

POST-WAR RESEARCH IN METEOROLOGY.

By DR. C. W. B. NORMAND, *C.I.E., D.Sc., F.N.I.*

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Past experience shows that at times of economic depression scientific departments suffer the most and the first victim of retrenchment is research. The same tendency is likely to reappear in the post-war world. The history of meteorological research reminds one of the parable of the roof of the Irishman's cottage, recently quoted by an American physicist: When the weather is fine, there is no point in repairing the roof; when the rain comes, the roof cannot be repaired, and the roof remains unended. So with meteorological research; there is never sufficient done in time for the needs that will arise. The funds that are lacking in peace-time become available in war-time, but always too late, because the trained personnel become too occupied with applications of meteorology to urgent practical needs to be spared for research in war-time.

- (a) A National Research Council is to be welcomed provided it is fully representative and carries authority in Indian scientific and administrative circles and provided, amongst other aims, it keeps in the forefront a policy of maintenance of research at all times, even in financial stringency.
- (b) In most countries Meteorology is a Government monopoly. The Government monopoly in meteorological research should be broken down by universities developing schools of aerodynamics, in the widest sense of that term, which would include courses in dynamical meteorology, thermodynamics, modern hydrodynamics (after Prandtl and Bjerknes rather than after Lamb) and statistics. The courses and post-graduate work should be of Hons. B.Sc., M.Sc., Ph.D. or D.Sc. standards.

Meteorological research may be statistical, experimental or mathematical. Much has been done in India and published in meteorological memoirs. The Meteorological Department must continue to be a major source of meteorological investigation, but universities and research centres could also help much. Amongst possible measures for developing meteorological research in India I personally would emphasise (a) and (b) above, and also press for

- (c) A portion of staff and grants of the Meteorological Department being set aside specifically for investigation and development,
- (d) A Meteorological Research Committee composed of several leading scientists and representatives of the Air Force, Civil Aviation, Council of Agricultural Research and the Meteorological Department, and
- (e) Grants for the conduct of research approved by the Meteorological Committee, like the grants of the I.C.A.R.

While the Meteorological Research Committee mentioned in (d) should, I think, report direct to the department of Government responsible for the subject of meteorology, it must work in co-ordination with committees of the National Research Council dealing with allied subjects. This research committee would be engaged largely in considering and evolving methods of solving the more immediate practical problems of meteorology. For the long-term, more abstruse problems, another committee, like the Gassiot Committee of the London Royal Society would be most useful. The difficulty about copying the Gassiot Committee in India lies in the fact that most of our eminent scientists adopt towards meteorology the attitude of Lord Kelvin, who declared that the atmosphere and its physical changes were much too complex for him to study and preferred to devote his whole attention to the controllable experiments of the laboratory. When (b) develops, it should become possible to follow the Gassiot Committee model.

Separate national research committees will be required for Astronomy and Geophysics.