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Advancing climate research through the WCRP core project on Earth System Modelling and Observations (ESMO)

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Earth System Modelling and Observations (ESMO) is a new core project of the World Climate Research Project (WCRP) that coordinates, advances, and facilitates all modelling, data assimilation and observational activities within WCRP, working jointly with all other WCRP projects. Our mission is to facilitate the coordination and advancement of climate modeling and observational efforts. Through collaborative approaches, interdisciplinary partnerships, and identification of critical research gaps ESMO aims to enhance the accuracy, reliability, and accessibility of climate data and projections. Alongside three pre-existing Working Groups - on Coupling Modelling (WGCM), Numerical Experimentation (WGNE), and Sub-seasonal to Interdecadal Prediction (WGSIP), an additional working group on Observations for Researching Climate (WGORC) has now been established. WGORC in particular will focus on observations and needs for observation across WCRP, including observations for reanalyses and emerging technologies. This, alongside the other WGs focused on modelling, will be instrumental in identifying gaps and bridging research communities in climate science. Here, we present the exciting new structure of ESMO, and how we hope to bring together experts across modelling and observational disciplines, to further scientific advances.