

### **Commission for Atmospheric Sciences (CAS)**

The Commission for Atmospheric Sciences shall be responsible for promoting, coordinating and facilitating research and access to its results, technology transfer from research to operations, training and capacity-building activities in atmospheric sciences including weather and its forecasting, climate, water, atmospheric chemistry, and related environmental sciences.

The specific objectives of the Commission shall be:

- (a) To identify the requirements of WMO Members, including those related to support of environmental and climate conventions, and to facilitate the transfer of knowledge, technologies and advice concerning atmospheric science issues;
- (b) To support and facilitate research in atmospheric and related sciences to advance the understanding and prediction of atmospheric processes within the broader Earth system, with emphasis on the following:
  - (i) Weather, climate, water and related environmental analysis and prediction for timescales ranging from minutes to seasons to multidecadal, embracing new developments in environmental prediction;
  - (ii) Refining the end-to-end prediction process so as to improve the forecasting of high impact events associated with serious consequences for populations and economies;
  - (iii) Atmospheric composition and air pollution, their interaction with weather and climate, studies of transport, transformation, deposition and impacts of air pollutants and related monitoring;
  - (iv) The physics and chemistry of clouds, greenhouse gases, ozone and aerosols;
  - (v) Weather modification science assessment with emphasis on the underlying physical and chemical processes and the development of rigorous evaluation procedures;
  - (vi) Processes in tropical and polar regions where the lack of understanding has large impacts on global predictive skill;
- (c) To maintain and develop the Global Atmosphere Watch Programme using an integrated approach to observations and research, focusing on greenhouse gases, atmospheric chemistry and air quality,

contributing to scientific assessments in support of international environmental and climate conventions and policies;

- (d) To maintain and develop the World Weather Research Programme, including the Observing System Research and Predictability Experiment (THORPEX), focusing on knowledge of high-impact weather and partnerships in multidisciplinary research advancing the broader science of environmental prediction;
- (e) In accordance with the WMO Strategic Plan, to coordinate the activities of the Commission with relevant WMO bodies and promote cooperation between WMO Members, international scientific organizations, environmental institutions and other scientific groups;
- (f) To standardize functions, constants, terminology and bibliographic practices applicable to atmospheric sciences;
- (g) To support and facilitate the effective transfer of advances made by atmospheric science research to reduce the societal impact of weather, climate and pollution on societies, economies and ecosystems;
- (h) To conduct scientific assessments in atmospheric science as required by Members or by the delivery of the science programmes of the Commission.