



## FROM THE PRESIDENT'S DESK

The credit of maintaining the quality of any scientific journal goes to the distinguished Editors. It is also important to change the Editorial Board from time to time so as to bring novelty and new expertise to the review process. VayuMandal reconstituted its Editorial Board from January 2019. The Standing Committee, herewith, thank the outgoing distinguished Editors such as Prof.U.C.Mohanty, Prof.G.S.Bhat, Prof.Mohankumar, Dr.M.Mohapatra, Dr.R.C.Dhiman and Dr.Snehamani for their tireless efforts to enhance the quality of the journal and also their contribution in bringing out the review process timely during the last three years 2016-2018. We will continue seeking their guidance for the overall growth of the journal in future. The Standing Committee also welcomes the distinguished members of the newly constituted Editorial Board.

In this volume of VayuMandal, the invited paper entitled 'Monsoon Onset over Kerala 2017 & 2018: A Satellite Perspective' has been contributed by well known satellite meteorologists Dr. B. Simon from the Space Applications Centre, ISRO, Ahmedabad. This paper reiterates the importance of using satellite data in the field of Weather and Climate. The study shows that about 18 days before the Monsoon Onset over Kerala (MOK) in 2018, the Total Precipitable Water Vapor (TPW) over the Western Arabian Sea had its peak value. This can be used as the precursor for determining the date of MOK, along with 850hPa wind fields and Outgoing Longwave Radiation (OLR) based Madden-Julian Oscillations (MJO). It is well known that future of weather forecasting depends on assimilation of more satellite data into NWP models. In another paper, it has been indicated that our weather scientists in the premier organization NCMRWF are regularly assimilating various radiance observations in its global data assimilation systems viz. NCUM and NGFS. The quantity of satellite radiance observations assimilated amounts to about 50% of the total observations assimilated in these systems. In one of the papers it is demonstrated that use of threshold values of some key meteorological parameters obtained from the NCMRWF Unified Model (NCUM) can successfully lead to the detection of radiative fog events over IG plains of India. Results of a study using MODIS and INSAT 3D satellite data indicate predictability of convection evolution leading to thunderstorm activity in Andhra Pradesh. These results can help in disaster management to some extent.

The best example of the importance of weather forecasting in agriculture is the estimation of yield potential of any crop for a region. In one of the papers in this volume, eminent agricultural scientists have done the yield gap analysis of sugarcane crop in different Agro-climatic Zones of Uttar Pradesh utilizing normal weather data in DSSAT-CANEGRO simulation model. It is suggested that location-specific integrated approaches would be needed to bridge the yield gap of the sugarcane crop grown in the target regions.

It is important to understand the sources of Equivalent Black Carbon (EBC) aerosols which are produced from incomplete combustion processes of fossil fuel and biomass burning. In a study held at Madurai, it is found that the variation of EBC is also highly influenced by the changes in the wind speed at the study site. In another paper, ambient Carbon Dioxide (CO<sub>2</sub>) concentration has been estimated in the same Madurai city carried out by using satellite retrieved dataset and further its annual, seasonal and monthly variations are discussed.

I hope and believe that the readers will enjoy the above mentioned articles published in this 45(1) Volume of the VayuMandal.

**SKDash**  
**President, IMS**