors.

HOW IT WORKS (PROPOSED MODEL)

1. Identify real-world challenges
2. Match with solution providers and technology innovators
3. Test, validate and scale solutions

TARGETED OUTCOMES

- Practical, scalable climate solutions for our sectors
- Stronger industry-innovation collaboration
- Contribution to Malaysia's net zero and circular economy goals

RELEVANCE TO CLIMATE ACTION

Climate Mitigation
Supports solutions that reduce emissions and improve resource efficiency (e.g. energy, materials, devices).

Climate Adaptation
Enables technologies that strengthen resilience and service continuity (e.g. climate risk monitoring, resilient networks, early warning).

KEY MESSAGE

Our ambition: to connect industry challenges with emerging technologies and partners, accelerating practical solutions for climate mitigation and adaptation.

A More Resilient, Lower-Carbon and More Inclusive Digital Future

Emerging technologies give us new tools. Progress depends on collaboration across regulators, industry and international partners.



CLIMATE MITIGATION

Lower emissions and more efficient use of resources across our sectors.

CLIMATE ADAPTATION

Stronger, more resilient networks and communities.

SOCIAL IMPACT & INCLUSION

A connected, safe and inclusive digital society.

TECHNOLOGY & INNOVATION

Unlocking solutions for real-world impact.

KEY MESSAGE

By working together, we can harness emerging technologies to **adapt to climate risks** while advancing a **lower-carbon, more resilient and more inclusive digital future** for Malaysia and beyond.