

## 4. Task Teams Update

### New WCRP Task Teams

**3. Machine Learning/Artificial Intelligence – Innovations & Applications in Climate Science (ML/AI-IACS) Task Team** – to do stocktake and make recommendations to the JSC  
(Cristina Stan + Maureen)

Proposed reps from JSC, RfS, CliC, ESMO, APARC (TBC), GEWEX (TBC), CLIVAR (TBC), DE, EPESC CMIP, CORDEX, GPEX (TBC), Academy; "Externals" (one self-nominated)

**4. Fundraising Strategy Task Team**  
(Tim Naish & Cristina Stan + Mike)

**Proposed reps: TBC**

*(If we have missed anyone please email secretariat/write in the chat!)*

## 4. Task Teams Update

### New WCRP Task Teams

#### 3. Machine Learning/Artificial Intelligence – Innovations & Applications in Climate Science

- **White paper:** Future research priorities could (or should) include: (i) physics-informed and hybrid modeling; (ii) foundation models for climate, democratization and capacity building; (iii) trustworthy and explainable AI.
- **TT Objectives:**
  - *Conduct a concise stocktake of AI/ML activities* relevant to climate research, projections and applications within WCRP and closely related WMO/partner initiatives.
  - *Distil key lessons, opportunities and risks* from AI/ML for weather and early warning and translate them to climate timescales.
  - *Identify priority use cases* where AI/ML can add clear value to WCRP activities (e.g. CMIP, CORDEX, Lighthouse Activities, core projects).
  - *Formulate practical recommendations to the WCRP JSC on integrating AI/ML into WCRP strategies, workplans and capacity development.*

# 4. Task Teams Update

## New WCRP Task Teams

### 3. Machine Learning/Artificial Intelligence – Innovations & Applications in Climate Science

- **Focus:**
  - **Modelling and projections:** AI/ML emulators, hybrid modelling, downscaling, bias adjustment and postprocessing of climate model output.
  - **Data and observations:** AI/ML for quality control, gapfilling, data fusion, feature and extreme event detection and attribution across large observational and reanalysis datasets.
  - **Impacts and services:** AI/ML methods that transform climate information into decision-relevant indicators and tools across timescales.
  - **Crosscutting issues:** good practices on validation, uncertainty, documentation, reproducibility, and responsible/ethical AI in climate applications.
  - **Engagement** with the private sector supporting development and integration of AI/ML into climate research and applications and other WMO activities
- **Deliverables:**
  - **Stocktake Summary Note:** Short mapping of ongoing AI/ML activities, use cases, gaps and overlaps.
  - **Recommendations to JSC:** Brief report outlining priority areas, good practices, suggested pilot activities and capacitybuilding needs for AI/ML in WCRP.
  - **Advisory Note to WMO RB and other relevant co-sponsor activities:** Focused recommendations on integrating AI/ML into climate research and projections in coherence with weather and hydrology initiatives.
  - **Knowledge sharing Outputs:** One or more concise briefings (e.g. webinar, 2–4 page status brief summary) for WCRP