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AD HOC COMMITTEE TO STUDY THE PEACEFUL
USES OF THE SEA-BED AND THE OCEAN
FLOOR BEYOND THE LIMITS OF NATIONAL
JURISDICTION

LETTER DATED 13 MAY 1968 FROM THE SECRETARY-GENERAL OF
THE WORLD METEOROLOGICAL ORGANIZATION ADDRESSED TO THE
SECRETARY-GENERAL

In reply to your letter PO 118 dated 19 April 1968 concerning United Nations General Assembly resolution 2340 (XXII), I should be grateful if you would submit to the Ad Hoc Committee the attached document containing information on meteorological and World Weather Watch (WWW) activities related to the terms of General Assembly resolution 2340 (XXII) - Examination of the question of the reservation exclusively for peaceful purposes of the sea-bed and the ocean floor, and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction, and the use of their resources in the interests of mankind.

With further reference to your letter PO 118 of 28 February 1968 and my reply No. 7.938/T/OC.4 of 19 March 1968, I should highly appreciate being informed whether I am to understand that representation of WMO at the forthcoming session of the Ad Hoc Committee would be welcomed. Our main interest would be in the discussion of the "scientific aspects".

(Signed) D.A. DAVIES
Secretary-General

METEOROLOGICAL ACTIVITIES IN SUPPORT OF PEACEFUL USE
OF THE RESOURCES OF THE SEA-BED AND OCEAN FLOOR
BEYOND THE LIMITS OF NATIONAL JURISDICTION

(Submitted by the Secretary-General of the World
Meteorological Organization)

The provision of services

1. Meteorology and hence WMO is involved in the provision of services in support of the safety and efficiency of a variety of types of operations at sea. In particular such services are being given in support of present-day exploitation of mineral resources at sea, with respect to activities which are carried out at or near the sea surface. It is assumed that development of the exploration and exploitation of the ocean floor and subsoil will require similar service to an increasing extent. The nature of these services is explained in the following paragraphs.
2. As in the case of other operations at sea it is likely that meteorological information will be required with regard to the design and construction of technical equipment which is exposed to surface conditions (ships or special marine structures). Factors involved include forces exerted by prevailing winds and by extreme gusts, shearing forces due to strong vertical wind shear, ice accretion, wave action and temperature variations. This information serves mainly in support of the safety of operations.
3. The safety and efficiency of the operations depend to a varying degree on atmospheric conditions and their effects on the conditions of the sea surface. Three different types of meteorological information are relevant in this respect:
 - (a) Accurate and detailed short-term forecasts of weather and wave conditions in support of the safe and efficient conduct of daily operations;
 - (b) Medium- and long-range forecasts of the trend of weather and sea conditions and the probability of the occurrence of extreme conditions in support of logistic planning of operations, such as the provision of a regular supply of material and personnel to ocean stations;
 - (c) Climatological data in support of long-range planning of exploration and exploitation activities.

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4. The services rendered by national meteorological centres in this respect, the scientific research involved, the role of WMO and of the World Weather Watch in its operational and scientific aspects have been surveyed in the report (part 1, chapter IV, appendices)* prepared under General Assembly resolution 2172 (XXI).

Research

5. The physical conditions of the marine environment in which marine sedimentary material is formed and transported and the run-off of terrestrial sediments are to a varying degree influenced by atmospheric conditions prevailing both over land and over the oceans. Relevant meteorological research is mostly concerned with studies of the general circulation of the atmosphere and of climatic variations of the marine environment. In both fields the interaction between ocean and atmosphere is one of the predominant agents to be considered.

Research into ocean-atmosphere interaction processes can therefore provide an important input in marine geophysical studies of a more general nature including bottom geology as well. The meteorological and oceanographic research involved, and the collaboration between WMO, IUGG and UNESCO (IOC) in this respect are mentioned in the report (part 1, chapter IV, appendices) prepared under General Assembly resolution 2172 (XXI).

Archiving and retrieval of data

6. National meteorological services have for many years operated systems for the archiving of meteorological data and where appropriate of marine meteorological data including those of ocean surface conditions. This work is co-ordinated by WMO. The data are used both for research and operational purposes. An example of an international archiving and retrieval project for marine meteorological data is that of "marine climatological summaries" prepared semi-annually by a number of designated centres, each of which is responsible

* The Secretary-General of the United Nations has notified that this report will be submitted to the Ad Hoc Committee as part of the material prepared in response to General Assembly resolution 2172 (XXI). It is therefore not forwarded with this present report.

for the collection and publication of data from a given ocean area. An example of a recent research project is the "Historical Sea Surface Temperature Data Project", in which four marine meteorological centres are preparing monthly means of individual years of several elements in a grid of small areas covering the world oceans and for a period extending over the last hundred years.

7. The advent of computer-based data storage and retrieval systems, and the further development, under the World Weather Watch, of global systems of observation and data exchange have opened new possibilities for centralized modern archiving and retrieval systems on an international basis. This has resulted in the development of extensive archiving functions at world and regional meteorological centres.

Selected bibliography

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