

Editors' Page

Continuing with the pattern of VayuMandal during the last couple of years, this issue includes review articles, contributed research papers, a report on the notable weather features during the earlier months, report on the activities of IMS and its local chapters and finally a list welcoming the new members to IMS. Every issue of VayuMandal faces new challenges which need the cooperation among the editors, members of editorial committee, reviewers and the authors. Ultimately, team work succeeds and it gives satisfaction and encouragement. In spite of the prevailing pandemic, this is the second successive VayuMandal issue which has been published on time. Credit goes equally to all concerned. It should be kept in mind that the future of this IMS journal of the last several years, depends on more review articles from reputed scientists and the quality of the contributed scientific papers.

This issue of VayuMandal includes two review papers from two distinguished scientists in agriculture and air pollution respectively. The first paper dealing with satellite remote sensing applications for agriculture in the country is an invited one from Dr. Shibendu S. Ray. The second invited paper by Prof. Umesh Kulshrestha is a review on the long range transport of air pollution in South Asia. The first paper vividly describes as to how the highly successful space programme in India has been very effectively used for various natural resources management applications with major emphasis on agriculture. Crop production forecasting, drought assessment, precision farming, crop insurance and several such other agricultural applications are the best examples. This paper discusses these applications, along with important gap areas and it further hints at the need for taking advantage of advanced technologies for better monitoring and management. The second paper deals with the implications of long range transport and transboundary pollution for Indian Summer Monsoon and sensitive ecosystems such as those of the Himalayas and Western Ghats. Study on the backward trajectories shows that the downwind locations are very badly affected and hence there is a need for the constitution of a task force and regional cooperation which can look into the modalities of the calculations and policy framing between the stakeholders. The third paper in this issue deals with another important topic such as the cloud seeding over Karnataka which is highly prone to the occurrence of drought conditions. Although the impact of seeding depends on the prevailing synoptic conditions, preliminary results of this study show an increase of 11 to 28% in rainfall in seeded areas compared to the control stations with a confidence level of >95%. The fourth paper is based on landslides in India in connection with the extreme rain events. In this paper, the frequency and casualties due to landslides have been discussed in the context of unsustainable growth, urbanization and deforestation. In the fifth paper, the authors have developed a Spatial Decision Support System (SDSS) using the Standardized Precipitation Index (SPI), Temperature Condition Index (TCI) and Vegetation Condition Index (VCI) based on 115yrs of rainfall of Purulia and Bankura districts of West Bengal. This micro-level analysis will be helpful to properly formulate strategies and reduce the vulnerability of the area to drought. In the sixth paper, the analysis of rainfall in the Damodar Valley Area (DVA) over a period of 46yrs from 1970 to 2015 indicates that summer monsoon rainfall accounts for about 80% of the total annual precipitation in the valley and that there are increasing and decreasing trends in the rainfall during post monsoon season and winter months respectively. The last and the seventh paper in this issue focuses on the characteristics of the Very Severe Cyclonic Storm (VSCS) TITLI which crossed the North Andhra and South Odisha coast in the early hours of 11th October, 2018 with gale force winds of 140 to 150 kmph gusting to 165 kmph causing extensive damages in some districts of Andhra Pradesh and Odisha with a death toll of 61. This paper shows how developments in early warning helped in timely and effective management of the disaster eventually leading to significant reduction in the losses.

It is hoped that all the above articles will be well received by the scientific community. Appreciations will give rise to encouragement for more contribution of scientific papers based on new ideas to our own VayuMandal.

S. K. Dash, Kamaljit Ray and D. R. Pattanaik