

1. Recommendation 1-VII (Canberra, 1961), Exchange of information on logistic problems

ORIGINAL TEXT:

The Representatives recommend to their Governments that they should undertake to exchange information on logistic problems. This might include information on the design and construction of buildings and airstrips, the provision of power supplies, the performance of aircraft, ships, tractors and other vehicles, techniques of supply of coastal and inland stations, the transport and handling of cargo in Antarctic conditions, food and cold weather clothing.

They further recommend that consideration should be given to the calling of a meeting or symposium of experts to consider the question of the exchange of information on experience gained in matters of the organisation of expeditions, logistic support and transport, and that proposals for the calling of such a meeting or symposium should be discussed at or before the next Treaty Consultative Meeting.

Suggested draft ATCM Final Report language:

The ATCM agreed that Recommendation 1-VII is no longer current, since the operative paragraphs have been met. However, the Parties wholeheartedly continue to support the exchange of information on logistics problems.

Therefore, recalling the general principles contained in Recommendation 1-VII as agreed at the first ATCM in Canberra, the Parties should continue to undertake to exchange information on logistics problems. Such exchange should be carried out in a number of different ways and through various fora including, but not limited to, symposia or meetings of experts or within COMNAP.

Or, Suggested draft updated Resolution language: (accompanied by making Recommendation I-VII (1961) no longer current)

Resolution R1 (2013)

Exchange of information on logistic problems

The Representatives recommend to their Governments that they should undertake to exchange information on logistic problems. This might include information on the design and construction of buildings and airstrips, the provision of power supplies, the performance of aircraft, ships, tractors and other vehicles, techniques of supply of coastal and inland stations, the transport and handling of cargo in Antarctic conditions, food and cold weather clothing, and medical provisions and facilities.

They further recommend that ~~consideration should be given to the calling of a meeting or symposium of experts to consider the question of the exchange of information on experience gained in matters of the organisation of expeditions, logistic support and transport, and that proposals for the calling of such a meeting or symposium should be discussed at or before the next Treaty Consultative Meeting.~~ such exchange should be carried out in a number of different ways and through various fora including but not limited to symposia or meetings of experts or within COMNAP.

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2. Recommendation 1-XII (Canberra, 1961), Cooperation on postal services

ORIGINAL TEXT:

The Representatives recommend to their Governments that they should:

1. promote co-operation among expeditions in the Treaty area in the collection and distribution of mail for expedition members;
2. advise each other of opportunities for forwarding mail to and from stations in the Treaty area;
3. consult together with a view to reaching agreement on further practical measures for improving postal communications in the Treaty area.

Suggested draft ATCM Final Report language:

Given the significant technological advances that have been made in the exchange of mail, the ATCM agreed that Recommendation 1-XII is no longer current. However, the Parties continue to support the general principle of cooperation on postal services and continuing consultation on improving communications, postal and electronic, in the Antarctic Treaty area and therefore propose a new Resolution as follows.

And, Suggested draft updated Resolution language: (accompanied by making Recommendation I-VII (1961) no longer current)

Resolution R2 (2013)

Cooperation on postal and electronic communications

The Representatives recommend to their Governments that they should:

1. promote co-operation among expeditions in the Treaty area in the collection and distribution of mail for expedition members;
2. advise each other of opportunities for forwarding mail to and from stations in the Treaty area;
3. continue to consult together with a view to reaching agreement on further practical measures for improving communications, postal and electronic, ~~communications~~ in the Antarctic Treaty area.

3. Recommendation VIII-7 (Oslo, 1975), Cooperative Air Transport System

ORIGINAL TEXT:

The Representatives,
Recalling Recommendation VII-8;

Recognizing that access to Antarctica by long-range aircraft combined with intracontinental feeder routes by smaller aircraft would facilitate new levels of co-operation and flexibility in research;

Noting the interest taken by the Scientific Committee on Antarctic Research (SCAR) in the potential benefits to be derived from a co-operative air transport system;

Recommend to their Governments that:

1. They request their offices responsible for the administration of Antarctic expeditions to review their scientific programmes in order to identify the ways in which a co-operative air transport system might benefit them and to inform SCAR through their representatives on the SCAR Working Group on Logistics;

2. They request SCAR, through their National Antarctic Committees, to review the available transport resources and the potential requirements with respect to a co-operative air transport system and to bring their conclusions to the attention of the Consultative Parties.

Suggested draft updated Resolution language: (accompanied by making Recommendation VIII-7(1975) no longer current)

Resolution R3 (2013)

Cooperative Air Transport System

The Representatives,

Recalling Recommendations VII-8 which is still current and Recommendation VIII-7 which is no longer current but contained general principles that remain valid;

Recognizing that access to Antarctica by long-range aircraft combined with intracontinental feeder routes by smaller aircraft ~~would~~ facilitates new levels of co-operation and flexibility in research;

Noting the interest taken by the Scientific Committee on Antarctic Research (SCAR) and by the Council of Managers of National Antarctic Programs (COMNAP) in the potential benefits to be derived from a co-operative air transport system;

Recommend to their Governments that:

1. They request their ~~offices responsible for the administration of Antarctic expeditions~~ National Antarctic Programs to keep under review their scientific programmes in order to identify the ways in which a co-operative air transport system might benefit them and to ~~inform SCAR through their representatives on the SCAR Working Group on Logistics~~ discuss and develop as necessary within COMNAP.;

~~2. They request SCAR, through their National Antarctic Committees, to review the available transport resources and the potential requirements with respect to a co-operative air transport system and to bring their conclusions to the attention of the Consultative Parties.~~

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4*. Recommendation X-3 (Washington, 1979), Improvement of Telecommunications in Antarctica and the Collection and Distribution of Antarctic Meteorological Data

**Here we make suggestions only in regards to points 6 and 7, the recommendation also includes many elements related to meteorology (points 1-5 and 8-10). Please see Attachment C, item 18 in reference to suggestions for these paragraphs.*

ORIGINAL TEXT

The Representatives, Recalling Recommendations VI-1, VI-3, and VII-7;

Noting that the Third Antarctic Treaty Meeting on Telecommunications held in Washington in September 1978 had described the telecommunications network for the exchange of meteorological data both within the Antarctic and between the Antarctic and Global Telecommunications System (GTS) of the World Weather Watch (WWW) as it existed on September 1978 (see Annexes 1, 2 and 3).

Taking account of the importance of Antarctic meteorological data to the WWW and the diminished value of such data if it is not available to users within and outside the Antarctic in accordance with the World Meteorological Organization (WMO) schedules for the receipt of raw and processed data;

Reaffirming the importance of the GTS for purposes of transmitting Antarctic meteorological data between Antarctic stations in cases where direct transmission within Antarctica is inhibited by ionospheric conditions;

Noting, with appreciation, the response of the Scientific Committee on Antarctic Research (SCAR) to Recommendation IX-3 and the improvement in Antarctic telecommunications that would follow if operators and offices administering Antarctic programs had available to them statements of the current telecommunications practices within and between national networks;

Recognizing that changing national requirements for Antarctic telecommunications, changing technology or budgetary constraints may lead to significant incompatibilities arising between national networks;

Recognizing that possible future trans-polar commercial air traffic and the steadily increasing amount of shipping in the Antarctic region may give rise to a changing pattern of needs for raw and processed meteorological data;

Affirming that developments in the collection and distribution of meteorological data should be reviewed from time to time;

Recommend to their Governments that:

1. Taking account of the final report of the Third Antarctic Treaty Meeting on Telecommunications, they should strive to improve the system for the collection and distribution of Antarctic meteorological data having regard particularly to increasing efficiency, reliability and economy of effort; taking into account opportunities offered by new technology;
2. Each station undertaking meteorological observations should ensure that data are transmitted as soon as practicable after the observation;
3. Stations receiving these data for onward transmission to other Antarctic stations or to the GTS should forward such data with minimum delay;
4. In cooperation with other Antarctic stations and World Meteorological Centers, they continue regularly to monitor receipt of Antarctic data by, and its transmission within, the GTS;
5. In cooperation with the WWW, they seek to ensure that the transmission of these data from the GTS to Antarctic stations is facilitated in cases where this method is likely to be more reliable or cost-effective than trans-Antarctic transmissions;
- 6. Through their National Antarctic Committees, they invite SCAR to prepare a brief handbook of the telecommunications practices within and between national networks in a format which allows it to be amended periodically in the light of changes in national practices;**
- 7. For the purposes of the previous paragraph, they ensure that their offices administering Antarctic programs inform SCAR in June and December each year of changes in their telecommunications practices;**
8. Subject to overriding scientific, administrative or budgetary reasons, they seek to ensure, by means of appropriate contacts with the offices administering Antarctic programs, that transmission of meteorological data between Antarctic stations is not prejudiced by changes in their telecommunications practices;
9. They invite WMO, through their Permanent Representatives to that Organization, to review Annexes 1 and 2 of Recommendation VI-3 with a view to advising Consultative Parties about current, and probable future, requirements for both raw and processed data in the Antarctic region;
10. Not later than at the Twelfth Antarctic Treaty Consultative Meeting they review developments in Antarctic telecommunications for meteorological purposes, having sought in the interim period to resolve any international difficulties that may arise with regard to the system by appropriate discussion.

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Suggested draft Final Report language: (accompanied by making Recommendation X-3 (1979) no longer current)

The ATCM agreed that points 6 and 7 of recommendation X-3 are outdated and note that COMNAP has prepared, continues to maintain and to make available a handbook on telecommunications called the Antarctic Telecommunications Operators Manual (ATOM). The ATCM continues to support the usefulness of the ATOM and encourages National Antarctic Programs to inform COMNAP on an annual basis of any changes in their telecommunication practices and contact details which are included in ATOM.

Note: Please see also advice from SCAR and COMNAP on Recommendations V11-7 Antarctic telecommunications: continued information exchange, and Rec XII-2 Use of Antarctic telecommunications systems in Appendix B.

5. Recommendation XV-17 (Paris, 1989), Establishment of New Stations

ORIGINAL TEXT

The Representatives,

Reaffirming that freedom of scientific investigation as set out in Article II of the Antarctic Treaty is one of the fundamental principles of the Treaty;

Affirming that measures adopted in this Recommendation are not intended to interfere with the possibility of a non-Consultative Party establishing a station in Antarctica but to ensure that such Parties may maximize their contribution to knowledge and the protection of the Antarctic;

Recalling Recommendations I-I, VI-4, VII-1, VIII-11, VIII-13, IX-5, XII-3, and XIV-2;

Recalling that at the XIIIth Consultative Meeting, Recommendation XIII-6 was adopted, calling for consultations between nations with Antarctic programmes operating existing stations in the same vicinity;

Recalling that the Final Report of the XIVth Consultative Meeting notes that:

(a) new stations had a greater possibility of maximizing their scientific potential if established in the widest possible range of areas;

(b) SCAR had:

(i) recorded its concern that the continued increase in the number of stations in some parts of the Antarctic could result in unproductive duplication of scientific programmes; and

(ii) recommended that adequate prior notice be given of intent to undertake a development or scientific activity that is likely to have a major environmental impact; and

(c) a process of consultation was needed which started as early as possible in the planning stage of the new station and continued through subsequent stages, including the development and implementation of routine operations;

Recognizing that the establishment of a new station or major logistic support facility is an activity which is likely to have more than a minor or transitory effect on the environment and is therefore subject to the Comprehensive Environmental Evaluation procedure described in Recommendation XIV-2;

Bearing in mind that while the establishment in the same vicinity of scientific research stations and logistic support facilities may favour scientific co-operation and the functioning of these stations, excessive concentration of such installations may have a negative effect on scientific activities and on the environment;

Recommend to their Governments that:

1. They urge Contracting Parties, when considering the establishment of new stations or facilities, to take the following measures to avoid excessive concentration in Antarctica of such stations or facilities:

(a) as early as possible when considering the establishment of a new station or facility in the vicinity of one or more existing stations or facilities, Contracting Parties should initiate, through their national Antarctic programmes, a process of consultations, co-ordination and possible cooperation with the other national Antarctic programme or programmes concerned;

(b) they should continue this process through the subsequent stages, including the development and implementation of routine logistic operations, with a view to minimizing both interference with existing programmes and impact on the environment;

(c) before establishing a new station or facility, Contracting Parties should prepare a Comprehensive Environmental Evaluation in accordance with Recommendation XIV-2.

2. In the case of a station or facility which the national Antarctic programme of a non-Consultative Party proposes to establish, they offer assistance to the managers of that programme with respect to the choice of site and the preparation of the Comprehensive Environmental Evaluation, with a view to maximizing the scientific output of the new programme and minimizing its environmental impact.

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Suggested draft updated Resolution language: (accompanied by making Recommendation XV-17(1989) no longer current)

Resolution R4 (2013)

Establishment of New Stations

The Representatives,

Reaffirming that freedom of scientific investigation as set out in Article II of the Antarctic Treaty is one of the fundamental principles of the Treaty;

Affirming that measures adopted in this Recommendation are not intended to interfere with the possibility of a non-Consultative Party establishing a station in Antarctica but to ensure that such Parties may maximize their contribution to knowledge and the protection of the Antarctic;

~~Recalling Recommendations I-I, VI-4, VII-1, VIII-11, VIII-13, IX-5, XII-3, and XIV-2;~~

Recalling that at the XIIIth Consultative Meeting, Recommendation XIII-6 was adopted and Environmental Protocol Article 6 affirms, calling for consultations between nations with Antarctic programmes operating existing stations in the same vicinity;

Recalling that the Final Report of the XIVth Consultative Meeting notes that:

(a) new stations had a greater possibility of maximizing their scientific potential if established in the widest possible range of areas;

(b) SCAR had:

(i) recorded its concern that the continued increase in the number of stations in some parts of the Antarctic could result in unproductive duplication of scientific programmes; and

(ii) recommended that adequate prior notice be given of intent to undertake a development or scientific activity that is likely to have a major environmental impact; and

(c) a process of consultation was needed which started as early as possible in the planning stage of the new station and continued through subsequent stages, including the development and implementation of routine operations;

Recognizing that the establishment of a new station or major logistic support facility is an activity which is likely to have more than a minor or transitory effect on the environment and is therefore subject to the Comprehensive Environmental Evaluation procedure described in ~~Recommendation XIV-2~~ the Environmental Protocol;

Bearing in mind that while the establishment in the same vicinity of scientific research stations and logistic support facilities may favour scientific co-operation and the functioning of these stations, excessive concentration of such installations may have a negative effect on scientific activities and on the environment;

Recommend to their Governments that:

1. They urge Contracting Parties, when considering the establishment of new stations or facilities, to consider scientific research needs and capabilities; initiate investigations to determine where the most scientifically advantageous location would be to successfully carry out such research; and fully consider the provisions of the Environmental Protocol, in particular, Article 6 in order to take the following measures to minimize impacts related to the research activity and to avoid excessive concentration in Antarctica of such stations or facilities: -

~~— (a) as early as possible when considering the establishment of a new station or facility in the vicinity of one or more existing stations or facilities, Contracting Parties should initiate, through their national Antarctic programmes, a process of consultations, co-ordination and possible cooperation with the other national Antarctic programme or programmes concerned;~~

~~— (b) they should continue this process through the subsequent stages, including the development and implementation of routine logistic operations, with a view to minimizing both interference with existing programmes and impact on the environment;~~

~~— (c) before establishing a new station or facility, Contracting Parties should prepare a Comprehensive Environmental Evaluation in accordance with Recommendation XIV-2.~~

2. In the case of a station or facility which the national Antarctic programme of a non-Consultative Party proposes to establish, they offer assistance to the managers of that programme with respect to the choice of site and the preparation of the Comprehensive Environmental Evaluation as per Annex 1 of the Environmental Protocol, with a view to maximizing the scientific output of the new programme and minimizing its environmental impact.

6. Recommendation XV-20 (Paris, 1989) Air Safety in Antarctica

ORIGINAL TEXT:

The Representatives, Recalling Recommendations I-X and XIV-9;

Recognising the importance of ensuring safe air operations in the Antarctic, and: (a) that there is a wide range of problems in air operations which are becoming more urgent with increasing activity; (b) that the principal body of knowledge and experience of Antarctica as well as of existing practices and services;

Noting, with appreciation, the Report of the Meeting of Experts on Air Safety in Antarctica, held in Paris from 2 to 5 May 1989;

Recommend to their Governments that:

1. For the purpose of ensuring that measures for improved air safety apply to all flights in Antarctica, measures to improve air safety set out in paragraphs 2-10 below should be elaborated on the basis of ICAO criteria, taking due account of the specific features of Antarctica as well as of existing practices and services.
2. For the purpose of ensuring the safety of air operations in the Antarctic Treaty area, they exchange, preferably by 1 September and no later than 1 November each year, information about their planned air operations in accordance with the standardized format at Annex 1 to this Recommendation.
3. For the purpose of improving air safety in Antarctica, national Antarctic programmes operating aircraft in Antarctica and their aircrews should be provided with a continuously updated compendium ('Handbook') describing ground facilities, aircraft and aircraft operating procedures (including helicopters) and associated communications facilities operated by each national Antarctic programme (out of the use of which questions of liability will not arise) and, therefore, they should: (a) prepare such a Handbook as a matter of urgency; (b) facilitate the preparation of such a Handbook by their national Antarctic programme operators by collective action through the medium of the Council of Managers of National Antarctic Programmes (COMNAP) federated to SCAR; (c) adopt a loose-leaf format in which information provided by each national operator is kept separate (unless facilities are jointly operated) so as to facilitate updating of information; (d) request their national Antarctic operators to provide information for the purpose of compiling the Handbook in accordance with Annex 2 to this Recommendation.
4. For the purpose of ensuring mutual awareness of current air operations and exchanging information about them, they should designate: (a) Primary Air Information Stations (PAIS) which coordinate their own air information and information from their Secondary Air Information Stations (if any) for the purpose of notifying current air operations to other PAIS. These PAIS should have adequate communication facilities able to transmit "hard copy" information by means of an agreed HF data mode and/or INMARSAT; and (b) Secondary Air Information Stations (SAIS) which comprise stations/bases (including field bases and ships) which provide air information to their parent coordinating PAIS.
5. For the purpose of avoiding air incidents in areas beyond the range of VHF radio coverage of primary and secondary stations, aircraft outside the areas covered by primary and secondary stations should use a specific radio frequency to apply the "TIBA" procedure laid down in Annex 11 to the Convention on International Civil Aviation.
6. So as to ensure compliance with Article VII, paragraph 5 of the Antarctic Treaty and also Recommendation X-8, Part IV, they should keep one another informed about non-governmental flights and a reminder of the above provisions should be given to all pilots filing a flight plan for flights to Antarctica.
7. So as to provide for the improved collection from, and exchange within Antarctica of meteorological data and information of significance to the safety of Antarctic air operations, they should: (a) encourage the World Meteorological Organisation in their work towards this end; and (b) take steps to improve meteorological services available in Antarctica, specifically to meet aviation requirements.
8. For the purpose of ensuring effective communications between Primary Air Information Stations (PAIS), they ensure that their PAIS have adequate facilities for communicating with other PAIS, and that, in this connection, they bear in mind the INMARSAT system.
9. For the purpose of locating aircraft in distress in Antarctica, and noting the possibilities offered by the COSPAS-SARSAT system for the location of Emergency-Locator-Beacons-Aircraft transmitting on 406 Mhz, they designate points of contact which are to be the addressees of emergency location messages relating to air operations in Antarctica generated by the COSPAS-SARSAT system.
10. For the purpose of enhancing the safety of operation of aircraft in the longer term, studies should be undertaken, at a suitable time, aimed at making use of a satellite communication and navigation system being developed within the framework of ICAO.

Suggested draft updated Measure language: (accompanied by making Recommendation XV-20(1989) no longer current)

Measure M1 (2013)

Air Safety in Antarctica

The Representatives,

Recalling Recommendations I-X ~~and XIV-9~~;

~~Noting, with appreciation, the Report of the Meeting of Experts on Air Safety in Antarctica, held in Paris from 2 to 5 May 1989;~~

Recognising the importance of ensuring safe air operations in the Antarctic, and noting :-

~~(a) that there is a wide range of problems in air operations which are becoming more urgent with increasing activity;~~

~~(b) that the principal body of knowledge and experience of Antarctic air operations, and its current problems, lies with the operators of national Antarctic programmes;~~

~~Noting, with appreciation, the Report of the Meeting of Experts on Air Safety in Antarctica, held in Paris from 2 to 5 May 1989;~~

Recommend to their Governments that:

1. For the purpose of ensuring that measures for improved air safety apply to all flights in Antarctica, measures to improve air safety set out in paragraphs 2-~~940~~ below should be elaborated on the basis of ICAO criteria, taking due account of the specific features of Antarctica as well as of existing practices and services.

2. For the purpose of ensuring the safety of air operations in the Antarctic Treaty area, they exchange, preferably by 1 September and no later than 1 November each year, information about their planned air operations in accordance with the standardized format at Annex 1 to this Recommendation of the EIES.

3. For the purpose of improving air safety in Antarctica, national Antarctic programmes operating aircraft in Antarctica and their aircrews should be provided with a continuously updated compendium produced by the Council of Managers of National Antarctic Programs (COMNAP) and now known as the COMNAP Antarctic Flight Information Manual (AFIM) ('Handbook') describing ground facilities, aircraft and aircraft operating procedures (including helicopters) and associated communications facilities operated by each national Antarctic programme (out of the use of which questions of liability will not arise) and, therefore, they should:

~~(a) prepare such a Handbook as a matter of urgency;~~

~~(ab) facilitate the ongoing preparation-revision of such a Handbook by their national Antarctic programme operators by collective action through the medium of the Council of Managers of National Antarctic Programmes (COMNAP) federated to SCAR;~~

~~(bc) adopt a loose-leaf format-format in which information provided by each national operator is kept separate (unless facilities are jointly operated) so as to facilitate updating of information;~~

~~(cd) request their national Antarctic operators to provide information for the purpose of compiling maintaining the Handbook AFIM in accordance with Annex 2 to this Recommendation.~~

4. For the purpose of ensuring mutual awareness of current air operations and exchanging information about them, they should designate:

(a) Primary Air Information Stations (PAIS) which coordinate their own air information and information from their Secondary Air Information Stations (if any) for the purpose of notifying current air operations to other PAIS. These PAIS should have adequate communication facilities able to transmit "hard copy"

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information by appropriate and agreed means ~~of an agreed HF data mode and/or INMARSAT~~; and
(b) Secondary Air Information Stations (SAIS) which comprise stations/bases (including field bases and ships) which provide air information to their parent coordinating PAIS.

5. For the purpose of avoiding air incidents in areas beyond the range of VHF radio coverage of primary and secondary stations, aircraft outside the areas covered by primary and secondary stations should use a specific radio frequency to apply the "TIBA" procedure laid down in Annex 11 to the Convention on International Civil Aviation.

6. So as to ensure compliance with Article VII, paragraph 5 of the Antarctic Treaty and also Recommendation X-8, Part IV, they should keep one another informed about non-governmental flights and a reminder of the above provisions should be given to all pilots filing a flight plan for flights to Antarctica.

7. So as to provide for the improved collection from, and exchange within Antarctica of meteorological data and information of significance to the safety of Antarctic air operations, they should:

(a) encourage the World Meteorological Organisation in their work towards this end; and
(b) take steps to improve meteorological services available in Antarctica, specifically to meet aviation requirements; and

(c) take account of The International Antarctic Weather Forecasting Handbook.-

8. For the purpose of ensuring effective communications between Primary Air Information Stations (PAIS), they ensure that their PAIS have adequate facilities for communicating with other PAIS, ~~and that, in this connection, they bear in mind the INMARSAT system.~~

~~9. For the purpose of locating aircraft in distress in Antarctica, and noting the possibilities offered by the COSPAS SARSAT system for the location of Emergency Locator Beacons Aircraft transmitting on 406 Mhz, they designate points of contact which are to be the addressees of emergency location messages relating to air operations in Antarctica generated by the COSPAS SARSAT system.~~

~~10. For the purpose of enhancing the safety of operation of aircraft in the longer term, studies should be undertaken, at a suitable time, aimed at making use of a satellite communication and navigation system being developed within the framework of ICAO.~~

7. Resolution 1 (1997) emergency Response Action and Contingency Planning

ORIGINAL TEXT:

The Representatives,

Noting the provisions of Article 15 of the Environmental Protocol and related provisions of Annex IV on emergency response action and contingency planning.

Conscious that implementation of the provisions requires actions by the Parties;

Recognising that initiatives bearing on the provisions have been taken by COMNAP and IAATO;

Convinced that additional work on the subject needs to be done by the ATCM;

Recommend that:

1. That those Consultative Parties whose research stations and vessels operating in Antarctica are not covered by contingency plans should take the necessary steps to ensure that the operators of the stations and vessels introduce plans based on the 1992 Guidelines prepared by COMNAP.

2. That the Consultative Parties, individually or collectively, should to the extent possible carry out regular contingency exercises, both theoretical and practical on land and at sea, to test and thereby refine their contingency plans, and report on the results of the exercises to the ATCM. Exercises at sea should be carried out in accordance with the relevant maritime conventions.

3. In view of the relevance of work being done by IMO, that the IMO expert invited to attend ATCM XXII be requested to take part also in the discussion on this subject.

4. That COMNAP and IAATO submit Information Papers to ATCM XXII describing their respective Guidelines for contingency plans, the extent to which the plans have been put in place, and plans for future work.

5. That in the light of the above reports, discussions, papers and other available information, ATCM XXII should review the issue of emergency response action and contingency planning with a view to implementing further the provisions of Article 15, and the related provisions of Annex IV to the Protocol, on cooperative response action, and decide on further action.

Suggested draft ATCM Final Report language:

Resolution 1 (1997) contains operative paragraphs which are now outdated or have been spent. However, the provisions related to emergency response action and contingency planning remain highly relevant and are covered by the Environmental Protocol, in particular, Article 15, Annex IV (Article 12) and Annex VI (Articles 4 and 5 in particular).

Note: Resolution 6 (1998) and Resolution 3 (2005) are considered together

8. Resolution 6 (1998) Emergency Response Action and Contingency Planning

ORIGINAL TEXT:

The Representatives,

Welcoming the entry into force of the Protocol on Environmental Protection to the Antarctic Treaty (Environmental Protocol);

Noting the provisions of Article 15 of the Environmental Protocol on emergency response action and contingency planning;

Aware that the reduction of risk of emergencies or accidents is best achieved through effective measures on preparedness, emergency response action and contingency planning;

Desiring to ensure that a comprehensive framework for such measures is in place;

Welcoming the continuing work that has been undertaken by COMNAP and IAATO;

Recalling Resolution 1(1997)

Recommend that:

1. The Consultative Parties adopt the COMNAP/SCALOP Guidelines, annexed to this Resolution, specifically:

- Recommended Procedures for Fuel Oil Handling at Stations and Bases;
- Recommendations for Spill Prevention and Containment of Fuel Oil at Stations and Bases;
- Guidelines for Oil Spill Contingency Planning;
- Guidelines for the Reporting of Oil Spill Incidents Which Occur in Antarctica.

2. COMNAP/SCALOP be requested to review, and if necessary revise, as appropriate, these recommendations and guidelines and keep them under periodic review.

3. The Consultative Parties take steps to ensure full application of the provisions of paragraphs 1 and 2 of Resolution 1(1997).

4. COMNAP/SCALOP be requested to undertake an assessment of the risks of environmental emergencies arising from activities in Antarctica, including but not limited to an analysis of incidents which have occurred over the past ten years within the Antarctic Treaty area, and the types of future incidents that could occur in connection with operations at stations and bases.

5. COMNAP/SCALOP also be requested to identify and formulate additional steps in relation to emergency response action and contingency planning for incidents other than oil spills (including guidelines on co-ordination, communication and equipment requirements).

6. COMNAP/SCALOP be further requested to report on the above work to ATCM XXIII, with the report to be provided to the Committee for Environmental Protection so that the Committee can provide advice to ATCM XXIII.

NOTE: Paragraph 3 of this Resolution refers to paragraphs 1 and 2 of Resolution 1 (1997) which state:

1. That those Consultative Parties whose research stations and vessels operating in Antarctica are not covered by contingency plans should take the necessary steps to ensure that the operators of the stations and vessels introduce plans based on the 1992 Guidelines prepared by COMNAP.

2. That the Consultative Parties, individually or collectively, should to the extent possible carry out regular contingency exercises, both theoretical and practical on land and at sea, to test and thereby refine their contingency plans, and report on the results of the exercises to the ATCM. Exercises at sea should be carried out in accordance with the relevant maritime conventions.

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9. Resolution 3 (2005) Fuel Storage and Handling

ORIGINAL TEXT:

The Representatives,

Recalling Article 3 of the Environmental Protocol which requires that activities in the Antarctic Treaty area shall be planned and conducted so as to limit adverse impacts on the Antarctic environment;

Noting the importance which Article 14 of the Protocol attaches to inspections in accordance with Article VII of the Antarctic Treaty as a way to promote the protection of the Antarctic environment and dependent and associated ecosystems;

Noting also that the issue of fuel storage and handling has been raised in several reports of inspections under Article VII of the Antarctic Treaty and has been noted by the CEP on a number of occasions;

Conscious of the importance of bringing the issue of fuel storage and handling to the attention of the Treaty Parties;

Recommend: 1. That their Governments either replace bulk fuel facilities currently lacking secondary containment with double-skinned tanks or provide them with adequate bunding, and have adequate oil spill contingency plans in place; 2. That COMNAP consider undertaking a further assessment of fuel handling and storage facilities and procedures in Antarctica with a view to issuing a set of clear recommendations to operators.

Suggested draft ATCM Final Report language:

Resolution 6 (1998) and Resolution 3 (2005) contain operative paragraphs which are now outdated or have been spent. However, the general provisions contained in these resolutions remain important considerations in regards to oil spill contingency planning, and fuel storage and handling. The ATCM therefore recommends that a new resolution incorporating these provisions be adopted as follows:

And Suggested draft updated Resolution language: (accompanied by making Resolution 6 (1998) Resolution 3 (2005) no longer current)

Resolution R5 (2013) Fuel Storage and Handling

The Representatives,

Recalling Article 3 of the Environmental Protocol which requires that activities in the Antarctic Treaty area shall be planned and conducted so as to limit adverse impacts on the Antarctic environment;

Noting the provisions of Article 15 of the Environmental Protocol;

Conscious that implementation of the provisions requires actions by the Parties;

Recognising that initiatives bearing on the provisions have been taken by COMNAP and IAATO;

Recommend:

That their Governments continue to implement measures for fuel spill prevention, oil spill contingency planning and response, and reporting as incorporated in the COMNAP Fuel Manual guidelines 2008

In particular,

1. That their Governments either replace bulk fuel facilities currently lacking secondary containment with double-skinned tanks or provide them with adequate bunding, and have adequate oil spill contingency plans in place.
2. That their governments introduce and maintain oil spill contingency plans based on the COMNAP Fuel Manual guidelines and that to the extent possible they carry out regular contingency exercises, both theoretical and practical on land and at sea, to test and thereby refine their contingency plans, and report on results of the exercises to the ATCM.

It is also recommended that COMNAP be requested to keep under periodic review, and if necessary revise, as appropriate, the Fuel Manual.

Note: Recommendation XV-19 (1989) and Resolution 1 (1995) are considered together

10. Recommendation XV-19 (1989) Cooperation in the Hydrographic Charting of Antarctic Waters

ORIGINAL TEXT:

The Representatives recommend to their Governments that

1. They increase their mutual cooperation in the hydrographic survey and charting of Antarctic waters in order to contribute to the safety of navigation, the protection of the Antarctic environment and dependent and associated ecosystems, for scientific purposes.
2. For the purposes of hydrographic survey and charting and associated terrestrial surveys and mapping, they coordinate their activities within the framework of IHO and SCAR, as appropriate.

11. Resolution 1 (1995) Strengthening Cooperation in Hydrographic Surveying and Charting of Antarctic Waters

ORIGINAL TEXT:

The Representatives of the Consultative Parties Recommend that:

1. All Consultative Parties with a hydrographic surveying and charting capability in Antarctica are encouraged to stress nationally that their surveying and charting activities in Antarctica are being coordinated through the IHO's PWG on Cooperation in Antarctica. In particular, they should emphasize the INT chart scheme initiative and their national contribution to it, which international cooperation through the IHO implements Recommendation XV-19 of the XVth Antarctic Treaty Consultative Meeting, and emphasizes the international commitment and nature of their Antarctic activities particularly when seeking national support for hydrographic surveying and charting priorities and budget.
2. That the IHO PWG on Antarctica should continue its endeavours to achieve comprehensive, up-dated, coverage of Hydrographic charting, as envisaged by Recommendation XV-19, through the INT chart scheme.

Suggested draft ATCM Final Report language:

The ATCM agreed that Recommendation XV-19 (1989) and Resolution 1 (1995) are no longer current but they do contain, along with Resolution 3 (2003), Resolution 5 (2008) and Resolution 2 (2010), general provisions on cooperation on hydrographic surveying and charting of Antarctic waters that are valid. The ATCM agreed to encompass the current provisions in a new updated Resolution as follows:

Attachment A

And Suggested draft updated Resolution language: (accompanied by making Recommendation XV-19, Resolution 1 (1995) Resolution 3 (2003), Resolution 5 (2008) and Resolution 2 (2010) no longer current)

Resolution R6 (2013) Strengthening Cooperation in Hydrographic Surveying and Charting of Antarctic Waters

Considering that reliable hydrographic data and nautical charts are essential to safe maritime operations;

Noting the increase in marine traffic, particularly tourist vessels, in the Antarctic region;

Concerned about the increased risk of harm to ships, persons and the environment in inadequately charted waters in the region;

Noting that the collection of accurate survey data will improve navigational safety and support scientific research;

Recognising the role of the International Hydrographic Organization Hydrographic Commission on Antarctica (HCA) in the coordination of hydrographic surveying and nautical charting in the Antarctic region and the value of cooperating with SCAR and other relevant expert bodies;

The Representatives, ~~of the Consultative Parties~~

Recommend that their Governments:

- ~~All Consultative Parties with a hydrographic surveying and charting capability in Antarctica are encouraged to stress nationally that their surveying and charting activities in Antarctica are being coordinated through the IHO's PWG on Cooperation in Antarctica. In particular, they should emphasize the INT chart scheme initiative and their national contribution to it, which international cooperation through the IHO implements Recommendation XV-19 of the XVth Antarctic Treaty Consultative Meeting, and emphasizes the international commitment and nature of their Antarctic activities particularly when seeking national support for hydrographic surveying and charting priorities and budget. Increase their mutual collaboration in the hydrographic surveying and charting of Antarctic waters in order to contribute to the economic sustainability through safety of navigation, protection of the Antarctic environment and scientific activities; and coordinate their activities within the framework of National Antarctic Programmes, national hydrographic offices and the IHO Hydrographic Commission on Antarctica, as appropriate.~~
- ~~That the IHO PWG on Antarctica should continue its endeavours to achieve comprehensive, up-dated, coverage of Hydrographic charting, as envisaged by Recommendation XV-19, through the INT chart scheme. Note the lack of hydrographic surveys, nautical charting and the increase in vessel traffic, and collaborate with the IHO through the HCA to achieve comprehensive, updated hydrographic survey and charting through the INT~~

chart scheme.

3. Cooperate with the HCA to clarify requirements for the collection of hydrographic data of sufficient quality for use in the development of electronic navigational charts being cognisant of the emerging challenges and opportunities faced in the digital navigation era; and identify priority areas for the collection of additional hydrographic and bathymetric data.

4. Encourage national programme vessels and ships of opportunity, to collect hydrographic and bathymetric data on all Antarctic voyages, as practicable; to forward any hydrographic and bathymetric data collected to the relevant international chart producer for charting action; and to endeavour to find additional resources to improve hydrographic surveying and charting in the Antarctic region.

ATTACHMENT B

In regards to both Recommendation VII-7 (1972) Antarctic Telecommunications and Recommendation XII-2 (1983) Antarctic Telecommunications, the ICG advice was “The ATCM should require more detailed technical advice from COMNAP and SCAR before taking a decision on the legal status of this recommendation.”

After reviewing both of these recommendations which are 41 and 30 years old, respectively, and noting that they deal with a topic where there has been significant technical and innovative advances, SCAR and COMNAP suggest that from a technical perspective both recommendations are out of date and are no longer valid.

However, if the ATCM feels the underlying principle on encouraging information exchange in regards to communications systems is still valid, we would recommend the two following actions:

1. That Recommendation VII-7 (1972) be designated as no longer current and that **suggested draft ATCM Final Report language** could be as follows in regards to it:

Due to significant technological advances in the last 40 years, Recommendation VII-7 (1972) contains operative paragraphs which are now largely outdated and therefore this recommendation should be considered no longer current. The general provisions for National Antarctic Programs to exchange information on communications equipment and methodology remains valid and is encouraged.

AND

2. That Recommendation XII-2 be updated to reflect the significant technological advances that have occurred in the past 30 years. We suggest the following:

Suggested draft updated Resolution language: (accompanied by making Recommendation XII-2(1983) no longer current)

Resolution R7 (2013) Antarctic Information and Telecommunications Technology Systems (ICTS)
The Representatives,

~~Recalling Recommendations VI-1, VII-7 and X-3;~~

Recognising that ~~modern ICTS can serve the Antarctic community Antarctic telecommunications are designed to carry operational, scientific and meteorological traffic and that improvement of the telecommunications system would serve~~ to ensure timely and full exchange of information;

~~Recognising that recent developments in the use of satellites, of which some Consultative Parties have made use, have improved the reliability of communication links between Antarctic stations and the outside world, but that consequent diminished reliance on conventional telecommunication methods may have affected the capability of stations to communicate with each other;~~

~~Noting with appreciation, the response of the SCAR Working Group on Logistics to the request in Recommendation X-3, paragraph 6, to prepare an Antarctic Telecommunications Guidance Manual (SCARCOM);~~

ATTACHMENT B

~~Noting that the increasing shipping and aircraft activity in Antarctica will require improved telecommunications and meteorological support by Consultative Parties undertaking such increased activity;~~

~~Noting that advanced technology is available;~~

~~Noting also that innovative research often makes high demands on ICTS capability and capacity;~~

Recommend to their Governments that:

(1) They strive to ensure effective use of the Antarctic ~~telecommunication-ICT~~ systems already in existence, and to utilise as appropriate the developing ~~satellite communication system~~ technology with a view to achieving improved communications between the Antarctic stations, as well as between those stations and points outside Antarctica;

(2) They invite ~~SCAR, through their National Antarctic Committ~~ COMNAP to continueees, to:

(i) ~~consider, in consultation with agencies responsible for national Antarctic programs (hereinafter referred to as "national Antarctic programs"), how best SCARCOM can be periodically updated so that it may provide adequate guidance to telecommunications operators on telecommunication practices of national Antarctic programs and relevant internationally agreed procedures;~~ Regularly update the Antarctic Telecommunications Operators Manual (ATOM) with information from National Antarctic Programs and others working in Antarctica;

(ii) examine practical and technological issues relating to ~~increased use of satellite communications~~ ICTS requirements and capabilities, including:

~~(a) an exchange of information and experience arising out of the adoption of satellite communications for the benefit of those national Antarctic programs which have not adopted this means of telecommunication;~~

~~(b) the cost-effectiveness of satellite communications options and the benefits to operational efficiency and scientific research that may be derived therefrom,~~

~~(c) identification of any problems which may be encountered in communication between the stations of different national Antarctic programs in the event of more widespread adoption of satellite communications, and~~

~~(d) exploration of means by which any such problems might be overcome while maintaining the cost-effectiveness and other benefits of satellite communications;~~

(iii) examine-discuss the adequacy of the Antarctic ~~telecommunications system~~ ICTS to meet demands arising from the expansion of shipping and aircraft activity in Antarctica, and to suggest improvements where these might be desirable. In this examination particular attention should be given to:

~~(a) communications between Antarctic stations,~~

~~(b) use of the existing facilities for communications between Antarctica and the outside world, and~~

~~(c) communications between stations, ships and aircraft for the purpose of co-ordinating emergency and search and rescue operations.~~

ATTACHMENT B

13 Recommendation VII-7 (1972) ANTARCTIC TELECOMMUNICATIONS

ORIGINAL TEXT:

The Representatives,

Considering the contribution to the study of Antarctic radio propagation and the ionosphere made at the SCAR Symposium on "Scientific and Technical Problems Affecting Antarctic Telecommunications" held in Sandefjord, Norway, in May 1972, and the Interim Report of the SCAR Group of Specialists (Revised 25 August 1972);

Recognising the need for improving, as far as practicable, the transmission of information between stations within the Antarctic Treaty Area and between those stations and the rest of the world;

Bearing in mind that difficulties may arise in Antarctic communications if new methods of transmission are accepted by Consultative Parties without due regard to the principle of compatibility both between new systems and between new and existing systems;

Recommend to their Governments that:

1. Their offices administering Antarctic programmes take into account the information presented at the SCAR Symposium when considering new means of improving Antarctic communications; techniques discussed at the Symposium and brought to the attention of Representatives by SCAR and others including communication satellites, VHF low power scatter systems, oblique ionospheric sounding, coding and error correcting devices and the wider use of ionospheric prediction services, especially with regard to short-term advice on impending disturbances;
2. Their offices administering Antarctic programmes be encouraged to exchange information about changes contemplated in types of equipment or methods in order to improve, where practicable, compatibility between Antarctic networks.

ATTACHMENT B

14 Recommendation XII-2 (1983) ANTARCTIC TELECOMMUNICATIONS

ORIGINAL TEXT:

The Representatives,
Recalling Recommendations VI-1, VII-7 and X-3;

Recognising that Antarctic telecommunications are designed to carry operational, scientific and meteorological traffic and that improvement of the telecommunications system would serve to ensure timely and full exchange of information;

Recognising that recent developments in the use of satellites, of which some Consultative Parties have made use, have improved the reliability of communication links between Antarctic stations and the outside world, but that consequent diminished reliance on conventional telecommunication methods may have affected the capability of stations to communicate with each other;

Noting with appreciation, the response of the SCAR Working Group on Logistics to the request in Recommendation X-3, paragraph 6, to prepare an Antarctic Telecommunications Guidance Manual (SCARCOM);

Noting that the increasing shipping and aircraft activity in Antarctica will require improved telecommunications and meteorological support by Consultative Parties undertaking such increased activity;

Recommend to their Governments that:

(1) They strive to ensure effective use of the Antarctic telecommunication systems already in existence, and to utilise as appropriate the developing satellite communication systems with a view to achieving improved communications between the Antarctic stations, as well as between those stations and points outside Antarctica;

(2) They invite SCAR, through their National Antarctic Committees, to:

(i) consider, in consultation with agencies responsible for national Antarctic programs (hereinafter referred to as "national Antarctic programs"), how best SCARCOM can be periodically updated so that it may provide adequate guidance to telecommunications operators on telecommunication practices of national Antarctic programs and relevant internationally agreed procedures;

(ii) examine issues relating to increased use of satellite communications including:

(a) an exchange of information and experience arising out of the adoption of satellite communications for the benefit of those national Antarctic programs which have not adopted this means of telecommunication,

(b) the cost-effectiveness of satellite communications and the benefits to operational efficiency and scientific research that may be derived therefrom,

(c) identification of any problems which may be encountered in communication between the stations of different national Antarctic programs in the event of more widespread adoption of satellite communications, and

(d) exploration of means by which any such problems might be overcome while maintaining the cost-effectiveness and other benefits of satellite communications;

(iii) examine the adequacy of the Antarctic telecommunications system to meet demands arising from the expansion of shipping and aircraft activity in Antarctica, and to suggest improvements where these might be desirable. In this examination particular attention should be given to:

(a) communications between Antarctic stations,

(b) use of the existing facilities for communications between Antarctica and the outside world, and

(c) communications between stations, ships and aircraft for the purpose of co-ordinating emergency and search and rescue operations.

ATTACHMENT C

In regards to the eight technical recommendations relating to meteorology, ATCM XXXV SP9 noted that:

“There are eight recommendations to analyse under this category, which contain detailed technical specifications, many of which may be outdated. They also refer to external texts that are not readily available, which makes it difficult to know the exact scope of these recommendations and their current status.

Although COMNAP made important comments on some of these recommendations, the ICG agreed that many of them contain highly technical details and the most recent is more than 20 years old. The ICG also agreed that a detailed analysis of all provisions was not practical during the intersessional period, although late in this period WMO, and in particular members of its Executive Council Panel of Experts on Polar Observations, Research and Services, did provide comments on each of the eight recommendations, implying that a major revision of recommendations under the “Meteorology” category is desirable. Therefore, a preferable outcome might be that the ATCM invites relevant organisations, including for example WMO, COMNAP and SCAR, to consider current arrangements for cooperation in the collection and exchange of meteorological data and services, and to present a summary of requirements to the ATCM XXXVI for consideration. If appropriate, any resulting recommendations might then be reflected in a new resolution that replaces the suite of recommendations listed in this document.”

This attachment provides the ATCM with a suggestion for significant revisions, including suggested draft Final Report language and a new suite of resolutions to consider which would replace the eight in the list. The original text of the eight recommendations under review can be found at the end of this attachment.

Suggested ATCM Final Report language:

ATCM agreed that, when each of the following Recommendations is considered by itself, and considering that each is, in effect, part of a suite of Recommendations aimed at maximizing the effectiveness and efficiency of meteorological and sea ice information and services, in delivering practical outcomes (eg mitigating risks), then Recommendation V-2 (Paris, 1968); Recommendation VI-1 (Tokyo, 1970); Recommendation VI-3 (Tokyo, 1970); Recommendation X-3 (Washington, 1979); Recommendation XII-1 (Canberra, 1983); Recommendation XIV-7 (Rio de Janeiro, 1987); Recommendation XIV-10 (Rio de Janeiro, 1987); and Recommendation XV-18 (Paris, 1989) are no longer current in every detail, and should be regarded as spent ([Decision D1 \(2013\)](#)).

However, the Parties wholeheartedly continue to support underpinning aspects of each of the Recommendations. A couple of examples: first, with Recommendation V-2, the best outcomes in effective and efficient use of scientific intelligence (eg: data; interpretation; prediction; use in service delivery outcomes) will be achieved by mutual collaboration and through involving subject matter experts such as the WMO; SCAR; and others; and, a second example, underpinning Recommendation XV18 (Paris, 1989) is the notion that risks to air and marine navigation can be minimized or mitigated by exchange of meteorological and oceanographic data from automatic weather stations and drifting buoys.

ATCM therefore agreed that, in order to maximize effective and efficient outcomes (eg risk minimization and mitigation) stemming from future meteorological and related work in the Antarctic, [Resolution R1 \(2013\)](#); [Resolution R2 \(2013\)](#); [Resolution R3 \(2013\)](#) and [Resolution R4 \(2013\)](#) be adopted as the contemporary suite of measures relating to 21st Century developments in meteorology and related fields (such as oceanography and the cryosphere-sea ice in particular).

ATCM noted the following mapping of the now spent Recommendations to the newly approved Decisions and Resolutions:

ATTACHMENT C

Spent Recommendations on Operational Meteorology	Contemporary elements of the spent Recommendations map to the Replacement Measures (Decision/Resolutions) below	Brief Comment
Recommendation V-2 (Paris, 1968)	Resolution R1 (2013) and Resolution R3 (2013)	Overarching co-operation; research.
Recommendation VI-1 (Tokyo, 1970)	Nil.	Old Recommendation strictly relates to meetings over 4 decades ago.
Recommendation VI-3 (Tokyo, 1970)	Resolution R2 (2013)	AntON is the new WMO Antarctic network.
Recommendation X-3 (Washington, 1979)	Resolution R2 (2013)	AntON is the new WMO Antarctic network. Need for efficiencies and effectiveness in delivering data are implicit in the new resolution.
Recommendation XII-1 (Canberra, 1983)	Resolution R2 (2013)	AntON is the new WMO Antarctic network. Need for efficiencies and effectiveness in delivering data are implicit in the new resolution.
Recommendation XIV-7 (Rio de Janeiro, 1987)	Resolution R2 (2013)	AntON is the new WMO Antarctic network. Need for efficiencies and effectiveness in delivering data are implicit in the new resolution.
Recommendation XIV-10 (Rio de Janeiro, 1987)	Resolution R3 (2013) and Resolution R4 (2013)	WMO (EC-PORS) working with others to improve meteorological related services via, inter alia, developing the Global Integrated Polar Prediction System (GIPPS)
Recommendation XV-18 (Paris, 1989)	Resolution R3 (2013) and Resolution R4 (2013)	WMO (EC-PORS) working with others to improve meteorological related services via, inter alia, developing the Global Integrated Polar Prediction System (GIPPS)

Suggested updated language

Decision D1 (2013) Weather-related Environmental Intelligence for the 21st Century

The Representatives,

Noting that ATCM Recommendations relating to Operational Meteorology span the period 1968 to 1989, these being: Recommendation V-2 (Paris, 1968); Recommendation VI-1 (Tokyo, 1970); Recommendation VI-3 (Tokyo, 1970); Recommendation X-3 (Washington, 1979); Recommendation XII-1 (Canberra, 1983); Recommendation XIV-7 (Rio de Janeiro, 1987); Recommendation XIV-10 (Rio de Janeiro, 1987); and Recommendation XV-18 (Paris, 1989). Moreover, noting that much of the detail in these two to four decade old recommendations are no longer current in detail

Desiring that Environmental Intelligence (observations, research and services) covering meteorology and related sciences (specifically, oceanography and the cryosphere) be as contemporary as possible in mitigating/minimizing risks in the Antarctic

Welcoming WMO's desire to engage with closely with ATCM, SCAR, COMNAP and other Antarctic-focussed institutions/agencies. Also welcoming relevant WMO initiatives in polar meteorologically-related matters through its WMO Executive Council expert panel on Polar Observations, Research, and Services (EC –PORS)

Decided that:

- Recommendation V-2 (Paris, 1968); Recommendation VI-1 (Tokyo, 1970); Recommendation VI-3 (Tokyo, 1970); Recommendation X-3 (Washington, 1979); Recommendation XII-1 (Canberra, 1983); Recommendation XIV-7 (Rio de Janeiro, 1987); Recommendation XIV-10 (Rio de Janeiro, 1987); and Recommendation XV-18 (Paris, 1989) are each declared spent;
- [Resolution R1 \(2013\)](#); [Resolution R2 \(2013\)](#); [Resolution R3 \(2013\)](#) and [Resolution R4 \(2013\)](#) replace the now-spent Recommendations listed above in line with the following mapping:

ATTACHMENT C

Spent Recommendations on Operational Meteorology	Contemporary elements of the spent Recommendations map to the Replacement Measures (Decision/Resolutions) below	Brief Comment
Recommendation V-2 (Paris, 1968)	Resolution R1 (2013) and Resolution R3 (2013)	Overarching co-operation; research.
Recommendation VI-1 (Tokyo, 1970)	Nil.	Old Recommendation strictly relates to meetings over 4 decades ago.
Recommendation VI-3 (Tokyo, 1970)	Resolution R2 (2013)	AntON is the new WMO Antarctic network.
Recommendation X-3 (Washington, 1979)	Resolution R2 (2013)	AntON is the new WMO Antarctic network. Need for efficiencies and effectiveness in delivering data are implicit in the new resolution.
Recommendation XII-1 (Canberra, 1983)	Resolution R2 (2013)	AntON is the new WMO Antarctic network. Need for efficiencies and effectiveness in delivering data are implicit in the new resolution.
Recommendation XIV-7 (Rio de Janeiro, 1987)	Resolution R2 (2013)	AntON is the new WMO Antarctic network. Need for efficiencies and effectiveness in delivering data are implicit in the new resolution.
Recommendation XIV-10 (Rio de Janeiro, 1987)	Resolution R3 (2013) and Resolution R4 (2013)	WMO (EC-PORS) working with others to improve meteorological related services via, inter alia, developing the Global Integrated Polar Prediction System (GIPPS)
Recommendation XV-18 (Paris, 1989)	Resolution R3 (2013) and Resolution R4 (2013)	WMO (EC-PORS) working with others to improve meteorological related services via, inter alia, developing the Global Integrated Polar Prediction System (GIPPS)

Resolution R1 (2013)

Mitigating risks in the Antarctic through Co-operation, Facilitation, and Exchange of Meteorological, related Oceanographic, and related Cryospheric Environment Intelligence comprising Observations (Data); Research and Services

The Representatives,

Desiring that risks, to people and infrastructure in Antarctic, relating to weather; climate; weather-related oceanographic effects; and aspects of the cryosphere, be minimized through mitigation strategies, informed by Environmental Intelligence (observations, research and services) that is as contemporary as is possible

Recalling [Decision D1 \(2013\)](#) that the now spent ATCM recommendations relating to Operational Meteorology and related sciences, (viz: Recommendation V-2 (Paris, 1968); Recommendation VI-1 (Tokyo, 1970); Recommendation VI-3 (Tokyo, 1970); Recommendation X-3 (Washington, 1979); Recommendation XII-1 (Canberra, 1983); Recommendation XIV-7 (Rio de Janeiro, 1987); Recommendation XIV-10 (Rio de Janeiro, 1987); and Recommendation XV-18 (Paris, 1989)) whilst no longer being current in detail, did, however, contain “generically” laudable aims

Welcoming WMO Congress XVI reaffirmation of its desire for WMO to work closely with ATCM and welcoming the development of the WMO Executive Council expert panel on Polar Observations, Research, and Services (EC –PORS)

Noting in the spirit of co-operation mentioned in Article II of the Antarctic Treaty, WMO’s desire to engage closely, not only with ATCM, but with also with complementary agencies/institutions involved in Antarctic research and services, such as, *inter alia*, Scientific Committee on Antarctic Research (SCAR); the WMO and Intergovernmental Oceanographic Commission (of UNESCO) (IOC) Joint Commission on Oceanography and Marine Meteorology (JCOMM); the US National Science Foundation (NSF); the Antarctic Meteorological Observation, Modeling and Forecasting Workshop forum (AMOMFW); and users of Antarctic weather-related service such as the members states of Council of Managers of National Antarctic Programs (COMNAP); and non governmental enterprises represented by, for example, the International Association of Antarctic Tour Operators (IAATO)

Recommend that:

- Parties encourage and facilitate the co-operative approach noted above;
- Parties note companion Resolutions [R2 \(2013\)](#); [R3 \(2013\)](#) and [R4 \(2013\)](#) dealing, in sequence, with Antarctic-related Observations; Research; and Services, each designed to be complementary (in other words, to be as effective and efficient as possible, Services require Research (and development), whilst Research needs to be informed and validated by Observations) in order to minimize weather-related; climate-related; and wave/sea-ice risks to personnel and infrastructure in the Antarctic;
- Their Governments, mindful of the cost/benefit advantages of minimizing risks to Antarctic personnel and infrastructure, facilitate, where feasible, the infrastructure (including, but not limited to, telecommunications; and major civil works) to support the aims of Resolutions [R2 \(2013\)](#); [R3 \(2013\)](#) and [R4 \(2013\)](#)

Resolution R2 (2013)

Mitigating risks in the Antarctic through meteorologically-related Observations (Data)

The Representatives,

Recalling that Recommendation VI-3 (Tokyo, 1970); Recommendation X-3 (Washington, 1979); Recommendation XII-1 (Canberra, 1983); and Recommendation XIV-7 (Rio de Janeiro, 1987); are now spent (no longer current in many details), did contain useful and still current ideas around Telecommunications and Observations (data); and that overarching [Resolution R1 \(2013\)](#) outlines the broad international effort at mitigating weather, climate, and marine-based (waves/sea-ice) risks to Antarctic personnel and infrastructure

Noting that obtaining data to minimize risks requires appreciable infrastructure in the form of, *inter alia*, automatic weather stations (AWS); upper air measuring systems (eg: radiosondes) drifting buoys; telecommunications systems; and access to satellite data

Welcoming WMO initiatives such as: the Antarctic Observing Network (AntON), which subsumes the previous Basic Antarctic Synoptic and Climatological Networks; and the embryonic Global Cryosphere Watch (GWC); and welcoming the World Climate Research Programme (WCRP)/SCAR International Programme for Antarctic Buoys (IPAB)

Recommend that:

- Parties consider the “Region 7” sublist in the WMO “Volume A” flat file¹ of operational stations to be the definitive list of AntON stations, having, *inter alia*, WMO numbers; current positions and elevations of each site; as well as being labeled as AntON stations.
- Their Governments, mindful of the cost/benefit advantages of minimizing risks to Antarctic personnel and infrastructure, facilitate, where feasible, the infrastructure (including, but not limited to, telecommunications; and major civil works) needed to support, in particular, AntON; GWC; and IPAB.

¹ See <ftp://ftp.wmo.int/wmo-ddbs/Pub9volA121029.flatfile> (obtained from <http://www.wmo.int/pages/prog/www/ois/volume-a/vola-home.htm>) See also <http://www.wmo.int/pages/prog/www/ois/volume-a/9ACodeTables9805.html>

Resolution R3 (2013)

Mitigating risks in the Antarctic through meteorologically-related Research

The Representatives,

Recalling that Recommendation V-2 (Paris, 1968); Recommendation XIV-10 (Rio de Janeiro, 1987); and Recommendation XV-18 (Paris, 1989) are now spent (no longer current in many details), did contain useful and still current ideas around underpinning Antarctic-related Research through speedily communicated Observations (data); and that overarching [Resolution R1 \(2013\)](#) outlines the broad international effort at mitigating weather, climate, and marine- based (waves/sea-ice) risks to Antarctic personnel and infrastructure

Welcoming the WMO initiative in championing the development of the Global Integrated Polar Prediction System (GIPPS) as part of the WWRP/THORPEX (World Weather Research Programme/The Observing System Research and Predictability Experiment) Polar Prediction Project as a means of providing improved weather and short-term climate forecast/outlooks for the polar regions

Noting the relevant work of SCAR, for example, in developing READER as a means of providing a “one-stop shop” of quality data for climate and climate-change research

Recommend that:

- Parties support, in principle at least, the underpinning of Antarctic-related meteorological and marine (wave/sea-ice) forecasting services over a range of time scales, through robust Antarctic-related research;
- Their Governments, mindful of the cost/benefit advantages of minimizing risks to Antarctic personnel and infrastructure, facilitate, where feasible, the infrastructure (including, but not limited to, telecommunications; and major civil works) needed to support Antarctic-related meteorological and marine (wave/sea-ice) research.

Resolution R4 (2013)

Mitigating risks in the Antarctic through meteorologically-related Services

The Representatives,

Recalling Recommendation XIV-10 (Rio de Janeiro, 1987); and Recommendation XV-18 (Paris, 1989) are now spent (no longer current in many details), did contain useful and still current ideas around mitigating weather, climate, and marine-based (waves/sea-ice) risks to Antarctic personnel and infrastructure and that overarching [Resolution R1 \(2013\)](#) outlines the broad international effort in this regard

Welcoming the WMO focus on provision of Services as the driver for its polar Observation (eg AntON; GCW) and Research (eg GIPPS) initiatives

Noting that there are a range of agencies/institutions that WMO is keen to seek collaboration in developing its Service strategies, ranging from on the development side, *inter alia*, SCAR; AMOMFW; the International Ice Charting Working Group (IICWG); the JCOMM Expert Team on Sea Ice (ETSI) (JCOMM ETSI); to on the “user” side COMNAP and IAATO, for example, and their members

Recommend that:

- Parties support WMO’s initiatives such as GIPPS underpinning Antarctic-related meteorological and marine (wave/sea-ice) forecasting services over a range of time scales, through robust Antarctic-related research and development;
- Parties support and encourage WMO in developing its Service strategy in wide consultation with other relevant Service developers and with Service users;
- Their Governments, mindful of the cost/benefit advantages of minimizing risks to Antarctic personnel and infrastructure, facilitate, where feasible, the infrastructure (including, but not limited to, telecommunications; and major civil works) needed to support Antarctic-related meteorological and marine (wave/sea-ice) Services.

Original Text

Recommendation V-2 (Paris, 1968) MEASURES FOR IMPROVING ANTARCTIC TELECOMMUNICATIONS

(Original text of the Recommendation *only* is below: the full text, including preamble, may be found at:

http://www.ats.aq/devAS/info_measures_listitem.aspx?lang=e&id=68)

The Representatives recommend to their governments that:

1. In view of the valuable information provided by WMO and SCAR to Consultative Parties, they continue to cooperate with the WMO through their Representatives thereto and with SCAR through their National Committees in defining future scientific requirements.
2. They consider the usefulness of creating Antarctic Meteorological Centres in the Antarctic.
3. They hold a meeting of telecommunications experts at Buenos Aires, Argentina, between 15 August and 15 September 1969, in accordance with Recommendation IV-24. The date of this meeting should be arranged through diplomatic channels, taking into account relevant meetings of other international organizations which will be held in 1969 and the time required to translate and distribute the documents from such meetings.
4. Although it is expected that all Consultative Parties will participate, the meeting in Buenos Aires may proceed without the participation of them all provided all the Consultative Parties agree to that procedure and to the provisional agenda. All Consultative Parties will communicate before 1 June 1969 to the host government their intentions as to sending experts. Proposals emanating from the meeting will be sent to all Consultative Parties for their consideration.
5. One expert each from WMO, ITU, IOC and SCAR should be invited to attend as observers. Invited observers may submit documents and make statements with the permission of the Chairman but they may not vote. All experts from Consultative Parties attending will be members of their delegations.
6. The agenda for the meeting should be determined by the Consultative Parties through diplomatic channels and the agreed provisional agenda will be circulated by the host government through diplomatic channels one month prior to the opening of the meeting.
7. The results of the meeting should take the form of proposals on telecommunications unanimously agreed by the delegations of the Consultative Parties participating in the meeting. These will be circulated by the host government to all Consultative Parties for consideration. These proposals will constitute the report of the meeting. Other conference documents may be appended for information as annexes to the report with the consent of all delegations present. The proposals would not become measures under Article IX of the Antarctic Treaty but any Consultative Parties may submit any matter arising from this meeting to a subsequent Consultative Meeting.
8. Information should be exchanged through diplomatic channels on the following aspects of telecommunications procedures at least one month prior to the opening of the Meeting:
 - (i) existing networks, traffic loads and channel capacity on each route;
 - (ii) shortcomings in existing networks and channels;
 - (iii) present traffic carried on each route
 - a) Administrative and operational traffic
 - b) Meteorological traffic

ATTACHMENT C

c) Other scientific traffic;

(iv) existing time schedules for meteorological transmission

a) Broadcast

b) Point to point traffic

9. The fields of discussion at the meeting should include, inter alia:

(i) New telecommunications traffic requirements submitted by Consultative Parties, WMO, IOC and SCAR, the capacity of the existing facilities and the effect of these new requirements on the existing facilities, taking into account the report of the Antarctic Treaty Meeting on Telecommunications held in Washington in 1963 and present prevailing conditions; (ii) Estimates of requirements for the near future and further projections if possible; (iii) Procedure for amending telecommunications arrangements from time to time to meet changing conditions; (iv) New telecommunications techniques which might be introduced into the Antarctic to meet future requirements; (v) Preparation of a standard format for the exchange of information on telecommunications facilities under Article VII of the Antarctic Treaty.

Recommendation VI-1 (Tokyo, 1970) ANTARCTIC TELECOMMUNICATIONS

(Original text of the Recommendation *only* is below: the full text, including preamble, may be found at:

http://www.ats.aq/devAS/info_measures_listitem.aspx?lang=e&id=76)

Recommend to their Governments that:

1. They adopt as guide-lines the Proposals contained in the Final Report of the Second Antarctic Treaty Meeting on Telecommunications held in Buenos Aires in 1969;
2. In the plans for their expeditions they provide the organizational and technical arrangements necessary to implement these Proposals as soon as, and as far as practicable.

Recommendation VI-3 (Tokyo, 1970) ANTARCTIC METEOROLOGY

(Original text of the Recommendation *only* is below: the full text, including preamble, may be found at:

http://www.ats.aq/devAS/info_measures_listitem.aspx?lang=e&id=78)

Recommend to their Governments that:

1. They adopt Annex 1 to this Recommendation as a current basis for planning the exchange of available raw meteorological data;
2. They adopt Annex 2 to this Recommendation as a current basis for planning the exchange of available processed meteorological data;
3. They support, as far as practicable, such measures as will facilitate the speedy and effective implementation of Annexes 1 and 2 as a basis for planning;
4. They invite the World Meteorological Organization to review Annexes 1 and 2 from time to time and advise them of the results of such reviews.

ATTACHMENT C

Recommendation X-3 (Washington, 1979) IMPROVEMENT OF TELECOMMUNICATIONS IN ANTARCTICA AND THE COLLECTION AND DISTRIBUTION OF ANTARCTIC METEOROLOGICAL DATA

(Original text of the Recommendation *only* is below: the full text, including preamble, may be found at:

http://www.ats.aq/devAS/info_measures_listitem.aspx?lang=e&id=125)

Recommend to their Governments that:

1. Taking account of the final report of the Third Antarctic Treaty Meeting on Telecommunications, they should strive to improve the system for the collection and distribution of Antarctic meteorological data having regard particularly to increasing efficiency, reliability and economy of effort; taking into account opportunities offered by new technology;
2. Each station undertaking meteorological observations should ensure that data are transmitted as soon as practicable after the observation;
3. Stations receiving these data for onward transmission to other Antarctic stations or to the GTS should forward such data with minimum delay;
4. In cooperation with other Antarctic stations and World Meteorological Centers, they continue regularly to monitor receipt of Antarctic data by, and its transmission within, the GTS;
5. In cooperation with the WWW, they seek to ensure that the transmission of these data from the GTS to Antarctic stations is facilitated in cases where this method is likely to be more reliable or cost-effective than trans-Antarctic transmissions;
6. Through their National Antarctic Committees, they invite SCAR to prepare a brief handbook of the telecommunications practices within and between national networks in a format which allows it to be amended periodically in the light of changes in national practices;
7. For the purposes of the previous paragraph, they ensure that their offices administering Antarctic programs inform SCAR in June and December each year of changes in their telecommunications practices;
8. Subject to overriding scientific, administrative or budgetary reasons, they seek to ensure, by means of appropriate contacts with the offices administering Antarctic programs, that transmission of meteorological data between Antarctic stations is not prejudiced by changes in their telecommunications practices;
9. They invite WMO, through their Permanent Representatives to that Organization, to review Annexes 1 and 2 of Recommendation VI-3 with a view to advising Consultative Parties about current, and probable future, requirements for both raw and processed data in the Antarctic region;
10. Not later than at the Twelfth Antarctic Treaty Consultative Meeting they review developments in Antarctic telecommunications for meteorological purposes, having sought in the interim period to resolve any international difficulties that may arise with regard to the system by appropriate discussion.

ATTACHMENT C

Recommendation XII-1 (Canberra, 1983) THE COLLECTION AND DISTRIBUTION OF ANTARCTIC METEOROLOGICAL DATA

(Original text of the Recommendation only is below: the full text, including preamble, may be found at:

http://www.ats.aq/devAS/info_measures_listitem.aspx?lang=e&id=136)

Recommend to their Governments that:

1. (1) use their best endeavours, subject to any overriding scientific, administrative or budgetary considerations, to secure full implementation of the network of stations and observational programs set forth in Annex 1 of this Recommendation;
- (2) maintain and improve, subject to any overriding scientific, administrative or budgetary considerations, the system for collection and distribution of meteorological data to, from and within Antarctica having regard to the routing arrangements shown in Annexes 2 and 3, which are based on the conclusions of the WMO Meeting of Experts on Antarctic Data Telecommunication Arrangements in June 1983;
- (3) seek, through their Permanent Representatives with WMO, the completion of Annex IV to the Final Report of the aforesaid WMO Meeting of Experts, as a helpful contribution to planning the exchange of available meteorological data;
- (4) seek, through their Permanent Representatives with WMO, to ensure that consideration is given, as appropriate, to other conclusions and recommendations made by the aforesaid WMO Meeting of Experts;
- (5) invite WMO through their Permanent Representatives with that Organisation, to keep under review the arrangements for routing of meteorological data within Antarctica and between Antarctica and the GTS of the World Weather Watch, and to suggest actions which might be taken to improve the timely receipt of data at stations in Antarctica and at World Meteorological Centres Melbourne, Moscow and Washington and other centres in the World Weather Watch System, having particular regard to changing requirements for meteorological information and to opportunities offered by new technology; and
- (6) Note that the statements of requirements for raw and processed Antarctic meteorological data provided by the WMO pursuant to Recommendation X-3 paragraph 9 require refinement, and invite WMO, through their Permanent Representatives with that Organization, to undertake such refinement.

ATTACHMENT C

Recommendation XIV-7 (Rio de Janeiro, 1987) ANTARCTIC METEOROLOGY AND TELECOMMUNICATIONS

(Original text of the Recommendation *only* is below: the full text, including preamble, may be found at:

http://www.ats.aq/devAS/info_measures_listitem.aspx?lang=e&id=166)

Recommend to their Governments that:

1. Having regard to Recommendations 6 and 8 of EC/WGAM-IV (reproduced at Annex H to the Final Report of the XIVth Consultative Meeting), they accept Annex 1 to this Recommendation as a current statement of the Basic Synoptic Network and the Network of Climat and Climat Temp Reporting Stations in the Antarctic and that, as a consequence, Annex I to Recommendation XII-1 be withdrawn;
2. Annexes 1, 2 and 3 to Recommendation X-3 and Annexes 2 and 3 to Recommendation XII-1 be withdrawn and replaced by Annexes 2 and 3 to this Recommendation as a current statement of the "Existing links for the daily international exchange of meteorological data within the Antarctic" and the "Principal routes by which Antarctic Meteorological data enter the GTS" (Global Telecommunications System of the WMO World Weather Watch);
3. Annexes I and II to Recommendation VI-3 be withdrawn and replaced by Annexes 4 and 5 to this Recommendation as current statements of Requirements for Observational Data and Requirements for Processed Information;
4. Having regard to paragraph 4.1 and Annex I to the Final Report of EC/WGAM-IV (reproduced at Annex I to the Final Report of ATCM XIV), they:
 - (a) respond expeditiously in respect of paragraph 288, sub-paragraphs (a) and (e);
 - (b) invite WMO to identify such areas of difficulty as there may be in respect of the transmission of meteorological data inside Antarctica, between the Antarctic and the outside world (in both directions) and in the operation of the GTS and to use all feasible means, through the exercise of their good offices, to see if such difficulties can be resolved;
 - (c) also be ready to consider a joint meeting of WMO and SCAR telecommunication experts, convened in accordance with Recommendation IV- 24, in the light of any report which may be prepared reflecting action taken in accordance with sub-paragraph (b) above;
 - (d) respond positively to requests received in accordance with sub-paragraphs (b) and (c) of paragraph 289, subject to overriding scientific, administrative or budgetary considerations;
 - (e) request WMO, when passing to Antarctic Treaty Consultative Parties their recommendations arrived at in accordance with sub-paragraph (d) of paragraph 289, to set out in specific terms the technical functions, capacities and services of proposed "Antarctic Meteorological Centres" and WMO's views on the justification for the designation of each proposed Centre;
 - (f) be prepared to respond to any request for designation received from WMO, in accordance with sub-paragraph (e) of paragraph 289, on the understanding that any such designations and activities carried out accordingly, will be subject to Article IV of the Antarctic Treaty.

ATTACHMENT C

Recommendation XIV-10 (Rio de Janeiro, 1987) MARINE METEOROLOGICAL AND SEA ICE INFORMATION SERVICES FOR NAVIGATION IN THE TREATY AREA OF THE SOUTHERN OCEAN

(Original text of the Recommendation *only* is below: the full text, including preamble, may be found at:

http://www.ats.aq/devAS/info_measures_listitem.aspx?lang=e&id=169)

Recommend to their Governments that:

1. They invite WMO and SCAR (through their Permanent Representatives and their National Committees, respectively) to consider ways of improving or developing operational marine meteorological and sea ice information services in the Treaty Area of the Southern Ocean;
2. Any such consideration should take into account the Implementation Programme for the Antarctic described in Annex I of the Final Report of the Fourth Session of the EC Working Group on Antarctic Meteorology (September 1986), and subsequent pertinent decisions of the Tenth WMO Congress (May 1987);
3. Such consideration be coordinated with the IOC;
4. After receiving a response from WMO and SCAR, they convene, if necessary, in accordance with Recommendation IV-24, a Meeting of Experts to consider how an improved approach to marine meteorological and sea ice information services in the Treaty Area of the Southern Ocean could be implemented.

Recommendation XV-18 (Paris, 1989) COOPERATION IN METEOROLOGICAL AND SEA ICE INFORMATION SERVICES FOR MARITIME AND AIR NAVIGATION IN ANTARCTICA

(Original text of the Recommendation *only* is below: the full text, including preamble, may be found at:

http://www.ats.aq/devAS/info_measures_listitem.aspx?lang=e&id=187)

Recommend to their Governments that:

1. They continue to consider ways of developing and improving meteorological and sea ice information services for maritime and air navigation in the Antarctic Treaty area;
2. The report of the Leningrad group of experts meeting be referred to the WMO Working Group on Antarctic Meteorology for formal consideration and comment at its next meeting.
3. Upon completion of the review by the WMO Working Group on Antarctic Meteorology the matter be considered by COMNAP, in association with SCAR, for the purpose of recommending any appropriate further joint, or individual action to the next Consultative Meeting.
4. In order to assist in improving meteorological services to maritime and air navigation, they take prompt measures to participate in the IGOSS, drifting-buoy and automatic weather station programmes to provide maximum data for international exchange and operational