47th Session of the World Climate Research Programme

Joint Scientific Committee

APARC

WCRP
World Climate
Research Programme

29 April 2026

online

WORLD METEOROLOGICAL ORGANIZATION

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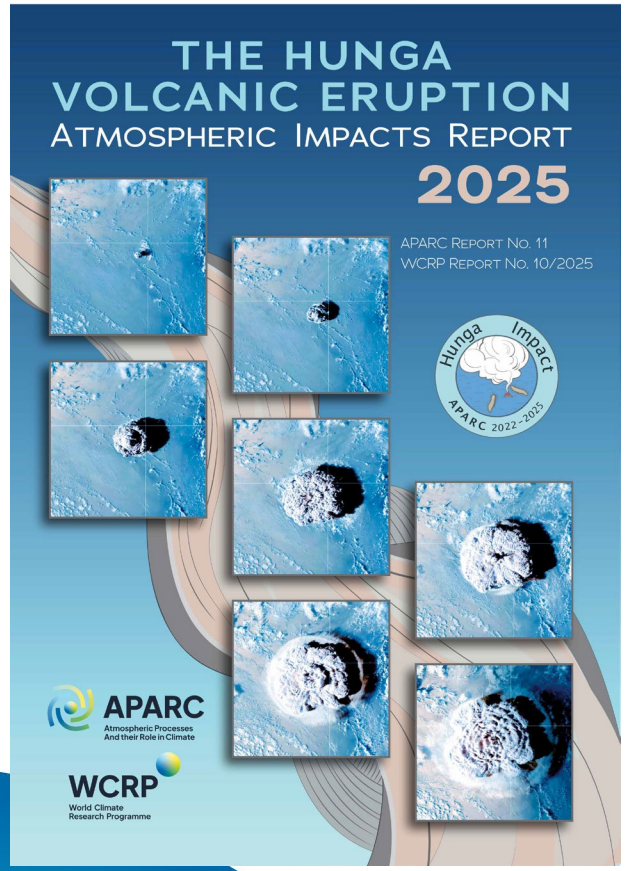
Key highlights: HTHH Report



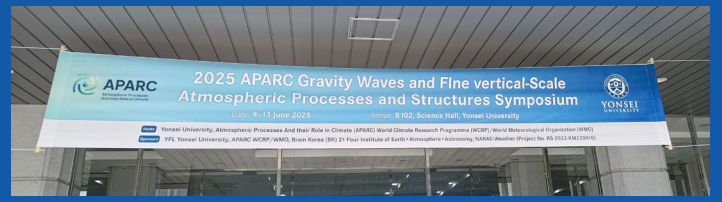
- Limited-term cross-activity focused project: Jan 2022 – Dec 2025
- >150 scientist from the APARC activity
- Co-Chairs: Yunqian Zhu, Graham Mann, Paul Newman, William Randel
- The report will directly feed into the upcoming 2026 UNEP/WMO Scientific Assessment of Ozone Depletion report, providing a benchmark synthesis of the impacts from this eruption.
- Side project: **HTHH-MOC**
  Hunga Tonga-Hunga Ha'apai volcano impact Model Observation Comparison
  - 14 climate models participating in three experiments that feed in the Hunga Report chapters to help answer scientific questions, as well as for future public uses
- https://aparc-climate.org/publications/aparc-report-no-11/

Key highlights: selected Workshops

June 2025 (Bali)
ACAM Workshop & Training School on Atmospheric Composition and the Asian Monsoon
115 participants (from 16 countries)

https://www2.acom.ucar.edu/acam/bali-2025

June 2025 (Seoul)
Gravity Waves and FISAPS Symposium
~100 participants (from 10 countries)



https://aparcgwfi2025.sciencesconf.org/

July 2025 (Busan)
EPESC-LEADER Science Meeting
92 participants (from 20 countries)

https://www.wcrp-climate.org/epesc-leader-meeting2025

Oktober 2025 (online)
Virtual Workshop Series on Stratospheric Aerosol Injection (SAI)
258 registered participants

https://www.wcrp-climate.org/ci-workshop-series-sai

November 2025 (Dakar)
School on AI for Climate & Weather Forecast
47 participants

https://sites.google.com/view/ai4climateschool

January 2026 (Amsterdam)
DynVar Workshop
132 participants (plus 50 online)

https://sites.google.com/view/dynamics-of-rossby-waves-co/home

Key highlights: CMIP7

- Stratospheric Aerosols:
  - EGUsphere - Stratospheric aerosol forcing for CMIP7 (part 1): Optical properties for pre-industrial, historical, and scenario simulations (version 2.2.1)
  - EGUsphere - Stratospheric aerosol forcing for CMIP7 (part 2): Volcanic sulfur dioxide emissions
- Solaris-Heppa:
  - Historical (1850-2023) and future (2022-2299) forcing data available on CMIP data server and solarisheppa.kit.edu
- DynVar:
  - Led request of additional atmospheric dynamical variables (DynVarMIP) for CMIP7

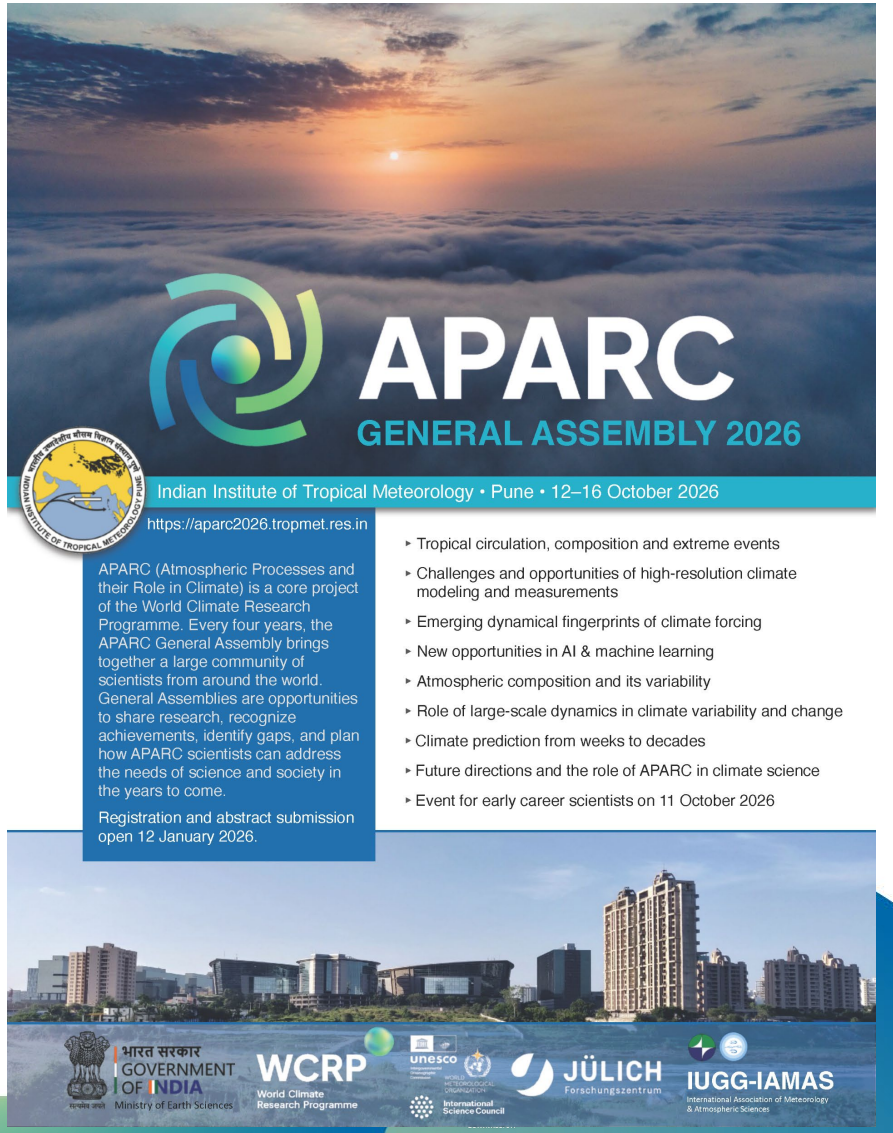
Future priorities: *APARC General Assembly*

12 – 16 October 2026 in Pune, India (ECR event on 11 October 2026)

- Quadrennial meeting of entire APARC community.
- Last General Assembly in 2022: > 400 participants across three hubs.
- SOC: Jonathon Wright (Tsinghua University) and Hella Garny (DLR)
- LOC: Suvarna Fadnavis (IITM)
- https://aparc2026.tropmet.res.in

Themes

1. Toward High Resolution Representations of the Climate System
2. Atmospheric Composition and its Variability in a Changing Climate
3. Dynamical and Thermodynamic Imprints of Climate Forcing
4. Circulation, Composition, and Extreme Events in the Tropics
5. Climate Prediction from Subseasonal to Decadal Scales
6. APARC Science for Society and Assessments



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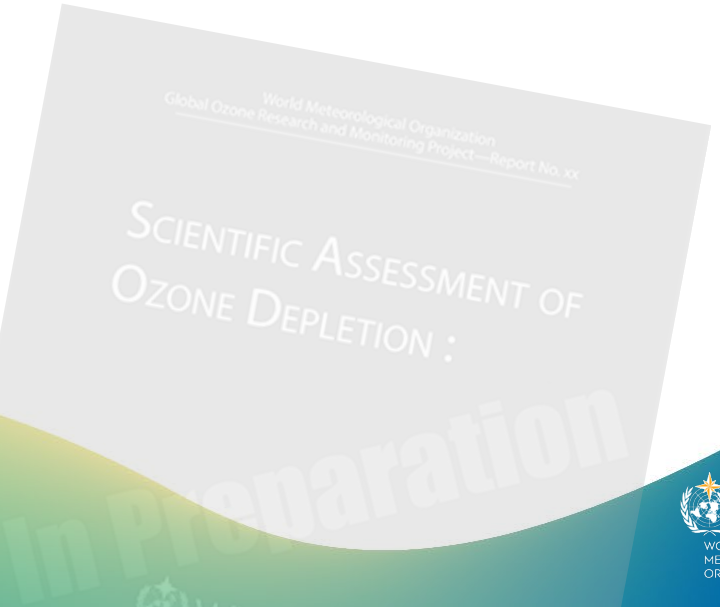
Future priorities

- *2026 UNEP/WMO Scientific Assessment of Ozone Depletion report*

All cited papers accepted for publication	1 June 2026
Final draft of core assessment completed	30 June 2026
Panel Review Meeting for Executive Summary, Geneva, Switzerland	20-24 July 2026
Executive Summary completed and submitted to the WMO Ozone Secretariat	September 2026
2026 Ozone Assessment submitted to the WMO Ozone Secretariat	31 December 2026



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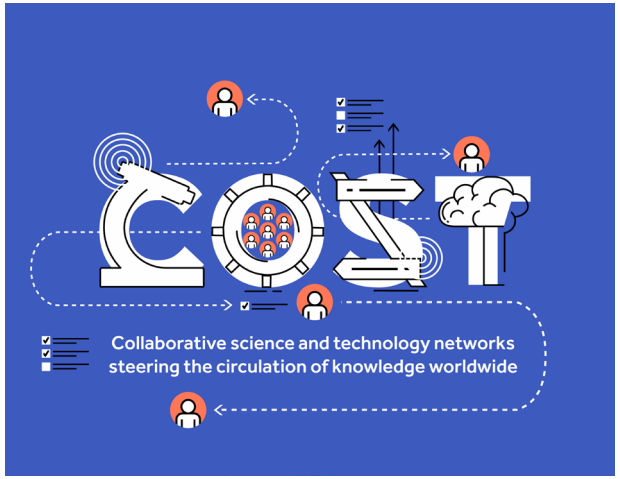
Future priorities

- Refine APARC's activity structure
  - *HTHH activity is transitioning towards closure following delivery of the report*
  - *VSLS and LEADER are time-limited activities approaching their planned conclusion*
- Strengthen APARC engagement through representation of co-chairs or SSG members in WCRP Task Teams (Science Strategy & Future Priorities; ML/AI in Climate Science).
- Maintain and strengthen connections with other WCRP core projects (through shared scientific questions) and build on existing Lighthouse Activity contributions.
- Strengthen connections with other WMO programmes (e.g. GAW)
- Maintain and strengthen connections with IGAC by building on existing joint activities (e.g. ACAM) and supporting emerging leadership.
- Expand APARC research to better integrate tropospheric processes

Future plans: additional funds

Potential network-based funding mechanism: COST

- What is COST? **European Cooperation in Science and Technology**
  - European funding scheme for research networks
  - Supports coordination, mobility, training
  - ~150k€/year, up to 4 years
- Why relevant for APARC?
  - Matches APARC needs (coordination, mobility, training)
  - Could complement decreasing WCRP/APARC funding by leveraging external funding
  - Offers a way to anchor part of the activities regionally (Europe), while freeing APARC resources for broader global activities



Suggestions, issues or challenges

- APARC builds on long-standing activities and strong community foundations, while evolving its scope towards broader atmospheric processes
- Ensure new initiatives/LHAs are well aligned with and build on the expertise of WCRP core projects
- Identify unifying scientific priorities to strengthen coherence across APARC activities (e.g. HTHH report-type initiatives) and alignment with other WCRP core projects
- Loss of key limb-sounding missions reduces continuity of vertically resolved observations, limiting process understanding, extreme event interpretation, and trend detection.
- Strong interest in APARC leadership positions reflects sustained community engagement.

Thank You

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