

TRATADO ANTARTICO  
XII REUNION CONSULTIVA

---

TRAITE SUR L'ANTARCTIQUE  
XII REUNION CONSULTATIVE



CANBERRA  
13-27 SEPTEMBER  
1983

ANTARCTIC TREATY  
XII CONSULTATIVE MEETING

---

ДОГОВОР ОБ АНТАРКТИКЕ  
XII КОНСУЛЬТАТИВНОЕ СОВЕЩАНИЕ

ANT/XII/3  
12 September 1983  
Original: English

IMPROVEMENT OF TELECOMMUNICATIONS IN ANTARCTICA AND  
DISTRIBUTION OF METEOROLOGICAL  
DATA

(Explanatory note and Draft Recommendation submitted  
by the United Kingdom)

#### EXPLANATORY NOTE

1. The arrangement of adequate telecommunications to enable meteorological data to be exchanged between Antarctic stations has been among the more pressing concerns of national Antarctic programmes since the International Geophysical Year. Three Antarctic Treaty Meetings on Telecommunications have been held in Washington (1963), Buenos Aires (1969) and Washington (1978).

2. Underlying the discussions at these meetings has been the difficulty of trans-auroral belt transmissions. The auroral belt in high southern latitudes is so disposed that some Antarctic stations lie within it and some outside it. Those stations within it have difficulty in establishing satisfactory communications with those outside it or with the outside world; those stations outside it can communicate adequately with the outside world but not with stations inside it. A satisfactory solution to this problem has, until recently, eluded the technical specialists. A solution which is now beginning to emerge is that meteorological data could be transmitted out of Antarctica via south to north satellite links, could be circulated through the Global Telecommunications System (GTS) of the WMO World Weather Watch (WWW), and should be relayed back to Antarctica via north to south satellite links to those Antarctic stations that require them for forecasting purposes. If such an arrangement could be made to work, and there is no physical reason why it should not, the advantages would include:

- (a) improved reliability;
- (b) reduced manpower requirements at Antarctic stations, and
- (c) timely receipt of Antarctic meteorological data at meteorological centres in the WWW that need them for forecasting purposes.

3. Such an arrangement should, in principle, work entirely automatically from the point where encoded meteorological data is fed into a satellite communications link, to the numerous points where they can be made available for forecasting purposes. However, not all

Antarctic stations are yet equipped to enable them to use satellite communications and there are a number of technical problems to be solved both at Antarctic stations and within the GTS.

4. At the Tenth Consultative Meeting a Recommendation was adopted that foresaw the possibility of a solution to the technical problem of Antarctic telecommunications for meteorological purposes along the lines set out in paragraph 2 above. Since then the WMO Executive Committee Working Group on Antarctic Meteorology held its Third Session in Geneva from 5-8 April 1982 and a further Meeting on Antarctic Data Telecommunication Arrangements was held in Geneva from 20-22 June 1983. The results of these meetings, more especially of the latter one, mark a significant advance on the way towards a cost effective solution to Antarctic meteorological telecommunications problems. Following the pattern established at earlier Consultative Meetings of marking such advances by means of a Recommendation (III-V, VI-1 to 3, VII-7 and X-3) a Draft Recommendation is attached.

IMPROVEMENT OF TELECOMMUNICATIONS IN ANTARCTICA  
FOR METEOROLOGICAL PURPOSES

(Draft Recommendation submitted by the United  
Kingdom)

The Representatives,

Recalling Recommendation X-3;

Noting that at a WMO Meeting on Antarctic Data Telecommunication Arrangements held in Geneva from 20 to 22 June 1983, the opportunity was taken to review and revise Annexes 1, 2 and 3 to Recommendation X-3, taking into account changes in the network up to June 1983 (see Annexes 1 and 2);

Noting further that this Meeting arrived at a number of conclusions aimed at improving Antarctic telecommunications for meteorological purposes and at improving the manner in which Antarctic meteorological data is transmitted within the Global Telecommunications System (GTS) of the WMO World Weather Watch (WWW);

Recognising, however, that Antarctic telecommunications arrangements adopted by each national Antarctic programme are devised so as to meet other operational requirements as well as the need for transmission of Antarctic meteorological data;

Recommend to their Governments that:

1. Taking account of the Final Report of the Meeting on Antarctic Data Telecommunication Arrangements (Geneva, 20-22 June 1983), they should strive to improve the operation of the system for the collection and transmission of Antarctic meteorological data to the GTS;
2. Through their Permanent Representatives to the World

Meteorological Organisation, they should seek to improve the transmission of Antarctic meteorological data within the GTS and to ensure that stations in the Antarctic which need Antarctic meteorological data and meteorological data from neighbouring areas should be able to receive them from the GTS on a real-time basis;

3. Through their Permanent Representatives to WMO, they should provide information to the Secretary-General to enable the table at Annex IV to the Final Report of the Meeting on Antarctic Data Telecommunication Arrangements, entitled "Requested data exchange between collecting centres in the Antarctic and appropriate WMC's, RTH's or MMC's", to be completed.