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**Bureau of the eighth meeting of the Conference of the Parties
to the Vienna Convention for the Protection of the Ozone Layer
First meeting
Geneva, 4 May 2011**

Issues for discussion by and information for the attention of the Bureau of the eighth meeting of the Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer

Note by the Secretariat

1. The present note outlines the issues on the agenda of the first meeting of the Bureau of the eighth meeting of the Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer. It also explains how the Secretariat plans to arrange the meeting.

I. Arrangements

2. Consistent with subparagraph (a) (i) of decision I/6, the current meeting of the Bureau is being convened in conjunction with the eighth meeting of the Ozone Research Managers of the Parties to the Vienna Convention for the Protection of the Ozone Layer. The Bureau members have also been invited to participate in the meeting of the Ozone Research Managers.

3. As stated in the letter of invitation to the Bureau members, the Secretariat had anticipated that the Bureau meeting would run from 5 p.m. to 6.30 p.m., immediately following the meeting of the Ozone Research Managers. After consultations with the President of the Bureau, however, it is suggested that the meeting be convened on 4 May in two parts: the first part during lunch, to go through agenda items 1, 2, 3, 4 and 6, and the second part immediately after the meeting of the Ozone Research Managers, to discuss agenda items 5, 7 and 8.

II. Actions taken on the decisions by the Conference of the Parties to the Vienna Convention at its eighth meeting (agenda item 3)

4. The present chapter summarizes the actions taken on the decisions adopted by the Conference of the Parties at its eighth meeting, held in Doha from 16 to 20 November 2008. The five decisions taken by the parties are reproduced in annex I to the present note.

A. Decision VIII/1: Status of ratification of the Vienna Convention, the Montreal Protocol and the London, Copenhagen, Montreal and Beijing amendments to the Montreal Protocol

5. In 2009 the parties to the Vienna Convention and the Montreal Protocol celebrated the fact that the two instruments had become the first treaties ever to be ratified by all countries. Not all countries have, however, yet ratified all the amendments to the Protocol, which include the London, Copenhagen, Montreal and Beijing amendments. The status of ratification of the Vienna Convention, the Montreal Protocol and its amendments as at 7 April 2011 and 15 November 2008, the date of the

adoption of decision VIII/I, is shown in table 1, together with the names of all parties that have yet to ratify the amendments:

Table 1

Status of ratification of the Vienna Convention, the Montreal Protocol and its amendments as at 7 April 2011 and 15 November 2008

	<i>Number of parties</i>		<i>Countries yet to ratify</i>
	<i>At 15 November 2008</i>	<i>At 7 April 2011</i>	
Vienna Convention	193	196	-
Montreal Protocol	193	196	-
London Amendment	189	195	Angola
Copenhagen Amendment	184	192	Angola, Guinea, Kazakhstan, Nepal
Montreal Amendment	167	182	Angola, Botswana, Côte d'Ivoire, Guinea, Kazakhstan, Libyan Arab Jamahiriya, Morocco, Myanmar, Nepal, Nicaragua, Papua New Guinea, Saudi Arabia, Vanuatu, Zimbabwe
Beijing Amendment	144	166	Angola, Azerbaijan, Bahrain, Bolivia (Plurinational State of), Bosnia and Herzegovina, Botswana, Cape Verde, Chad, Côte d'Ivoire, Djibouti, Ecuador, Georgia, Guinea, Haiti, Iran (Islamic Republic of), Kazakhstan, Kenya, Libyan Arab Jamahiriya, Mauritania, Morocco, Myanmar, Nepal, Nicaragua, Papua New Guinea, Peru, Saudi Arabia, Solomon Islands, Syrian Arab Republic, Vanuatu, Zimbabwe

6. The Secretariat stands ready to assist those parties that have not yet ratified these important amendments in their efforts to do so. It is hoped that these parties can count on the help of other parties to help them achieve their goals related to ratification. The Secretariat will continue to assist parties that have yet to ratify the amendments in the hope that the parties may soon celebrate the global ratification of all amendments.

7. The Bureau may wish to take note of the progress towards achieving universal ratification of the amendments and to encourage, as appropriate, all States yet to ratify, approve or accede to the amendments to do so.

B. Decision VIII/2: Recommendations adopted by the Ozone Research Managers at their seventh meeting

8. The report of the seventh meeting of the Ozone Research Managers, which was held in Geneva from 18 to 21 May 2008, was printed as report No. 51 in the report series of the World Meteorological Organization (WMO) Global Ozone Research and Monitoring Project. It was sent to all parties to the Vienna Convention and WMO official contact points and posted on the Secretariat's website.

9. Decision VIII/2 was based on a proposal by the President of the Bureau of the seventh meeting of the Conference of the Parties, (held in Dakar in 2005). The Conference of the Parties adopted the decision after a discussion which also featured a presentation on the outcomes of and recommendations adopted at the seventh meeting of the Ozone Research Managers by its Chair, Mr. Michael Kurylo. The President also submitted a draft decision on the Vienna Convention Trust Fund for Financing Activities on Research and Systematic Observations Relevant to the Vienna Convention for the Protection of the Ozone Layer, which was adopted as decision VIII/3 (see section C, below, for more information on that decision).

10. The recommendations adopted by the Ozone Research Managers at their seventh meeting were also taken up by the ministers of environment and heads of delegation of 143 parties attending the eighth meeting of the Conference of the Parties in Doha and the importance of atmospheric measurements was addressed in the Doha Declaration. Therein, Governments were urged to seek to ensure full coverage of relevant data gathering programmes in order to ensure that the atmosphere, including stratospheric ozone and its interrelation with climate change, was kept under continuous observation.

11. It may be recalled that the special topic of focus at the seventh meeting of the Ozone Research Managers was satellite monitoring to address concerns about ensuring appropriate continuation of monitoring when current satellites were decommissioned within the next few years. Through the decision of the Conference of the Parties and the Doha Declaration the issue was brought into the limelight to enable the satellite community to consider the issue further with confirmed awareness of the importance of, need and support for relevant programmes by the ozone and atmospheric science community. At its eighth meeting the Ozone Research Managers are expected to receive an update from the satellite organizations on the status of their programmes and will continue to address satellite related issues, this time with a focus on the vertical profiling of ozone.

C. Decision VIII/3: Vienna Convention Trust Fund for Financing Activities on Research and Systematic Observations Relevant to the Vienna Convention for the Protection of the Ozone Layer

12. Several parties have contributed to the Vienna Convention Trust Fund since 2008, when the Secretariat last reported comprehensively on the status of contributions to and expenditure of the Trust Fund, which it did at the seventh meeting of the Conference of the Parties. The latest report on the status of the Trust Fund is set out in annex II to the present note.

13. In accordance with paragraph 3 of decision VIII/3, the Ozone Secretariat and WMO have continued to cooperate with regard to the Trust Fund, in accordance with the memorandum of understanding between the United Nations Environment Programme (UNEP) and WMO on institutional arrangements for making decisions on the allocation of funds held in the Trust Fund.

14. Thanks to the contributions of several parties to the Trust Fund, two additional activities have been carried out:

(a) An intercomparison exercise for all African Dobson instruments in Irene, South Africa, which was carried out from 12 to 30 October 2009. A short report on the activity is set out in annex III to the present note. The budget for the exercise was \$66,000. The final expenditure report from WMO is awaited.

(b) A Dobson data quality workshop, which was convened in Hradec Králové, Czech Republic, from 14 to 18 February 2011. A short report on the activity is set out in annex IV to the present note. The budget for the activity was \$58,500. The final expenditure report from WMO is awaited.

15. In addition, the following projects are currently in the pipeline for financing by the Trust Fund:

(a) Brewer calibration and associated training, which is being planned for several stations worldwide. Brewer instruments in South America (Argentina, Brazil, Chile), Egypt, the Islamic Republic of Iran, Nepal and the Russian Federation need calibration in 2011;

(b) An intercomparison exercise involving all Dobson instruments in Africa, which is planned for October 2013. This will be a follow-up to the Dobson intercomparison in Irene mentioned in the preceding paragraph.

16. In accordance with paragraph 2 of decision VIII/3, the Secretariat has annually sent letters to the parties and relevant international organizations inviting them to make voluntary contributions to the Trust Fund. The letters for 2010 and 2011 enclosed the activity reports mentioned in paragraph 14 above.

17. The Secretariat will prepare a comprehensive report on the activities of the Trust Fund and a financial report for consideration by the Conference of the Parties at its ninth meeting, which will be held jointly with the Twenty-Third Meeting of the Parties to the Montreal Protocol in Bali, Indonesia, from 14 to 18 November 2011.

18. The Bureau may wish to note the situation with regard to contributions to, and progress made in the implementation of activities funded through, the Trust Fund.

D. Decision VIII/4: Financial matters: financial reports and budgets

19. The contributions to the Trust Fund for the Vienna Convention for the Protection of the Ozone Layer for the period 2008–2010 were as follows:

Table 2

Contributions to the Trust Fund for the period 2008–2010

<i>Year</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
Amounts pledged	602 999	603 000	603 000
Amounts received by 31 December	435 860	454 017	395 632
Unpaid contributions, including contributions pledged for prior years	167 139	148 983	207 368

20. Unpaid contributions as at 31 December 2010 totalled \$811,242.

21. The Bureau may wish to take note of the contributions of the parties and urge, as appropriate, all parties to pay their contributions promptly and in full, and to urge parties that have not done so to pay their contributions for prior years as soon as possible.

E. Decision VIII/5: Ninth meeting of the Conference of the Parties to the Vienna Convention

22. The Secretariat has been working, in collaboration with the Government of Indonesia, on the organization of the joint ninth meeting of the Conference of the Parties to the Vienna Convention and the Twenty-Third Meeting of the Parties to the Montreal Protocol. The Secretariat met a delegation from the Government of Indonesia during the twenty-sixth session of the Governing Council of UNEP, which was held in Nairobi in February. The Secretariat then undertook a mission to Bali to ensure that the meeting venue could meet all requirements of a paperless meeting. Preparations for the meeting by the Government are under way. The chosen conference facility, in the Nusa Dua area of Bali, will be confirmed by the Government before the thirty-first meeting of the Open-ended Working Group of the Parties to the Montreal Protocol.

III. Review of progress in the arrangements for the ninth meeting of the Conference of the Parties to the Vienna Convention, to be held jointly with the Twenty-Third Meeting of the Parties to the Montreal Protocol from 14 to 18 November 2011 (agenda item 4)

23. Progress in the arrangements for the ninth meeting of the Conference of the Parties to the Vienna Convention and the Twenty-Third Meeting of the Parties to the Montreal Protocol is outlined in paragraph 22 above. The Secretariat will provide any updates during the current meeting.

24. The Bureau may wish to note the progress made.

IV. Review of the recommendations adopted at the eighth meeting of the Ozone Research Managers of the Parties to the Vienna Convention, held in Geneva from 2 to 4 May 2011

25. The Chair of the eighth meeting of the Ozone Research Managers will be invited to discuss with the Bureau the outcome of the eighth meeting of the Ozone Research Managers.

Annex I

Decisions of the eighth meeting of the Conference of the Parties to the Vienna Convention

The Conference of the Parties decides:

VIII/1: Status of ratification of the Vienna Convention, the Montreal Protocol and the London, Copenhagen, Montreal and Beijing amendments to the Montreal Protocol

1. To note with satisfaction the large number of countries which have ratified the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer;
2. To note that, as of 15 November 2008, 193 Parties had ratified the Vienna Convention and the Montreal Protocol, 189 Parties had ratified the London Amendment to the Montreal Protocol, 184 Parties had ratified the Copenhagen Amendment to the Montreal Protocol, 167 Parties had ratified the Montreal Amendment to the Montreal Protocol and 144 Parties had ratified the Beijing Amendment to the Montreal Protocol;
3. To urge all States that have not yet done so to ratify, approve or accede to the Vienna Convention and the Montreal Protocol and its amendments, taking into account that universal participation is necessary to ensure the protection of the ozone layer;

VIII/2: Recommendations adopted by the Ozone Research Managers at their seventh meeting

Recalling that, pursuant to the objective defined in decision I/6 of the Conference of the Parties to the Vienna Convention, the Ozone Research Managers review ongoing national and international research and monitoring programmes with a view to ensuring the proper coordination of those programmes and identifying gaps that need to be addressed,

Recognizing that the Ozone Research Managers at their seventh meeting emphasized the discussion of satellite research and monitoring owing to concerns among scientists that there could be serious gaps in satellite monitoring and associated data when current generation satellites and associated instruments reach the end of their useful lives in the next few years,

Also recognizing that the Ozone Research Managers have noted that international funding and cooperation are essential for the implementation of their recommendations, that their previous recommendations have not received sufficient attention owing to a lack of such funding and cooperation and that problems associated with the maintenance of existing instruments and networks for ozone monitoring and the development of new capabilities have been exacerbated as a result,

Emphasizing the need for continued monitoring of the effectiveness of the implementation of the Montreal Protocol on Substances that Deplete the Ozone Layer and its adjustments and amendments, including the adjustment providing for the accelerated phase-out of hydrochlorofluorocarbons, the impact of the increasing abundance in the atmosphere of many substitute chemicals, including hydrofluorocarbons, and the expected recovery of the ozone layer in a context of climate change,

1. To take note with appreciation of the report of the seventh meeting of the Ozone Research Managers;¹
2. To endorse the recommendations adopted by the Ozone Research Managers at their seventh meeting, as set out in the report of that meeting;
3. To urge space agencies and Governments to ensure the continuation of satellite research and observations, particularly to allow for measurements that contribute to the long-term time series for both total and profile ozone and profiles of ozone-related and climate-related species and parameters, and to carry out any necessary gap-filler missions in order to avoid gaps in areas of

¹ World Meteorological Organization/United Nations Environment Programme, Report of the Seventh Meeting of the Ozone Research Managers, WMO Global Ozone Research and Monitoring Project, Report No. 51.

atmospheric observation that are critical to understanding and monitoring changes in atmospheric ozone and surface ultraviolet radiation and their interrelationship with climate variability and change;

4. To request all Parties to make a renewed effort to implement the actions recommended by the Ozone Research Managers, particularly those adopted at their seventh meeting, with a view to:

(a) Addressing uncertainties and new questions, including actual quantification of the extent to which chemical and dynamical processes are responsible for ozone production, loss, transport and distribution as well as changes in surface ultraviolet radiation resulting from changes in ozone and other atmospheric parameters and their impact on human and biological systems;

(b) Maintaining and expanding surface observation networks where gaps in geographical coverage result in data deficiencies in order to ensure the continuity and improvement of ground-based in situ observations of ozone depleting substances, their substitutes and greenhouse gases as well as the networks that provide altitude profile information for ozone-related and climate-related species;

(c) Ensuring that data acquired through observation are of the highest possible quality and include the metadata necessary to make them valuable to users today and in the future and, to that end, that efforts are made to enhance data archiving, including through the development of appropriate data quality assurance and submission procedures and timely access by users;

(d) Strengthening the capacity of developing countries and countries with economies in transition to enable them to maintain existing instruments and networks, acquire new observational capabilities and increase their participation in scientific research and assessments;

VIII/3: Vienna Convention Trust Fund for Financing Activities on Research and Systematic Observations Relevant to the Vienna Convention for the Protection of the Ozone Layer

Recalling decision VI/2, by which the Conference of the Parties established the Vienna Convention Trust Fund for Research and Systematic Observations,

Recalling also that the United Nations Environment Programme extended the Trust Fund to 31 December 2015 in order to continue supporting monitoring and research activities in developing countries and countries with economies in transition and that the Conference of the Parties is to decide in 2014 on whether to extend the Trust Fund beyond 2015,

Noting with appreciation the report provided by the Secretariat on the operation of, contributions to, and expenditures from the Trust Fund since its inception,²

Also noting with appreciation the contributions to the Trust Fund made by several Parties and the joint efforts of the World Meteorological Organization and the Ozone Secretariat in the implementation of the activities of the Trust Fund,

Recognizing the need to continue and strengthen atmospheric research and monitoring activities in order to address the many uncertainties that exist regarding the expected ozone recovery process and interaction between ozone and climate changes,

Noting the recommendations of the Ozone Research Managers at their seventh meeting, particularly with regard to the Trust Fund, in respect of which the Managers emphasize its importance in enabling capacity-building activities and the need for both monetary and specific in kind contributions that are directly targeted at ozone- and ultraviolet radiation-related activities,

1. To urge all Parties and relevant international organizations to make voluntary financial contributions to the Trust Fund and voluntary in kind contributions to enable the continuation and enhancement of monitoring and research activities in developing countries and countries with economies in transition, taking into account the need for balanced global coverage;

2. To request the Secretariat to continue to invite Parties and relevant international organizations annually to make voluntary contributions to the Fund and with each successive invitation to the Parties to report on the prior years' contributions, funded activities and planned future activities;

2 UNEP/OzL.Conv.8/5.

3. To request the Secretariat and the World Meteorological Organization to continue their cooperation in respect of the Trust Fund pursuant to the terms of the memorandum of understanding between the two bodies on the operation of the Fund and to alert the Parties should a need arise to amend the memorandum of understanding to take into consideration evolving needs and conditions;

4. To remind the Secretariat and the World Meteorological Organization of the request in paragraph 7 of decision VII/2 of the Conference of the Parties that they strive for regional balance in the activities supported by the Fund and that they make an effort to leverage other sources of funding;

VIII/4: Financial matters: financial reports and budgets

Recalling decision VII/3 on financial matters,

Recognizing that voluntary contributions are an essential complement for the effective implementation of the Vienna Convention;

Welcoming the continued excellent management by the Secretariat of the finances of the Trust Fund for the Vienna Convention for the Protection of the Ozone Layer:

1. To take note with appreciation of the financial statement of the Trust Fund for the biennium 2006-2007 ended 31 December 2007 and the report on the actual expenditures for 2007 as compared to the approvals for that year;³

2. To approve the revised 2008 budget for the Trust Fund in the amount of \$1,213,142, the budget for 2009 in the amount of \$699,897, the budget for 2010 in amount of \$717,901, and the budget for 2011 in the amount of \$1,268,489 as set out in annex I to the report of the eighth meeting of the Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer and the Twentieth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer;⁴

3. To authorize the Secretariat to draw down amounts of \$96,897 in 2009, \$114,901 in 2010 and \$665,489 in 2011, respectively, from the Fund balance for the purpose of reducing that balance;

4. To ensure, as a consequence of the draw-downs referred to in paragraph 3, that the contributions to be paid by the Parties amount to \$603,000 for each of the years 2009, 2010 and 2011 as set out in annex II to the report of the eighth meeting of the Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer and the Twentieth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer;

5. To urge all Parties to pay their outstanding contributions as well as their future contributions promptly and in full;

6. To request the Executive Director to extend the Vienna Convention Trust Fund until 31 December 2015;

VIII/5: Ninth meeting of the Conference of the Parties to the Vienna Convention

To convene the ninth meeting of the Conference of the Parties to the Vienna Convention back-to-back with the Twenty-Third Meeting of the Parties to the Montreal Protocol.

³ UNEP/OzL.Conv.8/4/Add.1.

⁴ UNEP/OzL.Conv.8/7-UNEP/OzL.Pro.20/9.

Annex II Report on the contributions to the General Trust Fund for Financing Activities on Research and Systematic Observation to the Vienna Convention

Provisional report as at 22 February 2011

<i>Parties</i>	2003	2004	2005	2006	2007	2008	2009	2010	<i>Total</i>
Czech Republic				8 000		10 000			18 000
Estonia				2 000					2 000
Finland	5 700	6 138	0			7 776	6 603	6 050	32 267
France							29 600		29 600
Kazakhstan		1 500	1 500	1 500	1 500	1 500	292		7 792
South Africa					30 000	30 000			60 000
Spain			6 306	6 035					12 341
Switzerland					20 677				20 677
United Kingdom		17 538				23 449			40 987
Subtotal	5 700	25 176	7 806	17 535	52 177	72 725	36 495	6 050	223 664
Interest income	16	431	911	2 757	5 494	7 326	4 686	1 022	22 643
Total									246 307
Less expenditure to date									155 600
Balance available									90 707

Expenditure

15 000 Dobson intercomparison, Egypt, 23 February–12 March 2004.

16 100 Brewer calibration in Nepal and Indonesia, September 2006.

66 000 First payment for Irene, South Africa, Dobson intercomparison, 12–30 October 2009.

58 500 First payment for the workshop on data quality in the total ozone network, Hradec Králové, Czech Republic, 14–18 February 2011.

Annex III

Report on activities undertaken under the Vienna Convention Trust Fund for Research and Systematic Observations

Period: 2009

The Ozone Secretariat and WMO continued to cooperate with regard to the Trust Fund and its activities. Cooperation has been excellent and, thanks to the contributions that several parties have made to the Trust Fund, the activity described in the following paragraphs (activity 4) has been carried since the last report, which was presented at the eighth meeting of the Conference of the Parties, in 2008:

Activity 4: Dobson intercomparison, Irene, South Africa, 12-30 October and 15–26 November 2009

Background

The South African Weather Service, under the auspices of WMO, hosted the third African Regional Dobson Spectrophotometer Intercomparison meeting. The meeting took place from 12 to 30 October and from 15 to 26 November 2009, and was conducted at the Irene Technical Centre near Pretoria. The meeting was of considerable magnitude and thus faced many challenges, including time constraints and other factors such as legal agreements, participant arrangements, funding transfers, instrument import and export challenges and resource and staff shortfalls. The meeting was conducted in two parts to ensure that most, if not all, African instruments could be inspected, assessed, intercompared and recalibrated where possible. The first part took place from 12 to 30 October and the second part from 15 to 26 November. During the second part the South African Weather Service Dobson staff continued the work on four instruments that owing to time constraints could not be included in the meeting as originally scheduled.

Intercomparison events for Dobson ozone spectrophotometers are held approximately every four years, to ensure that the primary ground-based network of Dobson instruments, which measures atmospheric ozone, is maintained through well-calibrated instruments. The second intercomparison meeting was held in 2004 in Dahab, Egypt, and was hosted by the Egyptian Meteorological Authority. These events therefore aim to ensure that the Dobson spectrophotometers attached to the African continent (and other world regional instruments) are in excellent operating condition, that those responsible for operating them receive up-to-date training, that data analysis is kept current and that all Dobson spectrometers are traceable to the World Standard Dobson Instrument located at Mauna Loa, Hawaii.

Participation and proceedings

The major goals of the intercomparison were:

- 1) To evaluate each instrument's calibration and the existing calibration data sets;
- 2) To repair, clean and improve each instrument as needed;
- 3) To redefine calibration levels (where applicable) for future measurements at each home station before returning the instruments to their home stations in good operating order.

When each instrument arrived, it and its accessories were inspected. No repairs, except those necessary to make the instrument operate, were made. The instrument was then operated in the condition that it would be in at its home station. Once a successful initial intercomparison was made, the results of that dictated whether significant repairs, such as the replacement of optical, mechanical or electronic parts, were needed, before a final intercomparison was concluded with improved results. The term final results means that the existing data sets could be easily reprocessed with either linear correction from the last calibration or a correction based on a known episode in the instrument's history. A comparison with other ozone measurements can indicate which method is more appropriate. In cases where shifts are less than 1 per cent (0.7 Nad), it is considered that the existing data set requires no reprocessing based on the intercomparison. Certain recommendations for each instrument were formulated. Other tasks included cleaning, repair and replacement of optics, as appropriate, followed by so-called wedge calibrations. A series of lamp calibrations were also done on a daily basis.

Instruments attended to from 12 to 30 October

The technical portions of the intercomparison event were headed by Mr. Robert Evans, head of the WMO World Calibration Centre of the United States National Oceanographic and Atmospheric Administration, using the reference standard D083 instrument. Mr. Ulf Kohler, of the German Weather Service, participated with the European Standard instrument D063. Mr. J. Easson, of the Bureau of Meteorology, Australia, participated with the Australian standard instrument D105, which was in desperate need of recalibration and world referencing after it was damaged. Other instruments that were attended to during this period were the three instruments from South Africa: D035 from Cape Town, D132 from Springbok and D089 from Irene. The Botswana Instrument (D015) and Seychelles (D057) instruments arrived during the conclusion of the first part of the event as the expert staff had to return back to their respective countries and they were only briefly inspected.

Instruments attended to from 15 to 26 November

The instruments that were attended to by the South African Weather Service staff during the period from 15 to 26 November were S5703 from Lagos, D018 from Nairobi, D057 from Mahe and D015 from Maun, Botswana.

Final results and recommendations

Technical

The official technical report, consisting of a description of the detailed work performed on the instruments and new calibration results/data review requirements, is currently being prepared by Mr. Robert Evans and will be submitted to WMO for publishing. It can be said in the meantime that all instruments mentioned above are well calibrated and in good operational condition, except for instrument D057 from Mahe, which still remains within a marginal calibration error. This instrument may need better expert attention before the next intercomparison event, which is to take place in three or four years. The situation of instrument D057 will be followed up. Overall, most of the objectives of the intercomparison were met satisfactorily under challenging circumstances.

Financial

The letter of agreement between UNEP and WMO estimates the cost of the intercomparison campaign at \$88,000. UNEP made an advance payment to WMO in the amount of \$66,000 was made from UNEP to WMO. The actual expenses, in United States dollars, can be summarized as follows:

Advance payment to the South African Weather Service:	20,350
Cost of shipping Dobson instrument from Nigeria	1,497
Cost of shipping Dobson instrument from Seychelles	4,530
Travel of Mr. Nguyo from Nairobi to Irene and cost of shipping instrument	3,209
Other expenditures	497
Unused funds to be returned from South African Weather Service (approx.)	-4,000
Overhead, 7 per cent of 26,083	1,826
Total:	27,909

Final recommendations to note

Dobson instrument staff from Algeria and Egypt should be enabled to take part, with their instruments, in intercomparison events planned in the European networks throughout 2010, as they could not participate during the Irene event. Financial support thus should be earmarked for that purpose.

Because the Dobson observers from Nairobi, Mahe, Lagos and Maun were unable to participate in the event, training for them remains outstanding and, especially for those from Lagos and Maun, is crucial. It is highly recommended that they be enabled to participate in similar regional events to be conducted elsewhere, such as the Dobson intercomparison and data workshop event being planned at the Solar and Ozone Observatory in the Czech Republic in 2010. Nigeria and Maun face challenges in the form of new and inexperienced instrument staff. They are also in great need of training in data processing and analysis techniques and tools and requirements pertaining to the submission of data to the WMO World Ozone and UV Data Centre.

Annex IV

Report on activities undertaken under the Vienna Convention Trust Fund for Research and Systematic Observations

Period: 2010–2011

The Ozone Secretariat and WMO have continued to cooperate with regard to the Trust Fund and its activities. Thanks to contributions from several parties, the following activity has been carried since the last report, which was sent to the parties in April 2010 together with a letter from Mr. Marco Gonzalez, Executive Secretary of the Ozone Secretariat, inviting contributions to the Trust Fund.

Activity 5: Dobson data quality workshop, Hradec Králové, Czech Republic, 14–18 February 2011

Background

Systematic observation of atmospheric ozone is a key task relevant to the Vienna Convention that is supported by WMO within the framework of the Global Atmosphere Watch Programme (GAW) and assisted by the “Network for the Detection of Atmospheric Composition Change” (NDACC). For adequate evaluation of the effectiveness of the Montreal Protocol, high quality column ozone measurements are very important. Continued maintenance and calibration of instruments at the ground-based GAW and NDACC total ozone monitoring stations are the focus of the assistance provided by WMO. Recent analyses presented by the GAW Scientific Advisory Group for Ozone (SAG-O3) have shown that these activities would benefit from enhanced implementation of data quality procedures in the network and a thorough evaluation of past measurements. This conclusion is particularly valid for Dobson total ozone observations. On the basis of this conclusion it was recommended at the seventh meeting of the Ozone Research Managers of the Parties to the Vienna Convention, held in Geneva in 2008, that a technological workshop should be organized to bring together the managers of the archived data sets and provide guidance on how to reevaluate and reprocess selected past data sets. This should be arranged with the assistance of SAG-O3 and supported by the Vienna Convention Trust Fund on Research and Systematic Observations.

On the recommendation of SAG-O3 each relevant institution was invited to nominate an expert responsible for processing the Dobson observations and maintaining the data base of its station or stations to participate in the workshop.

Goals of the workshop

- To provide a data set that users trust and understand.
- To provide a data set that meets the needs of users today and can more easily respond to future needs.
- To provide the ability to reconstruct a stations record from the information in the WMO World Ozone and UV radiation Data Centre.

Accomplishments

- Many Dobson observers and data analysis experts were introduced to one another. This will be very useful for the work ahead.
- A framework is now in place to start the needed reevaluation of historical Dobson data.
- Examples of how such re-evaluation can be accomplished were presented at the workshop.
- Much was learned about the state of the data record at many stations.

Participation and proceedings

- Thirty-one participants from 20 countries attended the workshop.
- Twenty-one data managers of 51 Dobson stations were present.
- The above represents about 75 per cent of the currently active WMO-GAW Dobson stations.
- Twenty-five expert and on-demand oral presentations were given.
- Much of the primary (0-level) data and the lamp-test records have been collected by the manager of the WMO-GAW World Ozone and UV radiation Data Centre.
- A summary of the workshop will be presented at the “eighth meeting of the Ozone Research Managers Meeting, to be held in Geneva from 2 to 4 May 2011.
- The final report will be prepared and published as a WMO-GAW report in 2011.