

# Open Call for Membership of the WCRP's Global Precipitation Experiment (GPEX) Lighthouse Activity

**Deadline: 28 April 2024**

The World Climate Research Programme (WCRP) Lighthouse Activities are transdisciplinary in nature, integrating across WCRP and collaborating with partners, to accelerate advances in new science, technologies, and institutional frameworks that are needed to more effectively manage climate risks and minimize societal threat based on robust and actionable climate information.

The current interim Scientific Steering Group (SSG) of the Global Precipitation Experiment (GPEX) Lighthouse Activity has developed its [Science Plan](#) (as of November 2023). The purpose of this Open Call is to seek nominations (including self-nomination) to the SSG and four Working Groups (WGs; see below) that will develop and execute the GPEX implementation plan over the next decade, provide guidance for the WGs, and integrate with the past efforts.

GPEX will have a diverse SSG composed of approximately ten members including two co-chairs. Similarly, each diverse WG is formed by approximately ten members including two co-chairs. WG co-chairs will be invited to all SSG meetings for discussions and decision-making, following the successful GEWEX practice. At least one Early and Mid-Career Researchers (EMCR) is anticipated to join the SSG and each WG. Gender and geographic balances will also be emphasized.

## Responsibilities

- **SSG Membership** – Contribute scientific knowledge, experience and energy to achieve the goals of GPEX and provide guidance for the WGs, working with other WCRP activities and partners, as necessary.
- **WG Membership** - Contribute scientific knowledge and energy to meet the objectives and proposed outcomes of the WG, working with other members of the WG, the GPEX SSG, and other WCRP activities and partners, as necessary.

## Time commitment

Hourly meetings are expected to take place regularly on a bi-monthly or monthly basis for the SSG and for the WGs, at the discretion of the SSG co-chairs and WG co-leads. There may be times when there is more or less work, depending on the activities undertaken. Most meetings will be online, with some out-of-hours work required due to time zone coordination. A face-to-face meeting is anticipated every 18 months.

## Remuneration

These are not paid roles.

## How to apply

Please submit the online application and upload your CV here:

[GPEX Membership Nomination](#)

The deadline for applications/nominations is **28 April 2024**.

Please contact Hindumathi Palanisamy, WCRP Scientific Officer in charge of GPEX should you have any questions ([hpalanisamy@wmo.int](mailto:hpalanisamy@wmo.int)).

### **Additional Information**

The future of the global water cycle in general, and specifically the prediction of freshwater availability, for humans around the world remains among the frontiers of climate research and are relevant to several UN Sustainable Development Goals. Despite progress over the past few decades, precipitation prediction remains a complex process in observing, understanding, and modeling. GPEX will take on the challenge of improving precipitation prediction around the world by organizing WCRP Years of Precipitation (YoP) and associated activities before and after YoP.

### **Working Group 1: Coordinated Field Campaigns**

As a flagship activity of GPEX, in order to plan and implement the YoP for 2-3 years, this Working Group will engage with national and international funding agencies to identify anchor projects and coordinate global field campaigns around these anchor projects. Scientific foci for these campaigns will sample across different storm types (atmospheric rivers, mesoscale convective systems, monsoons, and tropical cyclones, among others), regions, and seasons. We also seek leaders for each of these storm types.

### **Working Group 2: Data Development**

This Working Group will focus on data archiving, access, and analyses. It will support the establishment and/or expansion of global and regional precipitation databases from satellite, surface radar, and in situ measurements, including those from research-based observational campaigns. It will also address issues surrounding FAIR (findable, accessible, interoperable, and reusable) data and integration across observational types in collaboration with WMO and others. The Working Group will also work with other projects on the further assessment and quantification of uncertainties of gridded precipitation products (including those from reanalyses) at different spatiotemporal scales.

### **Working Group 3: Prediction and Modeling**

This Working Group will focus on operational forecasting, data assimilation, analysis, reanalysis; climate modeling; and process studies. It will support research on precipitation predictability, prediction techniques and applications across space and time scales. It will coordinate precipitation analyses and forecasts from different centers (particularly national meteorological and hydrological centers) for the GPEX period. It will also support the establishment of multi-model databases of subseasonal-to-seasonal prediction, climate projection, km-scale model ensembles, and a hierarchy of models for process understanding of precipitation, identification of model deficiencies, identification of sources and limits of precipitation predictability, and testing the transferability of model improvement from one region to another.

### **Working Group 4: Regional/National Activities and Capacity Development**

This Working Group will support existing national/regional activities and/or the establishment of new activities, partly through capacity development. The capacity development will focus on entraining scientists and graduate students into the YoP, particularly from the Global South. The Working Group will develop relevant activities, such as encouraging contribution to model evaluation, development, and inclusive experimental design over different regions; and seeking support for studying abroad and hosting training courses on precipitation science, prediction, modeling and applications. The Working Group will work on liaising and coordinating with existing Early and Mid-Career Researchers (EMCR) networks as well as other WCRP projects to promote GPEX capacity development activities and encourage their participation.