

4.a.v. Digital technologies

Digital technologies and NDCs: Digital solutions in support of NDC implementation

Draft report

TEC/2026/33/10

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United Nations Climate Change
Technology Executive Committee

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Context

- Collaboration approved by TEC31 (September 2025)
- Outline approved by TEC32 (April 2026)
- Draft submitted to the activity group on digital technologies
- Comments addressed for the TEC33 version:
 - Inclusion of the percentage of unique NDC texts referencing digital technologies
 - Distinction between direct and indirect digital technology deployment
 - Clarification of the methodology, including keyword searches, translations, and treatment of scanned documents
 - Refinement of the resource efficiency classification scope
 - Conservative expansion of the analysis of MRV systems
 - Revision of contextual paragraphs in the technology transfer and the introduction chapters (i.e. TEC mandate and Paris Agreement overview)
 - Inclusion of Digital Public Infrastructure (DPI) example
 - New conclusion section



Methodology

140 NDCs with 2035 targets, submitted between January 2024 and July 2026 (ICTU included when submitted as part of the annex)

Keyword search

- Discoverability
- Excerpts and passages
- Baseline comparability

Expert review

- Analysis and interpretation
- Database
- Categorization

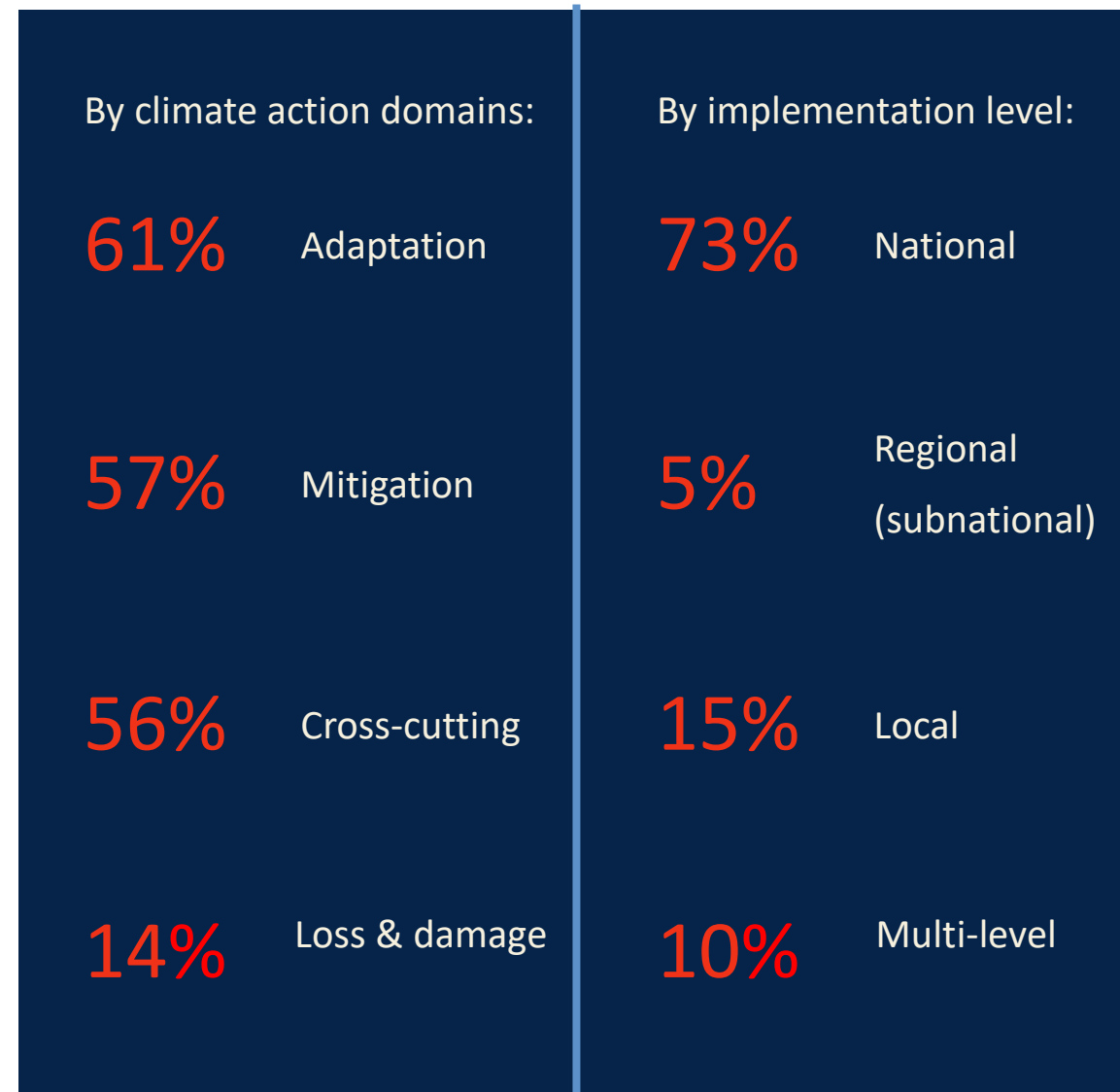
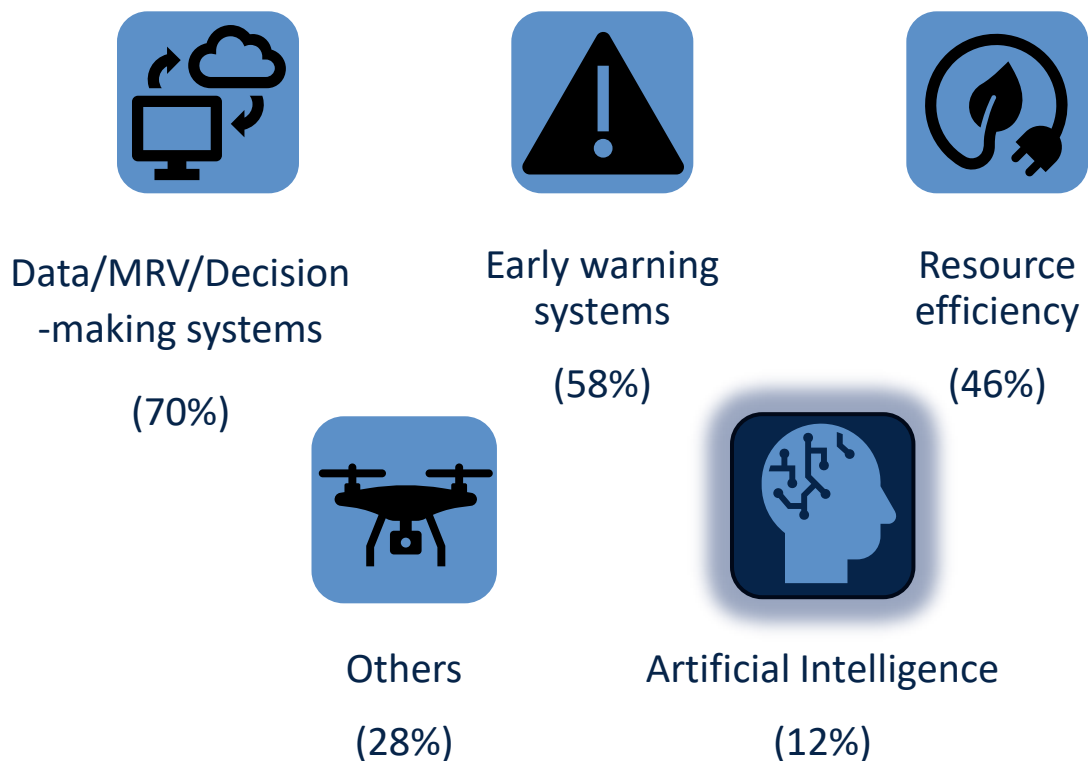
Cleaning and validation

- Multi-attribute tagging
- Deduplication logic
- Cross-checking



Key findings

Nearly three quarters of Parties (74%) reference digital technologies as solutions to be deployed.



Key findings: implementation and support dimensions

- A minority of Parties delineate highly specific targets, milestones or other quantified references.
- Cost estimates and budget components are referenced in some NDCs.
- Several Parties highlight plans to strengthen institutional arrangements and develop the institutional capacity using digital solutions.
- 43% of NDCs refer to digital technologies in the context of technology transfer.
- 21% of NDCs link a given digital solution as being explicitly conditional.

Country examples:

Andorra, Armenia, Azerbaijan, Bahrain, Bahamas, Brazil, Costa Rica, Côte d'Ivoire, Dominican Republic, El Salvador, Fiji, Guinea, India, Iraq, Kazakhstan, Marshall Islands, Mexico, Moldova, Morocco, Paraguay, Republic of Korea, Russian Federation, Rwanda, Sierra Leone, Singapore, Somalia, Suriname, Uruguay, Vanuatu



Key findings: social and innovation dimension

- Seven NDCs across Asia-Pacific, Eastern Europe and Latin America and the Caribbean express a commitment relating to addressing the digital divide.
- One third of Parties articulate digital-related just transition considerations in the NDCs analysed.
- 37% of NDCs also emphasise gender considerations specifically (beyond explicit just transition references), in the context of digital technologies.
- 22% of Parties refer to research and innovation commitments focused on digital technologies.

The digital sector itself

The environmental footprint of the sector is rarely addressed



- Bahamas: ocean thermal energy conversion and seawater district cooling to serve data centres and supercomputers.
- Marshall Islands: e-waste collection in outer atolls.
- Singapore: energy-efficient data centre infrastructure.
- Suriname: solar-powered ICT hubs.
- Vanuatu's NDC contains an ICT chapter

Conclusion

- Digital technologies are becoming a more prominent and widespread feature of NDCs
- Digital solutions are increasingly functioning as part of the operational infrastructure of climate action, particularly through data, monitoring, reporting, verification and decision-making systems.
- As digital systems become more central to implementation, more attention is needed to governance, institutional responsibilities, interoperability, data ownership, capacity building, finance and technology transfer.
- Despite the growing use of digital technologies for climate action, the environmental footprint of the digital sector itself remains largely under-addressed in current NDCs.

❑ Next steps: Once approved by the TEC, to be launched at COP31.



Thank you



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