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AN APPRAISAL OF THE INDIAN SPACE RESEARCH ORGANISATIONS' EFFORTS TO MONITOR AND MITIGATE CLIMATE CHANGE

Abstract

On 28 February 2022, the United Nations Intergovernmental Panel on Climate Change (IPCC) reported that the effect of climate change continues to be grim. The country would face extreme scenarios such as loss of habitats due to rising sea levels, reduction in groundwater levels and fall in crop production due to extreme weather events. The Government of India has been tackling these threats through the National Action Plan on Climate Change (NAPCC). The NAPCC has been supported by the Indian Space Research Organisation (ISRO) via the National Information system for Climate and Environment Studies (NICES). However, the contribution of ISRO to India's efforts to mitigate climate change is not given due coverage in the popular literature. This is unfortunate as the mechanism developed by ISRO is very robust. The NICES programme was initiated in 2012 to create a climate database on environmental parameters. It involves multiple institutions from the Indian Government's Department of Space (DOS). Further, it provides a highly streamlined mechanism to access the geophysical products of ISRO's satellite assets. The data can be downloaded by anyone and assists in analysing the detrimental effects of human activities on the environment. The policies involving NICES such as its governance structure, objectives, and applications can give a blueprint to other space agencies across the globe. This paper aims to fill the gap in the literature by highlighting the Indian Space Agency's efforts against climate change. It will also provide a design that other space agencies can use for climate change mitigation strategies in their respective states. Ultimately, the paper aims to share the best practices learnt from the NICES programme to support the space community in addressing and monitoring climate change.