
BOOK REVIEW

UNIDO Advances in Materials Technology: MONITOR, Issue number 9, 1987, Second quarter. (Published by Department of Industrial Promotions, UNIDO, P. B. No. 300, A1400, Vienna, Austria).

UNIDO publishes quarterly "Advances in Materials Technology: MONITOR". Each issue is devoted to one field and the purpose of publication is that over a cycle of several issues, materials relevant to developing countries could be covered and a state-of-art assessment made. The current issue focusses on solar cell materials and has several papers presented regarding solar cell materials, production, economics, and technological requirements.

The volume begins with a review of the state-of-the-art in photovoltaic research and application. The articles are well written for the audience for which the monitor is intended: policy makers, industrialists, scientists and technologists in developing countries. But for active researchers they may be far too sketchy and broad. Some familiarity with the specialized nomenclature of solar photovoltaic is assumed by the authors. However, to someone roughly familiar with the field, the articles and the figures should be accessible and clear. The first article is followed by recommendations of the consultative group on the solar energy research to be set up by UNIDO. This group, acronymed COSERA, has not yet been established but after its

establishment would help development of solar energy exploitation, worldwide. The review article on the economic and technological requirements of solar cells: "Studies and research directions of polycrystalline thin film devices" is well written and informative.

In the current awareness section, the monitor reports not only on solar cells but also on techno-economics of solar pumping, solar thermal power stations, low energy housing projects, and solar ponds. These issues occupy the first half of the 60 pages of the publication. The remaining half of the issue consists of addresses of groups actively involved in PV research and development. These groups are not all affiliated with UNIDO. On the penultimate page of the monitor, a calendar of past events and future meetings for 1986 and 1987 is given. The topics of the conferences are a mixture of solar and non-solar material sciences. The very last page contains a form which enables any reader to obtain the monitor free of cost from UNIDO.

The technical quality of the production of monitor is good except for the very small print used. This sometimes makes reading difficult.

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SCIENCE NEWS

WORKSHOP ON AGRICULTURAL DROUGHTS

This workshop, organized by the National Remote Sensing Agency of the Department of Space, and cosponsored by the Indian Council of Agricultural Research, the India Meteorological Department and the Central Water Commission, was held at the National Remote Sensing Agency Hyderabad, during 5-7 February 1988. About 60 persons who attended the workshop discussed in depth various issues such as the definition and characterization of agricultural drought, and whether it can be predicted or warned early. They took stock of remote sensing capabilities for integration with current ground monitoring procedures followed at the States

and at the Centre. Four working groups were formed to discuss and recommend the follow-up action. The workshop recommended that it is imperative to define and characterize agricultural droughts with respect to different agroclimatic environments in the country. Another major recommendation referred to the large spatial variation in rainfall, which is mostly convectional over India, and called for urgent significant augmentation of the reporting ground raingauge network with a grid size of 10-20 km within a time frame of 2-3 years. Rainfall forecast at the district level, 5-10 days in advance, is needed for the agricultural sector. It is understood

that the Government of India plans to do this under the Agricultural Meteorology Mission Plan. Any reliable rainfall prediction more than 5–10 days in advance is not practicable. It is desirable to carry out a statistical study of the past district wise rainfall and drought data, for determining the earliest point of time that is possible to provide early warning of the impending drought in that district. Another recommendation called for ground monitoring of all drought related data at the taluk level and not at the district as a unit, as in vogue in the Centre level monitoring. The office of the Relief Commissioner should be merged in the Agricultural Department, after delinking it from the Revenue Department, since in many States, the revenue department hierarchy up to the village level has been upset due to decentralization. Drought monitoring in many States is highly subjective and qualitative in nature, and should be quantified and made objective by improving ground data collection mechanism as well as through intergration of remotely sensed data. Computerization and effective linking of agricultural data base at taluks/districts to State headquarters and to Centre are urgently called for. The workshop

recommended urgent operationalization of periodic (say weekly) vegetation index maps from NOAA satellite data to provide information on vegetation status all over the country. This data should be distributed to the state departments and agricultural universities for interpretation and validation of drought information. Thermal and microwave sensing of soil moisture is another area requiring intensive investigation and near future operationalization. Satellite estimation of rainfall, shelter and canopy temperatures and insolation were identified to be the other thrust areas for rapid operationalization and utilization in the integrated agricultural drought monitoring systems.

The workshop proceedings, consisting of invited and contributed papers, the record of discussion during the sessions and the recommendations of the various working groups will be published shortly.

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NEWS

VII ANNUAL CONFERENCE OF THE SOCIETY OF TOXICOLOGY

VII Annual Conference of the Society of Toxicology, India, will be held at the Jiwaji University, Gwalior from November 4–6, 1988. For detailed

information write to Dr R. Mathur, Department of Zoology, Jiwaji University, Gwalior 474 002.
