

Meteorological Co-operation

Our restless atmosphere, flowing freely over continent and sea, imposes the dependence of every nation on others for knowledge of the forthcoming weather. Every national meteorological service, large or small, relies upon an international system for the prompt and frequent exchange of weather observations. From steady growth in the numbers of stations and an increasing modernization and sophistication of observing techniques has evolved today's global observing system. The need for information in a rapid, timely and co-ordinated flow has led to an increasingly modern international meteorological communications system. And the benefits evident in a mutual sharing of the processing of data into forecasts and warnings of severe weather for international shipping and aviation have resulted in a worldwide international maritime weather service and a number of arrangements for integrated services to international aviation that afford an admirable pattern for international co-ordination and co-operation.

In recent years the new developments in satellite observing and electronic data-processing, in automatic sensing systems and communications techniques, have made it increasingly clear that the full exploitation of these modern developments could lead to a breakthrough in the science of meteorology. The UN resolution proposing a concerted effort to capitalize on the potential of these new facilities was quickly seized upon by the World Meteorological Organization and turned into a plan for a reorganized and revitalized world weather system.

World Weather Watch Aims

This new world system was given the name "World Weather Watch" and its published Plan and Implementation Programme stated its purpose as follows :

The purpose of the World Weather Watch is to enable the unprecedented opportunities which now present themselves for progress in the atmospheric sciences to be seized and to enable all members to derive the full benefits from the improved meteorological services which such progress will make possible. Such improvements will have a profound impact on the agriculture, commerce and industry of all nations and will permit more accurate and timely warnings of severe storms and other weather hazards, for the protection of life and property. It will further the safety and efficiency of international air and sea transportation and provide essential support to nations in the management of water resources and food production.

In designing an improved world weather system, the deficiencies in the present system must first be known. A series of surveys has made it clear that the major limitation to meteorological progress is the lack of adequate observations of the earth's atmosphere. This lack prevents a full understanding of the processes in the atmosphere and greatly reduces the accuracy and value of forecasts and other weather services, especially in the many regions where data are sparse. Over ocean areas the problem is particularly difficult. Merchant ships recruited to take observations usually travel in established shipping lanes and large parts of the 71 per cent of the earth surface covered by oceans are rarely observed. Even the taking of observations of the pulse of the atmosphere