FIFTH

WORLD METEOROLOGICAL CONGRESS

GENEVA, 3 - 28 APRIL 1967

ABRIDGED REPORT WITH RESOLUTIONS

PRICE: Sw. fr. 30.—
The proceedings of Fifth Congress will be issued in a separate publication.

NOTE

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the World Meteorological Organization concerning the legal status of any country or territory or of its authorities, or concerning the delimitation of its frontiers.
### CONTENTS

List of persons attending Fifth Congress .................................................. VIII

Agenda ................................................................................................. xxii

General Summary of the work of Fifth Congress ........................................ 1

List of resolutions adopted by Fifth Congress ........................................... 49

<table>
<thead>
<tr>
<th>Resolution</th>
<th>Final No.</th>
<th>Session No.</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.1/1</td>
<td></td>
<td>Amendments to Articles 4(b) and 12(c) of the Convention</td>
<td>49</td>
</tr>
<tr>
<td>2</td>
<td>3.1/2</td>
<td></td>
<td>Amendment to the French text of Article 13(a) of the Convention</td>
<td>49</td>
</tr>
<tr>
<td>3</td>
<td>3.1/3</td>
<td></td>
<td>Amendments to the Convention</td>
<td>50</td>
</tr>
<tr>
<td>4</td>
<td>3.2/1</td>
<td></td>
<td>Amendments to the General Regulations of the World Meteorological Organization</td>
<td>50</td>
</tr>
<tr>
<td>5</td>
<td>7.13/1</td>
<td></td>
<td>Review of the organization of the technical and scientific work of WMO</td>
<td>51</td>
</tr>
<tr>
<td>6</td>
<td>3.3/1</td>
<td></td>
<td>Relations with the United Nations and other international organizations</td>
<td>53</td>
</tr>
<tr>
<td>7</td>
<td>3.3/2</td>
<td></td>
<td>United Nations Development Decade</td>
<td>55</td>
</tr>
<tr>
<td>8</td>
<td>3.3/3</td>
<td></td>
<td>Report of the Ad Hoc Committee of Experts to Examine the Finances of the United Nations and the Specialized Agencies</td>
<td>56</td>
</tr>
<tr>
<td>9</td>
<td>7.12/1</td>
<td></td>
<td>Collaboration with international organizations concerned with marine science and its applications</td>
<td>57</td>
</tr>
<tr>
<td>10</td>
<td>3.5/1</td>
<td></td>
<td>Public information policy</td>
<td>59</td>
</tr>
<tr>
<td>11</td>
<td>3.7/1</td>
<td></td>
<td>Celebration of IMO/WMO Centenary</td>
<td>59</td>
</tr>
<tr>
<td>12</td>
<td>7.1/4</td>
<td></td>
<td>Establishment of prizes for outstanding scientific research work in the field of meteorology</td>
<td>60</td>
</tr>
<tr>
<td>14</td>
<td>4.1/1</td>
<td></td>
<td>Co-ordination of technical co-operation at the national level</td>
<td>63</td>
</tr>
</tbody>
</table>
Resolutions

<table>
<thead>
<tr>
<th>Final No.</th>
<th>Session No.</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>4.4/1</td>
<td>Administration of technical assistance projects</td>
<td>64</td>
</tr>
<tr>
<td>16</td>
<td>5.1/1</td>
<td>World Weather Watch</td>
<td>65</td>
</tr>
<tr>
<td>17</td>
<td>5.2/1</td>
<td>World Weather Watch Implementation Programme</td>
<td>66</td>
</tr>
<tr>
<td>18</td>
<td>7.1/3</td>
<td>World Weather Watch Research Programme</td>
<td>69</td>
</tr>
<tr>
<td>19</td>
<td>2.1/1</td>
<td>The Advisory Committee of the World Meteorological Organization</td>
<td>69</td>
</tr>
<tr>
<td>20</td>
<td>7.1/1</td>
<td>Promotion of meteorological research</td>
<td>71</td>
</tr>
<tr>
<td>21</td>
<td>7.1/2</td>
<td>International Visiting Scientists Programme</td>
<td>72</td>
</tr>
<tr>
<td>22</td>
<td>7.2/1</td>
<td>Promotion of meteorological education and training</td>
<td>73</td>
</tr>
<tr>
<td>23</td>
<td>7.3/1</td>
<td>Antarctic meteorology</td>
<td>76</td>
</tr>
<tr>
<td>24</td>
<td>7.7/1</td>
<td>Regional climatic atlases</td>
<td>76</td>
</tr>
<tr>
<td>25</td>
<td>7.8/1</td>
<td>Instruments and methods of observation</td>
<td>77</td>
</tr>
<tr>
<td>26</td>
<td>7.10/1</td>
<td>Agrometeorological services in support of the world campaign against hunger</td>
<td>78</td>
</tr>
<tr>
<td>27</td>
<td>7.11/1</td>
<td>Hydrometeorology, water resources development and the International Hydrological Decade (IHD)</td>
<td>80</td>
</tr>
<tr>
<td>28</td>
<td>7.4/1</td>
<td>Technical Regulations of the World Meteorological Organization</td>
<td>82</td>
</tr>
<tr>
<td>29</td>
<td>3.6/2</td>
<td>Units used in coded messages for international exchange</td>
<td>83</td>
</tr>
<tr>
<td>30</td>
<td>7.6/1</td>
<td>Units for wind speed in meteorological messages for international exchanges</td>
<td>83</td>
</tr>
<tr>
<td>31</td>
<td>7.5/1</td>
<td>Publications programme for the fifth financial period</td>
<td>84</td>
</tr>
<tr>
<td>32</td>
<td>7.5/2</td>
<td>WMO Bulletin</td>
<td>85</td>
</tr>
<tr>
<td>33</td>
<td>6.1/1</td>
<td>Maximum expenditures for the fifth financial period</td>
<td>86</td>
</tr>
<tr>
<td>34</td>
<td>2.1/2</td>
<td>New Development Fund</td>
<td>86</td>
</tr>
<tr>
<td>35</td>
<td>8.3/1</td>
<td>Review of the Working Capital Fund</td>
<td>88</td>
</tr>
<tr>
<td>36</td>
<td>8.4/1</td>
<td>Proportional contributions of Members</td>
<td>88</td>
</tr>
<tr>
<td>37</td>
<td>8.4/2</td>
<td>Assessment of proportional contributions of Members for the fifth financial period</td>
<td>89</td>
</tr>
<tr>
<td>38</td>
<td>8.2/1</td>
<td>Establishment of the Financial Regulations of the World Meteorological Organiza</td>
<td>90</td>
</tr>
</tbody>
</table>
## CONTENTS

<table>
<thead>
<tr>
<th>Resolution</th>
<th>Final No.</th>
<th>Session No.</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>39</td>
<td>8.1/1</td>
<td></td>
<td>Establishment of Staff Regulations of the World Meteorological Organization</td>
<td>91</td>
</tr>
<tr>
<td>40</td>
<td>8.1/2</td>
<td></td>
<td>Group insurance against sickness and accident after retirement</td>
<td>91</td>
</tr>
<tr>
<td>41</td>
<td>8.8/1</td>
<td></td>
<td>Terms of appointment of the Secretary-General</td>
<td>92</td>
</tr>
<tr>
<td>42</td>
<td>8.6/1</td>
<td></td>
<td>The building of the Organization</td>
<td>93</td>
</tr>
<tr>
<td>43</td>
<td>3.6/1</td>
<td></td>
<td>Revision of previous Congress resolutions</td>
<td>94</td>
</tr>
</tbody>
</table>

### Resolutions of Congress remaining in force at the close of Fifth Congress

- **37(I)** Appointment of Deputy Secretary-General | 96
- **3(Cg-II)** Approval of the agreement with the host country | 96
- **4(Cg-II)** Agreement between the United Nations and the World Meteorological Organization | 97
- **5(Cg-II)** Convention on the Privileges and Immunities of the Specialized Agencies | 97
- **17(Cg-II)** Definitions of the Technical Regulations of the World Meteorological Organization | 98
- **18(Cg-II)** Definition of the guides of the World Meteorological Organization | 99
- **3(Cg-III)** Implementation of amendments to the Convention | 99
- **4(Cg-III)** Submission of proposals for amending the Convention by the Executive Committee | 100
- **6(Cg-III)** Suspension of Members for failure to meet financial obligations | 100
- **18(Cg-III)** Notification of compliance with and deviations from standard meteorological practices and procedures ("standards") (except paragraphs (4) and (5) under Decides) | 101
- **27(Cg-III)** The role of the World Meteorological Organization in the meteorological aspects of the peaceful uses of atomic energy | 102
- **29(Cg-III)** Responsibility of the World Meteorological Organization in international ozone work | 104
- **33(Cg-III)** Activity of the World Meteorological Organization in the field of bibliography and publications | 105
- **2(Cg-IV)** Amendments to the Convention of the World Meteorological Organization | 105
## VI CONTENTS

<table>
<thead>
<tr>
<th>Resolutions</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>13(Cg-IV)</td>
<td>Recruitment of experts to serve in technical cooperation programmes in which the World Meteorological Organization participates</td>
</tr>
<tr>
<td>19(Cg-IV)</td>
<td>Technical Regulations of the World Meteorological Organization</td>
</tr>
<tr>
<td>25(Cg-IV)</td>
<td>Measurements of atmospheric radioactivity</td>
</tr>
<tr>
<td>27(Cg-IV)</td>
<td>Research in tropical meteorology</td>
</tr>
<tr>
<td>35(Cg-IV)</td>
<td>International arrangements for marine climatological summaries and for data collection for the marine section of a World Climatic Atlas</td>
</tr>
<tr>
<td>38(Cg-IV)</td>
<td>Establishment of Financial Regulations of the World Meteorological Organization</td>
</tr>
<tr>
<td>39(Cg-IV)</td>
<td>Maximum expenditures for the Fourth Financial Period</td>
</tr>
<tr>
<td>40(Cg-IV)</td>
<td>Maximum expenditures for the Fourth Financial Period (New Fund)</td>
</tr>
<tr>
<td>41(Cg-IV)</td>
<td>Review of the Working Capital Fund</td>
</tr>
<tr>
<td>42(Cg-IV)</td>
<td>Proportional contributions of Members</td>
</tr>
<tr>
<td>43(Cg-IV)</td>
<td>Scale of contributions</td>
</tr>
<tr>
<td>44(Cg-IV)</td>
<td>Assessment of proportional contributions for the Fourth Financial Period</td>
</tr>
<tr>
<td>45(Cg-IV)</td>
<td>IMO Fund</td>
</tr>
<tr>
<td>46(Cg-IV)</td>
<td>Attendance at Congress of presidents of technical commissions at the expense of the Organization</td>
</tr>
</tbody>
</table>

## Annexes

| I | Annex to paragraph 3.1.10 of the General Summary Report of amendment to Article 3 of the Convention | 166 |
| II | Annex to paragraph 4.1.1.8 of the General Summary Broad principles to be considered by recipient countries in establishing their requests for assistance under the Technical Assistance component of the United Nations Development Programme | 167 |
| III | Annex to Resolution 3(Cg-V) Amendments to the Convention | 169 |
| IV | Annex to Resolution 4 (Cg-V) List of amended or new General Regulations | 171 |
## Annexes

<table>
<thead>
<tr>
<th>Annex</th>
<th>Resolution No.</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>V</td>
<td>16(Cg-V)</td>
<td>The World Weather Watch Plan for the four-year period, 1968–1971</td>
<td>188</td>
</tr>
<tr>
<td>VII</td>
<td>26(Cg-V)</td>
<td>Annex to Resolution 26(Cg-V)</td>
<td>235</td>
</tr>
<tr>
<td>VIII</td>
<td>28(Cg-V)</td>
<td>Amendments to the Technical Regulations of the World Meteorological Organization</td>
<td>238</td>
</tr>
<tr>
<td>IX</td>
<td>31(Cg-V)</td>
<td>Annex to Resolution 31(Cg-V)</td>
<td>246</td>
</tr>
<tr>
<td>X</td>
<td>33(Cg-V)</td>
<td>Annex to Resolution 33(Cg-V)</td>
<td>248</td>
</tr>
<tr>
<td>XI</td>
<td>37(Cg-V)</td>
<td>Maximum expenditures for the fifth financial period (1968–1971)</td>
<td>253</td>
</tr>
<tr>
<td>XII</td>
<td>38(Cg-V)</td>
<td>Annex to Resolution 38(Cg-V)</td>
<td>256</td>
</tr>
<tr>
<td>XIII</td>
<td>39(Cg-V)</td>
<td>Amendments to the Technical Regulations of the World Meteorological Organization</td>
<td>269</td>
</tr>
<tr>
<td>XIV</td>
<td>41(Cg-V)</td>
<td>Annex to Resolution 41(Cg-V)</td>
<td>275</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Agreement for the Secretary-General of the World Meteorological Organization</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>List of documents</td>
<td>278</td>
</tr>
</tbody>
</table>
# LIST OF PERSONS ATTENDING FIFTH CONGRESS

## A. Members of WMO

<table>
<thead>
<tr>
<th>Member State or Territory</th>
<th>Name</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
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</tr>
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</tr>
<tr>
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<td>Member State or Territory</td>
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LIST OF PERSONS ATTENDING FIFTH CONGRESS

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<tr>
<th>Member State or Territory</th>
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**B. Non-Member countries of WMO**

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<td>Liberia</td>
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<td>Monaco</td>
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C. Presidents of Technical Commissions

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<td>Commission for Instruments and Methods of Observation</td>
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<tr>
<td>Commission for Synoptic Meteorology</td>
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D. Individual expert

W. Böhme

IMO Lecturer

E. N. Lorenz

E. International organizations

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## AGENDA

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<td>1. Organization of the session</td>
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<td>1.1 Opening of the session</td>
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<td>1.3 Report of the Credentials Committee</td>
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<td>1, Rev. 1 ; 2 PINK/51</td>
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<td>1.5 Establishment of committees</td>
<td>68 PINK/51</td>
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<td>1.6 Approval of the minutes</td>
<td>PINK/51</td>
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<td>2. Reports</td>
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<tr>
<td>2.1 Report by the President of the Organization</td>
<td>57 ; 59, Add. 1 ; 76 PINK/1 ; PINK/38</td>
<td>19, 34</td>
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<td>2.2 Reports by the presidents of regional associations</td>
<td>41 ; 42 ; 51 ; 52 ; 53, Add. 1 ; 54, Corr. 1 (French only)</td>
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<td>2.3 Reports by the presidents of technical commissions</td>
<td>44 ; 45 ; 46, Add. 1 ; 47 ; 48 ; 49 ; 50, Add. 1 and 2 ; 65, Add. 1</td>
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<td>70 ; 70, App. C, Add. 1 ; 70, App. C, Add. 2</td>
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### AGENDA

#### 3. General and legal questions

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<td>3.1 Amendments to the WMO Convention</td>
<td>7, Add. 1; 8; 9; 10; 12; 13; 18; 22; 27; 73; 84; 88 PINK/2; PINK/39</td>
<td>1, 2, 3</td>
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<td>3.2 Review of the General Regulations</td>
<td>49 PINK/49</td>
<td>4</td>
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<td>3.3 Relations with the United Nations and other international organizations</td>
<td>82; 89, Corr. 1; 98 PINK/31</td>
<td>6, 7, 8</td>
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<td>3.4 Conference programme for the fifth financial period</td>
<td>40, Add. 1 PINK/9</td>
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<td>3.5 Public information</td>
<td>81 PINK/10</td>
<td>10</td>
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<td>3.6 Revision of previous resolutions of Congress</td>
<td>31 PINK/45</td>
<td>43</td>
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<td>3.7 Celebration of IMO/WMO Centenary</td>
<td>85 PINK/20</td>
<td>11</td>
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<tr>
<td>3.8 WMO Emblem and Flag</td>
<td>94 PINK/21</td>
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#### 4. Technical co-operation

<table>
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<tr>
<td>4.1 Review of WMO technical assistance activities</td>
<td>55; 60 PINK/8, Rev. 1 (Spanish only), Corr. 1 (Russian only)</td>
<td>13, 14</td>
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<td>4.2 Participation of WMO in the United Nations Development Programme (UNDP)</td>
<td>36, Add. 1 and 2, 75 PINK/6</td>
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<td>4.2.1 Technical Assistance component of UNDP</td>
<td>75 PINK/6</td>
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<td>4.2.2 Special Fund component of UNDP</td>
<td>36(1), Add. 1 and 2 PINK/6</td>
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<tr>
<td>4.3 Participation of WMO in other aid programmes</td>
<td>34 PINK/7, Rev. 1 (Spanish only), Corr. 1 (Russian only)</td>
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<td>4.4 Organization of technical co-operation activities in the Secretariat</td>
<td>37, Corr. 1 PINK/30</td>
<td>15</td>
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<td>5. World Weather Watch</td>
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<td>5.1 The plan for World Weather Watch</td>
<td>5 ; 21 ; 28, Add. 1, 2 and 3 ; 72 ; 78 ; 79 ; 86 ; 93 ; 99 PINK/43</td>
<td>16</td>
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<td>5.2 Implementation of World Weather Watch</td>
<td>30 ; 43 ; 56 ; 66 ; 92 ; 100 ; 103 ; 105 ; 106 PINK/41</td>
<td>17</td>
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<td>6. Programme and budget</td>
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<td>6.1 General consideration of technical programme and maximum expenditures for 1968-1971</td>
<td>3 ; 4 ; 66 ; 67 ; 96 ; 404 ; 105 PINK/44</td>
<td>33</td>
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<td>7. Technical questions</td>
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<td>7.1 Promotion of meteorological research</td>
<td>38 ; 65, Add. 1 ; 406 PINK/46</td>
<td>12, 18, 20, 21</td>
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<td>7.2 Promotion of meteorological training</td>
<td>24 ; 25, Add. 1 and 2 ; 61 ; 91 ; 105 ; 106 PINK/40, Add. 1</td>
<td>22</td>
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<td>7.3 Antarctic meteorology</td>
<td>26, Rev. 1 PINK/19</td>
<td>23</td>
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### Agenda

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<td>7.4 Review of the Technical Regulations</td>
<td>23, Add. 1; 71 PINK/37</td>
<td>28</td>
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<td>7.5 Publications programme</td>
<td>39 PINK/14, App. B, Rev. 1</td>
<td>31, 32</td>
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<td>7.6 Synoptic meteorology</td>
<td>45; 62, Add. 1 PINK/17</td>
<td>29, 30</td>
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<td>7.7 Climatology</td>
<td>49; 90 PINK/27</td>
<td>24</td>
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<td>7.8 Instruments and methods of observation</td>
<td>48 PINK/18</td>
<td>25</td>
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<td>7.9 Aeronautical meteorology</td>
<td>50, Add. 1 and 2; 67 PINK/11, App. B, Rev. 1</td>
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<td>7.10 Agricultural meteorology</td>
<td>47; 80 PINK/15</td>
<td>26</td>
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<td>7.11 Hydrometeorology and the International Hydrological Decade</td>
<td>46, Add. 1; 58 PINK/16</td>
<td>27</td>
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<td>7.12 Maritime meteorology</td>
<td>44; 93; 99 PINK/32</td>
<td>9</td>
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<tr>
<td>7.13 Organization of the scientific and technical work of WMO (including functions of regional associations and technical commissions)</td>
<td>6; 29; 32; 92; 102 PINK/47</td>
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**8. Administrative and financial questions**

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<td>8.1 Review of the Staff Regulations</td>
<td>33; 83 PINK/13; PINK/42</td>
<td>39, 40</td>
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<tr>
<td>8.2 Review of the Financial Regulations</td>
<td>14; 35 PINK/4</td>
<td>38</td>
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<tr>
<td>8.3 Consideration of the Working Capital Fund</td>
<td>41 PINK/24</td>
<td>35</td>
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### AGENDA

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<thead>
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<th>Agenda Items</th>
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<tr>
<td>8.4 Proportional contributions of Members</td>
<td>15; 16, Corr. 1; PINK/23; PINK/33, App. B, (Spanish only)</td>
<td>36, 37</td>
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<td>8.5 Publications Fund</td>
<td>74 PINK/5</td>
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<tr>
<td>8.6 The building of the Organization</td>
<td>77; 95 PINK/22</td>
<td>42</td>
</tr>
<tr>
<td>8.7 IMO Fund</td>
<td>20 PINK/3</td>
<td></td>
</tr>
<tr>
<td>8.8 Secretary-General’s contract</td>
<td>PINK/34, Corr. 1 (French only)</td>
<td>41</td>
</tr>
<tr>
<td>8.9 Staff assessment plan</td>
<td>47 PINK/25</td>
<td></td>
</tr>
<tr>
<td>9. Elections and nominations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.1 Election of President and Vice-Presidents of the Organization</td>
<td>PINK/29</td>
<td></td>
</tr>
<tr>
<td>9.2 Election of members of the Executive Committee</td>
<td>PINK/29, Add. 1, Add. 2</td>
<td></td>
</tr>
<tr>
<td>9.3 Appointment of Secretary-General</td>
<td>97 PINK/26; PINK/48</td>
<td></td>
</tr>
<tr>
<td>10. IMO Lecture</td>
<td>64; 69 PINK/12</td>
<td></td>
</tr>
<tr>
<td>11. Scientific discussions</td>
<td>63, Add. 1, 2 and 3; PINK/50</td>
<td></td>
</tr>
<tr>
<td>12. Place and date of Sixth Congress</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
GENERAL SUMMARY OF THE WORK OF FIFTH CONGRESS

The World Meteorological Organization held its Fifth Congress in the Palais des Nations, Geneva, from 3 to 28 April 1967, under the chairmanship of Dr. A. Nyberg, President of the Organization.

1. Organization of the session (Agenda item 1)

1.1 Opening of the session (Agenda item 1.1)

1.1.1 The President of the Organization, Dr. A. Nyberg, opened the Fifth Congress at 11.10 a.m. on 3 April 1967, and welcomed the following distinguished guests:

- H. P. Tschudi Conseiller fédéral and representative of the Conseil fédéral suisse
- G. Palthey Representative of the Secretary-General of the United Nations
- A. Chavanne President of the Conseil d'Etat of the Republic and Canton of Geneva
- P. Bouffard Vice-President of the Conseil administratif
- F. Revaclier President of the Conseil municipal
- P. Dorolle Deputy Director-General of the World Health Organization
- M. Mili Acting Secretary-General of the International Telecommunication Union
- A. Figueroa Assistant Director-General of the International Labour Office
- U. Schwarz Representative of the International Civil Aviation Organization

1.1.2 Mr. Tschudi, Federal Councillor representing the Swiss Federal Council, extended a warm welcome to all delegates. He said that the science they represented was assuming increased importance in its applications to the welfare of mankind. He referred to the plan for World Weather Watch which would be in the forefront of all the questions to be discussed by Congress and in which all nations of the world had a great interest for the development of their economic resources. The development and implementation of this plan called for great efforts both at the national and international level and he was sure that the elements needed were available at the national level, while WMO, with its large membership and long tradition of international collaboration and great achievements to its credit, was adequate to the task.
1.1.3 Mr. Palthey, representative of the Secretary-General of the United Nations, welcomed the delegates in the Palais and said that the Secretary-General, U Thant, would himself be addressing the Congress in a few days. He mentioned that in recent years WMO, which could be proud of very long experience of international co-operation, had taken a place of first importance in joint endeavours with the United Nations in international collaboration. The Organization was still pioneering and opening up new fields while adapting itself to new techniques which today reach global level and go even beyond the confines of the globe, as was shown by the World Weather Watch project.

1.1.4 Dr. Dorolle, Deputy Director-General of the World Health Organization, speaking on behalf of Dr. Candau, the Director-General, referred to the similarity between his organization and the World Meteorological Organization both of which worked with the same objective in view, namely the good of mankind. In both organizations, programmes are carried out at a level where there is no room for ideology nor any room for political differences, disagreements, if any, being confined to purely scientific and technical aspects. In certain specific fields there was already a close and very effective collaboration between the organizations, air pollution studies being a good example. In another field, namely biometeorology, in which much more work still remained to be done, he hoped that the two organizations would work together to study this important subject.

He expressed the hope that the Fifth Congress of WMO, which would be discussing the admirable programme known as the World Weather Watch, would be as successful as the previous sessions of Congress.

1.1.5 Mr. Mili, Acting Secretary-General of the International Telecommunication Union, conveyed the fraternal greetings of the Union and the most sincere wishes for the complete success of the work of the Congress. He referred to the long-standing and harmonious relations which had always existed between his organization and the World Meteorological Organization. The vital importance of telecommunications in international meteorological activities was well known and ITU welcomed the increasingly important role played by specialized meteorological telecommunication in the activities of WMO resulting in even closer collaboration between the two organizations.

1.1.6 Mr. Schwarz, representative of the International Civil Aviation Organization, referred to the close links between aviation and meteorology since the early days. Advances in aviation and meteorology had often gone hand in hand; a new era in aviation was now opening and meteorologists were facing it with energy and imagination by harnessing the latest products of science and technology, such as satellites, rockets and electronic computers. ICAO had been following with interest and appreciation the plan for World Weather Watch which would, among other things, improve meteorological service to aviation.
On behalf of the President and the Secretary-General of the International Civil Aviation Organization, he wished the Fifth Congress of the World Meteorological Organization all success in its work.

1.1.7 Dr. Nyberg, President of the World Meteorological Organization, expressed his thanks to all the speakers for their warm and encouraging words. He also extended a cordial welcome to all the delegates, especially from those States which had become Members of the Organization since Fourth Congress and were therefore attending a session of Congress for the first time. The membership of the Organization had increased considerably during the last decade and its tasks were becoming more imperative and complex, and at the same time more significant and urgent. He mentioned particularly that there was a growing recognition of the importance of meteorology to economic development and at the same time technological advances such as satellites and computers had opened new perspectives in the development of meteorological knowledge and its applications. This had been recognized by such a high body as the General Assembly of the United Nations which had invited WMO to devise an improved global meteorological system.

In response to the request of the United Nations, Fourth Congress had already endorsed the concept of the World Weather Watch and at the same time taken some vigorous and progressive decisions for its development. Since then the planning of the World Weather Watch had been a major concern within the Organization and indeed throughout the international meteorological community. The results of the studies carried out during the past four years for the planning of the World Weather Watch were being presented to Congress which would have to take important decisions towards the implementation of the first phase of this global meteorological plan. He was confident that in the plan for the World Weather Watch the long-standing tradition of constructive co-operation in international meteorology would be maintained. The implementation of the plan would, however, require in some cases major economic resources and other efforts during the next four-year period. Congress would therefore have to consider thoroughly the means for providing assistance to those countries which needed some aid to enable them to play their full role in the realization of the goals put forth in the plan.

The President concluded his remarks by expressing the hope that the decisions of the Congress, on which the future of world meteorology would depend, would be taken in the traditional spirit of mutual understanding which had all along characterized the World Meteorological Organization and it was in this hope that he expressed his wishes for a very successful session of the Congress.

1.1.8 U Thant, Secretary-General of the United Nations, honoured Congress by his presence at a plenary meeting held on 6 April. In his address to Congress, he referred to the importance of weather as a factor affecting human life and activity. He stressed the truly international character of the science of meteorology and the important role played by the World Meteorological Organization in the United Nations family of organizations.
It was most encouraging, he said, to see the progress being made by the Organization in using the new tools, such as satellites and electronic computers, which modern scientific and technological developments had made available to meteorologists in the task of understanding and predicting the physical processes in the atmosphere. He also commended the Organization for the manner in which it had responded to the request of the General Assembly of the United Nations by initiating the unique programme known as the World Weather Watch. He was sure that considerable economic benefits would result from this world-wide meteorological plan.

He concluded by wishing a very fruitful session for the Congress and every success to World Weather Watch.

1.1.9 Dr. B. R. Sen, Director-General of the Food and Agriculture Organization of the United Nations also addressed Congress at the plenary meeting held on 6 April.

He referred to the close relationship which existed between the Food and Agriculture Organization and the World Meteorological Organization; the two organizations had for a long time been working in close and fruitful harmony in joint projects aimed at studying climatic conditions in developing areas of the world in order to provide sound guidance on which agricultural planning could be developed.

He also referred to the critical world food situation and expressed the view that an expansion of the meteorological services by proper utilization of the recent scientific and technological advances in atmospheric sciences could make a major contribution to a rational development of agriculture. His organization would give full support to any activities undertaken by the World Meteorological Organization in this direction which would be of vital importance to the welfare of mankind and he therefore wished every success to Congress in its deliberations.

1.1.10 Mr. Paul Hoffman, Administrator of the United Nations Development Programme, was present at a plenary meeting held on 5 April. He referred to the activities of the World Meteorological Organization as a result of its participation in the United Nations Technical Co-operation Programmes, particularly the large projects executed by the Organization in the Special Fund component. A number of these projects had already been successfully completed, resulting in an improvement of the meteorological and hydrological networks in order to provide basic planning data for development and utilization of water resources.

He expressed his appreciation to the Organization for its imaginative initiative in planning the World Weather Watch by harnessing the latest scientific and technological developments. To the extent permitted by its resources, the United Nations Development Programme hoped to play a constructive role in the implementation of World Weather Watch by continuing its assistance to the improvement of national and regional, and thereby global Meteorological Services.
1.2 Establishment of a Credentials Committee (Agenda item 1.2)

Congress set up a Credentials Committee, composed of the following delegations:

Regional Association I: Chad, Madagascar, Senegal
Regional Association II: Japan, Union of Soviet Socialist Republics
Regional Association III: Chile
Regional Association IV: United States of America
Regional Association V: New Zealand
Regional Association VI: Belgium, Czechoslovakia, Spain

Mr. de Azcárraga (Spain) was elected chairman of the committee.

1.3 Report of the Credentials Committee (Agenda item 1.3)

The Credentials Committee submitted three reports concerning the credentials of the delegates of Members, the representatives of non-Member countries and those of international organizations. Those reports were approved by Congress.

1.4 Approval of the agenda (Agenda item 1.4)

Congress adopted the agenda indicated at the beginning of this report.

1.5 Establishment of committees (Agenda item 1.5)

The following committees were set up:

Nomination Committee (Chairman: Dr. L. S. Mathur)
In accordance with the provision of Regulation 23 of the General Regulations, the committee was composed of the principal delegates of the following twelve Members:

Region I: Democratic Republic of Congo, Ghana, Sudan
Region II: Iran, India
Region III: Chile
Region IV: Canada, United States of America
Region V: New Caledonia
Region VI: Yugoslavia, Switzerland, Ukrainian S.S.R.

This committee reported to Congress on agenda item 9.

Committee on Programme and Budget (Chairman: Mr. W. J. Gibbs)
Agenda items: 2.1, 2.2, 4.1, 4.2, 4.3, 4.4, 5.2, 6.1.

This committee reported to Congress on agenda items 2.1, 4.1, 4.2, 4.3, 4.4, 5.2, 6.1.
Committee on Technical Questions (Chairman: Mr. J. Bessemoulin)
Agenda items: 2.1, 2.2, 2.3, 5.1, 7
This committee reported to Congress on agenda items 2.2, 2.3, 5.1 and 7.1 to 7.13

Committee on General and Legal Questions (Chairman: Mr. N. A. Akingbehin)
Agenda items: 2.1, 2.2, 2.3, 2.4, 3.1 to 3.8, 8.1 to 8.9
This committee reported to Congress on agenda items 2.4, 3.1 to 3.8 and 8.1 to 8.9.

1.6 Approval of the minutes (Agenda item 1.6)
The minutes of the first nine plenary meetings were approved during the session. Congress decided to approve, by correspondence, the minutes of the other plenary meetings.

2. Report (Agenda item 2)
2.1 Report by the President of the Organization (Agenda item 2.1)
2.1.1 General
2.1.1.1 Congress noted with great satisfaction the report by the President of the Organization and in particular the comprehensive information provided in the report on the progress made in the activities of the Organization during the fourth financial period. Those questions in the President's report which call for special action by Congress were considered under the appropriate items of the agenda, except for the questions dealt with in the subsequent paragraphs.
2.1.1.2 Congress noted with appreciation that the Executive Committee had established the Advisory Committee in accordance with the instructions given by Fourth Congress and that the Advisory Committee had held annual meetings at WMO Headquarters which had resulted in a number of recommendations of considerable value for the work of the Organization. Congress further noted that the terms of reference given to the Advisory Committee by Fourth Congress were very broad and covered a large number of questions from research to operations. It was recognized that some of these questions are also being dealt with by other bodies of WMO, in particular the Commission for Aerology and the Executive Committee Panel of Experts on Education and Training.
2.1.1.3 In view of the decision taken under agenda item 7.1 to authorize the Executive Committee to negotiate an agreement with the International Council of Scientific Unions (ICSU) on the establishment of a Joint WMO/ICSU Organizing Committee for the Global Atmospheric Research Programme (GARP), Congress agreed that it would be necessary to reconsider the need for retaining, during the fifth financial period, all the bodies which will be concerned with
international research projects in atmospheric sciences. On the assumption that the Joint WMO/ICSU GARP Organizing Committee will be agreed to by the two Organizations concerned and that the Joint Committee will function satisfactorily, Congress authorized the Executive Committee to review the need for retaining the Advisory Committee and to determine its future accordingly.

2.1.1.4 The above conclusions of Congress are incorporated in Resolution 19(Cg-V).

2.1.2 Report on the New Development Fund

2.1.2.1 Congress considered the report, submitted by the Secretary-General and endorsed by the President on behalf of the Executive Committee, on the WMO New Development Fund which was set up by Fourth Congress for development purposes not provided for from other sources.

2.1.2.2 It was noted that the Fund was used for the implementation of projects in the general fields of: improvement of facilities; education and training; surveys and studies for the World Weather Watch; and that the selection of projects had been made in accordance with criteria which were approved by a vast majority of Members of the Organization. Congress fully endorsed the action taken by the Executive Committee in this respect.

2.1.2.3 After having reviewed the report of the Secretary-General on the status of implementation of the projects, Congress expressed satisfaction with the thorough manner in which the implementation of these projects was being carried out. It was noted that some unavoidable delays in implementation had occurred. Congress believed that the experience gained in implementing New Development Fund projects provided lessons which would be very useful in implementing similar projects in the future.

2.1.2.4 It was noted that not all projects will be completed by the end of the fourth financial period. The unanimous view was expressed that all approved projects should continue until they are completed and that any surplus arising at the end of the fourth financial period should be made available during the fifth financial period for new projects.

2.1.2.5 Congress decided to carry over the budgetary surplus of the New Development Fund to the fifth financial period and to entrust the Executive Committee with the supervision of the utilization of these funds.

It also authorized the Executive Committee to approve new projects to be financed by any savings available. The Executive Committee was author-
ized to decide on priorities and its attention was drawn in this regard to the importance of projects in the field of meteorological training.

2.1.2.6 Congress adopted Resolution 34(Cg-V) accordingly.

2.2 Reports by the presidents of regional associations (Agenda item 2.2)

Congress noted with appreciation the reports submitted by the various presidents of regional associations. These reports contained a large number of valuable proposals which were considered under the relevant items of the agenda. Congress agreed that it would simplify the work of future Congresses if the proposals made by the presidents of regional associations could be presented, as far as practicable, in time for consideration by the Secretary-General when preparing his budget estimates for the next financial period. Consequently, Congress requested the Secretary-General:

(a) To inform the presidents of regional associations of the above decision, and
(b) To invite the presidents of regional associations, in addition to their report to Congress, to submit their proposals, if not already taken into account by the Secretary-General in his budget estimates, as separate documents under the relevant items of the agenda of Congress.

2.3 Reports by the presidents of technical commissions (Agenda item 2.3)

Congress noted with satisfaction the reports submitted by the various presidents of technical commissions. These reports, as well as the many valuable proposals made in them, were considered in detail under the relevant items of the agenda. In order to simplify the consideration of these reports at future sessions, Congress agreed that the same procedure for presenting proposals to Congress as laid down in paragraph 2.2 above should also apply, as far as practicable, to the proposals made by presidents of technical commissions.

2.4 Financial report by the Secretary-General (Agenda item 2.4)

2.4.1 This report was examined and it was noted that the arrears of contributions and the late payment of contributions in each financial year could have a retarding effect on the programme of the Organization.

2.4.2 It was noted that the application of Articles 7.4 and 7.5 of the Financial Regulations as soon as the accounts for the fourth financial period have been rendered will probably place the Organization in a difficult financial position early in the next financial period. It was therefore decided that the proportional crediting of the surplus to Members at the end of the fourth financial period, in accordance with Article 7.5, should be deferred until all contributions for that period have been paid.
3. **General and legal questions** (Agenda item 3)

3.1 **Amendments to the WMO Convention** (Agenda item 3.1)

*Amendments to Articles 4(b) and 12(c)*

3.1.1 Congress examined the formal proposals of amendments to Articles 4(b) and 12(c) of the Convention submitted by France. Congress was of the opinion that an increase in the number of Vice-Presidents and of Directors of Meteorological Services of Members of the Organization on the Executive Committee was indicated in view of the increased Membership of the Organization and the increased amount of work that it was called upon to carry out. Congress therefore decided to change the number of Vice-Presidents of the Organization under Article 4(b) from two to three and the number of Directors of Meteorological Services of Members of the Organization on the Executive Committee under Article 12(c) from twelve to fourteen.

3.1.2 Several delegations, however, whilst agreeing to the proposed increases, thought that a system of rotation in filling the posts of the President and Vice-Presidents and members of the Executive Committee should be adopted, as practised by other organizations, to meet the need for equitable regional representation in view of WMO’s six regional associations. Other delegations drew attention to Article 12(c)(ii) of the Convention and General Regulation 11 which already provide for a measure of rotation and representational balance. Congress therefore decided to request the Executive Committee to study all aspects of the matter and make recommendations to Sixth Congress.

3.1.3 Congress then adopted Resolution 1(Cg-V) which amends these articles.

3.1.4 After examination of the proposal submitted by Italy for amendment to Article 2(d), Congress decided to insert the words “water problems” in the text of Article 2(d) after the word “shipping” and agreed that the corresponding French, Russian and Spanish texts should be as follows: “aux problèmes de l’eau”, “водные проблемы” and “los problemas del agua” respectively.

3.1.5 Congress studied the proposal of India to amend Article 6(b) of the Convention, but decided that the proposed amendment was not essential since the use of the word “should” in the present text clearly indicated that this was not a mandatory provision. It was emphasized that in the Convention mandatory provisions were identified by the use of the word “shall”.

3.1.6 Congress gave its approval to the proposal submitted by the Executive Committee designed to correct an error in reproduction in the French text of Article 13(a) and adopted Resolution 2(Cg-V) in this connexion.
3.1.7 In view of the fact that it had not been possible in the time available to give the legal opinion regarding Article 27, which had been received from the Legal Counsel of the United Nations, a thorough examination, Congress decided to request the Secretary-General to distribute this legal opinion to all Members of the Organization at a later date for examination. Congress also decided that the document submitted by the United Arab Republic (Doc. Cg-V/73) should be distributed to Member Governments at the same time as the legal opinion of the United Nations and, further, that the problem of the amendment of Article 27 should be examined by the Executive Committee in the light of the amendment submitted by Syria, of the legal opinion of the United Nations, and of the comments of the United Arab Republic, and that the Executive Committee should report to Sixth Congress in this connexion.

3.1.8 Congress also examined in detail all other proposed amendments submitted by Members in accordance with the provisions of Article 27 (a) of the Convention and by the Executive Committee.

3.1.9 All amendments which obtained the approval of two-thirds of the Members which are States are listed in the annex to Resolution 3(Cg-V) which Congress adopted in this connexion.

3.1.10 Congress requested the Executive Committee to submit again to Sixth Congress the proposal of amendment to Article 3 of the Convention which did not obtain a majority vote of two-thirds of Members which are States (see Annex I).

3.2 Review of the General Regulations (Agenda item 3.2)

3.2.1 Congress examined the proposals for amendment of the General Regulations contained in the report submitted by the Executive Committee. It decided to delete Annex III to the General Regulations and to incorporate parts thereof in the Regulations, leaving the remainder for insertion in the Rules of Procedure of the Executive Committee and internal instructions for regional associations, technical commissions and the Secretariat. In respect of the material which was not inserted in the Regulations, Congress offered suggestions to the Executive Committee and gave guidance to the Secretary-General.

3.2.2 All amendments to the General Regulations approved by Congress were included in the annex to Resolution 4(Cg-V) which Congress adopted in this connexion and which replaced Resolution 4(Cg-IV).

3.2.3 With reference to the provisions of new Regulation 91, Congress directed the Secretary-General to publish the abridged final reports of sessions of constituent bodies as early as possible after the end of each session in order to facilitate early examination by Members of the decisions taken at these sessions.
3.2.4 In connexion with Regulation 62 concerning the validity of voting slips, Congress decided to direct the Secretary-General to draw the attention of permanent representatives to the desirability of authorizing one or more persons to sign voting slips on their behalf in order to enable each Member to participate in votes whenever the permanent representative was absent.

3.2.5 Congress noted paragraph 3.2.6 of the general summary of Fourth Congress and requested the Executive Committee to take into account the decision of Fourth Congress in regard to the establishment of a Finance Committee in its study of the recommendation of the Ad Hoc Committee of Experts to Examine the Finances of the United Nations and the Specialized Agencies (see paragraph 3.3.4).

3.2.6 In connexion with the section entitled “Languages”, Congress reaffirmed the policy established by Fourth Congress and expressed in Regulation 93. In accordance with this policy, all publications of the Organization must be published in the four official and working languages. However, it was recognized that, when at a particular time the budgetary situation prevented full implementation of this policy, exceptions may be necessary. In such cases, Congress should indicate which publications are to be published in all four languages and which, for the time being, can be published in some of these languages only. It was further agreed that the intent of Congress was that in applying Regulation 98, the four languages be actually used in the publications programme of the Organization to the maximum possible extent, in order to achieve rapid progress towards full implementation of the policy stated above.

3.2.7 Congress received a request by Colombia to amend the map, showing the boundaries of regional associations, attached to Annex I of the General Regulations, in order to include the Colombian islands of San Andrés and Providencia within Region III, with reference to the text contained in Annex I describing the boundaries of that regional association.

Congress decided to refer this request to the Executive Committee for urgent consideration and decision.

3.3 relations with the united nations and other international organizations (Agenda item 3.3)

3.3.1 Congress examined the existing relations with the United Nations and other international organizations and decided that close co-operation, consultation and co-ordination with these organizations should be maintained and further strengthened. With a view to taking account of the new arrangements resulting from the implementation of World Weather Watch during the fifth financial period, Congress adopted Resolution 6(Cg–V).

3.3.2 Congress noted with satisfaction the action taken by the Executive Committee in concluding working arrangements with other international organizations and in granting consultative status to non-governmental international
organizations. By Resolution 6(Cg-V) it authorized the Executive Committee to enter into such further working arrangements as may be necessary, in particular as a result of the implementation of the World Weather Watch, and to consider, when appropriate, the advisability of concluding formal agreements with other international organizations.

3.3.3 Congress further noted that the United Nations Development Decade, which was the subject of Resolution 6(Cg-IV), would continue into the fifth financial period and adopted Resolution 7(Cg-V) in replacement of Resolution 6(Cg-IV) to take account of the contributions which the World Weather Watch is expected to make to the objectives of the Decade.

3.3.4 Congress examined the recommendations of the ad hoc Committee of Experts to Examine the Finances of the United Nations and the Specialized Agencies and noted that a number of these recommendations were already implemented by the Organization in accordance with its financial regulations and other practices. In view of the fact that certain recommendations of the ad hoc Committee, e.g. the establishment of an inspection unit, will require further inter-agency consultations and may require amendments or interpretation of the Convention or Regulations of the Organization, Congress decided to request the Executive Committee to take appropriate action, wherever possible, to study further those recommendations which required action by Congress and to submit appropriate proposals to Sixth Congress. This decision of Congress is contained in Resolution 8(Cg-V).

3.4 Conference programme for the fifth financial period (Agenda item 3.4)

3.4.1 Congress examined the information submitted by the Secretary-General on the invitations extended to sessions of the regional associations and technical commissions within the fifth financial period. It noted with satisfaction that these constituent bodies, except Regional Association II, had already received invitations from Members and that it could be expected that no difficulties would be experienced in connexion with the conference programme during the fifth financial period.

3.4.2 Some delegations considered that in order to enable all Members to extend invitations to constituent bodies, the Organization should make provision in its budget for the cost of sessions in Geneva for all constituent bodies. Host countries would thus only have to bear the expenses corresponding to the difference of cost between a meeting held in Geneva and one held in the host country. Congress decided to request the Secretary-General to study this proposal and to submit a report on its financial implications to Sixth Congress.

3.5 Public information (Agenda item 3.5)

3.5.1 Congress noted with satisfaction the report on the action taken by the Executive Committee and the Secretary-General as regards public information and the meteorological film loan service.
3.5.2 In connexion with the annual World Meteorological Day, Congress requested the Executive Committee to select the theme for its celebration two years in advance so as to permit timely and adequate preparations.

3.5.3 Congress examined the aims and purposes of the public information programme of the Organization and adopted Resolution 10(Cg-V) which contains a policy statement on the subject.

3.5.4 To achieve the aims of this policy, Congress authorized the Secretary-General to undertake the production and distribution of information material, within the limits of the funds appropriated, in co-operation with Members, and, where appropriate, with international and national organizations. Every possible means of obtaining support for this purpose from organizations in the field of public information should be explored. Activities in public information should include the production and distribution of visual information material, press releases and printed information publications as well as recorded radio material.

3.5.5 The public information material issued by the Secretariat should continue to be concentrated upon the practical applications of meteorology, including the World Weather Watch, to general human activities and on the economic value of meteorology. The relationship between the cost of meteorological services and the benefits derived therefrom should be explained and illustrated by facts and figures which may be easily understood by the public.

3.5.6 The meteorological film loan service should be further developed to support meteorological training activities all over the world and also to provide films for public information purposes.

3.6 Revision of previous resolutions of Congress (Agenda item 3.6)

Congress examined its previous resolutions in order that those which no longer had a purpose or which had been replaced by new decisions should not remain in force. Congress adopted Resolution 43(Cg-V) accordingly.

3.7 Celebration of IMO/WMO Centenary (Agenda item 3.7)

3.7.1 Congress welcomed the proposals submitted to it regarding the celebration of the IMO/WMO Centenary in 1973 and decided to request the Executive Committee to develop a programme to mark the occasion in an appropriate manner. In this connexion Congress adopted Resolution 11(Cg-V).

3.8 WMO Emblem and Flag (Agenda item 3.8)

3.8.1 Congress considered proposals to change the emblem of the Organization to incorporate in the design a Russian abbreviation of the title of the
Organization, and to adopt a flag to be flown on certain occasions, especially at international meetings.

3.8.2 In order to avoid periodic reconsideration of the emblem, Congress decided to delete all alphabetical abbreviations from the emblem, which would thus be identical to the United Nations design with a superimposed wind-rose as at present.

3.8.3 Congress also decided to request the Secretary-General to ensure that economy be exercised in the introduction of the new emblem so that full use can be made of existing stocks of stationery and other supplies bearing the WMO emblem.

3.8.4 Congress decided that the flag of the Organization should comprise the official emblem of the Organization centred on a United Nations blue background, the emblem appearing in white. It further decided that the United Nations Flag Code should be applied in the use of the WMO Flag, mutatis mutandis.

4. Technical co-operation (Agenda item 4)

4.1 Review of WMO technical assistance activities (Agenda item 4.1)

4.1.1 General

4.1.1.1 Congress noted with satisfaction that during the period 1963-1966 the participation of WMO in the various United Nations technical assistance programmes had substantially increased and that projects in the field of meteorology costing more than nine million US dollars had been carried out during that period.

4.1.1.2 Congress expressed its appreciation of the excellent manner in which these activities were carried out.

4.1.1.3 Congress noted that the two main United Nations technical cooperation schemes — the Expanded Programme of Technical Assistance and the Special Fund — had been merged with effect from 1 January 1966 into a single programme known as “the United Nations Development Programme” (UNDP).

4.1.1.4 Considering that nearly one hundred countries have benefited by the assistance provided in one form or other under the two components of the UNDP (Technical Assistance and Special Fund), Congress decided that WMO should continue to participate in the UNDP during the fifth financial period.
4.1.1.5 Noting that technical co-operation has become an operation of considerable complexity, Congress welcomed the proposal of the Secretary-General to issue a brochure, for the benefit of permanent representatives, summarizing possibilities and methods of obtaining assistance under the various programmes in which the Organization participates.

4.1.1.6 Considering that much more assistance will be required from both components of the UNDP for the implementation of the World Weather Watch, Congress requested the Secretary-General to continue to bring to the notice of appropriate United Nations organs the important role which meteorology plays in the economic development of developing countries and the necessity to provide assistance also to projects of an operational nature, particularly in the field of meteorological telecommunications.

4.1.1.7 Congress recognized that despite increased activities in the past there is a need for much more assistance to be obtained from the UNDP in the future. Congress also noted that governments receiving technical assistance made their own decisions on priorities regarding projects required from participating organizations. Congress therefore agreed to urge Members to pay due attention to the importance of meteorological projects when establishing their priorities for requests for technical assistance under both components of the UNDP.

4.1.1.8 Congress reconsidered the statement by the WMO Executive Committee on principles relating to the selection of projects under the Technical Assistance component and adopted a revised version which is contained in Annex II. It requested the Secretary-General to bring this revised version to the knowledge of governments concerned as and when required.

4.1.1.9 In view of the fact that decisions on priorities of projects are in many cases taken by governmental authorities which are not specifically concerned with meteorology, Congress believed that it was necessary for WMO to use every opportunity to make known to these authorities the important role which WMO plays in the implementation of national development plans. To facilitate this, Congress instructed the Secretary-General to provide permanent representatives with relevant pamphlets and publications.

4.1.1.10 Congress considered that it was necessary for national Meteorological Services to be represented in the national planning bodies of their countries and that resident representatives of the UNDP should be kept fully informed of the assistance provided by the Organization to the countries concerned in order that full co-ordination can be established between different programmes. For this purpose Congress adopted Resolution 14(Cg-V).

4.1.1.11 Congress agreed that close co-operation should be established with the programmes executed by other United Nations agencies and that the projects
carried out in any one country by the different United Nations organizations should constitute a balanced programme which will meet the economic development of the country in the best possible way.

4.1.2 Recruitment of experts

4.1.2.1 Congress noted with satisfaction that the active co-operation of many Members of the Organization had enabled the increasing requirements of providing experts in various fields for technical co-operation projects to be met, and expressed its appreciation to those Members who have made experts available for this purpose.

4.1.2.2 With regard to the planning of expert missions, Congress considered that in some cases the main mission should be preceded by a short preparatory mission for the purpose of determining the requirements and to enable both the recipient country and the Organization to make the necessary preparations to ensure that the mission is successful.

4.1.2.3 Congress appreciated the co-operation of the permanent representatives in assisting the Secretary-General in the evaluation of candidates proposed for experts' posts and emphasized the importance of these appraisals in ensuring that the list of candidates submitted to recipient governments for final selection indicated that the requirements of the mission regarding their professional, personal and language qualifications had been fulfilled.

4.1.2.4 With regard to the recruitment of experts, Congress considered that the procedure followed by the Secretary-General in advertising experts' posts to all Members of the Organization was very satisfactory and decided that this procedure should be continued. In cases of particular urgency, however (when the normal procedure would be too time-consuming), suitable candidates may be found from the list of experts maintained in the Secretariat.

4.1.2.5 Congress considered that the content of Resolution 13(Cg-IV) — Recruitment of experts to serve in technical co-operation programmes in which the World Meteorological Organization participates — is still valid and requested the Secretary-General to bring this resolution again to the notice of Members.

4.1.3 Evaluation of technical co-operation activities

4.1.3.1 Noting the importance of evaluating the benefits received by countries through technical assistance rendered by the Organization, Congress examined with great interest the detailed statistical and descriptive evaluation provided by the Secretary-General on all projects carried out under the UNDP during the period 1963-1966, and commended the Secretariat for the manner of presentation of the voluminous data contained in the evaluation document.
4.1.3.2 While agreeing that this evaluation (which was mainly based on assessments made and information supplied by permanent representatives of the recipient countries) was very useful, Congress felt that the method of assessment of the effectiveness of technical assistance might be improved and that, wherever possible, information should be included concerning the impact which technical assistance projects had on economic development.

4.1.3.3 Congress considered that visits of Secretariat officers to projects had proved extremely useful from the point of view of supervision of the project and evaluation of its results. Congress therefore felt that these visits should be increased. In particular cases it might be appropriate to appoint high-level consultants with experience in the special field of the project for visiting recipient countries to assess the effectiveness of the assistance rendered. Such visits should always be arranged with the agreement of the permanent representatives of the countries concerned.

4.1.3.4 Congress requested the Secretary-General to continue his efforts in evaluating the results of assistance provided by WMO.

4.1.3.5 Congress noted with interest that the Secretary-General intends to give wide distribution to final reports on completed Special Fund projects and expert missions under the Technical Assistance component provided that they have been de-restricted by the recipient government. It was informed that in accordance with UNDP procedures these reports will be published in either English, French or Spanish, the language to be chosen in agreement with the recipient country. If a government wishes that a final report or portions thereof should also be issued in a language other than the ones mentioned above, this can be done provided the government agrees to bear the cost of translating and issuing the report in the additional language.

4.1.3.6 In conclusion of its deliberations on agenda item 4.1 Congress adopted Resolution 13(Cg-V) which replaces Resolutions 14(Cg-IV) and 15(Cg-IV).

4.2 Participation of WMO in the United Nations Development Programme (UNDP) (Agenda item 4.2)

4.2.1 Technical Assistance component of UNDP (Agenda item 4.2.1)

4.2.1.1 Congress noted with great interest that the magnitude of participation of WMO in the Technical Assistance component steadily increased from one programme period to the other not only with respect to the over-all financial value of projects but also in terms of percentage of the whole UNDP Technical Assistance Programme. Whereas in 1953 WMO commenced with a share of 0.3 per cent of the total programme, this has now reached 2.6 per cent.
4.2.1.2 It was considered essential that the number of projects in the field of meteorology in the Technical Assistance component be further increased in view of the important role which meteorology plays in economic development plans and of the implementation of the World Weather Watch plans. Noting however that the governments themselves decide on priorities for projects in the fields of the various participating organizations, thus determining the over-all amount of the WMO programme, it was considered necessary that the Secretary-General continue his efforts to convince governments of the need for including projects in the field of meteorology in their programme requests.

4.2.1.3 It was agreed that regional projects constitute a very effective and economic means of rendering assistance to a group of countries particularly in the field of meteorological training. Noting however that the limited allocation to WMO for regional projects in the period 1967-1968 is practically exhausted and that not all requests made by regional associations could be satisfied, it was considered highly desirable that the allocations provided by the UNDP for regional projects be increased.

4.2.1.4 Several Members expressed the view that the system of providing operational experts under the Technical Assistance component was very useful and effective and that the continuance of this system should be ensured.

4.2.1.5 The views of Congress regarding the increased need for regional projects and the continuance of operational assistance have been incorporated in Resolution 13(Cg-V).

4.2.1.6 Congress noted with interest that the Governing Council of the UNDP is considering substantial changes in the programming procedures of the Technical Assistance component. Under the new system it is proposed to replace the biennial programming by a more or less continuing process with the effect that governments will have greater control of project selection and utilization of savings than hitherto. Since it is impossible to foresee what effect these new procedures, if adopted, will have on the development of the WMO programme under the UNDP, the Secretary-General was requested to take all possible steps with the appropriate authorities to ensure that the new procedures will not adversely affect the promotion of meteorological projects.

4.2.1.7 It was emphasized that permanent representatives should keep close contact with the technical assistance co-ordinating authorities of their countries and with the resident representative of the UNDP in order to ensure that meteorological projects are given adequate priority by governments in making their programme requests.

4.2.1.8 The Secretary-General was requested to keep permanent representatives currently informed of developments in this respect and of the steps to be taken by them to obtain the technical assistance they require.
4.2.2  **Special Fund component of UNDP (Agenda item 4.2.2)**

4.2.2.1 Congress noted with great interest that the first seven Special Fund projects have been successfully completed. Delegates of countries concerned made declarations emphasizing the economic benefits derived from these projects by their countries and expressed their appreciation to the UNDP and WMO for the assistance received.

4.2.2.2 Congress noted with satisfaction that additional projects had been approved and that the total value of the Special Fund contribution to WMO projects amounted to more than fourteen million dollars.

4.2.2.3 Congress was informed that among the newly-approved Special Fund projects there were, for the first time, projects of a regional nature benefitting a group of countries, and considered that regional projects under the Special Fund component also constitute a very effective means of providing assistance on a broader scale.

4.2.2.4 On the other hand the value of all sixteen WMO projects approved so far constitutes only 2.1 per cent of the total funds allocated for Special Fund projects. It was considered that much more Special Fund assistance will be required particularly in view of the needs resulting from the implementation of the World Weather Watch.

4.2.2.5 Congress noted with satisfaction that the UNDP authorities had expressed their interest in the World Weather Watch plans and hoped that requests from Members or groups of Members for relevant projects will receive sympathetic consideration.

4.2.2.6 The hope was also expressed that, through a broader interpretation of criteria by the Special Fund authorities, it will be possible in future to have approved more projects related to the World Weather Watch.

4.3  **Participation of WMO in other aid programmes (Agenda item 4.3)**

4.3.1 Congress noted that the services of experts with operational functions, which at the time of Fourth Congress could only be provided under the United Nations Programme for the Provision of Operational Executive and Administrative Personnel (OPEX), were currently available upon request of interested governments under the Technical Assistance component of the United Nations Development Programme, and that a number of countries were availing themselves of this assistance.

4.3.2 Congress also noted that in response to Resolution 16(Cg-IV) the United Nations had agreed to retain in its OPEX Programme a number of meteorological posts until such time that their purpose was fulfilled or that they
could be transferred to the Technical Assistance component of the United Nations Development Programme. The last post financed by the United Nations under this arrangement expired on 31 December 1966.

4.3.3 Congress decided to express its appreciation to the United Nations for having made this special arrangement for the benefit of countries in need of operational experts in the field of meteorology.

4.3.4 Congress was also informed that the special assistance provided by the United Nations to the Democratic Republic of the Congo had been gradually replaced by the conventional types of technical assistance under the two components of UNDP and by Funds-in-Trust arrangements.

4.3.5 Congress also noted the declaration of the Democratic Republic of the Congo concerning the value of this special assistance in building up the Meteorological Service, including the re-establishment of the network of stations and the training of national meteorological personnel.

4.3.6 Congress was informed that United Nations had set up a separate fund for the development of West Irian (FUNDWI) and that WMO had been invited to participate by assisting in the improvement of meteorological services there.

4.3.7 Congress agreed that in future WMO would make use to the maximum possible extent of any possibilities offered under United Nations funds for the implementation of projects in the field of meteorology.

4.4 Organization of technical co-operation activities in the Secretariat (Agenda item 4.4)

4.4.1 Congress considered the arrangements proposed by the Secretary-General for the organization of technical co-operation activities during the fifth financial period.

4.4.2 It was decided that the expenses incurred for the operation and administration of United Nations Development Programme projects should continue to be financed from the allocations received from the United Nations Development Programme.

4.4.3 Congress emphasized that maximum co-operation between the Technical Co-operation Department and the other departments of the Secretariat should be maintained in order that the projects under the United Nations Development Programme may be carried out in the most effective and economic manner.

4.4.4 Regarding the expenses incurred for the activities of the Technical Co-operation Department, it was not found practicable to include them in the maximum expenditures for the fifth financial period. Congress decided to
delegate to the Executive Committee the authority to approve the annual budgets of that department within the limits of the allocations granted by the United Nations Development Programme.

4.4.5 Congress adopted Resolution 15 (Cg-V) accordingly.

5. **World Weather Watch** (Agenda item 5)

5.1 The plan for World Weather Watch (Agenda item 5.1)

5.1.1 The discussions of this item were based mainly on a draft resolution and a plan for the World Weather Watch (WWW) submitted by the Executive Committee and on a document submitted by the Secretary-General containing a detailed explanation of the plan and the results of some recent planning studies.

5.1.2 In the general discussion on the item, there was complete agreement that the implementation of the World Weather Watch should lead to far-reaching economic benefits, which would greatly exceed the costs. There would also be many other benefits, such as the saving of human lives, which are difficult to assess in economic terms. It was also agreed that the World Weather Watch would be of benefit to all Members and that it was important that all Members should contribute to its implementation to the maximum of their resources.

5.1.3 Congress was of the opinion that the time is most opportune for forging ahead with the development of the World Weather Watch. It was recognized that many other branches of science are making heavy demands on governments for financial support, but it was felt that a very good case could be made for meteorology to receive its fair share of the available funds. Meteorology is a well-established science of obvious economic importance and the World Weather Watch is to be based on the existing system using modern technology. Governments could therefore be reassured that further investment in meteorology would produce a good return.

5.1.4 Congress expressed satisfaction at the steps which had already been taken towards implementing the World Weather Watch, including the operational use of meteorological satellites and the establishment of the World Meteorological Centres in Melbourne, Moscow and Washington. Congress expressed its appreciation to all who had participated in World Weather Watch planning meetings and studies and in the preparation of the many excellent World Weather Watch Planning Reports which had contributed greatly to the development of the World Weather Watch Plan. Congress recognized that these planning reports have no status in WMO unless specifically adopted. They provide, however, a useful basis for the further study and planning which is required in many cases.
5.1.5 It was repeatedly stressed that the most important next step was to start to implement the plans as soon as possible and to complete this implementation to the extent possible during the period 1968–1971. A more detailed account of Congress discussions and decisions regarding implementation of the World Weather Watch is given under agenda item 5.2.

5.1.6 Particular importance was attached to the need for accelerating the programmes for education and training of meteorological personnel to ensure that adequate numbers of trained personnel would be available in good time for implementing the various aspects of the World Weather Watch. Further information on this point is reported under agenda item 7.2.

5.1.7 There was general agreement that meteorological research formed one of the most important elements of the World Weather Watch. The decisions of Congress on this aspect are reported under agenda item 7.1.

5.1.8 Turning to the specific proposals contained in the plans submitted by the Executive Committee, Congress agreed that it would be desirable to lay down the broad principles of the plan and to give sufficient detail so that implementation can begin forthwith. It was decided, however, that sufficient flexibility should be incorporated in the plan so that the Executive Committee could make the necessary modifications which might be called for as a result of further planning studies.

5.1.9 As regards the Global Observing System, Congress urged Members to implement the regional basic networks laid down by the regional associations and reached agreement on a minimum implementation programme for 1968–1971. It was realized that even full implementation of the regional basic networks and other elements in the plan for the Global Observing System would not satisfy all the needs for operational and research purposes. Congress therefore decided that priority should be given to further planning studies on the optimum density of the various types of meteorological observing stations and also to the desirable frequency of upper-air observations in the tropics.

5.1.10 With regard to the Global Data Processing System, Congress adopted a plan for world, regional and national meteorological centres. The Executive Committee was requested to bring this plan up to date annually and in particular to make any necessary changes on the decisions regarding the regional meteorological centres. In this connexion several Members pointed out that additional information regarding the establishment of regional meteorological centres had been submitted too late for decisions to be taken during Congress. It was agreed that the Executive Committee should take this information into account when examining the revision of the plan for regional meteorological centres.

5.1.11 The plan adopted by Congress for the Global Data Processing System lays down the principles to be followed in further planning work on the contribution of the World Weather Watch to the provision of services to aviation,
marine activities, etc. In connexion with the potential support of the World Weather Watch to a global area forecast system (annex to Resolution 16(Cg-V), Appendix II, paragraph 11), the ICAO representative explained that the Air Navigation Commission favoured, for operational and technical reasons, regional rather than global area forecast systems planning, but of course with all the necessary co-ordination between these regional systems and the World Weather Watch.

5.1.12 With regard to the Global Telecommunication System, Congress adopted a plan covering the main trunk circuit, regional telecommunication networks and the national telecommunication networks. Special attention was given by Congress to the main trunk circuit as it was realized that the regional telecommunications networks could best be discussed in detail by the regional associations. The Executive Committee was authorized to make such adjustments to the plan as might become necessary in the light of the results of further planning studies. In this connexion the representatives of the International Telecommunication Union (ITU) informed Congress that the next meeting of the CCIR/CCITT World Plan Committee (Mexico, October/November 1967) will establish the plan of intercontinental (inter-regional) arteries (routes) and circuits on a world-wide scale. The ITU representatives also informed Congress of the usefulness of WMO submitting to the above-mentioned, Committee a list of intercontinental (inter-regional) circuits which it considers will be needed before 1970 and again before 1975.

5.1.13 The main decisions of Congress on this item are incorporated in Resolution 16(Cg-V).

5.2 Implementation of World Weather Watch (Agenda item 5.2)

5.2.1 Having adopted the plan for the World Weather Watch (agenda item 5.1) Congress decided that the WWW Implementation Programme should be based on the following basic principles:

(a) All meteorological activity connected with the implementation of the World Weather Watch on the territories of individual countries should be the responsibility of the countries themselves and should be met as far as possible from national resources;

(b) Implementation of the World Weather Watch Plan on the territory of developing countries should be based on the principle of utilization of national resources but, where necessary and so requested, assistance may be in part provided by:

(i) The United Nations Development Programme; this should be used to the maximum possible extent;

(ii) Bilateral or multilateral arrangements;

(iii) Contributions in financial form or in the form of equipment or services by Members of WMO; such contributions will
constitute the WMO Voluntary Assistance Programme (VAP);

(c) Implementation of the World Weather Watch Plan in regions outside the territories of individual countries (i.e. outer space, oceans and Antarctica) shall be based on the principle of voluntary participation of countries, who desire and are able to do so, by providing facilities and services from their national resources. The possibility of granting assistance from the WMO Voluntary Assistance Programme should, however, not be excluded.

5.2.2 Congress requested the Executive Committee to fix target dates for the implementation of the various phases of the World Weather Watch Plan in order to ensure that the plan be implemented without delay.

5.2.3 In order to ensure a speedy implementation of the World Weather Watch Plan the Secretary-General was directed to circulate this plan as soon as possible to the Members of the Organization and to invite them to indicate which projects they will carry out nationally; which projects they intend to include in their requests to the United Nations Development Programme (UNDP); which projects they expect to be implemented under bilateral or multilateral arrangements; and for which projects they will need assistance from the WMO Voluntary Assistance Programme.

5.2.4 The Secretary-General was also requested to invite Members to indicate as a matter of urgency what assistance they are prepared to offer bilaterally or multilaterally in cash or in kind, and what contributions they are prepared to make in cash or in kind to the WMO Voluntary Assistance Programme.

5.2.5 Congress decided that the Organization should be engaged as little as possible in bilateral or multilateral arrangements. The main role of the Organization may consist of bringing donors and recipients together as necessary. It is expected, however, that Members will keep the Secretary-General currently informed of bilateral or multilateral arrangements related to the implementation of the World Weather Watch Plan to enable him to ensure full co-ordination of efforts.

5.2.6 It was decided that the WMO Voluntary Assistance Programme shall be administered by the Secretary-General who will submit projects for approval to the Executive Committee proposing an order of priority on the basis of all information available to him on implementation of the various phases of the World Weather Watch Plan under the different possibilities outlined in paragraph 5.2.1 above.

5.2.7 Apart from establishing the principle that projects under the Voluntary Assistance Programme can only be approved and carried out upon request and
with agreement of the recipient country, Congress decided that it should establish general guide-lines only, for the operation and administration of the Voluntary Assistance Programme and requested the Executive Committee to adopt detailed rules and procedures at its nineteenth session.

5.2.8 Congress adopted Resolution 17(Cg-V) which contains the principles under which the World Weather Watch Plan should be implemented, including guide-lines for the WMO Voluntary Assistance Programme.

6. Programme and budget (Agenda item 6)

6.1 General consideration of technical programme and maximum expenditures for 1968-1971 (Agenda item 6.1)

6.1.1 Congress authorized the Executive Committee to incur expenditures of 11,817,000 US dollars during the fifth financial period. It also gave authority to the Executive Committee to incur necessary expenditures additional to the amount indicated above to cover increases in staff salaries and allowances consequent to comparable changes in United Nations salaries and allowances and also to incur other necessary expenditures not exceeding 100,000 US dollars in total, which may be agreed by Members. These decisions are embodied in Resolution 33(Cg-V). Congress authorized the Executive Committee to adjust Annex X by allocating the amounts appropriated for panels, working groups and planning meetings (Part VII), as well as the amount appropriated for personnel (Part VIII) to the appropriate sections of the maximum expenditures for the fifth financial period.

The Executive Committee is also directed to consider the possible use of any surplus which could appear at the end of a year in the budget of the Technical Co-operation Department to defray some of the cost of technical assistance activities normally met from the regular budget.

6.1.2 Congress gave close attention to the length of sessions of the Executive Committee, technical commissions and working groups in the forthcoming financial period. The appropriations for the Executive Committee were based on one session of one week and three sessions averaging two weeks in duration. As this may not be sufficient to meet the needs of the Executive Committee, it was accordingly left to the Executive Committee to determine the length of its session within the available budget allocations. In this connexion, it was considered that constituent bodies should give preference wherever possible to entrusting a specific assignment to a voluntary rapporteur rather than to a working group. For certain types of study the appointment of a consultant may be more efficient from a technical point of view. Sessions of working groups should only be held after full preparation of the work assigned to them had been made by correspondence and when there was reasonable evidence that the problems entrusted to the group had been clearly defined and adequately studied.
in advance. Thus the meetings could be reasonably expected to finalize the work.

6.1.3 Congress noted the substantial increase relating to linguistic services as shown in the estimates of the Secretary-General and underlined the necessity of making every possible saving on this item. Congress directed the Secretary-General to give close attention to the most economic means of meeting the administrative and linguistic requirements.

6.1.4 Congress requested the Secretary-General to study the possibility of including within the technical library reference material for the information of visiting representatives of developing countries.

6.1.5 Congress examined the proposed structure of the WMO Secretariat for the fifth financial period and decided to adopt only the broad lines of such a structure, as shown in Part B of Annex X, leaving it to the Secretary-General to present proposals for a detailed structure best adapted to a progressive development of the activities during the period to be approved by the Executive Committee. However, the number and terms of reference of the various divisions to be established will be subject to approval by the Executive Committee.

6.1.6 Congress decided that in submitting the detailed structure for approval by the Executive Committee the Secretary-General should take into account the following principles:

- The structure should be as simple as possible and the establishment of co-ordination units should be avoided as far as possible;
- Changes in the structure should be gradually implemented;
- Increase in staff should take into account the reductions decided by Congress on those parts of the budget related to staff expenses;
- Work should be delegated to the lowest possible grades.

6.1.7 As regards the application of the directive relating to staff, Congress decided that at the end of the fifth financial period the number of regular staff of the WMO Secretariat, excluding the staff of regional offices, should in no case exceed 90 per cent of the staff proposed for Headquarters in the budget estimates submitted by the Secretary-General to Fifth Congress. Congress did not approve some of the proposals for the establishment of the offices, in particular the WMO office for liaison with UN and ICAO. By this decision and by the reduction in staff mentioned in the preceding paragraph, an over-all reduction of approximately 1,200,000 US dollars was realized.

6.1.8 Congress directed the Secretary-General to submit to Sixth Congress the break-down of the expenditures during the fifth financial period under both the functional classification and the classification by object of expenditures (meetings, staff expenses, travel, equipment and supplies, etc.).
GENERAL SUMMARY

The Secretary-General should also be requested to provide as annexes to the document containing this item the detailed calculations and full information for each chapter and article of the estimates.

6.1.9 Congress noted that the increased budget will enable the scientific and technical staff of the Secretariat to be increased and stressed the need to recruit staff with high scientific and technical qualifications and with appropriate experience.

7. **Technical questions** (Agenda item 7)

7.1 **Promotion of meteorological research** (Agenda item 7.1)

7.1.1 Congress expressed satisfaction with the activities of the Commission for Aerology (CAe) as contained in the report of the president, and the considerable progress made by the various working groups of the commission. In particular, it expressed its appreciation for the report of the CAe Working Group on Tropical Meteorology which had proposed a tropical meteorological experiment designed to obtain data to be used by research workers to gain further knowledge of the tropical atmosphere. It considered this project to be a forerunner of the Global Atmospheric Research Programme (GARP) and suggested that the WMO/ICSU Joint Organizing Committee for GARP (see paragraph 7.1.7) study this project together with other similar tropical projects and present a detailed plan for a tropical meteorological experiment to the twentieth session of the Executive Committee. To enable the Executive Committee to decide if this plan should be implemented, the Secretary-General was instructed to convene a meeting of Members interested in supporting this project.

7.1.2 In Resolution 20(Cg-V), Congress requested the Executive Committee and the Secretary-General to continue to assure that meteorological data are made readily available to research workers, keeping in mind the new developments in automatic data-processing techniques.

7.1.3 It expressed its appreciation for the efforts of the Executive Committee and the Secretary-General in organizing and sponsoring meteorological meetings and symposia and requested them to arrange for the publication of the conclusions of all future meetings in order to inform Members who might not be able to attend.

7.1.4 Congress noted that WMO, through the UNDP, had assisted in establishing several meteorological research institutes. It considered that it would be desirable to support these and other existing institutes. New institutes should only be established if a real need is evident. Financial support for institutes should be limited to those countries that would have difficulty in obtaining the necessary funds.
7.1.5 It further considered that an international visiting scientists programme would encourage meteorological institutes to stimulate their research activities. This programme would permit institutes to receive long-term visits from outstanding research workers. The details of this programme are set down in Resolution 21(Cg-V).

7.1.6 The need for research workers to obtain information on research programmes was discussed. The Congress discussed whether this information could be collected, compiled and published by the Secretariat, but considered that an expanded programme of this type would put too much of a burden on the staff of the Secretariat. It suggested that the same aim could be achieved:

(a) If Members and meteorological institutes would include this information in their annual reports;

(b) By personal communication among scientists in each specialized field;

(c) By publishing selected survey articles in the expanded WMO Bulletin.

7.1.7 Congress noted with satisfaction the action taken by the Executive Committee and the Secretary-General in preparing a general outline of the research programme of the World Weather Watch (see item 5.1). Congress endorsed the proposals made by the Advisory Committee that a joint WMO/ICSU organizing committee should be established to plan and manage GARP. This committee should be composed of not more than twelve scientists selected by mutual agreement between the World Meteorological Organization and the International Council of Scientific Unions (ICSU), and it might, for example, consist of three or four dynamical/physical meteorologists, three or four experts in advanced technology, three or four experts in implementation procedures from weather services (e.g. networks, telecommunications, computers), and one expert in oceanography. The committee should meet once or twice a year to formulate the scientific objectives of GARP, lay down the general policy concerning the design of scientific experiments, the operational requirements including equipment, manpower and costing, and the implementation of the whole programme including data-processing and analysis. This joint organizing committee should be supported by a small full-time joint planning staff, working within the WMO Secretariat and composed of, say, two scientists, two technical assistants and two secretaries, which would carry out the detailed planning as formulated in general terms by the organizing committee.

7.1.8 Congress considered that if such an effective new structure is established, it should be possible to disband several existing working groups within the WMO structure and that the continued need for the Advisory Committee of WMO (see item 2.1) should be re-examined by the Executive Committee with the object of eliminating as far as possible all duplication of effort. Congress also felt that close liaison should exist between the proposed joint organizing committee and the Commission for Atmospheric Sciences which might take over some of the other functions of the Advisory Committee. Provisions were
made in the regular budget for the joint planning of GARP during the next financial period and Congress agreed that ICSU should be invited to provide an equal contribution. The main conclusions of Congress with regard to the WWW research programme are contained in Resolution 18(Cg-V) which includes as an annex a Draft Agreement between the World Meteorological Organization and the International Council of Scientific Unions on the Global Atmospheric Research Programme.

7.1.9 Under this item a proposal was made for the establishment of yearly WMO prizes for outstanding scientific research work in the field of meteorology. This proposal was made to stimulate interest in the important research programme included in the World Weather Watch, taking into consideration the great importance of scientific research activities for the development of meteorological services. Congress gave favourable consideration to this proposal but in view of the limited time available to study it, Congress decided to request the Executive Committee to examine the proposal in greater detail. Several Members supported the idea that prizes for outstanding scientific research could best be arranged at the national level. The conclusions of Congress are embodied in Resolution 12(Cg-V).

7.2 Promotion of meteorological training (Agenda item 7.2)

7.2.1 Congress reviewed the activities of the Organization in the field of meteorological education and training and expressed appreciation of the manner in which the Executive Committee and the Secretary-General had carried out the directives of Fourth Congress in this field. Particular satisfaction was expressed at the establishment, by the Executive Committee, of a Panel of Experts on Meteorological Education and Training, to act as the focal point for all education and training activities of the Organization, and at the important work already accomplished by the panel. It was agreed that the panel should remain as the main coordinating and advisory body in this field.

7.2.2 Satisfaction was expressed over the increased technical assistance in the field of training rendered to developing countries in the fourth financial period, particularly in Africa and Latin America. The establishment of Chairs of Meteorology and regional training centres, in addition to the expansion of the programme of seminars, fellowships and expert missions, was considered to have been a timely and important contribution. Congress also agreed that long-term fellowships, such as those which have been provided under the New Development Fund, constitute an essential element in the assistance to be provided to developing national Meteorological Services.

7.2.3 Congress noted with satisfaction the decisions of the Executive Committee, with respect to the preparation of a comprehensive WMO "Guide to meteorological education and training", and the progress achieved by the
technical commissions in the preparation of detailed syllabi suitable for inclusion in the Guide. In view of these developments, Congress agreed that no change should be made in the status of the WMO Technical Note No. 50, *The problem of the professional training of meteorological personnel of all grades in the less developed countries.*

7.2.4 Congress noted with concern the difficulties in finding qualified candidates to be trained as meteorological personnel, in particular in the developing countries. It was believed that this was due to the fact that few people knew of the importance of meteorology as a science. Congress agreed that information should be widely disseminated on the manifold ways in which meteorology can contribute to the prosperity of the community. It was suggested that one of the ways to achieve this aim would be to send experts or scientists to give lectures to the general public and to secondary school and university students or to visit the public officials to describe and discuss the growing strength and potentiality of the atmospheric sciences and their applications. It should be brought to the attention of all concerned that meteorology has great influence on practically all the phases of national economy. Furthermore, the science of meteorology represents one of the greatest fields of intellectual challenges and opportunity. Therefore Members should take adequate measures to interest youth in the career of meteorology.

7.2.5 Congress agreed that the attention of the public should be invited to the fact that meteorology has great future potentialities associated not only with weather forecasting but also with a range of problems in such fields as agriculture, biology, hydrology, chemistry, and physics, etc.

7.2.6 Congress agreed that despite the numerous undertakings of the Organization in the field of meteorological education and training during the fourth financial period, the needs of newly-independent Member states and the great number of meteorological personnel requiring training for the implementation of the World Weather Watch made further expansion of training activities in the years ahead inevitable. It was also agreed that, because virtually all parts of the WMO Secretariat are concerned with some elements of the Organization's training programme, it would be unrealistic to envisage a unit in the Secretariat which would have total responsibility for all training activities. In view of these considerations, Congress decided to establish in the Secretariat an Education and Training Co-ordination Office. The decisions of Congress in respect of the policy of the Organization in the fifth financial period in the field of meteorological education and training are contained in Resolution 22(Cg–V).

7.2.7 It was brought to the attention of Congress that in many developing countries training material, such as audio and visual aids, synoptic sequences, cross-sections, compendia and textbooks, is completely lacking. Since such material is essential to the training of meteorological personnel, Congress agreed that a library of training material should be gradually built up in the Secretariat
with the purpose of recommending and also disseminating such material to Members. The Secretary-General was requested to seek the ways and means of building up such a library in the Secretariat.

7.2.8 Under this item Congress noted the proposal made by the Delegation of the Republic of Cuba to establish a centre for meteorological education and training at Havana, Republic of Cuba, in co-operation with the meteorological services of that country, for the purpose of training meteorological personnel for the Area of the Caribbean Sea and Central America. With reference to Resolution 22(Cg-V) Congress agreed that the above proposal should be referred to the president of Regional Association IV and subsequently to the Executive Committee for study and appropriate action. This study should take into account the existing and other proposed training facilities in Region IV.

7.3 **Antarctic meteorology** (Agenda item 7.3)

7.3.1 Congress noted that during the fourth financial period it had proved impossible to arrange for the formation of a Standing Committee for the Antarctic as proposed in Resolution 29(Cg-IV) because no unanimous agreement from all Members which are signatories of the Antarctic Treaty could be obtained. In order to ensure co-ordination of meteorological activities in the Antarctic, the Executive Committee decided to establish an Executive Committee Working Group on Antarctic Meteorology. Congress noted with satisfaction the excellent work carried out by this working group and felt that this arrangement should be continued. Therefore Congress requested the Executive Committee to maintain its Working Group on Antarctic Meteorology composed of representatives of Members signatory to the Antarctic Treaty. Resolution 23(Cg-V) was adopted.

7.4 **Review of the Technical Regulations** (Agenda item 7.4)

7.4.1 A working group with a membership of six was set up under the chairmanship of Dr. O. Lönqvist (Sweden). The working group carefully examined all amendments to the Technical Regulations proposed by technical commissions and referred to Congress by the Executive Committee, together with subsequent amendments arising therefrom. As a result, a consolidated list of amendments was prepared and Resolution 28(Cg-V) was adopted by Congress.

7.4.2 A number of principles regarding the terminology of Technical Regulations and the preparation of new Regulations or amendments have been added to the Introduction to these Regulations. These guiding principles, together with the revised Introduction itself, are intended to facilitate the task of technical commissions when they discuss matters pertaining to Technical Regulations. In this relation Congress decided that the substance of Resolution 18(Cg-II)
concerning the status of the WMO Guides shall be inserted in introductory parts of these Guides.

7.4.3 Congress noted that there is a certain lack of homogeneity in the definitions appearing in Chapter 1 as developed by the various technical commissions. It accordingly requested the Commission for Synoptic Meteorology (CSM) to prepare and submit to Sixth Congress an edited version of this chapter.

7.4.4 It was noted that the texts recommended by the Commission for Maritime Meteorology (CMM) and those under study by the Commission for Synoptic Meteorology regarding land and sea automatic weather stations were not fully compatible. It was agreed to request the Commission for Synoptic Meteorology, in consultation with the Commission for Maritime Meteorology, to reconsider this question with a view to submitting, as a matter of urgency, a co-ordinated text of such Regulations for the approval of the Executive Committee.

7.4.5 Congress had some doubts about the exact intent of the definition of a radiation station proposed by the Commission for Instruments and Methods of Observation (CIMO), in particular whether “observations of global solar radiation” should be considered as constituting the minimum observing programme for a “radiation station”. In such cases, stations at which only sunshine duration is measured should not be considered as radiation stations. Some delegates expressed the view that this definition should be worded in more general terms and refer only to observations of solar radiation or of radiation. The commission was therefore instructed to reconsider this definition.

7.4.6 Congress noted that the new regulation proposed concerning the exposure of radiation stations corresponds exactly to the one relating to the exposure of climatological reference stations. It felt that the conditions so imposed on all radiation stations would be too stringent and very difficult to fulfil for all such stations. The Commission for Instruments and Methods of Observation was invited to study this matter further.

7.4.7 A suggestion was made that it would be very useful if the information on radiation stations referred to in new Regulation 2.6.4.1 was made available to the Secretariat for further dissemination, upon request, to those interested, especially the Members of the regional association or the regional working group on radiation concerned. This suggestion was referred for study to the Commission for Instruments and Methods of Observation. Mention was also made that the expression “significant changes” in new Regulation 2.6.4.1(e), which probably refers to changes in calibration factors, might be clarified.

7.4.8 Congress considered that it would be unwise to change the status of Appendices A, B, C and D from “standard” to “recommended practices” since the appendices contain not only values of some physical functions and constants
but also international conventions aimed at standardizing methods in meteorological work. The Commission for Atmospheric Sciences and the Commission for Instruments and Methods of Observation were therefore invited to review the relevant Regulations in the light of the publication of the Meteorological Tables, with a view to determining which parts of these appendices should be maintained as standard practices. They were also requested to propose the amendments which might be necessary to bring these appendices up to date. This review should also cover the terminology and the symbols used for the units.

7.4.9 New Regulations had been proposed by the Commission for Maritime Meteorology (Recommendation 32 (CMM-IV)) specifying that provision should be made to continue to meet the requirements of users in the case of changes in the areas of responsibility for the collection of ships' reports or in the case of discontinuance of the issue of shipping forecasts. Congress considered that the proposed Regulations do not specify the nature of the provision to be made by the Member concerned but relate to actions to be taken by constituent bodies of WMO and hence do not merit inclusion as Technical Regulations. Congress decided to insert notes under new 6.2.2.6 and 10.2.1.1 which adequately cover the intent of the proposals. It also requested the Commission for Maritime Meteorology to consider which measures should be taken in the case where a coastal station designated for the collection of ships' reports discontinued its service.

7.4.10 Congress noted that new paragraph 6.2.2.13 regarding the inclusion of the four-letter call-sign in ships' reports does not correspond exactly to the relevant decision of the fourth session of the Commission for Synoptic Meteorology (Recommendation 37 (CSM-IV)). That Commission was invited to reconsider the relevant Regulation with a view to eliminating possible inconsistencies.

7.4.11 No amendment to the International Maritime Meteorological Punch-Card (Appendix F to the Technical Regulations) was proposed to Fifth Congress. It was noted that, with the introduction of the revised international codes in January 1968, there will be certain discrepancies between the punch-card and these international codes. The Commission for Maritime Meteorology was requested to consider this matter.

7.4.12 Congress noted with satisfaction that a draft chapter on hydrometeorology had been developed by the Commission for Hydrometeorology (CHy) and had been submitted to permanent representatives of Members for comment, in consultation as far as possible with national hydrological agencies. In view of the importance of this chapter Congress instructed the Commission for Hydrometeorology to actively pursue its preparation so that a final text be adopted by the commission for submission to Sixth Congress.
7.4.13 Congress observed that although a great deal of effort had been devoted to the development of plans for the World Weather Watch, this system was not at present reflected in the Technical Regulations. It was agreed that it would be premature to attempt to do so at this stage, but the Technical Commissions were invited to keep this consideration in mind when preparing amendments to the Technical Regulations to be submitted to Sixth Congress.

7.5 Publications programme (Agenda item 7.5)

7.5.1 Congress noted with appreciation the extensive programme of publications which has been completed during the fourth financial period. It agreed in general to the programme of publications proposed by the Secretary-General for the fifth financial period, subject to some amendments with regard to the languages in which the publications should be issued. Congress considered that it would be of great assistance to Members if as many as possible of the WMO publications could be issued in four languages, i.e. English, French, Russian and Spanish, but realized that for certain types of publication, because of their special contents, this would not be necessary. The detailed decisions of Congress on this question are contained in Resolution 31(Cg-V).

7.5.2 Congress noted that the present WMO Bulletin has been regularly published since April 1952 in accordance with the policy laid down by First Congress. Although there were no doubts as to the success of the WMO Bulletin, Congress felt that in view of the World Weather Watch, there is a growing need for disseminating more information on technical developments, on the practical work of Meteorological Services and on the practical applications of the results of research. Congress felt that the feasibility and economic implications of this and other proposals with regard to the WMO Bulletin should be studied by the Executive Committee, and consequently adopted Resolution 32(Cg-V).

7.6 Synoptic meteorology (Agenda item 7.6)

7.6.1 Congress noted with satisfaction the report of the president of the Commission for Synoptic Meteorology. Congress expressed appreciation of the work done by the commission in revising the upper-air and aeronautical codes and noted with satisfaction that great emphasis was being laid on the precise determination of requirements as a basis for the further development and revision of codes, the need for which has been emphasized by the World Weather Watch. While realizing that the terms of reference of the CSM Working Group on Data Needs and Codes referred explicitly to the needs of numerical forecasting, automatic data processing and climatology, Congress stressed the special importance of these aspects of the requirements.

7.6.2 Special mention was made of the great delays affecting the collection and dissemination of observational data in many areas of the southern hemisphere. While realizing that the plans for the Global Telecommunication System
of the World Weather Watch provided for substantial improvements, Congress agreed that every effort should be made without delay to eliminate the more important deficiencies in the present system of telecommunications. Congress accordingly requested the president of the Commission for Synoptic Meteorology, in co-operation with the Secretary-General, to investigate, as a matter of urgency, the causes of the present deficiencies and to inform Members concerned of the results of the investigation so that the latter may take steps to reduce the deficiencies to a minimum.

7.6.3 The present state of implementation of Resolution 31(Cg-IV) — Units for wind speed in meteorological messages for international exchanges — was also discussed under this item. Congress noted that a majority of Contracting States of ICAO favoured the retention of the use of knots rather than metres per second while the latest position within the Maritime Safety Committee of IMCO was that opinion was equally divided. It being apparent that the position adopted by many countries differed from one organization to the other, and that further progress towards standardization depended on co-ordination of policy at national level, Congress decided that Resolution 31(Cg-IV) be restated with minor alterations and with the addition of a paragraph requesting Members concerned to take steps to ensure a uniform national position in this matter. Resolutions 29 and 30(Cg-V) were adopted accordingly.

7.6.4 The decisions of Congress regarding the role of the Commission for Synoptic Meteorology in the study of the World Weather Watch are given under agenda items 5 and 7.13.

7.7 Climatology (Agenda item 7.7)

7.7.1 Congress noted with satisfaction the report of the president of the Commission for Climatology (CCl) and the considerable progress made by its various working groups. The usefulness of several reports of working groups published as Technical Notes was emphasized.

7.7.2 Congress noted with appreciation the efforts made by the commission to promote the development of the scientific aspects of climatology and considered that a symposium on physical and dynamic climatology might greatly contribute to this end. Furthermore, Congress recognized that the advancement in fundamental climatology would facilitate successful studies of problems of applied climatology — especially those related to the activities of the other technical commissions such as the Commission for Agricultural Meteorology (CAgM) and the Commission for Hydrometeorology.

7.7.3 Congress examined thoroughly the present position in respect of the preparation and publication of regional climatic atlases. Congress recognized that financial difficulties should not prevent the accelerated preparation and printing of the climatic charts for regional atlases. Congress decided to support the financing of these atlases and consequently adopted Resolution 24(Cg-V).
7.7.4 With a view to securing — as far as possible — uniformity of quality and presentation, Congress considered that such expenditures should be incurred only for projects which are supported by the president of the Commission for Climatology.

7.8 **Instruments and methods of observation** (Agenda item 7.8)

7.8.1 Congress noted with appreciation the report of the president of the Commission for Instruments and Methods of Observation and noted with interest the considerable activities carried out by the commission during the past four years. Several delegates, however, expressed the view that meteorological instrumentation should absorb some of the new developments that have taken place in space technology and computer designs; this would lead to improved meteorological observing practices.

7.8.2 Congress commended the Executive Committee and the Secretary-General for having organized the technical conference on automatic weather stations with a wide participation of experts, including a number from outside the Meteorological Services, actively engaged in instrument development. Congress considered that the organization of such conferences would be one way of creating greater interest and progress in the field of meteorological instrumentation.

7.8.3 Congress noted that the Commission for Instruments and Methods of Observation has developed a comprehensive programme for comparison of various types of meteorological instruments and agreed in principle that WMO should provide assistance to Members in organizing some of the most important of these comparisons. In particular, Congress considered that WMO should give all assistance to accelerate the development of an internationally accepted reference radiosonde which would be invaluable for future comparisons of different types of radiosondes. While organizing such comparisons, due account should be taken of the need for carrying them out under different climatic conditions, and in particular in tropical and subtropical regions.

7.8.4 When discussing radiosondes, some Members raised the problem of inaccuracies in ascents due to insufficiently trained personnel. Congress recognized the importance of this problem and it was discussed under Agenda item 7.2.

7.8.5 The increasing importance of speedy and accurate methods of measurements of meteorological parameters at aerodromes to meet the needs of modern aviation was also mentioned.

7.8.6 The main conclusions of Congress are incorporated in Resolution 25 (Cg-V).
7.9 Aeronautical meteorology (Agenda item 7.9)

7.9.1 Congress noted with satisfaction the report of the president of the Commission for Aeronautical Meteorology and the considerable progress made by its various working groups. Recognizing that the international co-ordination of the Meteorological Services which will be required by supersonic transport operations has now become a matter of urgency, Congress noted with appreciation that follow-up action on Recommendation 8/27 — Meteorological requirements for supersonic transport aircraft — of the simultaneous session of the WMO Commission for Aeronautical Meteorology and of the ICAO Meteorology and Operations Division (Paris 1964), is now the object of negotiations between WMO and ICAO along the lines indicated by the sixteenth session of the Executive Committee.

7.9.2 Congress noted that, at the request of the eighteenth session of the Executive Committee, the CAeM Working Group on Meteorological Aspects of Area Forecasting Systems had, both as a CAeM working group and as an informal WWW planning meeting, taken urgent action to follow up Recommendation 9/3 (WMO CAeM-III/ICAO MET-OPS DIV) — Further development and co-ordination of the Area Forecast System — which called for joint action by both WMO and ICAO. Since this recommendation is closely related to Recommendation 9/4 (WMO CAeM-III/ICAO MET-OPS DIV) — Action by States and regional air navigation meetings with respect to development of area meteorological forecast systems — which entrusts ICAO with the development of interim regional area forecast systems pending completion of the study requested by Recommendation 9/3, concern was expressed at the difference of status at the present time of Recommendation 9/3 in the two organizations concerned. In this relation it noted with approval that the Secretary-General of WMO had proposed to the Secretary-General of ICAO to explain orally to the ICAO Air Navigation Commission and Council the purpose and scope of the WWW and the relation to service to aviation and that this offer had been accepted. Since the ICAO Council is expected to consider the future status of Recommendation 9/3 within ICAO in its session of 5 to 30 June 1967, it agreed that the Secretary-General should take this opportunity and other opportunities to foster very close collaboration between WMO and ICAO on meteorology as applied to aviation, both international and general. The discussions on the action taken by WMO on Recommendation 9/3 are reported upon under Agenda item 5.1.

7.9.3 Congress noted with appreciation that the Commission for Aeronautical Meteorology would meet in simultaneous session with the 5th Air Navigation Conference of ICAO (November 1967, Montreal) to consider the meteorological aspects of the approach, landing and take-off phase of flights. On the same occasion the Commission for Aeronautical Meteorology would meet in separate session. Congress decided to urge Members to make arrangements towards
securing appropriate participation in the session of the Commission for Aeronautical Meteorology to be held simultaneously with the fifth Air Navigation Conference.

7.9.4 Congress expressed its appreciation to the United Kingdom for its offer to be host to the CAeM Scientific and Technical Conference on Aeronautical Meteorology (London, March 1968) and noted with satisfaction that the president of CAeM, Mr. W. A. Dwyer, would chair the conference and had already made considerable progress in the preparation of this conference. It expressed the hope that this conference would constitute a milestone in the history of the Commission for Aeronautical Meteorology.

7.10 Agricultural meteorology (Agenda item 7.10)

Congress noted with satisfaction the report of the president of the Commission for Agricultural Meteorology. The major contributions which the commission has made toward the important task of improving world food production through the application of meteorological knowledge were stressed. Important among them were the reports of working groups which have been or will be published as Technical Notes, the published Guide to Agricultural Meteorological Practices, and the several symposia and seminars in related fields. Particular note was also taken of the continuing programme of study in arid and semi-arid zone agroclimatology in co-operation with the Food and Agriculture Organization of the United Nations (FAO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO).

Congress also noted with appreciation the views expressed by the Director-General of the Food and Agriculture Organization, in his statement before Fifth Congress, of the need for increased meteorological support and for continued close liaison between FAO and WMO in the world campaign against hunger.

Note was taken by Congress that, while in some countries there were quite successful forecasting and other meteorological services designed particularly to aid farmers and others engaged in food producing, processing and transporting activities, there were many world areas in which such services were either not fully developed or non-existent. Emphasis was given to the continuing rapid population increase, with attendant increased demands for food, and the lagging rate of increase in food production, the latter being intensified by losses of arable land due to erosion and similar factors and by urban encroachment. Congress also noted that an important factor in coming years in assisting many smaller nations to meet some of these problems will be the increased meteorological data and knowledge to result from the World Weather Watch.

Recognizing the need to continue, strengthen, and increase the important activities of WMO in the fight against hunger, through its constituent bodies and through research and applied techniques, and in co-operation with other agencies, principally UNESCO and FAO, Congress adopted Resolution 26 (Cg-V).
7.11 **Hydrometeorology and the International Hydrological Decade (IHD)**
(Agenda item 7.11)

7.11.1 Congress reviewed the activities of the Organization in the field of hydrometeorology, water resources development and the International Hydrological Decade (IHD) since Fourth Congress and noted with satisfaction that the Organization had made major contributions in these fields. Congress recognized the important role of meteorology and hydrometeorology in many scientific and operational activities related to the International Hydrological Decade and water resources development.

7.11.2 Congress decided that WMO should continue to play its full role in the IHD and in the water resources development programme of the United Nations and its specialized agencies. It directed the Executive Committee to keep itself informed of the activities of UNESCO, the United Nations, and other international organizations in these fields and to adjust the WMO participation as required. It was further agreed that the Secretary-General, in consultation with UNESCO, should make every effort to avoid any overlap between the activities of organizations participating in the IHD programme.

7.11.3 The main decisions of Congress regarding the role of WMO in hydrometeorology, water resources development and the IHD are incorporated in Resolution 27(Cg-V).

7.12 **Maritime meteorology** (Agenda item 7.12)

7.12.1 Congress noted with satisfaction the report of the president of the Commission of Maritime Meteorology. It supported the view expressed by the president of the commission that there is a need to ascertain in greater detail the requirements for meteorological products by the users engaged in marine activities.

7.12.2 Congress supported the need for higher accuracy and homogeneity in marine observations for both operational and research purposes and noted with appreciation that the Commission for Maritime Meteorology had initiated preparatory arrangements for relevant studies and instrument comparisons. Congress therefore expressed the hope that interested Members would find it feasible to undertake such studies and comparisons. Arrangements for the financial support by WMO to the evaluation of the results of these comparisons were considered under Agenda item 6.1.

7.12.3 Congress wished to record its appreciation for the voluntary contribution of shipping to the world-wide meteorological observing programme. It agreed that every effort should be made to ensure the efficient flow of ships'
observations, in particular to facilitate the transmission of observations to coastal radio stations. Moreover, increased attention should be given to the meteorological assistance to be provided to marine activities, both as to type and quality, in close consultation between WMO and other international organizations concerned.

7.12.4 In relation to the question of equivalent wind speeds for Beaufort numbers, Congress noted that, following a recent decision of the Executive Committee, the Commission for Maritime Meteorology was examining the question further in the light of newly accrued records of measurements.

7.12.5 Congress noted with interest that fisheries are showing a growing interest in various types of meteorological information from the point of view of considerations not only of safety but also of efficiency of operations, and that as a result the Food and Agriculture Organization supported the list of meteorological products given in World Weather Watch Planning Report No. 15. The representative of FAO also stressed the close relationship between meteorological parameters and such questions as fish migration and pollution of the sea; FAO is looking forward to increasing collaboration with WMO, in particular with certain working groups of the Commission for Maritime Meteorology.

7.12.6 Congress noted with interest the statement submitted by UNESCO for expanding the present good co-ordination between WMO and the Intergovernmental Oceanographic Commission (IOC) with regard to ocean data stations and related telecommunications problems. With reference to the latter, Congress decided to encourage Members to arrange, as a matter of urgency, that their national telecommunication authorities be made aware of the requirements for suitable radio frequencies for automatic observing platforms at sea, for consideration in preparation for the forthcoming World Administrative Radio Conference dealing with mobile maritime services (ITU).

7.12.7 Considering the growing importance of international research projects on air-sea interaction, and the increased need for collaboration with IOC and FAO, particularly in view of Resolution 2172 — Resources of the sea — of the United Nations General Assembly, Congress decided to revise Resolution 26(Cg-IV) and adopted Resolution 9(Cg-V).

7.13 Organization of the scientific and technical work of WMO (including functions of regional associations and technical commissions) (Agenda item 7.13)

7.13.1 Congress noted with appreciation the extensive consideration given by the Executive Committee since Fourth Congress to the technical structure of the Organization. It adopted the view that no major changes in the technical aspects of the technical and scientific structure should be made before Sixth
Congress, and proposals should be developed for consideration by Sixth Congress. It was agreed that the best method of undertaking this study would be for the Executive Committee to establish a panel of experts and that this panel should base its work on detailed terms of reference and basic principles laid down by Congress. These decisions are incorporated in Resolution 5(Cg-V).

7.13.2 In order that no unnecessary delays should occur in putting the decisions of Sixth Congress into effect, Congress decided that the panel should also develop such proposals for amendments to the Convention and General Regulations as would be necessary for this purpose. It also considered that the draft proposals of the panel, after consideration by the Executive Committee, should be sent to all Members for comment and that the panel should take these comments into account when composing its final report to the Executive Committee for subsequent submission to Congress. The procedure for carrying out this work is indicated in Resolution 5(Cg-V) and its annex.

7.13.3 Congress realized that it might be necessary to arrange for the participation of additional experts in the work of the panel and also considered that a senior staff member of the secretariat should participate in the work of the panel. Congress also agreed that interested Members should have the possibility of participating in the final discussion of the proposals prepared by the panel. For this purpose an extended meeting of the panel might be arranged at an appropriate time before Sixth Congress with the participation of experts from interested Members.

7.13.4 In view of the conclusions recorded in paragraphs 7.13.1, 7.13.2 and 7.13.3, Congress decided to make only some minor modifications at the present time to the terms of reference of the technical commissions, and to procedures governing their methods of work. However, Congress agreed that the decisions recorded in paragraph 7.13.1 should not prevent the Executive Committee from putting into operation before Sixth Congress any minor improvements which it may find urgently necessary.

7.13.5 In accordance with the recommendations of the Executive Committee, Congress agreed that certain steps could be taken to speed up the technical and scientific work of the Organization without making any changes in the present structure. In particular, Congress agreed that sessions of the technical commissions could be supplemented by more frequent sessions of smaller groups of experts selected by the commission (advisory working groups), with the president of the commission as chairman, to advise the President and to facilitate action on urgent matters. Furthermore, Congress agreed that the presidents of technical commissions should be given greater authority in their task of directing the work of the commissions, in particular their working groups, and to this effect certain amendments were made to the General Regulations (see Agenda item 3.2).
7.13.6 Congress considered that the technical commissions and particularly the Commission for Synoptic Meteorology should be more closely associated with the World Weather Watch activities. To this end it was decided to expand the terms of reference of the Commission for Synoptic Meteorology to include the co-ordination of all relevant aspects of global observational systems and global data-processing systems. Congress further decided that the Commission for Aerology be renamed "the Commission for Atmospheric Sciences". In this connexion Congress requested the Secretary-General, when informing Members of this change of name, to invite permanent representatives to take due account of any important research activities outside the Meteorological Services when nominating members to participate in the work of the Commission for Atmospheric Sciences.

7.13.7 The above-mentioned changes, and also some other minor amendments to the terms of reference of technical commissions, are recorded under agenda item 3.2 — Review of the General Regulations.

8. Administrative and financial questions (Agenda item 8)

8.1 Review of the Staff Regulations (Agenda item 8.1)

8.1.1 Congress reviewed certain Articles of the Staff Regulations as well as their introduction (Scope and purpose). It agreed that these Staff Regulations should also apply to staff employed in field projects of various technical assistance activities of the Organization not financed by the Organization, and the corresponding amendment to the paragraph "Scope and purpose" was adopted.

8.1.1.1 It agreed to introduce the Staff Assessment Plan in respect of salaries paid to WMO staff members. For this purpose, Article 3.1 of the Staff Regulations was amended and a new Article 3.2 introduced. The previous Articles 3.2 and 3.3 were renumbered 3.3 and 3.4 respectively, without change.

8.1.1.2 Congress noted that the United Nations had abolished the "service benefit" previously payable on termination to staff engaged on fixed-term contracts and therefore amended Article 9.4 of the Staff Regulations accordingly.

8.1.2 Congress also noted the decision of the General Assembly of the United Nations at its XXIst session which permits, under certain conditions, former members of the staff and their beneficiaries to continue, after retirement or in case of incapacity suffered during service with the Organization, to be covered under the existing health insurance schemes for United Nations staff. It therefore decided to grant its former staff the same social benefits under the same conditions.

8.1.3 In connexion with these amendments Congress adopted Resolutions 39 (Cg-V) and 40(Cg-V).
8.1.4 Congress decided that technical assistants should be recruited at grade P.1 and cancelled the limitations set by paragraph 6.1.13 of the General Summary of Cg–IV. Congress further authorized the Executive Committee, after examination of the matter in consultation with the Secretary-General, to revise as necessary the grading of technical assistants in order to provide them with a full career in accordance with the principles outlined in paragraph 6.1.9 of the general summary of Fourth Congress.

8.2 **Review of the Financial Regulations** (Agenda item 8.2)

Congress reviewed certain Articles of the Financial Regulations. No change to Article 9.2 was considered necessary provided each Congress continued to incorporate in its resolution on the Working Capital Fund the directives with regard to the purposes for which the Fund may be used. Articles 16.1, 16.2 and 16.3 were reworded to conform to procedures in the General Regulations. A new Article 9.10 was introduced to bring the terms of the Staff Compensation Plan Reserve Fund (which had been previously covered by a resolution of Congress) into the Financial Regulations. New sub-sections to Article 13.1 were introduced to cover circumstances arising from the expanded activities of the Organization. In this connexion Congress adopted Resolution 38.

8.3 **Consideration of the Working Capital Fund** (Agenda item 8.3)

Congress reviewed the Working Capital Fund and decided to modify the provisions that had been applied during the third and fourth financial periods by limiting the principal of the fund for the fifth financial period to four per cent of the approved Maximum Expenditures, but not exceeding 500,000 US dollars. Accordingly Resolution 35(Cg–V) was adopted.

8.4 **Proportional contributions of Members** (Agenda item 8.4)

8.4.1 Except in respect of Malaysia and Singapore, the Congress confirmed the assessments of proportional contributions for the fourth financial period made by the Executive Committee for those Members who had joined the Organization after Fourth Congress and for which no provision was made in Resolution 44(Cg–IV), and also for certain other countries which were expected to become Members. These decisions were incorporated in Resolution 36(Cg–V).

8.4.2 An assessment was also included for the prospective Member, Botswana.

8.4.3 The Congress decided to make no change in the assessment made in Resolution 44(Cg–IV) for Indonesia.
8.4.4 Congress re-examined the question of the scale of assessments of proportional contributions. As at previous sessions of Congress, some delegations considered that WMO should continue to move closer to the UN scale. However, it was decided that the same scale of assessments should apply for the fifth financial period to the Members of WMO as was currently being applied for the fourth financial period, including those assessments which had been approved for new and prospective Members in Resolution 36(Cg-V). In this connexion, Resolution 37(Cg-V) was adopted. The annex to this latter resolution gives the list of Members with the unit assessments to be applied throughout the fifth financial period.

8.5 Publications Fund (Agenda item 8.5)

Congress reviewed the administration of the Publications Fund during the fourth financial period. In view of the continued success of this form of financing the publications programme, no changes were proposed. In fulfilment of the requirement in Article 9.9 of the Financial Regulations, it was decided that the surplus standing to the credit of the Fund at the end of the fourth financial period should be carried forward in the Fund to the fifth financial period.

8.6 The building of the Organization (Agenda item 8.6)

8.6.1 Congress noted the reports submitted by the Secretary-General, on behalf of the Executive Committee, on the developments that had taken place in this matter since Fourth Congress.

8.6.2 The need for an extension of the building, to accommodate the increased Secretariat services and staff, resulting from the ever-expanding activities of WMO, was recognized. Congress noted with appreciation the willingness of the Swiss Authorities to grant a loan to WMO, through the Foundation for Buildings for International Organizations (FIPOI), to finance the construction of the extension of the building. It was also noted that the granting of such a loan was conditional upon the purchase of the existing building, on terms and conditions provided for in the agreement between the Organization and the Canton of Geneva.

8.6.3 Congress decided in principle to purchase the existing building and to authorize the construction of an extension. It requested the Executive Committee to proceed with the negotiations with FIPOI, and to prepare as soon as possible a detailed proposal for submission to Members covering the purchase of the existing building and the construction of an extension, and adopted directives to be followed in preparing such a proposal.

8.6.4 The above decisions are embodied in Resolution 42(Cg-V).
8.7 **IMO Fund** (Agenda item 8.7)

8.7.1 Congress considered that the IMO Fund should continue to be used to provide for the IMO Prize and for the IMO Lecture as set out in Resolution 45(Cg-IV).

8.7.2 In order to keep the expenditures of the Prize and the Lecture within the resources of the IMO Fund, it was decided that the honorarium for the lecture to be delivered at each future session of Congress should be 2,000 United States dollars.

8.7.3 In all other respects the decisions of Fourth Congress were retained.

8.8 **Secretary-General’s contract** (Agenda item 8.8)

8.8.1 Congress considered that the annual salary of the Secretary-General should be increased to 23,000 US dollars with retroactive effect from 1 January 1966 so as to bring it in line with the salaries of secretaries-general of other comparable specialized agencies. In order to avoid the recurrence of a situation in which the salary of the Secretary-General was lower than that of the secretary-general of any other comparable specialized agency, Congress decided to authorize the Executive Committee to carry out any readjustment of salary which might become necessary if, during the fifth financial period, an increase in the salary of all United Nations staff should occur.

8.8.2 Congress also decided to increase the budgetary provision for representation allowances for the Secretary-General and the Deputy Secretary-General to 17,000 US dollars so as to provide an annual allowance of 3,250 US dollars for the Secretary-General and one of 1,000 US dollars for the Deputy Secretary-General.

8.8.3 Congress adopted in this connexion Resolution 41(Cg-V). (See also Annex XIV — The draft contract to be signed by the President of the Organization and the Secretary-General for the fifth financial period.)

8.9 **Staff assessment plan** (Agenda item 8.9)

8.9.1 In recognition of the need for WMO to conform to the system adopted by the United Nations and the other specialized agencies for expressing the salary scales of Professional and General Service staffs, Congress confirmed the action taken by the Executive Committee (Resolution 16 (EC-XVII)) for the adoption by WMO of the United Nations Staff Assessment Plan. The consequential amendment to Article 3 of the WMO Staff Regulations was also approved.

8.9.2 Congress decided that it was not, at present, necessary to establish a Tax Equalization Fund for WMO. It decided further that the Executive
Committee should be invited to study all aspects of the Organization's reimbursement of national income taxes paid by staff members, with a view to submitting to Members the best possible proposal for dealing with this matter. The Executive Committee was invited to take a decision on this matter in the light of the discussion of this item at Fifth Congress.

9. **Elections and nominations** (Agenda item 9)

9.1 **Election of President and Vice-Presidents of the Organization** (Agenda item 9.1)

The Congress, by secret ballot, re-elected:

*Dr. Alf Nyberg*, Director of the Swedish Meteorological and Hydrological Institute, as President of the Organization;

and elected

*Mr. W. J. Gibbs*, Director of the Australian Bureau of Meteorology, as First Vice-President;

*Academician E. K. Fedorov*, Director of the Hydrometeorological Service of the Union of Soviet Socialist Republics, as Second Vice-President;

*Mr. N. A. Akingbehin*, Director of the Nigerian Meteorological Service, as Third Vice-President.

9.2 **Election of members of the Executive Committee** (Agenda item 9.2)

The Congress elected, by secret ballot, the following 14 members of the Executive Committee:

- Mr. E. A. A. Acquah, Ghana
- Mr. B. H. Andrade, Argentine
- Mr. M. Ayadi, Tunisia
- Mr. L. de Azcárraga, Spain
- Mr. J. Bessemoulin, France
- Mr. B. J. Mason, United Kingdom
- Mr. L. S. Mathur, India
- Mr. Ramanisarivo, Madagascar
- Mr. J. Marden dos Santos, Brazil
- Mr. Y. Shibata, Japan
- Mr. E. Süssenberger, Federal Republic of Germany
- Mr. M. F. Taha, United Arab Republic
- Mr. J. Van Miegheem, Belgium
- Mr. R. M. White, United States of America

9.3 **Appointment of Secretary-General** (Agenda item 9.3)

The Congress re-appointed unanimously Mr. D. A. Davies as Secretary-General of the Organization.
10. **IMO Lecture** (Agenda item 10)

10.1 Congress noted with satisfaction the action taken by the Executive Committee in implementation of the decisions of Fourth Congress in respect of the IMO Lecture. The selection of the subject: *The nature and theory of the general circulation of the atmosphere* and of Professor Edward N. Lorenz was in particular warmly welcomed.

10.2 Congress noted that the text of Professor Lorenz’s monograph had been received in accordance with the prescribed arrangements and requested the Secretary-General to proceed with this publication in suitable form as soon as possible. The question of publication of the monograph or a summary of it in the other official languages should be considered by the Executive Committee in the light of financial and other considerations.

10.3 In accordance with the decision of Fourth Congress, a summary of the monograph was presented in the form of a lecture by Professor Lorenz. Congress expressed its appreciation to Professor Lorenz for the brilliant lecture he delivered and for the answers which he gave to the many questions presented at the subsequent discussion.

10.4 Congress approved the continuation of the IMO Lecture under conditions specified under paragraph 8.7 of this report.

11. **Scientific discussions** (Agenda item 11)

Four half-day periods during Congress were devoted to scientific discussions on the following subjects, each of which was introduced in the form of lectures delivered by the persons and on the dates indicated:

(a) *Cloud physics*, by Dr. B. J. Mason 8 April
(b) *Meteorology applied to agriculture*, by Mr. L. P. Smith 12 April
(c) *The use of satellite data in weather forecasting*, by Mr. A. W. Johnson, and
   *Meteorological satellite systems of the future,* by Dr. M. Tepper 15 April
(d) *Weather modifications*, by Academician E. K. Fedorov 22 April

Each of these lectures was followed by a stimulating discussion in which several delegates present took part.

Congress expressed its appreciation to the lecturers for their work and for the interesting manner in which they presented the topics. Congress also considered that the scientific discussions constituted an important feature of
its fifth session, and decided that a similar programme should be included in the agenda of Sixth Congress.

12. **Place and date of Sixth Congress** (Agenda item 12)

Congress decided that Sixth Congress will be held in Geneva during 1971 at a date to be arranged later by the Executive Committee.
RESOLUTIONS ADOPTED BY FIFTH CONGRESS

1(Cg-V)—Amendments to Articles 4 (b) and 12 (c) of the Convention

THE CONGRESS,

CONSIDERING:

(1) That the number of Members of the Organization has considerably increased,

(2) The advisability of having on the Executive Committee wider consultation, thus not only improving the representation of the Regions, but also increasing the number of the Directors of Meteorological Services taking an active part in the operation of the Organization,

DECIDES:

(1) That the text of Article 4 (b) of the Convention be replaced by the following:

"(b) There shall be a President and three Vice-Presidents of the Organization who shall also be President and Vice-Presidents of the Congress and of the Executive Committee."

(2) That the first sentence of Article 12 (c)* of the Convention be replaced by the following:

"(c) Fourteen Directors of Meteorological Services of Members of the Organization, who can be replaced at sessions by alternates, provided . . . .";

(3) That these amendments shall come into force on 11 April 1967.

2(Cg-V)—Amendment to the French text of Article 13 (a) of the Convention

THE CONGRESS,

NOTING:

(1) That there is a discrepancy between the English and French texts of Article 13 (a) of the Convention,

(2) That the English text of this Article represents the will and intent of Members,

DECIDES that the French text of Article 13 (a)** be replaced by the following:

"(a) de mettre à exécution les décisions prises par les Membres de l'Organisation, soit au Congrès, soit par correspondance, et de conduire les activités de l'Organisation conformément à l'esprit de ces décisions;".

* This Article will appear as Article 13 in the 1967 edition of the Basic Documents.
** This Article will appear as Article 14 in the 1967 edition of the Basic Documents.
3(Cg-V)—Amendments to the Convention

The Congress,

Noting:
(1) Resolution 2(Cg-IV),
(2) Resolution 1(Cg-V),

Considering that the Convention, as the principal working instrument of the Organization, should be kept up to date in order that its efficiency may not be impaired,

Having examined the amendments proposed by Members in accordance with the provisions of Article 27 of the Convention and by the Executive Committee,

Decides:
(1) To approve the amendments to the Convention of the Organization listed in the annex to this resolution;*
(2) That these amendments come into force on 28 April 1967.

* See Annex III.

4(Cg-V)—Amendments to the General Regulations of the World Meteorological Organization

The Congress,

Noting Article 7 (a) of the Convention of the World Meteorological Organization,

Considering the General Regulations as they are printed in the fourth edition (1963) of the Basic Documents,

Decides:
(1) To adopt the amended Regulations given in the annex to this resolution;*
(2) To maintain in force those Regulations which have not been amended;
(3) To instruct the Secretary-General to publish a new edition of the Basic Documents incorporating these changes with the Regulations renumbered as necessary;
(4) That all changes shall come into force immediately after the termination of the fifth session of the Congress except as otherwise provided for in the resolutions of Congress.

Note: This resolution replaces Resolution 4 (Cg-IV) which is no longer in force.

* See Annex IV.
RESOLUTION 5(Cg-V)—Review of the organization of the technical and scientific work of WMO

The Congress,

Noting the various proposals submitted to Fifth Congress with regard to the structure and functioning of the Organization,

Considering:

(1) The need for a thorough review of the structure and functioning of the Organization, especially in view of the increasing activities of the Organization due to the planning and implementation of the World Weather Watch,

(2) The need for such a review to cover the functioning of all the constituent bodies and the Secretariat,

Directs the Executive Committee:

(1) To establish a Panel of Experts on the Structure and Functioning of WMO with the following composition:

(a) Three members of the Executive Committee or three experts nominated by these members (including if possible a president of a regional association);

(b) One president of a technical commission (selected by the presidents of technical commissions);

(c) Four experts from countries from which there are no members on the Executive Committee;

(2) To give the panel the terms of reference given in the annex to this resolution;

(3) To instruct the panel to base its work on the principles and procedures also contained in the annex to this resolution;

(4) To arrange, if required, for the participation of additional experts in the work, if requested by the panel;

(5) To arrange for the panel to report to the Executive Committee in time to permit its findings to be communicated to Members approximately 18 months before Sixth Congress;

(6) To present to Sixth Congress an integrated document with concrete proposals based on a reconsideration of the panel's report in the light of the comments of Members.

ANNEX
Terms of reference of panel of experts

Terms of reference:

(1) To prepare a thorough review of the structure and functioning of the Organization as far as they concern its technical and scientific work including the following:
RESOLUTION 5(C5-V)

(a) A study of possible ways of increasing the efficiency of sessions of Congress, including the question of frequency of sessions of Congress and relevant questions relating to the presentation of budget estimates to Congress;

(b) A study of the functioning of the Executive Committee and in particular the possibility of speeding up action on recommendations by constituent bodies;

(c) A study of the best ways of carrying out the present work of the technical commissions, technical and scientific panels of the Executive Committee, World Weather Watch planning groups, etc., taking into account a possible extended use of technical conferences;

(d) A study of the respective roles of regional associations and technical commissions in technical and scientific matters and the role of regional associations in the implementation of the World Weather Watch;

(e) A study of the role of the Secretariat in the technical and scientific work of the Organization, in particular in view of its extended World Weather Watch planning activities.

(2) To develop draft proposals concerning desirable modifications in the structure and methods of functioning of the Organization in the light of the above review and of the principles in this annex and to obtain the comments of Members on these draft proposals.

(3) To revise these draft proposals in the light of Members’ comments and to submit the revised proposals to the Executive Committee.

(4) To include in these revised proposals such draft amendments to the Convention and Regulations as would be necessary for the above proposals to be put into effect.

Principles:

(1) Prompt technical and scientific advice should be available to the Executive Committee on questions on which the Committee is required to take decisions between Congresses.

(2) Overlap of functions and duplication of effort should be eliminated as far as practicable.

(3) Proposals made by the panel should provide for as large a measure of continuity with the existing organization as is practicable.

Procedures:

(1) Subject to the approval of the Executive Committee, the panel might enlist the help as necessary of experts on management and on legal aspects.

(2) The Secretary-General should, as a matter of urgency, prepare for the use of the panel a summary of the arrangements adopted by executive organs of other international organizations and of the role played by the respective secretariats with respect to the technical and scientific work of those organizations.
(3) The panel should take into account previous studies on the subject and in particular the documentation presented to Fifth Congress.

(4) When the comments of Members on the proposals by the panel have been obtained, it would be useful to call an extended meeting of the panel including additional experts from interested Members.

6(Cg-V)—Relations with the United Nations and other international organizations

The Congress,

Noting the purposes of the World Meteorological Organization set out in Article 2 of the Convention,

Considering:

(1) The fundamental role of the World Meteorological Organization as a co-ordinator in world meteorology,

(2) The broad field of activities of the United Nations and its related agencies and other international organizations in which meteorological considerations enter to some extent,

(3) The need for whole-hearted co-operation with all these organizations if the responsibilities of the World Meteorological Organization are to be fully discharged,

(4) The establishment of the World Weather Watch and the opportunities it provides for various international organizations to collaborate constructively with the World Meteorological Organization in the implementation of this important undertaking,

Notes with satisfaction the conclusion of agreements and working arrangements listed in WMO Publication No. 60.BD.4 entitled Agreements and Working Arrangements with other international organizations and the granting of consultative status to non-governmental international organizations also listed therein;

Decides:

(1) That the Executive Committee is authorized to enter into such working arrangements with other international organizations as may be necessary and to consider, when appropriate, the advisability of concluding formal agreements which shall be subject to the approval of the Members in accordance with Article 25* paragraph (a) of the Convention of the World Meteorological Organization;

* This Article will appear as Article 26 in the 1967 edition of the Basic Documents.
(2) That full co-operation, which is one of the main aims of the World Meteorological Organization, to ensure the most effective application of the science of meteorology to human activities, shall be achieved according to the following principles:

(a) In the case of large projects the World Meteorological Organization should:
   (i) Ensure that it is consulted in the planning stage;
   (ii) Accept responsibility for selecting such meteorological staff as may be required;
   (iii) Accept responsibility for participating in the periodic reviews of progress and in the directives for future action;

(b) In the case of small projects, there should be consultation with the other organizations so as to create the desire on their part to seek counsel and advice from the World Meteorological Organization on matters of a meteorological nature;

(c) If in any project the meteorological aspect can be separated as a sub-project, the World Meteorological Organization should accept responsibility for it;

(3) That in carrying out all these co-operative endeavours the following modus operandi should be applied:

(a) If a question involves important policy or organizational aspects, it should be referred to the Executive Committee which should decide on the action to be taken;

(b) If a problem submitted has broad scientific aspects it should be referred to the appropriate body of the World Meteorological Organization and ultimately to the Executive Committee for consideration and decision;

(c) If the project concerned, conducted by a specialized agency or other international organization, has such large meteorological aspects as to require the full-time services of an expert in meteorology, the secondment of an expert for work on the project with the other organization concerned should be considered;

(d) If financial implications are involved, the foregoing should be dealt with on an individual basis in consultation with the agency of the organization concerned;

Reaffirms that the primary goal of such co-operation is effective and efficient collaboration with the United Nations and all other specialized agencies as well as with other international organizations whose interests or projects have meteorological aspects;

Directs the Executive Committee and the Secretary-General, as appropriate, to ensure compliance with this policy.

Note: This resolution replaces Resolution 5(Cg-IV) which is no longer in force.
RESOLUTION 7(Cg-V)

7(Cg-V)—United Nations Development Decade

THE CONGRESS,

CONSIDERING:

(1) That the United Nations General Assembly, at its sixteenth session, in its Resolution 1710 (XVI), declared the current decade to be the United Nations Development Decade and invited all agencies of the United Nations system to join in this world-wide endeavour;

(2) That the Economic and Social Council, at its thirty-fourth session, adopted in its Resolutions 916 and 920(XXXIV) a series of measures for the implementation of this common undertaking,

HAVING STUDIED the report of the Secretary-General regarding action by the Executive Committee concerning the participation of the World Meteorological Organization in the United Nations Development Decade,

REAFFIRMS its continued adherence to the objectives adopted by the United Nations General Assembly and the Economic and Social Council;

SUPPORTS warmly the General Assembly's initiative and notes with appreciation that it bears in mind the close relationship between economic and social factors, intensification of research and the exploitation of scientific and technological potentialities for the purpose of accelerating development;

STATES that the World Meteorological Organization should, within its field of competence, continue to assume the full role allotted to it in the United Nations Development Decade;

URGES Members to take all necessary action at the national level to participate in these programmes, by undertaking a programme for the development of Meteorological Services with certain specific objectives directly relating to an increase in the standard of living of the people, such as:

(a) Drawing up national plans for the development of Meteorological Services for the Decade in co-ordination with all other related plans in the economic and social fields;

(b) Concentration of effort on the instruction and training of professional and auxiliary personnel;

(c) Assignment of a greater proportion of national resources to improving Meteorological Services to the level required for economic development;

STRESSES the importance of the action taken by the World Meteorological Organization in calling attention to the important part played by meteorology and in particular the World Weather Watch, as factors of economic development;

INVITES those agencies and governments able to assist developing countries to increase their assistance in the field of meteorology in order to contribute to economic development through utilizing all scientific and technological resources;
RESOLUTIONS 7 AND 8(Cg-V)

Decides that the participation of the World Meteorological Organization in the Decade for the period 1968-1971 shall be governed by the provisions of the technical programme (including the World Weather Watch) adopted by Congress;

Instructs the Secretary-General to put at the disposal of Members, if they so desire, such advice and assistance as it may be possible to provide, within the various international technical co-operation programmes.

Note: This resolution replaces Resolution 6(Cg-IV) which is no longer in force.

8(Cg-V)—Report of the Ad Hoc Committee of Experts to Examine the Finances of the United Nations and the Specialized Agencies

The Congress,

Bearing in mind Resolution 2150(XXI) of the United Nations General Assembly approving the second report of the Ad Hoc Committee of Experts to Examine the Finances of the United Nations and the Specialized Agencies,

Aware that under the terms of General Assembly Resolution 2150(XXI) the specialized agencies are recommended "to give most attentive consideration to the recommendations contained in the report and to take appropriate measures within their respective areas of competence with a view to their earliest implementation",

Having considered the report of the Secretary-General on the application of the recommendations of the Ad Hoc Committee to the World Meteorological Organization,

Recognizing that many of the recommendations of the Ad Hoc Committee will require further consultation among the United Nations, the specialized agencies and the International Atomic Energy Agency, and

Noting with appreciation the co-operation of the Secretary-General in the work of the Ad Hoc Committee and in the inter-agency consultations related to the implementation of the Committee's recommendations,

Welcomes the findings and recommendations of the Ad Hoc Committee;

Notes with satisfaction:

(1) That a number of the recommendations of the Ad Hoc Committee are already in effect in the World Meteorological Organization; and

(2) That the Secretary-General has undertaken to implement as soon as practicable all other recommendations whose implementation is within his competence;
RESOLUTIONS 8 AND 9(Cg-V)

DIRECTS the Secretary-General:

(1) To continue to co-operate in inter-agency consultations on the implementation of all those recommendations requiring concerted action with other organizations;

(2) To participate, pursuant to inter-agency agreement thereon, in the establishment and operation of the joint inspection unit recommended by the Ad Hoc Committee; and

(3) To report to the twentieth session of the Executive Committee on the inter-agency consultations relating to the recommendations of the Ad Hoc Committee;

REQUESTS the Executive Committee:

(1) To take appropriate action to give effect as soon as possible to those recommendations upon which inter-agency agreement is reached and whose implementation does not require prior amendment of the WMO Convention or the Regulations; and

(2) To present to Sixth Congress proposals for action in regard to any remaining recommendations whose implementation will be dependent upon prior action by Congress with respect to the Convention and the Regulations.

9(Cg-V)—Collaboration with international organizations concerned with marine science and its applications

THE CONGRESS,

NOTING:

(1) Resolution 19(EC-XIV),
(2) Resolution 14(EC-XVII),
(3) The desire expressed by various international bodies and in particular the Intergovernmental Oceanographic Commission (IOC) and the Food and Agriculture Organization of United Nations (FAO) for close collaboration with the World Meteorological Organization,
(4) The increasing involvement of Members of the World Meteorological Organization in providing marine environmental prediction services to diverse marine activities including fishing, shipping and off-shore mining,

CONSIDERING:

(1) That most international oceanographic research projects include supporting meteorological programmes and studies of air-sea interaction,
(2) That many of the activities of the international oceanographic bodies and in particular those of the Intergovernmental Oceanographic Commission are of direct concern to the World Meteorological Organization,
(3) That pursuant to Resolution 2172(XXI) adopted by the United Nations General Assembly, the United Nations Secretary-General has been authorized to undertake, in co-operation with relevant intergovernmental organizations and interested Member States, a global survey to further international co-operation relating to marine science and resources and their exploitation and conservation,

(4) The need to understand more fully the temporal and spatial variations at the air-sea interface so as to develop improved prediction techniques,

(5) That the interdependence of ocean and atmosphere necessitates efficient co-ordinated programmes of acquisition of meteorological and oceanographic data,

(6) That there is a need for close collaboration between international oceanographic organizations, especially the Intergovernmental Oceanographic Commission and the World Meteorological Organization, in particular with regard to international research projects on air-sea interaction, establishment of ocean data stations on the high seas, timely transmission of oceanographic and meteorological data and the exchange of such data,

Decides that the World Meteorological Organization shall endeavour to participate in all meteorological and related aspects of international marine scientific activities;

Requests the Executive Committee and the Secretary-General:

(1) To take necessary steps to strengthen the collaboration between the World Meteorological Organization and other international agencies concerned with international marine activities, in particular the United Nations, the Intergovernmental Oceanographic Commission and the Food and Agriculture Organization;

(2) To bring all relevant international oceanographic activities to the early attention of the responsible bodies of the World Meteorological Organization and of the Members concerned;

(3) Where applicable to inform international bodies concerned with marine science and its applications, regarding international meteorological activities;

(4) To establish, as required, joint working groups with the Intergovernmental Oceanographic Commission, the Food and Agriculture Organization and other international bodies concerned with marine activities of mutual interest to the World Meteorological Organization, such as joint participation in the development and establishment of networks of ocean data stations to meet the environmental needs of marine user groups and to further international co-operation with respect to various marine activities;

(5) To provide a mechanism for the co-ordination between the Intergovernmental Oceanographic Commission, the World Meteorological Organization and the International Council of Scientific Unions in the planning and implementation of air-sea interaction research within the framework of the Global Atmospheric Research Programme.
10(Cg-V)—Public information policy

The Congress,

Considering that it is necessary to bring to the attention of the public the value and usefulness of meteorology for economic development and the particularly effective international technical and scientific co-operation in this field, with special reference to the World Weather Watch,

Decides that the aim of the Public Information Programme of the World Meteorological Organization shall be to make known throughout the world:

(1) The applications of meteorology to general human activities and their importance for balanced economic development;

(2) The extensive daily international exchange of meteorological and other scientific information which constitutes the basis not only of weather forecasting, but also of global atmospheric research;

(3) The efforts made and the progress achieved in scientific research in meteorology, inter alia, through international co-operative programmes;

(4) The aims and activities of the Organization and its contribution to international technical co-operation;

(5) The progress made in the implementation of the World Weather Watch programme;

Requests the Executive Committee to ensure compliance with this policy; and

Directs the Secretary-General to take the necessary action to implement this policy in co-operation as appropriate with competent international and national organizations.

Note: This resolution replaces Resolution 10 (Cg-IV), which is no longer in force.

11(Cg-V)—Celebration of IMO/WMO Centenary

The Congress,

Noting:

(1) That the First International Meteorological Congress of delegates was held in Vienna in 1873,

(2) That this event marked the beginning of the work of the International Meteorological Organization,

Recalling:

(1) That the International Meteorological Organization served without interruption, from its inception to 1951, as a most effective body for ensuring
international collaboration in meteorology and in encouraging the development of the science of meteorology and its practical application,

(2) That the World Meteorological Organization took over the responsibilities of IMO in 1951,

Decides that the centenary of the creation of the International Meteorological Organization shall be celebrated by WMO in 1973 under the title “IMO/WMO Centenary Celebration”;

Requests the Executive Committee:

(1) To develop a programme to mark the IMO/WMO Centenary Celebration in an appropriate manner;

(2) In developing the programme to take into account the following suggestions regarding forms of celebration:
   (a) A ceremony in Vienna;
   (b) A scientific conference in Vienna reviewing the progress in the science of meteorology during the past 100 years;
   (c) A social or other function in Geneva to mark the occasion;
   (d) A centenary volume containing the lectures given at the scientific conference;
   (e) The issue of special postage stamps by Member countries as well as possibly by the United Nations;
   (f) A review of the history of IMO and WMO in a special issue of the *WMO Bulletin*;

(3) To take action to commence the preparation for the programme in those cases where such action cannot be delayed until Sixth Congress;

(4) To submit to Sixth Congress the proposed programme, together with action already taken and the further action necessary, with financial proposals.

12(Cg-V)—Establishment of prizes for outstanding scientific research work in the field of meteorology

The Congress,

Noting Resolution 16(Cg-V) on the World Weather Watch,

Taking into consideration the great importance of scientific research activities for the development of meteorological services,

Considers it desirable to establish annual WMO prizes for outstanding scientific research work in the field of meteorology;

Requests the Executive Committee:

(1) To examine the proposal for WMO to award every year not more than five such prizes at a total sum not exceeding five thousand United States dollars ($5,000);
(2) To work out the procedure for selection of the papers; and, if practicable,
(3) To take the necessary measures for this system of awards of WMO prizes to start during the fifth financial period;

URGES Members to establish prizes for outstanding scientific research work in the field of meteorology.

13(Cg-V)—Participation of the World Meteorological Organization in the United Nations Development Programme

THE CONGRESS,

NOTING:
(1) Resolution 14(Cg-IV) — Participation by the World Meteorological Organization in the United Nations Expanded Programme of Technical Assistance for economic development of less-developed countries, and Resolution 15 (Cg-IV) — Assistance to less-developed countries to be rendered in the field of the World Meteorological Organization under the United Nations Special Fund,
(2) That by Resolution 2029(XX) of the General Assembly of the United Nations the previous Expanded Programme of Technical Assistance and United Nations Special Fund were consolidated, with effect from 1 January 1966, into a single United Nations Development Programme, the objective of which is to assist recipient countries in their economic development,
(3) With satisfaction that much valuable assistance has been given under the two components (Technical Assistance and Special Fund) of the United Nations Development Programme for the promotion of meteorological activities, which has helped in the economic development of the countries concerned,
(4) The increased appreciation by the United Nations Development Programme of the role of meteorological projects in the economic development of developing countries particularly in connexion with the World Weather Watch Plan of the Organization,

CONSIDERING:
(1) The increasing need for assistance to developing countries in the field of meteorology,
(2) That the World Weather Watch Plan, established by the Organization in accordance with United Nations General Assembly Resolutions 1721(XVI), 1802(XVII) and 1963(XVIII), will require for its implementation increased assistance from the United Nations Development Programme,

DECIDES:
(1) That the World Meteorological Organization should continue to participate in the United Nations Development Programme;
(2) That the Executive Committee should continue to supervise the working arrangements for such participation in so far as these arrangements are dependent upon the decisions of the World Meteorological Organization;

(3) That the Secretary-General should continue to emphasize to the appropriate United Nations bodies the important role which meteorology plays in economic development;

Noting also:

(1) The important role played by regional and inter-regional projects under the Technical Assistance component of the United Nations Development Programme particularly in the field of meteorological training,

(2) That recently under the Special Fund component of the United Nations Development Programme regional projects have also been approved which prove to be particularly useful to benefit a number of countries in the same area,

(3) The usefulness of experts to carry out temporarily operational functions,

(4) That the appropriate organs of the United Nations will soon take a decision regarding the continued availability of this type of assistance,

Directs the Secretary-General to convey to the Economic and Social Council of the United Nations the views of the World Meteorological Congress:

(1) That regional and inter-regional projects under the Technical Assistance component of the United Nations Development Programme constitute a very efficient and economic means of rendering assistance to a group of countries and that therefore increased provision should be made for such projects;

(2) That continued attention should also be given to the development of regional projects under the Special Fund component of the United Nations Development Programme;

(3) That it is desirable that operational assistance under the United Nations Development Programme, upon request by countries, continue to be available after the present period;

Noting further:

(1) That despite the considerable increase in recent years of assistance under the United Nations Development Programme in the field of meteorology, the World Meteorological Organization's participation in the United Nations Development Programme enables only a part of known requirements for assistance to be met,

(2) That governments receiving technical assistance under the United Nations Development Programme make their own decisions on priorities regarding assistance required from the participating organizations,

(3) The importance of meteorology to the economic development of countries,
URGES Members to pay due attention to the importance of meteorological projects particularly of those relating to the World Weather Watch when establishing priorities for their requests for technical assistance both under the Technical Assistance and under the Special Fund components of the United Nations Development Programme;

REQUESTS the Secretary-General:

(1) To assist recipient countries in developing projects in the field of meteorology and to encourage the inclusion of these in their programme requests;

(2) To make the necessary arrangements for an efficient and speedy execution of approved projects;

(3) To continue his efforts in evaluating the results of the assistance provided under the United Nations Development Programme.

NOTE: This resolution replaces Resolutions 14(Cg-IV) and 15(Cg-IV) which are no longer in force.

14(Cg-V)—Co-ordination of technical co-operation at the national level

THE CONGRESS,

NOTING Resolution 11(Cg-IV) — Co-ordination of technical co-operation at the national level,

CONSIDERING:

(1) That the basic objective of co-ordination is to improve the aid given to governments,

(2) The important part which Meteorological Services can play in economic development,

RECOGNIZING that the national plans are the responsibility of the various governments,

INVITES Members concerned, who have not yet done so, to give consideration to the inclusion of a representative of the national Meteorological Service in the national planning body;

REQUESTS the Secretary-General:

(1) To bring this proposal to the notice of resident representatives of the United Nations Development Programme and request them to support it in their negotiations with the technical assistance co-ordinating authorities of countries to which they are assigned;

(2) To take the opportunity of visits of Secretariat officials to recipient countries to invite attention to the usefulness of including a representative of the Meteorological Service in the national planning body;
RESOLUTIONS 14 AND 15(Cg-V)

Considers that the World Meteorological Organization is the appropriate body to assist governments, at their request, with advice in respect of the technical co-ordination of meteorological activities at the national level;

Directs the Secretary-General to continue to keep resident representatives of the United Nations Development Programme fully informed about the assistance which the World Meteorological Organization proposes to provide to the countries.

Note: This resolution replaces Resolution 11(Cg-IV) which is no longer in force.

15(Cg-V)—Administration of technical assistance projects

The Congress,

Noting:
(1) Resolution 12(Cg-IV),
(2) The experience acquired during the fourth financial period regarding the administration of Technical Assistance projects sponsored or co-sponsored by WMO,

Considering:
(1) The ever-increasing number and importance of technical assistance projects carried out by WMO under UN programmes or otherwise,
(2) That maximum efficiency and economy in the administration of these projects should be ensured, for the benefit of recipient countries as well as of the WMO as a whole,
(3) That all administrative and operational expenses should be covered by funds provided for in the programmes from which the projects will be financed,

Decides that the World Meteorological Organization should continue its present policy in the field of technical assistance activities, including the responsibility for the administration of the UNDP/WMO projects, under the direction and supervision of the Executive Committee;

Directs the Secretary-General:
(1) To take necessary action to ensure maximum collaboration between the departments of the Secretariat in dealing with technical assistance operational and administrative activities;
(2) To report to the Executive Committee on the measures taken to this effect and on the progress achieved thereon.
16(Cg-V)—World Weather Watch

The Congress,

Noting:
(1) Resolutions 21 and 22(Cg-IV),
(2) Paragraph 5.3.1 of the General Summary of the report of the Fourth World Meteorological Congress,
(3) The decisions of various organs of the United Nations on the subject of international co-operation in the peaceful uses of outer space and in particular Resolutions 1721(XVI) and 1802(XVII) of the General Assembly of the United Nations,
(5) The progress already made in implementing some of the elements of the World Weather Watch, notably the improvement of the global observational system by satellites and other means, the improvement of the global telecommunications system and the establishment of world meteorological centres,

Reaffirms its belief:
(1) That modern scientific and technological developments present unprecedented opportunities for the advancement of the science and practice of meteorology;
(2) That if such opportunities are taken and applied in a co-ordinated fashion on a global basis great benefits will be reaped by all countries of the world, developed and developing;
(3) That such opportunities should be used only for peaceful purposes, due account being taken of the national sovereignty and security of states, in accordance with the provisions of the Charter of the United Nations and the spirit and traditions of the World Meteorological Organization;

Confirms its endorsement of the concept of an improved world meteorological system to which the name World Weather Watch has been given;

Adopts the plan for World Weather Watch contained in the annex to this resolution* as a major item in the programme of the World Meteorological Organization for the fifth financial period 1968-1971;

Authorizes and requests the Executive Committee:
(1) To review and adjust the details of the plan as necessary in the light of changing requirements, technical developments, and system improvement needs, bearing in mind at all times the general principles and directives specified in the plan;

* See Annex V.
To prepare plans and carry out the study programme necessary for the further implementation of the World Weather Watch during the sixth financial period, including the evaluation and integration, as appropriate, of new technological developments;

(3) To assist Members of the World Meteorological Organization in all possible ways in meeting their respective responsibilities within the plan;

(4) To keep Members of the World Meteorological Organization fully informed of progress and developments in the planning and implementation of the plan;

(5) To submit a report to the Sixth World Meteorological Congress on the implementation of the plan during the fifth financial period together with proposals for the continuation and further development of World Weather Watch in the sixth financial period;

URGES all Members of the Organization to co-operate actively, enthusiastically and promptly in the implementation and operation of the World Weather Watch Plan as defined in the annex to this resolution;*

EXPRESSES its appreciation to the other international organizations which assist in the World Weather Watch planning activities, in particular the United Nations and its various organs, the International Council of Scientific Unions and the International Union of Geodesy and Geophysics;

INVITES these bodies to continue to support and assist in the implementation of the World Weather Watch and in further planning activities;

DIRECTS the Secretary-General:

(1) To bring this resolution to the attention of all concerned;

(2) To give high priority to all activities related to the implementation and further planning of the World Weather Watch.

NOTE: This resolution replaces Resolutions 21 and 22(Cg-IV) which need no longer be kept in force.

* See Annex V.

17(Cg-V)—World Weather Watch Implementation Programme

THE CONGRESS,

Noting the adoption of Resolution 16(Cg-V), on the World Weather Watch Plan,

CONSIDERING:

(1) The substantial economic and other benefits to be derived by all countries from the implementation of this plan,

(2) The need to implement this plan during the fifth financial period,

(3) The need to co-ordinate all aspects of its implementation,
RESOLUTION 17(Cg-V)

URGES all Members, developing and developed, to support this programme and to contribute the maximum that their resources will permit towards its immediate implementation:

(1) By providing facilities nationally on their own territory or in regions outside national territories (i.e. outer space, oceans and Antarctica);

(2) Where appropriate, by including World Weather Watch projects in their requests for UNDP assistance;

(3) By assisting other countries bilaterally or multilaterally in cash or in kind (equipment and services);

(4) By contributing in cash or in kind to the WMO Voluntary Assistance Programme (VAP) to be administered by the World Meteorological Organization;

(5) By co-operating with the Secretary-General in fulfilling his responsibilities towards the World Weather Watch;

APPEALS to Meteorological Services of Non-Member countries to accept the World Weather Watch concept within their territories;

DECIDES that the plan should be implemented on the basis of the following principles:

(1) All meteorological activity connected with the implementation of the World Weather Watch Plan on the territories of individual Members should be the responsibility of the Members themselves and should be met from national resources to the greatest possible extent;

(2) Realization of the WWW Implementation Programme in regions outside the territories of individual countries (i.e. outer space, ocean areas, Antarctica) should normally be based on the principle of voluntary participation of countries by providing facilities and services from their national resources;

(3) Where requirements cannot be met from national resources, aid should be obtained as far as possible from the UNDP;

(4) Where assistance takes the form of bilateral or multilateral projects, these should be organized and administered as far as possible by the participants with the minimum call on the WMO Secretariat;

(5) The WMO Voluntary Assistance Programme should be devoted to purposes which cannot be implemented under the UNDP and which there is no reasonable prospect of meeting by other means;

FURTHER DECIDES in respect of the WMO Voluntary Assistance Programme that:

(1) Wherever possible, contributions should include a reasonable proportion of cash;

(2) Cash contributions should be made unconditionally;

(3) Offers of contribution in kind should be made without prior conditions, and the Executive Committee is empowered to approve the allocations
of such resources for the World Weather Watch plan, after due consultations with donor and recipient Members;

(4) The administrative costs to the World Meteorological Organization should be kept to the minimum and should be met from the cash contributions if necessary;

(5) Priority should be given to projects which are expected to be of lasting benefit and which are not likely to require financing by the Organization indefinitely;

(6) In the allocation of projects, consideration should be given to the need for long-term fellowships;

Requests Members, in assessing their contributions to the WMO Voluntary Assistance Programme, to bear in mind the present need, based on planning studies by the Secretary-General, to raise about one million US dollars ($1,000,000) a year in cash and about four million US dollars ($4,000,000) a year in kind for this programme;

Directs the Secretary-General to circulate to Members as soon as possible the World Weather Watch Plan approved by Congress and:

(1) To invite Members to indicate as a matter of urgency:
(a) Which projects they will carry out nationally;
(b) Which projects they will include in their requests to the UNDP;
(c) Which projects they expect to be implemented under bilateral or multilateral arrangements;
(d) For which projects they will need assistance from the WMO Voluntary Assistance Programme;

(2) To invite Members to indicate as a matter of urgency:
(a) What assistance they are prepared to offer bilaterally or multilaterally in cash or in kind;
(b) What contributions they are prepared to make in cash or in kind to the WMO Voluntary Assistance Programme;

(3) To examine all deficiencies and offers reported in response to (1) and (2), and to draw up plans and orders of priority for approval by the Executive Committee for the use of the WMO Voluntary Assistance Programme;

(4) To submit for the approval of the Executive Committee at its nineteenth session detailed rules and procedures for the implementation of the WMO Voluntary Assistance Programme, modelled on those devised for the New Development Fund and on the draft rules submitted by the Secretary-General to Fifth Congress subject to any modifications required in the light of the guidance given by Fifth Congress;

Requests the Executive Committee:

(1) To arrange for further studies of the needs of the WMO Voluntary Assistance Programme and for Members to be informed of the results of these studies;
(2) To take any necessary further decisions and action for the realization of the WWW Implementation Programme according to the wishes of Congress.

18(Cg-V)—World Weather Watch Research Programme

The Congress,

Noting Resolution 16(Cg-V) — World Weather Watch,

Endorses the concept of a Global Atmospheric Research Programme as a framework within which all research activities relating to WWW shall be planned and implemented in a co-ordinated and effective fashion;

Invites the International Council of Scientific Unions to associate itself with the World Meteorological Organization in the Global Atmospheric Research Programme on a joint basis;

Approves the text of the draft agreement between the WMO and the International Council of Scientific Unions given in the annex to this resolution * as a basis on which the Global Atmospheric Research Programme shall be undertaken as a joint enterprise;

Requests the Executive Committee:
(1) To negotiate with the International Council of Scientific Unions on the details of an agreement on the basis of the approved draft agreement;
(2) To take all other steps to further progress in the Global Atmospheric Research Programme within the over-all terms of the Convention and the other relevant decisions of Congress and within the financial resources approved for this purpose in the programme and budget of the Organization for the period 1968-1971.

* See Annex VI.

19(Cg-V)—The Advisory Committee of the World Meteorological Organization

The Congress,

Noting:
(1) Resolution 20(Cg-IV) — The Advisory Committee of the World Meteorological Organization, and
(2) The excellent work carried out by the Advisory Committee,

Commends the Executive Committee and the Advisory Committee for the efficient manner in which they have carried out the decision of Congress as a
consequence of Resolution 1721(XVI), Resolution 1802(XVII) and subsequent resolutions of the General Assembly of the United Nations, relating to the advancement of the atmospheric sciences and their application in the light of developments in outer space;

Noting further the proposal in Resolution 18(Cg-V) to establish a Joint WMO/ICSU GARP Organizing Committee,

Considering the need for simplifying the machinery for dealing with international research projects in atmospheric sciences,

Authorizes the Executive Committee to decide the future of the Advisory Committee, taking into account the existence of the proposed Joint WMO/ICSU GARP Organizing Committee and the experience in the functioning of the latter Committee,

Decides that in the meantime the Advisory Committee of WMO shall have the terms of reference as given in the annex to this resolution and continue to be composed of not more than 12 members being outstanding experts in scientific and operational matters in the field of atmospheric sciences.

Note: This resolution replaces Resolution 20 (Cg-IV).

ANNEX

The Advisory Committee of the World Meteorological Organization

Terms of Reference:

(1) To advise the Executive Committee on:

(a) Principal research problems in the atmospheric sciences, especially in connexion with the application of meteorological satellites, and ways of promoting this research, including methods of ensuring the availability of data for research;

(b) Proposals volunteered in support of (a), including projects originated outside the World Meteorological Organization;

(c) All scientific aspects of the objectives set forth in United Nations resolutions, including 1721(XVI) and 1802(XVII).

(2) To advise the Executive Committee on major operational problems of objectives set forth in United Nations Resolutions 1721(XVI) (Part C) and 1802(XVII) (Part III, paragraphs 3 and 4) and other United Nations resolutions, and make appropriate recommendations.

(3) To advise the Executive Committee on its over-all policies and plans for training and education at all levels, and make appropriate recommendations.

(4) To advise the Executive Committee on the co-ordination of the scientific activities of the constituent bodies of the World Meteorological Organization, especially those relating to meteorological satellites.
(5) To advise the Executive Committee on major questions relating to co-ordination of meteorological satellite programmes and the use of data obtained from satellites.

20(Cg-V)—Promotion of meteorological research

The Congress,

Noting:
(1) Resolution 23(Cg-IV),
(2) Resolution 27(Cg-IV),

Commends:
(1) The Commissions for Aerology and Climatology for their pioneering efforts in endeavouring to establish standard media and procedures for the exchange, storage and retrieval of meteorological data, both for research and climatological purposes;

(2) The Executive Committee and the Secretary-General for their efforts in publishing Part 1 of the Catalogue of Meteorological Data for Research, which contains information on the availability of published synoptic and climatological data;

Expresses its gratitude to the Meteorological Service of Canada for its publication Ozone data for the world and to the U.S.S.R. Hydrometeorological Service for its publications Solar radiation and radiation balance data and Results of ground observations of atmospheric electricity;

Requests the Executive Committee to continue its efforts to make meteorological data readily available to research workers, bearing in mind that arrangements for publishing these data may have to be revised in the light of the development of new electronic techniques for the processing of meteorological data; and

Directs the Secretary-General:
(1) To continue to expand the Catalogue of meteorological data for research, giving high priority to a section containing information on the availability of machine-processable data;

(2) To provide other assistance as required for obtaining data for research workers.

Note: This resolution replaces Resolution 23(Cg-IV) which is no longer in force.
21(Cg-V)—International Visiting Scientists Programme

THE CONGRESS,

NOTING:
(1) Resolution 27(Cg-IV),
(2) Paragraph 5.2.3 of the General Summary of the eighteenth session of the Executive Committee,
(3) The report of the third session of the Panel of Experts on Tropical Meteorology,

CONSIDERING:
(1) That a WMO-sponsored programme of visiting scientists would further the promotion of international research in meteorology,
(2) That such a programme, under which outstanding scientists would make extended visits either for research or educational purposes to research institutes, would greatly assist the institutes concerned,

DIRECTS the Secretary-General:
(1) To carry out a general inquiry to all permanent representatives inviting them to make specific requests for projects under this programme;
(2) To examine the requests received in consultation with any existing WMO panel or working group which is competent in the particular field of research proposed;

REQUESTS the Executive Committee to arrange for the implementation of those requests which would best further the promotion of international meteorological research;

INVITES Members to submit specific requests for projects under this programme to the Secretary-General in accordance with the information contained in the annex to this resolution.

ANNEX

International Visiting Scientists Programme

1. The WMO-sponsored International Visiting Scientists Programme is designed to permit research institutes to benefit from extended visits of visiting scientists.

2. Permanent representatives are invited to make specific requests in sufficient detail to enable the value and the feasibility of the project to be assessed. The request should include the name(s) of the visiting scientist(s), the institute to be visited, the research planned and the proposed duration of the project.
3. It should be understood that if the project is approved, the plan should not be considered absolutely binding, as research workers must always be given sufficient latitude to enable them to modify their programme as the research develops.

4. At the end of each project, the visiting scientist should submit a report. In the case of a project relating to basic research, the report would be brief and mainly of an administrative nature; it would be hoped that the main scientific results of the project would ultimately be published in the scientific literature. In the case of projects in applied meteorological research, the report might contain more information about the scientific results.

5. It should be borne in mind that the main purpose of the programme is to advance the science of meteorology but, other things being equal, preference should be given to requests from those developing countries which would have difficulty in obtaining the necessary funds to support the project from other sources. Preference should also be given to projects of several months' duration.

22(Cg-V)—Promotion of meteorological education and training

The Congress,

Noting:
(1) Resolution 2083(XX) of the General Assembly of the United Nations on the development and utilization of human resources,
(2) Resolution 24(Cg-IV),
(3) Resolution 11(EC-XVIII),
(4) With appreciation the results obtained by the Organization in the performance of the tasks incumbent on it as regards education and training of meteorological personnel,

Considering:
(1) The wide expansion of the activities of the Organization in the field of meteorological education and training since Fourth Congress,
(2) That there continues to be pressing need for highly trained specialists at all levels to plan, direct, organize and carry out the meteorological programmes essential to efficient and rapid growth of the developing countries,
(3) That the successful implementation of the World Weather Watch depends on the creation and strengthening of national Meteorological Services in the developing countries,

Commends the Executive Committee and the Secretary-General for their initiative in carrying out the directives of Fourth Congress relating to meteorological training;
NOTES WITH SATISFACTION the establishment of the Executive Committee Panel of Experts on Meteorological Education and Training to act as a focal point for all training activities of the Organization;

AGREES that the expansion of the education and training activities of the Organization during the fifth financial period is both desirable and essential;

RECOGNIZES that the education and training activities are undertaken by, or are the concern of, virtually all the constituent bodies of the Organization and the Secretariat;

AGREES that there is a need to ensure continuous co-ordination of the planning, implementation, and technical and scientific evaluation of these activities;

REQUESTS the Secretary-General to take the necessary action to ensure such co-ordination,

DECIDES that the education and training activities of the Organization shall be regarded as a matter of high priority during the fifth financial period with special emphasis on the following:

(a) Maintaining high standards in the technical and scientific training of meteorological personnel throughout the world;

(b) Assisting in national and regional training programmes with particular emphasis on establishing as necessary new regional and national meteorological training centres and on strengthening the existing centres. This would include as far as possible the provision of appropriate equipment and material for training purposes;

(c) Making the utmost use of the facilities available at the world and regional meteorological centres (WMCs and RMCs) for training of various categories of meteorological personnel;

(d) Undertaking studies and surveys and preparing reports on the requirements of national Meteorological Services in the field of meteorological education and training;

(e) Providing information to Members on all aspects of meteorological education and training and advice to those who request it;

(f) Organizing regional and inter-regional seminars and conferences covering all aspects of meteorological education and training;

(g) Collaborating with the United Nations, the United Nations Educational, Scientific and Cultural Organization, and other international organizations in their respective activities which have a bearing, directly or indirectly, on meteorological education and training;

(h) Fostering exchanges of opinions and ideas on education and training between Meteorological Services and members of the academic community;
INVITES:

(1) The presidents of the technical commissions to keep under continuous study and review the education and training problems related to their fields of specialization including research training;

(2) The presidents of regional associations to ensure that problems related to meteorological education and training are given adequate attention in the Regions;

DIRECTS:

(1) The Executive Committee to study, through its Panel of Experts on Meteorological Education and Training, measures for acceleration and extension of the above objectives;

(2) The Executive Committee and Secretary-General to use their best endeavours to ensure that the United Nations Development Programme contributes, upon request by governments, as extensively as possible to the Organization's activities in the field of training;

CONSIDERS that the financial resources necessary for the attainment of these aims might be obtained, *inter alia*, by:

(1) Making the maximum use of the various possibilities offered by the United Nations Development Programme;

(2) Use of extra-budgetary funds which may be established by the Organization particularly in the development of long-term fellowships and specialization fellowships to meet World Weather Watch requirements;

(3) Giving priority to training requirements on any savings under the Organization's regular budget consistent with the financial regulations;

(4) The Organization's support of the bilateral programmes of Members in this field;

CONSIDERING the difficulties which Meteorological Services experience in the recruitment of suitable candidates for all categories of staff, particularly in developing countries,

URGES Members to make every effort to popularize the science and career of meteorology with a view to attracting capable candidates and to take measures as far as possible to introduce meteorology in the curriculum of secondary schools and universities in their countries.

NOTE: This Resolution replaces Resolution 24(Cg-IV) which is no longer in force.
23(Cg-V)—Antarctic meteorology

The Congress,

Noting:
(1) Resolution 29(Cg-IV),
(2) Resolution 23(EC-XVI),
(3) With satisfaction that the Executive Committee has set up a Working Group on Antarctic Meteorology which has proved a very efficient body in advising and co-ordinating meteorological activities relating to the Antarctic,

Considering that there is a need for continuing advice and co-ordination in Antarctic meteorology,

Invites Members which are States signatories of the Antarctic Treaty to continue and, if possible, to enlarge their meteorological programmes in the Antarctic;

Requests the Executive Committee to ensure the continued co-ordination of meteorological activities in the Antarctic:
(a) By maintaining its Working Group on Antarctic Meteorology with membership and terms of reference as established in Resolution 23(EC-XVI); and
(b) By arranging that the relevant recommendations of the working group be transmitted to States signatories of the Antarctic Treaty for comment prior to their consideration by the Executive Committee; and

Authorizes the Secretary-General to arrange for necessary sessions of the Executive Committee Working Group on Antarctic Meteorology and to provide the necessary secretariat support.

24(Cg-V)—Regional climatic atlases

The Congress,

Noting with appreciation the report presented by the Secretary-General concerning possibilities for financing regional climatic atlases,

Considering the relatively slow progress made in producing regional climatic atlases,

Invites Members to proceed as expeditiously as possible with the computation of statistics required for regional climatic atlases and to contribute as far as possible to the work of drawing the regional maps,

Authorizes the Secretary-General to continue his negotiations with the United Nations Educational, Scientific and Cultural Organization and
other interested organizations in order to obtain financial support for the produc-
tion of regional climatic atlases and to incur expenditures within the budget-
ary provisions made by Congress, for the preparation and printing of at least
some of the planned regional atlases during the fifth financial period.

25(Cg-V)—Instruments and methods of observation

The Congress,

Noting with appreciation:
(1) The report of the president of the Commission for Instruments and
Methods of Observation,
(2) The steps taken by the Executive Committee and the Secretary-
General to assist and stimulate activities in this field, such as by organizing
the technical conference on automatic weather stations,

Considering:
(1) The need for greater accuracy in upper-air observation to meet the
needs of synoptic meteorology and to provide data required for supersonic trans-
port aircraft, as well as research,
(2) The usefulness of comparisons of different types of radiosondes
as a means of determining their relative errors,
(3) That an effective programme of international comparison of radio-
sonde and radiowind instruments cannot be completed until reference radio-
sondes have been developed,
(4) The increasing requirements for speedy and accurate methods of
measurement of meteorological parameters at aerodromes,

Urges Members:
(1) To give their full co-operation to the development of a reference
radiosonde and to improve the accuracy of their routine radiosondes;
(2) To support actively international comparisons of meteorological
instruments organized in accordance with the recommendations of the Commiss-
ion for Instruments and Methods of Observation, as adopted by the Executive
Committee, and in particular take part in international comparisons of radio-
sondes with a chosen reference radiosonde with special attention to:
(a) Comparisons in the layer between 100 mb and 10 mb;
(b) Comparisons in the lower levels in the tropics;
(c) Comparisons under different climatic conditions;
(3) To intensify their efforts to study and develop observing techniques
which may be included in the future World Weather Watch plans with particular
reference to techniques for meteorological satellites, horizontal soundings,
automatic weather stations, radiowind observations aboard ships, low-level soundings and meteorological rocket soundings,

Invites the presidents of the Commission for Atmospheric Sciences, the Commission for Synoptic Meteorology and the Commission for Aerological Meteorology to review the accuracy requirements for upper-air observations in the light of recent developments and communicate them to the president of the Commission for Instruments and Methods of Observation as a matter of urgency,

Invites the president of the Commission for Instruments and Methods of Observation:

(1) To continue his efforts to consolidate the accuracy requirements specified by various users of radiosonde and radiowind instruments;

(2) To promote the development of reference radiosondes on the basis of agreed accuracy requirements and select a suitable reference radiosonde;

(3) To encourage activities devoted to the development of speedy and accurate methods of observation at aerodromes to meet the needs of modern aviation;

Directs the Executive Committee to arrange for the World Weather Watch Plan for the next financial period to be adjusted in the light of important developments in the field of instruments and methods of observation and to take the necessary steps to keep Members informed of such developments,

Authorizes the Executive Committee and the Secretary-General:

(1) To provide support to international comparisons of radiosondes with a chosen reference, as far as available funds permit;

(2) To organize, if required, one or two technical conferences during the fifth financial period to consider specific problems in this field, similar to the 1966 Conference on automatic weather stations;

Directs the Secretary-General to make available to Members the results of these comparisons by arranging for their publication.

26(Cg-V)—Agrometeorological services in support of the world campaign against hunger

The Congress,

Noting with appreciation the views expressed by the Director-General of the Food and Agriculture Organization of the United Nations, in his statement before Fifth Congress, on the need for increased meteorological support and for continued close liaison between the Food and Agriculture Organization and the World Meteorological Organization in the world campaign against hunger,
Noting with satisfaction the report of the president of the Commission for Agricultural Meteorology,

Noting further:

(1) Article 2 (d) of the Convention of the World Meteorological Organization,
(2) Resolution 41(EC-XVII),
(3) Resolution 33(Cg-IV), and

Recognizing:

(1) That the rate of increase of population in several critical areas of the world is greater than the rate of increase of food production and that this has led to acute food shortages with the accompanying suffering of millions of people, a situation which will rapidly grow worse unless immediate and sustained action is taken,
(2) That several Meteorological Services are already providing significant aid to many farmers, agencies and others who are engaged in the food production process, thus helping to increase production and conserve food resources,
(3) That other Meteorological Services could make similar valuable contributions if given appropriate guidance and assistance,
(4) That the implementation of the World Weather Watch and improved techniques of applied meteorology are opening new possibilities of substantial further progress in the quality and type of services which can be made available to food producers,
(5) That the World Meteorological Organization and its Members have an obligation, in the serious situation now confronting a large part of the world's population, to make the maximum possible use of meteorological knowledge to improve world food production and conservation,

Considering that close collaboration among meteorological, agricultural and other related agencies, both at the national and the international level, is essential for the furthering of the application of meteorology to agriculture,

Decides that a major objective of the World Meteorological Organization during the fifth financial period shall be the establishment and implementation of an expanded world programme for achieving the maximum contribution from meteorology, at both the international and national levels, to increasing world food production and conserving world food resources and supplies;

Invites Members:

(1) To establish, or reorganize existing national committees on agricultural meteorology as national joint committees on meteorology and food production, with representation thereon of national agricultural and meteorological interests, and any other appropriately useful agencies, to promote the implementation at the national level of such portions of the Agrometeorological
Programme in Aid of Food Production * as is applicable and appropriate in each particular case;

(2) To facilitate active personal collaboration between members of their staff and those concerned with agricultural administration, research, advice and practice, so that the maximum use can be made of all available agrometeorological knowledge and services;

(3) To encourage the participation of agricultural meteorologists in agricultural and related conferences and seminars held in their own and neighbouring countries;

(4) To seek, where appropriate, United Nations Development Programme assistance in developing national agrometeorological programmes in support of food production, particularly as regards improvements of the meteorological observing networks in food-producing areas;

Requests the Executive Committee and the Secretary-General:

(1) To invite the Food and Agriculture Organization of the United Nations to urge its Members to give their full support at the national level to the action proposed within invites (1) and (2);

(2) To continue to collaborate with other international organizations in the field of agricultural meteorology in consultation with the presidents of the technical commissions concerned, and especially the president of the Commission for Agricultural Meteorology;

(3) To invite these other international organizations (particularly the Food and Agriculture Organization, the United Nations Educational, Scientific and Cultural Organization and the United Nations Development Programme) to join with the World Meteorological Organization in a joint panel to develop and implement an agrometeorological programme in aid of food production along the principles outlined in the annex to this resolution;*

Authorizes the Executive Committee to meet the expenditures involved in the meteorological aspects of this joint panel (Requests (3)) and to arrange for necessary meetings of the panel.

NOTE: This resolution replaces Resolution 33(Cg-IV), which is no longer in force.

* See Annex VII.

27(Cg-V)—Hydrometeorology, water resources development and the International Hydrological Decade (IHD)

The Congress,

Noting with satisfaction:

(1) The report of the president of the Commission for Hydrometeorology,

(2) The action taken by the Executive Committee and the Secretary-General in implementing Directs (4) of Resolution 34(Cg-IV) and in particular
the activities of the Executive Committee Panel for the International Hydrological Decade,

(3) That the World Meteorological Organization has assumed the responsibility for a number of important activities and projects forming part of the programme for the IHD, upon invitation from the Co-ordinating Council for the International Hydrological Decade,

Noting also the activities of the United Nations and its regional economic organizations in the development and rational utilization of water resources,

Considering the important role of meteorology and in particular hydrometeorology in many scientific and operational activities related to the International Hydrological Decade,

Invites Members to continue and extend, as necessary, their participation in the International Hydrological Decade and in particular (1) to ensure adequate co-ordination at the national level and with the international activities, and (2) to strengthen, where appropriate, the meteorological, hydrometeorological and hydrological institutions participating in these activities;

Directs the Executive Committee:

(1) To continue to keep itself informed of the activities of the United Nations Educational, Scientific and Cultural Organization and other international organizations in the International Hydrological Decade and to adjust the World Meteorological Organization participation in this programme as required;

(2) To keep itself informed on the water resources development programme of the United Nations, its organs, the specialized agencies and other international organizations, and to arrange for the World Meteorological Organization to collaborate as required in projects within the field of water resources development with the organs of the United Nations, the specialized agencies and other international organizations;

Authorizes the Secretary-General to continue to support the International Hydrological Decade activities, and in particular:

(1) To provide the Secretariat for the International Hydrological Decade activities and projects for which the World Meteorological Organization has already assumed the responsibility;

(2) To arrange for the World Meteorological Organization to participate in, or to assume responsibility for, additional projects on the invitation of the Co-ordinating Council of the International Hydrological Decade such as:

(a) Standardization of instruments and methods in hydrometeorology;
Global water balance studies and water information systems;
Methods for hydrological forecasting;
as far as budgetary provisions permit;
(3) To collaborate with the United Nations Educational, Cultural and Scientific Organization and other international organizations actively engaged in the International Hydrological Decade;
(4) To assist in the training of hydrometeorologists, hydrologists and relevant technical staff;
(5) To assist in developing Meteorological and Hydrological Services as an essential prerequisite for the development and economic use of water resources.

NOTE: This resolution replaces Resolution 34(Cg-IV) which is no longer in force.

28(Cg-V)—Technical Regulations of the World Meteorological Organization

THE CONGRESS,
NOTING:
(1) Article 7 (d) of the Convention,
(2) Resolution 19(Cg-IV),

DECIDES to amend the current World Meteorological Organization Technical Regulations with effect from 1st July 1968, as indicated in the annex to this resolution; *

DIRECTS the Executive Committee:
(1) To review the Technical Regulations during the fifth financial period and to take appropriate action as necessary in accordance with Article 13 (b) ** of the Convention;
(2) To recommend to Sixth Congress amendments to the text of these Technical Regulations as necessary in the light of developments in meteorology and meteorological techniques and in the application of meteorology;

INSTRUCTS the Secretary-General to inform all concerned.

NOTE: This resolution replaces Resolution 19(Cg-IV) which remains in force only until 1 July 1968.
* See Annex VIII.
** This Article will appear as Article 14(c) in the 1967 edition of the Basic Documents.
RESOLUTIONS 29 AND 30(Cg-V)

29(Cg-V)—Units used in coded messages for international exchange

The Congress,

Noting the good progress achieved as a result of Resolution 30(Cg-IV),

Expresses its appreciation to Members for their efforts in this respect;

Considering the strong desirability of the adoption with the least possible delay of a common system of meteorological units,

Decides:

(1) To confirm the adoption of Celsius degrees and metric system of units for the evaluation of meteorological elements included in reports for international exchanges;

(2) To request Members who do not use Celsius degrees and the metric system for observations, to adopt them for use in coded messages for international exchanges at their earliest convenience;

(3) To take special measures, however, for the introduction of metres per second as the unit for wind speed, as laid down in Resolution 30(Cg-V).

Note: This resolution replaces Resolution 30(Cg-IV) which is no longer in force.

30(Cg-V)—Units for wind speed in meteorological messages for international exchanges

The Congress,

Noting:

(1) Resolutions 30 and 31(Cg-IV),

(2) Recommendation 7(CSM-IV), and Resolution 12(EC-XVIII),

(3) The lack of uniformity of policy at the national level in some countries on the unit to be used for the reporting of wind speed,

Considering:

(1) That it is most desirable that only one unit be used for wind speed in meteorological messages,

(2) That the introduction of metres per second as the unit of wind speed in meteorological messages will promote uniformity in the use of the metric system for international exchanges, and

Recognizing:

(1) That both the International Civil Aviation Organization and the Inter-Governmental Maritime Consultative Organization have stated a requirement for the continuance of the current procedure for reporting wind speed in knots for aeronautical and marine purposes respectively,
(2) That the International Civil Aviation Organization and the Inter-Governmental Maritime Consultative Organization may wish to give further consideration to this problem,

(3) That immediate adoption of metres per second as the unit for wind speed in international exchanges would necessitate conversion of wind speeds in a large volume of reports supplied for aeronautical and marine purposes and that a risk of error may be involved, even though the conversion is simple,

(4) That to facilitate the agreement at the level of international organizations on this matter, agreement will first have to be reached at the national level in some countries,

Decides that the use of metres per second as the unit for wind speed be extended to all meteorological messages for international exchanges as soon as agreement is reached with the other international organizations concerned;

Directs the Secretary-General to continue negotiations, as a matter of urgency, with the International Civil Aviation Organization and the Inter-Governmental Maritime Consultative Organization with a view to enlisting their concurrence for the universal adoption of metres per second as the unit for wind speed in all international meteorological messages for synoptic, aeronautical, marine and other purposes;

Requests Members concerned to take appropriate steps, as a matter of urgency, with their national authorities, with a view to obtaining a uniform national position in this matter so that it is reflected in the international organizations concerned.

Note: This resolution replaces Resolution 31(Cg-IV) which is no longer in force.

31(Cg-V)—Publications programme for the fifth financial period

The Congress,

Noting Resolution 18(Cg-IV) — Publications programme for the fourth financial period,

Considers that the production and distribution of publications constitutes one of the most important activities of the Organization,

Decides that as a matter of general policy a high priority shall be given to the publications programme;

Establishes as the basis of the publications programme for the fifth financial period the list of publications contained in the annex to this resolution;

Authorizes the Executive Committee to approve additional technical publications as may be necessary during the fifth financial period, in so far as budgetary provisions permit;
DECADES:

(1) That the languages in which publications shall be issued shall be as shown in the annex to this resolution; *

(2) That the format and method of reproduction shall be decided by the Secretary-General taking into account the need for economy and any relevant instructions given by the Executive Committee.

NOTE: This resolution replaces Resolution 18(Cg-IV) which is no longer in force.

* See Annex IX.

32(Cg-V)—WMO Bulletin

THE CONGRESS,

NOTING Resolution 16 of First Congress, and

CONSIDERING:

(1) That the success of the WMO Bulletin which has been published regularly at quarterly intervals in English and French since April 1952 has amply justified the decision of First Congress to introduce such a publication and that the contents of the Bulletin have been in accordance with the policy laid down by First Congress,

(2) That the purpose of the Bulletin, namely to serve as an information medium on the activities of WMO and on other noteworthy activities in the field of meteorology, would be more adequately fulfilled if the Bulletin were published in all four official languages of the Organization,

(3) That there is a growing need for disseminating more information on technical developments in the practical work of Meteorological Services and on the practical applications of the results of research,

REQUESTS the Executive Committee:

(1) To arrange for the publishing of the WMO Bulletin in English, French, Russian and Spanish;

(2) To study the feasibility and economic implications of:
   (a) Extending its contents to include more information about technical developments in the practical work of Meteorological Services and about the practical applications of the results of research;
   (b) Increasing the frequency of publication of the Bulletin; and
   (c) Distributing the Bulletin by air mail;

(3) To take the necessary steps for introducing such changes as are feasible with priority to the question of extending the contents of the Bulletin as indicated in 2(a) above.

NOTE: This resolution replaces Resolution 16(Cg-I) which need no longer be retained in force.
33(Cg-V)—Maximum expenditures for the fifth financial period

The Congress,

Noting:

(1) Article 22 of the Convention of the World Meteorological Organization,

(2) Article 4 of the Financial Regulations of the Organization,

Authorizes the Executive Committee:

(1) To incur expenditure of eleven million, eight hundred and seventeen thousand United States dollars ($11,817,000) in the fifth financial period from 1 January 1968 to 31 December 1971, the division of such expenditure into parts being shown in the annex to this resolution; *

(2) To incur necessary expenditures resulting from any increases in Secretariat staff salaries and allowances consequent to comparable changes in the United Nations salaries and allowances during the fifth financial period, each expenditure being additional to the sum included in paragraph (1) above, only if the Executive Committee is satisfied that they cannot reasonably be met by economies within the approved budget;

(3) To incur any necessary expenditures during the fifth financial period, additional to those covered by paragraphs (1) and (2) above, but not exceeding one hundred thousand United States dollars ($100,000) in total, which may be agreed by Members;

Directs the Executive Committee and the Secretary-General that, notwithstanding Articles 4.2 and 7.6 of the Financial Regulations, transfers may not be made during the fifth financial period from the appropriation sections presented for Personnel, Premises, Activities in support of the Global Atmospheric Research Project and Long-term fellowships;

Delegates to the Executive Committee the authority to approve annual expenditures within these limits.

Note: The Executive Committee was invited by Congress to adopt Annex X by apportioning the appropriations for panels and working groups of constituent bodies and planning meetings (Part VII) and for personnel (Part VIII) to the appropriate sections of the budget, in accordance with the requirements for these purposes.

* See Annex X.

34(Cg-V)—New Development Fund

The Congress,

Noting:

(1) That not all of the projects approved during the fourth financial period for financing from the New Development Fund (NDF) will be completed by 31 December 1967,
(2) Article 7 of the Financial Regulations,

(3) Annex VII of the abridged report of the sixteenth session of the Executive Committee — Plan for the Utilization and Operation of the WMO New Development Fund,

Considering:

(1) That very useful projects have been or are being carried out under the Fund,

(2) That all approved projects should continue until they are completed,

(3) That it is desirable that any surplus arising from the New Development Fund at the end of the last year of the fourth financial period should be made available during the fifth financial period,

Notes the action taken by the Executive Committee with respect to approval of projects;

Decides:

(1) That the budgetary surplus of Part VI of the maximum expenditures for the fourth financial period shall be kept available for the whole of the fifth financial period for the continuation of financing of New Development Fund projects approved by the Executive Committee during the fourth financial period and of any new projects which may be approved by the Executive Committee after 1 January 1968;

(2) That the funds thus made available shall be accounted for in the fifth financial period separately from the General Fund;

Requests the Executive Committee:

(1) To supervise the utilization of funds carried over to the fifth financial period under the provision of this resolution;

(2) To approve new projects to the extent that the funds carried over to the fifth financial period may not be completely needed for the implementation of projects approved before 31 December 1967;

(3) To take into account, in doing so, the pressing requirements in the field of meteorological training;

(4) To supervise completion of all projects after Fifth Congress and to consider the reports to be submitted by certain recipient countries after termination of WMO/NDF assistance;

(5) To report to Sixth Congress on the utilization of the funds carried over to the fifth financial period under the terms of this resolution and on the results achieved with all projects not completed at the time of Fifth Congress.
35(Cg-V)—Review of the Working Capital Fund

The Congress,

Noting:

(1) Resolution 41(Cg-IV) and Articles 8.3 and 9.2 of the Financial Regulations,

(2) That the Financial Regulations provide for the establishment of a Working Capital Fund financed by advances from Members in the scale of proportional contributions to the General Fund of the Organization,

Decides:

(1) That the Working Capital Fund shall continue to be maintained for the following purposes:
   (a) To finance budgetary appropriations pending receipt of contributions;
   (b) To advance such sums as may be necessary to cover unforeseen and extraordinary expenses which cannot be met from current budgetary provisions;

(2) (a) That all Members should bring their advances to the Working Capital Fund up to the level to be established by the Executive Committee on the basis of their proportional assessments for the fifth financial period;
   (b) That this will be done by additional contributions by Members as necessary during the fifth financial period;

(3) That the amount which Members shall be required to advance to the Working Capital Fund during the fifth financial period shall be four per cent of the maximum expenditures authorized for the four years of the period, but not exceeding five hundred thousand United States dollars ($500,000).

Note: Resolution 41(Cg-IV) need not be kept in force.

36(Cg-V)—Proportional contributions of Members

The Congress,

Noting:

(1) That certain changes had taken place in the Membership of the World Meteorological Organization during the fourth financial period,

(2) That in some cases assessments of contributions for such Members were not made by Fourth Congress,
RESOLUTIONS 36 AND 37(Cg-V)

Decides:

(1) That assessments of contributions for the fourth financial period for the following Members shall be as indicated below:

- Barbados ........................................ 1 unit
- British Caribbean Territories ............... 1 unit
- Cyprus .............................................. 1 unit
- Guyana ............................................... 1 unit
- Kenya ................................................ 1 unit
- Malawi .............................................. 1 unit
- Malaysia ............................................ 1 unit
- Nepal ............................................... 1 unit
- Singapore ........................................... 1 unit
- Somalia ............................................. 1 unit
- Southern Rhodesia ............................... 1 unit
- Tanzania ............................................ 1 unit
- Zambia .............................................. 2 units

(2) That the assessed contributions for the fourth financial period for the following prospective new Members shall be as indicated below:

- Botswana ........................................... 1 unit
- Liberia ............................................. 1 unit
- Maldives Islands ................................. 1 unit
- Panama ............................................. 1 unit
- Seychelles ........................................ 1 unit
- Yemen ............................................... 1 unit

37(Cg-V)—Assessment of proportional contributions of Members for the fifth financial period

The Congress,

Noting:

(1) Article 23 of the Convention of the World Meteorological Organization,
(2) Resolution 43(Cg-IV),
(3) Resolution 44(Cg-IV),

Decides:

(1) That the assessments of proportional contributions of Members for the fifth financial period shall be as set out in Table I of the annex to this resolution;

* See Annex XI.
(2) That the proportional contributions of countries specified in Table II in the annex to the present resolution * which are not Members but which may become Members shall be assessed as shown in Table II;

(3) That the unit assessments shown in the annex to this resolution * shall remain fixed throughout the fifth financial period;

AUTHORIZES the Secretary-General to accept and implement any proposal for the adjustment of individual unit assessments submitted jointly by two or more countries, provided that the aggregate unit assessments of any countries submitting such a proposal shall remain after adjustment equal to their aggregate assessments as set out in the annex to this resolution *;

AUTHORIZES the Executive Committee to make a provisional assessment in respect of non-Member countries not listed in the annex to this resolution * in the event of any such countries becoming Members, the method of assessment being based on principles similar to those applied in accordance with Resolution 43(Cg-IV).

* See Annex XI.

38(Cg-V)—Establishment of the Financial Regulations of the World Meteorological Organization

THE CONGRESS,

NOTING

(1) That Article 7(d) of the Convention of the World Meteorological Organization authorizes Congress to determine regulations prescribing the procedures of the various bodies of the Organization, and in particular, the Financial Regulations,

(2) The decisions taken by First Congress, Second Congress, Third Congress and Fourth Congress in Resolutions 22(Cg-I), 12(Cg-II), 37(Cg-III) and 38(Cg-IV) in establishing Financial Regulations for the first, second, third and fourth financial periods respectively,

(3) That the present Regulations of the World Meteorological Organization do not specifically provide for payments under contracts in accordance with generally-accepted practices in international trade, and that such provisions have been made in the Financial Regulations of United Nations,

(4) Resolution 35(Cg-III),

CONSIDERING that Article 16 of the Financial Regulations requires clarification,
RESOLUTIONS 38, 39 AND 40(Cg-V)

Decides that the Financial Regulations as set out in the annex to this resolution* shall apply to the fifth financial period commencing on 1 January 1968.

NOTE: This resolution replaces Resolution 38(Cg-IV) which remains in force only until 1 January 1968. Resolution 35(Cg-III) need not be kept in force.

* See Annex XII.

39(Cg-V)—Establishment of Staff Regulations of the World Meteorological Organization

The Congress,

Noting that Articles 7 (d) and 20 (b) of the Convention require Congress to establish regulations for the appointment of the staff of the Secretariat,

Realizing the need for the establishment of Staff Regulations to govern the other aspects of the administration of the staff of the Secretariat,

Noting also the decisions of previous Congresses in respect of the Staff Regulations and in particular those of Fourth Congress contained in Resolution 36(Cg-IV),

Considering that some amendments to the Staff Regulations are necessary,

Decides that the Staff Regulations, as set out in the annex to this resolution,* shall be effective as from 1 January 1968;

Authorizes the Secretary-General to administer the staff employed in programmes financed by the United Nations Development Programme, in accordance with United Nations procedures for such staff, mutatis mutandis, and to issue appropriate WMO Rules on this basis.

NOTE: This resolution replaces Resolution 38(Cg-IV) which is no longer in force.

* See Annex XIII.

40(Cg-V)—Group insurance against sickness and accident after retirement

The Congress,

Noting the decision of the General Assembly of the United Nations which permits, under certain conditions, former members of the staff and their beneficiaries to continue, after retirement or in case of incapacity suffered during service with the Organization, to be covered under the existing health insurance schemes for United Nations staff,
RESOLUTIONS 40 AND 41(Cg-V)

Decides:

(1) To enable the retired staff of the World Meteorological Organization to participate in the same health insurance scheme under the same conditions as those applied by the United Nations of its own staff and their beneficiaries;

(2) To include the expense involved in this coverage under Part VI C — Insurances and Staff Compensation Fund — for the fifth financial period;

(3) To give effect to this resolution upon its adoption by Congress and, as a transitional measure, to cover the expense involved from savings under Part V D — Insurances and staff compensation fund — of the budget for the fourth financial period adopted under Resolution 39(Cg-IV);

Directs the Secretary-General to take the necessary measures to this end.

ANNEX

 Extract from United Nations General Assembly (twenty-first session), document A/6605

"Agenda item 81

PERSONNEL QUESTIONS

..."

"32. In his report (A/6491 and Corr. 1) on this item, the Secretary-General made the following proposals:

...

"(c) With effect from 1 January 1967, to make available to retired staff members or their survivors health insurance under the schemes established by the United Nations for its staff. Extension of the insurance would be subject to certain conditions of eligibility and to the basic principles governing the operation of the health insurance schemes."

41(Cg-V)—Terms of appointment of the Secretary-General

The Congress,

Noting Article 20 (a) of the Convention of the World Meteorological Organization,

Decides that the terms of appointment of the Secretary-General shall be as set forth in the draft contract contained in the annex to this resolution.*

Note: This resolution replaces Resolution 37(Cg-IV) which remains in force only until 1 January 1965.

* See Annex XIV.
42(Cg-V)—The building of the Organization

The Congress,

Noting:

1. Resolution 47(Cg-IV) — Permanent Headquarters of the Organization,

2. That the present building is small for existing requirements and that the situation will become more difficult during the fifth financial period,

3. That under the agreement between the Canton of Geneva and the Organization, the latter has the right to purchase the present building,

Agrees in principle:

1. To the purchase of the present building under the terms of the Annex to the Agreement between the Canton of Geneva and the Organization;

2. To construct an extension to the present building by means of a loan from the Fondation des immeubles pour les organisations internationales;

Requests the Executive Committee:

1. To prepare as soon as possible a detailed proposal covering the purchase of the present building and the construction of an extension;

2. To take into account the directives and comments contained in the annex to this resolution, in preparing the proposal;

3. To submit the proposal to the Members for an exchange of opinion;

4. To submit the proposal, revised if necessary to take account of the opinions expressed by Members, to the Members for approval by postal ballot;

5. To proceed with the implementation of the proposal if approved by Members.

ANNEX

Directives and comments of Fifth Congress on the WMO building

The directives and comments given below shall be used as the basis of a proposal to be prepared by the Executive Committee for submission to the Members of the Organization.

Present building

Any agreement to purchase the building should become effective when the extension to the building has been completed.

Construction of extension to building

The nature, style and size of the extension shall be based on and shall follow as closely as possible the preliminary plan prepared by the architect which may be summarized as follows:
(a) The extension will comprise a prolongation of the present building on the north-west end and a T-wing on the south-west side;
(b) The north-west prolongation will consist of a ground floor and five storeys, with a total office space of 750 square metres;
(c) The south-west T-wing will consist of a basement, a ground floor and eight storeys plus an attique on the roof, with a total office space of 1,650 sq.m.; the foundations and main walls of this wing shall be strong enough to support additional storeys, to provide for a vertical extension, if so required in the future;
(d) The extension as a whole will provide for 1,100 sq.m. for archives and storage.

Financial arrangements

The conditions of purchase shall be those specified in the annex to the agreement on this subject between the Canton of Geneva and the Organization, the period over which the purchase shall be made being 30 years.

The cost of constructing the extension shall be met by a loan from FIPOI. The repayment of the loan and interest shall be spread over as long a period as possible.

Every effort should be made to keep the expenditure on this item during the fifth financial period within the maximum expenditures approved for the regular budget of the Organization. If the proposal to be submitted to the Members should include additional financial provision for the fifth financial period, full explanations should be given when the proposal is submitted.

43(Cg-V)—Revision of previous Congress resolutions

The Congress,

Noting Regulation 109 of the General Regulations, concerning the revision of previous Congress resolutions,

Considering that it is very useful to publish Congress resolutions in force after each of its sessions,

Having examined its previous resolutions still in force,

Decides:

(1) To keep in force the following resolutions:
   First Congress (Cg-I): 37
   Second Congress (Cg-II): 3, 4, 5, 17, 18
   Third Congress (Cg-III): 3, 4, 6, 18 (except paragraphs (4) and (5) under Decides), 27, 29, 33
   Fourth Congress (Cg-IV): 2, 13, 25, 27, 35, 43, 45, 46;
(2) To keep in force, but only until 31 December 1967, Resolutions 38, 39, 40, 41, 42, 44\(\text{Cg-IV}\);  
(3) To keep in force, but only until 30 June 1968, Resolution 19\(\text{Cg-IV}\);  
(4) Not to keep in force the other resolutions adopted before the fifth session of Congress;  
(5) To publish the text of resolutions kept in force pursuant to resolutions adopted at the fifth session of Congress.

**Note:** This resolution replaces Resolution 48\(\text{Cg-IV}\) which is no longer in force.
RESOLUTIONS OF CONGRESS REMAINING IN FORCE
AT THE CLOSE OF FIFTH CONGRESS

Editor's note: The references in the following resolutions are to the edition of the Basic Documents in force at the time the resolutions were taken. The figures in square brackets refer to the 1967 edition.

FIRST CONGRESS

37(I)—Appointment of Deputy Secretary-General

The Congress,

Realizing,

(1) The large volume of work that will exist at the top level in the Secretariat of the World Meteorological Organization, both in respect to technical matters and in connection with the relationship of the Organization to the United Nations and the other Specialized Agencies; and

(2) That the Secretary-General will necessarily be absent from the Secretariat on frequent occasions;

Decides that a post of Deputy Secretary-General shall be created.

SECOND CONGRESS

3(Cg-II)—Approval of the agreement with the host country

The Congress,

Noting with appreciation,

(1) The completion by the Executive Committee of an agreement with the Swiss Government * in accordance with Resolution 42(I);

(2) That the agreement was signed on 10 March 1955;

Decides to approve the text of the agreement concluded between the Swiss Federal Council and the World Meteorological Organization, including the plan of execution and the protocol appended to the agreement; and

Instructs the Secretary-General to give formal notification of the approval to the Government of the Swiss Confederation.

* See WMO Publication No. 15.BD.1.
4(Cg-II)—Agreement between the United Nations and the World Meteorological Organization

The Congress,

Considering,

(1) That Article 24 [25] of the World Meteorological Convention provides that the Organization shall be brought into relationship with the United Nations pursuant to Article 57 of the Charter of the United Nations subject to the approval of the terms of the agreement by two-thirds of the Members which are States;

(2) That such an agreement between the United Nations and the World Meteorological Organization has been negotiated between the representatives of the World Meteorological Organization and the Committee of the Economic and Social Council on Negotiations with Inter-Governmental Agencies;

(3) That the text of this agreement has been signed by the representatives of the two Organizations and that the President of the World Meteorological Organization has submitted it to Congress, with a recommendation that the draft agreement be adopted without change; and

(4) That the First Congress approved, without change, the text of this agreement;

Notes with satisfaction the approval given to this agreement by the General Assembly of the United Nations during its meeting on 20 December 1951 and the action taken by the Secretary-General of the United Nations and the Secretary-General of the World Meteorological Organization to implement this agreement.

* See WMO Publication No. 15.BD.1.

5(Cg-II)—Convention on the Privileges and Immunities of the Specialized Agencies

The Congress,

Considering,

(1) That Article 26(c) [27(c)] of the Convention of the World Meteorological Organization provides that the legal capacity, privileges and immunities of the Organization shall be defined in a separate agreement to be prepared by the Organization in consultation with the Secretary-General of the United Nations; and

(2) That a Convention on the Privileges and Immunities of the Specialized Agencies has been adopted by the United Nations; *

* See WMO Publication No. 15.BD.1.
Accepts the standard clauses of the said Convention on the Privileges and Immunities of the Specialized Agencies of the United Nations, as set out in Section 37 of that Convention;

Approves the following text as a suitable annex to the said Convention governing the application of that Convention to the World Meteorological Organization:

"The standard clauses shall be applied without modification";

Notes with satisfaction the action taken by the Secretary-General of the United Nations and the Secretary-General of the World Meteorological Organization for the application of that Convention to the World Meteorological Organization; and

Instructs the Secretary-General of the World Meteorological Organization to continue his efforts in conjunction with the Secretary-General of the United Nations in order that the largest possible number of Members apply the Convention on Privileges and Immunities of the Specialized Agencies to the World Meteorological Organization.

17(Cg-II)—Definitions of the Technical Regulations of the World Meteorological Organization

The Congress,

Noting,

(1) The purposes of the World Meteorological Organization as described in Article 2 [2] of the Convention; and

(2) Article 7 [8], paragraphs (b) and (d) of the Convention;

Decides,

(1) That the Technical Regulations of the World Meteorological Organization shall cover standard meteorological practices and procedures and recommended meteorological practices and procedures, designed:

(a) To facilitate meteorological co-operation between Members;

(b) To meet, in the most effective manner, specific needs, in the international sphere, of the various fields of application of meteorology; and

(c) To secure uniformity and standardization, as appropriate, in the practices and procedures employed in achieving (a) and (b);

(2) That the standard meteorological practices and procedures:

(a) Shall be the meteorological practices and procedures which it is necessary that Members follow or implement; and therefore

(b) Shall have the status of requirements in a technical resolution, in respect of which Article 8 [9] of the Convention shall be applicable; and
FORMER CONGRESS RESOLUTIONS REMAINING IN FORCE

(c) Shall invariably be distinguished by the use of the term shall in the English text, and by suitable equivalent terms in the French, Spanish and Russian texts;

(3) That the recommended meteorological practices and procedures:

(a) Shall be the meteorological practices and procedures which it is desirable that Members follow or implement; and therefore

(b) Shall have the status of recommendations to Members, to which Article 8(b) [9(b)] of the Convention shall not be applied;

(c) Shall be distinguished by the use of the term should in the English text, except where specially provided otherwise by decision of the Congress, and by suitable equivalent terms in the French, Spanish and Russian texts.

18(Cg-II)—Definition of the guides of the World Meteorological Organization

THE CONGRESS,

NOTING Congress Resolution 17(Cg-II);

DECIDES,

(1) That in addition to the Technical Regulations of the World Meteorological Organization appropriate guides shall be published by the World Meteorological Organization;

(2) That the guides referred to in paragraph (1):

(a) Shall describe practices, procedures and specifications which Members are invited to follow or implement in establishing and conducting their arrangements for compliance with the Technical Regulations and in otherwise developing Meteorological Services in their respective countries;

(b) Shall, within the Organization, be regarded as material to which Article 8 [9] of the Convention is not applicable.

THIRD CONGRESS

3(Cg-III)—Implementation of amendments to the Convention

THE CONGRESS,

NOTING,

(1) That doubts have arisen concerning the interpretation of Article 27(e) [28(e)] of the Convention;
(2) That other specialized agencies of the United Nations which have provisions in their constitutions similar to those of Article 27 [28] often bring into force amendments which have been approved during sessions of their general assemblies immediately or on a fixed date;

Decides that an amendment which is in good form and does not fall under the provisions of Article 27 (b) [28 (b)] may be given a date on which it shall come into force after the approval of the amendment during a session of Congress by two-thirds of the Members which are States.

4(Cg-III)—Submission of proposals for amending the Convention by the Executive Committee

THE CONGRESS,

NOTING,

(1) The desirability of keeping the Convention under continuing review in order that its efficiency as the principal working instrument of the Organization may not be impaired;

(2) That the Executive Committee, as the body responsible for guiding the activities of the Organization during the interval between meetings of Congress, is able to bring to the notice of Members any deficiencies or ambiguities in the Convention;

(3) That Article 13 (d) [14 (c)] of the Convention does not contain a precise definition of the functions of the Executive Committee with regard to proposed amendments of the Convention;

RECOGNIZING that only Members which are States, as the contracting parties to the Convention, have a prescriptive right to propose amendments to the Convention;

INSTRUCTS the Executive Committee under the last paragraph of Article 13 [14] to keep the Convention under continuing review between meetings of Congress, and, bearing in mind the provisions of Article 27 (a) [28 (a)] of the Convention, to submit to Congress the text of any proposed amendment to the Convention which may appear to the Executive Committee to be necessary.

6(Cg-III)—Suspension of Members for failure to meet financial obligations

THE CONGRESS,

NOTING,

(1) Article 30 [31] of the Convention; and

(2) Article 8.4 of the Financial Regulations;
CONSIDERING the importance of fulfilment of financial obligations by all Members;

DECIDES,

(1) That those Members who have not paid their contributions for more than two consecutive financial years shall not be entitled to vote in sessions of constituent bodies nor to receive publications of the Organization free of charge;

(2) That any appeal by a Member against the application of this decision shall be referred to Members immediately but, until Members have decided otherwise, the measures as provided under paragraph (1) above shall be applicable;

(3) That this resolution shall come into force on 1 January 1961;

INSTRUCTS the Secretary-General to inform all Members of the Organization of this resolution.

18(Cg-III) *—Notification of compliance with and deviations from standard meteorological practices and procedures (“standards”)

THE CONGRESS,

NOTING,

(1) Article 8 (b) [9 (b)] of the Convention;

(2) Resolution 20(Cg-II);

DECIDES,

(1) That when “standards” are adopted by Congress or the Executive Committee, the date of implementations shall be specified;

(2) That at least nine months’ notice of the date of implementation shall ordinarily be given to Members;

(3) That, in addition to the information supplied in accordance with Article 8 (b) [9 (b)] of the Convention, Members shall inform the Secretary-General as to the specific nature and extent of non-implementation of a “standard” and that it is highly desirable that such notification be made before an appropriate date to be specified by the Secretary-General, so that the deviations may be published as far as practicable prior to the date of implementation;

(4) That Members shall formally notify the Secretary-General of their intention to apply the “standards” of the revised Technical Regulations adopted by Third Congress except those for which they have lodged specific deviations,

* Except paragraphs 4 and 5 under DECIDES.
and that they shall follow the same procedure in respect of any "standards" adopted in the future;

(5) That Members shall inform the Secretary-General at the earliest possible date, and at least three months in advance, of any changes or amendments to the information furnished under (3) and (4) above:

Directs the Secretary-General to take all possible steps with a view to ensuring the implementation of this resolution.

27(Cg-III)—The role of the World Meteorological Organization in the meteorological aspects of the peaceful uses of atomic energy

The Congress,

Noting,

(1) The resolution adopted at the Tenth Assembly of the United Nations, under the headings "Peaceful Uses of Atomic Energy" and "Effects of Atomic Radiation";

(2) Resolution 22(EC-VIII) under the heading of "Participation of the World Meteorological Organization in international developments on the peaceful uses of atomic energy" deciding on the advisory function of the World Meteorological Organization on the meteorological aspects of the peaceful uses of atomic energy;

(3) Resolutions 16(EC-X) and 42(58–EC);

(4) That in order to implement these resolutions the co-operation of the specialized agencies of the United Nations and of the International Atomic Energy Agency will be required;

Considering,

(1) That meteorology has important significance in the use of atomic energy for peaceful purposes in the various branches of human activity;

(2) That the application of nuclear physics (e.g., radioactive isotopes) to meteorology can help in its development;

(3) That the World Meteorological Organization can play a very important role in informing and advising the Members on the meteorological problems connected with:

(a) The application of radioactive isotopes in the field of instrumentation and methods of observation;

(b) Planning, construction and operation of various kinds of atomic energy plants for peaceful purposes (such as power stations, processing plants, etc.), to make their operations safe for the population;

(c) Measurements of the radioactivity of air and water;
FORMER CONGRESS RESOLUTIONS REMAINING IN FORCE

Decides,

(1) That the World Meteorological Organization, as a specialized agency of the United Nations, should:
   (a) Study all the possible meteorological aspects of the application of radioactive isotopes;
   (b) Consult appropriate international organizations, especially the International Atomic Energy Agency, and Members of the World Meteorological Organization on the meteorological aspects of the peaceful uses of atomic energy and consolidate the information in the form of a report;

(2) To direct the Executive Committee,
   (a) (i) To work out and approve a World Meteorological Organization programme on the application of nuclear physics in meteorology, making provision therein for questions relating to the use of radioactive isotopes for measuring the various elements (such as precipitations, soil moisture, water reserves in snow, evaporation and so forth) and also for extending the necessary assistance to Members of the Organization in this field;
      (ii) To issue from time to time Technical Notes, reports and lists of references on this question;
   (b) (i) To study the work being done by the International Council of Scientific Unions, the International Union of Geodesy and Geophysics and the United Nations Scientific Committee on the Effects of Atomic Radiation and to make arrangements for the World Meteorological Organization to participate in working out projects with the United Nations and other international organizations on the peaceful uses of atomic energy when meteorological aspects have important significance in such projects;
      (ii) To study the problems of standardization of instruments and methods of observation for the collection of radioactivity data together with meteorological data within the existing framework of the Organization and to assist and co-operate with other specialized agencies of the United Nations interested in these problems;
      (iii) To assist and co-operate within the existing framework of the World Meteorological Organization with other specialized agencies of the United Nations and other international organizations interested in problems connected with radioactivity of air and water;
   (c) To re-establish the Panel of Experts on atomic energy to include new members who have been closely connected with the problems relating to the meteorological aspects of the peaceful uses of atomic energy;
(3) To give all help and assistance to the Members of the Organization and other international organizations in all the fields of activity mentioned in paragraph (2) under DECIDES of this resolution.

29(Cg-III)—Responsibility of the World Meteorological Organization in international ozone work

The Congress,

Noting,
(1) Resolution 26(Cg-III);
(2) Article 2 [2] of the Convention;
(3) The terms of the Working Arrangement between the World Meteorological Organization and the International Union of Geodesy and Geophysics;
(4) That discussions with representatives of the International Ozone Commission of the International Union of Geodesy and Geophysics have shown the desirability of the World Meteorological Organization undertaking certain responsibilities in international ozone work;

DECIDES that the activities of the World Meteorological Organization shall be extended to include appropriate responsibilities within the field of international ozone work;

AUTHORIZES the Executive Committee to develop and implement a programme for the Organization in this field;

REQUESTS the Executive Committee,

(1) To co-ordinate the programme of the World Meteorological Organization with that of the International Ozone Commission with a view to avoiding duplication of effort; and

(2) To give particular but not necessarily exclusive attention to the desirability of including the following items in the programme of the Organization:
(a) Maintenance of a catalogue of ozone stations and observations;
(b) Development of instructions, handbooks, circulars and forms for standard observations and for routine tests and calibrations;
(c) Provision of general guidance on instrumental and observational problems;
(d) Organizing inter-regional comparisons of instruments;
(e) Assisting countries or regions in establishing a successful ozone programme;

DIRECTS the Secretary-General to bring this resolution to the notice of all concerned.
FOR N’ER CONGRESS RESOLUTIONS REMAINING IN FORCE

33(Cg-III)—Activity of the World Meteorological Organization in the field of bibliography and publications

The Congress,

Noting the limited attendance by Members at the sessions of the Commission for Bibliography and Publications; and

Considering that questions in the field of bibliography and publications may be handled more appropriately by some machinery other than that of a technical commission;

Expresses its appreciation for the valuable work carried out by the Commission for Bibliography and Publications;

Decides not to re-establish the Commission for Bibliography and Publications;

Directs the Executive Committee to take the necessary steps to continue the present activities of the Organization in the field of bibliography and publications and to keep a continuous watch on matters related to this field of activity;

Expresses the view that this could best be achieved by:

(1) The establishment of a panel of experts to:
   (a) Complete and keep up to date the International Meteorological Vocabulary and the Multilingual Meteorological Nomenclature;
   (b) Revise as and when necessary the Universal Decimal Classification, other classifications of meteorological subjects, and the Guide to Meteorological Library Practice;
   (c) Advise on questions relating to liaison with those international organizations which are concerned with questions of documentation, edition, bibliography and international terminology (for example, the International Federation of Library Associations, the International Federation of Documentation, the International Organization for Standardization, the United Nations Educational, Scientific and Cultural Organization, etc.);

(2) Requesting the Secretary-General to attend to other administrative and secretarial matters in the field of bibliography and publications along the lines of his activities during the Second Financial Period.

F O U R T H C O N G R E S S

2(Cg-IV)—Amendments to the Convention of the World Meteorological Organization

The Congress,

Noting,

(1) Resolution 4(Cg-III);
(2) Resolution 1(Cg–IV);

CONSIDERING that the Convention of the World Meteorological Organization as the principal working instrument of the World Meteorological Organization, should be kept up to date in order that its efficiency may not be impaired;

HAVING EXAMINED the amendments proposed by Members in accordance with the provisions of Article 28 (a) [29 (a)] of the Convention and by the Executive Committee;

DECIDES,

(1) To approve the amendments to the Convention of the World Meteorological Organization listed in the annex to this resolution;

(2) That these amendments come into force on 27 April 1963.

ANNEX

Amendments to the Convention of the World Meteorological Organization

1. Amend the English text only of Article 2— Purposes, paragraph (b) to read:

(b) To promote the establishment and maintenance of systems for the rapid exchange of meteorological information;

2. Amend Part V— Eligibility, Article 5, to read:

PART V

Officers of the Organization and members of the Executive Committee

Article 5 [6]

(a) Eligibility for election to the offices of President and Vice-Presidents of the Organization, of President and Vice-President of the Regional Associations, and for membership, subject to the provisions of Article 12 (c) (ii) [13 (c) (ii)] of the Convention, of the Executive Committee shall be confined to persons who are designated as the Directors of their Meteorological Service by the Members of the Organization for the purpose of this Convention.

(b) In the performance of their duties, all officers of the Organization and members of the Executive Committee shall act as representatives of the Organization and not as representatives of particular Members thereof.
3. Amend Article 6 — Composition, to read:

**Article 6 [7]**

**Composition**

(a) The Congress is the general assembly of delegates representing Members and as such is the supreme body of the Organization.

(b) Each Member shall designate one of its delegates, who should be the Director of its Meteorological Service, as its principal delegate at Congress.

(c) With a view to securing the widest possible technical representation, any Director of a Meteorological Service or any other individual may be invited by the President to be present and to participate in the discussions of the Congress in accordance with the provisions of the General Regulations (hereinafter referred to as “Regulations”).

4. Amend Article 7 — Functions, to read:

**Article 7 [8]**

**Functions**

In addition to functions set out in other Articles of the Convention, the primary duties of the Congress shall be:

(a) To determine general policies for the fulfilment of the purposes of the Organization as set forth in Article 2 [2];

(b) To make recommendations to Members on matters within the purposes of the Organization;

(c) To refer to any body of the Organization any matter within the provisions of the Convention upon which such a body is empowered to act;

(d) To determine regulations prescribing the procedures of the various bodies of the Organization, and in particular, the General, Technical, Financial and Staff Regulations;

(e) To consider the reports and activities of the Executive Committee and to take appropriate action in regard thereto;

(f) To establish Regional Associations in accordance with the provisions of Article 17 [18]; to determine their geographical limits, co-ordinate their activities, and consider their recommendations;

(g) To establish Technical Commissions in accordance with the provisions of Article 18 [19]; to define their terms of reference, co-ordinate their activities, and consider their recommendations;

(h) To determine the location of the Secretariat of the Organization;

(i) To elect the President and Vice-Presidents of the Organization, and members of the Executive Committee other than the Presidents of the Regional Associations.
Congress may also take any other appropriate action on matters affecting the Organization.

5. Amend Article 10 — Voting, to read:

**Article 10 [11]**

**Voting**

(a) In a vote in Congress each Member shall have one vote. However, only Members of the Organization which are States (hereinafter referred to as "Members which are States"), shall be entitled to vote or to take a decision on the following subjects:

1. Amendment or interpretation of the Convention or proposals for a new Convention;
2. Requests for Membership of the Organization;
3. Relations with the United Nations and other intergovernmental organizations;
4. Election of the President and Vice-Presidents of the Organization and of the members of the Executive Committee other than the Presidents of the Regional Associations.

(b) Decisions shall be by a two-thirds majority of the votes cast for and against, except that elections of individuals to serve in any capacity in the Organization shall be by simple majority of the votes cast. The provisions of this paragraph, however, shall not apply to decisions taken in accordance with Articles 3 [3], 24 [25], 25 [26] and 27 [28] of the Convention.

6. Amend Article 11 — Quorum, to read:

**Article 11 [12]**

**Quorum**

The presence of delegates of a majority of the Members shall be required to constitute a quorum for meetings of the Congress. For those meetings of the Congress at which decisions are taken on the subjects enumerated in paragraph (a) of Article 10 [11], the presence of delegates of a majority of the Members which are States shall be required to constitute a quorum.

7. Delete Article 12 — First meeting of the Congress.

9. Amend Article 14 — Functions, to read:

**Article 13 [14]**

**Functions**

The Executive Committee is the executive body of the Organization.

In addition to functions set out in other Articles of the Convention, the primary functions of the Executive Committee shall be:

(a) To implement the decisions taken by the Members of the Organization either in Congress or by means of correspondence and to conduct the activities of the Organization in accordance with the intention of such decisions;

(b) To consider and, where necessary, take action on behalf of the Organization on resolutions and recommendations of Regional Associations and Technical Commissions in accordance with the procedures laid down in the Regulations;

(c) To provide technical information, counsel, and assistance in the field of meteorology;

(d) To study and make recommendations on any matter affecting international meteorology and the operation of Meteorological Services;

(e) To prepare the agenda for the Congress and to give guidance to the Regional Associations and Technical Commissions in the preparation of their agenda;

(f) To report on its activities to each session of Congress;

(g) To administer the finances of the Organization in accordance with the provisions of Part XI of the Convention.

The Executive Committee may also perform such other functions as may be conferred on it by the Congress or by Members collectively.

10. Amend Article 15 — Meetings, to read:

**Article 14 [15]**

**Sessions**

(a) The Executive Committee shall normally hold a session at least once a year, at a place and on a date to be determined by the President of the Organization, after consultation with other members of the Committee.

(b) An extraordinary session of the Executive Committee shall be convened according to the procedures contained in the Regulations, after receipt by the Secretary-General of requests from a majority of the members of the Executive Committee. Such a session may also be convened by agreement between the President and the two Vice-Presidents of the Organization.

12. Amend Article 17 — Quorum, to read:

**ARTICLE 16 [17]**

**Quorum**

The presence of two-thirds of the members shall be required to constitute the quorum for meetings of the Executive Committee.

13. Renumber Article 18 to read Article 17 [18] and similarly renumber all articles up to 22 inclusive.

14. Amend Part XI — Finances, Article 23, to read:

**PART XI**

**Finances**

**ARTICLE 22 [23]**

(a) The Congress shall determine the maximum expenditure which may be incurred by the Organization on the basis of the estimates submitted by the Secretary-General, after prior examination by, and with the recommendations of, the Executive Committee.

(b) The Congress shall delegate to the Executive Committee such authority as may be required to approve the annual expenditures of the Organization within the limitations determined by the Congress.

15. Amend Part XII — Relations with the United Nations, Article 25, to read:

**PART XII**

**Relations with the United Nations**

**ARTICLE 24 [25]**

The Organization shall be in relationship to the United Nations pursuant to Article 57 of the Charter of the United Nations. Any agreement concerning such relationship shall require approval by two-thirds of the Members which are States.

16. Amend Part XIII — Relations with other organizations, Article 26, to read:

**PART XIII**

**Relations with other organizations**

**ARTICLE 25 [26]**

(a) The Organization shall establish effective relations and co-operate closely with such other intergovernmental organizations as may be desirable.
Any formal agreement entered into with such organizations shall be made by the Executive Committee, subject to approval by two-thirds of the Members which are States, either in Congress or by correspondence.

(b) The Organization may on matters within its purposes make suitable arrangements for consultation and co-operation with non-governmental international organizations and, with the consent of the government concerned, with national organizations, governmental or non-governmental.

(c) Subject to approval by two-thirds of the Members which are States, the Organization may take over from any other international organization or agency, the purpose and activities of which lie within the purposes of the Organization, such functions, resources, and obligations as may be transferred to the Organization by international agreement or by mutually acceptable arrangements entered into between competent authorities of the respective organizations.

17. To amend Part XIV — Legal Status, Privileges and Immunities, to read:

PART XIV

Legal status, privileges and immunities

Article 26 [27]

(a) The Organization shall enjoy in the territory of each Member such legal capacity as may be necessary for the fulfilment of its purposes and for the exercise of its functions.

(b) (i) The Organization shall enjoy in the territory of each Member to which the present Convention applies such privileges and immunities as may be necessary for the fulfilment of its purposes and for the exercise of its functions;

(b) (ii) Representatives of Members, officers and officials of the Organization as well as members of the Executive Committee shall similarly enjoy such privileges and immunities as are necessary for the independent exercise of their functions in connexion with the Organization.

(c) In the territory of any Member which is a State and which has acceded to the Convention on the Privileges and Immunities of the Specialized Agencies adopted by the General Assembly of the United Nations on 21 November 1947 such legal capacity, privileges and immunities shall be those defined in the said Convention.

18. Renumber all remaining Articles, Article 28 as Article 27 [28], Article 29 as Article 28 [29], etc.
13(Cg-IV)—Recruitment of experts to serve in technical co-operation programmes in which the World Meteorological Organization participates

The Congress,

Noting,

(1) That many Members of the World Meteorological Organization have made available qualified experts to serve in the technical co-operation programmes in which the Organization participates, thus contributing substantially to the success of these programmes;

(2) That a number of Members have taken and are taking steps to make it possible for a greater number of qualified experts to be made available;

Considering that with the increasing magnitude and scope of the Organization's technical co-operation activities the need for qualified experts is growing;

Expresses its appreciation to all Members who have made or are making available experts in the field of the Organization;

Appeals to Members in whose countries qualified experts may be found to take appropriate steps so that experts, to the maximum possible extent, may be made available to the Organization;

Considering that the provision by recipient countries of suitable counterparts is an essential prerequisite for the success of the mission and shortens the period for which the experts' services are required;

Noting that in some cases a single expert has been assigned to serve the interests of a group of countries who were in need of the same form of assistance;

Invites recipient countries,

(1) To make every effort to furnish counterparts to experts serving in their countries;

(2) To consider the possibility of requesting an expert mission, as practicable, jointly with other countries;

Considering the importance of submitting for final selection to recipient countries experts capable of fulfilling all requirements envisaged for the mission in question, including professional, personal and language qualifications;

Noting,

(1) The steps being taken by the Secretary-General for careful evaluation of each expert's qualifications;

(2) With appreciation the offer of the United Nations to make its interviewing facilities available to the World Meteorological Organization, as practicable;
Requests Members to assist the Secretary-General in the evaluation of experts’ qualifications by making available to him through their permanent representatives comprehensive appraisals of qualifications of candidates with respect to the requirements of the pertinent mission;

Directs the Secretary-General,

(1) To continue his efforts of determining the full qualifications of candidates in order to facilitate the final choice to be made by recipient countries from the list of well-qualified candidates to be submitted to them;

(2) To draw the attention of all Members of the Organization to the importance of this resolution.

19(Cg-IV)—Technical Regulations of the World Meteorological Organization

The Congress,

Noting,

(1) Article 7 (d) [8 (d)] of the Convention of the World Meteorological Organization;

(2) Resolution 17(Cg-III);

(3) Resolution 18(Cg-III);

Decides to amend the current World Meteorological Organization Technical Regulations with effect from 1 July 1964, as indicated in the annex to this resolution;

Directs the Executive Committee,

(1) To review the Technical Regulations during the Fourth Financial Period and to take appropriate action as necessary in accordance with Article 14 (b) [14 (c)] of the Convention;

(2) To recommend to Fifth Congress amendments to the text of these Technical Regulations as necessary in the light of developments in meteorology and meteorological techniques and in the application of meteorology;

Instructs the Secretary-General to inform all concerned.

NOTE: This resolution replaces Resolution 17(Cg-III) which remains in force only until 1 July 1964. This resolution remains in force only until 30 June 1968.
Chapter 1 — Definitions

1. Delete the following entries and their definitions

Basic land station
Collective transmission
Continental broadcast
Meteorological broadcast
Subcontinental broadcast

2. Insert at the appropriate place, the following entries

Hemisphere broadcast. A broadcast, intended for reception within the zone of responsibility of a hemisphere exchange centre, of selected meteorological information available on a hemispheric scale.

Hemisphere Exchange Centre. A communication centre which exchanges selected meteorological information with adjacent centres to make information available on a hemispheric scale. It collects selected information from, and disseminates information as required, within its zone of responsibility.

Lightship station. A surface synoptic station situated aboard a lightship.

Principal land station. A surface synoptic station on land suitably equipped and staffed, which observes the elements specified in paragraph 3.1.1.1 and normally reports these observations for international exchange.

Reference climatological station. A climatological station where homogeneous series of observations over a period, not less than thirty years, have been made or are expected to be made under the conditions specified in 2.3.3.2 and 3.4.1.2.

Regional broadcast. A broadcast, intended for reception within an inter-regionally agreed area, of a selection of meteorological information from one Region and from limited adjacent areas.


Subregional broadcast. A broadcast, intended for reception throughout a Region and in limited adjacent areas, of a selection of meteorological information from a portion of a Region and from limited adjacent areas.

3. Amend definitions of the following terms to read:

Forecast. A statement of expected meteorological conditions for a specified period, and for a specified area or portion of air space.

Meteorological transmission. Communication of meteorological information by either of the following systems:
(a) Point-to-point radio or line communication established between specific stations;

(b) Broadcast — Communication by radio intended for reception at any point within a specified area.

**Mobile ship station.** A station aboard a ship on passage.

**Ocean weather station.** A station aboard a suitably equipped and staffed ship which tries to maintain a fixed maritime location and which observes and reports for international exchange the observations of the elements specified in 3.1.1.2 and 4.1.1.1.

**Radiosonde observation.** An observation of meteorological elements in the upper air, usually atmospheric pressure, temperature and humidity, by means of a radiosonde from which the readings are transmitted instantaneously to the station. **NOTE:** The radiosonde may be attached to a balloon, or it may be dropped (dropsonde) from an aircraft or a rocket.

**Selected ship station.** A mobile ship station which is equipped with sufficient certified meteorological instruments for making observations and which transmits the required observations in the full code form for ships.

**Supplementary land station.** A surface synoptic station on land other than a principal land station.

**Supplementary ship station.** A mobile ship station which is equipped with a limited number of certified meteorological instruments for making observations and which transmits the required observations in an abbreviated code form for ships.

**Territorial broadcast.** A broadcast, containing the meteorological information from the territory or territories of one or more Members and from appropriate sea areas, and intended for reception:

(a) Within the area of origin of the information; and

(b) At one or more designated subregional centres; and

(c) If possible, at the appropriate regional broadcast centre.

**Chapter 2 — Meteorological observing stations**

2.1.2.1 — Amend to read:

**Surface synoptic stations**

A. **Land stations:**

(a) Principal stations;

(b) Supplementary stations.

B. **Sea stations:**

(a) Mobile ship stations:

(i) Selected ship stations;

(ii) Supplementary ship stations;

(iii) Auxiliary ship stations.
(6) Fixed ship stations:
   (i) Lightship stations;
   (ii) Ocean weather stations.

NOTES:
(1) Stations aboard ships assigned to ocean weather station duty and sailing to and from their fixed maritime location are considered as selected ship stations.
(2) For reporting purposes, lightship stations may be considered as either land or sea stations.

2.1.3 — Insert under (d) the following note:

NOTE: Any of the above climatological stations may be a reference climatological station provided that the conditions given in the definition in Chapter 1 are fulfilled.

2.2.1.2 — Amend to read:
Principal land stations should be spaced at intervals not exceeding 150 km.

2.2.1.6, 2.2.1.7, 2.2.1.8 — Replace by the following:

2.2.1.6
In its recruitment programme, each Member should aim at making the maximum possible contribution from mobile ship stations towards attaining an adequate density of reports in all oceanic areas.

NOTES:
(1) An adequate density of surface reports in oceanic areas is at least one per 300 km for each main standard time of observation;
(2) An adequate density of upper-air reports in oceanic areas is at least one per 1000 km for each standard time of observation;
(3) The networks referred to in Notes (1) and (2) include observations from sea stations of all nationalities and from stations on appropriate islands;
(4) A map giving an indication of the density of ships' surface reports received from all oceans is included in Publication No. 9, TP. 4, Volume D.

Renumber present paragraphs 2.2.1.9 and 2.2.1.10 as 2.2.1.7 and 2.2.1.8.

2.2.2.3 — Amend to read:
Each Member, or Members, according to regional agreement, should establish and maintain a number of reference climatological stations.

2.3.2.2 — Amend to read:
The elevation data of a synoptic land station shall be specified in whole metres.

After 2.3.3.1 — Insert new paragraph:

2.3.3.2
Each reference climatological station should be sited with an adequate and unchanged exposure where the observations can be made in representative conditions. The surroundings of the station should not alter in time to such an extent as to affect the homogeneity of the series of observations.

Present paragraph 2.3.3.2 — Delete this paragraph and the Note and substitute the following new paragraph:

2.3.3.3
The elevation of any meteorological instrument for climatological purposes should be specified to the nearest five metres, except for that of the barometer which should be specified to the nearest metre.

2.3.5.1 — Amend to read:
The elevation data of an aeronautical meteorological station on land shall be specified in whole metres.
Chapter 3 — Meteorological surface observations

3.1.1.1 — Amend to read:
"At a principal land station, a surface synoptic observation shall consist of..."

After 3.1.2.1 — Insert the following new paragraph:
3.1.2.2
At a principal climatological station, soil temperature should be measured at some or all of the following depths: 5, 10, 20, 50, 100, 150 and 300 cm.

Renumber present paragraph 3.1.2.2 as 3.1.2.3.

After 3.4.1.1 — Insert the following new paragraph:
3.4.1.2
At reference climatological stations any change in instrumentation should be such as not to decrease the degree of accuracy of the observations as compared with the earlier observations, and any such change should be preceded by an adequate overlap (at least two years) with the earlier instrumentation.

Renumber present paragraph 3.4.1.2 as 3.4.1.3.

3.4.4.1 — Amend to read:
On land, atmospheric pressure shall be determined from a mercury barometer, or by another instrument of equal accuracy. The mercury barometer shall be the standard for comparison.

3.4.5.1 — Amend to read:
For psychrometric purposes, thermometers shall be read to 0.1°C or closer.

3.4.6.3 — Amend to read:
Amounts of precipitation up to 10 mm should be read to 0.2 mm, and larger amounts to 2 per cent of the total.

3.4.10.1 — Amend to read:
"Sea surface temperature should be measured by..."

3.4.10.2 — Amend to read:
"The method used for measuring sea surface temperature shall be..."

Chapter 4 — Meteorological upper-air observations

4.2.1.2 and Note — Amend to read:
The actual time of regular upper-air synoptic observations should be as close as possible to (H-30) and should not fall outside the time range (H-45) to H.

N O T E : The actual time of a pilot-balloon observation may deviate from the time range indicated in paragraph 4.2.1.2 if by doing so observed winds to considerably greater heights can be expected.

4.2.1.3 — Delete this paragraph.

4.2.1.4 — Renumber this paragraph as 4.2.1.3.
Chapter 5 — Meteorological codes

5.1.1.1 and Note — Amend to read:
Meteorological messages exchanged for international purposes shall be in the appropriate international code forms, specified in Publication No. 9. TP. 4, Volume B (Annex II), with the exception of those messages or parts of messages specifically excluded by these Technical Regulations.

NOTE: Meteorological messages exclusively for exchange between one Member and another may be in other forms by bilateral agreement.

5.1.1.2 — Delete this paragraph.

Chapter 6 — Meteorological telecommunications

6.1.1.1 — Amend to read:
Each Member shall make available to the appropriate communication centre for further dissemination such information as is reported in a territorial transmission, either by a territorial broadcast or by other means of communication, as agreed between the Members concerned.

6.1.1.4 — Amend to read:
A Member experiencing difficulties in receiving or observing any deficiencies in a transmission intended for its reception as specified in Publication No. 9. TP. 4, Volume C, should first take corrective action of a local nature and, if unsuccessful, subsequently notify in detail the Member making this transmission and also keep the presidents of the relevant regional associations informed, as necessary.

6.1.1.5 — Amend to read:
"Telegraphic transmissions should be made..."

6.1.1.6 — Amend to read:
"The speed of morse transmissions should be..."

6.1.1.7 — Amend (b) and (c) of this paragraph and add a new subparagraph (g) as follows:
(b) Power supplied to the antenna;
(c) Class of emission, necessary bandwidth;
(g) Specific point(s) or area(s) in which the transmission is intended to be received.

6.1.1.10 — Amend to read:
In addition to the information supplied to the Secretariat under 6.1.1.8, notification of impending changes in frequencies or in time schedules of any routine meteorological radio transmission shall be included within its transmission for main synoptic hours during at least three days immediately prior to the change.

6.1.1.11 — Amend to read:
When it is necessary to discontinue a transmission intended primarily for reception by other Members provision shall be made to continue to meet the requirements of all recipients of the transmission.

NOTE: Transmissions by a Member intended primarily for its own use are not affected by the above, even if they are used by other Members.
FORMER CONGRESS RESOLUTIONS REMAINING IN FORCE

After 6.1.1.11 — Insert the following new paragraphs:

6.1.1.12
When it is necessary or desirable to change the mode of a transmission intended primarily for reception by other Members, notice of a duration agreed regionally or multilaterally shall be given to the recipients.

NOTES:
(1) On expiry of this notice it will be assumed that the requirements of the recipients are met by the transmissions in the new mode.
(2) Transmissions by a Member intended primarily for its own use are not affected by the above, even if they are used by other Members.

6.1.1.13
Members making meteorological transmissions should adhere to the practices and procedures supplementing the Technical Regulations contained in WMO Publication No. 9, TP. 4, Volume C, Chapter I, Parts III and IV.

6.2.2.1 — Amend to read:
Members responsible for the reception of reports from ships shall provide the Secretariat with a list of their coastal stations designated for this purpose, including information on location, call signs, working transmission and reception frequencies.

After 6.2.2.6 — Insert the following new paragraph:

6.2.2.7
Each Member shall arrange that its coastal stations, designated to receive reports from ships, accept these reports with minimum delay and transmit them expeditiously to appropriate collection centres.

Renumber present paragraphs: 6.2.2.7, 6.2.2.8, 6.2.2.9, 6.2.2.10, 6.2.2.11, 6.2.2.12 and 6.2.2.13 as: 6.2.2.8, 6.2.2.9, 6.2.2.10, 6.2.2.11, 6.2.2.12, 6.2.2.13 and 6.2.2.14.

6.3 to 6.3.3.1 — Replace all these paragraphs by the following:

6.3
Transmissions for the purposes of synoptic meteorology

6.3.1
Hemisphere exchange

6.3.1.1
A Member which has accepted responsibility to operate a hemisphere exchange centre shall ensure that at least twice a day it:
(a) Collects from its zone of responsibility:
   (i) A representative selection of reports of surface synoptic observations;
   (ii) A representative selection of summarized reports of upper-air synoptic observations;
   (iii) Other meteorological data as agreed;
(b) Exchanges with adjacent centres by point-to-point communications the information from its zone of responsibility and that of similar centres responsible for other zones;
(c) Disseminates information as required (by hemisphere broadcast or other means) throughout its zone of responsibility.

6.3.1.2
There should be in the northern hemisphere five hemisphere exchange centres, and in the southern hemisphere three hemisphere exchange centres, as given in the general plan.
6.3.1.3
The contents of transmissions for hemisphere exchanges and the arrangements for the collection, exchange and dissemination of the data should conform to the general plan. 
NOTE: The general plan is given in the Guide to Meteorological Telecommunications (Publication No. 9, TP. 4, Volume C, Chapter 1, Part II).

6.3.2
Regional broadcasts

6.3.2.1
A Member which has accepted responsibility for making a regional broadcast shall ensure that this broadcast includes at least:
(a) An inter-regionally agreed selection of reports of surface and upper-air synoptic stations;
(b) Analyses and forecasts, as inter-regionally agreed;
(c) Other meteorological information, as inter-regionally agreed.

6.3.2.2
The time schedules and order of contents in regional broadcasts should follow the general plan established for that purpose.

NOTE: Details of this plan are given in the Guide to Meteorological Telecommunications (Publication No. 9, TP. 4, Volume C, Chapter 1, Part II).

6.3.3
Subregional broadcasts

6.3.3.1
A Member which has accepted responsibility for making a subregional broadcast shall ensure that this broadcast includes at least the following information:
(a) Reports required by regional agreement for regional and inter-regional exchanges from surface and upper-air synoptic land stations and fixed ship stations within the area of responsibility allocated to the subregional broadcast;
(b) All reports received from mobile ship stations, either directly or via collecting centres from territorial transmissions made within the area of responsibility allocated to the subregional broadcast;
(c) Other information as required by regional agreement.

6.3.4
Territorial transmissions

6.3.4.1
Territorial transmissions shall include at least the following information for retransmission in subregional broadcasts:
(a) Surface and upper-air synoptic reports from land stations and fixed ship stations required by regional agreement for regional and inter-regional exchange;
(b) All reports from mobile ship stations received either directly or from other collecting centres within the area covered by the territorial transmission;
(c) Other information as required by regional agreement.

Chapter 7 — Synoptic and forecasting practices

Add the following note immediately under the title of Chapter 7:
NOTE: In addition to the regulations contained in this chapter, detailed guidance is given in the Guide to the Preparation of Synoptic Weather Charts and Diagrams.

7.2.1.1 — Delete the Note at the end of this paragraph.
7.4.1.2 — Amend to read:

The standard isobaric surfaces for representing and analysing the conditions in the atmosphere shall be the 1000 mb, 850 mb, 700 mb, 500 mb, 400 mb, 300 mb, 200 mb, 150 mb and 100 mb surfaces.

After 7.4.1.2 — Insert the following new paragraph:

7.4.1.3

The standard isobaric surfaces for representing and analysing the conditions in the atmosphere above 100 mb should be the 70 mb, 50 mb, 30 mb, 20 mb and 10 mb surfaces.

Present paragraph 7.4.1.3 — Renumber this paragraph as 7.4.1.4 and amend it to read:

7.4.1.4

Members should either prepare or have available upper-air charts for at least four of the five following standard isobaric surfaces: 850 mb, 700 mb, 500 mb, 300 mb and 200 mb.

Present paragraph 7.4.1.4 — Renumber this paragraph as 7.4.1.5 and amend it to read:

7.4.1.5

The upper-air analyses in regional broadcasts shall include those for the 700 mb, 500 mb and 300 mb surfaces.

Present paragraph 7.4.1.5 — Renumber this paragraph as 7.4.1.6 and amend it to read:

7.4.1.6

The upper-air analyses in subregional broadcasts shall be in accordance with regional decisions.

7.5 — Amend this paragraph to read:

7.5

Publication of synoptic observations

7.5.1

General

7.5.1.1

"Each Member should publish, with as little delay as possible, a daily or monthly bulletin consisting, ..."

Chapter 8 — Climatological practices

8.4.2.2 (a) — Amend to read:

(a) Atmospheric pressure at fixed times at the reference level appropriate to the station, as indicated in 8.5.1.2.2 (b);

8.4.2.3 (a) — Amend to read:

(a) Atmospheric pressure at the reference level appropriate to the station as indicated in 8.5.1.2.2 (b);

8.5 — Under the title of 8.5, insert the following new paragraph:

8.5.1

Whenever period averages, normals and climatological standards are published, the period to which they refer should be indicated.

Renumber present paragraphs 8.5.1, 8.5.1.1, 8.5.1.2, 8.5.1.2.1, 8.5.1.2.2, 8.5.1.3, 8.5.1.4, 8.5.2, 8.5.2.1, 8.5.2.2, 8.5.2.3 and 8.5.3, as 8.5.2, 8.5.2.1, 8.5.2.2, 8.5.2.2.1, 8.5.2.2.2, 8.5.2.3, 8.5.2.4, 8.5.3, 8.5.3.1, 8.5.3.2, 8.5.3.3 and 8.5.4 respectively.
FORMER CONGRESS RESOLUTIONS REMAINING IN FORCE

Present paragraph 8.5.3.1 — Renumber as 8.5.4.1 and amend it as follows:

8.5.4.1

Members should publish or make available on request old series of reliable data which have not previously been published.

NOTE: Publication of data from reference climatological stations is especially desirable.

Chapter 9 — Bibliography and publications

After 9.1.1.1 — Insert the following new paragraph:

9.1.1.2

The International Organization for Standardization (ISO) system of Cyrillic transliteration should be used in all meteorological documents and publications for international use.

Renumber present paragraph 9.1.1.2 as 9.1.1.3.

Chapter 10 — Meteorological service for shipping

After 10.2.3.15 — Insert the following new paragraph:

10.2.3.16

Members should arrange for providing their ships with detailed information about weather bulletins broadcast for shipping, relating to ocean areas in which they ply.

Chapter 11 — Meteorological service for agriculture

Add the following note immediately under the title of Chapter 11:

NOTE: In addition to the regulations contained in this Chapter, detailed advice is given in the Guide to Agricultural Meteorological Practices.

Appendix A — International barometer conventions

Paragraph (3) (c) — (first line on page 50 of the current edition) — Amend to read:

"provided the mercury is at the standard temperature of 0°C and it is subjected..."

Appendix C — Values of some physical functions and constants used in meteorology

Paragraph (2) — Amend to read:

(2) Molecular weight of gases constituting dry air

<table>
<thead>
<tr>
<th>Constituent gas</th>
<th>Molecular weight (based on C = 12.0000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen (N₂)</td>
<td>28.015</td>
</tr>
<tr>
<td>Oxygen (O₂)</td>
<td>31.999</td>
</tr>
<tr>
<td>Argon (A)</td>
<td>39.942</td>
</tr>
<tr>
<td>Carbon dioxide (CO₂)</td>
<td>44.008</td>
</tr>
<tr>
<td>Neon (Ne)</td>
<td>20.182</td>
</tr>
<tr>
<td>Helium (He)</td>
<td>4.003</td>
</tr>
<tr>
<td>Krypton (Kr)</td>
<td>83.80</td>
</tr>
<tr>
<td>Hydrogen (H₂)</td>
<td>2.016</td>
</tr>
<tr>
<td>Xenon (Xe)</td>
<td>131.3</td>
</tr>
<tr>
<td>Ozone (O₃)</td>
<td>47.998</td>
</tr>
<tr>
<td>Radon (Rn)</td>
<td>222</td>
</tr>
</tbody>
</table>
FORMER CONGRESS RESOLUTIONS REMAINING IN FORCE

Paragraph (3) — Amend to read:

(3) **Apparent molecular weight of dry air (M)**

\[ M = 28.966 \]

Paragraph (4) — Delete the following from this paragraph:

Temperature on the derived Rankine scale (°R)

\[ °R = 1.8 °K \]

Paragraph (5) (a) — Delete the following from this paragraph:

Temperature on the derived Fahrenheit scale (°F)

\[ °F = 1.8 °C + 32 \]

Paragraph (8) — Amend to read:

(8) **Gas constant (R*) for 1 gram mole of ideal gas**

\[ R* = 8.31432 \pm 0.00034 \text{ joule (g mole)}^{-1} \text{ °K}^{-1} \]

= 1.9875 \pm 0.00008 \text{ IT calorie (g mole)}^{-1} \text{ °K}^{-1} \]

Paragraph (10) — Amend to read:

(10) **Molecular weight (M_w) of water vapour**

\[ M_w = 18.0153 \]

Paragraph (13) — Amend to read:

(13) **Saturation vapour pressures**

(a) Over water (e_w), 0°C to 100°C

\[
\log_{10} e_w = 10.79574 \left( 1 - \frac{T_i}{T} \right) - 5.02600 \log_{10} \left( \frac{T}{T_i} \right) \\
+ 1.50475 \times 10^{-4} \left[ 1 - 10^{-8.5969} \left( 1 - \frac{T}{T_i} \right) \right] \\
+ 0.42873 \times 10^{-8} \left[ 10^{4.7695} \left( 1 - \frac{T}{T_i} \right) - 1 \right] \\
+ 0.78614
\]

where

\[ T_i = 273.16°K \text{ (the triple point of water)} \]

\( e_w \) is expressed in millibars and \( T \) in °K.

**NOTICE**: The above formula is based on data which have been experimentally confirmed only in the range 0°C to 100°C, but the same formula can be used for saturation vapour pressure over super-cooled water in the range -50°C to 0°C, with as far as is known, insignificant error.

(b) Over ice (e_i), 0°C to -100°C

\[
\log_{10} e_i = -9.09686 \left( \frac{T}{T_i} - 1 \right) - 3.56654 \log_{10} \left( \frac{T}{T_i} \right) \\
+ 0.87682 \left( 1 - \frac{T}{T_i} \right) + 0.78614
\]

where

\[ T_i = 273.16°K \text{ (the triple point of water)} \]

\( e_i \) is expressed in millibars and \( T \) in °K.

**Appendix E** — **International symbols used for graphic representation of data on weather charts and for analyses on weather charts**

Paragraph I. A. (2) — On page 63 of the current edition, replace lines 3 to 9 by the following:

The following method is used for plotting of missing wind data:
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Missing wind speed

Missing wind direction

Missing wind direction is indicated by the letter D followed by the reported wind speed in figures.

Missing wind direction and speed

Missing wind direction and speed are indicated by the letters DF.

These indications are inserted directly over the station circle, under the position of the CM cloud, and within a frame in order to avoid confusion with PPP.

Paragraph I. A. (3) — In the table, replace the present symbols for WW = 11 and 12 by the following:

\[
\begin{array}{ccc}
\vdash & \vdash & \vdash \\
\end{array}
\quad \text{for } \text{WW} = 11
\]

\[
\begin{array}{ccc}
\vdash & \vdash & \vdash \\
\end{array}
\quad \text{for } \text{WW} = 12
\]

II. Analyses on weather charts

Replace the present list of symbols by the following:

**Symbols**

<table>
<thead>
<tr>
<th>Term</th>
<th>Monochromatic</th>
<th>Polychromatic</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Cold front at the surface</td>
<td>no change in these two columns</td>
<td>no change</td>
</tr>
<tr>
<td>(2) Cold front above the surface</td>
<td>no change in these two columns</td>
<td>no change</td>
</tr>
<tr>
<td>(3) Warm front at the surface</td>
<td>no change in these two columns</td>
<td>no change</td>
</tr>
<tr>
<td>(4) Warm front above the surface</td>
<td>no change in these two columns</td>
<td>no change</td>
</tr>
<tr>
<td>(5) Quasi-stationary front at the surface</td>
<td>no change in these two columns</td>
<td>no change</td>
</tr>
<tr>
<td>(6) Quasi-stationary front above the surface</td>
<td>no change in these two columns</td>
<td>no change</td>
</tr>
<tr>
<td>(7) Inter-tropical convergence zone</td>
<td>no change in these two columns</td>
<td>orange</td>
</tr>
</tbody>
</table>

**NOTE:** The separation of the two lines gives a qualitative representation of the width of the zone, the hatched lines may be added to indicate areas of activity.

25(Cg-IV)—Measurements of atmospheric radioactivity

The Congress,

Noting,

(1) United Nations General Assembly Resolution 1629(XVI);
(2) Abridged report of the fourteenth session of the Executive Committee, general summary, paragraph 5.5;
(3) United Nations General Assembly Resolution 1764(XVII);
Having Examined the reports by the Secretary-General on the action taken by the World Meteorological Organization in implementing the above-mentioned resolutions and the draft plans prepared in consultation with the International Atomic Energy Agency (IAEA) and the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR);

Approves the second plan on the understanding that the meteorological telecommunication channels are not to be used for transmission of the data and also that the plan may be revised in the light of further comments received from the United Nations Scientific Committee on the Effects of Atomic Radiation;

Directs the Secretary-General,

(1) To revise this plan, incorporating the comments offered by the United Nations Scientific Committee on the Effects of Atomic Radiation during its twelfth session;

(2) To take into account results of further consultation with the United Nations Scientific Committee on the Effects of Atomic Radiation;

(3) To transmit the plan to the permanent representatives of Members of the World Meteorological Organization;

Invites Members,

(1) To assist in implementing the plan;

(2) To exchange the data by airmail on receipt of requests from Members desiring these data.

27(Cg-IV)—Research in tropical meteorology

The Congress,

Noting Resolution 22(Cg-III);

Commends the Executive Committee and the Secretary-General for the action taken since Third Congress with regard to research in tropical meteorology;

Notes with satisfaction that several research institutes for tropical meteorology are already in existence and that plans exist for establishing others; and

Considering,

(1) That there is an urgent need for further research in tropical meteorology;

(2) That analysis centres can contribute to such research;

Encourages Members concerned to establish and to co-operate in the establishment of additional research institutes for tropical meteorology and
additional analysis centres for both the oceanic and land areas of the tropics, and to expand as necessary the programmes at existing institutes and centres;

Decides that the World Meteorological Organization should give increasing emphasis to its programme in tropical meteorology; and

Requests the Executive Committee to work out the details of this programme, giving particular but not exclusive attention to:

(a) Organizing symposia in tropical meteorology;
(b) Assisting research institutes and analysis centres for tropical meteorology by contributing directly to and by promoting support for such items as:
   (i) secondment of staff;
   (ii) execution of research projects;
   (iii) purchase of scientific equipment;
   (iv) development of libraries;
   (v) exchange of scientific staff between research institutes and analysis centres; and

Directs the Secretary-General to arrange for the Secretariat to continue to serve as an information centre on research in tropical meteorology.

Note: This resolution replaces Resolution 22(Cg-III) which is no longer in force.

35(Cg-IV)—International arrangements for marine climatological summaries and for data collection for the marine section of a World Climatic Atlas

The Congress,

Noting,

(1) Resolution 32(Cg-III);
(2) The request by the International Association of Meteorology and Atmospheric Physics of the International Union of Geodesy and Geophysics to the World Meteorological Organization to consider the publication of mean monthly sea surface temperatures and, if possible, also of other meteorological elements from representative sea areas;
(3) Recommendation 22(CMM-III);
(4) Resolution 31(EC-XIV);
(5) The report of the first session of the Executive Committee Working Group on Collection and Processing of Marine Climatological Data;

Considering,

(1) That no specific nation is responsible for the collection and publication of meteorological data for the oceans and seas outside territorial waters;
(2) That it is essential that individual Members be invited to accept responsibility for specific areas of the oceans and seas with a view to the publication of climatological summaries and the collection of data for the planned marine section of the World Climatic Atlas;

(3) That Members willing to undertake the preparation of climatological summaries and the collection of data for the eventual preparation of a part of the planned marine section of the World Climatic Atlas (henceforth called the “responsible Members”) would require all available marine climatological data from the areas for which they are responsible;

Decides that for the purpose of preparing the climatological summaries and of collecting data with a view to the eventual preparation of a marine section of the World Climatic Atlas, the oceans and seas should be divided into areas of responsibility as indicated in part A of the annex to this resolution;

Invites,

(1) The Members indicated on the map of part A of the annex to this resolution to assume responsibility for the respective areas as shown on the map;

(2) The responsible Members to prepare, without cost to the World Meteorological Organization, climatological summaries annually for a number of selected representative areas within their area of responsibility and for fixed ship stations in accordance with the procedure specified in part B of the annex to this resolution;

(3) The responsible Members to include in the climatological summaries the data listed in part C of the annex to this resolution;

(4) Members to follow the arrangements detailed in part D of the annex to this resolution for collection, punching and distribution of their marine observations;

(5) Members concerned to participate fully in the arrangements laid down in this resolution and to undertake the necessary work without cost to the World Meteorological Organization;

(6) The responsible Member to make available on a repayment basis duplicate copies of punch-cards, on request;

Requests the Executive Committee,

(1) To arrange for the marine climatological summaries prepared in accordance with this resolution to be published annually in the most economical manner;

(2) To introduce the arrangements detailed in this resolution, if feasible on 1 January 1964.
ANNEX

Part A — Areas of responsibility and responsible Members
Part B

Procedures for preparing marine climatological summaries

1. Each responsible Member shall prepare climatological summaries annually for a number of selected representative areas in its area of responsibility, for the fixed ship stations within its area and, upon mutual agreement, for fixed ship stations operated solely by the responsible Member in an area of another responsible Member.

2. Since it is desirable that the distribution of selected areas shall be as uniform as possible, each responsible Member shall propose a number of such areas from within its assigned area of responsibility. In this connexion consideration should be given to the density of data, climatic gradients and related factors. The areas used in the U.S. Navy Atlas may serve as an example for the choice of areas. The areas selected by the individual responsible Members shall be submitted, not later than January 1966, to the president of CMM who will ensure that the final choice of the selected representative areas proposed by the responsible Members is such as to provide a reasonable distribution throughout all areas of responsibility.

3. The boundaries of the areas of responsibility shall be examined by CMM with a view to readjustment, if appropriate, considering density of data, the possible appearance of additional Members desiring to become responsible Members and the possible desire of responsible Members to adjust boundaries. Adjustments should be kept to the minimum possible.

4. Monthly climatological summaries shall be prepared on an annual basis starting with the year 1964. Responsible Members should also prepare similar summaries for the years 1961 to 1963 inclusive and 10 years climatological summaries starting with the period 1961-70.

5. In order to provide the data essential for the study of climatic change, the responsible Members are encouraged to extend the collecting of the marine meteorological observations for the selected representative areas and for fixed ship stations, and the preparing of the climatological summaries, to the years before 1961, and to prepare climatological summaries for these earlier years going as far back in time as possible. Members are requested to supply the necessary data by reproducing the corresponding marine punch-cards from their files without cost to the responsible Members who are willing to process the marine observations for former years. If on account of paucity of data it is not possible to comply fully with the prescriptions laid down for the marine climatological summaries, the statistics may be reduced to the following elements:

   - Dry bulb temperature,
   - Sea temperature,
Wind direction and speed,
Atmospheric pressure,
Total cloud amount.

Part C

Data to be included in the climatological summaries

A. Fixed ship stations

Definition of area within which observations are to be regarded as “on station”

The “on station” area should be defined as the smallest area of 1° squares in which 95 per cent or more of the observations lie during all or nearly all the months of the year.

1. Dry-bulb temperature
   (a) Monthly means;
   (b) Mean for the year, computed from monthly means;
   (c) Extremes with dates and hours of occurrence and 5, 25, 50, 75 and 95 percentile values for each month;
   (d) Number of observations.

2. Dew-point temperature
   (a) Monthly means;
   (b) Mean for the year, computed from monthly means;
   (c) Extremes with dates and hours of occurrence and 5, 25, 50, 75 and 95 percentile values for each month;
   (d) Number of observations.

3. Sea temperature
   (a) Monthly means;
   (b) Mean for the year, computed from monthly means;
   (c) Extremes with dates and hours of occurrence and 5, 25, 50, 75 and 95 percentile values for each month;
   (d) Number of observations.

4. Air-sea temperature difference
   (a) Monthly means;
   (b) Mean for the year, computed from monthly means;
FORMER CONGRESS RESOLUTIONS REMAINING IN FORCE

(c) Extremes with dates and hours of occurrence and 5, 25, 50, 75 and 95 percentile values for each month;

(d) Number of observations.

5. Visibility

(a) Percentage frequency for each month for each code figure 90–99 inclusive (WMO Code No. 4377);

(b) Annual percentage frequency for each code figure 90–99 inclusive;

(c) Number of days for each month and for the year with \( VV = 90–93 \) and/or \( W = 4 \);

(d) Number of observations.

6. Weather

(a) Number of days for each month with precipitation, i.e. days when one or more of the \( \text{ww} \) or \( W \) code figure (WMO Codes Nos. 4500 and 4677) listed in subsections (b) to (e) were reported (excluding \( \text{ww} = 17, 98 \));

(b) Number of days for each month with rain and/or drizzle (\( \text{ww} = 20, 21, 24, 25, 50–67, 80–82; W = 5, 6, 8 \));

(c) Number of days for each month with snow and/or rain and snow (\( \text{ww} = 22, 23, 26, 68–79, 83–86; W = 7 \));

(d) Number of days for each month with hail (\( \text{ww} = 27, 87–90 \));

(e) Number of days for each month with thunderstorms (\( \text{ww} = 17, 29, 94–99; W = 9 \));

(f) Number of days for each month with

(i) gales (Beaufort force \( \geq 8 \))

(ii) storms (Beaufort force \( \geq 10 \))

(iii) hurricane force winds (Beaufort force = 12);

(g) Number of complete observing days for items (a) to (f);

(h) Total number of days annually for each item (a) to (f);

(i) Monthly percentage frequency of occurrence of precipitation at the time of observation (\( \text{ww} = 50–97, 99 \));

(j) Annual percentage frequency of occurrence of precipitation at the time of observation (\( \text{ww} = 50–97, 99 \));

(k) Number of observations for items (i) and (j);

(l) If measured, monthly and annual amount of precipitation;

(m) Annual percentage frequency of occurrence of each individual \( \text{ww} \) code figure 50–97, 99.

7. Wind direction and speed

(a) Monthly percentage frequencies for the following ranges of speed

(i) 0 to 4 knots

(ii) 5 to 9 knots
(iii) 10 to 14 knots  
(iv) 15 to 19 knots  
(v) 20 to 24 knots  
(vi) 25 to 29 knots  
(vii) 30 to 39 knots  
(viii) 40 to 49 knots  
etc.

and for directions by sectors of 30°, true north bisecting the first sector;

(b) Monthly total of observations for each sector irrespective of speed;

(c) Monthly percentage frequency of occurrence of observations for each range of speed irrespective of direction;

(d) Mean monthly wind speed in knots, derived from all wind-speed observations;

(e) Mean wind speed for the year, computed from monthly means;

(f) Number of observations corresponding to item (d);

(g) Highest wind speed for each month and for the year, with dates and hours of occurrence;

(h) Vector mean wind for each month and its components (W to E and S to N directions taken as positive).

8. Pressure

(a) Monthly means for each hour of observation;

(b) Monthly means for all hours of observation;

(c) Mean for the year, computed from monthly means;

(d) Number of observations;

(e) Extremes with dates and hours of occurrence and 5, 25, 50, 75 and 95 percentile values for each month.

9. Cloud

(a) Monthly mean total amount for each hour of observation;

(b) Monthly mean for all hours of observation;

(c) Monthly mean for all hours of observation in respect of low cloud only (defined as cloud for which h is any code figure [WMO Code No. 1600] from 0 to 8 inclusive);

(d) Monthly percentage frequency of observations in the following ranges of total cloud amount (all hours of observation combined):

(i) 2 oktas or less  
(ii) 3 to 5 oktas inclusive  
(iii) 6 or 7 oktas  
(iv) 8 oktas

(e) As item (d), but for low cloud only;

(f) Percentage frequency of height of low cloud for each month, subdivided into ranges corresponding to WMO Code 1600;
FORMER CONGRESS RESOLUTIONS REMAINING IN FORCE 133

(g) Same for the year for items (a) to (f) inclusive computed from the monthly means or frequencies;

(h) Number of observations.

10. Waves

Only the waves with greatest height should be selected. If two or more waves in the same observation have equal height, the one with the largest period should be selected. If the periods are also equal, the mean direction should be used.

Monthly percentage frequency tables are to be prepared as shown in figure 1 (reproduced on the following page).

Height period and direction are given in the following intervals:

<table>
<thead>
<tr>
<th>Height (metres)</th>
<th>Period (seconds)</th>
<th>Direction (degrees)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 3/4</td>
<td>5 or less</td>
<td>30° throughout</td>
</tr>
<tr>
<td>1 - 1 1/2</td>
<td>6 or 7</td>
<td></td>
</tr>
<tr>
<td>2 - 2 1/2</td>
<td>8 or 9</td>
<td></td>
</tr>
<tr>
<td>3 - 3 1/2</td>
<td>10 or 11</td>
<td></td>
</tr>
<tr>
<td>4 - 5 1/2</td>
<td>12 or 13</td>
<td></td>
</tr>
<tr>
<td>6 - 7 1/2</td>
<td>14 or 15</td>
<td></td>
</tr>
<tr>
<td>8 - 9 1/2</td>
<td>16 or 17</td>
<td></td>
</tr>
<tr>
<td>≥ 10</td>
<td>18 or 19</td>
<td></td>
</tr>
<tr>
<td>X not determined</td>
<td>&gt; 19</td>
<td>X not determined</td>
</tr>
</tbody>
</table>

The tables give:

(a) Percentage frequency of any combination of wave height, period, and direction;

(b) Percentage frequency of any combination of wave height and period irrespective of direction;

(c) Percentage frequency of any combination of wave height and direction irrespective of period;

(d) Percentage frequency of any combination of wave period and direction irrespective of height;

(e) Percentage frequency of any wave height irrespective of period and direction;

(f) Percentage frequency of any wave period irrespective of direction and height;

(g) Percentage frequency of any wave direction irrespective of height and period;

(h) Total number of observations.

NOTE:

Reference item A (6) — Weather — it is recommended that the number of days with precipitation etc., be obtained by making appropriate entries in the log-book at the end of each day, as shown in the following example:
### Figure 1

**Monthly Percentage Frequency of Wave Directions by Specified Periods and Heights**

<table>
<thead>
<tr>
<th>Period</th>
<th>Height</th>
<th>X*</th>
<th>X1</th>
<th>X2</th>
<th>X3</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1m</td>
<td>0-1m</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-4m</td>
<td>0-1m</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-4m</td>
<td>2-4m</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-7m</td>
<td>0-1m</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-7m</td>
<td>2-4m</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8+</td>
<td>0-1m</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8+</td>
<td>2-4m</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8+</td>
<td>5-7m</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8+</td>
<td>8+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9+</td>
<td>0-1m</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9+</td>
<td>2-4m</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9+</td>
<td>5-7m</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9+</td>
<td>8+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Legend:**
- X*: Period and direction observed, but not wave height
- X1: Period and height observed, but not wave direction
- X2: Direction and height observed, but not wave period
- X3: Frequency of height by specified direction regardless of period
- N: Number of observations
In order to facilitate the computation of the monthly and annual totals, these entries can be punched in fixed columns as "1" on a "day-card". If this is done, the sorting of the international maritime punch-cards by the various combinations of WW and W is avoided and an accurate total obtained.

B. Selected representative areas

1. Dry-bulb temperature
   (a) Monthly means;
   (b) Mean for the year, computed from monthly means;
   (c) Frequency table in 1°C steps based on the intervals 0.0 to 0.9°C (positive values), -0.1 to -1.0°C (negative values), e.g. 9.0 to 9.9°C, -4.1 to -2.0°C;
   (d) Monthly and annual total number of observations.

2. Dew-point temperature
   (a) Monthly means;
   (b) Mean for the year, computed from monthly means;
   (c) Frequency table in 1°C steps based on the intervals 0.0 to 0.9°C (positive values), -0.1 to -1.0°C (negative values), e.g. 9.0 to 9.9°C, -4.1 to -2.0°C;
   (d) Monthly and annual total number of observations.

3. Sea temperature
   (a) Monthly means;
   (b) Mean for the year, computed from monthly means;
   (c) Frequency table in 1°C steps based on the intervals 0.0 to 0.9°C (positive values), -0.1 to -1.0°C (negative values), e.g. 9.0 to 9.9°C, -4.1 to -2.0°C;
   (d) Monthly and annual total number of observations.

4. Air-sea temperature differences
   (a) Monthly means;
   (b) Mean for the year, computed from monthly means;
   (c) Frequency table in 1°C steps based on the intervals 0.0 to 0.9°C (positive values), -0.1 to -1.0°C (negative values), e.g. 9.0 to 9.9°C, -4.1 to -2.0°C;
   (d) Monthly and annual total number of observations.

5. Visibility
   (a) Number of observations for each month for each code figure 90–99 (WMO Code No. 4377);
   (b) Total number of observations for the year for each code figure 90–99;
   (c) Monthly and annual total of observations.
FORMER CONGRESS RESOLUTIONS REMAINING IN FORCE

6. Weather
(a) Monthly number of occasions with rain or drizzle at the time of observation (ww = 50-67, 80-82 (WMO Code No. 4677));
(b) Monthly number of occasions with snow or snow and rain at the time of observation (ww = 68-79, 83-86);
(c) Monthly number of occasions with hail at the time of observation (ww = 87-90);
(d) Monthly number of occasions with thunderstorms at the time of observation (ww = 17, 91-99);
(e) Monthly number of observations with:
   (i) gales (Beaufort force ≥ 8)
   (ii) storms (Beaufort force ≥ 10)
   (iii) hurricane force winds (Beaufort force = 12) at the time of observation;
(f) Monthly number of occasions of precipitation at the time of observation (ww = 50-97, 99);
(g) Annual number of occasions for each item (a) to (f);
(h) Monthly and annual total number of observations.

7. Wind direction and force
(a) Monthly number of observations for each month for each Beaufort number 0, 1, 2 etc., and for direction by sectors of 30 degrees, true north bisecting the first sector;
(b) Monthly total of observations for each sector irrespective of wind force;
(c) Monthly number of observations for each Beaufort number irrespective of direction;
(d) Mean monthly wind force according to the Beaufort scale, derived from all wind observations;
(e) Mean wind force for the year, computed from monthly means;
(f) Monthly and annual total number of observations.

8. Pressure
(a) Monthly means for all hours of observation;
(b) Mean for the year, computed from monthly means;
(c) Frequency table in:
   (i) 2 mb steps between 0 and 30° latitude, based on the intervals 0.0 to 1.9 mb, e.g. 990.0 to 991.9;
   (ii) 4 mb steps N of 30° N and S of 30° S, based on the intervals 0.0 to 3.9 mb, e.g. 996.0 to 999.9 mb;
(d) Monthly and annual total number of observations.
9. **Cloud**

(a) Monthly mean of total cloud amount;

(b) Monthly mean amount for low cloud only (defined as cloud for which \( h \) is any code figure from 0 to 8 inclusive (WMO Code No. 1600));

(c) Monthly and annual number of observations in the following ranges of total cloud amount:
   (i) 2 oktas or less
   (ii) 3 to 5 oktas inclusive
   (iii) 6 or 7 oktas
   (iv) 8 oktas;

(d) Mean for the year for items (a) and (b), computed from monthly means;

(e) Monthly and annual total of observations.

10. **Waves**

Monthly frequency tables are to be prepared exactly as for fixed ship stations, except that the numbers of observations will be given for each month instead of the monthly percentage frequencies.

**NOTES:**

1. If in any individual month there are no observations in a particular selected representative area, the annual mean for that year will not be computed.

2. In preparing a climatological summary for a decade or longer period, the summary for each month will be prepared first by combining all available means for the same month. The decadal mean will be based on these monthly means.

3. If in any individual month the number of observations in a selected representative area is less than 10, no frequency tables will be prepared for that month.

**Part D**

**Arrangements for the collection, punching and distribution of data**

1. Members operating fixed ship stations, selected, supplementary and auxiliary ship stations should ensure that all surface observations from these stations are punched in accordance with the lay-out of the international maritime meteorological punch-card, sorted half-yearly and despatched to the responsible Members concerned.

2. Members who operate selected or supplementary ships but are not able to comply with paragraph 1 above are requested to copy the observations from the log-books of their selected ships on a standard form and to send these forms to an appropriate responsible Member who will undertake to punch and sort the cards for distribution to any other responsible Member concerned. It is assumed that each meteorological service following this procedure would wish to send all its standard forms to one responsible Member and that this Member would be the one responsible for the area where the standard forms contain most observations.
FORMER CONGRESS RESOLUTIONS REMAINING IN FORCE

3. Members operating auxiliary ship stations should make available to responsible Members the observations of those auxiliary ships which were made in areas where the number of reporting ships is inadequate, or in areas which are rarely traversed by ocean-going ships, provided that, on being checked, the observations are considered to be of a sufficiently high standard.

(Reference: Map of sparse areas appearing in WMO Publication No. 9, TP. 4, Volume D.)

38(Cg-IV)—Establishment of Financial Regulations of the World Meteorological Organization

The Congress,

Noting that Article 7 (I) [8 (a)] of the Convention of the World Meteorological Organization authorizes Congress to take appropriate action to further the purposes of the Organization;

Realizing the need for the establishment of Financial Regulations for the administration of the finances of the World Meteorological Organization;

Noting also the decisions taken by First Congress, Second Congress and Third Congress in Resolutions 22(I), 12(Cg-II) and 37(Cg-III) in establishing Financial Regulations for the First, Second and Third Financial Periods respectively;

Considering that a new Article 16.5 needs to be added to the Financial Regulations adopted for the Third Financial Period;

Decides that the Financial Regulations as set out in the annex to this resolution shall apply to the Fourth Financial Period commencing 1 January 1964.

NOTE: This resolution replaces Resolution 37(Cg-III) which remains in force only until 1 January 1964. This resolution remains in force only until 31 December 1967.

ANNEX

Financial Regulations of the World Meteorological Organization

ARTICLE 1

Applicability

1.1 These Regulations shall cover the financial administration of the World Meteorological Organization (hereinafter called the Organization). They may be amended only by the Congress. In the event of any conflict between any provisions of these Regulations and any provision of the Convention, the Convention shall prevail.
ARTICLE 2

The financial period

2.1 The financial period shall be four years beginning on the 1st of January of the calendar year immediately following a session of the Congress and ending on the 31st of December of the fourth year.

2.2 Notwithstanding the above provisions, the first financial period shall begin on 4th April 1951, the date of the transfer to the Organization of the functions, resources and obligations of the International Meteorological Organization, and end on the 31st of December 1955.

2.3 Nevertheless, in the event that a session of the Congress is completed before the beginning of the last full year of a financial period, a new financial period shall begin on the 1st of January following that session of the Congress.

ARTICLE 3

Maximum expenditures for the financial period

3.1 Estimates of maximum expenditures which may be incurred by the Organization in the financial period shall be prepared by the Secretary-General.

3.2 The estimates shall cover the income and expenditures for the financial period to which they relate and shall be presented in United States dollars.

3.3 The estimates shall be divided into parts, sections, chapters and articles and shall be accompanied by such informational annexes and explanatory statements as may be requested by, or on behalf of, the Congress, and such further annexes or statements as the Secretary-General may deem necessary and useful.

3.4 The estimates shall be submitted to the Executive Committee at least five weeks prior to the meeting at which they will be considered. The Executive Committee shall examine them and prepare a report on them to the Congress.

3.5 The estimates as prepared by the Secretary-General and the report of the Executive Committee on them shall be transmitted to all Members at least three months prior to the opening of the Congress.

3.6 Necessary supplementary estimates for the financial period may be submitted to the Executive Committee by the Secretary-General during the interval between the submission of the estimates to the Executive Committee and the opening of the Congress.

3.7 The Secretary-General shall prepare the supplementary estimates in the same form as that of the applicable portions of the estimates for the financial period.

3.8 When time permits, the Executive Committee shall examine the supplementary estimates and prepare a report thereon to the Congress; otherwise they shall be left for consideration by the Congress.
3.9 The maximum expenditures for the following financial period shall be voted by the Congress after consideration of the estimates and of any supplementary estimates prepared by the Secretary-General and of the reports of the Executive Committee on them.

ARTICLE 4

Authorization of appropriations for the financial period

4.1 The maximum expenditures voted by the Congress shall constitute an authorization to the Executive Committee to approve appropriations for each financial year of the financial period. The total appropriations shall not exceed the amount voted by the Congress.

4.2 Transfers between appropriation parts may be authorized by the Executive Committee, subject to the total amount of such transfers not exceeding 1 (one) per cent of the total maximum expenditure authorized for the financial period.

ARTICLE 5

The financial year

5.1 The financial year shall be the period 1st January through 31st December.

ARTICLE 6

The annual budget

6.1 The annual budget estimates shall be prepared by the Secretary-General.

6.2 The estimates shall cover income and expenditures for the financial year to which they relate and shall be presented in United States dollars.

6.3 The annual budget estimates shall be divided into parts, sections, chapters and articles and shall be accompanied by such informational annexes and explanatory statements as may be requested by, or on behalf of, the Executive Committee, and such further annexes or statements as the Secretary-General may deem necessary and useful.

6.4 The Secretary-General shall submit to the regular meeting of the Executive Committee estimates for the following financial year. The estimates shall be transmitted to all members of the Executive Committee at least five weeks prior to the opening of the regular meeting of the Executive Committee.

6.5 The budget for the following financial year shall be approved by the Executive Committee.

6.6 Supplementary estimates may be submitted by the Secretary-General whenever necessary.
The Secretary-General shall prepare these supplementary estimates in the same form as that of the applicable portions of the estimates for the financial year and shall submit such estimates to the Executive Committee for approval.

**Article 7**

**Appropriations**

7.1 The appropriations approved by the Executive Committee shall constitute an authorization to the Secretary-General to incur obligations and make payments for the purposes for which the appropriations were approved and up to the amounts so approved.

7.2 Appropriations shall be available for obligation during the financial year to which they relate.

7.3 Appropriations shall remain available for twelve months following the end of the financial year to which they relate to the extent that they are required to discharge obligations in respect of goods supplied and services rendered in that financial year and to liquidate any other outstanding legal obligation of that year. The balance of the appropriations shall be surrendered.

7.4 At the end of the twelve-months period provided in Regulation 7.3, the then remaining balance of any appropriations retained shall be surrendered. If the financial year is the last year of a financial period, any obligation of the financial period which remains a valid charge, shall then be transferred as an obligation against current appropriations.

7.5 Amounts surrendered in accordance with Regulations 7.3 and 7.4 shall be transferred to the credit of the General Fund and shall be retained for the purposes approved by the Congress for the financial period, except that amounts so surrendered for the last financial year of the financial period shall be credited, on the basis of the scale of assessments for the completed financial period to the Members of the Organization as follows:

(a) For Members who have paid in full their previous contributions, by deduction from the next assessment;

(b) For Members who have not paid in full their previous contributions, by reduction of their arrears, and thereafter by deduction from the next assessment.

7.6 A transfer between annual appropriation sections may be made by the Secretary-General subject to confirmation by the Executive Committee.

**Article 8**

**Provision of funds**

8.1 Appropriations shall be financed by contributions from Members of the Organization according to the scale of assessments determined by the Congress, such contributions to be adjusted, in accordance with the
provisions of Regulation 8.2. Pending the receipt of such contributions
the appropriations may be financed from the Working Capital Fund.

8.2 In fixing the amount of appropriations which will be charged against
Members of the Organization for each financial year, the Executive Com-
mitee shall take into account:
(a) The appropriations which the Executive Committee consider necessary
for that year including supplementary appropriations not previously
taken into account in assessing contributions;
(b) Any balance of appropriations surrendered under Regulations 7.3
and 7.4;
(c) Miscellaneous income for which credit has not previously been taken
into account and any adjustments in estimated miscellaneous income
previously taken into account;
(d) Contributions from new Members of the Organization under the pro-
visions of Regulation 8.9; provided that the Executive Committee
may, in exceptional circumstances, retain the income referred to
under sub-headings (c) and (d) above for disposal in a manner to be
determined by Congress.

8.3 After the Executive Committee has approved the annual budget and
determined the amount needed for the Working Capital Fund, the
Secretary-General shall:
(a) Transmit the relevant documents to the Members of the Organization;
(b) Inform the Members of their commitments in respect of annual con-
tributions and advances to the Working Capital Fund;
(c) Request them to remit their contributions and advances.

8.4 Contributions and advances shall be considered as due and payable
in full within thirty days of the receipt of the communication of the
Secretary-General referred to in Regulation 8.3 above, or as of the first
day of the financial year to which they relate, whichever is the later. As
of 1st January of the following financial year, the unpaid balance of
such contributions and advances shall be considered to be one year in
arrears.

8.5 Annual contributions and advances to the Working Capital Fund of
the Organization shall be assessed in United States dollars and paid in
the currency of the State in which the Organization has its headquarters.

8.6 Notwithstanding the provisions of Regulation 8.5, the Executive
Committee is empowered to fix a percentage, each year, up to which
Members who so desire may make payment in other specified currencies.
In deciding this percentage, and specifying the currencies, the Executive
Committee shall be guided by the estimate of the Secretary-General of
the probable needs of the Organization for these other currencies.

8.7 Payments made by a Member of the Organization shall be credited
first to the Working Capital Fund, then applied in chronological order to
the reduction of the contributions which are due in accordance with the scale of assessments.

8.8 The Secretary-General shall submit to the regular meeting of the Executive Committee a report on the collection of contributions and advances to the Working Capital Fund.

8.9 New Members of the Organization shall be required to make a contribution for the unexpired portion of the financial year in which they become Members and to provide their proportion of the total advances to the Working Capital Fund at rates to be determined provisionally by the Executive Committee, subject to subsequent approval by the Congress.

ARTICLE 9

Funds

9.1 There shall be established a General Fund for the purpose of accounting for the expenditures of the Organization. The contributions paid by the Members of the Organization under Regulation 8.1, miscellaneous income, and any advances made from the Working Capital Fund to finance general expenditures shall be credited to the General Fund.

9.2 There shall be established a Working Capital Fund in an amount fixed by the Congress and for purposes to be determined from time to time by the Executive Committee. The source of monies of the Working Capital Fund shall be advanced from the Members of the Organization. These advances shall be calculated by the Executive Committee in accordance with the scale of assessments for the apportionment of the expenses of the Organization, and shall be carried to the credit of those Members which have made such advances.

9.3 A Member withdrawing from the Organization shall make its contribution for the period from the beginning of the financial year in which it withdraws to and including the date of its withdrawal and shall be entitled only to the amount standing to its credit in the Working Capital Fund, less any sum due from that Member of the Organization.

9.4 Advances made from the Working Capital Fund to finance appropriations during a financial year shall be re-imburseable to the Fund as soon as and to the extent that income is available for that purpose.

9.5 Except when such advances are recoverable from some other source, supplementary estimates shall be submitted for the purpose of re-imburseing the advances made from the Working Capital Fund to cover unforeseen and extraordinary expenses or other authorized expenses.

9.6 Income derived from investments of the Working Capital Fund shall be credited to miscellaneous income.

9.7 The purpose and limits of each trust fund, reserve account and special account shall be clearly defined by the Executive Committee. Unless otherwise provided by the Congress, such funds and accounts shall be administered in accordance with these Regulations.
9.8 Trust funds, reserve accounts and special accounts may be established by the Secretary-General and shall be reported to the Executive Committee.

9.9 There shall be established a Publications Fund to meet the cost of providing for all publications of the Organization. The Fund shall be credited with:

(a) Appropriations made by Congress;
(b) Income derived from the sale of publications;
(c) Income derived from advertisements in the WMO Bulletin.

The Publications Fund shall be used only for the production of the following:

(a) Publications included in the programme approved by Congress;
(b) Other administrative publications required for the work of the Organization;
(c) The reprints of those publications of the Organization for which there is a substantial demand;
(d) Technical publications additional to the programme approved by Congress, provided that the Executive Committee is satisfied in each case that there is a real need for such publications.

The disposal of the amount standing to the credit of the Publications Fund at the end of each financial period shall be decided by Congress.

ARTICLE 10

Other income

10.1 All other income, except:

(a) Contributions to the budget;
(b) Direct refunds of expenditures made during the financial year;
(c) Advances or deposits to funds and accounts;

shall be classed as miscellaneous income, for credit to the General Fund, unless otherwise specified in accordance with Regulations 9.7 and 9.9.

10.2 Voluntary contributions, whether or not in cash, may be accepted by the Secretary-General, provided that the purposes for which the contribution is made are consistent with the policies, aims and activities of the Organization and provided that the acceptance of such contributions which directly or indirectly involve additional financial liability for the Organization shall require the consent of the Congress or, in case of urgency, of the Executive Committee.

10.3 Monies accepted for purposes specified by the donor shall be treated as trust funds or special accounts under Regulations 9.7 and 9.8.

10.4 Monies accepted in respect of which no purpose is specified shall be treated as miscellaneous income and shall be reported as “gifts” in the annual accounts.
ARTICLE 11

Custody of funds

11.1 The Secretary-General shall designate the bank or banks in which the funds of the Organization shall be kept.

ARTICLE 12

Investment of funds

12.1 The Secretary-General may make short-term investments of monies not needed for immediate requirements and shall inform the Executive Committee periodically of the investments thus made.

12.2 The Secretary-General may make long-term investments of monies standing to the credit of trust funds, reserve accounts and special accounts as may be provided by the appropriate authority in respect of each such fund or account.

12.3 Income derived from investments shall be credited as provided in the rules relating to each fund or account; otherwise the provisions of Regulation 10.1 shall apply.

ARTICLE 13

Internal control

13.1 The Secretary-General shall:

(a) Establish detailed financial rules and procedures in order to ensure effective financial administration and the exercise of economy;

(b) Cause all payments to be made on the basis of supporting vouchers and other documents which ensure that the services or goods have been received, and that payment has not previously been made;

(c) Designate the officials who may receive monies, incur obligations and make payments on behalf of the Organization;

(d) Maintain an internal financial control which shall provide for an effective current examination and/or review of financial transactions in order to ensure:

(i) The regularity of the receipt, custody and disposal of all funds and other financial resources of the Organization;

(ii) The conformity of obligations and expenditures with the appropriations or other financial provisions voted by the Congress or approved by the Executive Committee, or with the purposes and rules relating to trust funds, reserve accounts and special accounts;

(iii) The rational use of the resources of the Organization.

13.2 No obligations shall be incurred until allotments or other appropriate authorizations have been made in writing under the authority of the Secretary-General.
13.3 The Secretary-General may, with the approval of the President, make such *ex gratia* payments as he deems to be necessary in the interests of the Organization, provided that a statement of such payments shall be submitted to the Executive Committee with the annual accounts.

13.4 The Secretary-General may, after full investigation, authorize the writing off of losses of cash, stores and other assets, provided that a statement of all such amounts written off shall be submitted to the External Auditor with the annual accounts.

13.5 Tenders for equipment, supplies, and other requirements shall be invited by advertisement, except where the Secretary-General deems that, in the interests of the Organization, a departure from the rule is desirable.

**ARTICLE 14**

**The accounts**

14.1 The Secretary-General shall maintain such accounting records as are necessary and shall submit annual accounts showing for the financial year to which they relate:

(a) The income and expenditures of all funds;
(b) The status of appropriations, including:
   (i) The original appropriations;
   (ii) The appropriations as modified by any transfers;
   (iii) Credits, if any, other than the appropriations approved by the Executive Committee;
   (iv) The amounts charged against those appropriations and/or other credits.
(c) The assets and liabilities of the Organization.

He shall also give such other information as may be appropriate to indicate the current financial position of the Organization.

14.2 The annual accounts of the Organization shall be presented in United States dollars. The accounting records shall, however, be kept in the currency of the State in which the Organization has its headquarters. Subsidiary records may be kept in other currencies as necessary.

14.3 Appropriate separate accounts shall be maintained for all trust funds, reserve accounts and special accounts.

14.4 The annual accounts shall be submitted by the Secretary-General to the External Auditor not later than 28th February following the end of the financial year.

14.5 Not later than thirteen months after the ending of a financial period, the Secretary-General shall submit to the External Auditor an account of the total expenditures made in respect of that financial period.
Article 15

External audit

15.1 An External Auditor, who shall be a member of or eligible for membership of the Joint Panel of Auditors of the United Nations, shall be appointed by the Executive Committee and may be changed by it if circumstances warrant. The External Auditor shall conduct an annual audit in accordance with the principles set out in the Annex to these Financial Regulations.

15.2 The External Auditor shall submit his report to the Executive Committee by a date to be determined by the latter.

15.3 The External Auditor shall audit the account specified by Regulation 14.5 and shall submit his report thereon to the Executive Committee by a date to be determined by the latter.

15.4 The financial statement for the financial year and the account for the financial period, together with the External Auditor's certificates, shall be transmitted to the Members of the Organization by the Secretary-General.

Article 16

General provisions

16.1 In case of necessity and with the approval of the President of the Organization, the Secretary-General shall be authorized to consult Members by correspondence for the purpose of securing their agreement on financial matters which are beyond the competence of the Executive Committee.

16.2 Subject to prior consultation and agreement by two-thirds of the Members of the Organization the application of any of the Financial Regulations may be suspended by decision of the Executive Committee for a period which shall not extend beyond the next session of the Congress.

16.3 Replies to the consultations provided for in Regulations 16.1 and 16.2 must reach the Secretariat not later than 120 days after the date on which the correspondence was despatched by the Secretariat.

16.4 In case of doubt as to the interpretation or application of any of these Financial Regulations, the Secretary-General is authorized to rule thereon, subject to confirmation by the President in important cases.

16.5 The Financial Regulations do not apply to the field projects of the various technical co-operation activities of the Organization not financed by the Organization; the Secretary-General is authorized to administer those activities under Financial Regulations and Rules which may be established by the governing bodies of the organization from which the funds are made available.
(1) The External Auditor shall perform an audit of the accounts of the World Meteorological Organization, including all trust funds, reserve accounts and special accounts, as he may deem necessary in order to certify:

(a) That the financial statements are in accord with the books and records of the Organization;

(b) That the financial transactions reflected in the statements have been in accordance with the rules and regulations, the budgetary provisions, and other applicable directives;

(c) That the securities and monies on deposit and on hand have been verified by certificate received direct from the Organization's depositaries or by actual count.

(2) Subject to the provisions of the Financial Regulations, the External Auditor shall be the sole judge as to the acceptance in whole or in part of certifications by the Secretariat and may proceed to such detailed examination and verification as he chooses of all financial records, including those relating to supplies and equipment.

(3) The External Auditor may affirm by test the reliability of the internal audit, and may make such reports with respect thereto, as he may deem necessary, to the Executive Committee, or to the Secretary-General.

(4) The External Auditor and staff working under his direction shall subscribe to such oath as may be approved by the Executive Committee. Thereupon the External Auditor and his staff shall have free access at all convenient times to all books of accounts and records which are, in the opinion of the External Auditor, necessary for the performance of the audit. Information classified as confidential in the records of the Secretariat, and which is required by the External Auditor for the purposes of the audit, shall be made available on application to the Secretary-General. In the event that the External Auditor is of the opinion that a duty rests on him to draw to the attention of the Executive Committee any matter respecting which all or part of the documentation is classified as confidential, direct quotation should be avoided.

(5) The External Auditor, in addition to certifying the accounts, may make such observations as he may deem necessary with respect to the efficiency of the financial procedures, the accounting system, the internal financial controls and, in general, the financial consequences of administrative practices.

(6) In no case, however, shall the External Auditor include criticism in his audit report without first affording the Secretariat an opportunity of explanation to the External Auditor of the matter under observation. Audit objections
to any items arising during the examination of the accounts shall be immediately communicated to the Secretary-General.

(7) The External Auditor shall prepare a report on the accounts certified, in which he should mention:

(a) The extent and character of his examination of any important changes therein;

(b) Matters affecting the completeness or accuracy of the accounts, such as:
   (i) Information necessary to the correct interpretation of the account;
   (ii) Any amounts which ought to have been received but which have not been brought to account;
   (iii) Expenditures not properly substantiated;
   (c) Other matters which should be brought to the notice of the Executive Committee such as:
      (i) Cases of fraud or presumptive fraud;
      (ii) Wasteful or improper expenditure of money or other assets of the World Meteorological Organization (notwithstanding that the accounting for the transactions may be correct);
      (iii) Expenditure likely to commit the World Meteorological Organization to further outlay on a large scale;
      (iv) Any defect in the general system or detailed regulations governing the control of receipts and expenditure, or of supplies and equipment;
      (v) Expenditure not in accordance with the intentions of the Congress and/or the Executive Committee, after making allowance for duly authorized transfers within the budget;
      (vi) Expenditure in excess of appropriations as amended by duly authorized transfers within the budget;
      (vii) Expenditure not in conformity with the authority which governs it.
   (d) The accuracy or otherwise of the supplies and equipment records as determined by stock-taking and examination of the records.

In addition, the report may contain reference to:

(e) Transactions accounted for in a previous year, concerning which further information has been obtained, or transactions in a later year concerning which it seems desirable that the Executive Committee should have early knowledge.

(8) Certifications shall be made as follows:

(a) The External Auditor, or such of his officers as he may designate, shall certify the financial statement in the following terms:
   "The financial statement of the World Meteorological Organization for the financial year ended 31st December . . . . has been examined in accordance with my directions. I have obtained all the information and explanations that I have required, and I certify, as a result of the audit, that, in my opinion, the financial statement is correct."
adding, should it be necessary,

"subject to the observations in my report".

(b) When the External Auditor submits the report required by Regulation 15.3, he, or such of his officers as he may designate, shall certify the financial statement in the following terms:

"The financial statement of the World Meteorological Organization for the financial period which began .... and ended 31st December .... has been examined in accordance with my directions. I have obtained all the information and explanations that I have required and I certify, as a result of the audit, that in my opinion the financial statement is correct";

adding, should it be necessary,

"subject to the observations in my report".

(9) The External Auditor shall have no power to disallow items in the accounts, but shall draw to the attention of the Secretary-General for appropriate action any transaction concerning which he entertains doubt as to legality or propriety.

(10) The External Auditor or his representative shall be present when his report is being considered by the Executive Committee.

39(Cg-IV)—Maximum expenditures for the Fourth Financial Period

The Congress,

Noting,


(2) Article 4 of the Financial Regulations of the Organization;

Authorizes the Executive Committee,

(1) To incur expenditures of five million, three hundred and seventy-three thousand, five hundred and eighty-one United States dollars ($5,373,581) in the Fourth Financial Period of 1 January 1964 to 31 December 1967, the division of such expenditures into parts being shown in the annex to this resolution;

(2) To incur necessary expenditures resulting from any increases in Secretariat staff salaries and allowances consequent to comparable changes in the United Nations salaries and allowances during the Fourth Financial Period, such expenditures being additional to the above sum of five million, three hundred and seventy-three thousand, five hundred and eighty-one United States dollars ($5,373,581), only if the Executive Committee is satisfied that they cannot reasonably be met by economies within the approved budget;

(3) To incur any necessary expenditures during the Fourth Financial Period, additional to those covered by paragraphs (1) and (2) above, but not
FORMER CONGRESS RESOLUTIONS REMAINING IN FORCE

exceeding one hundred and fifty thousand United States dollars ($150,000) in total, which may be agreed by Members;

Delegates to the Executive Committee the authority to approve annual expenditures within these limits.

NOTE: The Executive Committee was authorized by Congress to adjust the annex, so that the maximum expenditure does not exceed the approved sum appearing in Authorization (1) above.

This resolution remains in force only until 31 December 1967.

ANNEX

Maximum expenditures for the Fourth Financial Period
(1964–1967)
(In United States dollars)

<table>
<thead>
<tr>
<th>Revenue</th>
<th>Expenditures</th>
<th>Regional representation (RA I)</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contributions . . . 5,613,581</td>
<td>I. Meetings . . . 684,190</td>
<td>25,600</td>
<td>709,590</td>
</tr>
<tr>
<td>Miscellaneous income 10,000</td>
<td>II. Personnel . . . 3,794,226</td>
<td>86,165</td>
<td>3,877,691</td>
</tr>
<tr>
<td></td>
<td>III. General services . 429,300</td>
<td>10,400</td>
<td>439,700</td>
</tr>
<tr>
<td></td>
<td>IV. Supplementary programme . 474,000</td>
<td>—</td>
<td>474,000</td>
</tr>
<tr>
<td></td>
<td>V. Other budgetary provisions . 120,700</td>
<td>1,900</td>
<td>122,600</td>
</tr>
<tr>
<td></td>
<td><strong>5,623,581</strong></td>
<td><strong>5,499,416</strong></td>
<td><strong>124,165</strong></td>
</tr>
</tbody>
</table>

Part I — Meetings

<table>
<thead>
<tr>
<th>Headquarters Geneva</th>
<th>Regional representation (RA I)</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Executive Committee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Travel of members . 62,000</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(2) Conference staff . 85,000</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(3) Overtime for Secretariat staff . 8,500</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(4) Supplies . 4,500</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(5) Equipment and services . 2,900</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(6) Travel and subsistence of presidents of technical commissions . 9,000</td>
<td>171,900</td>
<td>—</td>
</tr>
<tr>
<td>B. Regional associations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Travel and subsistence of WMO staff . 25,000</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>(2) Supplies and transportation of documents . 4,500</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(3) Interpreter services . 14,000</td>
<td>43,500</td>
<td>—</td>
</tr>
<tr>
<td>C. Technical commissions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Travel and subsistence of WMO staff . 46,200</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(2) Supplies and transportation of documents . 5,600</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(3) Interpreter services . 16,000</td>
<td>67,800</td>
<td>—</td>
</tr>
</tbody>
</table>

Carried forward — Part I . 283,200 | 1,200 | 284,400 |
<table>
<thead>
<tr>
<th>Part I</th>
<th>Headquarters</th>
<th>Regional representation</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brought forward — Part I.</td>
<td>283,200</td>
<td>1,200</td>
<td>284,400</td>
</tr>
<tr>
<td>D. Working groups and panels of experts</td>
<td>162,000</td>
<td>—</td>
<td>162,000</td>
</tr>
<tr>
<td>E. Representation of WMO at meetings of other international organizations</td>
<td>40,600</td>
<td>3,000</td>
<td>43,600</td>
</tr>
<tr>
<td>F. Travel of the President and the Secretary-General</td>
<td>12,000</td>
<td>—</td>
<td>12,000</td>
</tr>
<tr>
<td>G. Fifth Congress</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Travel (presidents of technical commissions)</td>
<td>9,350</td>
<td>1,200</td>
<td>—</td>
</tr>
<tr>
<td>(2) Conference staff</td>
<td>47,300</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(3) Overtime for Secretariat staff</td>
<td>6,900</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(4) Supplies</td>
<td>9,200</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(5) Rentals and equipment</td>
<td>13,800</td>
<td>86,550</td>
<td>1,200</td>
</tr>
<tr>
<td>H. Other expenditure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Meetings of presidents of technical commissions</td>
<td>6,840</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(2) Collaboration between presidents of technical commissions and their permanent secretaries</td>
<td>4,000</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(3) Other travel</td>
<td>5,000 *</td>
<td>20,000</td>
<td>—</td>
</tr>
<tr>
<td>(4) Four annual meetings of WMO Advisory Committee</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Travel</td>
<td>55,000</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(b) Conference staff</td>
<td>28,000</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(c) Overtime</td>
<td>84,000</td>
<td>99,840</td>
<td>20,000</td>
</tr>
<tr>
<td>Totals Part I</td>
<td>684,190</td>
<td>25,400</td>
<td>709,590</td>
</tr>
<tr>
<td>Part II — Personnel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Salaries, overtime</td>
<td>2,738,151</td>
<td>66,810</td>
<td>2,804,961</td>
</tr>
<tr>
<td>B. Common staff costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Recruitment and termination expenses, home leave</td>
<td>219,753</td>
<td>3,000</td>
<td>—</td>
</tr>
<tr>
<td>(2) Pension Fund</td>
<td>423,037</td>
<td>10,355</td>
<td>—</td>
</tr>
<tr>
<td>(3) Health insurance</td>
<td>33,842</td>
<td>700</td>
<td>—</td>
</tr>
<tr>
<td>(4) Dependency allowance and education grant</td>
<td>323,143</td>
<td>5,400</td>
<td>19,455</td>
</tr>
<tr>
<td>(5) Language courses</td>
<td>2,000</td>
<td>1,001,275</td>
<td>—</td>
</tr>
<tr>
<td>C. Secretariat assistance to the President of WMO</td>
<td>2,000</td>
<td>—</td>
<td>2,000</td>
</tr>
<tr>
<td>D. Representation allowance for Secretary-General and Deputy Secretary-General</td>
<td>13,000</td>
<td>—</td>
<td>13,000</td>
</tr>
<tr>
<td>E. Shared costs for joint services (UNJS Pension Board, housing bureau, joint administrative expenses)</td>
<td>6,800</td>
<td>—</td>
<td>4,800</td>
</tr>
<tr>
<td>F. Temporary staff, sick relief, etc.</td>
<td>32,000</td>
<td>200</td>
<td>32,200</td>
</tr>
<tr>
<td>Totals Part II</td>
<td>3,791,226</td>
<td>86,465</td>
<td>3,877,691</td>
</tr>
</tbody>
</table>

* Travel of WMO staff for regional associations' working groups.
PART III — General services

<table>
<thead>
<tr>
<th>Description</th>
<th>Headquarters Geneva</th>
<th>Regional representation (BA I)</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Hospitality</td>
<td>3,000</td>
<td>400</td>
<td>3,400</td>
</tr>
<tr>
<td>B. Stationery and office supplies</td>
<td>70,000</td>
<td>2,500</td>
<td>72,500</td>
</tr>
<tr>
<td>C. Office equipment and machines</td>
<td>47,300</td>
<td>2,000</td>
<td>49,300</td>
</tr>
<tr>
<td>D. Library</td>
<td>9,000</td>
<td>800</td>
<td>9,800</td>
</tr>
<tr>
<td>E. Communications</td>
<td>149,000</td>
<td>2,500</td>
<td>151,500</td>
</tr>
<tr>
<td>F. Premises</td>
<td>149,000</td>
<td>2,000</td>
<td>151,000</td>
</tr>
<tr>
<td>G. Other supplies and services</td>
<td>32,000</td>
<td>200</td>
<td>32,200</td>
</tr>
<tr>
<td><strong>Totals Part III</strong></td>
<td>429,300</td>
<td>40,400</td>
<td>469,700</td>
</tr>
</tbody>
</table>

PART IV — Supplementary programme

<table>
<thead>
<tr>
<th>Description</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Publication programme</td>
<td>180,000</td>
<td></td>
<td>180,000</td>
</tr>
<tr>
<td>B. Projects</td>
<td>224,000</td>
<td></td>
<td>224,000</td>
</tr>
<tr>
<td>C. Consultants</td>
<td>70,000</td>
<td></td>
<td>70,000</td>
</tr>
<tr>
<td><strong>Totals Part IV</strong></td>
<td>474,000</td>
<td></td>
<td>474,000</td>
</tr>
</tbody>
</table>

PART V — Other budgetary provisions

<table>
<thead>
<tr>
<th>Description</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Provisions for contingencies and unforeseen expenditures</td>
<td>41,700</td>
<td>1,000</td>
<td>42,700</td>
</tr>
<tr>
<td>B. External audit</td>
<td>15,000</td>
<td>450</td>
<td>15,450</td>
</tr>
<tr>
<td>C. Information services</td>
<td>30,000</td>
<td>200</td>
<td>30,200</td>
</tr>
<tr>
<td>D. Insurances and staff compensation fund</td>
<td>34,000</td>
<td>250</td>
<td>34,250</td>
</tr>
<tr>
<td><strong>Totals Part V</strong></td>
<td>120,700</td>
<td>1,900</td>
<td>122,600</td>
</tr>
<tr>
<td><strong>Totals Parts I-V</strong></td>
<td>5,499,416</td>
<td>124,165</td>
<td>5,623,581</td>
</tr>
</tbody>
</table>

* * *
Part B — Structure of the Secretariat for the Fourth Financial Period

**Regional Representation (RA-I)**
1. Technical officer
2. Secretary

**Office of the Secretary-General**
1. Personal assistant
2. Secretaries
3. Typists

**Office of the Deputy Secretary-General**
1. Secretary
2. Assistant
3. Typists

**Administration, Conferences and Publications Division**
1. Chief of Division
2. Secretary
3. Treasurer
4. Chief of Budget and Finance
5. Finance officer
6. Accountant
7. Chief Personnel Section
8. Chief Registrar
9. Chief of Division
10. Chief of Conference
11. Chief of Publications
12. Chief of Stenography
13. Chief of Language
14. Chief of Registry
15. Chief of Documents
16. Chief of Typing Pool
17. Chief of Distribution
18. Chief of Messengers
19. Chief of Telecommunications
20. Chief of Duplicating Pool
21. Chief of Minors
22. Chief of Assemblers

**Office of the Assistant Secretary-General**
1. Assistant Secretary-General
2. Librarian
3. Secretary

**Planning Unit**
1. Chief of Unit
2. Technical officers
3. Secretaries

**Technical Division**
1. Chief of Division
2. Secretary
3. Assistant
4. Technicians
5. Technicians

**Technical Co-operation Division**
1. Chief of Division
2. Secretary
3. Technical officers
4. Technicians
5. Technicians
FORMER CONGRESS RESOLUTIONS REMAINING IN FORCE

40(Cg-IV)—Maximum expenditures for the Fourth Financial Period (New Fund)

The Congress,

Noting,

(1) The increasing importance of meteorology;
(2) That the criteria laid down by the United Nations technical co-operation programmes in which the Organization participates exclude certain important meteorological projects;
(3) The need for the implementation of regional and inter-regional recommendations of the World Meteorological Organization to ensure that all countries have the necessary meteorological data for the provision of adequate meteorological services;

Considering,

(1) That funds should be provided to meet the above requirements;
(2) That the Organization has a responsibility to assist developing Member countries in the development of their meteorological services;

Directs the Secretary-General, in consultation with Members, to prepare, for the approval of the Executive Committee, an international meteorological development plan in the light of expected needs and means available;

Authorizes the Executive Committee to incur, if necessary, expenditure additional to that approved in Resolution 39(Cg-IV) on maximum expenditures for the Fourth Financial Period, as required during that period but not exceeding one million five hundred thousand United States dollars ($1,500,000) for the purpose of implementing the above-mentioned plan subject to its prior approval by the Members;

Delegates to the Executive Committee the authority to approve annual expenditures within these limits.

Note: This resolution remains in force only until 31 December 1967.

41(Cg-IV)—Review of the Working Capital Fund

The Congress,

Noting,

(1) Resolution 41(Cg-III) and Articles 8.3 and 9.2 of the Financial Regulations of the World Meteorological Organization;
(2) That the Financial Regulations provide for the establishment of a Working Capital Fund financed by advances from Members in the scale of proportional contributions to the General Fund of the Organization;
FORMER CONGRESS RESOLUTIONS REMAINING IN FORCE

Decides,
(1) That the Working Capital Fund shall continue to be maintained for the following purposes:
(a) To finance budgetary appropriations pending receipt of contributions;
(b) To advance such sums as may be necessary to cover unforeseen and extraordinary expenses which cannot be met from current budgetary provisions;

(2) (a) That all Members should bring their advances to the Working Capital Fund up to the level to be established by the Executive Committee on the basis of their proportional assessments for the Fourth Financial Period;
(b) That this will be done by additional contributions by Members as necessary during the Fourth Financial Period;

(3) That the amount which Members shall be required to advance to the Working Capital Fund during the Fourth Financial Period shall be not greater than five per cent of the maximum expenditures authorized for the four years of the same period.

Note: This resolution replaces Resolution 41(Cg-III) which will no longer be in force as from 1 January 1964. This resolution remains in force only until 31 December 1967.

42(Cg-IV)—Proportional contributions of Members

The Congress,

Noting,
(1) Resolution 40(Cg-III);
(2) Article 8.9 of the Financial Regulations of the World Meteorological Organization;
(3) That certain changes in Membership of the World Meteorological Organization have occurred during the Third Financial Period;
(4) That in some cases assessments of contributions for such Members were not made by Third Congress;

Decides,
(1) That the assessments of contributions for the Third Financial Period for the following new Members shall be as indicated below:

<table>
<thead>
<tr>
<th>Country</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burundi</td>
<td>1</td>
</tr>
<tr>
<td>Cameroon</td>
<td>2</td>
</tr>
<tr>
<td>Central African Republic</td>
<td>1</td>
</tr>
<tr>
<td>Chad</td>
<td>1</td>
</tr>
<tr>
<td>Colombia</td>
<td>4</td>
</tr>
<tr>
<td>Congo (Brazzaville)</td>
<td>1</td>
</tr>
<tr>
<td>Congo (Leopoldville)</td>
<td>7</td>
</tr>
<tr>
<td>Country</td>
<td>Units</td>
</tr>
<tr>
<td>--------------------</td>
<td>-------</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>1</td>
</tr>
<tr>
<td>Dahomey</td>
<td>1</td>
</tr>
<tr>
<td>Gabon</td>
<td>1</td>
</tr>
<tr>
<td>Honduras</td>
<td>1</td>
</tr>
<tr>
<td>Ivory Coast</td>
<td>1</td>
</tr>
<tr>
<td>Kuwait</td>
<td>1</td>
</tr>
<tr>
<td>Madagascar</td>
<td>3</td>
</tr>
<tr>
<td>Mali</td>
<td>1</td>
</tr>
<tr>
<td>Mauritania</td>
<td>1</td>
</tr>
<tr>
<td>Niger</td>
<td>1</td>
</tr>
<tr>
<td>Nigeria</td>
<td>3</td>
</tr>
<tr>
<td>Rwanda</td>
<td>1</td>
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<td>Togo</td>
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<td>Upper Volta</td>
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(2) That the proportional assessment of contributions of the United Arab Republic shall be amended as from 5 October 1961 to nine units;

(3) That the assessments in respect of each of the other Members listed above applied from the date of Membership;

Noting also that Tanganyika and Uganda formerly included in the Member Territories as British East African Territories, have become Member States of the World Meteorological Organization;

Decides,

(4) That the assessments of contributions from the dates of Membership of Tanganyika and Uganda shall be two units each; and the assessment of the former Member Territories now entitled Kenya, Zanzibar and the Seychelles, shall be two units, as from the date of Membership of Uganda;

Noting further that Trinidad and Tobago, formerly included in the Member Territories, the West Indies and other British Caribbean Territories, have become a Member State of the World Meteorological Organization;

Decides,

(5) That the assessment of contributions, from the date of Membership, of Trinidad and Tobago shall be one unit;

(6) That the assessment of contributions of the West Indies and other British Caribbean Territories (including Jamaica), as from the date of Membership of Trinidad and Tobago shall be three units, but that this shall be reduced to two units when Jamaica becomes a Member;

Noting further that certain other countries, which are not Members, may become Members of the World Meteorological Organization;
Decides,

(7) That the assessments of contributions for the Third Financial Period for the following prospective Members shall be:

- Algeria ........................................... 1 unit
- Cyprus ........................................... 1 unit
- Jamaica .......................................... 1 unit
- Mongolia ......................................... 1 unit
- Nepal ............................................. 1 unit
- Panama ........................................... 1 unit
- Somalia .......................................... 1 unit
- Yemen ............................................ 1 unit

(8) That the above-mentioned assessments for Trinidad and Tobago, Jamaica and Algeria are made subject to the assessments eventually made by the United Nations for these Members being comparable to one unit each in the World Meteorological Organization's scale of assessments for the Third Financial Period.

Note: This resolution remains in force only until 31 December 1967.

43(Cg-IV)—Scale of contributions

The Congress,


Decides,

(1) That with effect from 1 January 1964, the proportional contributions of Members shall be assessed upon a combination of the unit contributions for the Third Financial Period as amended by Congress and of a scale of units based on the assessment of contributions to the United Nations, modified to take into account the difference in membership between the two Organizations;

(2) That the combination of the two scales shall be effected by taking fifty per cent of the assessment for the Third Financial Period and fifty per cent of the assessment based on the United Nations scale for the years 1962–1964.

Note: This resolution replaces Resolution 39(Cg-III) which remains in force only until 1 January 1964.
FORMER CONGRESS RESOLUTIONS REMAINING IN FORCE

44(Cg-IV)—Assessment of proportional contributions for the Fourth Financial Period

The Congress,

Noting,


(2) Congress Resolution 43(Cg–IV);

Decides,

(1) That in the calculation of the proportional contributions of Members for the Fourth Financial Period the scale of assessment of contributions to the United Nations for the years 1962–1964 shall be used, as specified in column 3 of the table in the annex to this resolution, together with the scale of assessments for the Third Financial Period as specified in column 2;

(2) That the assessments of proportional contributions of Members for the Fourth Financial Period shall be as set out in column 4 of the table in the annex to this resolution;

(3) That except as provided below the unit assessments shown in column 4 of the table in the annex to this resolution shall remain fixed throughout the Fourth Financial Period;

Authorizes the Secretary-General to accept and implement any proposal for the adjustment of individual unit assessments submitted jointly by two or more countries, provided that the aggregate unit assessments of any countries submitting such a proposal shall remain after adjustment equal to their aggregate assessments as set out in column 4 of the table in the annex to this resolution;

Authorizes the Executive Committee to make a provisional assessment in respect of non-Member countries not listed in the annex to this resolution in the event of any such countries becoming Members, the method of assessment being based on principles similar to those governing the assessments laid down in the annex to this resolution;

Considering the units assessments of certain Members during the Third Financial Period;

Decides that irrespective of the provisions in Resolution 43(Cg–IV), the following assessments of proportional contributions shall apply for the Fourth Financial Period:

<table>
<thead>
<tr>
<th>Country</th>
<th>Assessment</th>
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<tr>
<td>Jordan</td>
<td>1 unit</td>
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<td>Madagascar</td>
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<tr>
<td>Morocco</td>
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</table>

Note: This resolution remains in force only until 31 December 1967.
FORMER CONGRESS RESOLUTIONS REMAINING IN FORCE

ANNEX

Table of proportional contributions to the World Meteorological Organization for the Fourth Financial Period

1964-1967

<table>
<thead>
<tr>
<th>Members</th>
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<th>UN scale</th>
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* See Resolution 49(Cg-IV).
* As from the date of membership of Algeria.
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### FORMER CONGRESS RESOLUTIONS REMAINING IN FORCE

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- Sierra Leone
- Singapore and the British Territories in Borneo
- South Africa
- Spain
- Spanish Territories of Guinea
- Sudan
- Surinam
- Sweden
- Switzerland
- Syria
- Tanganyika
- Thailand
- Togo
- Trinidad and Tobago
- Tunisia
- Turkey
- Uganda
- Ukrainian S.S.R.
- Union of Soviet Socialist Republics
- United Arab Republic
- United Kingdom
- United States of America
- Upper Volta
- Uruguay
- Venezuela
- Viet-Nam, Republic of
- West Indies and other British Caribbean Territories
- West Irian
- Yugoslavia

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</tbody>
</table>

1,143 1,142 1,141

* See Resolution 42(Cg-IV).

### 45(Cg-IV)—IMO Fund

The Congress,

Noting Resolution 44(Cg-III);

Decides,

(1) That the IMO Fund, established in accordance with the provisions of Resolution 44(Cg-III), shall be maintained and that its monies shall be invested in first class securities;

(2) That of the total capital of the IMO Fund, fifty thousand United States dollars ($50,000) shall be set aside, and the interest received from the investment thereof shall be utilized in the following manner:

(a) Ten per cent shall revert to the capital of the fund;
FORMER CONGRESS RESOLUTIONS REMAINING IN FORCE

(6) The remainder shall be used to award an IMO Prize for outstanding work in the field of meteorology;

(3) That the balance of the interest shall be used towards the payment of an honorarium to establish an IMO lecture to be delivered at each Congress;

Requests the Executive Committee to make the arrangements with regard to the IMO Prize and the IMO Lecture.

NOTE: This resolution replaces Resolution 44(Cg-III) which is no longer in force.

46(Cg-IV)—Attendance at Congress of presidents of technical commissions at the expense of the Organization

The Congress,

Noting,

(1) Article 19(d) [19(d)] of the Convention of the World Meteorological Organization;

(2) Resolution 32(EC-X);

Decides,

(1) That it is desirable for the presidents of the technical commissions to participate in the meetings of Congress and that invitations shall, therefore, be extended to them to attend each session in that capacity;

(2) That, except under the conditions mentioned in paragraph (4) below, the travel and subsistence expenses of the presidents of technical commissions for attendance at meetings of Congress shall be borne by the Organization;

(3) That the class of accommodation during travel and the rate of per diem of subsistence allowance, during travel and during the period of attendance at Congress, shall be the same as that established for attendance of such presidents at sessions of the Executive Committee, i.e. the rates established for staff members of the United Nations in the equivalent rank of the Deputy Secretary-General of the World Meteorological Organization;

(4) That the travel and subsistence expenses mentioned in paragraphs (2) and (3) above shall not be paid by the Organization if the president of the technical commission is also included in the delegation of a Member to that session of Congress.
ANNEX I

Annex to paragraph 3.1.10 of the General Summary

Proposal of amendment to Article 3 of the Convention

To amend Article 3 — Members — to read:

"ARTICLE 3

Members

The Members of the Organization shall comprise:

(1) Those States which have deposited an instrument of ratification or accession in accordance with Article 31 or Article 32 of the present Convention, on or before 28 April 1967;

(2) Those territories or groups of territories to which the Convention has been applied, in accordance with Article 33 of the present Convention, by the States responsible for their international relations, on or before 28 April 1967;

(3) Any other State, territory or group of territories, having a Meteorological Service, which accedes after 28 April 1967, or to which the present Convention is applied after that date, in accordance with the procedure prescribed hereunder:
   (a) For a Member of the United Nations, in accordance with Article 32;
   (b) For a State, fully responsible for the conduct of its international relations but not a Member of the United Nations, in accordance with Article 32, after presentation to the Secretary-General of the Organization of a request for Membership and approval of this request by two-thirds of the Members of the Organization which are States;
   (c) For any territory or group of territories which is not responsible for the conduct of its international relations; in accordance with Article 33, after presentation to the Secretary-General of the Organization, by the State responsible for its international relations, of a request for Membership and approval of this request by two-thirds of the Members of the Organization which are States.

(4) Any trust territory or group of trust territories having a Meteorological Service and administered by the United Nations to which the present Convention is applied in accordance with Article 33.

Any request for Membership in the Organization shall state under which of the foregoing sub-paragraphs Membership is sought."
ANNEX II
Annex to paragraph 4.1.1.8 of the General Summary

Broad principles to be considered by recipient countries in establishing their requests for assistance under the Technical Assistance component of the United Nations Development Programme

The Congress of the World Meteorological Organization during its fifth session held in Geneva in April 1967 reviewed the broad principles which the Executive Committee of the World Meteorological Organization had established for the preparation of programmes under the previous Expanded Programme of Technical Assistance. It decided that the following revised version of the broad principles should be brought to the attention of countries receiving technical assistance which may use them in preparing their requests for assistance under the Technical Assistance component of the United Nations Development Programme:

(a) Bearing in mind the importance of the practical applications of meteorology to aviation, agriculture, shipping and water resources development, governments should ensure that adequate meteorological services are provided in their countries. Where it is not possible to provide these services from national resources, governments should seek assistance from the Technical Assistance component of UNDP, noting however that this programme is limited to certain types of assistance.

(b) Governments are reminded that assistance under the Technical Assistance component of UNDP in the field of meteorology can only be given if governments themselves include meteorological projects in their country’s UNDP programme. Because of the vital importance of meteorology in the development of a country’s aviation, agriculture, shipping and water resources, governments requiring assistance should ensure that meteorological projects are included in their programme requests.

(c) Where necessary, countries should ask for assistance in the establishment and maintenance of the network of meteorological stations recommended by WMO in so far as this is possible within the established procedures.

(d) Attention should be given to any assistance needed in the field of meteorological telecommunications with particular reference to the establishment and maintenance of telecommunications facilities for meteorological purposes.

(e) The World Meteorological Organization is introducing a new world weather system known as World Weather Watch (WWW) to include the use of satellite as well as conventional meteorological data and their rapid exchange through world and regional centres. This scheme is being developed in
accordance with Resolutions 1721(XVI), 1802(XVII) and 1963(XVIII) of the General Assembly of the United Nations wherein the World Meteorological Organization in consultation with other agencies was requested to develop a programme to advance atmospheric science research and to develop improved weather forecasting capabilities in the light of developments in outer space. The World Weather Watch will help national Meteorological Services to meet the requirements of their respective countries more effectively and more efficiently. Therefore, when requesting technical assistance in the field of meteorology, countries should include projects to further the implementation of the World Weather Watch, as necessary.

(f) Particular attention should be given to adequate training in all categories of meteorological personnel including those responsible for instruments and equipment. Requests for the award of fellowships for training in other countries and for appropriate experts as instructors should be submitted as required.

(g) In all countries which have a National Development Plan it is important to check that meteorological requirements involved in the execution of the plan have been considered. If it is found that detailed meteorological advice is a requirement, and that arrangements for such advice have not been made, then appropriate requests for assistance will evidently need to be submitted to WMO to ensure that the National Development Plan is not endangered. For instance, if it is planned to construct a dam it should be ensured that the necessary meteorological and hydrological data for the planning of the dam are available, or if, for instance, in the field of civil aviation plans for jet operations are developed, it should be ensured that the necessary facilities for upper-air observations and high-level forecasting be developed at the same time.

Technical advice as to the extent to which meteorology is involved in many activities such as agriculture, aviation, shipping, etc., may be obtained from the Secretariat of WMO upon request. The assistance of the Secretariat is also available in the formulation of project requests including advice on the steps to be taken for obtaining approval by the United Nations Development Programme.
ANNEX III
Annex to Resolution 3(Cg-V)

Amendments to the Convention

1. Amend the text of Article 2—Purposes—paragraph (d) to read:

“(d) To further the application of meteorology to aviation, shipping, water problems, agriculture, and other human activities; and”

2. Insert a new Article in Part IV of the Convention entitled “Organization”, after the present Article 4 to read:

“ARTICLE 5

The activities of the Organization and the conduct of its affairs shall be decided by the Members of the Organization.

(a) Such decisions shall normally be taken by Congress in session;

(b) However, except on matters reserved in the Convention for decisions by Congress, decisions may also be taken by Members by correspondence, when urgent action is required between sessions of Congress. Such a vote shall be taken upon receipt by the Secretary-General of the request of a majority of the Members of the Organization, or when so decided by the Executive Committee. Such votes shall be conducted in accordance with Articles 11 and 12 of the Convention and with the General Regulations (hereinafter referred to as the “Regulations”)."

The addition of this new Article requires all following Articles to be renumbered and all references to these Articles throughout in the Convention to be corrected accordingly.

3. Amend Article 9*—Meetings—to read:

“ARTICLE 10

Sessions

“(a) Congress shall normally be convened at intervals as near as possible to four years, at a place and on a date to be decided by the Executive Committee;

(b) An extraordinary Congress may be convened by decision of the Executive Committee;

(c) On receipt of requests for an extraordinary Congress from one-third of the Members of the Organization, the Secretary-General shall conduct a vote by correspondence and if a simple majority of the Members are in favour, an extraordinary Congress shall be convened.”
Also as a consequence of this amendment, add Article 10 (e) to the enumeration of Articles contained in the last sentence of paragraph (b) of Article 10 * — Voting.

4. Amend the first sentence of Article 13 * — Functions (in Part VII — The Executive Committee) to read:

"The Executive Committee is the executive body of the Organization and is responsible to Congress for the co-ordination of the programmes of the Organization and for the utilization of its budgetary resources in accordance with the decisions of Congress."

5. Insert the following new sub-paragraph (b) in the text of Article 13 * — Functions (in Part VII — The Executive Committee) and change the letters identifying the present sub-paragraphs (b), (c), (d), (e), (f) and (g) accordingly:

"(b) To examine the programme and budget estimates for the following financial period prepared by the Secretary-General and to present its observations and its recommendations thereon to Congress."

6. Insert in Article 15 * — Voting (in Part VII — The Executive Committee) the following new paragraph as paragraph (b):

"Between sessions, the Executive Committee may vote by correspondence. Such votes shall be conducted in accordance with Articles 16 (a) and 17 of the Convention."

7. Amend Article 32 * to read:

"ARTICLE 33

Subject to the provisions of Article 3 of the present Convention, accession shall be effected by the deposit of an instrument of accession with the Government of the United States of America, which shall notify each Member of the Organization thereof."
ANNEX IV
Annex to Resolution 4(Cg-V)

List of amended or new General Regulations

Notes:
1. The column headed old numbering shows the numbers of the regulations modified or adopted by Fifth Congress from the 1963 edition of publication WMO – No. 15. BD. 1.
2. The column headed new numbering shows the numbers of the regulations in the 1967 edition of publication WMO – No. 15. BD. 1.

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Regulation 30

Any constituent body may establish working groups to act until the next session of that constituent body. The terms of reference of such working groups shall be established by the constituent body and shall be within the terms of reference of that body. Membership need not be restricted to members of the constituent body. When a working group is established during a session, the constituent body may select the members and/or invite designated Members to do so. The constituent body may select the chairman of the working group or authorize its President to do so.

In cases of urgency and subject to the authorization of the Executive Committee, the President of a Regional Association or Technical Commission may, between sessions, establish any working group of the constituent body that may be deemed useful by him and select its chairman.
ANNEX IV

Regulation 30a

A member of a working group selected by a constituent body or its President in accordance with Regulation 30 may be replaced on the working group only by decision of that constituent body, except that, in case of urgency, the President of the constituent body may do so. A member of a working group selected by a Member of the Organization may be replaced only by decision of that Member.

Regulation 32

An invitation to any person in accordance with Regulations 30, 30a and 31 to participate in the work of a working group shall be addressed by the President of a constituent body to the Permanent Representative of the country in which the person lives for onward transmission to the person if the Permanent Representative approves of such invitation.

Regulation 33

Expenses of attendance of members of working groups of constituent bodies at sessions of these groups shall normally be borne by the Members to which those members belong.

However a session of a working group of a constituent body or of a panel of experts appointed by the Executive Committee may be financed by the Organization by decision by Congress or the Executive Committee, provided that the questions to be dealt with:

1. Are of general interest to the Organization;
2. Are such as to necessitate the services of individual experts specially chosen in view of their specialized knowledge or to represent a regional interest, rather than the services of representatives chosen on a national basis;
3. Are such that they cannot be solved by correspondence; and
4. Are considered by Congress or the Executive Committee as having high priority.

Regulation 40a

Notwithstanding Regulation 30, a working group may be dissolved at any time by the constituent body that established it if that body considers that it has completed its task or is not able to proceed further.

Regulation 48

On receipt of an invitation for the Organization to be represented at a session of another international organization or one of its constituent bodies, or at a joint session of a similar nature, the Secretary-General shall consult the President of the Organization and the Presidents of the Regional Associations and Technical Commissions most directly concerned, if any, as to whether the invitation shall be accepted and, if so, who shall represent the Organization.
However, the Secretary-General may decline any invitation without such consultations when the session concerned is obviously of little interest to the Organization.

**Regulation 49**

In case of an invitation to a session or joint session convened to discuss matters which relate to the field of responsibility of an Association or a Commission of the Organization, if it is decided to accept the invitation, the representative or representatives of the Organization shall normally be the President or Vice-President of the Association or the Commission most directly concerned or an official of the Secretariat designated by the Secretary-General. However, a competent person or persons located in or near the place where the session is to be held may be designated, with the approval of the Permanent Representative of the country in which the person lives, to represent the Organization. Representation at sessions shall be kept to the minimum consistent with the aims of the Organization.

**Regulation 61**

Between sessions any question within the terms of reference of a constituent body which, in the opinion of its President, could be solved by correspondence, may be submitted to a vote by correspondence subject to the following provisions:

(a) A vote by correspondence by Members of the Organization, when Congress is not in session, shall be taken only on matters which are not reserved in the Convention for decision by Congress in session and Articles 10* and 11* of the Convention shall apply in any such vote by correspondence;

(b) In a vote by correspondence by members of the Executive Committee, Article 15* of the Convention shall apply;

(c) In a vote by correspondence, upon a proposal before a Technical Commission, the votes shall be cast by the Permanent Representatives of the Members represented on the Commission.

**Regulation 61 a**

Votes by correspondence, other than an election, shall be preceded by an exchange of opinion in the following cases:

(a) If the President of the constituent body so decides;

(b) If any of those entitled to vote requests such action within thirty days of the date of dispatch of the request to vote;

(c) If the question put to the vote falls within one of the following categories:

(i) Questions leading to changes in the Technical Regulations;

(ii) Questions affecting the Organization’s programme;

* These Articles will appear as Articles 11, 12 and 16 in the 1967 edition of the *Basic Documents.*
(iii) Questions affecting the relations between the Organization and another intergovernmental body or an organization with which WMO has defined its relations;

(iv) Proposals whose implementation, if they are accepted, would call for extensive or costly action on the part of Members.

In the case of a Technical Commission the exchange of opinion shall be between the Members represented on the Commission.

**Regulation 61 b**

The President of a constituent body, when requesting opinions in accordance with Regulation 61 a, shall present any available information for and against the proposal, suggest, whenever appropriate, a date for implementation of the proposal if it is adopted, and indicate a time limit for the receipt of comments on the proposal.

**Regulation 61 c**

Any proposal submitted to a vote by correspondence shall be arranged so that independent questions are voted on separately.

**Regulation 61 d**

The provisions applicable to a vote by correspondence shall be those in force on the date of dispatch of the request to vote.

**Regulation 62**

A vote, in any vote by correspondence, including an election, shall be valid only if the voting slip:

(a) Is received by the Secretary-General not more than ninety days after the date of dispatch of the request to vote;

(b) Has been signed on behalf of the Minister for Foreign Affairs of the Member or, in the case of those matters to which the provisions of General Regulation 6 apply, by the Permanent Representative of the Member or a person authorized to sign on behalf of the Permanent Representative and designated as such to the Secretary-General.

The Secretary-General shall determine whether a voting slip is valid or not.

**Regulation 63**

(a) Except in Technical Commissions, the quorum for voting by correspondence within a constituent body shall equal the quorum required for a meeting of that body.

(b) The quorum for voting by correspondence within Technical Commissions shall be a majority of the number of Members represented on that Commission.
(c) If the number of replies received by the Secretary-General during the ninety-day period referred to in Regulation 62 does not reach the quorum required for voting by correspondence, the motion shall be considered as lost.

**Regulation 63 a**

All votes by correspondence including elections shall be conducted by the Secretary-General. At least two senior officials of the Secretariat shall be designated by the Secretary-General to check and count the voting slips received. A statement certifying the results of the ballot shall be established and signed by these officials after such a count. The voting slips shall be retained by the Secretary-General for a period of a hundred and eighty days after the close of the ballot and then destroyed.

**Regulation 63 b**

The President of a constituent body may approve a proposal on behalf of that body, without a vote by correspondence, under the following conditions:

(a) When presenting the proposal to the constituent body, he shall have indicated his intention to do so, provided that no objection is expressed;

(b) A period of ninety days from the date of the issue of the circular letter presenting the proposal shall have been allowed for replies;

(c) No objection shall have been received within that ninety-day period from any of those entitled to vote.

**Regulation 69**

A separate election shall be held for each office in the order of President, First Vice-President, Second Vice-President, Third Vice-President and other offices. Each place on the Executive Committee shall be filled by separate election.

**Regulation 73**

When it is decided to hold elections by correspondence, the Secretary-General shall invite those entitled to vote to nominate in advance candidates for the place to be filled. The President who requested the election shall decide on the duration of the period which shall not be less than forty-five days, during which nominations of candidates will be received.

**Regulation 73 a**

Before proceeding with the election, the Secretary-General shall ascertain that each person whose name has been submitted is willing to be included among the candidates for election, after which he shall establish the final list of candidates.

When the list of candidates contains only one name, this candidate shall be declared elected.
In addition to exercising any power conferred upon him elsewhere in these Regulations, the Presiding Officer shall open and close the meetings, direct the discussions, ensure the observance of the provisions of the Convention and of the Regulations applicable to the body concerned, accord the right to speak, put questions to the vote and announce decisions. The Presiding Officer shall have control over the proceedings and the maintenance of order at its meetings. He shall rule on points of order and shall have, in particular, the power to propose adjournment or closure of the debates or adjournment or suspension of meetings.

**Regulation 88 a**

Any document intended for consideration in a plenary meeting shall be distributed to participants in the session at least eighteen hours before the opening of the plenary meeting at which it will be discussed.

**Regulation 91**

After the close of a session of a constituent body, an Abridged Final Report of the session, comprising a General Summary of the work and the text of all resolutions, and, in the case of a Regional Association or a Technical Commission, all recommendations, which were adopted at the session, shall be published by the Secretariat with a minimum of delay.

**Regulation 95**

The President of a Regional Association, after ascertaining the requirements of the Members concerned, shall notify the Secretary-General, at least one hundred and eighty days before the opening of each session of Congress, of the working languages which will be required at sessions of that Association during the following financial period.

When the membership of a working group of a Regional Association has been completed, the President of the Association shall notify the Secretary-General of the working languages that will be required for sessions, if any, of that working group.

**Regulation 96**

The four official and working languages shall be used in the Technical Commissions and their committees.

When the membership of a working group of a Technical Commission has been completed, the President of the Commission shall notify the Secretary-General of the working languages that will be required for sessions, if any, of that working group.

*This Regulation is to be included in the Section of the General Regulations entitled "Records and documents".*
Regulation 102

A Member which is unable to give effect to a requirement in a technical resolution which has been adopted by Congress, or by the Executive Committee on behalf of Congress, and to which the provisions of Article 8 (b)* of the Convention and of these Regulations have been specifically stated to apply, shall so inform the Secretary-General in writing within a period of ninety days after the notification of the decision by the latter. The Member concerned must indicate, in its communication to the Secretary-General, whether its inability to give effect to the resolution is provisional or final and state its reasons therefor.

Members shall specifically notify the Secretary-General in writing of their intention to apply the "standard practices" of the Technical Regulations except for those for which they lodge specific deviations. Members shall also inform the Secretary-General, at least three months in advance, of any change in the degree of their implementation of a "standard practice" as previously notified and of the effective date of the change.

Regulation 105 a

The Presidents of all Technical Commissions shall normally be invited to attend each session of Congress for an appropriate period, the cost of their transportation and subsistence to be borne by the Organization.

Regulation 127 a

In accordance with Article 18 (d)* of the Convention, the President of any Technical Commission may participate in sessions of the Executive Committee; the cost of travel and subsistence for an appropriate period shall be met by the Organization in the case of a President whose attendance is considered to be necessary by the Executive Committee.

Regulation 136

(a) Any decision of an Association which requires implementation by Members of the Association only or which concerns only the internal activities of the Association, such as its future work programme, the establishment and terms of reference of working groups, or the designation of a rapporteur, shall be recorded in the form of a resolution, provided that such resolution is not in conflict with the provisions of the Convention, the regulations of the Organization or any previous decision of Congress or the Executive Committee.

(b) Any decision of an Association which is intended to convey information, an opinion or a request to another Association or a Technical Commission or which gives directives to a working group (other than its terms of reference), to the officers of the Association or to any individual who has been designated to undertake a task for the Association, shall be recorded in the General Summary of the Abridged Final Report of the session.

* These Articles will appear as Articles 9 and 19 in the 1967 edition of the Basic Documents.
Any decision of an Association on any other matter, including proposals for changes in regional practices which require reconsideration or modification of a previous decision of Congress or the Executive Committee, proposals for Secretariat action and proposals intended for consideration by a body outside the Organization, shall be recorded only as a recommendation to Congress or the Executive Committee.

**Regulation 137**

For the purpose of Article 17(a)* of the Convention, a Member of the Organization has the right to belong to an Association if the Member is exclusively responsible, technically and financially, for the maintenance of a network of meteorological stations lying in or extending into the geographical limits of the Region concerned, provided that such stations are situated on the territory of the Member.

**Regulation 137a**

The Secretary-General shall invite new Members of the Organization to declare the Regional Associations of which they consider themselves to be Members under the conditions of Article 17(a)* of the Convention.

The Secretary-General shall report to the Executive Committee, if necessary, on any difficulties that arise.

Any question or dispute concerning Membership of a Regional Association shall be referred to Congress or, if the Executive Committee so decides, to the Members of the Organization, for decision by a vote by correspondence.

**Regulation 139**

The duties of the President of an Association shall be:

1. To preside over the sessions of the Association;
2. To guide and co-ordinate the activities of the Association and its working groups between sessions of the Association;
3. To carry out such specific duties as are prescribed by decisions of Congress and the Executive Committee and by the regulations of the Organization;
4. To ensure that the activities, recommendations and resolutions of the Association are in accordance with the provisions of the Convention, decisions of Congress and the Executive Committee and the regulations of the Organization;
5. To present the views of the Association to Congress at its regular sessions and to the Executive Committee at its sessions;
6. To arrange for appropriate representation of the Association in sessions of other Associations, if necessary;

* This Article will appear as Article 18 in the 1967 edition of the Basic Documents.
(7) To conduct, either directly or through the Secretary-General on behalf of the Association, correspondence on matters relating to the activities of the Association;

(8) To maintain files of his official correspondence as President of an Association, and to send copies of this correspondence to the Secretary-General.

Regulation 142

Sessions shall normally be held at intervals not exceeding four years. The Secretary-General shall draw up a provisional programme of sessions of Regional Associations in consultation with the Presidents of the Associations and the President of the Organization. The co-ordinated programme of sessions shall be sent to Members prior to the session of Congress, whenever they are invited to act as host countries for one or more sessions of constituent bodies. The time and place of an extraordinary session shall be determined by the President of the Association in agreement with the President of the Organization.

Regulation 150

(a) Any decision of a Commission which concerns only the internal activities of the Commission, such as its future work programme, the establishment and terms of reference of a working group or the designation of a rapporteur, shall be recorded in the form of a resolution, provided that such resolution is not in conflict with the provisions of the Convention, the regulations of the Organization or any previous decision of Congress or the Executive Committee.

(b) Any decision of a Commission which is intended to convey information, an opinion or a request to a Regional Association or another Commission or which gives directives to a working group (other than its terms of reference), to the officers of the Commission or to any individual who has been designated to undertake a task for the Commission, shall be recorded in the General Summary of the Abridged Final Report of the session.

(c) Any decision of a Commission on any other matter including proposals for Secretariat action and proposals intended for consideration by a body outside the Organization, shall be recorded only as a recommendation to Congress or the Executive Committee.

Regulation 153

The duties of the President of a Commission shall be:

(1) To preside over sessions of the Commission;

(2) To guide and co-ordinate the activities of the Commission and its working groups between sessions of the Commission;

(3) To carry out such specific duties as are prescribed by decisions of Congress and the Executive Committee and by the regulations of the Organization;

(4) To ensure that the activities, recommendations and resolutions of the Commission are in accordance with the provisions of the Convention, decisions
of Congress and the Executive Committee and the regulations of the Organization;

(5) To report to Congress at its regular sessions on the activities of the Commission;

(6) To present the views of the Commission at sessions of the Executive Committee which he may be called upon to attend;

(7) To conduct, either directly or through the Secretary-General on behalf of the Commission, correspondence on matters relating to the activities of his Commission;

(8) To maintain files of his official correspondence as President of a Commission and to send copies of this correspondence to the Secretary-General.

Regulation 154

Sessions shall normally be held at intervals not exceeding four years. The Secretary-General shall draw up a provisional programme of sessions of Technical Commissions in consultation with the Presidents of the Commissions for co-ordination by the Executive Committee at its last session before a session of Congress. The co-ordinated programme of sessions shall be sent to Members prior to the sessions of Congress, whenever they are invited to act as host countries for one or more sessions of constituent bodies. The time and place of an extraordinary session shall be determined by the President of the Commission after consultation with the Secretary-General.

Procedures for the appointment of the Secretary-General

Regulation 164

When in the appointment of the Secretary-General it is necessary to choose between two or more persons the following procedures shall be used:

(a) Each principal delegate, or his alternate, of the Members represented in Congress shall be asked to indicate the candidate he prefers by writing the candidate's name on the voting slip. All candidates who fail to receive a vote and the candidate who receives the smallest number of votes shall be struck from the list of candidates. In the event of more than two candidates receiving the smallest number of votes, a separate vote of preference shall be taken and the candidate who receives the least number of votes shall be eliminated from the list and the others retained. If in this separate vote of preference more than one candidate receives the smallest number of votes, all these candidates shall be eliminated from the list.

(b) The procedures described in paragraph (a) shall then be repeated with the reduced list of candidates.

(c) This procedure shall continue until one candidate (the "preferred" candidate) remains on the list.
(d) A proposal shall then be submitted to Congress that the "preferred" candidate be declared appointed. Such a proposal shall be supported by a two-thirds majority of the votes cast for and against in order to be adopted.

(e) If, at any stage during the voting procedure described in paragraphs (a) to (e) above, a candidate receives a two-thirds majority of the votes cast for and against, he shall be declared appointed and no further votes shall be taken.

(f) In the event of the two final candidates in the indication-of-preference procedure receiving the same number of votes, a further vote shall take place.

(g) In the event that the proposal, described in paragraph (d), is not supported by a two-thirds majority of the votes cast for and against, a further vote shall take place.

(h) In the event of the further votes described in paragraphs (f) and (g) being indecisive, Congress shall decide whether further voting shall take place, whether a new procedure shall be followed, or whether its decision shall be withheld.

Amended text of Annex II to the General Regulations

TECHNICAL COMMISSIONS

The Technical Commissions of the World Meteorological Organization established by Congress are as follows:

1. Commission for Synoptic Meteorology (CSM)
2. Commission for Climatology (CCl)
3. Commission for Instruments and Methods of Observation (CIMO)
4. Commission for Atmospheric Sciences (CAS)
5. Commission for Aeronautical Meteorology (CAeM)
6. Commission for Agricultural Meteorology (CAgM)
7. Commission for Hydrometeorology (CHy)
8. Commission for Maritime Meteorology (CMM)

and their terms of reference are as indicated below.

General terms of reference

Within its field of responsibility as hereunder defined, and within the provisions of these Regulations, each Technical Commission shall:

1. Advise Congress and any other constituent body of the Organization on the relevant aspect of any meteorological question;
2. Maintain, through approved channels, close co-operation in technical matters with other relevant international organizations;
3. Make such recommendations, as it may consider necessary.
Individual terms of reference

The fields of responsibility of the respective Technical Commissions shall be as follows:

1. **Commission for Synoptic Meteorology (CSM)**
   
   The Commission shall be responsible for:
   
   (a) Keeping abreast of and promoting meteorological developments, both in scientific and practical fields, relating to synoptic meteorology and bringing these to the attention of other relevant constituent bodies;
   
   (b) Standardizing methods, procedures and techniques in synoptic meteorology;
   
   (c) Co-ordinating in its special field the requirements specified by other Technical Commissions and, as appropriate, by Regional Associations, and arranging for these requirements to be met efficiently and economically;
   
   (d) Formulating observational requirements for synoptic meteorology;
   
   (e) Co-ordinating matters relating to global observational systems including those aspects of concern to other Technical Commissions;
   
   (f) Preparing code forms and tables of specifications for all meteorological purposes;
   
   (g) Preparing systems of meteorological identification and index numbers;
   
   (h) Considering questions relating to networks of surface and upper-air stations and times of observation for synoptic purposes;
   
   (i) Standardizing scales, projections and layouts of synoptic charts and diagrams;
   
   (j) Standardizing the graphical representation of information on charts and diagrams used in synoptic meteorology;
   
   (k) Co-ordinating matters relating to global data-processing systems including those aspects of concern to other Technical Commissions;
   
   (l) Co-ordinating international requirements and the arrangements for international exchange and dissemination of data, analyses, forecasts and warnings, including questions relating to meteorological information from satellites;
   
   (m) Promoting studies of methods and techniques suitable for analysis and forecasting (short, medium and long range), including numerical forecasting;
   
   (n) Considering questions relating to global telecommunications systems, schedules and operational procedures;
   
   (o) Considering questions relating to radio frequencies for transmitting meteorological messages and aids, in particular instrumental aids;
   
   (p) Considering questions relating to specialized training in the field of synoptic meteorology, including meteorological telecommunications.
(2) **Commission for Climatology (CCl)**

The Commission shall be responsible for:

(a) Keeping abreast of and promoting meteorological developments, both in scientific and practical fields, relating to climatology and bringing these to the attention of other relevant constituent bodies;

(b) Standardizing methods, procedures and techniques in climatology;

(c) Co-ordinating in its special field the requirements specified by other Technical Commissions and, as appropriate, by Regional Associations and arranging for these requirements to be met efficiently and economically;

(d) Formulating observational requirements for climatological investigations of surface and upper-air conditions;

(e) Considering questions relating to the network of stations required for climatological investigations of surface and upper-air conditions;

(f) Considering questions relating to processing for climatological purposes of the data collected from meteorological satellites;

(g) Considering questions relating to the reliability and homogeneity of climatological observations;

(h) Standardizing the forms of recording and exchanging climatological observations and other original meteorological data for climatological purposes;

(i) Considering questions relating to the climatological aspects of exchange, quality control, storage and retrieval of data collected from global observational systems;

(j) Standardizing the methods of computation of climatological data for research and publication (means, ranges, frequencies, correlations, periodicities, probabilities, etc.);

(k) Considering questions relating to the application of climatological data to forecasting;

(l) Considering questions relating to the application of climatological data to man, his comfort and his activities;

(m) Considering questions relating to microclimatological observations and data;

(n) Formulating requirements for the dissemination of climatological data;

(o) Promoting the study of the climate of the world on a global scale;

(p) Considering questions relating to specialized training of meteorological personnel in the field of climatology.

(3) **Commission for Instruments and Methods of Observation (CIMO)**

The Commission shall be responsible for:

(a) Keeping abreast of and promoting meteorological developments, both in scientific and practical fields, relating to meteorological instruments and methods of observation, as specified below, and bringing these to the attention of other relevant constituent bodies;
(b) Co-ordinating in its special field the requirements specified by other Technical Commissions and, as appropriate, by Regional Associations and arranging for these requirements to be met efficiently and economically;

c) Examining international aspects of meteorological instruments and methods of observation. To fulfil this responsibility it should in particular:

(i) Advise on types, characteristics, accuracies and performance of meteorological instruments;

(ii) Promote the international comparison and standardization of meteorological instruments;

(iii) Study and recommend methods of observation, including the corrections to be applied but excluding the reduction of data unless there is a particular requirement common to more than one Commission;

(iv) Promote research and development projects relating to meteorological instruments and methods of observation including, where necessary, the preparation of appropriate technical plans and financial estimates;

(d) Providing advice to other Technical Commissions concerning meteorological instruments and methods of observation in order to meet the requirements formulated by these Commissions;

(e) Examining aspects of special instruments and methods of observation which are the sole concern of another Commission if specifically requested to do so;

(f) Studying the developments in the field of instrumentation generally with a view to their adaptation for meteorological purposes;

(g) Encouraging the interchange of information between Members concerning their respective research and development projects on meteorological instruments and methods of observation;

(h) Promoting research and development in the field of automatic observation;

(i) Considering questions relating to specialized training of meteorological personnel on instruments and methods of observation.

4 Commission for Atmospheric Sciences (CAS)
The Commission shall be responsible for:

(a) Keeping abreast of and promoting scientific meteorological developments relating to studies of the atmosphere, and bringing these to the attention of other relevant constituent bodies;

(b) Standardizing methods, procedures and techniques where appropriate in atmospheric research;

(c) Considering questions relating to research in physics, dynamics and chemistry of the atmosphere, especially with a view to:

(i) The maintenance of a continuous review of current research;

(ii) The promotion and co-ordination of research and exchange of information;

(iii) The establishment of requirements of research, especially as regards observations and publications;
(d) Carrying out a scientific evaluation of technical meteorological procedures;
(e) Standardizing and tabulating physical functions and constants;
(f) Standardizing nomenclatures and classifications in physical and dynamic meteorology;
(g) Considering questions relating to the advanced training of meteorological personnel in the physics, dynamics and chemistry of the atmosphere;
(h) Formulating observational requirements for atmospheric research;
(i) Considering questions relating to the storage, retrieval and exchange of data for research.

(5) **Commission for Aeronautical Meteorology (CAeM)**

The Commission shall be responsible for:

(a) Keeping abreast of and promoting meteorological developments, both in scientific and practical fields, relating to aeronautical meteorology and bringing these to the attention of other relevant constituent bodies;
(b) Studying the requirements in the field of aeronautical meteorology and arranging so far as possible for these requirements to be met either by its own action or, when co-ordination is necessary, by referring the requirements to the relevant constituent bodies;
(c) Applying knowledge in all branches of meteorology to aeronautics and the provision of advice in this field;
(d) Developing, improving and promoting the international standardization of methods, procedures and techniques employed, or appropriate for employment in:
   (i) The application of meteorology to aeronautics and the provision of meteorological services to international air navigation;
   (ii) The making and reporting of meteorological observations from aircraft;
(e) Considering questions relating to specialized training of meteorological personnel in the field of aeronautical meteorology;
(f) Considering questions relating to aeronautical requirements for meteorological observations.

(6) **Commission for Agricultural Meteorology (CAGM)**

The Commission shall be responsible for:

(a) Keeping abreast of and promoting meteorological development, both in scientific and practical fields, relating to agricultural meteorology and bringing these to the attention of other relevant constituent bodies;
(b) Standardizing methods, procedures and techniques in agricultural meteorology;
(c) Studying and formulating the requirements in the field of agricultural meteorology and arranging so far as possible for the requirements to be met either by its own action or, where co-ordination is necessary, by referring the requirements to the relevant constituent bodies;
(d) Studying questions relating to the observation, measurement, evaluation and suitable presentation of single and complex factors of weather and climate as they affect soils, plants and animals and their enemies;

(e) Considering the meteorological aspects of phenology and of the physiology of crops and farm animals;

(f) Applying knowledge in all branches of meteorology to agriculture and providing advice in this field;

(g) Providing advice in particular on:

   (i) The most practical utilization of knowledge concerning weather and climate (natural and artificial) for agricultural purposes such as conservation of natural resources, land utilization, the increase of the area of agricultural production, reduction of production costs, the improvement of agricultural products and the selection of improved varieties of plants and breeds of animals;

   (ii) The combating of unfavourable influences of weather and climate on agriculture;

   (iii) The combating of pests and diseases affecting agriculture, including help in the provision of warnings by agriculturists;

   (iv) The protection of agricultural produce in storage or in transit against damage or deterioration due to the influences of weather and climate, whether directly or indirectly;

   (v) The use of weather forecasts and warnings for agricultural purposes;

(h) Considering questions relating to specialized training in the field of agrometeorology;

(i) Considering questions relating to instruments and methods of observation concerning the Commission for which co-ordination by the Commission for Instruments and Methods of Observation is not necessary.

(7) **Commission for Hydrometeorology (CHy)**

The Commission shall be responsible for:

(a) Keeping abreast of and promoting developments in hydrology related to meteorology, both in scientific and practical fields, and bringing these to the attention of other relevant constituent bodies;

(b) Developing, improving, and promoting the international standardization of methods, procedures, techniques, and terminology for:

   (i) Studies of the water-balance, the global hydrologic cycle and hydrological forecasting;

   (ii) Hydrometeorological aspects of design of systems for water management and control;

(c) Formulating observational requirements (including design and promotion of networks) for the activities cited in paragraph (b) above;

(d) Co-ordinating international hydrometeorological requirements and assistance in the arrangements for international exchange and dissemination of hydrometeorological data, analysis, forecasts, and warnings;
(e) Considering questions relating to the reliability and homogeneity of hydro-
meteorological observations;

(f) Standardizing the form for recording and exchanging hydrometeorological
observations;

(g) Standardizing methods of computation of hydrometeorological data for
research and publication (means, ranges, frequencies, etc.);

(h) Considering questions relating to the specialized training in the field of
concern to the Commission;

(i) Considering questions relating to instruments and methods of observation
concerning the Commission for which co-ordination by the Commission
for Instruments and Methods of Observation is not necessary.

(8) **Commission for Maritime Meteorology (CMM)**

The Commission shall be responsible for:

(a) Keeping abreast of and promoting meteorological developments, both in
scientific and practical fields, relating to maritime meteorology and bringing
them to the attention of other relevant constituent bodies;

(b) Standardizing methods, procedures and techniques relating to meteorological
observations made at sea;

(c) Studying and formulating the requirements in the field of maritime meteoro-
logy and arranging so far as possible for the requirements to be met either
by its own action or, where co-ordination is necessary, by referring the
requirements to the relevant constituent bodies;

(d) Applying knowledge in all branches of meteorology to shipping and fishing
and the provision of advice in these fields;

(e) Formulating the special requirements for meteorological observations made
at sea;

(f) Considering questions relating to the recruitment of ships and training of
marine observers;

(g) Organizing meteorological networks of observation from ships at sea;

(h) Formulating requirements for the organization of a system of radio weather
bulletins and other meteorological information for meeting the needs of
shipping and fishermen both on the high seas and in coastal waters, including
warnings required for maritime navigation and the safety of life at sea;

(i) Establishing plans for the allocation of areas of responsibility, both for the
collection of observations from shipping and the issue of radio weather
bulletins for shipping;

(j) Applying climatological information including the preparation of maritime
climatological atlases to shipping and fishing;

(k) Promoting studies of the meteorological aspects of ocean waves and sea ice;

(l) Considering questions relating to specialized training of meteorological
personnel in the field of maritime meteorology.
ANNEX V
Annex to Resolution 16(Cg-V)

The World Weather Watch Plan
for the four-year period, 1968-1971

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

2. Implementation of the World Weather Watch is urgently called for at this time because:

(a) Recent developments in satellite observing and data-processing techniques, in automatic sensing systems and in communication techniques make it clear that there is a rapidly developing capability to obtain meteorological data on a global scale and communicate and process these data rapidly and efficiently;

(b) It is equally clear that such global data and the ability to communicate them rapidly and reliably can be put to immediate and effective use in weather forecasting, using mathematical and other weather prediction procedures and modern communication facilities. Lack of global data and the ability to communicate them rapidly and reliably are the principal hindrances to immediate improvement in weather forecasting capabilities in most parts of the world. The fact is that today the networks of upper-air observations over most of the oceans, which cover 70 per cent of the Earth's surface, are still very inadequate. In addition, there are land areas, especially in the southern hemisphere and in tropical regions, over which our observational network remains very inadequate;

(c) With adequate global data and with the resolution of certain other scientific problems, it may be possible to provide daily weather predictions for a week or more in advance. Predictions of average values of selected weather parameters may be attainable for significantly longer periods. These advances will require, at a minimum, the development of far more complex and realistic physical-mathematical procedures to simulate the behaviour of the atmosphere than are presently available. It also appears
that these same observational data and advanced mathematical procedures will provide essential data for the exploration of the feasibility of large-scale weather and climate control.

Basic concepts

3. The primary purpose of the World Weather Watch is to ensure that all Members obtain the meteorological information they require both for operational work and for research.

4. The World Weather Watch is conceived as a world-wide system composed of the national facilities and services provided by individual Members, coordinated and in some cases supported by WMO and other international organizations.

5. The World Weather Watch shall be used only for peaceful purposes, due account being taken of the national sovereignty and security of States, in accordance with the provisions of the Charter of the United Nations and the spirit and traditions of the World Meteorological Organization.

6. A further very important purpose of the World Weather Watch is to stimulate and facilitate the research work which is necessary to improve the accuracy and extend the useful range of weather forecasts and to enable the possibilities of weather and climate modification to be assessed.

7. One of the most serious obstacles towards the achievement of all the above objectives is the lack of sufficient skilled meteorologists of all classes in many countries. The successful implementation and operation of the World Weather Watch therefore depend on an adequate programme of education and training.

8. The information required by Members includes both meteorological observations and processed data. For operational work the information must be received in a timely and co-ordinated fashion, while for research purposes the information must be readily accessible in convenient forms.

9. It follows that the essential elements of the World Weather Watch are:

   (a) The observational networks and other observational facilities, hereafter called the Global Observing System;

   (b) The meteorological centres and the arrangements for the processing of the observation data and for the storage and retrieval of data, called the Global Data-Processing System;

   (c) The telecommunication facilities and arrangements necessary for the rapid exchange of the observations themselves and of the processed data, called the Global Telecommunication System;

   (d) The research programme;

   (e) The programme in education and training.

10. Each of the above elements (a) to (e) is considered in turn in the World Weather Watch Plan. This subdivision of the plan is, however, largely a matter
of convenience, and it is emphasized that the various elements are closely linked with each other and should not be considered as independent entities.

11. In the over-all development of the World Weather Watch Plan, the maximum use should be made of the existing facilities and arrangements in all the different fields of activity involved.

12. The World Weather Watch is a dynamic system, flexible enough to be adapted to changing conditions. New techniques of observation, telecommunication and data-processing should be introduced as soon as they have been proved to be sufficiently reliable and economical. The World Weather Watch programme will therefore consist of two broad, continuous and parallel streams of action. The first stream will involve the introduction of proven technology into the existing international meteorological system during the fifth financial period.

13. The second stream will involve the development of new technology in order to achieve the ultimate goals of the World Weather Watch at a reasonable cost. Studies will be undertaken to evaluate which observing, telecommunication and data-processing techniques will permit achieving an economical and effective World Weather Watch during the sixth financial period. The successful implementation of the second stream will necessitate a concerted planning effort on the integration of new techniques into the existing system. It is hoped to bring the new technology to operational status in the early 1970s so that it can be incorporated into the first stream. It involves the development of physical models of the atmosphere for operational use by Meteorological Services in weather prediction using high-speed electronic computers and of such devices as meteorological satellites, horizontal sounding balloons and automatic meteorological ocean buoys. The second stream also involves the use of further developments in such areas as communication satellites and electronic computers.

14. In broad terms, the initial phase of the first stream will seek to achieve by 1971:

(a) A substantial improvement in the Global Observing System to provide better and more complete data for meteorological analysis and forecasting;

(b) The implementation of the Global Data-Processing System;

(c) The improvement of the Global Telecommunication System.

15. During the period 1968-1971, efforts will also be made to effect a significant acceleration of the programme of education and training of meteorologists, both at the national level and under international auspices.

16. On the research side, the main effort during the period 1968-1971 will be directed towards planning the Global Atmospheric Research Programme.
Global Observing System

17. The present global observing system is principally deficient over most ocean areas, in the tropics and in remote land areas. To remedy these deficiencies, extension of conventional observing networks and deployment of meteorological satellites and other new observing tools will be used to ensure a more homogeneous distribution of meteorological observations on a global basis. During the fifth financial period (1968–1971) the following maximum average spacing between stations should be aimed at as a first step:

(a) 1000 km for upper-air stations over continental regions and ocean regions having suitably distributed islands;
(b) 1500 km for upper-air observations over open ocean areas;
(c) 1000 km for surface observations over the oceans;
(d) 500 km for surface stations on land.

Upper-air observations should be made twice daily at 0000 and 1200 GMT.

Network recommendations of Regional Associations

18. At each session of a Regional Association, a recommended network of surface and upper-air stations is approved. Full implementation of these regional basic networks is eminently desirable and is urged upon Members. The most critical deficiency is in the upper-air networks, and if, for practical reasons, full implementation cannot be carried out by 1971, every effort should be made to achieve the following minimum implementation programme of upper-air observations in order to approach the criteria laid down in paragraph 17:

(a) Approximately 40 completely new radiosonde/radiowind stations should be established;
(b) Approximately 25 partially equipped upper-air stations should be fully equipped and make a complete sounding twice daily at 0000 and 1200 GMT;
(c) Approximately 70 radiosonde/radiowind stations, already fully equipped, should make two full daily soundings at 0000 and 1200 GMT.

19. The order in which the additional programmes are implemented will be governed by many local factors. The main requirement is that each Member concerned should take the initiative in arranging implementation of this minimum upper-air plan. If priorities have to be established at the national level in tropical areas, priority should be given to the establishment of new upper-air stations rather than to increasing the frequency of observations at existing stations.

20. Appendix I gives a list of land-based upper-air observing stations falling under the categories described in paragraph 18 above.

21. Although the most critical deficiency is in the upper-air observing programme, there is also a serious lack of surface observing stations. Of the total
of approximately 3600 surface stations required by the regional basic networks, some 175 had not been established by April 1967 and about 1200 of the established stations were not following the full recommended observing programme. Because of the large numbers involved the individual deficiencies are not listed here, but Members are urged to bring their surface observing networks up to the level recommended by Regional Associations.

**Fixed ocean stations**

22. The present North Atlantic and other ocean weather stations should be retained without reduction in number or programme, regardless of any reduction in the direct utilization of the stations for aeronautical purposes, until such time as completely satisfactory and proven alternative observing systems are available which could maintain in full the necessary regular reliable data output. New stations should be established in critical locations where essential meteorological observations cannot be obtained by more economical means. As a first step, between five and ten additional fixed-ship ocean weather stations should be established, mainly in the southern hemisphere (see Appendix I).

**Mobile ships**

23. Substantially increased use should be made of mobile ships for obtaining surface and upper-air observations over ocean areas, especially in the southern hemisphere. By the end of 1971 there should be a total of at least 100 ships taking upper-air observations in addition to a normal surface observing programme.

24. To meet the vital need for surface observations from ocean areas the present selected-ship programme should be substantially increased and, if possible, doubled during the period 1968-1971.

**Aircraft reports**

25. Commercial aircraft still constitute a valuable source of upper-air data, especially over the oceans and other sparsely inhabited areas, and the selection and distribution of such reports should be developed as an integral part of the plan.

**Meteorological satellites**

26. Meteorological satellites already provide, on an operational basis, valuable data on the extent and character of the global cloud cover. Much improved meteorological satellites will probably be in orbit during the period 1968-1971. These satellites are expected to provide data on cloud distribution during both day and night and certain other global atmospheric parameters for operational purposes. The WMO should assist in bringing about co-ordination of the satellite programmes of individual countries (or groups of countries).
27. The present operational system has demonstrated the value of local reception of cloud-cover information directly from the satellite. Members may wish to install at least one such station in their territory.

Further studies and new techniques

28. Scientific studies of the optimum density of various types of station and of their observational programmes should be continued, with a view to reaching agreement on the criteria to be used for future improvement of the Global Observing System. Special attention should be given to the tropics and to establishing the requirements for numerical forecasting techniques and for research purposes, with particular emphasis on the networks needed for research on the general circulation of the atmosphere.

29. Electronic and space developments present great new possibilities for observing the atmosphere; automatic weather stations and buoys, constant-level balloons, satellite-borne remote sensors, dropsondes and meteorological rockets are a few that show great potential. The character of many of these developments is such that Members, both large and small, can make a significant contribution. Members are urged to participate to the maximum extent possible so as to bring critical items of new technology to an operational status by 1971. The progress of these developments should be closely monitored so as to determine when new techniques can be introduced into the Global Observing System. Members should also take all possible steps to improve existing observing techniques and equipment to ensure more accurate observations.

30. Plans and studies should be undertaken to develop procedures and techniques for integrating new technological developments into existing systems. Studies should be undertaken to determine the optimum configuration of new and existing observational techniques.

Global DataProcessing System

31. During the fifth financial period, the Global Data-Processing System will prepare and make available to all Members global products through a system of world, regional and national meteorological centres. The functions of the various centres will not affect any international commitments of Members for support to shipping and aviation nor determine the manner in which Members execute these responsibilities. These centres will be equipped to the maximum degree possible with the most modern facilities, including high-speed computers. WMCs and RMCs will produce analyses and prognoses for meteorological purposes directly supporting NMCs, using advanced numerical procedures of modern meteorological science. They will also ensure the processing of data for climatological and research purposes and the storage of data in such a way that they are readily accessible for climatological and research purposes. In view of the fact that methods of numerical forecasting are still in a state of development, national Meteorological Services are encouraged to maintain and develop their activities in this field, notwithstanding the existence of RMCs.
32. To serve the Meteorological Services of Members for operational purposes, there will be required during the period 1968-1971:

(a) Analyses on a global scale for a selection of standard isobaric surfaces from the surface to 10 mb at 0000 and 1200 GMT. Surface analyses should contain the pressure distribution and frontal systems; upper-air analyses should include the field of the geopotential, the temperature, wind, and moisture up to the highest level at which it can be measured with sufficient accuracy.

(b) Prognoses on a global scale for a selection of standard isobaric surfaces from the surface to 10 mb with periods of validity up to at least three days and preferably five days. The frequency of issue of each product will depend on such factors as length of forecast period, average rate of change of various fields with time, and the average rate at which the accuracy of the prognosis decreases with time. The surface prognoses should include isobars (or streamlines for tropical regions) and frontal systems. Upper-air prognoses should include contours (or streamlines for tropical regions).

(c) Supplementary analyses and prognoses on a regional scale. The characteristics of these products will be determined for each RMC in the light of the requirements of the Members to be served by that RMC. In general, they should supplement the products listed under (a) and (b) above in one or more of the following ways: contain greater detail, be issued more frequently, contain additional parameters, or permit more timely reception.

(d) Extended period prognoses in general terms on a regional and national scale valid for at least five days.

(e) Warnings of dangerous weather conditions on a large scale (e.g. hurricanes, typhoons).

33. As regards the forms in which the data should be processed for climatological and research purposes, the essential thing is that data required by Members or scientific organizations should be published and that data which are needed for large-scale investigations should be readily available in a convenient form for machine processing.

34. The Global Data-Processing System will require basically three different classes of meteorological centre as mentioned below:

(a) WMCs, which are located at Melbourne, Moscow and Washington. They are regarded as service centres for analyses and prognoses of the large-scale atmospheric processes for use by all Members as aids to forecasting and to assist in other long-range planning.

(b) RMCs, which will be established where the need exists and with the consent of the Members to be served. An RMC should perform the functions required by the Members it serves and should meet the criteria presented in Appendix II.

(c) NMCs.
35. The functions of the centres are described in more detail in Appendix II.

36. WMCs and RMCs should be brought into operation during the period 1968-1971.

37. Each Member should ensure that it has an NMC adequately manned and equipped to enable it to play its full part in the WWW and to ensure that the full benefits of the information obtained under the WWW are reaped on the national level. The requirements of each individual country will naturally decide the nature of the facilities to be provided in the NMC. In some countries national needs will require advanced centres equipped with computers and other modern devices; in others where the needs and the resources of the country are less, more modest facilities will suffice.

38. Further studies will be carried out to refine the respective processing and research roles of WMCs, RMCs and NMCs to ensure that they complement each other in the most efficient manner. They will also help to define the training and archiving roles of the RMCs and WMCs and to determine the feasibility and usefulness of formalized exchange of information among computer-equipped processing centres on computers and computer programmes.

39. The whole system of meteorological centres should be kept under review during the period 1968-1971 in order to decide what changes will be desirable after 1971. Special attention may have to be given to the adequacy of a single WMC in the southern hemisphere.

40. Further planning studies will be carried out to refine the role of the various segments of WWW in assisting in the provision of services to aviation, maritime interests, hydrology, agriculture, the general public, etc., in collaboration with the relevant international organizations.

41. The Global Data-Processing System is described in more detail in Appendix II.

Global Telecommunication System

42. The purpose of the improved Global Telecommunication System during the period 1968–1971 will be to collect and distribute raw observational data to national, regional and world meteorological centres and subsequently to distribute the resulting processed information to other WMCs, RMCs, and NMCs. The present communication system is inadequate to provide essential services to Members. During the period 1968–1971, Members should seek to install jointly a reliable global circuit which will interconnect all Regions and have sufficient capacity to exchange the meteorological data and products required by Members.
43. The Global Telecommunication System should be organized on a three-level basis, namely:
(a) The main trunk circuit to interconnect the WMCs and appropriate RTHs, RMCs and NMCs. All the RTHs and RMCs should have equal access to the main trunk circuit;
(b) The regional telecommunications networks; and
(c) The national telecommunications networks.

44. The principal function of the main trunk circuit should be to ensure rapid and reliable exchange of the observational data required for analyses and prognoses on a global scale. The main circuit will also be used for the exchange of processed data issued by WMCs, including the data received from meteorological satellites. Additional processed information will be included in the transmission programme to supply RTHs, RMCs and NMCs. Supplementary observational data, required for exchange between Regions, will also be transmitted where feasible.

45. The main trunk circuit should consist of telephone-type circuits and corresponding equipment at the ends including interconnecting and relaying arrangements, providing a duplex link and exchange of digital and non-digital signals with the maximum technically attainable speed. The reliability of exchange on the main trunk circuit should be guaranteed through the use of special error-detecting and correcting equipment. Inasmuch as the above-mentioned main trunk circuit (Melbourne - Moscow - Washington - Melbourne) will operate on a duplex basis and will constitute a closed loop, the transmission could be realized in opposite directions around the globe and thus ensure that all three WMCs, as well as RMCs, NMCs, and RTHs connected with this circuit receive all the information they require without delay.

46. All NMCs, RMCs and RTHs shall be connected with the main trunk circuit either directly or through corresponding NMCs, RMCs and RTHs. The time, character and means of this connexion (including the question of transmitting and receiving capabilities) should be defined in the light of technical and economical considerations as well as national and regional requirements. In any event, the design of the Global Telecommunication and Data-Processing Systems must ensure that if there is an interruption in any part of the system, Members will obtain the necessary data satisfactorily by alternative means.

47. The regional telecommunication networks should be capable of:
(a) Exchange and distribution of observational data within the Region, as required, to meet the needs of Members in the Region;
(b) Collection of observational data originating in, or being received by, radio stations located in the Region (e.g. reports from aircraft and ships);
(c) Exchange and distribution of processed (conventional and satellite) information as required to meet the needs of Members of the Region;
(d) Interchange of observational and processed information with other Regions
either by the main trunk circuit or by other special inter-regional circuits.

48. The regional telecommunication networks should consist of an integrated
system of point-to-point circuits. Until this is practicable in all parts of the
world, radio broadcasts will have to be used in order to meet the requirements
of the Members of the Region.

49. The successful functioning of the Global Telecommunication System
depends mainly on the reliable and timely reception of reports from observing
stations by NMCs. Members should accordingly ensure that their national
arrangements for collecting observations are adequate to meet the international
as well as the national needs.

50. The above plans establish the basic principles of the Global Telecommu­
nication System to be implemented in the period 1968–1971. Planning studies
and conferences should be continued to ensure that Members are provided with
sufficient technical functional information to enable them to implement telecon­
munication centres consistent with their needs and their role in the Global
Telecommunication System. These detailed studies are needed to ensure that
the equipment and procedures implemented by Members are fully compatible
with each other, especially at connecting centres with telecommunications
functions. In addition, studies of the use of new telecommunications technology
to improve the effectiveness of the Global Telecommunication System should
be continued, including feasibility studies on the use of various satellite systems.

51. The Global Telecommunication System is described in greater detail in
Appendix III.

The research programme

52. Major improvements in the accuracy and range of operational forecasting
and serious investigation of the feasibility of large-scale weather modification
and control can come only from a greatly increased understanding of the behav­
iour of the globe's atmosphere. A vigorous programme of research on the general
circulation of the atmosphere must therefore be established as an essential
ingredient of the WWW. While the operational programme of the WWW will
provide observational data for the testing of physico-mathematical models of
the atmosphere, the results of such computations will serve to guide the further
development and the most economic design of the operational systems.

53. Since their introduction in recent years, mathematical models of the
general circulation of the atmosphere have grown in complexity and now incor­
porate many of the basic physical and dynamical processes. Nevertheless, they
are still only very inadequate descriptions of the real atmosphere. In particular
the processes of convection, condensation, heating and cooling, mass and energy
exchange between the atmosphere and the underlying land and ocean surfaces
have yet to be incorporated satisfactorily. Many of these processes, although
operative on scales smaller than the global circulation, nevertheless interact strongly with it, and their proper study will require detailed observational programmes perhaps over a number of limited areas. Furthermore, high priority should be given to an intensive observational programme in tropical regions (Tropical Observational Experiment) over a period of about a year.

54. This may well point the way for a global observational experiment involving a relatively dense and uniform network of observation stations that will gather detailed information on the state of the entire atmosphere up to an altitude of 30 km for a period of up to one year. Although data from the present network have been useful for some preliminary tests, more complete data will be required to test the stability and predictability of sophisticated mathematical models of the atmosphere and to assess the possibility of producing reliable weather forecasts for periods of a week or more.

55. Scientific research will primarily be the responsibility of Members. The role of WMO will be that of assisting in the co-ordination of research activities. The Secretariat should keep under review the achievements of research and should inform Members as appropriate with a view to enabling them to be brought into operational use.

56. The current activities of WMO for encouraging and assisting in the co-ordination of research should therefore be expanded, with special reference to research projects directly related to the WWW. The WMO permanent scheme for the central collection and publication of selected meteorological data (ozone, radiation, etc.) should be kept under review and should be expanded and improved as required. Consideration should be given to the role of WMCs and RMCs in processing and archiving meteorological data for research purposes. Publications of particular interest to research workers, such as the Catalogue of Meteorological Data for Research and the International Meteorological Tables, should be kept up to date and expanded as necessary. Special attention should be given to ensuring that research workers can obtain the data they require in a form suitable for machine processing.

57. The visiting-scientists programme should be further developed. WMO should continue to sponsor meteorological symposia and other meetings, particularly in areas related to the WWW.

58. In all its research activities, WMO should continue to collaborate closely with the ICSU and its relevant unions (particularly the IUGG), associations, commissions and committees. The joint WMO-ICSU Organizing Committee will be the primary machinery for planning and monitoring the Global Atmospheric Research Programme (see Resolution 18(Cg-V)).

Education and training

59. As stated in Appendix II, the functions of the world and regional meteorological centres include the provision of facilities for training. In general, all
the existing WMO activities relating to education and training at all levels should be intensified to meet the growing need for trained meteorologists for implementing the operational aspects of the World Weather Watch and for conducting research on problems related to the World Weather Watch. The use of the world and regional centres as locations of training should be developed extensively, especially as places of "on-the-job" training and of training seminars.

Implementation Programme

60. Following the approval of the World Weather Watch Plan by Fifth Congress, a World Weather Watch Implementation Programme shall be established on the following basic principles:

(a) All meteorological activity connected with the implementation of the World Weather Watch on the territories of individual countries shall be the responsibility of the countries themselves and should be as far as possible met from national resources;

(b) Implementation of the World Weather Watch Plan on the territory of developing countries should be based on the principle of the utilization of national resources but, where necessary and so requested, assistance may be in part provided by:
   (i) The United Nations Development Programme (this should be used to the maximum possible extent);
   (ii) Bilateral or multilateral arrangements;
   (iii) Contributions in financial form or in the form of equipment or services by Members of WMO; such contributions will constitute the WMO Voluntary Assistance Programme (VAP);

(c) Implementation of the World Weather Watch Plan in regions outside the territories of individual countries (i.e. outer space, oceans, Antarctica) shall be based on the principle of voluntary participation of countries which desire and are able to do so, by providing facilities and services from their national resources. The possibility of granting assistance from the WMO Voluntary Assistance Programme should, however, not be excluded.

61. All Members of the Organization are urged to co-operate fully in the WWW Implementation Programme as far as possible, including the WMO Voluntary Assistance Programme (see Resolution 17(Cg-V)).
### ANNEX V

#### APPENDIX I

**Suggested minimum additional programme (upper-air stations) for 1968-1971**

<table>
<thead>
<tr>
<th>Responsible Member</th>
<th>Stations already equipped for both radiosonde and radiosonde but making only one observation per day, required to increase frequency to twice daily</th>
<th>Stations equipped for either radiosonde or radiosonde but not both, require further equipment and increased observing programme</th>
<th>Stations not equipped for either radiosonde or radiosonde but completely new upper-air stations required</th>
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<tr>
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<td>60571 Bechar</td>
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<td>64700 Port-Lammy</td>
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<td>64235 Luluabourg</td>
<td>61976 Serge-Frolow (ii)</td>
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<tr>
<td></td>
<td>64370 Karavia (i)</td>
<td>(Ile Tromelin)</td>
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<td>Ethiopia</td>
<td>61996 Ile Nouvelle-Amsterdam</td>
<td>61976 Serge-Frolow (ii)</td>
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<td>61998 Port-aux-Français (Iles Kerguelen)</td>
<td>(Ile Tromelin)</td>
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### Footnotes:

(i) - Stations equipped for either radiosonde or radiosonde but not both. Require further equipment and increased observing programme.

(ii) - Stations not equipped for either radiosonde or radiosonde but completely new upper-air stations required.

(iii) - Stations equipped for either radiosonde or radiosonde but not both. Require further equipment and increased observing programme.

(iv) - Stations not equipped for either radiosonde or radiosonde but completely new upper-air stations required.

(v) - Stations equipped for either radiosonde or radiosonde but not both. Require further equipment and increased observing programme.
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<td>96996 Cocos Island</td>
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</table>
## ANNEX V

### (a)  | (b)  | (c)  | (d)  
---|---|---|---
French Polynesia | 91958 Rapa | 91925 Atuona | 97014 Menado/
Indonesia | 97180 Makassar/Hasanuddin | 91948 Rikitea | Mapangat
Malaysia | 97560 Belak/Mokmer | | 97372 Kupang/Penfui
New Caledonia | 94592 Nouméa | | 96471 Jesselton
New Zealand | 93780 Christchurch Airport (vii) | 91843 Rarotonga | 
Philippines | 93944 Campbell Island (vii) | 91997 Roul Island | 
Singapore | 48694 Singapore Airport | 93936 Chatham Island | 
United Kingdom | 91517 Honiara (ix) | 91643 Funafuti (x) | 91487 Fanning Island or
| 91680 Nandi (x) | 91490 Christmas Island (xi) | 91610 Tarawa (xii) |
United States | 91700 Canton Island | 91902 Malden Island | 91950 Pitea Island |
of America | | | 91222 Pagan Island, |
| | | | (Marina Islands)
United Kingdom | | | 91317 Woleai Atoll, |
| and France | | | (Caroline Islands)
| | | 91554 Luganville |
| | | | (Espiritu-Santo) (xiii)
Regional Association VI | | | 91902 Malden Island |
Europe | | | 91950 Pitea Island |
Denmark | | | 91222 Pagan Island, |
| | | | (Marina Islands)
Argentina Is. | | | 91317 Woleai Atoll, |
Antarctic | | | (Caroline Islands)
Mawson | 88952 Argentine Is. | | 
Orchad | 94986 Mawson | | 

### Fixed ocean stations

In implementing fixed ocean stations, Members should pay due attention to the decisions of Regional Associations, and to the following locations:

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<tr>
<th>Latitude</th>
<th>Longitude</th>
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<td>78°E</td>
</tr>
<tr>
<td>55°S</td>
<td>135°E</td>
</tr>
<tr>
<td>60°S</td>
<td>115°W</td>
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<tr>
<td>40°S</td>
<td>95°W</td>
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<td>44°S</td>
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<td>50°S</td>
<td>455°W</td>
</tr>
<tr>
<td>50°S</td>
<td>95°W</td>
</tr>
</tbody>
</table>
NOTES

(i) The upper-air basic network includes 64360 Lubumbashi, but RW observations are currently carried out at the nearby station 64370 Karama, which is therefore included in this plan.

(ii) Included in the upper-air basic network as radiowind station only.

(iii) The upper-air basic network includes 61832 Conakry/Gbessia, but RW observations are currently carried out at the nearby station 61831 Conakry, which is therefore included in this plan.

(iv) South Africa reports that a recent survey of Bouvet gives promise for the establishment of an upper-air station there.

(v) The upper-air basic network includes 68110 Windhoek, but RW observations are currently carried out at the nearby station 68112 J. G. Strydom, which is therefore included in this plan.

(vi) 72935 Cambridge Bay is not in the basic upper-air network, but Canada has advised that the basic upper-air station 72938 Coppermine will probably be relocated at Cambridge Bay.

(vii) Full programme during part of year only. To be increased to cover whole year.

(viii) 91948 Rikitea is included in the basic upper-air network as a radiowind station only.

(ix) Operated by Australia by arrangement with the United Kingdom.

(x) Operated by New Zealand by arrangement with the United Kingdom.

(xi) Present surface station operated by New Zealand by arrangement with the United Kingdom.

(xii) Included in basic upper-air network as radiowind station only. Present surface station operated by New Zealand by arrangement with the United Kingdom.

(xiii) 91554 Luganville is a Condominium joint station — France/United Kingdom.

(xiv) Full programme planned to be implemented by 1 July 1987.
Appendix II

Global data-processing system

Introduction

1. In adopting the Global Data-Processing System plan, Congress was aware that for technical and financial reasons full implementation of the plan might not be achieved in some parts of the world during the implementation period 1968–1971.

General

2. The plan of world, regional and national meteorological centres and their respective functions is conceived as a co-ordinated and integrated system, aimed at securing maximum efficiency from a world system of meteorological centres, with the available manpower and facilities. It is intended to serve Members and to assist them, where required, in the provision of meteorological services of all kinds required for national economic development and other activities at the national level. In broad terms, world meteorological centres will concentrate on the global type of products primarily describing large-scale synoptic phenomena, whereas regional meteorological centres will concentrate on the continental or sub-continental type of products. By making use of the processed data so provided, many Members will find it possible to concentrate a greater part of their efforts on special-purpose forecasts as well as on mesoscale analysis and weather forecasting, the requirements for which are growing rapidly in many fields of application. Each Member will, of course, determine which products it will require from world and regional meteorological centres.

3. In any given country operating a WMC or an RMC all the facilities of the centre need not be located in the same place.

Functions of WMCs

4. Details regarding the functions of WMCs are given in Attachment I as a basis for further planning.

Locations and functions of regional meteorological centres

5. Details regarding the functions of RMCs are given in Attachment I as a basis for further planning.

6. The following basic criteria (a to d) and the additional criteria (e to i) which have been used in the planning work so far shall be followed in the further development of the plan referred to in paragraph 7 below:

(a) A centre wishing to accept the responsibilities of an RMC should indicate its willingness to carry out the functions indicated in Attachment I, paragraph 3;
(b) It should have a reasonable scientific, technical and financial capability of implementing these activities in the course of the period (1968–1971);
(c) To be selected as an RMC there should be some expressed requirement by one or more national Meteorological Services for the services offered;
(d) Each added RMC should contribute to the purposes of the WWW;
(e) The number of RMCs should be kept to the minimum compatible with the provision of adequate and efficient service as required by Members;
(f) Overlap of areas of analysis of RMCs will be necessary to allow the meshing of analyses originating from adjacent RMCs;
(g) As far as possible, the system should have built into it the potential of at least a partial back-up in the event that, for any reason, the services of a regional meteorological centre suffer a prolonged breakdown;
(h) The areas of analyses and forecasts of RMCs should be arranged so that Members can receive the products they require from a minimum number of RMCs;
(i) A regional meteorological centre may be established under the joint responsibility of two or more nations, and such developments should be encouraged by WMO. In such a case, however, the countries concerned would have to specify their respective responsibilities.

7. The plan of RMCs for the period 1968–1971 as given in Attachment II should form the basis for implementation work. The Executive Committee will bring this plan up to date annually and, on the basis of information provided by recipient Members and by Regional Associations, introduce such changes as may be required to make the system more effective, taking into account the implications on the telecommunications systems.

National Meteorological Centres

8. National meteorological centres must inevitably be the responsibility of the Members concerned. It is for each Member to decide, in the light of its own capabilities and needs, the extent to which it will wish to receive and use the products of world and regional meteorological centres. Members may, for their own national purposes, have a need for centralized processing centres fulfilling functions similar to those of a Regional Meteorological Centre. If such centres are established purely for national purposes, they will naturally not fall into the category of regional meteorological centres.

Functions of WMCs and RMCs in support of specialized activities

9. As already stated, further planning studies will be carried out to define the role of the various segments of WWW in assisting in the provision of services to aviation, maritime interests, hydrology, agriculture, the general public, etc., in collaboration with the relevant international organizations. The functions of the centres will not affect any international commitments of the Members for
support to shipping and aviation nor determine the manner in which they execute their responsibilities.

Support to maritime activities

10. Members responsible for operating existing maritime forecasting centres should indicate what type of processing support, if any, is required from an external WMC or an RMC. The tentative list of meteorological products which might be required from WMCs or RMCs for providing the requested assistance to maritime forecasting centres is given in Attachment III, as a basis for further planning.

Support to aviation activities

11. With respect to the supporting action of WWW processing centres to existing or planned area forecast centres, a number of principles and a broad framework of a possible world-wide area forecast system are given in Attachment IV, as one basis for further planning of the contribution of the WWW to the area forecast system in collaboration with ICAO.

Requirements for exchange of products between different types of centre

12. Each world meteorological centre should make available its products to other world meteorological centres and to appropriate telecommunication centres for further selective distribution to meet the expressed needs of the regional and national meteorological centres. It will be for regional and national meteorological centres to state which products from which world meteorological centre they wish to receive.

13. The distribution of output products of regional meteorological centres to national meteorological centres will be arranged according to the requirements expressed by the latter.

14. Operational exchanges of processed data between RMCs should not normally be necessary. During the period when RMCs are building up their full capabilities there may be a need for such exchanges on an interim basis. In the middle and high latitudes of the northern hemisphere, such interim requirements should be met by arrangements between the RMCs concerned, taking into account the available telecommunication facilities. For other parts of the globe, the need for more extensive exchanges of processed data between RMCs cannot be excluded a priori. The availability of WMC products will play a determining role as to the extent of the requirements for exchanges between RMCs.

Requirements for observational data

15. World meteorological centres will require data from the whole world. Regional meteorological centres, on the other hand, will require observations from at least the area for which they issue analyses and forecasts and the surrounding area; the total size of the area will depend on the period of validity of the forecasts and, to some extent, on the latitude.
16. The requirements of national meteorological centres will vary greatly from one to the other, depending on their service obligations and their processing capabilities; the basic principle is that they should have access to all data relevant to their stated requirements.

**TIME OF RECEIPT AND DISTRIBUTION OF DATA**

17. Data (observational and processed) required for operational purposes should reach the national Meteorological Services sufficiently quickly. This calls for rapid handling of the observational and processed data both by the Global Data-Processing System and the Global Telecommunication System. A reasonable target for the end of 1971 is as follows, it being understood that this target only applies to the specific data required by a given WMC, RMC or NMC.

<table>
<thead>
<tr>
<th></th>
<th>Short-range forecasting</th>
<th>Medium and long-range forecasting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observation collection time (available at all RTHs concerned)</td>
<td>H + 2 hours</td>
<td>H + 2 hours</td>
</tr>
<tr>
<td>Completion of chart distribution by WMCs</td>
<td></td>
<td>H + 4 hours</td>
</tr>
<tr>
<td>Completion of chart distribution by RMCs</td>
<td>H + 3 hours</td>
<td>H + 5 hours</td>
</tr>
</tbody>
</table>

Where H is time of observation.

**INTERCHANGE OF PERSONNEL**

18. Members should be encouraged to make provision for professional staff at world, regional and national meteorological centres to visit other centres, especially those whose products they use. The primary purpose of such visits would be to enable the staff to study and evaluate the analysis and forecast methods in use. During these visits, which should be of several months' duration, the staff would take part in the work of the centres they are visiting.
ANNEX V

ATTACHMENT I TO APPENDIX II

Detailed functions and characteristics of WMCs and RMCs

WORLD METEOROLOGICAL CENTRES

1. The following is a description in general terms of the functions of WMCs:

(a) Reception of conventional and satellite meteorological data on a global basis; transmission and/or relay of such data, as appropriate, to other world, regional and national meteorological facilities;

(b) Preparation of meteorological analyses and prognoses for as much of the globe as practicable;

(c) Making these analyses and prognoses available promptly to other world, regional and national meteorological facilities;

(d) Providing opportunities for training;

(e) Conducting both basic and applied research on large-scale weather problems;

(f) Archiving of charts and data and making these available to the international scientific community for research and climatological purposes;

(g) Exchange on a regular basis with other interested centres of techniques and procedures used and of results achieved, this both for operational and research purposes;

(h) In addition to the above, world meteorological centres will also perform telecommunications functions as laid down under the Global Telecommunication System.

2. Translated into specific terms for the period 1968-1971, the characteristics and functions of the world meteorological centres will be as follows:

(a) The WMCs will be concerned with the analysis and processing of macroscale features of the atmosphere.

(b) These WMCs will be computer equipped, and it is assumed that automated techniques will be used for processing.

(c) The output of the WMCs will be basic meteorological products intended to assist the national Meteorological Services in meeting their national requirements.

(d) During the planning period 1968-1971, it is expected that only the two WMCs in the northern hemisphere will have associated with them command data acquisition stations for meteorological satellites. They will thus have the only direct access to "NON-APT" satellite data; therefore, arrangements will have to be made to provide adequate satellite data to the Melbourne centre.

(e) It is recognized that each WMC facility will also perform the functions of a national meteorological centre (NMC), and possibly also of an RMC. The functions outlined below, however, are only those proposed to be discharged in their roles as WMCs. Also, these functions are proposed as targets toward which to strive. It is recognized that, in some respects, inadequate data or inadequate communications may be obstacles to reaching the target. In other respects the target may be exceeded.

(f) Operational characteristics (the following list represents a goal for the basic programme, but is not exhaustive):

(i) Output products

Surface analyses and prognoses for periods up to five days; prognoses produced for dissemination (as appropriate) at least twice and analyses possibly
four times per day. These might include, for example, fronts and large-scale cloud and precipitation systems.

Upper-air analyses and prognoses at different levels for periods up to five days, analyses produced for dissemination at least twice per day and prognoses once or twice a day depending on the period of validity of the prognosis. These will include at least contours, isotherms, isotachs and vorticity fields and perhaps other analyses — for example, tropopause charts.

Vertical motion analyses and prognoses.

Analyses of moisture fields.

Alerts of important meteorological phenomena under certain conditions — for example, warnings based on satellite data.

Satellite nephanalyses as required (from NH WMCs only) and radiation data as they become available.

(ii) Minimum geographic area of product coverage

Each WMC will process data for as much of the globe as possible.

(iii) Form of output

The output of the WMCs should be available in both graphic (pictorial) and digital (computer-to-computer) form. The form in which the products are actually transmitted will depend on the capability of the Global Telecommunication System.

(g) To the maximum extent feasible, each WMC should be prepared to assume the functions of any other WMC. This will require a complete exchange of information among WMCs on a routine basis, the ability to receive all necessary input data, and the exchange (and possible reprogramming) of analytical and prognostic models.

(h) The archiving and service functions should be studied further. In general, selected output products (plus possibly input data — see archival functions of RMCs) should be stored in such a way as to be retrievable in suitable form for both automated processing and for manual processing, as required.

(i) Research and training will be supported by WMCs.

Regional Meteorological Centres

3. (1) The RMCs will be equipped to the maximum degree possible with the most modern facilities, including high-speed computers.

(2) The following is a description in general terms of the functions of RMCs:

(a) Issue of analyses and prognoses of surface and upper-air conditions for use by associated National Meteorological Centres, as required;

(b) Processing and archiving of basic meteorological information as agreed;

(c) Publication of selected data, if required;

(d) Archiving of regional charts and processed data for distribution to the international scientific community for research and climatological purposes;

(e) Provision of training opportunities;

(f) Support of research in atmospheric sciences;

(g) Exchange, on a regular basis, with other interested centres of techniques and procedures used, and of results achieved, this both for operational and research purposes.
4. Translated into more specific terms for the period 1968–1971, the list produced in Attachment V will serve as a basis for the further planning of the products to be issued by individual RMCs, in the light of the requirements of recipient Members. Specific aviation products should be subject to further detailed discussions between WMO and ICAO and consideration by the countries concerned, taking into account the development of the interim regional Area Forecast Systems.

5. RMCs with limited capacities should concentrate their efforts initially on the products for which there is a more urgent demand, bearing in mind the products which will be available from WMCs. In general, this might mean that RMCs should, in the first instance, give special attention to the preparation (using as appropriate the flow pattern analysis and prognosis and other large-scale information provided by WMCs) of:
   (a) Surface charts and a selection of short-range upper-air prognostic charts;
   (b) Charts predicting precipitation, surface temperatures and other special phenomena needed to meet the special requirements of the forecast area of the RMCs.

With the development of its processing and transmission capabilities, an RMC might expand its activities by concentrating on the amplification of WMC products — for example, by devoting increased attention to:
   (a) The preparation of charts for intermediate times, when suitable data are available;
   (b) The use of finer grid spacing, based on greater density of observations;
   (c) The use of different or higher resolution techniques focusing attention on particular regional features.

See Attachment II on next page.
Plan of Regional Meteorological Centres for the period 1968-1971

LIST OF RMCs RESPONSIBLE FOR INDICATED AREAS:
- WELLINGTON
- BRACKNELL
- OFFENBACH
- TOKYO
- KHABAROVSK
- MELBOURNE
- MONTREAL
- DAKAR
- PRETORIA
- NEW DELHI
- NAIROBI
- TUNISIA and MOROCCO (Joint Operation)
- MOSCOW
- BUENOS AIRES
- STOCKHOLM
- CAIRO
- DARWIN
- NOVOSIBIRSK
- TASHKENT
- ROME
- MIAMI
### ANNEX V

#### ATTACHMENT III TO APPENDIX II

**LIST OF FORECAST PRODUCTS WHICH SHOULD HELP SHIPPING AND OTHER MARINE ACTIVITIES IN THE SAFE AND EFFICIENT CONDUCT OF THEIR OPERATIONS**

<table>
<thead>
<tr>
<th>Products</th>
<th>Detail required</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storm warnings</td>
<td>Location and movement of pressure systems, gale force and higher winds, including tropical storms and hurricanes and other significant hazards</td>
<td>+ + +</td>
</tr>
<tr>
<td>Marine weather analysis</td>
<td>Fronts, pressure centres and isobars, wind pattern, sea-surface temperature pattern (including anomalies) where required for fishing purposes. Selected ocean station and moving ship observations including reports of wind, weather, visibility, temperature, sea temperature, humidity</td>
<td>+</td>
</tr>
<tr>
<td>Wave analysis</td>
<td>Wave pattern, etc. Selected reports from ocean stations and moving ships concerning wave height, period and direction</td>
<td>+</td>
</tr>
<tr>
<td>Marine weather forecast</td>
<td>Prognostic charts depicting the expected position of fronts and pressure centres at specific time intervals. Isobars to indicate intensity of centres and forecast wind patterns. Forecast data concerning wind, temperature, sea temperature (including anomalies), visibility and weather which causes visibility reduction as well as sky cover if required for fishing purposes</td>
<td>+ + +</td>
</tr>
<tr>
<td>Wave forecast</td>
<td>Prognostic charts depicting the expected positions of fronts and tropical storms and forecast wave patterns</td>
<td>+ + +</td>
</tr>
<tr>
<td>Superstructure icing</td>
<td>Areas of probable superstructure icing due to freezing rain or seaspray</td>
<td>+ + +</td>
</tr>
</tbody>
</table>
7. Mixed-layer Thermocline information and information on ocean surface currents where required for fishing purposes + + + +

8. Sea ice Description of areas of ice, identifying locations where ice is impassable or requires icebreaker assistance + + + +

9. Specialized warnings Significant changes in wind, wave or precipitation conditions, abnormal tidal conditions or heavy breakers and surf

Note 1: Forecasts. — Short-range forecast refers to periods up to 24 hours. Medium-range forecast refers to periods up to 72 hours. Extended-range forecast refers to periods exceeding 72 hours. It is appreciated that enormous economic benefits arise from the application of forecasts for weekly, monthly and even longer periods. However, in view of the state of development of long-range forecasting, it is not possible to detail, at this stage, forecast periods.

Note 2: Collaboration between meteorology and other scientific disciplines. — In drawing up this list of products it was realized that the preparation of some of these products will require the collaboration of meteorology with other scientific disciplines, both at the national and international level. The conference stressed the importance of such collaboration.

METEOROLOGICAL CHARTS (AND OTHER PRODUCTS) WHICH MAY BE REQUIRED BY NATIONAL METEOROLOGICAL SERVICES TO PREPARE THE PRODUCTS CONTAINED IN THE FOREGOING TABLE

Basic charts: It is assumed that all basic charts required for servicing marine activities will normally be available at national Meteorological Services for general operational activities. Such charts will include, for example, surface and upper-air analyses and prognoses of meteorological parameters and nephanalyses.

Specialized charts: In addition to the basic charts, the following specialized charts should be available at national Meteorological Services.

<table>
<thead>
<tr>
<th>Charts and other processed data</th>
<th>Content</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>Analysis</td>
</tr>
<tr>
<td>Waves</td>
<td>Height, direction and period</td>
<td>+</td>
</tr>
<tr>
<td>Sea-surface temperatures</td>
<td>Isotherm intervals of 1°C</td>
<td>+</td>
</tr>
<tr>
<td>Thermoclines</td>
<td>Isotherm intervals of 1°C</td>
<td>+</td>
</tr>
<tr>
<td>Ice</td>
<td>Distribution and character of sea ice</td>
<td>+</td>
</tr>
<tr>
<td>Superstructure icing</td>
<td>Areas of probable superstructure icing due to freezing rain or seaspray</td>
<td>+</td>
</tr>
</tbody>
</table>
ANNEX V

ATTACHMENT IV TO APPENDIX II

Principles for the co-ordinated development of the system of WWW processing centres and the system of area forecast centres

1. In the initial stages of the WWW, there may well be a developing world system of WWW processing centres and developing regional systems of area forecast centres. The prospect of progressive integration of these two types of centre would be a matter for consideration and decision by the countries responsible for operating these centres and would call for continued co-ordination between ICAO and WMO.

2. Every effort should be made to ensure that the World Weather Watch makes its maximum contribution to the area forecast system. To this end, it is suggested that:

(i) Any Members which accept responsibilities both for an area forecast centre and a regional meteorological centre may wish to consider to what extent the data-processing required for fulfilling the functions of its area forecast centre could be carried out by a regional meteorological centre.

(ii) In countries where area forecast centres have already been designated but no RMC is planned it is a matter for discussion between the country responsible for the operation of the AFC and the countries responsible for the operation of any of the neighbouring RMCs to see what assistance, if any, may be required and can be provided by the RMCs.

(iii) When planning the location of AFCs in areas where they have not yet been designated, due account should be taken of the existing and planned RMCs in the areas. In certain cases it may be desirable to locate the AFC in a country which is operating, or plans to operate, an RMC. In other cases, where the system of RMCs does not readily lend itself to supporting the functions of an AFC, it may be necessary to set up an AFC in another country.

3. Much further study is required before definite conclusions can be reached. This calls for close collaboration between WMO and ICAO with a view to ensuring that the services planned and provided meet as closely as practicable the requirements for service by international civil aviation, and avoid duplication of effort.

4. Where an AFC has been designated and set up to make available forecast products required for civil aviation operations over a given area, the country in which the AFC is located should make suitable arrangements which are reasonable and practicable in consultation with other countries as necessary, for dissemination of the forecast products to the countries normally expected to make use of these products. Any forecast products which are specifically designed for civil aviation operations covering the same area but which are being prepared by an RMC should be disseminated by the RMC only at the request of the state in which the AFC is located and should be addressed to that AFC and not to the NMCs of the countries operating flights over that given area. In line with one of the guiding principles of the WWW planning according to which the functions of an RMC are determined by the requirements put on it by recipient Members, it would be for the country responsible for the area forecast centre to decide whether and to what extent it requires processing support from the RMC; this would be reflected in the processing functions of the RMC in question.

5. A broad framework of a possible world-wide area forecast system is attached herewith as one basis for further planning (charts A and B). The contents of these two charts are complementary to each other.
Broad framework of a possible world-wide area forecast system for aviation purposes (forecast products to be issued on a scale of 1:15,000,000)

Forecast areas for flights mainly in middle and high latitudes of the northern hemisphere.
CHART B

Broad framework of a possible world-wide area forecast system for aviation purposes (forecast products to be issued on a scale of 1:15,000,000)

Forecast areas for flights mainly in the tropical belt.
## ANNEX V

### ATTACHMENT V TO APPENDIX II

Regional meteorological centre products

### ANALYSES

<table>
<thead>
<tr>
<th>No.</th>
<th>Chart and content</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Surface (isobars, isotherms, fronts, weather, data plots)</td>
<td>6-hourly</td>
</tr>
<tr>
<td>2</td>
<td>12- and/or 24-hour surface pressure tendency</td>
<td>&quot;</td>
</tr>
<tr>
<td>3</td>
<td>850-mb contour (isotherms, humidity, vorticity, vertical motion, isotachs)</td>
<td>&quot;</td>
</tr>
<tr>
<td>4</td>
<td>700-mb contour (as for 850 mb)</td>
<td>&quot;</td>
</tr>
<tr>
<td>5</td>
<td>500-mb contour</td>
<td>&quot;</td>
</tr>
<tr>
<td>6</td>
<td>300-mb contour</td>
<td>&quot;</td>
</tr>
<tr>
<td>7</td>
<td>200-mb contour</td>
<td>&quot;</td>
</tr>
<tr>
<td>8</td>
<td>Surface — streamline/isotachs, low level wind, convergence (tropical belt)</td>
<td>&quot;</td>
</tr>
<tr>
<td>9</td>
<td>850-mb streamline/isotachs, low level wind, convergence (tropical belt)</td>
<td>12-hourly</td>
</tr>
<tr>
<td>10</td>
<td>700-mb streamline/isotachs (tropical belt)</td>
<td>&quot;</td>
</tr>
<tr>
<td>11</td>
<td>500-mb streamline/isotachs (tropical belt)</td>
<td>&quot;</td>
</tr>
<tr>
<td>12</td>
<td>300-mb streamline/isotachs (tropical belt)</td>
<td>&quot;</td>
</tr>
<tr>
<td>13</td>
<td>200-mb streamline/isotachs (tropical belt)</td>
<td>&quot;</td>
</tr>
<tr>
<td>14</td>
<td>Tropopause/maximum wind</td>
<td>6-hourly ¹</td>
</tr>
<tr>
<td>15</td>
<td>Selected relative topographies</td>
<td>12-hourly</td>
</tr>
<tr>
<td>16</td>
<td>Stability parameters (inc. trade wind inversion)</td>
<td>&quot;</td>
</tr>
<tr>
<td>17</td>
<td>State of sea</td>
<td>6- or 12-hourly</td>
</tr>
<tr>
<td>18</td>
<td>Sea surge</td>
<td>As appropriate</td>
</tr>
<tr>
<td>19</td>
<td>Sea-surface temperature</td>
<td>12-hourly</td>
</tr>
<tr>
<td>20</td>
<td>Freezing level</td>
<td>6-hourly</td>
</tr>
<tr>
<td>21</td>
<td>Precipitation areas (a) 6-hr accumulative</td>
<td>6-hourly</td>
</tr>
<tr>
<td></td>
<td>(b) 24-hr accumulative</td>
<td>24-hourly</td>
</tr>
<tr>
<td>22</td>
<td>APT read-out nephanalyses</td>
<td>As frequently as available</td>
</tr>
<tr>
<td>23</td>
<td>Sferics</td>
<td>6-hourly</td>
</tr>
<tr>
<td>24</td>
<td>Radar</td>
<td>&quot;</td>
</tr>
<tr>
<td>25</td>
<td>Special phenomena (turbulence, including clear-air turbulence, visibility/fog, hail, severe thunderstorms</td>
<td>3-hourly ²</td>
</tr>
<tr>
<td>26</td>
<td>Sea ice</td>
<td>24-hourly</td>
</tr>
<tr>
<td>27</td>
<td>Precipitable water</td>
<td>12-hourly</td>
</tr>
<tr>
<td>28</td>
<td>Snow depth</td>
<td>6-hourly</td>
</tr>
</tbody>
</table>

¹ Frequency will depend on data available.
² These charts would refer to special phenomena over the previous three hours.
ANNEX V

PROGNOSES
(for selected periods up to 72 hours)

<table>
<thead>
<tr>
<th>No.</th>
<th>Chart and content</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Surface 1 (isobars, fronts, weather, isotherms)</td>
<td>6/12-hourly</td>
</tr>
<tr>
<td>2</td>
<td>850-mb contour (isotherms, humidity, vorticity,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>vertical motion, isotachs)</td>
<td>&quot;</td>
</tr>
<tr>
<td>3</td>
<td>700-mb contour (isotherms, humidity, vorticity,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>vertical motion, isotachs)</td>
<td>&quot;</td>
</tr>
<tr>
<td>4</td>
<td>500-mb contour (isotherms, humidity, vorticity,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>vertical motion, isotachs)</td>
<td>&quot;</td>
</tr>
<tr>
<td>5</td>
<td>300-mb contour (isotherms, vorticity, vertical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>motion, isotachs)</td>
<td>&quot;</td>
</tr>
<tr>
<td>6</td>
<td>200-mb contour (isotherms, vorticity, vertical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>motion, isotachs)</td>
<td>&quot;</td>
</tr>
<tr>
<td>7</td>
<td>850-mb streamline/isotachs, low-level wind</td>
<td></td>
</tr>
<tr>
<td></td>
<td>convergence (tropical belt)</td>
<td>&quot;</td>
</tr>
<tr>
<td>8</td>
<td>700-mb streamline/isotachs (tropical belt)</td>
<td>&quot;</td>
</tr>
<tr>
<td>9</td>
<td>500-mb streamline/isotachs (tropical belt)</td>
<td>&quot;</td>
</tr>
<tr>
<td>10</td>
<td>300-mb streamline/isotachs (tropical belt)</td>
<td>&quot;</td>
</tr>
<tr>
<td>11</td>
<td>200-mb streamline/isotachs (tropical belt)</td>
<td>&quot;</td>
</tr>
<tr>
<td>12</td>
<td>Tropopause/maximum wind</td>
<td>6-hourly</td>
</tr>
<tr>
<td>13</td>
<td>Tropopause/vertical wind shear</td>
<td>&quot;</td>
</tr>
<tr>
<td>14</td>
<td>Selected relative topography</td>
<td>6/12-hourly</td>
</tr>
<tr>
<td>15</td>
<td>Upper wind and temperature at selected altitudes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>for aviation requirements (digital form)</td>
<td>&quot;</td>
</tr>
<tr>
<td>16</td>
<td>Significant weather above 400 mb</td>
<td>6-hourly</td>
</tr>
<tr>
<td>17</td>
<td>Significant weather below 400 mb</td>
<td>&quot;</td>
</tr>
<tr>
<td>18</td>
<td>Precipitation</td>
<td>6/12-hourly</td>
</tr>
<tr>
<td>19</td>
<td>Max./min. temperatures</td>
<td>24-hourly</td>
</tr>
<tr>
<td>20</td>
<td>Freezing level</td>
<td>6-hourly</td>
</tr>
<tr>
<td>21</td>
<td>Sea surge</td>
<td>As appropriate</td>
</tr>
</tbody>
</table>

* Forecast positions of tropical revolving storms are assumed to be included in surface forecast charts.

Note

* Extended range forecasts (exceeding 72 hours)

It is appreciated that enormous economic benefits arise from the application of forecasts for weekly, monthly, seasonal, yearly, and even longer periods. However, in view of the state of development of long-range forecasting it is not yet possible to specify the analysed charts for use in extended forecasting nor the specific forecasts which can be made.
ANNEX V

APPENDIX III

Global Telecommunication System

INTRODUCTION

1. In adopting the Global Telecommunication System Plan, Congress was aware that for technical and financial reasons full implementation of the plan may not be achieved in some parts of the world during the implementation period 1968–1971.

ORGANIZATION OF THE GTS

2. The Global Telecommunication System should be organized on a three-level basis:

(i) A main trunk circuit (MTC) interconnecting world meteorological centres and appropriate regional telecommunication hubs and regional meteorological centres. In principle, all regional telecommunication hubs, regional meteorological centres and national meteorological centres should have equal possibility to be connected to the main trunk circuit. In practical implementation of this principle and planning the main trunk circuit, the views of Regional Associations and other competent WMO bodies, such as CSM, should be taken into account in selecting these centres and telecommunication hubs.

(ii) The regional telecommunication networks for the collection of observational data in a given part of the world and their transmission to meteorological centres and telecommunication hubs on the main trunk circuit. These regional networks also provide for the distribution of the observational data and output products of world and regional meteorological centres to satisfy the needs of national meteorological centres.

(iii) The national telecommunication networks for the collection of observational data and distribution of data as required within the country concerned.

3. Because not all meteorological centres requiring global observational and processed data will be on the main trunk circuit, it is necessary to plan regional telecommunication networks in order to ensure proper connections to WMCs, RMCs and RTHs on the MTC.

4. TELECOMMUNICATION FUNCTIONS OF WORLD METEOROLOGICAL CENTRES (WMCs)

The WMCs will perform the following telecommunication functions:

(i) Alpha-numeric traffic (observations, bulletins, etc.)

1. The collection of traffic from any RMCs, RTHs or NMCs served directly by the WMC, the pre-processing (meteorological checking *) of the data
if required, editing (forming bulletins, etc.) and transmission of the traffic on the high-speed main trunk.

*Note:* This function should be performed by the national meteorological centres; meteorological checking of bulletins could be done at the designated regional telecommunication hubs, if the capability exists, in cases where it is not possible for such action to be taken at the national meteorological centres.

2. The relay of incoming trunk traffic without speed conversion, as required, to those regional telecommunication hubs (RTHs), RMCs and NMCs served by the WMC.

3. The conversion of incoming trunk traffic from high speed to low speed, and the selective dissemination of this traffic to RTHs, RMCs and NMCs served by the WMC.

(ii) Facsimile traffic

1. The reception of facsimile transmissions from WMCs and other centres, and the dissemination of these products to RTHs, RMCs and NMCs served by the WMC.

2. The relay on to the main trunk of any facsimile products required for inter-regional exchange.

(iii) Grid-point (computer-to-computer) traffic

1. The reception of products in grid-point form from other WMCs and other centres, and the reconstitution of these products into facsimile or other suitable form for dissemination to RTHs, RMCs and NMCs served by the WMC.

2. The transmission on the main trunk of any grid-point products required for inter-regional exchange.

(iv) General functions

1. Transmission quality control by appropriate error detection and correction techniques.

2. Priority handling of urgent messages (e.g. storm warnings) in accordance with procedures established and agreed upon by Members.

5. Functions of regional telecommunication hubs (RTHs)

The regional telecommunication hubs are the primary interface between the main trunk and the national Services. In this role, the RTHs should be capable of performing the following functions:

(i) Alpha-numeric traffic (observations, bulletins, etc.)

1. The collection of traffic from within the Region, the pre-processing (meteorological checking *) of the data if required, editing (forming
bulletins, etc.) and transmission of the traffic on the high-speed main trunk.

* Note: This function should be performed by the national meteorological centres; meteorological checking of bulletins could be done at the designated regional telecommunication hubs, if the capability exists, in cases where it is not possible for such action to be taken at the national meteorological centres.

2. The relay of incoming trunk traffic without speed conversion to RMCs and NMCs as required.

3. The conversion of incoming trunk traffic from high speed to low speed, and the selective dissemination of this traffic within the Region, as agreed by the Members within the Region.

(ii) Facsimile traffic

1. The reception of facsimile transmissions from WMCs and other centres, and the dissemination of these products within the Region, as agreed.

2. The relay on to the main trunk of any facsimile products from within the Region, as required for inter-regional exchange.

(iii) Grid-point (computer-to-computer) traffic

1. The reception of products in grid-point form from the WMCs and other centres and the retransmission in suitable form for dissemination within the Region, as agreed by Members of the Region.

2. The retransmission on the main trunk of any grid-point products created within the Region, as may be required for inter-regional exchange.

(iv) General functions

1. Transmission quality control by appropriate error detection and correction techniques.

2. Priority handling of urgent meteorological messages (e.g. storm warnings) in accordance with procedures established and agreed upon by Members.

3. Dissemination into their Regions by landline transmissions at low, medium and high speeds and by radio broadcasts appropriate to the receiving capabilities of regional and national centres.

6. Most national Meteorological Services will receive data from, and transmit data to, the main trunk through a regional telecommunication hub or a world meteorological centre. In certain cases, an RMC will also act as an RTH. However, it is recognized that some national Meteorological Services will prefer to be connected directly to the main trunk and perform similar functions to those listed above for themselves.
7. **Telecommunication Functions of Regional Meteorological Centres**

The telecommunication functions of regional meteorological centres should be similar to those described for RTHs.

**Engineering principles**

8. As regards the planning for the period 1968–1971, the basic engineering principles are as follows:

**Principle 1**

The Global Telecommunication System should be engineered as an integrated network for the collection, exchange and distribution of both processed and unprocessed (observational) basic meteorological information on a worldwide basis, with a view to meeting, efficiently and effectively, the requirements of all national Meteorological Services, and also the requirements of world and regional meteorological centres.

**Principle 2**

The system should make the fullest possible use of cable and landline facilities and other telecommunication means with similar technical and operational characteristics.

For medium- and high-speed data transmission and also for facsimile transmission (in digital and non-digital form), the standard telephone-type circuit, as well as radio circuits having similar technical characteristics, is preferred for both operational and financial reasons.

**Principle 3**

The circuits to be provided and the techniques to be employed should be adequate to accommodate the volume of data and its transmission within the required time limits, to meet the needs of world, regional and national meteorological centres.

**Principle 4**

In planning the circuits and data transmission schedules, the volume of data to be passed over any one channel should not exceed 80 per cent of its ultimate capacity. The channels should be engineered to ensure the highest possible reliability.

**Principle 5**

The system should be based on the interconnexion of a number of centres, namely NMCs, RMCs, RTHs and WMCs. The WMCs, RMCs and RTHs require suitable equipment for selection, switching and editing in order to provide NMCs with the data selected to meet their specified needs.
**PRINCIPLE 6**

In order to ensure the reliability and increase the efficiency of the main trunk circuit, it should be envisaged to have additional segments, where adequate facilities exist, serving as alternative routes to the main trunk segments.

**SPECIFICATIONS FOR THE MAIN TRUNK CIRCUIT, REGIONAL AND NATIONAL TELECOMMUNICATION NETWORKS**

9. **Main trunk circuit**

(i) The main trunk circuit shall operate in a segmented “store and forward” mode.

(ii) The main trunk circuit shall consist of four-wire telephone-type circuits and where necessary HF radio channels with a nominal band-width of 3 kHz.

(iii) The main trunk circuit configuration shall be a segmented closed loop permitting transmissions in both directions.

(iv) World meteorological centres, regional meteorological centres and regional telecommunication hubs on the main trunk circuit shall form the terminal ends of adjoining segments of this circuit, and shall be capable of transmitting and receiving on the main trunk circuit.

(v) When the channels are used for data transmission, during the first phase of the implementation of the WWW, a speed of 1200 bits per second will be used, but a transmission speed of 2400 bits per second may be used on segments of the main trunk circuit where practicable.

(vi) The synchronous mode of transmission shall be used in accordance with CCITT Recommendation V-22.

(vii) The seven-bit alphabet for data and message transmissions (CCITT/ISO proposed new alphabet) should be used.

(viii) The modulation techniques used should be in accordance with the relevant CCITT and CCIR recommendations.

(ix) Appropriate error detection and correction techniques should be used on the main trunk circuit to meet the requirements of the WWW.

(x) Facsimile transmissions in analogue form should be made in accordance with WMO standards (see WMO Publication No. 9, Volume C, Chapter 1, Part V).

(xi) The main trunk circuit should be operated continuously, i.e. 24 hours per day.

10. **Regional telecommunication networks**

In order to ensure rapid collection and distribution of observational and processed information to all national Meteorological Services, Regional Associations were requested to establish regional telecommunication plans as soon
as possible, taking into account the principles set forth in the plan for the WWW. Details of the regional telecommunication networks, including exchange programmes, scheduling and guidelines for engineering, should be developed by Regional Associations.

11. National telecommunication networks

The organization of appropriate national telecommunication networks is of great importance to the efficient working of the over-all Global Telecommunication System. Without speedy and reliable collection of meteorological information from all observing sources, the Global Telecommunication System cannot achieve its objective. Therefore, Regional Associations, in adopting their telecommunication plans, should include the technical and operational characteristics which should be fulfilled by national meteorological telecommunication networks.

12. List of telecommunication centres for implementation in the period 1968-1971

(i) World meteorological centres

Melbourne  Moscow  Washington

(ii) Regional telecommunication hubs with receiving and transmitting capabilities on the main trunk circuit and its branches

Bracknell  Offenbach
Brasilia  Paris
Cairo  Prague
Nairobi  Tokyo
New Delhi

(iii) Other regional telecommunication hubs and regional meteorological centres with telecommunication functions

In addition to those centres listed in 12 (i) and 12 (ii) above, Regional Associations have already included the following RTHs and RMCs in their regional telecommunication plans:

| Region I: | Algiers | Kano |
| region II: | Dakar | Pretoria |
| Region II: | Bangkok | Tashkent |
| Region II: | Novosibirsk | Tehran |
| Region II: | Khabarovsk | |
| Region III: | Buenos Aires | Maracay |
| Region IV: | Miami | Montreal |
| Region V: * | Wellington | |
| Region VI: * | | |
The regional telecommunication plans for Regions V and VI as well as for the Antarctic are not yet finalized and therefore further centres will be included by the Regional Associations concerned and by the Executive Committee respectively. As regards the designation of telecommunication centres in the Antarctic, the procedures laid down in Resolution 23(Cg-V) shall be followed.

(iv) **Centres with only receiving capabilities on the MTC**

RMCs, RTHs and NMCs having only receiving capabilities on MTC are not listed above, and their inclusion will be decided upon later by the Regional Associations concerned.
ANNEX VI
Annex to Resolution 18(Cg-V)

Draft Agreement between the World Meteorological Organization and the
International Council of Scientific Unions on the Global Atmospheric
Research Programme

The WORLD METEOROLOGICAL ORGANIZATION and the INTERNATIONAL
COUNCIL OF SCIENTIFIC UNIONS,

Recognizing that modern scientific and technological developments,
notably in the field of satellite meteorology and in the use of high-speed elec­
tronic computers for meteorological purposes, present an opportunity for unpre­
ceded progress in man’s understanding of the atmospheric processes and for
applying such knowledge for practical purposes; and

Noting that the nations of the world, through the medium of the General
Assembly of the United Nations (Resolutions 1721(XVI) and 1802(XVII)) and
in other ways, have called upon WMO and ICSU to take appropriate action to
ensure that this opportunity is taken for the benefit of all countries;

Being mindful of the Working Arrangements agreed upon by the two
organizations which specify that “the two organizations, with a view to facilitat­
ing the attainment, in the most effective and economical manner, of the objec­
tives set forth in their respective constitutions, will act in close co-operation . . .”;

Agree:

(1) To sponsor jointly a Global Atmospheric Research Programme
(GARP) as outlined in the “First and second reports of the ICSU/IUGG Com­
mittee on Atmospheric Sciences (CAS)” and the “Reports of the third and fourth
sessions of the WMO Advisory Committees”; and to this end

(2) To develop and to keep under review a jointly agreed programme of
activities for the planning and implementation of GARP, and GARP Sub-Pro­
grammes, taking into account the three major elements of GARP, namely,
determination of scientific objectives and content of programmes, design of
observational and logistical systems, and the implementation of the whole pro­
gramme including data acquisition, processing and analysis;

(3) To establish a Joint GARP Organizing Committee for the following
purposes:

(a) To consider, to endorse and to recommend jointly to ICSU and WMO
scientific goals and plans for GARP and for GARP sub-programmes that
are considered essential prerequisites in defining the scientific requirements
of GARP itself (in both categories, this will include defining detailed experimental objectives and operational requirements for their implementation); 

(b) To recommend to WMO those techniques and procedures developed in GARP programmes that may be applied in the operation of WWW; 

(c) To recommend to WMO the manner in which the scientific requirements of GARP can best be supported by the operation of WWW.

AGREE further: 

(1) That the Joint Organizing Committee shall be constituted according to the following principles:

(a) It shall consist of not more than twelve scientists selected by mutual agreement between WMO and ICSU; 

(b) It shall be regarded by both organizations as the main scientific organ for the consideration, endorsement and recommendations on all proposals relating to GARP and its sub-programmes; 

(c) It shall be adequately supported by both organizations; 

(d) It shall be authorized to select and convene working groups, special study groups, to select consultants, etc., within its field of responsibility, within the plans and budgets approved annually by the Executive Committee of both organizations and taking into account existing technical and scientific groups in both organizations; *

(e) In pursuing its planning efforts it shall keep the relevant bodies of ICSU and WMO fully informed of its activities, and it shall take full and appropriate consideration of the expressed interests of such WMO and ICSU bodies, including technical commissions and advisory bodies; 

(f) It shall guide the activities of a small full-time Joint Planning Staff; 

(g) It shall meet at least once annually; 

(2) The detailed procedures specified in the annex to this agreement shall be followed in the practical application of this agreement; 

(3) The Joint Planning Staff for the Global Atmospheric Research Programme should consist of personnel recommended by the Joint Organizing Committee and approved by WMO and ICSU, and should: 

(a) Formulate, for the Joint GARP Organizing Committee and in accordance with the scientific objectives established by it, detailed plans for GARP and GARP sub-programmes; 

(b) Provide secretarial assistance for the Joint GARP Organizing Committee; 

(c) Assist in the preparation of reports and supply information concerning GARP as directed by the Joint GARP Organizing Committee; 

(d) Follow up the implementation of GARP and GARP sub-programmes, submitting to the Joint GARP Organizing Committee adequate information.

* As far as implementation of joint projects is concerned, the normal WMO procedures as defined in the Basic Documents of WMO will apply unless agreed otherwise between ICSU and WMO.
concerning the degree of fulfilment of the objectives, within the approved plans;

(4) The Secretary-General of WMO shall be responsible for administering the finances and providing services for the Joint Organizing Committee and Joint Planning Staff in accordance with procedures approved by the Executive Committees of both WMO and ICSU;

Express the view that only by such a collaborative effort can the GARP be successfully executed.

Annex to Draft Agreement

Procedure to be followed in implementing the Agreement

Decisions

All major decisions affecting the implementation of GARP shall be taken jointly by the two organizations. Such decisions may relate to pilot projects, preliminary experiments, the main programme and any other major form of activity which might foster the common aim.

Implementation of decisions

The methods of implementing such decisions shall be agreed jointly. In some cases, implementation may be on a joint basis (e.g. a joint conference); in others, one or other of the two organizations may, by mutual consent, accept sole responsibility. In the case of joint projects the procedures and methods adopted shall conform to the basic constitutions of both organizations. If the implementation requires action by another body or organization, the request will be submitted to that body by one or other of the organizations, but in the name of both. All proposals from the Joint Organizing Committee should clearly indicate the method of implementation recommended.
ANNEX VII
Annex to Resolution 26(Cg-V)

A general outline for an agrometeorological programme in aid of food production

1. Basic requirements

1.1 Fundamental research. Studies regarding the heat balance and water balance at the surface of the earth, and at the surfaces of plants and animals; examination of the physical laws governing the processes of photosynthesis; studies in soil physics and soil chemistry, especially those concerning problems of soil moisture, soil temperature, and the physical factors affecting the action of fertilizers. Studies of the relation of topography and soil parameters to microclimate.

1.2 Applied research. Establishment of practical links between the weather and every weather-sensitive agricultural operation. The nature and details of such links will vary from country to country and from crop to crop; priority should be given to problems of great economic importance, the solving of which, even if only in approximate form, will assist in decision-making by the primary producers and by related administrative services. The number of such problems is too great to list them all but they include, for example: crop location, sowing dates, the incidence and intensity of attacks of pests and diseases, factors affecting yield and quality, harvest conditions and food storage and transport.

1.3 Data and measurements. Establishment of an adequate network of observational stations for both research and operational purposes. Development of instruments, especially those for the measurement of radiation, soil temperature, soil moisture, and crop climate in general, including factors such as leaf wetness. Acquisition of suitable data concerning cultivated crops, farm animals, pests and disease incidence, and farming activities which can be related to current, past, or future meteorological conditions. Such data are required both for investigational purposes in operational research, and for current use in operational practice and planning.

2. Local requirements

2.1 Operational planning. The provision of technical advice and appropriate meteorological data, preferably on a probability or frequency basis determined by past records, to aid the making of decisions concerning, for example:

(a) Land utilization or site selection, including frost hazard;
(b) Crop adaptation or selection;
ANNEX VII

236

(c) Shelter-belt location and design;
(d) Location and design of buildings for the housing of animals and the storage of food;
(e) Irrigation planning, including water supply and equipment;
(f) Machinery and equipment requirements, i.e. tractors, harvesters, grain-driers, etc.

NOTE: Such operational planning is at present based mainly on the extrapolation of past weather; it would be greatly assisted if, at a future date, seasonal forecasts were to become available.

2.2 Operational practice. The provision of technical advice, current meteorological data, and forecasts to aid the making of decisions concerning, for example:
(a) The estimation of best dates for cultivation, planting, and harvest;
(b) Manpower requirements and disposition;
(c) Irrigation practice, when and how much;
(d) Cultivation of the soil, fumigation and fertilizer applications;
(e) Frost protection;
(f) The onset of infestations by pests and disease;
(g) Pests and disease counter-action, such as spraying and dusting, including aerial operations by light aircraft or helicopters;
(h) Harvest operations, including drying, curing, and storing of crops;
(i) Livestock husbandry, including management and feeding problems both indoors and outdoors;
(j) Forecasts of yield and quality of crops.

2.3 The provision of warnings of major disasters.

3. National and international requirements

3.1 Development planning
(a) Development and improvement of techniques to interpret climatic information in terms of potential agricultural production;
(b) Establishment of adequate observational networks to make the measurements required in such techniques;
(c) Application on a regional basis of modern data-processing methods to compile and analyse such measurements;
(d) Publication of climatic data in a form specially designed to meet the planning needs.

NOTE: As in 2.1, such development planning is at present based mainly on the use of past weather records; it would be greatly assisted if, at a future date, forecasts of climatic trends were to become available.
3.2 Education and training

(a) The potential efficiency of this programme depends largely on the degree of collaboration between meteorologists and agriculturalists and their mutual education on an international basis. There must be the best possible exchange of opinions and research findings both on a local and on an international scale;

(b) Equally essential requirements for success are the education and training of the farming community, at all levels from the farm worker to central administration, to make use of all available scientific aids. Adequate publicity in the form of lectures, broadcasts, and printed literature must therefore be included in the programme.
ANNEX VIII

Annex to Resolution 28(Cg-V)

Amendments to the Technical Regulations of the World Meteorological Organization

INTRODUCTION — Replace by the following text:

INTRODUCTION

The Technical Regulations of the World Meteorological Organization are determined by Congress in accordance with Article 7 (d) of the Convention. The first edition was adopted by Second Congress (1955) and the second one by Third Congress (1959). The present edition incorporates all amendments to these Regulations up to and including those adopted by Fifth Congress (1967).

These Regulations are designed:

(a) To facilitate meteorological co-operation between Members;
(b) To meet, in the most effective manner, specific needs, in the international sphere, of the various fields of application of meteorology; and
(c) To secure uniformity and standardization, as appropriate, in the practices and procedures employed in achieving (a) and (b).

The Technical Regulations comprise standard meteorological practices and procedures and recommended meteorological practices and procedures.

The definitions of these two types of Regulation are as follows:

The standard meteorological practices and procedures:

(a) Shall be the meteorological practices and procedures which it is necessary that Members follow or implement; and therefore
(b) Shall have the status of requirements in a technical resolution in respect of which Article 8 (b) of the Convention is applicable; and
(c) Shall invariably be distinguished by the use of the term shall in the English text, and by suitable equivalent terms in the French, Spanish and Russian texts.

The recommended meteorological practices and procedures:

(a) Shall be the meteorological practices and procedures which it is desirable that Members follow or implement; and therefore
(b) Shall have the status of recommendations to Members, to which Article 8 (b) of the Convention shall not be applied;
(c) Shall be distinguished by the use of the term should in the English text (except where specifically provided otherwise by decision of the Congress) and by suitable equivalent terms in the French, Russian and Spanish texts.

In accordance with the above definitions, Members shall do their utmost to implement the standard meteorological practices and procedures. Members shall formally notify the Secretary-General of their Intention to apply the “standards” of Technical Regulations except those for which they have lodged a specific deviation, in accordance with Article 8 (b) of the Convention.

With regard to recommended meteorological practices and procedures, Members are urged to comply with these, but it is not necessary to notify the Secretary-General of non-observance.
In order to clarify the status of the various Regulations, the standard practices and procedures are distinguished from the recommended practices and procedures by a difference in typographical practices, as indicated in the Editorial Note.

Certain Notes are included in the Technical Regulations, for explanatory purposes; they may, for instance, refer to relevant WMO Guides and Manuals. These Notes have no status as Technical Regulations. (The WMO Guides describe practices, procedures and specifications which Members are invited to follow or implement in establishing and conducting their arrangements in compliance with the Technical Regulations and in otherwise developing Meteorological Services in their respective countries.)

Those WMO publications which have the status of a Technical Regulation and which are published separately from the Technical Regulations are called "annexes". As can be seen from the Table of Contents, specified parts of the International Cloud Atlas and of Volume B — Codes — of Publication No. 9, though not attached to the present publication, are parts of these Technical Regulations. These two annexes are considered as standard practices and procedures.

Texts which are appended to the Technical Regulations are called "appendices" and have the same status as the Technical Regulations to which they refer. Appendices A, B, C, D and G are therefore considered as standard practices and procedures. Appendices E and F are considered as recommended practices and procedures.

The words "shall" and "should" in annexes and appendices have their dictionary meanings and have not the regulatory character of "shall" and "should" in the Technical Regulations themselves.

Whenever a cross-reference to WMO publications appears in the text of a Technical Regulation the relevant portion of the publication has the same status as if that portion appeared as an integral part of the Technical Regulations.

Guiding principles

Certain principles which have been previously agreed upon by Congress and applied in the selection of material for inclusion in the Technical Regulations are reproduced hereafter. These principles constitute guidance material for constituent bodies, in particular technical commissions, when dealing with matters pertaining to Technical Regulations.

(i) Technical commissions should not recommend that a Regulation should be a standard practice unless it is supported by a strong majority;
(ii) Paragraphs of the Technical Regulations should contain appropriate instructions to Members regarding implementation of the provision;
(iii) No major changes should be made in Technical Regulations without special advice from the appropriate technical commissions.

Chapter 1 — Definitions

Insert at the appropriate place the following entries:

Ordinary radiation station. A radiation station whose observing programme includes at least the continuous recording of the global solar radiation.


Principal radiation station. A radiation station whose observing programme includes at least the continuous recording of global solar radiation and of sky radiation and regular measurements of direct solar radiation.
After "Standard time of observation" insert the following:

**NOTE:** The term Greenwich Mean Time, abbreviated as GMT, is used in the WMO Technical Regulations (Chapters 1 to 11) as a synonym of the term Universal Time (UT).

Amend definitions of the following terms to read:

**Meteorological message.** A single meteorological report, analysis, or forecast.

**Territorial broadcast.** A broadcast containing the meteorological information from the territory or territories of one or more Members and appropriate sea areas, and intended for reception:

(a) Within the area of origin of the information;
(b) In adjacent countries, as regionally or inter-regionally agreed;
(c) At one or more designated centres responsible for subregional broadcasts; and
(d) If possible, at the designated centre responsible for the regional broadcast.

**Chapter 2 — Meteorological observing stations**

Renumber present paragraph 2.2.4.1.1 as 2.2.4.2.

After new 2.2.4.2 insert the following paragraphs:

2.2.4.3
There should be at least one principal radiation station in each of the main climatic zones of every country.

2.2.4.4
The density of the network of ordinary radiation stations should be adequate for the study of the radiation climatology of the country.

2.3.3.3 — Amend to read:

2.3.3.3
The elevation data of a climatological station should be specified at least to the nearest five metres, except that for a station with a barometer the elevation should be specified to the nearest metre.

2.5.2.2 — Replace "port meteorological liaison officers" by "port meteorological officers".

After 2.6.3.1 — Insert the following new paragraph:

2.6.4
**Observing stations for special purposes**

2.6.4.1
Each Member should maintain an up-to-date directory of ordinary and principal radiation stations in its territory, giving the following information for each station:

(a) Name and geographical co-ordinates;
(b) Elevation of station;
(c) A brief description of the local topography;
(d) Category of station and details of observing programme;
(e) Details of radiometers in use (type and serial numbers of each instrument, calibration factors, dates of any significant changes);
(f) Exposure of radiometers, including heights above ground and nature of underlying surface;

(g) A station history (dates of beginning of records, removals, closing or interruption of records, changes in the name of the station and important changes in the observing programme);

(h) Name of the supervising organization or institution.

Chapter 3 — Meteorological surface observations

3.1.1.2 — Amend sub-paragraph (r) to read:

(r) Sea ice and/or icing on board ship, when appropriate;

3.1.1.3 — Amend sub-paragraph (r) to read:

(r) Sea ice and/or icing on board ship, when appropriate.

3.1.1.4 — Amend sub-paragraph (j) to read:

(j) Sea ice and/or icing on board ship, when appropriate.

3.1.1.5 — Delete sub-paragraph (f) and insert the following new sub-paragraphs (f), (g) and (h):

(f) Atmospheric pressure;

(g) Temperature;

(h) Sea ice and/or icing on board ship, when appropriate.

3.1.4.1 and 3.1.4.2 — Amend these paragraphs to read:

3.1.4.1

At principal radiation stations the observing programme should include:

(a) Continuous recording of global solar radiation and of sky radiation, using pyranometers of the first or second class;

(b) Regular measurements of direct solar radiation;

(c) Recording of duration of sunshine.


3.1.4.2

At ordinary radiation stations the observing programme should include:

(a) Continuous recording of global solar radiation;

(b) Recording of duration of sunshine.

3.3.1.1 — Replace “basic land stations” by “principal land stations”.

3.4.10.1 — Delete this paragraph.

3.4.10.2 — Renumber this paragraph as 3.4.10.1.

After 3.5.1.2 — Insert the following new paragraph 3.5.1.3:

3.5.1.3

Observations made at auxiliary ship stations should be recorded in a meteorological log-book.
3.5.1.3 to 3.5.1.4.1 — Renumber present paragraphs 3.5.1.3, 3.5.1.4 and 3.5.1.4.1 as 3.5.1.4, 3.5.1.5 and 3.5.1.5.1 respectively.

3.5.1.4 (new) — Amend new paragraph 3.5.1.4 to read:

The entries in a ship's meteorological log-book should follow the sequence of elements in the appropriate international code form.

Chapter 4 — Meteorological upper-air observations

4.4.3.2 — Amend to read:

4.4.3.2

The elements to be observed during meteorological reconnaissance flights should include:

(a) Altitude of aircraft;
(b) Atmospheric pressure at which aircraft is flying;
(c) Temperature;
(d) Humidity;
(e) Wind (type of wind, wind direction and speed);
(f) Present and past weather;
(g) Turbulence;
(h) Flight conditions (cloud amount);
(i) Significant weather changes;
(j) Icing and contrails.

NOTE: Detailed guidance regarding observations made during meteorological reconnaissance flights is given in the Guide to Meteorological Instrument and Observing Practices.

Chapter 6 — Meteorological telecommunications

After 6.2.2.1 — Insert the following new paragraph 6.2.2.2:

6.2.2.2

A Member shall send necessary amendments to the information supplied under 6.2.2.1 to the Secretariat.

Renumber present paragraphs 6.2.2.2 to 6.2.2.15 as 6.2.2.3 to 6.2.2.16 respectively.

After 6.2.2.6 (new) — Insert the following Note:

NOTE: Details concerning the action to be taken in case of change in areas of responsibility are given in Publication No. 9, TP. 4, Volume D.

6.2.2.12 (new) — Amend new paragraph 6.2.2.12 (present 6.2.2.11) to read:

6.2.2.12

Members should arrange with their telecommunication services for the inclusion of four-letter call-signs of ships when available in the preamble of reports from selected supplementary and auxiliary ship stations when transmitted from coastal stations to collecting centres.

6.3.1.2 — Amend to read:

6.3.1.2

Appropriate arrangements should be made by Members concerned so that, in conformity with the general plan:

(a) Five hemisphere exchange centres are established in the northern hemisphere;
(b) Three hemisphere exchange centres are established in the southern hemisphere.
Chapter 7 — Synoptic and forecasting practices

Amend the Note under the heading to read:

**NOTE:** In addition to the regulations contained in this chapter, detailed guidance is given in the Guide to the Preparation of Synoptic Weather Charts and Diagrams and in the International Meteorological Tables.

Chapter 8 — Climatological practices

8.3.1.1.1 — Amend to read:

8.3.1.1.1

The distribution of stations from which monthly surface climatological data are transmitted should be such that every 250,000 km² is represented by one station; the distribution of stations from which monthly upper-air climatological data are transmitted should be such that every 1,000,000 km² is represented by one station.

After 8.3.1.5 — Insert the following new paragraphs 8.3.1.6 to 8.3.1.8:

8.3.1.6

Members operating fixed ship stations and selected and supplementary ship stations should ensure that all surface observation data from these stations are punched in accordance with the layout of the International Maritime Meteorological Punch-Card, sorted half-yearly and dispatched to the responsible Members concerned.

**NOTE:** The responsible Members are those which have agreed to undertake the preparation of climatological summaries and the collection of data for the preparation of a part of the planned marine section of the World Climatic Atlas.

8.3.1.7

Members who operate selected or supplementary ship stations but are not able to comply with 8.3.1.6 above should copy the observations from the log-books of these ships on a standard form and send these forms to an appropriate Member who will undertake to punch and sort the cards for distribution to the responsible Members.

8.3.1.8

Members operating auxiliary ship stations should make available to responsible Members the observations of those auxiliary ships, which were made in areas where the number of reporting ships is inadequate, or in areas which are rarely traversed by ocean-going ships, provided that, on being checked, the observations are considered to be of a sufficiently high standard.

8.5.2.4 — Amend to read:

8.5.2.4

Each Member should publish or make available on a national and a regional basis at least the following radiation data:

(a) For principal radiation stations, hourly totals of global solar radiation and of sky radiation (see paragraph 3.1.4.1);

(b) For ordinary radiation stations, daily totals of global solar radiation (see paragraph 3.1.4.2).

Chapter 10 — Meteorological service for shipping

10.2.1.1 — Amend to read:

10.2.1.1

Members responsible for shipping forecasts shall transmit to shipping on the high seas in their allotted areas meteorological information for these allotted areas.

**NOTE:** Details concerning the action to be taken in case of discontinuance of shipping forecasts and a map showing the allocation of areas of responsibility are given in Publication No. 9, TP. 4, Volume D.
ANNEX VIII

10.2.2.5 — Amend to read:

10.2.2.5

The first warning of a tropical cyclone or of a storm of hurricane intensity should be broadcast as soon as possible, regardless of existing schedules.

Appendix A — International barometer conventions

Paragraph 5 — Amend to read:

(5) Determination of local acceleration of gravity

The value of $g_{\phi,H}$ required for reducing barometer readings to standard gravity shall be based on the most accurate determination of the acceleration of gravity $g$ available. In the event that the local value of the acceleration of gravity has not been determined on the basis of some method considered to be more accurate in the absolute sense than the methods outlined in Appendix B, it shall be ascertained in accordance with the provisions of Appendix B.

Appendix C — Values of some physical functions and constants used in meteorology

Paragraphs (2), (3) and (11) — Amend to read:

(2) Molecular weight of gases constituting dry air

<table>
<thead>
<tr>
<th>Constituent gas</th>
<th>Molecular weight ($^{12}$C = 12.0000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen (N$_2$)</td>
<td>28.013</td>
</tr>
<tr>
<td>Oxygen (O$_2$)</td>
<td>31.999</td>
</tr>
<tr>
<td>Argon (Ar)</td>
<td>39.948</td>
</tr>
<tr>
<td>Carbon dioxide (CO$_2$)</td>
<td>44.010</td>
</tr>
<tr>
<td>Neon (Ne)</td>
<td>20.183</td>
</tr>
<tr>
<td>Helium (He)</td>
<td>4.003</td>
</tr>
<tr>
<td>Krypton (Kr)</td>
<td>83.80</td>
</tr>
<tr>
<td>Xenon (Xe)</td>
<td>131.30</td>
</tr>
<tr>
<td>Ozone (O$_3$)</td>
<td>41.998</td>
</tr>
<tr>
<td>Radon (Rn)</td>
<td>222</td>
</tr>
</tbody>
</table>

(3) Molecular weight of dry air ($M$)

$M = 28.9644$

(11) Gas constant ($R_w$) for 1 gram of water vapour

$R_w = \frac{R^*}{M_w} = \frac{0.46151}{12} \text{ joule g}^{-1}\text{K}^{-1}$

$= 0.011023 \text{ IT cal g}^{-1}\text{K}^{-1}$

Appendix D — Definitions and specifications of water vapour in the atmosphere

Paragraphs (4), (5), (10), (14) and (15) — Replace the numerical coefficient 0.62197 by 0.62198 in these paragraphs.
Appendix E — International symbols used for graphic representation of data on weather charts and for analyses on weather charts

II. Analyses on weather charts (symbols) — Insert the following new symbol:

(6) Convergence line

Solid orange line

Renumber present symbols (6) and (7) as (7) and (8).
ANNEX IX
Annex to Resolution 31(Cg-V)

Programme and languages of WMO publications
for the fifth financial period

<table>
<thead>
<tr>
<th>Publication</th>
<th>Languages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Basic documents (BD)</td>
<td></td>
</tr>
<tr>
<td>(a) Basic Documents BD.1</td>
<td>English, French</td>
</tr>
<tr>
<td>(b) Technical Regulations BD.2 and BD.3</td>
<td>Russian, Spanish</td>
</tr>
<tr>
<td>(c) Agreements and Working Arrangements BD.4</td>
<td></td>
</tr>
<tr>
<td>2. Official records (RC)</td>
<td></td>
</tr>
<tr>
<td>(a) Abridged report of Congress with resolutions</td>
<td></td>
</tr>
<tr>
<td>(b) Minutes of Congress</td>
<td>English, French</td>
</tr>
<tr>
<td>(c) Abridged reports of the Executive Committee with resolutions</td>
<td>Russian, Spanish</td>
</tr>
<tr>
<td>3. Technical publications (TP)</td>
<td></td>
</tr>
<tr>
<td>(a) Publication No. 2</td>
<td>Multilingual, as required</td>
</tr>
<tr>
<td>(b) Publication No. 5</td>
<td>Bilingual — English/ French</td>
</tr>
<tr>
<td>(c) WMO Guides</td>
<td>English, French</td>
</tr>
<tr>
<td>(d) Syllabi for training and education</td>
<td>Russian, Spanish</td>
</tr>
<tr>
<td>(e) Publication No. 9</td>
<td>English, French</td>
</tr>
<tr>
<td>(i) Volume A</td>
<td>Russian, Spanish</td>
</tr>
<tr>
<td>(ii) Volume B</td>
<td>Bilingual — English/ French</td>
</tr>
<tr>
<td>(iii) Volume C</td>
<td>English, French</td>
</tr>
<tr>
<td>(iv) Volume D</td>
<td>Russian, Spanish</td>
</tr>
</tbody>
</table>

The regulatory material should also be included in Spanish and Russian.
4. Reports (RP)

(a) Annual reports of the WMO

(b) Reports of sessions of regional associations

(c) Reports of sessions of technical commissions

5. WMO Bulletin

### Publication | Languages
--- | ---
(f) International list of selected and supplementary ships | Bilingual — English/
(g) Technical Notes | French

(h) Other technical publications (manuals, vocabulary, nomenclatures, meteorological tables, catalogues, WWW planning reports, network charts, etc.) | In one or more of the official languages, and with summaries in the four languages, as decided by the Executive Committee

The most important of these publications, such as manuals, vocabulary and a selection of WWW Planning Reports, should normally be issued in English, French, Russian and Spanish, but the decision on the selection is left to the discretion of the Executive Committee

- English, French, Russian, Spanish
- Should be issued in the same languages as the documentation prepared for the session

- English, French, Russian, Spanish

- English, French, Russian, Spanish
ANNEX X
Annex to Resolution 33(Cg-V)

Part A

Maximum expenditures for the fifth financial period
(1968–1971)
(In United States dollars)

<table>
<thead>
<tr>
<th>Revenue</th>
<th>Expenditures</th>
</tr>
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<tbody>
<tr>
<td>Contributions</td>
<td>I. Policy-making organs : 417,489</td>
</tr>
<tr>
<td>Miscellaneous income</td>
<td>10,000</td>
</tr>
<tr>
<td></td>
<td>II. Executive management : 113,000</td>
</tr>
<tr>
<td></td>
<td>III. Programme of technical activities : 1,947,200</td>
</tr>
<tr>
<td></td>
<td>IV. Regional activities : 553,000</td>
</tr>
<tr>
<td></td>
<td>V. Administrative and common services : 1,040,000</td>
</tr>
<tr>
<td></td>
<td>VI. Other budgetary provisions : 180,000</td>
</tr>
<tr>
<td></td>
<td>VII. Panels and working groups of constituent bodies and planning meetings : 600,000</td>
</tr>
<tr>
<td></td>
<td>VIII. Personnel : 6,966,311</td>
</tr>
</tbody>
</table>

11,817,000

Part I — Policy making Organs

A. Congress
   Session
   Report
   Working groups *
   Appropriations 151,170
   6,500

B. Extraordinary Congress
   Session
   Report

C. Executive Committee
   Session
   Report
   Working groups, panels and planning meetings *
   Appropriations 223,819
   16,000

D. Bureau meetings
   Appropriations 10,000

E. Other related expenditure
   President of Organization
   Secretarial assistance at home station
   Travel
   Secretarial assistance in Geneva
   Total Part I 417,489

* See Part VII.
ANNEX X

### Part II — Executive Management

<table>
<thead>
<tr>
<th>Section</th>
<th>Personnel</th>
<th>Appropriations</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Secretary-General’s Office</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>B. Deputy Secretary-General’s Office</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>C. Legal, External and Public Affairs Section</td>
<td>Information</td>
<td>30,000</td>
</tr>
<tr>
<td></td>
<td>Film loan service</td>
<td>30,000</td>
</tr>
<tr>
<td>D. Temporary staff and overtime</td>
<td></td>
<td>6,000</td>
</tr>
<tr>
<td>E. Travel</td>
<td></td>
<td>22,000</td>
</tr>
<tr>
<td>F. Representation</td>
<td></td>
<td>17,000</td>
</tr>
<tr>
<td>G. Consultant (legal)</td>
<td></td>
<td>8,000</td>
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<tr>
<td><strong>Total Part II</strong></td>
<td></td>
<td>413,000</td>
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### Part III — Programme of Technical Activities

<table>
<thead>
<tr>
<th>Section</th>
<th>Appropriations</th>
</tr>
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<tbody>
<tr>
<td>A. Technical Commissions</td>
<td></td>
</tr>
<tr>
<td>Sessions</td>
<td>216,800</td>
</tr>
<tr>
<td>Reports</td>
<td>4,000</td>
</tr>
<tr>
<td>Working groups and planning meetings*</td>
<td></td>
</tr>
<tr>
<td>Meetings of presidents of technical commissions and collaboration between presidents and permanent secretaries</td>
<td>23,400</td>
</tr>
<tr>
<td>B. Advisory Committee</td>
<td></td>
</tr>
<tr>
<td>Sessions</td>
<td>84,000</td>
</tr>
<tr>
<td>Reports</td>
<td>2,000</td>
</tr>
<tr>
<td>C. Personnel</td>
<td></td>
</tr>
<tr>
<td>C.1 Special assistant for technical policies and programmes ** Training Co-ordination Office</td>
<td></td>
</tr>
<tr>
<td>C.2 Scientific and Technical Department</td>
<td></td>
</tr>
<tr>
<td>C.3 Technical Co-operation Department</td>
<td></td>
</tr>
<tr>
<td>C.4 Special Assistant for WWW Management and Co-ordination **</td>
<td></td>
</tr>
<tr>
<td>C.5 Conference and Publications Division</td>
<td></td>
</tr>
<tr>
<td>D. Projects</td>
<td>410,000</td>
</tr>
<tr>
<td>E. Consultants</td>
<td>100,000</td>
</tr>
<tr>
<td>F. Technical publications</td>
<td>290,000</td>
</tr>
<tr>
<td>G. Temporary staff</td>
<td>45,000</td>
</tr>
<tr>
<td>H. Technical library</td>
<td>12,000</td>
</tr>
<tr>
<td>I. Travel (Other than travel of staff for sessions of constituent bodies)</td>
<td>60,000</td>
</tr>
<tr>
<td>J. Activities in support of Joint GARP Organizing Committee</td>
<td>200,000</td>
</tr>
<tr>
<td>K. Long-term fellowships</td>
<td>500,000</td>
</tr>
<tr>
<td><strong>Total Part III</strong></td>
<td>1,947,200</td>
</tr>
</tbody>
</table>

* See Part VII.
** See Part VIII.
## Part IV — Regional activities

### A. Regional associations

<table>
<thead>
<tr>
<th>Activity</th>
<th>Appropriations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sessions</td>
<td>163,000</td>
</tr>
<tr>
<td>Reports</td>
<td>3,000</td>
</tr>
<tr>
<td>Working groups and planning meetings*</td>
<td>166,000</td>
</tr>
</tbody>
</table>

### B. Regional offices and administrative expenses for presidents of regional associations

#### B.1 Africa

<table>
<thead>
<tr>
<th>Activity</th>
<th>Appropriations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional office</td>
<td></td>
</tr>
<tr>
<td>Personnel</td>
<td>121,000</td>
</tr>
<tr>
<td>Travel</td>
<td>30,000</td>
</tr>
<tr>
<td>Supplies and equipment</td>
<td>3,000</td>
</tr>
<tr>
<td>Communications</td>
<td>6,000</td>
</tr>
<tr>
<td>Rental of premises</td>
<td>2,000</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td></td>
</tr>
<tr>
<td>Assistance to the president, including travel</td>
<td>8,000</td>
</tr>
</tbody>
</table>

#### B.2 Asia

<table>
<thead>
<tr>
<th>Activity</th>
<th>Appropriations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistance to the president, including travel</td>
<td>170,000</td>
</tr>
<tr>
<td>(a) Travel</td>
<td>10,000</td>
</tr>
<tr>
<td>(b) Secretarial assistance</td>
<td>20,000</td>
</tr>
</tbody>
</table>

#### B.3 Latin America

<table>
<thead>
<tr>
<th>Activity</th>
<th>Appropriations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional office</td>
<td></td>
</tr>
<tr>
<td>Personnel</td>
<td>115,000</td>
</tr>
<tr>
<td>Travel</td>
<td>30,000</td>
</tr>
<tr>
<td>Supplies and equipment</td>
<td>6,000</td>
</tr>
<tr>
<td>Communications</td>
<td>6,000</td>
</tr>
<tr>
<td>Rental of premises</td>
<td>2,000</td>
</tr>
<tr>
<td>Assistance to the president, including travel</td>
<td>170,000</td>
</tr>
</tbody>
</table>

#### B.4 South-West Pacific

<table>
<thead>
<tr>
<th>Activity</th>
<th>Appropriations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistance to the president, including travel</td>
<td>8,000</td>
</tr>
</tbody>
</table>

#### C. Antarctica

<table>
<thead>
<tr>
<th>Activity</th>
<th>Appropriations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9,000</td>
</tr>
</tbody>
</table>

**Total Part IV** | **553,000**

* See Part VII.
## Part V — Administrative and common services

### A. Personnel

<table>
<thead>
<tr>
<th>Subcategory</th>
<th>Appropriations</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.1 Office of Head (Administration) **</td>
<td>10,000</td>
</tr>
<tr>
<td>A.2 Administrative and Common Services Division **</td>
<td>10,000</td>
</tr>
</tbody>
</table>

### B. Administrative publications

- 180,000

### C. Travel for administrative meetings

- 180,000

### D. Stationery and office supplies

- 130,000

### E. Office equipment and machines

- 200,000

### F. Communications

- 450,000

### G. Premises

- 6,000

### H. Hospitality

- 34,000

### I. Shared costs for joint services (UNJS Pension Board, housing bureau, joint administrative expenses)

- 20,000

### J. Temporary staff

- **Total Part V**: 4,040,000

---

## Part VI — Other budgetary provisions

<table>
<thead>
<tr>
<th>Subcategory</th>
<th>Appropriations</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Contingencies and unforeseen expenditure</td>
<td>70,000</td>
</tr>
<tr>
<td>B. External audit</td>
<td>30,000</td>
</tr>
<tr>
<td>C. Insurances and staff compensation fund</td>
<td>80,000</td>
</tr>
</tbody>
</table>

- **Total Part VI**: 180,000

---

## Part VII — Panels and working groups of constituent bodies and planning meetings

- 600,000

---

## Part VIII — Personnel

- **Total Parts I-VIII**: 11,817,000

---

** See Part VIII.
Part B — Proposed organizational structure of Secretariat

Secretary-General: Offices and services
- Secretary-General’s Office
- Deputy Secretary-General’s Office
  - External and Public Affairs Office
- Special assistant for WWW management and co-ordination
- Special assistant for technical policies and programmes
  - Education and Training Co-ordination Office
- Regional Offices for Africa and Latin America

Office of Head of Scientific and Technical Department
Division of the Scientific and Technical Department

Office of Head of Technical Co-operation Department
Various Divisions according to requirements and to funds available from UNDP. Also provision for some VAP projects

Office of Head of Administration and Supporting Activities Department
Divisions of Administration and Supporting Activities Department
ANNEX XI
Annex to Resolution 37(Cg-V)

Table of proportional contributions
to the World Meteorological Organization
for the fifth financial period

Table I — Members as of 29 April 1967

<table>
<thead>
<tr>
<th>Members</th>
<th>Number of votes assured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>4</td>
</tr>
<tr>
<td>Albania</td>
<td>1</td>
</tr>
<tr>
<td>Algeria</td>
<td>1</td>
</tr>
<tr>
<td>Argentina</td>
<td>15</td>
</tr>
<tr>
<td>Australia</td>
<td>20</td>
</tr>
<tr>
<td>Austria</td>
<td>6</td>
</tr>
<tr>
<td>Barbados</td>
<td>1</td>
</tr>
<tr>
<td>Belgium</td>
<td>14</td>
</tr>
<tr>
<td>Bolivia</td>
<td>3</td>
</tr>
<tr>
<td>Brazil</td>
<td>45</td>
</tr>
<tr>
<td>British Caribbean Territories</td>
<td>1</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>4</td>
</tr>
<tr>
<td>Burma</td>
<td>3</td>
</tr>
<tr>
<td>Burundi</td>
<td>1</td>
</tr>
<tr>
<td>Byelorussian S.S.R.</td>
<td>6</td>
</tr>
<tr>
<td>Cambodia</td>
<td>1</td>
</tr>
<tr>
<td>Cameroon</td>
<td>1</td>
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<tr>
<td>Canada</td>
<td>30</td>
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<tr>
<td>Central African Republic</td>
<td>1</td>
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<td>Ceylon</td>
<td>3</td>
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<td>Chad</td>
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<td>Chile</td>
<td>5</td>
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<td>China</td>
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<tr>
<td>Colombia</td>
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<td>Congo (Republic of)</td>
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<td>Congo (Democratic Republic of)</td>
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<td>Costa Rica</td>
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<td>Cuba</td>
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<tr>
<td>Czechoslovakia</td>
<td>11</td>
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<tr>
<td>Dahomey</td>
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<tr>
<td>Denmark</td>
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<tr>
<td>Dominican Republic</td>
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</tr>
<tr>
<td>Ecuador</td>
<td>1</td>
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<tr>
<td>El Salvador</td>
<td>1</td>
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<td>Ethiopia</td>
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<td>Finland</td>
<td>6</td>
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<tr>
<td>France</td>
<td>52</td>
</tr>
<tr>
<td>Members</td>
<td>Number of units assessed</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>French Polynesia</td>
<td>1</td>
</tr>
<tr>
<td>French Somaliland</td>
<td>1</td>
</tr>
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<td>Gabon</td>
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<td>Germany, Federal Republic of</td>
<td>53</td>
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<td>Ghana</td>
<td>2</td>
</tr>
<tr>
<td>Greece</td>
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<tr>
<td>Guinea</td>
<td>1</td>
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<tr>
<td>Guyana</td>
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<tr>
<td>India</td>
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<tr>
<td>Indonesia</td>
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## ANNEX XI

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<thead>
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<th>Members</th>
<th>Number of units assessed</th>
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<td>Philippines</td>
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<td>Portugal</td>
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<td>Portuguese East Africa</td>
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<td>Portuguese West Africa</td>
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<td>Romania</td>
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<td>Saudi Arabia</td>
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<td>Senegal</td>
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<td>Sierra Leone</td>
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<td>Singapore</td>
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<td>Spain</td>
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<td>Spanish Territories of Guinea</td>
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<td>Sudan</td>
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<td>Surinam</td>
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<td>Sweden</td>
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<td>Syria</td>
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<td>Tanzania (United Republic of)</td>
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<tr>
<td>Thailand</td>
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<td>Togo</td>
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<td>Trinidad and Tobago</td>
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<td>Tunisia</td>
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<td>Turkey</td>
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<td>Union of Soviet Socialist Republics</td>
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<td>United Arab Republic</td>
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<td>United States of America</td>
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<td>Upper Volta</td>
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<td>Uruguay</td>
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<td>Venezuela</td>
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<td>Viet-Nam</td>
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<td>Yugoslavia</td>
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<td>Zambia</td>
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<td><strong>Total</strong></td>
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### Table II — Countries which may become members

<table>
<thead>
<tr>
<th>Country</th>
<th>Number</th>
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<tr>
<td>Botswana</td>
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<tr>
<td>Liberia</td>
<td>1</td>
</tr>
<tr>
<td>Maldives Islands</td>
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<td>Panama</td>
<td>1</td>
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<td>Seychelles</td>
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<tr>
<td>Yemen</td>
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</table>
Financial Regulations of the World Meteorological Organization

Article 1

Applicability

1.1 These Regulations shall cover the financial administration of the World Meteorological Organization (hereinafter called the Organization). They may be amended only by Congress. In the event of any conflict between any provisions of these Regulations and any provision of the Convention, the Convention shall prevail.

Article 2

The financial period

2.1 The financial period shall be four years beginning on the 1st of January of the calendar year immediately following a session of Congress and ending on the 31st of December of the fourth year.

2.2 Notwithstanding the above provisions, the first financial period shall begin on 4th April 1951, the date of the transfer to the Organization of the functions, resources and obligations of the International Meteorological Organization, and end on the 31st of December 1955.

2.3 Nevertheless, in the event that a session of Congress is completed before the beginning of the last full year of a financial period, a new financial period shall begin on the 1st of January following that session of Congress.

Article 3

Maximum expenditures for the financial period

3.1 Estimates of maximum expenditures which may be incurred by the Organization in the financial period shall be prepared by the Secretary-General.

3.2 The estimates shall cover the income and expenditures for the financial period to which they relate and shall be presented in United States dollars.

3.3 The estimates shall be divided into parts, sections, chapters and articles and shall be accompanied by such informational annexes and
explanatory statements as may be requested by, or on behalf of, the Congress, and such further annexes or statements as the Secretary-General may deem necessary and useful.

3.4 The estimates shall be submitted to the Executive Committee at least five weeks prior to the meeting at which they will be considered. The Executive Committee shall examine them and prepare a report on them to Congress.

3.5 The estimates as prepared by the Secretary-General and the report of the Executive Committee on them shall be transmitted to all Members at least three months prior to the opening of Congress.

3.6 Necessary supplementary estimates for the financial period may be submitted to the Executive Committee by the Secretary-General during the interval between the submission of the estimates to the Executive Committee and the opening of Congress.

3.7 The Secretary-General shall prepare the supplementary estimates in the same form as that of the applicable portions of the estimates for the financial period.

3.8 When time permits, the Executive Committee shall examine the supplementary estimates and prepare a report thereon to Congress; otherwise they shall be left for consideration by Congress.

3.9 The maximum expenditures for the following financial period shall be voted by Congress after consideration of the estimates and of any supplementary estimates prepared by the Secretary-General and of the reports of the Executive Committee on them.

Article 4

Authorization of appropriations for the financial period

4.1 The maximum expenditures voted by Congress shall constitute an authorization to the Executive Committee to approve appropriations for each financial year of the financial period. The total appropriations shall not exceed the amount voted by Congress.

4.2 Transfers between appropriation parts may be authorized by the Executive Committee, subject to the total amount of such transfers not exceeding 1 (one) per cent of the total maximum expenditure authorized for the financial period.

Article 5

The financial year

5.1 The financial year shall be the period 1st January to 31st December.
ARTICLE 6

The annual budget

6.1 The annual budget estimates shall be prepared by the Secretary-General.

6.2 The estimates shall cover income and expenditures for the financial year to which they relate and shall be presented in United States dollars.

6.3 The annual budget estimates shall be divided into parts, sections, chapters and articles and shall be accompanied by such informational annexes and explanatory statements as may be requested by, or on behalf of, the Executive Committee, and such further annexes or statements as the Secretary-General may deem necessary and useful.

6.4 The Secretary-General shall submit to the regular meeting of the Executive Committee estimates for the following financial year. The estimates shall be transmitted to all members of the Executive Committee at least five weeks prior to the opening of the regular meeting of the Executive Committee.

6.5 The budget for the following financial year shall be approved by the Executive Committee.

6.6 Supplementary estimates may be submitted by the Secretary-General whenever necessary.

6.7 The Secretary-General shall prepare these supplementary estimates in the same form as that of the applicable portions of the estimates for the financial year and shall submit such estimates to the Executive Committee for approval.

ARTICLE 7

Appropriations

7.1 The appropriations approved by the Executive Committee shall constitute an authorization to the Secretary-General to incur obligations and make payments for the purposes for which the appropriations were approved and up to the amounts so approved.

7.2 Appropriations shall be available for obligation during the financial year to which they relate.

7.3 Appropriations shall remain available for twelve months following the end of the financial year to which they relate to the extent that they are required to discharge obligations in respect of goods supplied and services rendered in that financial year and to liquidate any other outstanding legal obligation of that year. The balance of the appropriations shall be surrendered.

7.4 At the end of the twelve-months period provided in Regulation 7.3, the then remaining balance of any appropriations retained shall be
surrendered. If the financial year is the last year of a financial period, any obligation of the financial period which remains a valid charge shall then be transferred as an obligation against current appropriations.

7.5 Amounts surrendered in accordance with Regulations 7.3 and 7.4 shall be transferred to the credit of the General Fund and shall be retained for the purposes approved by the Congress for the financial period, except that amounts so surrendered for the last financial year of the financial period shall be credited, on the basis of the scale of assessments for the completed financial period to the Members of the Organizations as follows:

(a) For Members who have paid in full their previous contributions, by deduction from the next assessment;

(b) For Members who have not paid in full their previous contributions, by reduction of their arrears, and thereafter by deduction from the next assessment.

7.6 A transfer between annual appropriation sections may be made by the Secretary-General subject to confirmation by the Executive Committee.

ARTICLE 8

Provision of Funds

8.1 Appropriations shall be financed by contributions from Members of the Organization according to the scale of assessments determined by the Congress, such contributions to be adjusted, in accordance with the provisions of Regulation 8.2. Pending the receipt of such contributions the appropriations may be financed from the Working Capital Fund.

8.2 In fixing the amount of appropriations which will be charged against Members of the Organization for each financial year, the Executive Committee shall take into account:

(a) The appropriations which the Executive Committee consider necessary for that year including supplementary appropriations not previously taken into account in assessing contributions;

(b) Any balance of appropriations surrendered under Regulations 7.3 and 7.4;

(c) Miscellaneous income for which credit has not previously been taken into account and any adjustments in estimated miscellaneous income previously taken into account;

(d) Contributions from new Members of the Organization under the provisions of Regulation 8.9; provided that the Executive Committee may, in exceptional circumstances, retain the income referred to under sub-headings (c) and (d) above for disposal in a manner to be determined by Congress.

8.3 After the Executive Committee has approved the annual budget and determined the amount needed for the Working Capital Fund, the Secretary-General shall:

(a) Transmit the relevant documents to the Members of the Organization;
(b) Inform the Members of their commitments in respect of annual contributions and advances to the Working Capital Fund;
(c) Request them to remit their contributions and advances.

8.4 Contributions and advances shall be considered as due and payable in full within thirty days of the receipt of the communication of the Secretary-General referred to in Regulation 8.3 above, or as of the first day of the financial year to which they relate, whichever is the later. As of 1st January of the following financial year, the unpaid balance of such contributions and advances shall be considered to be one year in arrears.

8.5 Annual contributions and advances to the Working Capital Fund of the Organization shall be assessed in United States dollars and paid in the currency of the State in which the Organization has its headquarters.

8.6 Notwithstanding the provisions of Regulation 8.5, the Executive Committee is empowered to fix a percentage, each year, up to which Members who so desire may make payment in other specified currencies. In deciding this percentage, and specifying the currencies, the Executive Committee shall be guided by the estimate of the Secretary-General of the probable needs of the Organization for these other currencies.

8.7 Payments made by a Member of the Organization shall be credited first to the Working Capital Fund, then applied in chronological order to the reduction of the contributions which are due in accordance with the scale of assessments.

8.8 The Secretary-General shall submit to the regular meeting of the Executive Committee a report on the collection of contributions and advances to the Working Capital Fund.

8.9 New Members of the Organization shall be required to make a contribution for the unexpired portion of the financial year in which they become Members and to provide their proportion of the total advances to the Working Capital Fund at rates to be determined provisionally by the Executive Committee, subject to subsequent approval by Congress.

Article 9

Funds

9.1 There shall be established a General Fund for the purpose of accounting for the expenditures of the Organization. The contributions paid by the Members of the Organization under Regulation 8.1, miscellaneous income, and any advances made from the Working Capital Fund to finance general expenditures shall be credited to the General Fund.

9.2 There shall be established a Working Capital Fund to an amount fixed by Congress and for purposes to be determined from time to time by the Executive Committee. The monies of the Working Capital Fund shall be advanced by the Members of the Organization. These advances shall be calculated by the Executive Committee in accord-
9.3 A Member withdrawing from the Organization shall make its contribution for the period from the beginning of the financial year in which it withdraws up to and including the date of its withdrawal and shall be entitled only to the amount standing to its credit in the Working Capital Fund, less any sum due from that Member of the Organization.

9.4 Advances made from the Working Capital Fund to finance appropriations during a financial year shall be reimbursed to the Fund as soon as and to the extent that income is available for that purpose.

9.5 Except when such advances are recoverable from some other source, supplementary estimates shall be submitted for the purpose of reimbursing the advances made from the Working Capital Fund to cover unforeseen and extraordinary expenses or other authorized expenses.

9.6 Income derived from investments of the Working Capital Fund shall be credited to miscellaneous income.

9.7 The purpose and limits of each trust fund, reserve account and special account shall be clearly defined by the Executive Committee. Unless otherwise provided by the Congress, such funds and accounts shall be administered in accordance with these Regulations.

9.8 Trust funds, reserve accounts and special accounts may be established by the Secretary-General and shall be reported to the Executive Committee.

9.9 There shall be established a Publications Fund to meet the cost of providing for all publications of the Organization. The Fund shall be credited with:

(a) Appropriations made by Congress;
(b) Income derived from the sale of publications;
(c) Income derived from advertisements in the WMO Bulletin.

The Publications Fund shall be used only for the production of the following:

(a) Publications included in the programme approved by Congress;
(b) Other administrative publications required for the work of the Organization;
(c) The reprints of those publications of the Organization for which there is a substantial demand;
(d) Technical publications additional to the programme approved by Congress, provided that the Executive Committee is satisfied in each case that there is a real need for such publications.

The disposal of the amount standing to the credit of the Publications Fund at the end of each financial period shall be decided by Congress.

9.10 There shall be established a Staff Compensation Plan Reserve Fund to an amount to be decided by each Congress for the subsequent financial
period. The source of monies of the Staff Compensation Plan Reserve Fund shall be as follows:

(a) Annual appropriations of the Organization;
(b) Sums realized as a result of related claims under the commercial insurance carried by the Organization;
(c) Sums received as a result of a staff member’s claims against third parties in instances where the staff member receives benefits under Chapter VI of the Staff Regulations and Rules.
(d) Sums received (notwithstanding Article 10.1 of the Financial Regulations) in respect of interest derived from investment of monies in the Fund;

Pending the receipt of sufficient funds, advances may be made from the Working Capital Fund.

**ARTICLE 10**

**Other income**

10.1 All other income, except :

(a) Contributions to the budget;
(b) Direct refunds of expenditures made during the financial year;
(c) Advances or deposits to funds and accounts;

shall be classed as miscellaneous income, for credit to the General Fund, unless otherwise specified in accordance with Regulations 9.7 and 9.9.

10.2 Voluntary contributions, whether or not in cash, may be accepted by the Secretary-General, provided that the purposes for which the contribution is made are consistent with the policies, aims and activities of the Organization and provided that the acceptance of such contributions which directly or indirectly involve additional financial liability for the Organization shall require the consent of Congress or, in case of urgency, of the Executive Committee.

10.3 Monies accepted for purposes specified by the donor shall be treated as trust funds or special accounts under Regulations 9.7 and 9.8.

10.4 Monies accepted in respect of which no purpose is specified shall be treated as miscellaneous income and shall be reported as “gifts” in the annual accounts.

**ARTICLE 11**

**Custody of funds**

11.1 The Secretary-General shall designate the bank or banks in which the funds of the Organization shall be kept.

**ARTICLE 12**

**Investment of funds**

12.1 The Secretary-General may make short-term investments of monies not needed for immediate requirements and shall inform the Executive Committee periodically of the investments thus made.
12.2 The Secretary-General may make long-term investments of monies standing to the credit of trust funds, reserve accounts and special accounts as may be provided by the appropriate authority in respect of each such fund or account.

12.3 Income derived from investments shall be credited as provided in the rules relating to each fund or account; otherwise the provisions of Regulation 10.1 shall apply.

**Article 13**

**Internal control**

13.1 (a) The Secretary-General shall establish detailed financial rules and procedures in order to ensure effective financial administration and the exercise of economy;

(b) The Secretary-General shall cause all payments to be made on the basis of supporting vouchers and other documents which ensure that the services or goods have been received, and that payment has not previously been made;

(c) In addition to payments authorized under clause (d) below, and notwithstanding clause (b) above, the Secretary-General may, when he deems it in the interest of the Organization so to do, authorize progress payments;

(d) Except where normal commercial practice in the interest of the Organization so requires, no contract or purchase order shall be made on behalf of the Organization which requires a payment in advance of the delivery of goods or performance of contractual services;

(e) The Secretary-General shall designate the officials who may receive monies, incur obligations and make payments on behalf of the Organization;

(f) The Secretary-General shall maintain an internal financial control which shall provide for an effective current examination and/or review of financial transactions in order to ensure:

(i) The regularity of the receipt, custody and disposal of all funds and other financial resources of the Organization;

(ii) The conformity of obligations and expenditures with the appropriations or other financial provisions voted by the Congress or approved by the Executive Committee, or with the purposes and rules relating to trust funds, reserve accounts and special accounts;

(iii) The rational use of the resources of the Organization.

13.2 No obligations shall be incurred until allotments or other appropriate authorizations have been made in writing under the authority of the Secretary-General.

13.3 The Secretary-General may, with the approval of the President, make such *ex gratia* payments as he deems to be necessary in the interests
of the Organization, provided that a statement of such payments shall be submitted to the Executive Committee with the annual accounts.

13.4 The Secretary-General may, after full investigation, authorize the writing off of losses of cash, stores and other assets, provided that a statement of all such amounts written off shall be submitted to the External Auditor with the annual accounts.

13.5 Tenders for equipment, supplies, and other requirements shall be invited by advertisement, except where the Secretary-General deems that, in the interests of the Organization, a departure from the rule is desirable.

ARTICLE 14

The accounts

14.1 The Secretary-General shall maintain such accounting records as are necessary and shall submit annual accounts showing for the financial year to which they relate:

(a) The income and expenditures of all funds;
(b) The status of appropriations, including:
   (i) The original appropriations;
   (ii) The appropriations as modified by any transfers;
   (iii) Credits, if any, other than the appropriations approved by the Executive Committee;
   (iv) The amounts charged against those appropriations and/or other credits.
(c) The assets and liabilities of the Organization.

He shall also give such other information as may be appropriate to indicate the current financial position of the Organization.

14.2 The annual accounts of the Organization shall be presented in United States dollars. The accounting records shall, however, be kept in the currency of the State in which the Organization has its headquarters. Subsidiary records may be kept in other currencies as necessary.

14.3 Appropriate separate accounts shall be maintained for all trust funds, reserve accounts and special accounts.

14.4 The annual accounts shall be submitted by the Secretary-General to the External Auditor not later than 28th February following the end of the financial year.

14.5 Not later than thirteen months after the ending of a financial period, the Secretary-General shall submit to the External Auditor an account of the total expenditures made in respect of that financial period.

ARTICLE 15

External audit

15.1 An External Auditor, who shall be a member of or eligible for membership of the Joint Panel of Auditors of the United Nations, shall be appointed
by the Executive Committee and may be changed by it if circumstances warrant. The External Auditor shall conduct an annual audit in accordance with the principles set out in the Annex to these Financial Regulations.

15.2 The External Auditor shall submit his report to the Executive Committee by a date to be determined by the latter.

15.3 The External Auditor shall audit the account specified by Regulation 14.5 and shall submit his report thereon to the Executive Committee by a date to be determined by the latter.

15.4 The financial statement for the financial year and the account for the financial period, together with the External Auditor's certificates, shall be transmitted to the Members of the Organization by the Secretary-General.

ARTICLE 16

General provisions

16.1 In case of urgency and with the approval of the President of the Organization, the Secretary-General shall refer to Members, for decision by correspondence, financial matters which are beyond the competence of the Executive Committee.

16.2 The applications of any of the present Regulations may be suspended for a period which shall not extend beyond the next session of Congress if the Executive Committee has decided that the matter under consideration is of such a character that a decision should be taken before the next Congress. In such circumstances, the proposal of the Executive Committee for such a suspension shall be communicated by the Secretary-General to all Members for a consultation and subsequently for a postal ballot according to the procedures for voting by correspondence in the General Regulations.

16.3 In the application of Article 16.1 the proposal shall be adopted, and in the application of Article 16.2 the suspension of regulations shall be put into force, if two thirds of the votes cast for and against which have reached the Secretariat within ninety days after the date of dispatch of the request to vote to Members are in the affirmative. The decisions shall be communicated to all Members.

16.4 In case of doubt as to the interpretation or application of any of these Financial Regulations, the Secretary-General is authorized to rule thereon subject to confirmation by the President in important cases.

16.5 The Financial Regulations do not apply to the field projects of the various technical co-operation activities of the Organization not financed by the Organization; the Secretary-General is authorized to administer those activities under Financial Regulations and Rules which may be established by the governing bodies of the organization from which the funds are made available.
PRINCIPLES TO GOVERN THE AUDIT PROCEDURES OF THE WORLD METEOROLOGICAL ORGANIZATION

(1) The External Auditor shall perform an audit of the accounts of the World Meteorological Organization, including all trust funds, reserve accounts and special accounts, as he may deem necessary in order to certify:

(a) That the financial statements are in accord with the books and records of the Organization;

(b) That the financial transactions reflected in the statements have been in accordance with the rules and regulations, the budgetary provisions, and other applicable directives;

(c) That the securities and monies on deposit and on hand have been verified by certificate received direct from the Organization’s depositaries or by actual count.

(2) Subject to the provisions of the Financial Regulations, the External Auditor shall be the sole judge as to the acceptance in whole or in part of certifications by the Secretariat and may proceed to such detailed examination and verification as he chooses of all financial records, including those relating to supplies and equipment.

(3) The External Auditor may affirm by test the reliability of the internal audit, and may make such reports with respect thereto as he may deem necessary, to the Executive Committee or to the Secretary-General.

(4) The External Auditor and staff working under his direction shall subscribe to such oath as may be approved by the Executive Committee. Thereupon the External Auditor and his staff shall have free access at all convenient times to all books of accounts and records which are, in the opinion of the External Auditor, necessary for the performance of the audit. Information classified as confidential in the records of the Secretariat, and which is required by the External Auditor for the purposes of the audit, shall be made available on application to the Secretary-General. In the event that the External Auditor is of the opinion that a duty rests on him to draw to the attention of the Executive Committee any matter respecting which all or part of the documentation is classified as confidential, direct quotation should be avoided.

(5) The External Auditor, in addition to certifying the accounts, may make such observations as he may deem necessary with respect to the efficiency of the financial procedures, the accounting system, the internal financial controls and, in general, the financial consequences of administrative practices.
(6) In no case, however, shall the External Auditor include criticism in his audit report without first affording the Secretariat an opportunity of explanation to the External Auditor of the matter under observation. Audit objections to any items arising during the examination of the accounts shall be immediately communicated to the Secretary-General.

(7) The External Auditor shall prepare a report on the accounts certified, in which he should mention:

(a) The extent and character of his examination of any important changes therein;
(b) Matters affecting the completeness or accuracy of the accounts, such as:
   (i) Information necessary to the correct interpretation of the account;
   (ii) Any amounts which ought to have been received but which have not been brought to account;
   (iii) Expenditures not properly substantiated;
(c) Other matters which should be brought to the notice of the Executive Committee such as:
   (i) Cases of fraud or presumptive fraud;
   (ii) Wasteful or improper expenditure of money or other assets of the World Meteorological Organization (notwithstanding that the accounting for the transactions may be correct);
   (iii) Expenditure likely to commit the World Meteorological Organization to further outlay on a large scale;
   (iv) Any defect in the general system or detailed regulations governing the control of receipts and expenditure, or of supplies and equipment;
   (v) Expenditure not in accordance with the intentions of Congress and/or the Executive Committee, after making allowance for duly authorized transfers within the budget;
   (vi) Expenditure in excess of appropriations as amended by duly authorized transfers within the budget;
   (vii) Expenditure not in conformity with the authority which governs it.
(d) The accuracy or otherwise of the supplies and equipment records as determined by stock-taking and examination of the records.

In addition, the report may contain reference to:

(e) Transactions accounted for in a previous year, concerning which further information has been obtained, or transactions in a later year concerning which it seems desirable that the Executive Committee should have early knowledge.

(8) Certifications shall be made as follows:

(a) The External Auditor, or such of his officers as he may designate, shall certify the financial statement in the following terms:

"The financial statement of the World Meteorological Organization for the financial year ended 31st December .... has been examined in
accordance with my directions. I have obtained all the information and explanations that I have required and I certify, as a result of the audit, that in my opinion the financial statement is correct”, adding, should it be necessary, “subject to the observations in my report”.

(b) When the External Auditor submits the report required by Regulation 15.3, he, or such of his officers as he may designate, shall certify the financial statement in the following terms:

“The financial statement of the World Meteorological Organization for the financial period which began .... and ended 31st December .... has been examined in accordance with my directions. I have obtained all the information and explanations that I have required and I certify, as a result of the audit, that in my opinion the financial statement is correct”, adding, should it be necessary, “subject to the observations in my report”.

(9) The External Auditor shall have no power to disallow items in the accounts, but shall draw to the attention of the Secretary-General for appropriate action any transaction concerning which he entertains doubt as to legality or propriety.

(10) The External Auditor or his representative shall be present when his report is being considered by the Executive Committee.
ANNEX XIII
Annex to Resolution 39(Cg-V)

Staff Regulations
of the World Meteorological Organization

Scope and purpose

The Staff Regulations embody the fundamental conditions of service and the basic rights, duties and obligations of the Secretariat staff of the World Meteorological Organization, hereinafter called the Organization. They represent the broad principles of personnel policy for the staffing and administration of the Secretariat. The Secretary-General, as the Chief Administrative Officer, shall provide and enforce such Staff Rules consistent with these principles as he considers necessary.

ARTICLE 1

Duties, obligations and privileges

1.1 Members of the Secretariat are international civil servants. Their responsibilities are not national but exclusively international. By accepting appointment, they pledge themselves to discharge their functions and to regulate their conduct with the interests of the Organization only in view.

1.2 Staff members are subject to the authority of the Secretary-General and to assignment by him to any of the activities or offices of the Organization. They are responsible to him in the exercise of their functions. The whole time of staff members shall be at the disposal of the Secretary-General. The Secretary-General shall establish a normal working week.

1.3 No member of the Secretariat shall accept, hold or engage in any office or occupation which is incompatible with the proper discharge of his duties with the Organization.

1.4 In the performance of their duties members of the Secretariat shall neither seek nor accept instructions from any government or from any other authority external to the Organization.

1.5 Members of the Secretariat shall conduct themselves at all times in a manner befitting their status as international civil servants. They shall avoid any action and in particular any kind of public pronouncement which may adversely reflect on that status. While they are not expected
to give up their national sentiments or their political and religious convictions, they shall at all times bear in mind the reserve and tact incumbent upon them by reason of their international status.

1.6 Staff members shall exercise the utmost discretion in regard to all matters of official business. They shall not communicate to any person any information known to them by reason of their official position which has not been made public, except in the course of their duties or by authorization of the Secretary-General. At no time shall they in any way use to private advantage information known to them by reason of their official position. These obligations do not cease with separation from the service.

1.7 No staff member shall accept any honour, decoration, favour, gift or remuneration from any source external to the Organization, without first obtaining the approval of the Secretary-General. Approval shall be granted only in exceptional cases and where such acceptance is not incompatible with the terms of Staff Regulation 1.2 and with the individual's status as an international civil servant.

1.8 Staff members may exercise the right to vote but shall not engage in any political activity which is inconsistent with or might reflect upon the independence and impartiality required by their status as international civil servants.

1.9 The immunities and privileges attached to the World Meteorological Organization by virtue of Article 27 of the Convention are conferred in the interests of the Organization. These privileges and immunities furnish no excuse to the staff members who enjoy them for non-performance of their private obligations or failure to observe laws and police regulations. In any case where these privileges and immunities arise, the staff member shall immediately report to the Secretary-General, with whom alone it rests to decide whether they shall be waived.

1.10 Members of the Secretariat shall subscribe to the following oath or declaration:

"I solemnly swear (undertake, affirm, promise) to exercise in all loyalty, discretion and conscience the functions entrusted to me as an international civil servant of the World Meteorological Organization, to discharge these functions and regulate my conduct with the interests of the Organization only in view, and not to seek or accept instructions in regard to the performance of my duties from any government or other authority external to the Organization."

1.11 The oath or declaration shall be made orally by the Secretary-General in the presence of the President and either a Vice-President or another member of the Executive Committee, and by all other members of the Secretariat before the Secretary-General or his authorized deputy.
ARTICLE 2
Classification of posts and staff

2.1 In conformity with relevant decisions of Congress the Secretary-General shall make appropriate provisions for the classification of posts and staff according to the nature of the duties and responsibilities required.

ARTICLE 3
Salaries and related allowances

3.1 Subject to the approval of the Executive Committee with respect to changes in the salary scales, salaries of staff members other than G-staff shall be determined by the Secretary-General in accordance with the grades and corresponding gross and net salary scales applicable to United Nations personnel. The rates of pay for G-staff shall be determined by the Secretary-General in accordance with the equivalent scales for the European Office of the United Nations.

3.2 All salaries, and all terminal payments computed under Staff Regulation 3.1, unless specifically exempted by the Secretary-General at the time of appointment, shall be subject to an assessment as determined by United Nations. The amount of salary remaining after deduction of the assessment is known as “net salary”.

3.3 The basic salary rates for professional category staff shall be adjusted by application of the appropriate United Nations post adjustments.

3.4 The Secretary-General shall establish a scheme for the payment of dependency benefits, education grants and such other allowances as he may consider necessary in the interests of the Organization.

ARTICLE 4
Appointment and promotion

4.1 The Secretary-General shall appoint staff members as required in accordance with Article 21 (b) of the Convention and shall specify their terms of appointment. Upon appointment each staff member shall receive a letter of appointment signed by the Secretary-General or by an authorized official in the name of the Secretary-General.

4.2 The paramount consideration in the appointment, transfer or promotion of the staff shall be the necessity of securing the highest standards of efficiency, competence and integrity. Due regard shall be paid to the importance of recruiting and maintaining the staff on as wide a geographical basis as possible.

4.3 Selection of staff members shall be without regard to race, creed, political belief or sex. So far as is practicable, selection shall be made on a competitive basis.
4.4 Subject to the provisions of paragraph 4.3 above and without prejudice to the recruitment of fresh talent at all levels, the fullest regard shall be had, in filling vacancies, to the requisite qualifications and experience of persons already in the service of the Organization. This consideration shall also be applied, on a reciprocal basis, to the United Nations and the specialized agencies brought into relationship with the United Nations.

4.5 Staff members shall be granted either permanent or temporary appointments. A permanent appointment shall be granted subject to the satisfactory completion of a probationary period which shall be specified for each grade in the staff rules. Temporary appointments shall be granted for such periods and under such conditions as the Secretary-General may determine.

4.6 The Secretary-General shall establish appropriate medical standards which staff members shall be required to meet before appointment.

ARTICLE 5
Annual and special leave

5.1 Staff members shall be allowed appropriate annual leave.

5.2 Special leave may be authorized by the Secretary-General in exceptional cases.

5.3 Eligible staff members shall be granted home leave once every two years. The Organization shall allow necessary travelling time for that purpose under conditions and definitions prescribed by the Secretary-General.

ARTICLE 6
Social security

6.1 Provision shall be made for the participation of staff members in the United Nations Joint Staff Pension Fund in accordance with the regulations of that fund.

6.2 The Secretary-General shall establish a scheme of social security for the staff, including provisions for health protection, sick leave and maternity leave, and reasonable compensation in the event of illness, accident or death attributable to the performance of official duties on behalf of the World Meteorological Organization.

ARTICLE 7
Travel and removal expenses

7.1 The Secretary-General shall establish conditions and definitions under which the Organization, in appropriate cases, shall pay travel expenses of staff members and their dependents.
7.2 The Secretary-General shall establish conditions and definitions under which the Organization shall pay removal costs for staff members.

**ARTICLE 8**

**Staff relations**

8.1 The Secretary-General shall make provision for staff participation in the discussion of policies relating to staff questions.

**ARTICLE 9**

**Separation from service**

9.1 Staff members may resign from the Secretariat upon giving the Secretary-General the notice required under the terms of their appointment.

9.2 The Secretary-General may terminate the appointment of a staff member in accordance with the terms of his appointment, or if the necessities of the service require abolition of the post or reduction of the staff, if the services of the individual concerned prove unsatisfactory, or if he is, for reasons of health, incapacitated for further service.

9.3 If the Secretary-General terminates an appointment under Regulation 9.2 the staff member shall be given notice and indemnity payment in accordance with the terms of his appointment.

9.4 The Secretary-General shall establish a scheme for the payment of repatriation grants.

9.5 Normally, staff members shall not be retained in active service beyond the age specified in the Pension Fund regulations as the age of retirement. This age-limit may in the interests of the Organization be extended in exceptional cases. The extension of the age of retirement of a P-category staff member shall require the authority of the Executive Committee.

**ARTICLE 10**

**Disciplinary measures**

10.1 The Secretary-General may impose disciplinary measures on staff members whose conduct is unsatisfactory. He may summarily dismiss a member of the staff for serious misconduct.

10.2 The Secretary-General shall establish administrative machinery with staff participation which shall be available to advise him in disciplinary cases.

**ARTICLE 11**

**Appeals**

11.1 The Secretary-General shall establish administrative machinery with staff participation to advise him in case of any appeal by staff members against an administrative decision alleging the non-observance of their
ANNEX XIII

terms of appointment, including all pertinent regulations and rules, or
against disciplinary action.

11.2 An administrative tribunal, the competence of which has been
recognized by the Organization, shall, under conditions prescribed in its
statute, hear and pass judgment upon applications from staff members
alleging non-observance of their terms of appointment including all
pertinent regulations and rules or against disciplinary action.

ARTICLE 12

General provisions

12.1 The allowances, grants, indemnities, leave provisions and travel
provisions mentioned in these Regulations, and any other allowances
which the Executive Committee may deem necessary, shall be determined
as far as practicable in conformity with the scales approved by the United
Nations for the staff of that Organization.

12.2 The Secretary-General shall report annually to the Executive Com-
mittee such Staff Rules and amendments thereto as he may make to
implement these Regulations.

12.3 These Regulations may be supplemented or amended by Congress,
without prejudice to the acquired rights of staff members. If it would
not be in the interests of the Organization to defer an amendment until
the next session of Congress, such amendment may be made by the
Executive Committee; an amendment made by the Executive Committee
shall be subject to approval by Congress at its next following session.
ANNEX XIV
Annex to Resolution 41(Cg-V)

Agreement for the Secretary-General of the
World Meteorological Organization

In application of Article 21, paragraph (a) of the Convention of the World Meteorological Organization, prescribing that the Secretary-General shall be appointed by the Congress on such terms as the Congress may approve; and

Having regard to the resolution adopted by Fifth Congress of the World Meteorological Organization approving the terms of appointment included in the present agreement;

It is hereby agreed as follows:

Between the World Meteorological Organization, hereinafter called the Organization, represented by its President, on the one part, and Mr. D. A. Davies, appointed Secretary-General by Fifth World Meteorological Congress during its meeting of 24 April 1967, on the other part,

1. The Secretary-General's term of appointment shall take effect from 1 January 1968.

2. The Secretary-General, at the time of taking up his appointment, shall subscribe to the oath or declaration contained in Staff Regulation 1.10.

This oath or declaration shall be made orally by the Secretary-General in the presence of the President and either a Vice-President or another member of the Executive Committee.

3. During the term of his appointment, the Secretary-General shall enjoy the privileges and immunities in keeping with his office which are granted him by appropriate agreements entered into by the Organization; he shall not engage in any activity that is incompatible with the proper discharge of his duties as Secretary-General of the Organization; he shall renounce any employment or remunerated activities other than those of Secretary-General of the Organization, except those activities authorized by the Executive Committee; he shall not accept any honour, decoration, favour, gift or remuneration from any source external to the Organization without first obtaining the approval of the Executive Committee.

4. The term of appointment of the Secretary-General shall end:

(a) By expiration of this agreement on 31 December 1971; or

(b) By this official's resignation submitted in writing to the President of the Organization, in which case the Secretary-General shall cease his functions
two months after the date of acceptance of his resignation by the Executive Committee; or

(c) By termination for serious failure to carry out his duties and obligations, and in particular those set out in paragraphs (2) and (3) of this agreement. In such case, the Secretary-General shall be heard as of right by the Executive Committee; if the Executive Committee decides to terminate the appointment, the decision shall take effect two months after the date of pronouncement. After consultation with the Executive Committee, the President of the Organization may suspend the Secretary-General from the exercise of his functions pending investigation by the Executive Committee and until this Committee has taken a decision.

5. The Secretary-General shall receive from the Organization:

(a) An annual salary of 23,000 United States dollars net (i.e., after deduction of income tax, if any), as at New York, with the application of the appropriate post adjustment according to the location of the Secretariat and at a rate equivalent to that applied to the Under-Secretaries of the United Nations Organization, salary and post adjustment to be paid in monthly instalments;

(b) An annual representation allowance of 3,250 United States dollars, to be paid in monthly instalments;

(c) Other allowances including dependency benefits, education grants and travel and subsistence allowances appropriate and under the conditions applicable to Under-Secretaries of the United Nations.

All the above-mentioned sums will be paid in the currency of the country where the Secretariat is located, unless some other arrangement is agreed to by the Executive Committee and the Secretary-General.

6. The Secretary-General shall be allowed thirty working days' leave each year. In order that the Secretary-General may take his annual leave every two years in his home country, the Organization shall pay the expenses in connexion with the travel of the Secretary-General and his dependants, under the conditions applicable to Under-Secretaries of the United Nations.

7. The Secretary-General shall participate in any social security scheme established by the Organization, the benefits he would receive being not less favourable than those which would accrue in similar circumstances to an official of the next highest rank of the staff covered by the scheme.

8. Any divergence of views concerning the application or interpretation of the present agreement, which it shall not have been possible to settle by direct discussion between the parties, can be submitted by one or the other of the parties to the judgment of the Administrative Tribunal of the International Labour Organization whose decision will be final. For any appeals by the Secretary-General against the non-observation of the statutes of the United
Nations Joint Staff Pension Fund, of which the Secretary-General shall be a participant, the United Nations Administrative Tribunal is recognized hereby as the competent arbitrator.

Done and signed in duplicate at .................. on the ............. of 1967.

President of the World Meteorological Organization

Secretary-General appointed by the Fifth World Meteorological Congress
### List of documents

#### I. "DOC" series

<table>
<thead>
<tr>
<th>Doc. No.</th>
<th>Title</th>
<th>Agenda Item No.</th>
<th>Submitted by</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Provisional agenda for Fifth Congress Rev. 1</td>
<td>1.4 (1)</td>
<td>—</td>
</tr>
<tr>
<td>2</td>
<td>Explanatory memorandum relating to the provisional agenda for Fifth Congress</td>
<td>1.4 (2)</td>
<td>—</td>
</tr>
<tr>
<td>3</td>
<td>Programme and budget General consideration of technical programme and maximum expenditures for 1968-1971</td>
<td>6.1 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>4</td>
<td>General consideration of technical programme and maximum expenditures for 1968-71 Report of the Executive Committee on the programme and budget prepared by the Secretary-General for the fifth financial period</td>
<td>6.1 (2)</td>
<td>Executive Committee</td>
</tr>
<tr>
<td>5</td>
<td>The Plan for the World Weather Watch</td>
<td>5.1 (1)</td>
<td>Executive Committee</td>
</tr>
<tr>
<td>6</td>
<td>Organization of the scientific and technical work of WMO Technical structure of the Organization</td>
<td>7.13 (1)</td>
<td>Executive Committee</td>
</tr>
<tr>
<td>7</td>
<td>Amendments to the WMO Convention Add. 1</td>
<td>3.1 (1)</td>
<td>Secretary-General including draft amendments submitted in the name of the Executive Committee</td>
</tr>
<tr>
<td>8</td>
<td>Amendments to the WMO Convention</td>
<td>3.1 (2)</td>
<td>France</td>
</tr>
<tr>
<td>9</td>
<td>Amendments to the WMO Convention</td>
<td>3.1 (3)</td>
<td>Italy</td>
</tr>
<tr>
<td>10</td>
<td>Amendments to the WMO Convention</td>
<td>3.1 (4)</td>
<td>India</td>
</tr>
<tr>
<td>11</td>
<td>Consideration of the Working Capital Fund</td>
<td>8.3 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>12</td>
<td>Amendments to the WMO Convention</td>
<td>3.1 (5)</td>
<td>Netherlands</td>
</tr>
<tr>
<td>13</td>
<td>Amendments to the WMO Convention</td>
<td>3.1 (6)</td>
<td>Syria</td>
</tr>
<tr>
<td>14</td>
<td>Review of the Financial Regulations</td>
<td>8.2 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>15</td>
<td>Proportional contributions of Members</td>
<td>8.4 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>16</td>
<td>Proportional contributions of Members Corr. 1 (English only)</td>
<td>8.4 (2)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>17</td>
<td>Staff Assessment Plan</td>
<td>8.9 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>18</td>
<td>Amendments to the WMO Convention</td>
<td>3.1 (7)</td>
<td>Poland</td>
</tr>
<tr>
<td>Doc. No.</td>
<td>Title</td>
<td>Agenda item No.</td>
<td>Submitted by</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------------------------------------------</td>
<td>-----------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>19</td>
<td>Review of the General Regulations</td>
<td>3.2 (1)</td>
<td>Secretary-General on behalf of the Executive Committee</td>
</tr>
<tr>
<td>20</td>
<td>IMO Fund</td>
<td>8.7 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>21</td>
<td>The Plan for the World Weather Watch</td>
<td>5.1 (2)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>22</td>
<td>Amendments to the WMO Convention</td>
<td>3.1 (8)</td>
<td>U.S.S.R.</td>
</tr>
<tr>
<td>23</td>
<td>Review of the Technical Regulations</td>
<td>7.4 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>24</td>
<td>Promotion of meteorological training</td>
<td>7.2 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>25</td>
<td>Promotion of meteorological training Specialized fields of meteorological training</td>
<td>7.2 (2)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>26</td>
<td>Antarctic meteorology</td>
<td>7.3 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>27</td>
<td>Amendments to the WMO Convention</td>
<td>3.1 (9)</td>
<td>Secretary-General at the request of the Government of France</td>
</tr>
<tr>
<td>28</td>
<td>The plan for World Weather Watch Detailed explanation of the plan for the World Weather Watch Add. 1, 2 and 3</td>
<td>5.1 (3)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>29</td>
<td>Organization of the scientific and technical work of WMO Structure of the Technical Commissions organization</td>
<td>7.13 (2)</td>
<td>United Arab Republic</td>
</tr>
<tr>
<td>30</td>
<td>Implementation of World Weather Watch</td>
<td>5.2 (1)</td>
<td>United Arab Republic</td>
</tr>
<tr>
<td>31</td>
<td>Revision of previous resolutions of Congress</td>
<td>3.6 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>32</td>
<td>Organization of the scientific and technical work of WMO Comments by Members on Cg–V/Doc. 6–Technical structure of the Organization</td>
<td>7.13 (3)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>33</td>
<td>Review of the Staff Regulations</td>
<td>8.1 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>34</td>
<td>Participation of WMO in other aid programmes</td>
<td>4.3 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>35</td>
<td>Review of the Financial Regulations</td>
<td>8.2 (2)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>36</td>
<td>Participation of WMO in the United Nations Development Programme (UNDP) Special Fund component of UNDP Add. 1 and 2</td>
<td>4.2 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>Doc. No.</td>
<td>Title</td>
<td>Agenda Item No.</td>
<td>Submitted by</td>
</tr>
<tr>
<td>---------</td>
<td>-----------------------------------------------------------------------</td>
<td>----------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>37</td>
<td>Organization of technical co-operation activities in the Secretariat</td>
<td>4.4 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td></td>
<td>Corr. 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>Promotion of meteorological research</td>
<td>7.1 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>39</td>
<td>Publications programme</td>
<td>7.5 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>40</td>
<td>Conference programme for the fifth financial period</td>
<td>3.4 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>Add. 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>Reports by the presidents of regional associations</td>
<td>2.2 (1)</td>
<td>President of RA V</td>
</tr>
<tr>
<td></td>
<td>Report by the president of Regional Association V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>Reports by the presidents of regional associations</td>
<td>2.2 (2)</td>
<td>President of RA IV</td>
</tr>
<tr>
<td></td>
<td>Report by the president of Regional Association IV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>Implementation of World Weather Watch</td>
<td>5.2 (2)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>44</td>
<td>Reports by the presidents of technical commissions</td>
<td>2.3 (1)</td>
<td>President of CMM</td>
</tr>
<tr>
<td></td>
<td>Report by the president of the Commission for Maritime Meteorology</td>
<td>7.12 (1)</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>Reports by the presidents of technical commissions</td>
<td>2.3 (2)</td>
<td>President of GSM</td>
</tr>
<tr>
<td></td>
<td>Report by the president of the Commission for Synoptic Meteorology</td>
<td>7.6 (1)</td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>Reports by the presidents of technical commissions</td>
<td>2.3 (3)</td>
<td>President of CHy</td>
</tr>
<tr>
<td></td>
<td>Report by the president of the Commission for Hydrometeorology</td>
<td>7.11 (1)</td>
<td></td>
</tr>
<tr>
<td>Add. 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>Reports by the presidents of technical commissions</td>
<td>2.3 (4)</td>
<td>President of CAgM</td>
</tr>
<tr>
<td></td>
<td>Report by the president of the Commission for Agricultural Meteorology</td>
<td>7.10 (1)</td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>Reports by the presidents of technical commissions</td>
<td>2.3 (5)</td>
<td>President of CIMO</td>
</tr>
<tr>
<td></td>
<td>Report by the president of the Commission for Instruments and Methods of Observation</td>
<td>7.8 (1)</td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>Reports by the presidents of technical commissions</td>
<td>2.3 (6)</td>
<td>President of CCI</td>
</tr>
<tr>
<td></td>
<td>Report by the president of the Commission for Climatology</td>
<td>7.7 (1)</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>Reports by the presidents of technical commissions</td>
<td>2.3 (7)</td>
<td>President of CAeM</td>
</tr>
<tr>
<td></td>
<td>Report by the president of the Commission for Aeronautical Meteorology</td>
<td>7.9 (1)</td>
<td></td>
</tr>
<tr>
<td>Add. 1 and 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doc. No.</td>
<td>Title</td>
<td>Agenda Item No.</td>
<td>Submitted by</td>
</tr>
<tr>
<td>---------</td>
<td>-------</td>
<td>----------------</td>
<td>--------------</td>
</tr>
<tr>
<td>51</td>
<td>Reports by the presidents of regional associations</td>
<td>2.2 (3)</td>
<td>President of RA I</td>
</tr>
<tr>
<td></td>
<td>Reports by the president of regional association I (Africa)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>Reports by the presidents of regional associations</td>
<td>2.2 (4)</td>
<td>President of RA VI</td>
</tr>
<tr>
<td></td>
<td>Report by the president of Regional Association VI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>53</td>
<td>Reports by the presidents of regional associations</td>
<td>2.2 (5)</td>
<td>President of RA II</td>
</tr>
<tr>
<td></td>
<td>Report by the president of Regional Association II Add. 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>54</td>
<td>Reports by the presidents of regional associations</td>
<td>2.2 (6)</td>
<td>President of RA III</td>
</tr>
<tr>
<td></td>
<td>Report by the president of Regional Association III Corr. 1 (French only)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>Review of WMO technical assistance activities</td>
<td>4.1 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td></td>
<td>Evaluation of assistance provided under the United Nations Development Programme during the period 1963–1966</td>
<td></td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>Implementation of World Weather Watch Operations of Voluntary Funds</td>
<td>5.2 (3)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>57</td>
<td>Report by the President of the Organization</td>
<td>2.1 (1)</td>
<td>President of WMO</td>
</tr>
<tr>
<td>58</td>
<td>Hydrometeorology and International Hydrological Decade</td>
<td>7.11 (2)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>59</td>
<td>Report on the New Development Fund Add. 1</td>
<td>2.1 (2)</td>
<td>Secretary-General and endorsed by the President on behalf of the Executive Committee</td>
</tr>
<tr>
<td>60</td>
<td>Review of WMO technical assistance activities</td>
<td>4.1 (2)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>61</td>
<td>Promotion of meteorological training Status of WMO Technical Note No. 50</td>
<td>7.2 (3)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>62</td>
<td>Synoptic meteorology Units for wind speed in meteorological messages for international exchange Add. 1</td>
<td>7.6 (2)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>63</td>
<td>Scientific discussions Add. 1, 2 and 3</td>
<td>11 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>64</td>
<td>IMO Lecture</td>
<td>10 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>65</td>
<td>Reports by the presidents of technical commissions</td>
<td>2.3 (8)</td>
<td>President of CAe</td>
</tr>
<tr>
<td></td>
<td>Report by the President of the Commission for Aerology Add. 1</td>
<td>7.1 (2)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>Doc. No.</td>
<td>Title</td>
<td>Agenda Item No.</td>
<td>Submitted by</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------------------------------------------</td>
<td>-----------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>66</td>
<td>Programme and budget</td>
<td>6.1 (3)</td>
<td>United Arab Republic</td>
</tr>
<tr>
<td></td>
<td>General consideration of technical programme and maximum expenditures for 1968-1971</td>
<td>5.2 (4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Implementation of World Weather Watch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>67</td>
<td>Programme and budget</td>
<td>6.1 (4)</td>
<td>President of WMO</td>
</tr>
<tr>
<td></td>
<td>Aeronautical meteorology</td>
<td>7.9 (2)</td>
<td></td>
</tr>
<tr>
<td>68</td>
<td>Establishment of Committees</td>
<td>1.5 (1)</td>
<td>Secretary-General on behalf of the Bureau</td>
</tr>
<tr>
<td>69</td>
<td>IMO Lecture</td>
<td>10 (2)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>70</td>
<td>Financial Report by the Secretary-General App. C, Add. 1 and 2</td>
<td>2.4 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>71</td>
<td>Review of the Technical Regulations Draft amendments to Technical Regulations dealing with hydrometeorology</td>
<td>7.4 (2)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>72</td>
<td>The Plan for the World Weather Watch Research aspects</td>
<td>5.1 (4)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>73</td>
<td>Amendment to the WMO Convention</td>
<td>3.1 (10)</td>
<td>United Arab Republic</td>
</tr>
<tr>
<td>74</td>
<td>Publications Fund</td>
<td>8.5 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>75</td>
<td>Participation of WMO in the United Nations Development Programme (UNDP) Technical Assistance component of UNDP</td>
<td>4.2 (2)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.2.1 (1)</td>
<td></td>
</tr>
<tr>
<td>76</td>
<td>Report by the President of the Organization Executive Committee recommendation on Secretary-General's salary</td>
<td>2.1 (3)</td>
<td>President of WMO</td>
</tr>
<tr>
<td>77</td>
<td>The Building of the Organization</td>
<td>8.6 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>78</td>
<td>The Plan for World Weather Watch</td>
<td>5.1 (5)</td>
<td>United States of America</td>
</tr>
<tr>
<td>79</td>
<td>The Plan for World Weather Watch</td>
<td>5.1 (6)</td>
<td>United States of America</td>
</tr>
<tr>
<td>80</td>
<td>Agricultural Meteorology Meteoroical Services to increase world food production</td>
<td>7.10 (2)</td>
<td>United States of America</td>
</tr>
<tr>
<td>81</td>
<td>Public information</td>
<td>3.5 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>82</td>
<td>Relations with the United Nations and other international organizations</td>
<td>3.3 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>83</td>
<td>Review of Staff Regulations Group Insurance against sickness and accident after retirement</td>
<td>8.1 (2)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>Doc. No.</td>
<td>Title</td>
<td>Agenda item No.</td>
<td>Submitted by</td>
</tr>
<tr>
<td>---------</td>
<td>-------</td>
<td>----------------</td>
<td>--------------</td>
</tr>
<tr>
<td>84</td>
<td>Amendments to the WMO Convention</td>
<td>3.1 (11)</td>
<td>United States of America</td>
</tr>
<tr>
<td>85</td>
<td>Celebration of IMO/WMO Centenary</td>
<td>3.7 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>86</td>
<td>The Plan for World Weather Watch Regional Meteorological Centre (RMC) in Czechoslovakia (Prague)</td>
<td>5.1 (7)</td>
<td>Czechoslovakia</td>
</tr>
<tr>
<td>87</td>
<td>First report of the Credentials Committee</td>
<td>1.3 (1)</td>
<td>Chairman of the Committee</td>
</tr>
<tr>
<td>88</td>
<td>Amendments to the WMO Convention</td>
<td>3.1 (12)</td>
<td>France</td>
</tr>
<tr>
<td>89</td>
<td>Relations with the United Nations and other international organizations Report of the Ad Hoc Committee of Experts to examine the finances of the United Nations and the Specialized Agencies Corr. 1</td>
<td>3.3 (2)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>90</td>
<td>Climatology Regional climatic atlases</td>
<td>7.7 (2)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>91</td>
<td>Promotion of meteorological training</td>
<td>7.2 (4)</td>
<td>Delegation of Romania</td>
</tr>
<tr>
<td>92</td>
<td>Organization of the scientific and technical work of WMO (including functions of regional associations and technical commissions) Implementation of World Weather Watch</td>
<td>7.13 (4)</td>
<td>Australia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.2 (5)</td>
<td></td>
</tr>
<tr>
<td>5.1 (8)</td>
<td></td>
<td>UNESCO</td>
<td></td>
</tr>
<tr>
<td>94</td>
<td>WMO Emblem and Flag</td>
<td>3.8 (1)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>95</td>
<td>The Building of the Organization</td>
<td>8.6 (2)</td>
<td>Secretary-General</td>
</tr>
<tr>
<td>96</td>
<td>General consideration of technical programme and maximum expenditures for 1968–1971 Programme and budget Proposal for long-term fellowships</td>
<td>6.1 (5)</td>
<td>Trinidad and Tobago</td>
</tr>
<tr>
<td>97</td>
<td>Appointment of Secretary-General</td>
<td>9.3 (1)</td>
<td>President of WMO</td>
</tr>
<tr>
<td>98</td>
<td>Relations with the United Nations and other international organizations Report of the Ad Hoc Committee of Experts to examine the finances of the United Nations and the specialized agencies</td>
<td>3.3 (3)</td>
<td>Delegation of the United States</td>
</tr>
</tbody>
</table>
### LIST OF DOCUMENTS

<table>
<thead>
<tr>
<th>Doc. No.</th>
<th>Title</th>
<th>Agenda Item No.</th>
<th>Submitted by</th>
</tr>
</thead>
<tbody>
<tr>
<td>99</td>
<td>The plan for World Weather Watch</td>
<td>5.1 (9)</td>
<td>FAO Secretariat</td>
</tr>
<tr>
<td></td>
<td>Maritime meteorology</td>
<td>7.12 (3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Contribution of World Weather Watch to fisheries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>Implementation of World Weather Watch</td>
<td>5.2 (6)</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>101</td>
<td>Second report of the Credentials Committee</td>
<td>1.3 (2)</td>
<td>Chairman of the Committee</td>
</tr>
<tr>
<td>102</td>
<td>Organization of the scientific and technical work of WMO</td>
<td>7.13 (5)</td>
<td>Netherlands</td>
</tr>
<tr>
<td></td>
<td>Comment on the structure and functioning of the Organization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>Implementation of World Weather Watch</td>
<td>5.2 (7)</td>
<td>United States of America</td>
</tr>
<tr>
<td>104</td>
<td>General consideration of technical programme and maximum expenditures for 1968–1971 Technical staff of the Secretariat</td>
<td>6.1 (6)</td>
<td>Italy</td>
</tr>
<tr>
<td>105</td>
<td>Implementation of World Weather Watch</td>
<td>5.2 (8)</td>
<td>Italy</td>
</tr>
<tr>
<td></td>
<td>General consideration of technical programme and maximum expenditures for 1968–1971 Technical staff of the Secretariat</td>
<td>6.1 (7)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Promotion of meteorological training Point of view of Italy regarding fellowships</td>
<td>7.2 (5)</td>
<td></td>
</tr>
<tr>
<td>106</td>
<td>Implementation of World Weather Watch</td>
<td>5.2 (9)</td>
<td>France</td>
</tr>
<tr>
<td></td>
<td>Promotion of Meteorological Research</td>
<td>7.1 (3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Promotion of Meteorological Training — Development of Research and Global Atmospheric Research Programme</td>
<td>7.2 (6)</td>
<td></td>
</tr>
<tr>
<td>107</td>
<td>Third Report of the Credentials Committee</td>
<td>1.3 (3)</td>
<td>Chairman of the Committee</td>
</tr>
</tbody>
</table>

### II. “PINK” series

<table>
<thead>
<tr>
<th>Doc. No.</th>
<th>Title</th>
<th>Agenda Item No.</th>
<th>Submitted by</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Report by the President of the Organization</td>
<td>2.1</td>
<td>Chairman PRO * Committee</td>
</tr>
<tr>
<td></td>
<td>Report on the New Development Fund</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Amendments to the WMO Convention</td>
<td>3.1</td>
<td>Chairman GEN * Committee</td>
</tr>
<tr>
<td></td>
<td>Amendments to Articles 4 (b) and 12 (c)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*PRO Committee: Committee on Programme and Budget<br>GEN Committee: Committee on General and Legal Questions<br>TEO Committee: Committee on Technical Questions
<table>
<thead>
<tr>
<th>Doc. No.</th>
<th>Title</th>
<th>Agenda Item No.</th>
<th>Submitted by</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>IMO Fund</td>
<td>8.7</td>
<td>Chairman GEN Committee</td>
</tr>
<tr>
<td>4</td>
<td>Review of the Financial Regulations</td>
<td>8.2</td>
<td>Chairman GEN Committee</td>
</tr>
<tr>
<td>5</td>
<td>Publications Fund</td>
<td>8.5</td>
<td>Chairman GEN Committee</td>
</tr>
<tr>
<td>6</td>
<td>Participation of WMO in the United Nations Development Programme (UNDP)</td>
<td>4.2</td>
<td>Chairman PRO Committee</td>
</tr>
<tr>
<td></td>
<td>Technical Assistance component of UNDP Special Fund component of UNDP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Participation of WMO in other aid programmes</td>
<td>4.3</td>
<td>Chairman PRO Committee</td>
</tr>
<tr>
<td></td>
<td>Rev. 1 (Spanish only)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Corr. 1 (Russian only)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Review of WMO Technical Assistance activities</td>
<td>4.1</td>
<td>Chairman PRO Committee</td>
</tr>
<tr>
<td></td>
<td>Rev. 1 (Spanish only)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Corr. 1 (Russian only)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Conference programme for the fifth financial period</td>
<td>3.4</td>
<td>Chairman GEN Committee</td>
</tr>
<tr>
<td>10</td>
<td>Public information</td>
<td>3.5</td>
<td>Chairman GEN Committee</td>
</tr>
<tr>
<td>11</td>
<td>Aeronautical meteorology</td>
<td>7.9</td>
<td>Chairman TEC Committee</td>
</tr>
<tr>
<td></td>
<td>App. B, Rev. 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>IMO lecture</td>
<td>10</td>
<td>The President</td>
</tr>
<tr>
<td>13</td>
<td>Review of Staff Regulations</td>
<td>8.1</td>
<td>Chairman GEN Committee</td>
</tr>
<tr>
<td>14</td>
<td>Publications programme</td>
<td>7.5</td>
<td>Chairman TEC Committee</td>
</tr>
<tr>
<td></td>
<td>App. B, p. 3, Rev. 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Agricultural meteorology</td>
<td>7.10</td>
<td>Chairman TEC Committee</td>
</tr>
<tr>
<td>16</td>
<td>Hydrometeorology and International Hydrological Decade</td>
<td>7.11</td>
<td>Chairman TEC Committee</td>
</tr>
<tr>
<td>17</td>
<td>Synoptic meteorology</td>
<td>7.6</td>
<td>Chairman TEC Committee</td>
</tr>
<tr>
<td>18</td>
<td>Instruments and methods of observation</td>
<td>7.8</td>
<td>Chairman TEC Committee</td>
</tr>
<tr>
<td>19</td>
<td>Antarctic meteorology</td>
<td>7.3</td>
<td>Chairman TEC Committee</td>
</tr>
<tr>
<td>20</td>
<td>Celebration of IMO/WMO Centenary</td>
<td>3.7</td>
<td>Chairman GEN Committee</td>
</tr>
<tr>
<td>21</td>
<td>WMO Emblem and Flag</td>
<td>3.8</td>
<td>Chairman GEN Committee</td>
</tr>
<tr>
<td>22</td>
<td>The Building of the Organization</td>
<td>8.6</td>
<td>Chairman GEN Committee</td>
</tr>
<tr>
<td>23</td>
<td>Proportional contributions of Members</td>
<td>8.4</td>
<td>Chairman GEN Committee</td>
</tr>
<tr>
<td>Doc. No.</td>
<td>Title</td>
<td>Agenda item No.</td>
<td>Submitted by</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------------------------------------------</td>
<td>-----------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>24</td>
<td>Consideration of the Working Capital Fund</td>
<td>8.3</td>
<td>Chairman GEN Committee</td>
</tr>
<tr>
<td>25</td>
<td>Staff Assessment Plan</td>
<td>8.9</td>
<td>Chairman GEN Committee</td>
</tr>
<tr>
<td>26</td>
<td>Appointment of the Secretary-General</td>
<td>9.3</td>
<td>Chairman Nomination Committee</td>
</tr>
<tr>
<td>27</td>
<td>Climatology</td>
<td>7.7</td>
<td>Chairman TEC Committee</td>
</tr>
<tr>
<td>28</td>
<td>Financial Report by the Secretary-General</td>
<td>2.4</td>
<td>Chairman GEN Committee</td>
</tr>
<tr>
<td>29</td>
<td>Election of President and Vice-Presidents of the Organization</td>
<td>9.1</td>
<td>Chairman Nomination Committee</td>
</tr>
<tr>
<td></td>
<td>Election of Members of the Executive Committee</td>
<td>9.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Add. 1 and 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>Organization of Technical Co-operation activities in the Secretariat</td>
<td>4.4</td>
<td>Chairman PRO Committee</td>
</tr>
<tr>
<td>31</td>
<td>Relations with the United Nations and other international organizations</td>
<td>3.3</td>
<td>Chairman GEN Committee</td>
</tr>
<tr>
<td></td>
<td>Rev. 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>Maritime Meteorology</td>
<td>7.12</td>
<td>Chairman TEC Committee</td>
</tr>
<tr>
<td>33</td>
<td>Proportional contributions of Members App. B, p. 1, Rev. 1 (Spanish only)</td>
<td>8.4</td>
<td>Chairman GEN Committee</td>
</tr>
<tr>
<td>34</td>
<td>Secretary-General’s contract</td>
<td>8.8</td>
<td>Chairman GEN Committee</td>
</tr>
<tr>
<td></td>
<td>Corr. 1 (French only)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>Reports by presidents of regional associations</td>
<td>2.2</td>
<td>Chairman TEC Committee</td>
</tr>
<tr>
<td>36</td>
<td>Reports by presidents of technical commissions</td>
<td>2.3</td>
<td>Chairman TEC Committee</td>
</tr>
<tr>
<td>37</td>
<td>Review of the Technical Regulations</td>
<td>7.4</td>
<td>Chairman TEC Committee</td>
</tr>
<tr>
<td>38</td>
<td>Report by President of the Organization</td>
<td>2.1</td>
<td>Chairman GEN Committee</td>
</tr>
<tr>
<td>39</td>
<td>Amendments to the WMO Convention</td>
<td>3.1</td>
<td>Chairman GEN Committee</td>
</tr>
<tr>
<td>40</td>
<td>Promotion of meteorological training</td>
<td>7.2</td>
<td>Chairman TEC Committee</td>
</tr>
<tr>
<td></td>
<td>Add. 1</td>
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<td>Implementation of World Weather Watch</td>
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<td>42</td>
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<td>The Plan for World Weather Watch</td>
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<td>General consideration of technical programme and maximum expenditures for 1968-1971</td>
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<td>45</td>
<td>Revision of previous resolutions of Congress</td>
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<td>Promotion of meteorological research</td>
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<td>Organization of the scientific and technical work of WMO (Including functions of regional associations and technical commissions)</td>
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<td>Organization of the session</td>
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