

Bureau international des poids et mesures

Comité international des poids et mesures

101st meeting (June and October 2012)

Report of the 101st Meeting of the International Committee for Weights and Measures 2012

This Report of the 101st meeting of the International Committee for Weights and Measures (June and October 2012) is one of a set of three documents issued annually by the CIPM and the BIPM which collectively cover the formal reporting to Member States, the other two reports in the set being the:

- Director's Report on the Activity and Management of the BIPM 2012, and the
- *Rapport annuel aux gouvernements des hautes parties contractantes sur la situation administrative et financière du Bureau international des poids et mesures 2012.*

Note on the use of the English text

To make its work more widely accessible the International Committee for Weights and Measures publishes an English version of its reports.

Readers should note that the official record is always that of the French text. This must be used when an authoritative reference is required or when there is doubt about the interpretation of the text.

Executive Summary

Following Recommendation 10 of the *ad hoc* Working Group on the role, mission, objectives, long-term financial stability, strategic direction and governance of the BIPM the CIPM decided that reports of meetings should be kept as short as possible while maintaining the rationale behind the discussions and decisions. As a result, the report of Sessions I and II of the 101st meeting of the CIPM and future reports of meetings of the CIPM will be written to give a summary of discussions. This represents a move away from the traditional narrative style of report. Decisions and actions are clearly presented in the report and the rationale is provided. The decisions and actions were made available electronically shortly after the CIPM Sessions.

Session I of the 101st meeting of the CIPM (6 to 8 June 2012)

Session I of the 101st meeting of the CIPM focused on the report of the meeting of the *ad hoc* Working Group on the role, mission, objectives, long-term financial stability, strategic direction and governance of the BIPM which was held in March 2012 at the BIPM headquarters and on the Programme of Work and its corresponding budget for the years 2013 to 2015.

The 20 Draft Recommendations made by the *ad hoc* Working Group (Appendix 2) were discussed in detail and resulted in a series of actions for the CIPM with the support of the staff of the BIPM. Recommendations that did not conflict with the Metre Convention were implemented immediately, while others were referred for further discussion at the joint meeting of representatives of Member States and NMI Directors in October 2012.

The CIPM set up three standing sub-committees (science strategy; finance; and pensions and health insurance) and two *ad hoc* Working Groups (CIPM membership and conditions of employment of BIPM staff members) in order to address the findings of the Recommendations and to offer advice on their implementation. It was agreed that Terms of Reference for the standing sub-committees and *ad hoc* Working Groups would be developed and presented at Session II of the 101st meeting of the CIPM.

The CIPM reviewed and approved the Programme of Work and its corresponding budget for the years 2013 to 2015. The CIPM approved, after due consideration, the BIPM financial statements for 2011, the BIPM Pension and Provident Fund financial statement for 2011 and the reports of the auditor. A report was given on Member States in financial arrears for more than three years. The CIPM also approved a series of amendments to the BIPM Staff Regulations, Rules and Instructions.

A report was given on the Joint Committee of the Regional Metrology Organizations and the BIPM (JCRB). The CIPM approved JCRB Resolutions that clarify the requirements for designated institutes according to the CIPM MRA and the quality management systems that they are expected to implement in order to publish Calibration and Measurement Capabilities (CMCs) in the BIPM key comparison database (KCDB).

The CIPM authorized the Director of the BIPM to sign a Memorandum of Understanding with the International Atomic Energy Agency (IAEA). The CIPM also approved the proposed signing of the CIPM MRA by the European Space Agency (ESA) and the extension of a cooperative agreement with the NIST, USA, in chemistry.

Session II of the 101st meeting of the CIPM (18 to 19 October 2012)

At Session II of the 101st meeting of the CIPM the conclusions of the representatives of Member States and NMI Directors on the 20 Recommendations that had been made by the *ad hoc* Working Group on the role, mission, objectives, long-term financial stability, strategic direction and governance of the BIPM were discussed in detail. The CIPM developed a document that summarized the conclusions of the representatives of Member States and NMI Directors and made the document available to participants (Appendix 5).

The draft Terms of Reference of the three standing sub-committees and two *ad hoc* Working Groups that were set up by the CIPM at Session I were presented and discussed. Reports from the seven Consultative Committees that had met since October 2011 were also presented and discussed. The President of the Consultative Committee for Time and Frequency (CCTF) presented six Recommendations to the CIPM. Recommendation CCTF 1 (2012) 'Updates to the list of standard frequencies' was accepted by the CIPM and may be prepared as a Draft Resolution for the 25th meeting of the CGPM. The CIPM noted the five other CCTF Recommendations. Vacancies for the seats of President of the Consultative Committee for Mass and Related Quantities (CCM) and the Consultative Committee for Photometry and Radiometry (CCPR) were discussed. The CIPM appointed Dr Philippe Richard, the METAS, Switzerland, as President of the CCM and Dr Takashi Usuda, the NMIJ, Japan, and CIPM member, as President of the CCPR, following a vote.

Reports were given on the administrative and financial affairs of the BIPM including a report on Member States in financial arrears and an update on the actions taken by the BIPM on this matter following the decisions made at the CGPM in 2011, in particular [Resolution 6 \(2011\)](#) and [Resolution 7 \(2011\)](#). A rescheduling agreement with the Dominican Republic was signed on 1 August 2012 and the CIPM mandated the BIPM Director to sign a rescheduling agreement with the Islamic Republic of Iran. There has been no positive reply from either Cameroon or the Democratic People's Republic of Korea.

A progress report was given on the 2012 estimated outturn. The CIPM approved amendments to the BIPM Financial Regulations (Article 15) and the BIPM 2013 budget.

The CIPM recommended that the JCGM continues with the investigation into the development of an online, annotated version of the International Vocabulary of Metrology (VIM3) and the development of an International Vocabulary for Nominal Properties (VIN) as work items for JCGM WG2. The latter recommendation was in response to a draft recommendation from the International Union of Pure and Applied Chemistry (IUPAC).

The CIPM discussed the draft protocol for the use of the international prototype of the kilogram in preparation for the redefinition of the kilogram. A refined version of the protocol will be submitted to the CCM for finalization.

The CIPM agreed with the reinstatement of a key comparison in the field of large organic molecules to be carried out by the Chemistry Department during the BIPM Programme of Work for 2013 to 2015 as a result of additional support, both financially and by secondment, from NMIs.

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MEMBER STATES AND ASSOCIATES OF THE GENERAL CONFERENCE

as of 18 October 2012

Member States

Argentina	Korea (Democratic People's Republic of)
Australia	Malaysia
Austria	Mexico
Belgium	Netherlands
Brazil	New Zealand
Bulgaria	Norway
Cameroon	Pakistan
Canada	Poland
Chile	Portugal
China	Republic of Korea
Croatia	Romania
Czech Republic	Russian Federation
Denmark	Saudi Arabia
Dominican Republic	Serbia
Egypt	Singapore
Finland	Slovakia
France	South Africa
Germany	Spain
Greece	Sweden
Hungary	Switzerland
India	Thailand
Indonesia	Tunisia
Iran (Islamic Republic of)	Turkey
Ireland	United Kingdom of Great Britain and Northern Ireland
Israel	United States of America
Italy	Uruguay
Japan	Venezuela (Bolivarian Republic of)
Kazakhstan	
Kenya	

Associates of the General Conference

Albania	Malta
Bangladesh	Mauritius
Belarus	Montenegro
Bolivia (Plurinational State of)	Namibia
Bosnia and Herzegovina	Oman
Botswana	Panama
CARICOM	Paraguay
Chinese Taipei	Peru
Costa Rica	Philippines
Cuba	Republic of Moldova
Ecuador	Seychelles
Estonia	Slovenia
Former Yugoslav Republic of Macedonia	Sri Lanka
Georgia	Syrian Arab Republic
Ghana	Ukraine
Hong Kong (China)	Viet Nam
Jamaica	Zambia
Latvia	Zimbabwe
Lithuania	

THE MISSION AND ROLE OF THE BIPM

The BIPM is an intergovernmental organization established by the Metre Convention, through which Member States act together on matters related to measurement science and measurement standards.

The mission of the BIPM is to ensure and promote the global comparability of measurements, including providing a coherent international system of units for:

- Scientific discovery and innovation,
- Industrial manufacturing and international trade,
- Sustaining the quality of life and the global environment.

The unique role of the BIPM is based on its international and impartial character enabling it:

- To coordinate the realization and improvement of the world-wide measurement system to ensure it delivers accurate and comparable measurement results.
- To undertake selected scientific and technical activities that are more efficiently carried out in its own laboratories on behalf of Member States.
- To promote the importance of metrology to science, industry and society, in particular through collaboration with other intergovernmental organizations and international bodies and in international forums.

The unique role of the BIPM enables it to achieve its mission by developing the technical and organizational infrastructure of the International System of Units (SI) as the basis for the world-wide traceability of measurement results. This is achieved both through technical activities in its laboratories and through international coordination.

THE OBJECTIVES OF THE BIPM

- To establish and maintain appropriate reference standards for use as the basis of a limited number of key international comparisons at the highest level.
- To coordinate international comparisons of national measurement standards through the Consultative Committees of the CIPM; taking the role of coordinating laboratory for selected comparisons of the highest priority and undertaking the scientific work necessary to enable this to be done.
- To provide selected calibrations for Member States.
- To coordinate activities between the NMIs of Member States, such as through the CIPM MRA¹, and to provide technical services to support them.

¹ The CIPM Mutual Recognition Arrangement (CIPM MRA) is coordinated jointly by the BIPM and the Regional Metrology Organizations.

- To liaise as required with relevant intergovernmental organizations² and other international bodies³ both directly and through joint committees⁴.
- To organize scientific meetings to identify future developments in the world-wide measurement system required to meet existing and future measurement needs in industry, science and society.
- To inform, through publications and meetings, the science community, the wider scientific public and decision makers on matters related to metrology and its benefits.

² Examples of intergovernmental organizations in liaison with the BIPM are: OIML, IAEA, WMO and WHO.

³ Examples of other international bodies in liaison with the BIPM are: ILAC and ISO.

⁴ Examples of joint committees are the Joint Committee on Guides on Metrology and the Joint Committee on Traceability in Laboratory Medicine.

International Committee
for Weights and Measures

**Proceedings of Session I
of the 101st meeting**

(6 – 8 June 2012)

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as of 6 June 2012

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Secretary

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* There were 17 members of the CIPM at Session I of the 101st meeting instead of 18 due to S. Bennett (United Kingdom) having resigned from the CIPM since the previous meeting in October 2011.

Honorary members

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9. J. Skákala, Professor, Slovak Technical University, Nám. Slobody 17, 812 31 Bratislava, Slovakia.

Agenda

1. Opening of the meeting, quorum, and approval of the agenda
2. Confirmation of the minutes of the 2011 sessions
3. Report of the Secretary and activities of the bureau of the CIPM (first part)
4. Appointment of the next Director of the BIPM
5. States Parties to the Metre Convention and Associates of the CGPM
6. Discussion and approval of the programme of work for 2013 to 2015
7. Report on the meeting of the *ad hoc* Working Group on the role, mission, objectives, long-term financial stability, strategic direction and governance of the BIPM.
8. Financial and administrative matters
9. Membership of the CIPM
10. Preparation for the meeting of Representatives of Member States and NMI Directors on 16 to 17 October 2012
11. Preparation of the programme of work starting in 2016
12. Amendments to the Rules of procedure for the Consultative Committees (CCs) (CIPM-D-01) and to the services available to Associate States and Economies of the CGPM and their participation in the CIPM MRA (CIPM2005-05).
13. Report on the present status of the CIPM MRA
14. International cooperation
15. The future role of the Consultative Committees and consequences for the terms of reference
16. Presentation of the BIPM science programmes by the Directors of the scientific departments
17. Any other business
18. Date of the 102nd CIPM meeting

1. OPENING OF THE MEETING; QUORUM; AGENDA

The International Committee for Weights and Measures (CIPM) held Session I of its 101st meeting from Wednesday 6 June to Friday 8 June 2012 at the International Bureau of Weights and Measures (BIPM) headquarters in Sèvres.

Present: K. Carneiro, K.H. Chung (except for the morning session of Wednesday 6 June), Y. Duan, L. Énard, E.O. Göbel, B. Inglis, R. Kaarls, W.E. May, J.W. McLaren, H.O. Nava-Jaimes, W. Schwitz, M. Tanaka, H. Uğur, and M. Kühne, Director of the BIPM.

Apologies were received from L.K. Issaev, A. Sacconi and J. Valdés. F. Hengstberger was absent.

Also attending: S. Arlen (Legal Adviser of the BIPM), S. Bennett (Former CIPM Member), F. Joly (Head of the Secretariat Section and PA to the Director of the BIPM), B. Perent (Financial and Administrative Director of the BIPM), C. Planche (Librarian/Drafting Officer), T.J. Quinn (Emeritus Director of the BIPM), and R. Sitton (Publications Officer).

Also in attendance for parts of the meeting: A. Henson (Director of the International Liaison and Communication Department) and the following Executive Secretaries of CIPM Consultative Committees: P.J. Allisy-Roberts (Former Director of the Ionizing Radiation Department), E.F. Arias (Director of the Time Department), D.T. Burns (*ad interim* Director of the Ionizing Radiation Department), A. Picard (Director of the Mass Department), S. Picard (Principal Physicist, Ionizing Radiation Department), L. Robertsson (Principal Physicist, Time Department), M. Stock (Director of the Electricity Department), C. Thomas (Principal Research Physicist, KCDB Coordinator), and R.I. Wielgosz (Director of the Chemistry Department).

Dr B. Inglis, President of the CIPM, opened Session I of the 101st meeting of the CIPM. With 12 out of 17 members present the quorum was satisfied according to Article 12 of the Regulations annexed to the Metre Convention.

Dr B. Inglis noted with sadness the announcement of the death of André Perlstain in early March 2012 at the age of 93 years. He was a member of the CIPM from 1971 to 1985 and first President of the Consultative Committee for Mass and Related Quantities (CCM). A minute's silence was observed in his memory.

Agenda item 4 'Appointment of the next Director of the BIPM' was discussed in a closed session on Wednesday 6 June. This was followed by a further closed session on Thursday 7 June to reach a decision on the selected candidate for appointment as next Director of the BIPM.

2. CONFIRMATION OF THE MINUTES OF THE 2011 SESSIONS

The minutes of Sessions I and II of the 100th meeting (2011) were approved by correspondence and the CIPM agreed that the printed version tabled is confirmed to be a true copy of the circulated document.

Decision CIPM/101-1: The CIPM agreed that the minutes of the 100th meeting (2011) were confirmed by correspondence and that the printed version tabled is a true copy of what was circulated.

3. REPORT OF THE SECRETARY AND ACTIVITIES OF THE BUREAU OF THE CIPM

The Secretary of the CIPM, Dr R. Kaarls, gave his report (see Appendix 1) covering the period October 2011 to June 2012.

Dr B. Inglis invited questions on the report. The following points from the discussion were noted.

GULFMET, an international collaboration between seven States in the Gulf region, has been created and has formally applied for recognition as a Regional Metrology Organization (RMO) within the meaning of the Mutual Recognition Arrangement of national measurement standards and of calibration and measurement certificates issued by National Metrology Institutes (CIPM MRA). However the Joint Committee of the Regional Metrology Organizations and the BIPM (JCRB) has reviewed progress and concluded that, at the time of this review, the criteria for approval of a new RMO to the JCRB were not fully satisfied. Consequently the JCRB has not made any recommendation to the CIPM at this time. A delegation from GULFMET will attend the next meeting of the JCRB on 25 to 26 September 2012 in Washington, United States of America.

There has been very little interaction with the Versailles Project on Advanced Materials and Standards (VAMAS) since the signing of the Memorandum of Understanding with the BIPM in 2008. A representative from the VAMAS will be invited to attend the relevant Consultative Committee Working Group meetings.

Concerning the rapprochement between the BIPM and the International Organization of Legal Metrology (OIML), at the OIML's request an estimate of legal and administrative consequences as well as the costs of the rapprochement based on the number of square metres of space required by the International Bureau of Legal Metrology (BIML) at the BIPM premises has been prepared by the Finance, Administration and General Services Department for the OIML's consideration.

Dr B. Inglis thanked Dr R. Kaarls for his report.

4. APPOINTMENT OF THE NEXT DIRECTOR OF THE BIPM

Agenda item 4 'Appointment of the next Director of the BIPM' was discussed in a closed session on Wednesday 6 June. The post of Director of the BIPM will become vacant when the current Director of the BIPM, Prof. M. Kühne, retires in the near future. The CIPM decided to publish a vacancy notice for this post which was also sent to the Member States and their National Metrology Institutes (NMIs) in September 2011. The deadline for applications was set as 1 December 2011. Forty one applications were received.

The Selecting Committee, set up by the CIPM, was composed of the members of the bureau and Prof. João Jornada, President of the Brazilian NMI, *Instituto Nacional de Metrologia, Qualidade e Tecnologia* (INMETRO). It invited nine potential candidates for the post of Director of the BIPM for an interview on 12 and 13 March 2012 in Paris. A shortlist of four candidates, together with the report and recommendations of the Selection Committee, was presented to the CIPM for its consideration and final decision.

By letter to the bureau of the CIPM, Prof. M. Kühne resigned as Director of the BIPM from the end of 2012 for personal reasons.

After a further discussion in a closed session on Thursday 7 June, a secret ballot was held and

Dr Martin Milton, currently NPL Fellow in Chemical Metrology, was nominated as Director Designate commencing 1 October 2012 and as Director commencing 1 January 2013.

5. STATES PARTIES TO THE METRE CONVENTION AND ASSOCIATES OF THE GENERAL CONFERENCE ON WEIGHTS AND MEASURES (CGPM)

On 1 February 2012 the Republic of Tunisia, formerly an Associate of the CGPM since 2007, became the 56th State Party to the Metre Convention. The Sultanate of Oman became an Associate of the CGPM on 8 May 2012, the Republic of Botswana became an Associate on 30 May 2012, and the Syrian Arab Republic became an Associate of the CGPM on 31 May 2012. There were, at the date of the meeting, 36 Associates of the CGPM.

Three other States that are involved in advanced discussions to accede to the Metre Convention or to become Associate of the CGPM are Colombia, Luxembourg and Kuwait. The BIPM outreach programme is very successful, with the number of Member States and Associates expected to increase during the 2013-2015 programme of work.

6. PROGRAMME OF WORK AND BUDGET FOR 2013 TO 2015

Prof. M. Kühne presented the programme of work and budget of the International Bureau of Weights and Measures for the years 2013 to 2015. The programme of work has been reduced by one year because the CGPM at its 24th meeting (2011) agreed on the dotation for a period of three years, and not four years as traditionally done. The CIPM noted that there is some uncertainty regarding the impact of Resolution 4 adopted by the CGPM at its 24th meeting (2011) 'on the status of Associate States of the General Conference'. This resolution provides for an increase of the Associates' subscription and it is possible that not all subscriptions will be fully and timely settled and that some Associates may even withdraw from the Associate status.

Discussion of the programme of work and budget of the International Bureau of Weights and Measures for the years 2013 to 2015 centred on: the realization of the new definition of the kilogram; the need to ensure uniformity in the dissemination of the unit of mass when redefined; whether or not new Global Navigation Satellite System (GNSS) receivers should be calibrated at the BIPM headquarters or in RMOs; the importance of the development of the room-temperature watt balance and the postponement of a cryogenic watt balance; and the definition of priorities in the allocation of additional funds that would become available.

Prof. M. Kühne asked for the CIPM's formal approval of the extension of a cooperative agreement with the NMI of the United States of America, the National Institute of Standards and Technology (NIST) for methods development for large organic molecule primary calibrants, which would provide additional funding to the BIPM.

Decision CIPM/101-2: The CIPM approved the extension of a cooperative agreement with the NIST in chemistry.

Decision CIPM/101-3: The CIPM approved the programme of work and budget of the BIPM for the years 2013 to 2015. Noting that the budget is conservative it was agreed that additional funds that become available would preferentially be used to support BIPM activities related to the redefinition of the kilogram, as a high priority.

Prof. M. Kühne recalled that the 2013 to 2015 programme of work contains a proposal to cease the subsidy of the pensioners' contribution to the health insurance from the reserve fund for health insurance starting 1 January 2013.

Indeed, when the CIPM decided in 1991 to transfer the risks related to health, incapacity, death and work accident insurance for BIPM staff from the French national scheme to a private scheme, it gave a guarantee that, in the event of failure of the private scheme, medical coverage for the staff and pensioners of the BIPM would be provided out of BIPM funds until new coverage was arranged. A Reserve Fund for Health Insurance (RFHI) was set up to provide the basis for such a guarantee. The CIPM also decided that interest on the capital of the RFHI would be available to subsidize pensioners' contributions and keep them, as far as possible, at 2 % of pensions.

In light of the proposal to increase the pensioners' contributions to the health insurance scheme to one third of the total rate of contribution (see **Decision CIPM/101-26**), it was proposed that the CIPM consequently decide to cease the subsidy of the pensioners' contributions out of the Reserve Fund for Health Insurance.

Decision CIPM/101-4: The CIPM agreed to cease the subsidy of the pensioners' contributions out of the health insurance reserve fund starting 1 January 2013.

7. **REPORT ON THE MEETING OF THE *AD HOC* WORKING GROUP ON THE ROLE, MISSION, OBJECTIVES, LONG-TERM FINANCIAL STABILITY, STRATEGIC DIRECTION AND GOVERNANCE OF THE BIPM**

Dr B. Inglis reported on the *ad hoc* Working Group meeting which was held at the BIPM headquarters on 14 to 16 March 2012. The *ad hoc* Working Group was set up in application of Resolution 10 adopted by the CGPM at its 24th meeting (2011). The meeting was considered to be very useful by all participants and there was much support for the work of the BIPM. The report from the *ad hoc* Working Group meeting contained 20 recommendations (see Appendix 2 '*Ad hoc Working Group on the Role, Mission, Objectives, Long-term Strategy and Governance of the BIPM: Summary of key findings and recommendations of the meeting 14 to 16 March 2012*') and was sent to the representatives of States Parties to the Metre Convention, the NMI Directors and the CIPM for comment. Dr B. Inglis will present an interim report on the outcome of the *ad hoc* Working Group discussions to the joint meeting of representatives of States Parties to the Metre Convention and NMI Directors to be held at the BIPM headquarters in October 2012. These outcomes will form the basis of a report for Session I of the 102nd meeting of the CIPM in 2013.

The findings and the 20 Recommendations made by the *ad hoc* Working Group were discussed by the CIPM. For each Recommendation, the CIPM considered whether or not to support it or to make suggestions on it. A list of Decisions and Actions to each Recommendation was prepared (see Appendix 3).

7.1 **Recommendation 1 of the *ad hoc* Working Group:** "*Develop a compact and clear statement on the role, mission and objectives based on the original objectives set by the Metre Convention, but reinterpreted for the 21st Century*"

Dr B. Inglis reported that the *ad hoc* Working Group concluded that the BIPM is a necessary institution and that the work it carries out is useful for the international metrology community. A sub-group of the

ad hoc Working Group drafted a new mission statement for the BIPM (see Appendix 2, Annex 1, p162 ‘*World-wide uniformity of measurement for trade, science and society*’). The CIPM discussed Recommendation 1 and the text of the Draft mission statement. The CIPM decided to set up a Working Group consisting of Dr K. Carneiro, Dr W.E. May, Dr T.J. Quinn and Dr W. Schwitz to refine the text of the Draft mission statement.

Decision CIPM/101-5: Recommendation 1 of the *ad hoc* Working Group was discussed by the CIPM and a Working Group was convened to refine the proposed text.

The findings of the CIPM Working Group, and the text of the modified draft statement, were presented at the start of the fourth session of the CIPM meeting. The CIPM Working Group made some modifications and retained the spirit of the draft mission statement drafted by the *ad hoc* Working Group ‘*World-wide uniformity of measurement for trade, science and society*’ (Appendix 2, Annex 1, p162) but suggested, for example, changing the title of the document from ‘*World-wide uniformity of measurement for trade, science and society*’ to ‘*BIPM Mission, Role and Objectives*’.

A discussion of the modified draft statement took place. The CIPM modified document ‘*BIPM mission, role and objectives*’ and the original version of the *ad hoc* Working Group ‘*World-wide uniformity of measurement for trade, science and society*’ will be presented together at the meeting of representatives of States Parties to the Metre Convention and NMI Directors on 16 to 17 October 2012.

7.2 Recommendation 2 of the *ad hoc* Working Group: “*The BIPM/CIPM to develop a consolidated planning process requiring:*

- a) *Consultative Committee mid- and long-term strategic plans and derived key comparison plans to be forwarded to NMI Directors by email and via the BIPM website for input and comment,*
- b) *Input and comments from NMI Directors to be forwarded to the CIPM for consolidation with the strategic plans, prioritization and the development of the strategy of the BIPM and its Programme of Work and Budget,*
- c) *The consolidation and prioritization to be forwarded to Government Representatives and NMI Directors, together with financial analysis, for comment and input,*
- d) *The final Draft of the BIPM Programme of Work and Budget and analysis to be presented to a joint meeting of NMI Directors and Government Representatives.*

taking into account that:

- *BIPM activities should focus on those that add value over and above what can be delivered by the NMIs,*
- *priority setting should be done in the context of the consolidated planning process, identifying both the wider metrology needs and the role and capabilities of the BIPM in delivering the required activities,*
- *options should include all budgetary implications,*
- *an annual update of the Consultative Committee’s plans will take place in consultation with the NMI Directors”.*

The CIPM understood the rationale behind Recommendation 2 was to allow it to engage more effectively with representatives of States Parties to the Metre Convention and NMI Directors from an early stage within the process of development of the BIPM programme of work. It was considered that despite the effort that goes into the development of the programme of work and budget by the BIPM, to engage with

the representatives of States Parties to the Metre Convention and NMI Directors at all stages may ease the adoption of the programme of work and budget and the re-evaluated dotation by the CGPM. The CIPM agreed that this is a key Recommendation because support from the NMI Directors during the early stages of preparation of the programme of work and budget may help gain the support of their respective governments. It was also suggested that the Consultative Committees (CCs) should inform the NMIs about how they intend to cooperate at an international level to allow the formulation of a plan for CC activities.

Decision CIPM/101-6: The CIPM agreed that there is a need to change the engagement process between the CIPM, NMI Directors and representatives of States Parties to the Metre Convention related to the activities of the Consultative Committees and development of the BIPM programme of work. The suggestions in Recommendation 2 were supported in spirit but there were some concerns about the mechanisms to implement it.

Action CIPM/101-1: The BIPM Director and the Director of the International Liaison and Communication Department will examine and formulate a plan to implement Recommendation 2.

7.3 Recommendation 3 of the *ad hoc* Working Group: “*NMI Directors and Government Representatives are asked to take an active interest in the development of the BIPM long-term strategy and successive Programmes of Work and Budget by timely responding to the proposals (failure to respond means: assent)*”

The CIPM agreed with this Recommendation as it considered that it would improve the dialogue and interaction between the BIPM and Representatives of States Parties to the Metre Convention and NMI Directors.

Decision CIPM/101-7: The CIPM agreed with Recommendation 3 of the *ad hoc* Working Group.

7.4 Recommendation 4 of the *ad hoc* Working Group: “*The long-term financial plan, including capital investments, should be provided to Member States (addressing building, equipment, staff, assets and liabilities such as the Pension and Provident Fund) with a number of possible scenarios.*”

The discussion of Recommendation 4 focused on how the BIPM can be operated in the future and the need to develop the long-term scientific strategy prior to developing the long-term financial plan. The CIPM decided that two standing sub-committees will be created to investigate the implementation of Recommendation 4 in terms of (a) finance and (b) pensions and health insurance. Terms of Reference will be needed for the two standing sub-committees (chairmanship, set-up, etc.).

Decision CIPM/101-8: The CIPM decided that two standing sub-committees will be established for (a) finance and (b) pensions and health insurance.¹

7.5 Recommendation 5 of the *ad hoc* Working Group: “*RMO chairs should be invited to attend the NMI Directors meetings, while RMO Technical Committee chairs should be invited to attend the Consultative Committee Strategy and Key Comparisons Working Groups.*”

Following a brief discussion the CIPM agreed with Recommendation 5 of the *ad hoc* Working Group.

Decision CIPM/101-9: The CIPM agreed with Recommendation 5 of the *ad hoc* Working Group.

¹ See Decision CIPM/101-29

Action CIPM/101-2: The BIPM Director will invite RMO chairs to the NMI Directors' Meeting. The Consultative Committee Presidents will also invite the RMO Technical Committee chairs to the Consultative Committee Strategy and Key Comparisons Working Group meetings.

- 7.6 Recommendation 6 of the *ad hoc* Working Group:** *“The CIPM will produce and maintain compact, easily readable and understandable document(s), including a compilation of all currently applicable rules, and describing the BIPM (including Terms of Reference etc. for the CIPM, as the governance board, and for all other committees) and its operational and decision making processes. All in one place and easily accessible.”*

The CIPM noted that a Compendium, which compiles the main rules and practices applicable to the BIPM, including Decisions of the CGPM on institutional matters over the last 135 years had been produced by the Finance, Administration and General Services Department and made available to the *ad hoc* Working Group. It was also noted that it is a valuable document although some members of the *ad hoc* Working Group considered it too long. It was further noted that one cannot summarize such rules and practices into a short document, and that perhaps some of the criticism is related to the fact that the key reference documents were also appended, making a very large document overall.

The CIPM discussed how to obtain a concise yet comprehensive version of the Compendium to provide guidance for representatives of States Parties to the Metre Convention and NMI Directors on how the BIPM operates. Because representatives of States Parties to the Metre Convention and NMI Directors regularly change, there is a real need to allow new people to easily access information about the BIPM. A solution would be to publish the Compendium on the BIPM website in a searchable format, with an easy-to-follow table of contents.

Decision and Action: see **Decision CIPM/101-10** and **Action CIPM/101-3** after Recommendation 10.

- 7.7 Recommendation 7 of the *ad hoc* Working Group:** *“An annual four page summary of achievements, planning, financial situation, audits, human resources, relations with other organizations complemented by an index of detailed reports be prepared and sent to Member States and NMIs.”*

The discussion of Recommendation 7 centred on how much detail is needed in the proposed four-page summary. The summary of achievements should include actions undertaken at the BIPM. It was pointed out that the preparation of all the documents and information as suggested by the *ad hoc* Working Group may result in more work and that the need for communication and the work required to produce these documents should be balanced.

To address Recommendation 7 a document will be developed. The CIPM agreed that some members of the *ad hoc* Working Group will be contacted to provide clarifications and details. Dr R. Kaarls will act as the interface with the *ad hoc* Working Group.

Decision and Action: see **Decision CIPM/101-10** and **Action CIPM/101-3** after Recommendation 10.

- 7.8 Recommendation 8 of the *ad hoc* Working Group:** *“In addition to the complete Annual Financial Statements, a summary highlighting the key issues, including long-term consequences, trends and risk analysis should be annexed.”*

Discussion of Recommendation 8 focused on whether the production of a summary as proposed will result in an increased workload for the BIPM, whether two meetings of the CIPM are needed each year and if there is duplication of information within the BIPM reports. It was recalled that the change of the BIPM accounting system was made for more transparency and accountability. Prof. M. Kühne commented on the difficulties involved in the timely preparation of all necessary information required for Session I of each CIPM meeting and recommended that Session I of the 102nd meeting of the CIPM take place in late June 2013.

Decision and Action: see **Decision CIPM/101-10** and **Action CIPM/101-3** after Recommendation 10.

- 7.9 Recommendation 9 of the *ad hoc* Working Group:** *“In all relevant reports, a short summary should be added, addressing the major issues, e.g. those to be brought to the attention of governments.”*

The CIPM agreed with Recommendation 9.

Decision and Action: see **Decision CIPM/101-10** and **Action CIPM/101-3** after Recommendation 10.

- 7.10 Recommendation 10 of the *ad hoc* Working Group:** *“All meetings should result in a rapidly distributed summary of decisions and actions. In general, minutes should not be produced in detail.”*

The *ad hoc* Working Group found that minutes of meetings are generally too long. The CIPM acknowledged that not producing detailed minutes would lose historical detail. Consensus was reached that minutes will no longer contain a detailed record of who said what. Future minutes will be kept as short as possible yet will retain the rationale behind the decisions and will include an executive summary. A list of decisions and actions will be made available to relevant parties as soon as possible after each meeting. In addition, a review of all publications will be carried out for rationalization.

Decision CIPM/101-10: The CIPM agreed with Recommendations 6 to 10 and will seek clarification of the level of detail recommended by the *ad hoc* Working Group for the documents produced by the BIPM.

Action CIPM/101-3: The CIPM Secretary will liaise with members of the *ad hoc* Working Group to seek clarification regarding Recommendations 6 to 10.

Decision CIPM/101-11: The CIPM decided that minutes be kept as short as possible while maintaining the rationale behind the discussions and decisions. Executive summaries and lists of decisions and actions should be made available to those entitled to them as soon as possible after meetings.

Action CIPM/101-4: The BIPM Director will examine the reports and information prepared by the BIPM, indicating those specifically required under the Metre Convention, analyze where rationalizations can be made and present the information to the CIPM.

- 7.11 Recommendation 11 of the *ad hoc* Working Group:** *“Official documentation should not only be sent via the embassies, but also directly to the Government Representatives concerned and NMI Directors. (e.g. summary of the CIPM meetings).”*

The question of ensuring that the right person receives the appropriate documents was noted. Sending

documents to embassies, as is formally required, does not guarantee that documents reach their intended recipient. The importance of the BIPM being informed of changes to personnel and addresses, so that its databases can be kept up-to-date, was emphasized.

Decision CIPM/101-12: The CIPM agreed with Recommendation 11 of the *ad hoc* Working Group.

7.12 Recommendation 12 of the *ad hoc* Working Group: “Regular yearly meetings with the NMI Directors and Member State Representatives should be held and may be combined if appropriate, depending on the agenda.”

The discussion centred on the fact that the representatives of States Parties to the Metre Convention and NMI Directors would like to have a report of their meetings. There is a need to record the findings of these meetings in accordance with the recommendations of the *ad hoc* Working Group. The CIPM agreed that a list of decisions and actions is sufficient.

Decision CIPM/101-13: The CIPM agreed with Recommendation 12 of the *ad hoc* Working Group.

7.13 Recommendation 13 of the *ad hoc* Working Group: “CIPM Members be elected for a fixed term of 4 years, renewable. Every two years, half of the CIPM Members will go up for (re-)election (see also Rec. 17).”

The CIPM supported a renewable fixed term of 4 years for CIPM membership; however there was general disagreement with the second part of Recommendation 13 calling for re-election of half of the CIPM Members every two years. The CIPM held the view that this would result in a loss of continuity in the membership of the CIPM. The CIPM favoured retaining provisional elections to fill vacancies in between meetings of the CGPM as per Article 14 of the Annexed Regulations to the Metre Convention, possibly based on a list of candidates put forward to the CGPM and based on the criteria developed in accordance with Recommendation 14.

The discussion focused on the details of the mechanism for election of the CIPM. The question was raised if it was possible to elect the CIPM without going through the process at the meeting of the CGPM, for example if the election process could be carried out by correspondence and if it was possible for the delegates at the CGPM to undertake a vote outside of the CGPM meeting. The BIPM Legal Adviser recalled that, pursuant to Article 7 of the Annexed Regulations to the Metre Convention, the election takes place at the meeting of the CGPM by the Delegates entitled to vote. Any change to the voting process would require an amendment to the Regulations annexed to the Metre Convention.

An *ad hoc* Working Group will be set up by the CIPM to examine the requirements of Recommendation 13 (see **Action CIPM/101-5** and **Action CIPM/101-7**).

Decision CIPM/101-14: The CIPM is in favour of retaining provisional elections, possibly based on a list of candidates put forward to the CGPM and based on the criteria developed in accordance with Recommendation 14. The CIPM agreed in principle with the first part of Recommendation 13 but disagreed with the re-election of half of the CIPM every two years.

- 7.14 Recommendation 14 of the *ad hoc* Working Group:** “*The CIPM will review the list of criteria to be fulfilled by CIPM candidates. The full range of skills necessary to oversee the BIPM in the modern era will be taken into account.*”

The CIPM agreed in principle with Recommendation 14. The list of criteria to be fulfilled by CIPM candidates is designed to enable them to actively participate in the work of the CIPM. It was felt that the current criteria still apply but should be made more precise in particular given that the CIPM needs to collectively possess a number of scientific and management skills to effectively supervise the BIPM. The CIPM Working Group mentioned in relation to the discussions in Recommendation 13 (see **Action CIPM/101-5** and **Action CIPM/101-7**) was asked to review and, if applicable, refine the current list of criteria to be fulfilled by CIPM candidates for discussion.

Decision CIPM/101-15: The CIPM agreed in principle with Recommendation 14 of the *ad hoc* Working Group.

- 7.15 Recommendation 15 of the *ad hoc* Working Group:** “*All CIPM candidates will be scrutinized against these criteria and the results of this with the names of the potential candidates will be provided to a CGPM Election WG. The CGPM WG to give recommendations to the CGPM. Privacy protection of candidates will be taken into account.*”

The CIPM noted that the CGPM Election Working Group proposed by the *ad hoc* Working Group could be elected or chosen by a procedure similar to that used for the CGPM Working Group on the BIPM dotation. Recommendation 15 aims to have a more transparent election system by allowing the CGPM to have a more active involvement in the election of the CIPM. The CIPM would supply a list of candidates for consideration by the CGPM. The applications would be scrutinized against criteria to be developed in response to Recommendation 14. The CGPM would then elect the CIPM members. This process would make the election of members of the CIPM more transparent. In addition to the CGPM Election Working Group to be established during the CGPM, the CIPM will establish a separate *ad hoc* Working Group on CIPM Membership to study Recommendations 13, 14 and 15. Preliminary findings will be presented at Session II of the 101st meeting of the CIPM in October 2012, with a definitive report produced for consideration by the CIPM in 2013 (see **Decision CIPM/101-29**).

Decision CIPM/101-16: The CIPM agreed in principle with Recommendation 15 of the *ad hoc* Working Group.

Action CIPM/101-5: The CIPM will establish an *ad hoc* Working Group on CIPM membership to look at the requirements of Recommendations 13, 14 and 15.²

- 7.16 Recommendation 16 of the *ad hoc* Working Group:** “*On balance it is suggested that Consultative Committee Presidents not be drawn from the CIPM in order that the CIPM maintains a global and independent view.*”

The CIPM was not in favour of Recommendation 16, concern being expressed that if Consultative Committee Presidents were not members of the CIPM the flow of information between the Consultative Committees and the CIPM would be impeded and vice versa. The CIPM also pointed out that collective independence of the CIPM is ensured by the 18 seats within the CIPM.

Decision CIPM/101-17: The CIPM did not agree with Recommendation 16 of the *ad hoc* Working Group.

² See Action CIPM/101-7.

The CIPM is mindful that on occasions it may be necessary to seek a CC President from outside the CIPM if the appropriate skills are not available in the CIPM.

7.17 Recommendation 17 of the *ad hoc* Working Group: *“Full CGPM meetings should be held every 4 years and a CGPM with limited agenda should be held in between (so every two years a CGPM). The full CGPM should decide on the BIPM budget for a four year period.”*

The discussion focused on: whether it was desirable to hold a meeting of the CGPM every two years; whether the meeting could be hosted outside France; and the various organizational, financial and logistical constraints. There was a general consensus that a meeting of the CGPM would be necessary every two years only if there were decisions that needed to be taken and if there was a sufficient number of subjects to deal with. The consequences of holding a meeting of the CGPM every two years should be carefully examined, to include costs, time and the amount of work required to prepare for the meetings. There may be more value in addressing some of the questions that would be covered in the proposed interim meetings of the CGPM in annual meetings of the representatives of States Parties to the Metre Convention and NMI Directors. The suggestion that some meetings of the CGPM could be hosted by countries other than France was received with caution as Article 7 of the Annexed Regulations to the Metre Convention provides that the CGPM meets in Paris. In addition, attendees at the CGPM are granted visas by the French authorities pursuant to the BIPM headquarters agreement, but this is obviously only applicable for meetings held in France.

Decision CIPM/101-18: The CIPM agreed that the BIPM budget should be decided by the CGPM for a four year period but questioned the need to have a CGPM meeting every two years and suggested that the objectives could be achieved through regular meetings with the representatives of States Parties to the Metre Convention.

7.18 Recommendation 18 of the *ad hoc* Working Group: *“The duration of CGPM meetings should become reduced to two or at most three days. Consultative Committee Presidents will only present a very short summary report and will be available to answer questions (reports should be provided in advance).”*

The CIPM bureau had discussed Recommendation 18 before the current meeting of the CIPM and agreed that action must be taken; however, reducing the duration of CGPM meetings is dependent largely on the requirements of the Working Group on the Dotation of the BIPM. The possibility of organizing the meeting of the Working Group on the Dotation of the BIPM before the CGPM or of provisionally deciding on membership of the Working Group before the CGPM was discussed by the CIPM. Mrs B. Perent commented that the Member States may decide to discuss the dotation before the CGPM meetings but recalled that the CGPM itself decides on the membership of its Working Group on the Dotation once its meeting is officially opened. She reminded the CIPM of the difficulties resulting from the late communication of the composition of some delegations to the BIPM. Mrs B. Perent also reminded the CIPM that the Working Group on the Dotation of the BIPM only makes recommendations regarding the dotation; it is the CGPM that actually votes on the dotation.

The CIPM agreed that the Consultative Committee Presidents’ reports presented to the CGPM are needed to report to the CGPM part of the core work of the BIPM; however it was considered that these reports are too time-consuming within the CGPM meetings. In future, Consultative Committee Presidents will be asked to shorten their presentations, which should be harmonized in style and content, and be available for questions.

Prof. M. Kühne commented that the programme of work and budget of the BIPM should be presented to the representatives of States Parties to the Metre Convention and NMI Directors at an earlier stage to be thoroughly discussed before meetings of the CGPM. This would allow both groups to take part in the process by commenting on the programme of work and budget and transmitting the necessary information to their relevant national authorities.

Decision CIPM/101-19: The CIPM agreed that the duration of CGPM meetings should be reduced and decided that the CC Presidents will give only short reports during the CGPM meetings and will be available for questions.

Action CIPM/101-6: The CIPM bureau and the BIPM will examine ways and means of further reducing the duration of the CGPM meetings.

7.19 Recommendation 19 of the *ad hoc* Working Group: “*The management structure of the BIPM Pension and Provident Fund will be reviewed by the CIPM with eventual recommendations to the CGPM.*”

The discussion of Recommendation 19 highlighted the CIPM’s support. The CIPM concluded by deciding that a standing sub-committee will be set-up to review the BIPM Pension and Provident Fund. The standing sub-committee on Pensions and Health Insurance will have the power to consult external experts.

Decision CIPM/101-20: The CIPM agreed with Recommendation 19 of the *ad hoc* Working Group which will be considered by the Standing Sub-Committee on pensions and health insurance.³

7.20 Recommendation 20 of the *ad hoc* Working Group: “*The BIPM and CIPM are requested to determine how and when all proposals can be implemented without conflict with the Metre Convention and its annexed Regulations and eventual other legislation.*”

The CIPM noted Recommendation 20 of the *ad hoc* Working Group and further noted that the Finance, Administration and General Services Department has already started to proceed with this recommendation.

Decision CIPM/101-21: The CIPM took note of Recommendation 20 and has initiated the appropriate actions.

Action CIPM/101-7: A series of three Standing Sub-Committees addressing science strategy, finance, and pensions and health insurance, and two *ad hoc* Working Groups addressing CIPM membership and conditions of employment of BIPM staff members will be set up by the CIPM to advise it on these matters. The BIPM has already started considering which of the Recommendations of the *ad hoc* Working Group can be implemented without conflicting with the Metre Convention.⁴

The CIPM discussed the composition of the three standing sub-committees and the two *ad hoc* Working Groups. Each standing sub-committee and *ad hoc* Working Group is required to formulate and draft its terms of reference and initial findings by 14 September 2012 for circulation and consideration by the CIPM. These will be presented to the meeting of representatives of States Parties to the Metre Convention and NMI Directors on 16 to 17 October 2012. The CIPM agreed on the following membership for the standing sub-committees and *ad hoc* Working Groups:

³ See Decision CIPM/101-21.

⁴ See Action CIPM/101-5, Decision CIPM/101-8 and Decision CIPM/101-29.

- CIPM Standing Sub-Committee on Science Strategy: BIPM Director (Chair), Dr K.H. Chung, Prof. E.O. Göbel, Dr B. Inglis, the person appointed to the seat previously held by Dr L.K. Issaev and Dr W. Schwitz.
- CIPM Standing Sub-Committee on Finance: the person appointed to the seat previously held by Dr S. Bennett (Chair), Dr K. Carneiro, Dr Y. Duan and Dr J.W. McLaren.
- CIPM Standing Sub-Committee on Pensions and Health Insurance: Dr R. Kaarls (Chair), Mr L. Énard, Prof. E. Göbel and the person appointed to the seat previously held by Dr M. Tanaka.
- CIPM *ad hoc* Working Group on CIPM Membership: Dr W.E. May (Chair), Dr K. Carneiro, Dr F. Hengstberger, Dr B. Inglis, Dr R. Kaarls and Dr H. Uğur.
- CIPM *ad hoc* Working Group on Conditions of Employment: Dr J.W. McLaren (Chair), Mr L. Énard, Dr H.O. Nava-Jaimes, Dr A. Sacconi and Dr J. Valdés.

Decision CIPM/101-29: The CIPM agreed on the composition of the CIPM Standing Sub-Committees and *ad hoc* Working Groups. It decided that each should draft terms of reference and preliminary thoughts by mid-September 2012 for circulation and consideration by the CIPM and presentation to the representatives of States Parties to the Metre Convention and NMI Directors in October 2012.

8. FINANCIAL AND ADMINISTRATIVE MATTERS

8.1 'Rapport aux Gouvernements' for 2011

This section of the agenda was brought forward from Section 12 due to the attendance of the external financial auditor, to allow him to report on the audit of the 2011 financial statements of the BIPM and of the BIPM Pension and Provident Fund.

The *Rapport annuel aux Gouvernements des Hautes parties contractantes sur la situation administrative et financière du Bureau international des poids et mesures en 2011* was presented in detail by Mrs B. Perent. The auditor then presented his audit reports to the CIPM.

The auditor was asked if it was possible for future financial statements to be made available earlier in the year to give the CIPM more time to review them prior to its meeting and if compliance with the International Public Sector Accounting Standard (IPSAS) could be achieved with less detail as this represents an enormous workload for the BIPM. The auditor replied that the IPSAS requires more information than a cash accounting system and therefore more time to produce the financial statements. However it allows better transparency and accountability. Nonetheless, it is likely that the 2012 report could be produced during April to May 2013. The auditor pointed out that the IPSAS are the only set of standards widely accepted internationally for public entities. He also stated that there is no simplified IPSAS for smaller organizations but the question is on the IPSAS Board agenda for 2014.

The auditor pointed out that the Pension Fund financial statements are adequate and accurate. He also mentioned the current partial funding of the liabilities of the Fund, as detailed in his audit report, noting that the CIPM took a number of measures to address this situation.

The CIPM noted the qualified opinion of the auditor and was satisfied by comments from the auditor, both written and oral.

The CIPM concluded that the BIPM Pension and Provident Fund is in good shape, providing the BIPM continues to exist.

8.2 Quitus for 2011

After presentation of the 2011 BIPM financial statements of the BIPM and of the BIPM Pension and Provident Fund by Mrs B. Perent, Financial and Administrative Director of the BIPM, the reports of the auditor on these financial statements and its oral presentation, the CIPM unanimously approved the 2011 BIPM financial statements and the 2011 BIPM Pension and Provident Fund financial statements. The CIPM discharged the Director of the BIPM from all liability in respect of his administration for the 2011 financial period.

The CIPM then decided to transfer to 'Other reserves' the net result for the 2011 period, which amounts to -1059 thousand Euros. Concerning the BIPM Pension and Provident Fund, the CIPM decided to transfer to the 'Other reserves' the net result for the 2011 period which amounts to -847 thousand Euros.

Decision CIPM/101-22: After due consideration of the 2011 BIPM audited financial statements, the CIPM approved the 2011 BIPM financial statements and discharged the Director of the BIPM from all liability in respect of his administration for the 2011 financial period. The CIPM decided to transfer to the 'Other reserves' the net result for the 2011 period which amounts to -1059 thousand Euros. With regard to the BIPM financial statements, the CIPM noted the qualified opinion of the auditor and was satisfied by comments from the auditor, both written and oral.

Decision CIPM/101-23: After due consideration of the 2011 audited BIPM Pension and Provident Fund financial statements, the CIPM approved the 2011 BIPM Pension and Provident Fund financial statements and discharged the Director of the BIPM from all liability in respect of his administration for the 2011 financial period. The CIPM decided to transfer to the 'Other reserves' the net result for the 2011 period which amounts to -847 thousand Euros. With regard to the BIPM Pension and Provident Fund financial statements, the CIPM noted the qualified opinion of the auditor and was satisfied by comments from the auditor, both written and oral.

8.3 Member States in financial arrears

A report was given by Mrs B. Perent on the Member States in financial arrears for more than six years and the various contacts that the BIPM has had with each of them. The Member States concerned are Cameroon, the Dominican Republic, the Islamic Republic of Iran and the Democratic People's Republic of Korea. Each of these States was notified by *Note Verbale* of 26 October 2012 of Resolution 6 (2011) adopted by the CGPM by which it decided to grant them a period of 12 months from the date of adoption of Resolution 6 (2011) to conclude a rescheduling agreement with the CIPM, at the risk of exclusion. Following this notification, a number of contacts took place with representatives of each of these States, and discussions are pending on this subject.

8.4 Amendments to the Regulations, Rules and Instructions applicable to BIPM staff members (RRI)

The CIPM considered a proposed revision of some Regulations, Rules and Instructions applicable to BIPM staff members (RRI).

Firstly, the CIPM considered a modification of the adjustment system of the *point* (the unit of the salaries scale and of some allowances) so that it is adjusted annually rather than quarterly to rationalize the administrative workload. Any adjustments would be carried out on 1 January each year.

The CIPM also considered introducing a provision allowing it to phase in the adjustment of the *point*, apply it in part, suspend it or defer it in exceptional or unforeseen circumstances if the BIPM cannot,

without one of these measures, meet both its financial obligations and essential operating requirements. This was accepted. The draft amendment of Regulation 10.2 of the RRI, entitled Salaries scale is as follows:

“The unit of the salaries scale (Annex 4) shall be the *point*. The value of the *point* shall be revised on 1st January every year in accordance with the consumer price index calculated for some categories of civil servants serving in international organisations based in France, as communicated by the services of the Coordinated Organisations.

10.2.1 The CIPM may, if exceptional or unforeseen circumstances so warrant, phase in the adjustment of the *point* value, apply it in part, suspend it or defer it if the BIPM cannot, without one of these measures, meet both its financial obligations and essential operating requirements.”

Decision CIPM/101-24: The CIPM approved the modification to Regulation 10.2 of the RRI, entitled Salaries scale, effective 1 January 2013.

The CIPM considered a modification of the distribution of the contribution rate for the Health insurance system between the BIPM and active staff. The proposal to modify the distribution of the contribution rate between the staff and the BIPM from one third-two thirds to 40 %-60 % was accepted. The draft amendment of Rule 11.10.2 of the RRI, entitled Insurance contract and contributions is as follows:

“The BIPM shall enter into a contract with a private insurance company to insure the risks mentioned in Rule 11.10.1. The BIPM shall contribute to the payment of the health, incapacity and death insurance fees for 60 % of the total fees. The staff members shall contribute to the payment of the health, incapacity and death insurance fees for 40 % of the total fees. The staff members shall contribute in full to the payment of the contributions related to funeral expenditures.”

Decision CIPM/101-25: The CIPM approved the modification to Rule 11.10.2 of the RRI, entitled Insurance contract and contributions, effective 1 January 2013.

The CIPM considered repartition of the distribution rate for the Health insurance system between the BIPM and pensioners. The proposal to modify the distribution of the contribution rate between the pensioners and the BIPM from 2 % to 2.847 % (one third of the present rate of contribution) was accepted. The draft amendment of Rule 11.10.3 of the RRI, entitled Health insurance and retired staff members is as follows:

“The staff members who retire can continue to benefit from the insurance mentioned in Rule 11.10.2. They shall only benefit from the health and funerals expenditures insurance. They must be affiliated to the insurance scheme on leaving service and not have any gainful occupation. Their contribution shall thus equal one third of the total fees”.

Decision CIPM/101-26: The CIPM approved the modification to Rule 11.10.3 of the RRI, entitled Health insurance and retired staff members, effective 1 January 2013.

Following the adoption of its decision CIPM/101-24, and given the programme of work approved by the CIPM and corresponding budget, the CIPM considered and decided that the *point* be adjusted temporarily during the period 2013-2015 by a maximum of 1 % on an annual basis.

Decision CIPM/101-27: The CIPM approved the proposal that the *point* be adjusted temporarily during the period 2013-2015 by a maximum of 1 % on an annual basis.

9. MEMBERSHIP OF THE CIPM

9.1 Future elections

A discussion concerning the election process and the criteria for membership of the CIPM took place. As there will be three vacancies on 30 June 2012, resulting from the resignations of Dr S. Bennett, Dr M. Tanaka and Dr L.K. Issaev, and in view of the election to fill these 3 vacancies, the CIPM discussed all eligible candidates and reviewed their CVs on the basis of the existing criteria. The election process will be completed by 28 June 2012.

Decision CIPM/101-28: As there will be three vacancies on 30 June 2012, and in view of the election to fill these 3 vacancies, the CIPM has discussed all eligible candidates in light of the existing criteria, and will go to a vote. The election process will be completed by 28 June 2012.

The resignation of Dr M. Tanaka will result in a vacancy for the President of the Consultative Committee for Mass and Related Quantities (CCM). The CIPM decided to invite Dr R. Davis, Principal Research Physicist Emeritus and BIPM Consultant, to chair the CCM Workshop on the *mise en pratique* of the new definition of the kilogram in November 2012. The CIPM will decide the next President of the CCM at its meeting in October 2012.

Action CIPM/2012-8: The CIPM President will invite Dr R. Davis to chair the CCM Workshop on the *mise en pratique* of the new definition of the kilogram. The next President of the CCM will be decided at the CIPM meeting in October 2012.

10. PREPARATION FOR THE MEETING OF REPRESENTATIVES OF MEMBER STATES AND NMI DIRECTORS ON 16 TO 17 OCTOBER 2012

A draft resolution was discussed on the name of the intergovernmental organization created by the Metre Convention. The draft resolution is intended to clarify the confusion between the name of the organization itself and the name of the institute located at Sèvres and address the lack of common practice in references to the intergovernmental organization created by the Metre Convention by adopting a name designating the whole organization. The draft resolution contains a proposal that the name of the intergovernmental organization created by the Metre Convention shall be the Intergovernmental Organization of the Metre Convention, acronym OICM, from the French *Organisation intergouvernementale de la Convention du Mètre*. A brief discussion resulted in support for the Draft Resolution. Domain name registration of the proposed acronym should be checked.

Decision CIPM/101-30: The CIPM strongly supported this proposed Draft Resolution and agreed that this will be presented at the meeting of representatives of States Parties to the Metre Convention and NMI Directors in October 2012, after the question of the acronym of the organization has been addressed.

Action CIPM/2010-9: The BIPM will address the question of the acronym of the organization.

The four chairs of the break-out groups created by the *ad hoc* Working Group resulting from Resolution 10 (2011) will be invited to attend and give presentations to the meeting of representatives of States Parties to the Metre Convention and NMI Directors in October 2012. A draft agenda has been developed for the meeting. The bureau suggested including some time at the meeting for open discussions. This would allow the attendees to have input into the agenda.

Action CIPM/2010-10: The CIPM President or Secretary will contact the chairs of the break-out groups of

the *ad hoc* Working Group to make a presentation of their respective sessions at the meeting of representatives of States Parties to the Metre Convention and NMI Directors in October 2012.

11. PREPARATION FOR THE PROGRAMME OF WORK STARTING IN 2016

As decided by the CGPM in 2011, the Convocation and Programme of work and budget for 2016 to 2019 will be circulated six months before the next meeting of the CGPM. Preparation of both documents will start in mid-2012 and the first drafts will be made ready for comment by the CIPM bureau in March 2013. The Consultative Committees have to prepare input for consideration for the programme of work and the deadline for input was set at 31 January 2013. There was concern that this will allow less than one month for the BIPM to finalize the documents before they are presented to the CIPM bureau in mid-February 2013, so a revised deadline of mid-January 2013 was retained. There was a brief discussion on whether the first draft of the Programme of work should be circulated to the NMI Directors for their input prior to its review by the CIPM. This was considered inappropriate because there is a need to ensure that the Consultative Committee reports are reviewed and presented in a standard format. The NMI Directors will therefore receive the first draft of the Programme of work in April 2013 and the second draft after mid-June 2013. The six-month deadline would require the Convocation and the Programme of Work and budget to be sent in April 2014 if the CGPM meeting is scheduled for October 2014. It was suggested that the 25th meeting of the CGPM should be scheduled for November 2014 to allow an extra month to prepare for the meeting and to allow the Convocation to be sent in May 2014.

Decision CIPM/101-31: The CIPM agreed that the next meeting of the CGPM will be held in November 2014.

12. AMENDMENTS TO THE RULES OF PROCEDURE FOR THE CONSULTATIVE COMMITTEES (CCS) (CIPM-D-01) AND TO THE SERVICES AVAILABLE TO ASSOCIATE STATES AND ECONOMIES OF THE CGPM AND THEIR PARTICIPATION IN THE CIPM MRA (CIPM/2005-05)

The proposed changes to the Rules of Procedure for the Consultative Committees (CCs) created by the CIPM, CC Working Groups and CC workshops (CIPM-D-01) were presented. The changes were in sections 4.5a and 6.3 and concerned the opening of observer status to institutes of an Associate of the CGPM which is not eligible to become a State Party to the Metre Convention and allowing the appointment of a chairperson from this Associate to a Working Group.

Decision CIPM/101-32: The CIPM approved the proposed changes to document CIPM-D-01.

The proposed changes to document CIPM/2005-05 '*services available to Associate States and Economies of the General Conference on Weights and Measures and their participation in the CIPM MRA*' were presented. The changes concerned the addition of two bullet points to section 2.4:

- that Observer Status on a CC may be granted to those institutes of an Associate of the CGPM, which is not eligible to become a State Party to the Metre Convention, that actively participate in the activities organized under the auspices of the CC and its working groups. Observer status is decided by the CIPM.

- that a CC working group chairperson, normally drawn from those attending the CC can be a representative from an institute of an Associate, which is not eligible to become a State Party to the Metre Convention.

Decision CIPM/101-33: The CIPM approved the proposed changes to document CIPM 2005-05. The document CIPM/2005-05 will be referenced CIPM/2005-05 Rev. June 2012.

13. REPORT ON THE PRESENT STATUS OF THE CIPM MRA

13.1 JCRB report, recommendation and resolutions

The JCRB report summarized the discussions and records the actions, resolutions and recommendations agreed by the JCRB at its 28th meeting, held at the BIPM on 3 to 4 April 2012. The CIPM was requested to approve the changes to the text pertaining to the approval procedure of RMO supplementary comparison reports contained in the document CIPM MRA-D-05, Measurement Comparisons in the CIPM MRA, as referenced in Recommendation 28/1 of the JCRB. This recommendation updates the text of the procedure to bring it into accordance with current practice.

After a brief discussion, the CIPM decided that the text in the final bullet point of section 7.2 of document CIPM MRA-D-05, Measurement Comparisons in the CIPM MRA, should be changed so that the comment and editorial review period is extended from three to six weeks. The revised text is thus: *Reports approved by the RMO must be forwarded to the CC Executive Secretary and the Chair of the relevant working group (e.g. Key Comparison or CMC⁵ Working Group) of the CC to allow for a six-week period of comment and editorial control.*

Decision CIPM/101-34: The CIPM approved the proposed changes to document CIPM MRA-D-05 with the exception of the three week period which will be extended to six weeks.

The JCRB report contained two resolutions for approval:

Resolution 28/1: The JCRB resolves that laboratories should only be designated under the CIPM MRA when they have responsibility for national measurement standards and the dissemination of the units (i.e. providing traceability), as demonstrated by provision of appropriate and relevant services to customers.

Resolution 28/2: The JCRB resolves that the QMS⁶ that must be in place prior to the acceptance of CMCs must be according to ISO/IEC 17025 (and ISO Guide 34 for CRMs⁷) in line with requirements for calibration laboratories.

Decision CIPM/101-35: The CIPM approved the JCRB proposed resolutions 28/1 and 28/2.

13.2 Status of signing of the CIPM MRA addendum

The addendum to the CIPM MRA was sent to all signatories for approval during 2011. Fifty replies had been received until the date of the CIPM meeting. So far only the signatories from Spain and the United States of America have rejected the addendum. The Spanish NMI expressed concerns with the use the word 'economies' in the original text of the Arrangement. The proposed addendum is to the original Arrangement and they cannot sign any document that contains the word 'economies'. The NMI of the

⁵ Calibration and Measurement Capability

⁶ Quality Management System

⁷ Certified Reference Materials

United States of America objected to Note 3 in the addendum on the definition of CMCs. Note 3 states that special calibrations ‘should not be offered to clients who then use them to provide a commercial, routinely available service.’ This clause had been agreed with ILAC and the CIPM had unanimously approved it in 2007.

Consent from all signatories to the CIPM MRA is required for the addendum to be adopted. There were concerns that waiting for a positive response from every signatory may result in the addendum never coming into effect because some signatories have not been in contact for several years. It was suggested that the issue should be discussed again with the NMI Directors.

14. INTERNATIONAL COOPERATION

The report on the BIPM international liaisons briefly summarized key developments in BIPM international liaison activities not included in the presentations of the scientific departments for the period since the previous CIPM meeting in October 2011. It covered the CODATA Task Group on Fundamental Constants, the CODEX Alimentarius Commission, the IAEA, the ILAC, the OIML/BIML, the WMO and Quadripartite (the BIPM, the OIML, the ILAC and ISO).

The signing of a Memorandum of Understanding (MoU) between the BIPM and the IAEA is scheduled for 26 June 2012 during a conference in Vienna, Austria. Prof. M. Kühne asked for approval from the CIPM to sign the MoU.

Decision CIPM/101-36: The CIPM authorized the Director of the BIPM to sign the Memorandum of Understanding between the BIPM and the IAEA.

A letter has been received from the European Space Agency (ESA) requesting that it become a signatory to the CIPM MRA and Prof. M. Kühne asked for approval from the CIPM for the ESA to participate. Dr W.E. May expressed concerns that the international organizations that are signatories to the CIPM MRA are all based in Europe. Dr W.E. May drew the attention of the CIPM to a line in the letter from the ESA which states that ‘ESA is an International Organization, independent of the European Commission, whose purpose is to provide for and promote cooperation among European States in space research and technologies and its applications.’ He commented that the ESA is an international organization but it promotes cooperation among European States and questioned which organizations are eligible to join. He stated that he would abstain.

Decision CIPM/101-37: With one abstention (Dr W.E. May), the CIPM approved the signature of the CIPM MRA by the ESA under the same criteria and rules applying to the other signatory international organizations.

There was a discussion of whether international organizations that participate in the CIPM MRA should make a financial contribution to the BIPM. It was commented that although there is no financial contribution, the BIPM also gains from the mutual support it receives from international organizations that participate in the CIPM MRA. A conclusion was reached that the CIPM and BIPM must work vigorously to encourage other international organizations to participate in the CIPM MRA and review if these organizations should contribute financially.

Action CIPM/2010-11: The CIPM and BIPM will increase their efforts to encourage signature of the CIPM MRA by other relevant international organizations (world-wide and from other regions).

Action CIPM/2010-12: The BIPM will examine the level of participation in the CIPM MRA of each international organization signatory of the CIPM MRA so as to review if they should contribute financially to the operation of the CIPM MRA.

Dr T.J. Quinn presented a document which made comments and suggestions on the International vocabulary of metrology – Basic and general concepts and associated terms, also known as VIM-3. The document provided a critique of VIM-3, outlining reasons for which it is considered by many to be unsuitable for its purpose. The CIPM does not support the key decision to base the VIM3 on a systematized structure of concepts since the resulting vocabulary departs from the language of science with which metrologists are familiar. Dr T.J. Quinn asked the CIPM for support for the proposed document and for permission to present the document at the next meeting of JCGM Working Group 2 on the VIM.

Decision CIPM/101-38: The CIPM supported the document proposed by Dr T.J. Quinn and for him to make a presentation at the meeting of the JCGM Working Group 2 on the VIM.

15. THE FUTURE ROLE OF THE CONSULTATIVE COMMITTEES AND CONSEQUENCES FOR THE TERMS OF REFERENCE

Recommendation 2 of the *ad hoc* Working Group was presented to the Executive Secretaries of the CCs who were invited to attend this agenda item.

Recommendation 2 was intended to ensure that the BIPM programme of work and budget is developed in a transparent way with timely involvement of the stakeholders and following an agreed strategy. The intention is to ensure that the representatives of States Parties to the Metre Convention and NMI Directors are fully involved in the development of the programme of work and budget. The BIPM/CIPM was asked by the *ad hoc* Working Group to develop a consolidated planning process requiring Consultative Committee mid- and long-term strategic plans and derived key comparison plans to be forwarded to NMI Directors by email and via the BIPM website for input and comment. The CIPM will examine how this will work in practice. The *ad hoc* Working Group suggested that the strategic plans developed by the Consultative Committees be presented to the representatives of States Parties to the Metre Convention and NMI Directors directly rather than being ‘filtered’ through the CIPM. The intent is to get all the Consultative Committees to develop strategic plans in a uniform way, and for this reason a template has been developed. The strategic plans are scheduled for submission by all CCs by mid-January 2013.

Recommendation 16 of the *ad hoc* Working Group was also presented to the Executive Secretaries of the CCs.

This Recommendation states that, on balance, Consultative Committee Presidents should not be drawn from the CIPM so that the CIPM maintains a global and independent view. The rationale behind Recommendation 16 is to improve development of the BIPM programme of work and budget by allowing independent opinion by drawing CC Presidents from outside the CIPM. As stated in **Decision CIPM/101-17** the CIPM does not agree with Recommendation 16. The CIPM is mindful that on occasions it may be necessary to seek a CC President from outside the CIPM if the appropriate skills are not available in the CIPM.

The Executive Secretaries of the CCs were invited to comment on the *ad hoc* Working Group Recommendations 2 and 16.

It was noted that it is unlikely that comments from all CC Presidents will be received by mid-January 2013. The first draft of the Programme of work and budget 2016 to 2019 is scheduled to be completed in March 2013 and therefore any changes or additions must be received by mid-January 2013. Dr R. Wielgosz commented that the timetable is very tight to allow the Consultative Committee for

Amount of Substance: Metrology in Chemistry (CCQM) to develop its strategy within the planned timetable. A decision will be needed soon on the level and specific information required concerning the strategic plans or the strategy may not be harmonized with that of other CCs. It was further noted that it may now be too late to ensure uniformity in the development of the programme of work 2016-2019 but that the process will be in place for the subsequent programme. A clear definition of exactly what is required from the CCs is needed and a draft template for the CC and CC WG Strategy Document for Rolling Programme Development needs to be completed.

The draft template for CC and CC WG Strategy Document for Rolling Programme Development was briefly presented. A statement from each CC as to how its work will affect the programme of work is recommended. The document is divided into ten sections:

1. General Information on CC Body (CC or a CC WG)
2. Terms of Reference
3. Baseline (description status of activities and achievements up to and including 2012)
4. Stakeholders (who they are and their level of involvement)
5. Future scan (2013 to 2023)
6. Rationale for various activities (2013 to 2023)
7. Required key comparisons and pilot studies 2013 to 2023 with indicative repeat frequency
8. Resource implications for laboratories for piloting comparisons
9. Summary table of comparisons, dates, required resources and the laboratories already having institutional agreement to pilot particular comparisons
10. Document revision schedule.

It was clarified that in Section 4 the stakeholders will depend on the CC and in Section 8 the resource implications will vary enormously, especially for pilot comparisons. It was noted that NMI Directors would like some indication of the costs involved in carrying out a comparison, to compare these to the cost-shared basis provided by the BIPM. Dr E.F. Arias added that the resource implications for the Time Department differ from the other BIPM departments because its resources are mainly staff time. Concerns were expressed about allowing CCs to include NMIs in Section 4 on stakeholders.

The draft template for CC and CC WG Strategy Documents is intended to clarify understanding of the international liabilities of the CCs. This will be incorporated into the programme of work and will enable the NMI Directors to see the role of the BIPM in a broader perspective. The information provided by each CC in the Strategy Document will be shared with NMI Directors much earlier in the process of development of the programme of work and will provide an opportunity for NMI Directors to comment on the strategy and outputs. The Strategy Document aims to improve communication between the BIPM and the NMI Directors during the preparation of the programme of work. The requirements of Recommendation 2 of the *ad hoc* Working Group calling for the BIPM/CIPM to develop a consolidated planning process are very complex. A timeline will be required within the planning process for the CCs and the NMI Directors. The BIPM will examine what preparatory work can be implemented using only existing staff resources. It was stated that the programme of work 2016 to 2019 must be ready by April 2013; therefore the information from the CCs is needed by the second week of January 2013.

Before the end of the session and while the Executive Secretaries of the CCs were still present, Dr B. Inglis took the opportunity to comment that Dr P.J. Allisy-Roberts, former Director of the Ionizing Radiation Department, has retired and that this is the last time she will attend a CIPM meeting. Dr P.J. Allisy-Roberts has worked at the BIPM for nearly 18 years and during this time has made an

enormous contribution to the Ionizing Radiation Department. On behalf of the CIPM, Dr B. Inglis acknowledged her achievements.

16. PRESENTATION OF THE BIPM SCIENCE PROGRAMMES BY THE DIRECTORS OF THE SCIENTIFIC DEPARTMENTS

The BIPM's scientific Department Directors presented the activities and achievements of their departments during the programme of work 2009 to 2012. The Director of the International Liaison and Communication Department gave a summary of the highlights of the department since its creation on 1 January 2012.

Dr B. Inglis thanked the Department Directors for their presentations and opened the floor for questions and comments.

Dr F.A. Arias was asked how many clocks currently contribute to International Atomic Time (TAI). She stated that there are more than 450 contributing clocks and this number has grown by more than 50 in the last year. It was noted that this level of growth is not expected to continue and that the percentage of hydrogen masers is increasing. There are 13 primary clocks that contribute to accuracy.

Dr R.I. Wielgosz was asked if NMIs may consider funding some of the large-molecule work being undertaken at the BIPM. It was noted that there is currently a proposal with the World Anti-Doping Agency (WADA) for funding for the large-molecule programme because the WADA is one of the few funding agencies that the BIPM qualifies for. If successful, the funding would sponsor further work. Other funding opportunities are always being sought. The existing support from the NIST was applied for through an established funding mechanism in the United States of America. If similar funding mechanisms were available in other major economies, the BIPM would take up the opportunity. The situation in the United States of America is however thought to be unique at the moment. It is hoped that the European Metrology Research Programme (EMRP) may transform into a system that will allow the BIPM to apply for funding in a similar way. It was confirmed that the latest draft of the European Association of National Metrology Institutes (EURAMET) programme from 2014 includes the possibility of providing funding for the BIPM, a situation which is not currently possible.

Dr J.W. McLaren noted that the National Research Council of Canada (NRC) has recently started production of calibrant-type certified reference materials. Although it is an experienced producer of CRMs, the NRC has gained from its cooperation with the BIPM and the value of this unique work at the BIPM has been communicated to the appropriate government representative in Canada.

17. ANY OTHER BUSINESS

The bureau recommended that the CIPM take steps to reduce the costs associated with its meetings.

Decision CIPM/101-39: The CIPM supported the initiative to reduce the costs in connection with its meetings.

Dr K. Carneiro made a brief presentation during agenda item 7 of a paper entitled '*Reflections over organizational structure of the Metre Convention in view of the necessity for modifying its way of operating*'. It compared the organizational structure of the BIPM to that of a limited company, highlighting the similarities and differences. The CIPM briefly discussed the paper.

18. DATE OF THE 102ND MEETING OF THE CIPM

In response to the discussions associated with Recommendation 8 of the *ad hoc* Working Group, the CIPM decided to delay Session I of the 102nd meeting of the CIPM by two weeks. Session I of the 102nd meeting of the CIPM was originally scheduled for 5 to 7 June 2013.

Decision CIPM/101-40: The CIPM agreed to change the date of Session I of the 102nd meeting of the CIPM as follows:

CIPM bureau meeting: 17 to 18 June 2013.

CIPM meeting: 19 to 21 June 2013.

International Committee
for Weights and Measures

**Proceedings of Session II
of the 101st meeting**

(18–19 October 2012)

MEMBERS OF THE INTERNATIONAL COMMITTEE FOR WEIGHTS AND MEASURES

as of 18 October 2012

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Secretary

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Members

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11. W.E. May, Associate Director for Laboratory Programs, Principal Deputy Office of the Director, National Institute of Standards and Technology (NIST), 100 Bureau Drive, Gaithersburg, MD 20899-8300, United States of America.
Vice-President.
12. J.W. McLaren, Director General, Institute for National Measurement Standards, National Research Council of Canada (NRC-INMS), 1200 Montreal Drive, Ottawa ON K1A 0R6, Canada.
Vice-President.
13. H.O. Nava-Jaimes, Director General, Centro Nacional de Metrología (CENAM), km 4.5 Carretera a Los Cués, El Marqués C.P. 76241 Querétaro, Mexico.
14. A. Sacconi, Science Director, Istituto Nazionale di Ricerca Metrologica (INRIM), Strada delle Cacce 91, 10135-Turin, Italy.
15. W. Schwitz, Hausmattstr. 40, CH-3063 Ittigen, Switzerland.
16. H. Uğur, Kemeralti mah. 123. Sok, Denizkent sitesi, 19C/2 Marmaris, MUĞLA 48700, Turkey.
17. T. Usuda, Director, International Metrology Cooperation Office NMIJ/AIST, Tsukuba Central 3-9, 1-1-1 Umezono, Tsukuba 305-8563, Japan.
18. J. Valdés, Director for Technology Transfer in Metrology, Micro-Nano Technology and New Materials, Instituto Nacional de Tecnología Industrial (INTI), Parque Tecnológico Miguelete, av. Gral. Paz e/Albarellos y Constituyentes, C.C. 157 (B1650WAB) San Martín, 1001 Buenos Aires, Argentina.

Honorary members

1. E. Ambler, 300 Woodhaven Drive, Apt. 5301, Hilton Head Island, SC 29928, United States of America.
2. W.R. Blevin, 10 Turpentine Place, Glenhaven NSW 2156, Australia.
3. L.M. Branscomb, Box 309, Concord, Massachusetts 01742, United States of America.
4. J.V. Dunworth, Apt. 902, Kings Court, Ramsey, Isle of Man, United Kingdom of Great Britain and Northern Ireland.
5. K. Iizuka, Japan Association for Metrology Promotion, 25-1 Nando-cho, Shinjuku-ku, Tokyo 162-0837, Japan.
6. D. Kind, Knappstrasse 4, 38116 Braunschweig, Germany.
7. J. Kovalevsky, Observatoire de la Côte d'Azur, Av. Nicolas Copernic, 06130 Grasse, France.
8. J. Skákala, Professor, Slovak Technical University, Nám. Slobody 17, 812 31 Bratislava, Slovakia.

Agenda

1. Opening of the meeting; quorum; agenda
2. Report of the Secretary and activities of the bureau of the CIPM (second part)
3. Membership of the CIPM
4. States Parties to the Metre Convention and Associates of the CGPM
5. Meeting of representatives of Member States and NMI Directors, 16-17 October 2012
6. Consultative Committees
7. Depository of the metric prototypes
8. Report on the present status of the CIPM MRA
9. Joint Committee for Traceability in Laboratory Medicine (JCTLM)
10. Contacts with other intergovernmental organizations and international bodies
11. Joint Committee for Guides in Metrology (JCGM)
12. Work of the BIPM
13. Publications
14. Administrative and financial affairs
15. Other business

1. **OPENING OF THE MEETING;
QUORUM;
AGENDA**

The International Committee for Weights and Measures (CIPM) held Session II of its 101st meeting from Thursday 18 October to Friday 19 October 2012 at the International Bureau of Weights and Measures (BIPM) headquarters in Sèvres.

Present: B.R. Bowsher, K. Carneiro, K.H. Chung, Y. Duan, L. Énard, F. Hengstberger, B. Inglis, R. Kaarls, V. Krutikov, W.E. May, J.W. McLaren, H.O. Nava-Jaimes, A. Sacconi, W. Schwitz, H. Uğur, T. Usuda, J. Valdés and M. Kühne, Director of the BIPM.

Apologies were received from E.O. Göbel.

Also attending: S. Arlen (Legal Adviser of the BIPM), F. Joly (Head of the Secretariat Section and PA to the Director of the BIPM), M. Milton (Deputy Director/Director Designate of the BIPM), B. Perent (Financial and Administrative Director of the BIPM), C. Planche (Librarian/Drafting Officer), T.J. Quinn (Emeritus Director of the BIPM) and R. Sitton (Publications Officer).

Also in attendance for parts of the meeting: A. Henson (Director of the International Liaison and Communication Department) and J. Miles (Editor). The following Executive Secretaries of Consultative Committees were in attendance for parts of the meeting: E.F. Arias (Director of the Time Department), S. Picard (Principal Physicist, Ionizing Radiation Department), J.M. Los Arcos (Director of the Ionizing Radiation Department), L. Robertsson (Principal Physicist, Time Department), M. Stock (Director of the Electricity Department), C. Thomas (Principal Research Physicist, KCDB Coordinator) and R.I. Wielgosz (Director of the Chemistry Department).

Dr B. Inglis, President of the CIPM, opened Session II of the 101st meeting of the CIPM. With 16 out of 18 members present¹ the quorum was satisfied according to Article 12 of the Regulations annexed to the Metre Convention.

Dr B. Inglis welcomed the three new members of the CIPM provisionally elected since Session I of the 101st meeting: Dr B.R. Bowsher, Dr V. Krutikov and Dr T. Usuda and asked each to briefly introduce themselves.

Dr B. Inglis noted with sadness the announcement of the death of Hugh Preston-Thomas on 11 August 2012 at the age of 88 years. He was a member of the CIPM for 22 years, from 1969 until his retirement in 1991 and was Vice-President of the CIPM from 1984 to 1991. He was elected an Honorary Member on his retirement. Dr Preston-Thomas was President of the Consultative Committee for Thermometry (CCT) from 1971 until 1989. This was a key period for the thermometry community, culminating in the adoption of the International Temperature Scale of 1990 (ITS-90). Dr Preston-Thomas was the Editor of *Metrologia* from 1968 until 1981. Thereafter he continued as a Member and then Honorary Member of *Metrologia*'s Editorial Board. A minute's silence was observed in his memory.

Dr B. Inglis welcomed Dr M. Milton to the CIPM. Dr Milton gave a brief summary of his background and experience and thanked the CIPM for the honour of selecting him for the role of Deputy Director/Director Designate of the BIPM and Director of the BIPM from 1 January 2013.

¹ Dr K.H. Chung arrived after the opening of the meeting, taking the number of members present from 16 to 17.

Additions to the agenda.

Progress reports from the Chairs of the three Standing Sub-Committees addressing science strategy, finance, pensions and health insurance and two *ad hoc* Working Groups addressing CIPM membership and conditions of employment of BIPM staff members and finalization of the Terms of Reference (ToR) for each Standing Sub-Committee and *ad hoc* Working Group were added under agenda item 5.

The draft mission statement for the BIPM was made available for comment by the CIPM with a view to refining the document during the meeting, under agenda item 5. The draft mission statement was initially proposed by the *ad hoc* Working Group on the role, mission, objectives, long-term financial stability, strategic direction and governance of the BIPM and was further developed during session I of the 101st meeting of the CIPM (see §7.1 of the report of Session I).

Preparations for the next meeting of the General Conference on Weights and Measures (CGPM), including a draft timetable for preparation of documents, were added to agenda item 5.

The proposal to reinstate a key comparison of large organic molecules in the BIPM Programme of Work was also added for discussion under agenda item 12.

2. REPORT OF THE SECRETARY AND ACTIVITIES OF THE BUREAU OF THE CIPM

The Secretary of the CIPM, Dr R. Kaarls, gave his report (see Appendix 4) covering the period June 2012 to October 2012.

Dr B. Inglis invited questions on the report. The following points from the discussion were noted.

A metrology institute in Bangladesh had been nominated as a designated institute (DI) through the Bangladesh embassy in Paris, without the knowledge of the State's national metrology institute (NMI). The NMI concerned found out about this issue via the BIPM website. The discussion concluded that the misunderstanding had originated with the government in Bangladesh. The BIPM has an obligation to act on official notices informing it that an institute has become a DI. The BIPM is unable to interfere in the process if one department within the government of a Member State (or Associate) nominates a DI without the knowledge of another department. It was suggested that the issue is raised at a future meeting of the Joint Committee of the Regional Metrology Organizations and the BIPM (JCRB).

Dr T.J. Quinn commented that he had some concerns that the adoption of British Standard OHSAS 18001:2007 in the BIPM Occupational Health and Safety Manual might lead to overly burdensome requirements.

Decision CIPM/101-41: The CIPM took note of the Secretary's Report.

3. MEMBERSHIP OF THE CIPM

3.1 Indications from members concerning planned resignations

As reported by the Secretary (see Appendix 4), Prof. E.O. Göbel, Dr F. Hengstberger and Dr W. Schwitz had announced their resignations since Session I of the 101st meeting of the CIPM in June 2012.

3.2 Possible future candidates

The *ad hoc* Working Group on CIPM membership has made progress with the review of criteria for selecting potential candidates for the CIPM.

The CIPM returned to the issue of selecting and electing CIPM Members in §5.3.

4. STATES PARTIES TO THE METRE CONVENTION AND ASSOCIATES OF THE CGPM

The number of States Parties to the Metre Convention remains unchanged at 56.

The Republic of Namibia became an Associate of the CGPM on 10 August 2012, taking the number of Associates to 37.

5. MEETING OF REPRESENTATIVES OF STATES PARTIES TO THE METRE CONVENTION AND DIRECTORS OF NATIONAL METROLOGY INSTITUTES, 16 TO 17 OCTOBER 2012

A meeting of representatives of States Parties to the Metre Convention and Directors of National Metrology Institutes (NMIs) was held at the BIPM headquarters on 16 to 17 October 2012. The delegates discussed the 20 recommendations made by the *ad hoc* Working Group on the role, mission, objectives, long-term financial stability, strategic direction and governance of the BIPM. After some wide-ranging discussions, the delegates had developed a conclusion for each recommendation. The recommendations and conclusions had been collated and a document produced which was made available on the restricted-access sections of the BIPM website for representatives of States Parties to the Metre Convention and NMI Directors (see Appendix 5). See §7 of Session I of the 101st meeting of the CIPM for the full text of the 20 recommendations made by the *ad hoc* Working Group.

5.1 Conclusions by the representatives of States Parties to the Metre Convention and NMI Directors to the Recommendations of the *ad hoc* Working Group on the role, mission, objectives, long-term financial stability, strategic direction and governance of the BIPM and comments by the CIPM

The conclusions to each of the recommendations were reviewed by the CIPM.

Conclusion to *ad hoc* Working Group Recommendation 1: *“Representatives of States Parties and NMI Directors supported the development of a statement on the BIPM mission, role and objectives and encouraged the CIPM to make rapid progress and achieve an acceptable statement as soon as possible.”*

A revised draft of the BIPM mission, role and objectives was circulated amongst the CIPM and a number of changes were suggested. The document was further revised during the meeting and is discussed in §5.2.

Conclusion to *ad hoc* Working Group Recommendation 2: *“Representatives of States Parties and NMI Directors supported the objectives, welcomed the progress being made and agreed with the*

planned timescale [for the BIPM and CIPM to develop a consolidated planning process]. It was recognized that development of the strategy process is an ongoing and iterative activity. The framework should be developed before the end of 2012.”

The CIPM commented that there was a clear message from the representatives of States Parties and NMI Directors that the CIPM Standing Sub-Committee on Science Strategy should continue with its work. The proposed timetable for the production of documents for the next meeting of the CGPM, including the BIPM Programme of Work, was discussed in §5.4. The framework for the BIPM science strategy will be in place by the end of 2012. It was noted that the representatives of States Parties and NMI Directors had welcomed the use of a ‘bottom-up’ approach whereby information would be gathered from the Consultative Committee in the first phase. It was recognized that there would also need to be some top-level input to the process to identify general issues and trends.

Conclusion to *ad hoc* Working Group Recommendation 3: *“Representatives of States Parties and NMI Directors agreed with recommendation 3 [that they be asked to take an active interest in the development of the BIPM long-term strategy and successive Programmes of Work and Budget by timely responding to the proposals (failure to respond means: assent)].”*

Conclusion to *ad hoc* Working Group Recommendation 4: *“Representatives of States Parties and NMI Directors encouraged the CIPM Standing Sub-Committee on Finance to continue its work to build confidence and improve transparency and to develop mechanisms on how to implement the findings.”*

The CIPM took note of conclusions 3 and 4.

Conclusion to *ad hoc* Working Group Recommendation 5: *“Representatives of States Parties and NMI Directors supported Recommendation 5 [that RMO² chairs should be invited to attend the NMI Directors meetings, while RMO Technical Committee chairs should be invited to attend the Consultative Committee Strategy and Key Comparisons Working Groups].”*

The Consultative Committee (CC) Presidents were called on to ensure that this happens in their respective CCs.

Conclusion to *ad hoc* Working Group Recommendations 6 to 10: *“Representatives of States Parties and NMI Directors recognized the progress regarding Recommendations 6 to 10 and encouraged continuation as far as possible [Recommendations 6 to 10 related to the development of a number of documents and the streamlining and improvement of publications and reports].”*

The CIPM noted that a detailed analysis of all reports distributed by the BIPM was carried out at a meeting held at the BIPM headquarters on 25 June 2012 which was attended by Dr F. Weritz (representative of the German government), Dr R. Kaarls (Secretary of the CIPM), Prof. M. Kühne (Director of the BIPM), Mrs B. Perent (BIPM Financial and Administrative Director) and Mr A. Henson (BIPM International Liaison and Communication Director). This meeting was a follow-up of Recommendations 6-10 of the *ad hoc* working group on the role, mission, objectives, long-term financial stability, strategic direction and governance of the BIPM so as to obtain clarification on the required level of detail in BIPM publications. The attendees reviewed each document to determine if any could be merged and to identify which reports can be produced in English only given the applicable provisions of the Regulations Annexed to the Metre Convention. The meeting was constructive and resulted in a clear

² Regional Metrology Organizations

idea of how to proceed. It was observed that the required information is available in the reports distributed by the BIPM but representatives of Member States generally do not have time to read all the information provided. More summaries and graphical representations of data were requested.

It was commented that streamlining of reports is leading to a certain loss of detail and the value of reports as a historical record of meetings is being diminished. Although this is true, there is a consensus among the representatives of Member States and NMI Directors that the rationale behind discussions is needed but not the detail. The BIPM retains a file of paper copies of all documents that are available on the restricted access part of the website.

Conclusion to *ad hoc* Working Group Recommendation 11: *“Representatives of States Parties and NMI Directors agreed with Recommendation 11 [that official documentation should not only be sent via the embassies, but also directly to the Government Representatives concerned and NMI Directors]. Opportunities for electronic distribution should be explored wherever possible.”*

The CIPM had nothing further to add to conclusion 11.

Conclusion to *ad hoc* Working Group Recommendation 12: *“Representatives of States Parties and NMI Directors supported Recommendation 12 to hold yearly meeting(s). It was proposed that the yearly meeting(s) should follow a structured agenda (e.g. day 1 for technical/scientific discussions, day 2 for finance/strategy) to facilitate full or partial participation. The general opinion was that an intermediate CGPM meeting should not be held.”*

The CIPM noted that divergent views had been expressed on the issue. Some of the NMI Directors would prefer a separate meeting to the representatives of Member States to allow them to discuss technical and scientific matters separately from any related political considerations. The CIPM returned to the issue of possible intermediate meetings of the CGPM under Recommendation 17.

Conclusion to *ad hoc* Working Group Recommendation 13: *“Representatives of States Parties and NMI Directors agreed with the proposal that CIPM members be elected for a fixed 4-year term, renewable. The CIPM is charged to work out the selection criteria and the process of selecting and electing CIPM members, including appropriate involvement of States Parties. Draft proposals should be ready for the end of 2012.”*

Conclusion to *ad hoc* Working Group Recommendation 14: *“Representatives of States Parties and NMI Directors supported Recommendation 14 [that the CIPM will review the list of criteria to be fulfilled by CIPM candidates. The full range of skills necessary to oversee the BIPM in the modern era will be taken into account]. Draft proposals should be ready for the end of 2012.”*

The CIPM had nothing further to add to conclusions 13 and 14.

Conclusion to *ad hoc* Working Group Recommendation 15: *“The CIPM will formulate proposals [on Recommendation 15 that all CIPM candidates will be scrutinized against the criteria set by the CIPM and the results of this with the names of the potential candidates will be provided to a CGPM Election WG. The CGPM WG to give recommendations to the CGPM. Privacy protection of candidates will be taken into account] which will be presented to the Representatives of States Parties and NMI Directors at the 2013 yearly meeting(s) and prepare a Draft Resolution on the process for the next CGPM meeting.”*

The CIPM clarified that the Draft Resolution will be on the process for selecting and electing members of the CIPM and it will not contain the names of any candidates. The Draft Resolution must be compliant with the provisions of the Metre Convention and will require very careful drafting.

Conclusion to *ad hoc* Working Group Recommendation 16: *“Representatives of States Parties and NMI Directors agreed that Consultative Committee Presidents should not necessarily be CIPM members. The CIPM should appoint the best persons: criteria for selecting Consultative Committee Presidents will be formulated. Representatives of States Parties and NMI Directors agreed with a fixed term of 4 years, renewable.”*

The CIPM discussed the conclusion to Recommendation 16 and noted that if CC Presidents are not drawn from the CIPM, the process of interaction between the CIPM and CCs must be made clear. Concerns were expressed that the renewable fixed term of four years for CC Presidents is too short, although this term generally included two meetings of a CC.

Conclusion to *ad hoc* Working Group Recommendation 17: *“Representatives of States Parties and NMI Directors concluded that intermediate CGPM meetings are not favoured provided that the CIPM can develop acceptable options with respect to transparency and the election of CIPM members, mindful of the decision to hold regular yearly meetings of Representatives of States Parties and NMI Directors.”*

It was noted by the CIPM that CGPM meetings are not held simply to elect members of the CIPM. There had been some views in favour of intermediate meetings of the CGPM, although it had been reported that the French Government was not in favour. It was further noted that the actual requirements for a CGPM meeting are limited; there is no requirement to provide a French/English interpretation of the discussions or to hold the meeting in any particular language.

Conclusion to *ad hoc* Working Group Recommendation 18: *“Representatives of States Parties and NMI Directors agreed to reduce the duration of the CGPM meetings.”*

Conclusion to *ad hoc* Working Group Recommendation 19: *“Representatives of States Parties and NMI Directors agreed with Recommendation 19 [The management structure of the BIPM Pension and Provident Fund will be reviewed by the CIPM with eventual recommendations to the CGPM] and first results will be presented in 2013.”*

Conclusion to *ad hoc* Working Group Recommendation 20: *“Recommendation 20 [The BIPM and CIPM are requested to determine how and when all proposals can be implemented without conflict with the Metre Convention and its annexed Regulations and eventual other legislation] is being implemented as the other Recommendations are being progressed.”*

The CIPM took note of conclusions 18, 19 and 20.

Decision CIPM/101-42: The CIPM developed a document summarizing the conclusions agreed at the meeting of Representatives of States Parties to the Metre Convention and Directors of National Metrology Institutes.

Action CIPM/101-13: The BIPM Director will send the document summarizing the conclusions as soon as possible to all Member States, NMI Directors and CIPM members.

5.2 Comments on the draft mission statement for the BIPM

There was a comprehensive discussion of the draft mission statement of the BIPM and the following points were noted:

- it should not restrict the BIPM to activities related to the International System of Units (SI)
- it should include the phrase ‘global comparability of measurements’
- more emphasis should be placed on work that is carried out in common on behalf of Member States
- the language used in the draft mission statement should be kept simple and jargon should be avoided
- the possibility of including the phrase ‘to ensure world-wide uniformity of measurements’ was discussed.

The CIPM was reminded that the rationale behind the draft mission statement is to develop a modern and compact statement on the mission of the BIPM. It was suggested that the draft mission statement should cover more than uniformity of measurement and facilitating international trade, it should state what the BIPM does and why it does it. It was further suggested that the draft mission statement could be used to clarify the ambiguity over the use of the term ‘BIPM’. Following a discussion on the use of the term ‘BIPM’ it was decided to return to the discussion on the name of the organization created by the Metre Convention later in the agenda (see §5.4). It was agreed that a revised version of the draft mission statement will be discussed later in the agenda (see **Action CIPM/101-23**).

5.3 Progress reports from the chairs of the Standing Sub-Committees and *ad hoc* Working Groups and finalization of the Terms of Reference (ToR)

CIPM Standing Sub-Committee on Finance

Dr B.R. Bowsher, Chair of the CIPM Standing Sub-Committee on Finance, presented the draft ToR of the Sub-Committee. The CIPM noted that the introductory sentences of the ToR were very succinct and included a clear statement of intent that the purpose of the Sub-Committee was to provide confidence in the long-term financial plan of the BIPM while remaining formally accountable to the CIPM. It was suggested that the ToR for each Standing Sub-Committee and *ad hoc* Working Group should include an introductory statement that makes it clear that the role of each is to advise the CIPM and not to engage in ‘micromanagement’.

It was asked whether the pension fund was considered when the long-term financial plan of the BIPM was discussed. The CIPM Standing Sub-Committee on Pensions and Health Insurance is responsible for advising the CIPM on the pension fund, but there is a link between the two and the long-term sustainability of the pension fund is an important issue for both Sub-Committees.

CIPM *ad hoc* Working Group on Conditions of Employment

Dr J.W. McLaren, Chair of the CIPM *ad hoc* Working Group on Conditions of Employment, presented the draft ToR of the Working Group. The Working Group will commence its tasks when a salary survey is received, which is expected in the second half of 2013. It was asked which major NMIs would be included in the salary review and if comparable positions in the private sector in France would also be taken into account. The latter is particularly important when considering administrative and technical staff recruited locally. It was noted that an objective of the CIPM *ad hoc* Working Group on Conditions of Employment is to review the complete BIPM employment package to determine if the organization is able to attract, recruit and retain highly-qualified staff. More emphasis should possibly be placed on

attracting staff, rather than simply focusing on salaries. Any possible changes would have to examine the question of acquired rights of staff.

It was observed that carrying out a thorough review of equivalent public sector pay was beyond the capabilities of the BIPM. For example, the Co-ordinated Organisations have an entire department that carries out such surveys and had been tasked by the BIPM to carry out the previous surveys. It was suggested that the reference to ‘well-qualified staff’ in the ToR should be changed to ‘highly-qualified staff’.

The BIPM conditions of employment should be set so as to attract and retain the best possible candidates world-wide, as this would avoid a situation whereby candidates from certain States could be discouraged from applying for positions at the BIPM due to pay and conditions that were not competitive.

It was agreed that a representative of the BIPM staff would participate in the CIPM *ad hoc* Working Group on Conditions of Employment.

CIPM Standing Sub-Committee on the Pensions and Health Insurance

Dr R. Kaarls, Chair of the CIPM Standing Sub-Committee on the BIPM Pension and Provident Fund and Health Insurance, presented the draft ToR of the Sub-Committee. The Sub-Committee is addressing many questions about the BIPM Pension and Provident Fund and Health Insurance, particularly whether the pension fund is sustainable in the long term. The last actuarial study of the BIPM pension fund found that it is sustainable for the next 30 to 40 years. The committee is also investigating whether the current health insurance arrangements are the most suitable for the BIPM. The equilibrium of the scheme is being examined and external advice has been sought. The CIPM Standing Sub-Committee on the BIPM Pension and Provident Fund and Health Insurance includes one member and one observer who are not members of the CIPM: Dr C. Bock (METAS, Switzerland), member, has been approached for advice; and Mrs C. Fellag Ariouet (member of the BIPM Commission for Conditions of Employment (CCE)), observer, has been appointed as a staff representative. It was recalled that the CIPM Standing Sub-Committee on the BIPM Pension and Provident Fund and Health Insurance would not negotiate with the BIPM staff, but it would consult with them. The input of the BIPM staff through its representatives is valued but it was stressed that confidentiality must be respected.

It was observed that there were inconsistencies in the format of the ToR of the CIPM Standing Sub-Committees and *ad hoc* Working Groups. The ToR should be presented in a common format and there should be harmonization of terminology, including agreement on issues such as the definition of short-term, medium-term and long-term.

Action CIPM/101-14: The BIPM Director and the Director Designate will define, in consultation with the BIPM Commission for Conditions of Employment (CCE), the terms of engagement of the BIPM staff members invited to take part in the CIPM *ad hoc* Working Group on Conditions of Employment and Standing Sub-Committee on Pensions and Health Insurance.

Action CIPM/101-15: The BIPM Director Designate will set a common format for the Terms of Reference of the CIPM Standing Sub-Committees and *ad hoc* Working Groups.

CIPM *ad hoc* Working Group on CIPM Membership

Dr W.E. May, Chair of the CIPM *ad hoc* Working Group on CIPM Membership, presented the draft ToR of the Working Group. The Working Group would review the criteria and processes for the selection of candidates for CIPM membership to ensure that the selection process becomes more transparent and to clearly determine what skills are required to allow members of the CIPM to fulfil their roles. There are

still some issues for the Working Group to resolve such as whether the CIPM should submit a list of all nominated candidates for CIPM membership, with recommendations, to the CGPM, or if the list should only include the names of candidates considered to be suitable. It was noted that there have been calls for the establishment of an *ad hoc* Working Group on the election which would be formed during the meeting of the CGPM. It was further noted that the possibility of seeking nominations for CIPM membership from all Member States was being considered. Dr W.E. May requested permission to invite Dr F. Weritz, a representative of the German Government, to take part in the CIPM *ad hoc* Working Group on CIPM Membership to include some independent external advice and to make the discussions more 'transparent'. The CIPM voted unanimously to invite Dr F. Weritz.

Decision CIPM/101-43: The CIPM agreed to invite Dr Friederike Weritz, government representative of Germany, to take part in the *ad hoc* Working Group on CIPM Membership.

Action CIPM/101-16: The BIPM Director will send an invitation to Dr Friederike Weritz.

There was a comprehensive discussion of the criteria and processes for the selection of candidates for CIPM membership. It was commented that seeking nominations for CIPM membership from all Member States would create a general pool of candidates and this option had to be considered against requesting nominations for candidates to replace particular skills as they are lost from the CIPM. The latter suggestion runs the risk of the CIPM appearing to match candidates to particular criteria, although matching candidates to specific criteria may be desirable when selecting potential CIPM members as CC Presidents. Guidelines that incorporate selection criteria will be needed if nominations for candidates are sought from all Member States. It was observed that Member States that submit a candidate, who is subsequently not elected, may want to know the reasons why not.

It was noted that any lists of candidates submitted to the CGPM would continue to be valid only for one CGPM meeting.

It was observed that performance evaluation was generally considered to be good practice, but it was questioned whether it should be included in the ToR for the CIPM *ad hoc* Working Group on CIPM Membership. Irrespective of the merits of formal performance evaluation, the President of the CIPM encouraged active participation by all members of the CIPM in the formal meetings, associated committees and related activities.

It was noted that there are further issues remaining to be resolved including the suggestion that there should be more candidates than there are vacancies at the election of CIPM members and how the process of re-electing half of the CIPM members every two years should be organized.

CIPM Standing Sub-Committee on Science Strategy

Dr M. Milton, as Chair of the CIPM Standing Sub-Committee on Science Strategy, presented the draft ToR of the Sub-Committee. There was a comprehensive discussion of the ToR which focused on editorial points and the use of terminology. The question of whether there was too much emphasis being placed on overlapping work was considered. Work at the BIPM that overlaps with the activities of the NMIs should not necessarily be excluded: it should be assessed on a case-by-case basis. There is more of a need to avoid duplication of work. The CIPM was reminded that work not carried out at the BIPM would generally have to be undertaken by a NMI.

It was suggested that input may be needed from outside the BIPM on new areas of metrology to ensure that the Consultative Committees have not missed any topics of strategic importance. This suggestion was welcomed although it was commented that the CIPM Standing Sub-Committee on Science Strategy was focusing on the strategy for the BIPM and not the whole metrology community. The broader context

of the BIPM in the outside world should however be considered including how the BIPM interfaces with the outside world.

It was noted that the CIPM Standing Sub-Committee on Science Strategy is examining the long-term strategy for services offered by the BIPM as well as scientific work, because programmes of work developed by the BIPM include services. Therefore, it was suggested that the name of the committee be changed from ‘CIPM Standing Sub-Committee on Science Strategy’ to ‘CIPM Standing Sub-Committee on Strategy’. The CIPM voted unanimously for this change.

Decision CIPM/101-44: The CIPM decided to rename the ‘CIPM Standing Sub-Committee on Science Strategy’ the ‘CIPM Standing Sub-Committee on Strategy’.

Action CIPM/101-23: The chairs of the CIPM Standing Sub-Committees and *ad hoc* Working Groups will send their respective Terms of Reference to the CIPM members. A deadline of one week would be given for comments on these terms of reference as well as on the revised Statement on the BIPM mission, role and objectives. The BIPM Director Designate will then coordinate the reformatting of the documents which will be formalized within one week.

5.4 Preparations for the next meeting of the General Conference on Weights and Measures (CGPM)

Prof. M. Kühne presented a report on the preparations for the 25th meeting of the CGPM, which is scheduled to be held on 18 to 21 November 2014. Following the decision made by the CGPM (2011), the Convocation of the CGPM to its 25th meeting will be sent to the Member States six months before the opening of the meeting (i.e. mid-May 2014) rather than nine months as had been customary. Therefore, the Convocation must be approved by the CIPM at Session II of its 102nd meeting in October 2013 to meet the deadline for sending it to the Member States. A timetable to achieve this deadline was presented.

A list of five Draft Resolutions had been prepared on the following subjects:

- the revision of the SI
- achieving a continuous reference time scale
- recommended values of standard frequencies for applications including the *mise en pratique* of the metre and secondary representations of the second
- the annual dotation of the BIPM for the years 2016 to 2019
- the name of the international organization created by the Metre Convention.

It was noted that proposals from Member States for Draft Resolutions can be submitted up to four months before the meeting of the CGPM.³

The timetables for the Programme of Work and Budget for 2016 to 2019 and for the CIPM President’s Report to the CGPM were presented.

Discussions on the preparations for the 25th meeting of the CGPM focused on whether the five Draft Resolutions should be prepared and if additional draft resolutions addressing scientific issues were needed. Draft Resolutions of a general nature were considered useful, but it was noted that there should not be too many. A generic resolution addressing metrology to underpin studies of climate change was proposed: some work has already been agreed in this area which could be used as a framework for the

³ There may be proposals after the deadline. [Decision of the CGPM (1948) Wishes and proposals submitted after the set deadline are presented to the CGPM only if the CIPM has time to study them and has approved them]

Draft Resolution. The CIPM broadly agreed with the list of five Draft Resolutions presented but suggested that one or two more 'science-based' Draft Resolutions should be added. The issue of a possible Draft Resolution 'On the Name of the International Organization created by the Metre Convention' was discussed.

The proposed duration of the meeting of the CGPM was discussed. It was suggested that the meeting of the CGPM should be no more than three days in duration. There would be a preparatory day to be held at the BIPM headquarters on the day immediately before the start of the CGPM meeting. The practicalities of this option were discussed, particularly whether the *ad hoc* Working Group on the Dotation would have time to complete its work in three days. Some of the discussions reflected the view that the confidence of the CGPM needed to be regained and that airing of contentious issues or partial (work in progress) conclusions could be counter-productive.

Decision CIPM/101-66: The CIPM discussed the actions and noted the timeline for the preparation for the 25th meeting of the CGPM.

6. CONSULTATIVE COMMITTEES

6.1 Reports from Presidents on the meetings of the Consultative Committees

6.1.1 Consultative Committee for Photometry and Radiometry (CCPR)

Dr F Hengstberger, President of the CCPR, presented his report on the 21st meeting of the CCPR, held at the BIPM headquarters on 23 to 24 February 2012 and other recent activities.

There was a brief discussion on whether the photometric base unit should be the lumen, the unit of luminous flux, rather than the candela, the unit of the luminous intensity. It was noted that the arguments for and against were well known when the candela was adopted.

6.1.2 Consultative Committee for Amount of Substance: Metrology in Chemistry (CCQM)

Dr R. Kaarls, President of the CCQM, presented his report on recent activities and the 18th meeting of the CCQM, held at the BIPM headquarters on 19 to 20 April 2012. The eight permanent Working Groups of the CCQM met between 13 and 18 April 2012.

It was noted that the Report of the 18th meeting of the CCQM had already been published on the BIPM website and that it includes a list of decisions and action points from the meeting.

6.1.3 Consultative Committee for Ionizing Radiation (CCRI)

Dr K. Carneiro, President of the CCRI, presented his report on the recent activities of the CCRI and the 23rd meeting of the CCRI, held at the BIPM headquarters on 14 to 15 May 2012. The new Executive Secretary of the CCRI, Mr J.M. Los Arcos introduced himself to the CIPM. The presentation included an update on the case for a linear accelerator (linac) at the BIPM, which was based on new reduced estimates for the cost of the linac and its vault.

The basis for the reduced estimates was questioned. Dr K. Carneiro replied by explaining that the reduction in the estimated purchase price was attributed to an increase in the availability of refurbished linacs and by requesting estimates without asking for a fixed price. The reduction in the estimated cost of the vault was due to an original overcompensation in the design for potential leaks.

The CIPM noted that the work carried out on reducing costs was welcome and timely due to the work that was under way on the BIPM strategy.

6.1.4 Consultative Committee for Thermometry (CCT)

Dr Y. Duan, President of the CCT, presented his report on recent activities of the CCT and the 26th meeting of the CCT, held at the BIPM headquarters on 24 to 25 May 2012. Highlights of the CCT included: work on the redefinition of the kelvin; the *mise en pratique* for the definition of the kelvin (*MeP-K*); progress on the key comparisons CCT-K5, CCT-K6, CCT-K8 and CCT-K9; the strategy of the CCT; and two monographs, *Supplementary Information for the ITS-90* (Red book) and *Techniques for Approximating the International Temperature Scale of 1990* (Blue book). Dr Y. Duan thanked Prof. H. Uğur for his twelve years of devoted service as President of the CCT now that he is stepping down from the role.

It was asked whether the CCT should be specifically concerned about the impact of Bayesian statistics on thermometry and its application in the Guide to the Expression of Uncertainty in Measurement (GUM) and whether the Joint Committee for Guides in Metrology (JCGM) should be made aware of such concerns.

6.1.5 Consultative Committee for Acoustics, Ultrasound and Vibration (CCAUV)

Dr J. Valdés, President of the CCAUV, presented his report on recent activities of the CCAUV and the 8th meeting of the CCAUV, held at the BIPM headquarters on 13 to 14 June 2012. A proposal was put forward for a new CCAUV key comparison for seismographic purposes. This is an Asia Pacific Metrology Programme (APMP) initiative for a key comparison (CCAUV.V-K3) of low vibration measurements down to 0.1 Hz. It was prompted by the recent series of earthquakes and tsunamis around the world. The presentation concluded with a brief obituary of Knud Rasmussen (1933 to 2012), who was an eminent Danish metrologist in the field of acoustics.

6.1.6 Consultative Committee for Time and Frequency (CCTF)

Mr L. Énard, President of the CCTF, presented his report on recent activities of the CCTF and the 19th meeting of the CCTF, held at the BIPM headquarters on 13 to 14 September 2012. The report included the presentation of six CCTF Recommendations.

Recommendation CCTF 1 (2012): Updates to the list of standard frequencies.

There was a brief discussion of Recommendation CCTF 1 (2012). It was noted that it is necessary to present this Recommendation to the 25th meeting of the CGPM because it marks a progression towards a new definition of the second.

Decision CIPM/101-45: The CIPM accepted Recommendation CCTF 1 (2012), agreed to make it a CIPM recommendation and asked the BIPM Director to prepare a Draft Resolution for the 25th CGPM meeting and submit it to the CIPM bureau in March 2013 (see Appendix 8).

Action CIPM/101-17: The BIPM Director will prepare a Draft Resolution for the 25th CGPM meeting and submit it to the CIPM bureau in March 2013.

Recommendation CCTF 2 (2012): On improved internet services provided by the BIPM Time Department and their maintenance.

It was noted that to ensure reliable dissemination of its time and frequency information and to take account of the extra tasks that it has been allocated, the BIPM Time Department needs to ensure that it has sufficient resources available.

Decision CIPM/101-46: The CIPM took note of Recommendation CCTF 2 (2012).

Recommendation CCTF 3 (2012): Regular calculation and publication of rapid UTC (UTC_r).

It was noted that the rapid UTC (UTC_r) experiment began in January 2012 and is still considered a pilot comparison. A report on UTC_r will be presented at the next meeting of the CCTF. UTC_r will not replace *Circular T*.

Decision CIPM/101-47: The CIPM took note of Recommendation CCTF3 (2012).

Recommendation CCTF 4 (2012): Concerning the upgrade and calibration of global navigation satellite systems (GNSS) equipment in the timing laboratories contributing to Coordinated Universal Time (UTC) towards multi-frequency, multi-constellation receiving systems.

It was noted that although Recommendation CCTF 4 (2012) is concerned with organizing regional campaigns which would reduce the workload of the BIPM, if adopted by the CIPM it could be viewed as the CIPM advising NMIs about what they should do. The Recommendation should therefore remain a CCTF Recommendation.

Decision CIPM/101-48: The CIPM took note of Recommendation CCTF 4 (2012).

Recommendation CCTF 5 (2012): Development of continental-scale optical fibre time and frequency transfer networks and support to studies of improved methods for intercontinental clock comparisons.

There were no comments on Recommendation CCTF 5 (2012).

Decision CIPM/101-49: The CIPM took note of Recommendation CCTF 5 (2012).

Recommendation CCTF 6 (2012): A contribution from the Consultative Committee on Time and Frequency (CCTF) on achieving a continuous reference time scale.

There was a comprehensive discussion on Recommendation CCTF 6 (2012) which was developed in response to WRC-12 Resolution 653 adopted by the World Radiocommunication Conference (WRC) 2012 on the future of Coordinated Universal Time (UTC). This invites the International Telecommunication Union (ITU) WRC 2015 to ‘*consider the feasibility of achieving a continuous reference time-scale, whether by the modification of UTC or some other method and take appropriate action, taking into account ITU-R⁴ studies.*’ The ITU Secretary-General has been instructed to bring WRC-12 Resolution 653 to the attention of the CGPM, the CCTF and the BIPM.

⁴ International Telecommunication Union – Radiocommunication Sector

It was noted that Recommendation CCTF 6 (2012) emphasizes the scientific aspects of achieving a continuous reference time scale but it will eventually assume a political dimension. It was further noted that the CIPM must respond to the ITU although it was not necessary to agree to Recommendation CCTF 6 (2012). Other points of note from the discussion were:

- The ITU requires clear advice on how to build a continuous time scale.
- A document is needed on how astronomers will cope with a time scale that does not include leap seconds.
- UTC will continue even without the leap second.
- Other communities will be interested in changes involving the leap second due to the impact on standards.
- It is the responsibility of the CGPM to define time scales, not the ITU.
- The CIPM should propose the formation of a joint working group with the ITU-R to discuss the issues.

In conclusion it was commented that there is a need to reply to the ITU and that, although there may be political dimensions which should be considered, the reply should focus on the scientific issues. It was further observed that there are no practical problems with dropping the leap second that cannot be overcome.

Decision CIPM/101-50: The CIPM took note of Recommendation CCTF 6 (2012).

Action CIPM/101-18: The BIPM Director will formulate a draft response to the ITU and circulate it to the CIPM as soon as possible with a short deadline for comments.

6.1.7 Consultative Committee for Length (CCL)

Dr A. Sacconi, President of the CCL, presented his report on recent activities of the CCL and the 15th meeting of the CCL, held at the BIPM headquarters on 19 to 20 September 2012. The report included the presentation of a Draft Proposal on CMC writing rules.

It was noted that the BIPM Director had presented the Draft Proposal from the CCL on CMC writing rules to the JCRB. It was of the opinion that if the Draft Proposal was adopted, it would require the re-entry of 25 000 CMCs, and the concomitant significant workload that this would entail is not justified. The opinion of the JCRB was to take no further action over the Draft Proposal at the present time.

Decision CIPM/101-51: The CIPM took note of the CCL Draft Proposal on CMC writing rules and noted that the BIPM Director has considered this matter and no further action will be taken.

6.1.8 Consultative Committee for Mass and Related Quantities (CCM)

Dr T. Usuda, on behalf of Dr M. Tanaka, the immediate past President of the CCM, stated that there has been no meeting of the CCM since the 100th meeting of the CIPM in October 2011. It was mentioned that the National Metrology Institute of Japan (NMIJ) will continue to pay the travel expenses of Dr M. Tanaka in relation to his ongoing work on the Avogadro project as a Fellow of the National Institute of Advanced Industrial Science and Technology (AIST), even though he has retired from his position at the NMIJ.

It was commented that since Dr M. Tanaka stepped down as CCM President, a CCM Working Group on Strategy (WGS) has been set up under the chairmanship of Dr P. Richard (METAS, Switzerland). The CCM strategy is scheduled to be developed before the next meeting of the CCM to be held on 18 to

22 February 2013. It was noted that the development of the strategy has been difficult because of the large number of CCM working groups, whose tasks do not overlap.

A Workshop on the *mise en pratique* of the new definition of the kilogram organized by the CCM will be held on 20 to 23 November 2012 at the BIPM headquarters. The workshop will be chaired by Dr R. Davis.

6.1.9 Consultative Committee for Electricity and Magnetism (CCEM)

Dr B. Inglis, President of the CCEM, reported that there has been no meeting of the CCEM since the 100th meeting of the CIPM in October 2011. The CCEM has established a Working Group on Strategic Planning (WGSP). It was noted that the strategic planning exercise is under way and that a first draft has been submitted.

6.2 Changes to Consultative Committee membership

Decision CIPM/101-52: The CIPM approved the following changes in Consultative Committee membership:

- PMOD/WRC (Switzerland) as a member of the CCPR;
- INMETRO (Brazil) as an observer in the CCPR;
- CMI (Czech Republic) as an observer in the CCPR;
- INMETRO (Brazil) as a member of the CCT;
- HMI/FSB-LPM (Croatia) as an observer in the CCT;
- ON/DSHO (Brazil) as an observer in the CCTF;
- UME (Turkey) as a member of the CCQM;
- Government Laboratory in Hong Kong (China) as an observer in the CCQM.

It was noted that the following NMIs will be invited to make presentations in support of their applications:

- SASO (Saudi Arabia) to the next meeting of the CCM;
- INMETRO (Brazil) to the next meeting of the CCM;
- NML-SIRIM (Malaysia) to the next meeting of the CCQM;
- UME (Turkey) to the next meeting of the CCEM.

6.3 Timetable of future meetings

CCM	18 to 22 February 2013
CCEM	11 to 15 March 2013
CCRI(I)	25 to 28 March 2013
CCQM	12 to 19 April 2013 (including Working Groups)

CCRI(III)	24 to 26 April 2013
CCRI(II)	13 to 16 May 2013
CCRI	17 May 2013
CCU	11 to 13 June 2013
CCAUV	28 to 31 October 2013
CCQM	4 to 11 April 2014 (including Working Groups)
CCT	19 to 23 May 2014 (including Working Groups)
CCPR	30 June to 4 July 2014

The BIPM Director reported that a meeting of the CCU had been proposed for September 2014 to discuss and resolve any last minute matters immediately before the 25th meeting of the CGPM. Should there be no last minute matters for discussion then this meeting may not be required, but the request has been made to allow attendees allocate the date in their diaries.

6.4 Vacancies for Consultative Committee Presidents

There were two vacancies for the position of President of Consultative Committees following the retirement of Dr M. Tanaka as President of the CCM and the imminent retirement of Dr F. Hengstberger as President of the CCPR.

It was noted that the intent of the *ad hoc* Working Group on the role, mission, objectives, long-term financial stability, strategic direction and governance of the BIPM was clear in that the most appropriate person should be appointed to the role. When considering this recommendation and the little overlap in expertise in the twelve Working Groups of the CCM, the bureau of the CIPM decided that a candidate was required who possessed a combination of technical competence and the ability to lead the development of a revised *mise en pratique* of the new definition of the kilogram. The bureau of the CIPM therefore proposed Dr P. Richard (METAS, Switzerland) to be appointed as President of the CCM; this was endorsed by the CIPM.

Decision CIPM/101-53: The CIPM appointed Dr P. Richard (METAS, Switzerland) as President of the Consultative Committee for Mass and Related Quantities.

The bureau of the CIPM proposed Dr T. Usuda (NMIJ, Japan) as President of the CCPR. The proposal was put to a vote and Dr T. Usuda was unanimously elected as President of the CCPR.

Decision CIPM/101-54: The CIPM appointed Dr T. Usuda (NMIJ, Japan) as President of the Consultative Committee for Photometry and Radiometry.

7. DEPOSITORY OF THE METRIC PROTOTYPES

The visit to the depository of the metric prototypes at the Pavillon de Breteuil took place at 17:30 on 18 October 2012, in the presence of the President of the CIPM, the Director of the BIPM, and the representative of the Curator of the *Archives nationales*, Ms H. Guichard-Spica. (see Appendix 6).

8. REPORT ON THE PRESENT STATUS OF THE CIPM MRA

8.1 Joint Committee of the Regional Metrology Organizations and the BIPM (JCRB) report

The Director of the BIPM presented the report of the Joint Committee of the Regional Metrology Organizations and the BIPM (JCRB) to the CIPM. The report included two recommendations that were adopted at the 29th meeting of the JCRB held on 25 to 26 September 2012 in Gaithersburg, United States of America.

JCRB Recommendation 29/1: The JCRB recommends to the CIPM to approve changes to document CIPM MRA-G-01 that involve the updating of references to other CIPM MRA documents.

JCRB Recommendation 29/2: The JCRB recommends to the CIPM to approve changes in Section 9 of document CIPM MRA-D-05 amending the procedure to monitor the impact of comparison results.

The Director of the BIPM asked the CIPM to approve the recommendations.

Decision CIPM/101-60: The CIPM approved JCRB Recommendations 29/1 and 29/2.

8.2 KCDB report

The CIPM noted the report on the BIPM key comparison database (KCDB).

9. JOINT COMMITTEE FOR TRACEABILITY IN LABORATORY MEDICINE (JCTLM)

A report on the Joint Committee for Traceability in Laboratory Medicine (JCTLM) was presented. The JCTLM Executive has agreed on a modified text of the 'Declaration of Cooperation' document between the CIPM, the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC) and the International Laboratory Accreditation Cooperation (ILAC) which establishes the JCTLM. The modifications are necessary in order to properly reference the normative standards that are used in the JCTLM review process (harmonized standards related to the EU *in vitro* diagnostic (IVD) Directive), to properly describe the funding arrangements in place, and to enhance the involvement of JCTLM Members in the Committee by providing regular updates on their activities. The CIPM was asked to approve the modifications to the text.

Decision CIPM/101-61: The CIPM approved the changes made in the Declaration of Cooperation between the CIPM, IFCC and ILAC, for the establishment of a Joint Committee for Traceability in Laboratory Medicine (JCTLM).

10. CONTACTS WITH OTHER INTERGOVERNMENTAL ORGANIZATIONS AND INTERNATIONAL BODIES

A report of the major international liaison activities undertaken by BIPM staff since the previous meeting of the CIPM in October 2011 was presented. It covered; the International Commission on Illumination (CIE), the Committee on Data for Science and Technology, Task Group on Fundamental Constants

(CODATA TGFC), CODEX Alimentarius Commission, the International Atomic Energy Agency (IAEA), the International Laboratory Accreditation Cooperation (ILAC), the International Organization for Standardization (ISO), ISO CASCO, ISO REMCO, the International Organization of Legal Metrology (OIML), Pharmacopeia, the United Nations Industrial Development Organization (UNIDO), the World Anti-Doping Agency (WADA), the World Meteorological Organization (WMO) and the World Trade Organization (WTO). The CIPM noted the report.

11. JOINT COMMITTEE FOR GUIDES IN METROLOGY (JCGM)

A report on the activities of the Joint Committee for Guides in Metrology (JCGM) WG2 was presented. A formal online survey among users of the ‘International vocabulary of metrology – Basic and general concepts and associated terms’ (VIM3) was conducted to address concerns about the complexity of the VIM3. An analysis of the survey responses has been completed. There was clear support in the survey responses for an ‘easier to understand’ version of the VIM3. Based on the survey results, WG2 decided, in consultation with Dr T.J. Quinn, that the development of an on-line, annotated version of the VIM3 would be useful to provide users with additional discussion, clarification, and perhaps alternative viewpoints and language, which would address the recommendations in the survey for possible improvements. In collaboration with Dr T.J. Quinn, some example draft annotations have been developed, and will be presented to the next meeting of the JCGM in conjunction with a proposal for a new WG2 project to develop such an Annotated VIM3.

A draft version of the Annotated VIM3 was demonstrated and there was a brief discussion on the annotated version.

Decision CIPM/101-62: The CIPM decided to recommend to the JCGM the development of an on-line, annotated version of the VIM3 as a work item for JCGM WG2.

Action CIPM/101-20: The BIPM Director will take appropriate actions [with regard to Development of an on-line, annotated version of the VIM3] and report back to the CIPM.

11.1 Document on Vocabulary for nominal properties and nominal examination – Basic and general concepts and associated terms.

A document was presented that provided background to the work being undertaken by the International Union of Pure and Applied Chemistry (IUPAC) on a draft recommendation ‘Vocabulary for nominal properties and nominal examination – Basic and general concepts and associated terms’. As the BIPM is a member of the Interdivisional Committee on Terminology, Nomenclature and Symbols (ICTNS) Committee of IUPAC it has been asked to review and comment on this draft. The document outlined the BIPM’s comments to the IUPAC and asked the CIPM to task the Director of the BIPM to suggest to the JCGM WG2 that it creates a corresponding work item.

Decision CIPM/101-63: The CIPM decided to recommend to the JCGM the development of a VIN (International Vocabulary for Nominal Properties) as a work item for JCGM WG2.

Action CIPM/101-21: The BIPM Director will inform the IUPAC [regarding the development of a VIN by JCGM WG2] and will take further appropriate actions and report back to the CIPM.

12. WORK OF THE BIPM

12.1 Director's Report for 2010-2011

It was noted that the Director's Report on the Activity and Management of the BIPM for 1 July 2010 to 31 December 2011 was published in August 2012.

12.2 Protocol on the use of the international prototype of the kilogram in preparation for the redefinition of the kilogram

The BIPM Director reported that in response to the work planned by the CCM within the framework of the redefinition of the kilogram and following an announcement of intent to the CIPM in October 2011, the BIPM was planning calibrations in air of the 1 kg platinum-iridium prototypes of the kilogram used in the experimental determinations of the Planck constant, h , and the Avogadro constant, N_A . This would also include determinations in vacuum of two silicon spheres used in the Avogadro work. To make the traceability chain to the international prototype of the kilogram (IPK) as short as possible, the IPK will be used during these calibrations for the first time since the Third Periodic Verification of National Prototypes of the Kilogram (1988-1992), usually referred to as the Third Verification. The establishment of traceability to the SI by using the IPK is considered by the CCM to be an essential step toward the planned redefinition of the kilogram. The calibration campaign will not be referred to as the "Fourth Verification" of national prototypes of the kilogram because of their limited goals and scope. The document that was presented to the CIPM proposed the next steps and sought approval for the proposals. A final protocol will be presented to the CCM Working Groups on Mass Standards, the Avogadro Constant and Changes to the SI kilogram.

Decision CIPM/101-64: The CIPM authorized the BIPM Director to submit the draft protocol for "The BIPM Calibration Campaign in anticipation of the kilogram redefinition" to the CCM for review and provision of a recommendation to the CIPM.

Action CIPM/101-22: The BIPM Director to submit the protocol to the CCM for review and completion, with the request to draft provision of a recommendation to the CIPM to approve the completed protocol. CIPM approval can be obtained by correspondence.

12.3 BIPM Quality Management System

A report on the BIPM Quality Management System was presented and noted by the CIPM. No major non-conformities have been detected in external or internal audits since the previous meeting of the CIPM in October 2011.

12.4 Safety report

A safety report pertaining to the period since the previous meeting of the CIPM in October 2011 was presented and noted. Highlights of the report were: the BIPM Occupational Health and Safety Manual (Version 1.0 English) was approved by the BIPM Director on 28 September 2012; a detailed project plan has been developed and is being implemented in order to make the OH&S Management system fully

operational by 30 April 2013; and the 2012 internal health and safety audits have been completed and outcomes were presented at the 2012 OH&S Management Review Meeting on 5 October 2012.

12.5 Key comparison for large molecules

It was noted that support has been secured from the NIM, China, and the NIST, United States of America, for the large organic molecule programme. This will allow a key comparison in this field to be reinstated in the BIPM programme of work for 2013 to 2015.

Decision CIPM/101-65: The CIPM agreed with the reinstatement in the BIPM Programme of work for 2013 to 2015 of a key comparison in the field of large organic molecules carried out by the Chemistry Department as additional support both financially and by secondment will be received from NMIs.

13. PUBLICATIONS

13.1 *Metrologia*

A paper on *Metrologia* was presented by the Editor and noted by the CIPM. Of particular note was the impact factor of 1.750 for 2011. There had also been two conference issues published in 2012: NEWRAD 2011 and CAMCT 2011, presenting respectively papers from the 11th International Conference on New Developments and Applications in Optical Radiometry and the Conference on Advanced Metrology for Cancer Therapy. After a long period without change, the composition of *Metrologia*'s Editorial Board has been reviewed and the membership of the board was renewed in May 2012. An 'open-access' model for publishing *Metrologia* is being investigated. The call for open-access publishing is widely supported by many funding bodies.

13.2 Streamlining publications

A report on the initiative to streamline reporting and publications was noted by the CIPM. The report was initiated in response to a recommendation of the *ad hoc* Working Group on the role, mission, objectives, long-term financial stability, strategic direction and governance of the BIPM in March 2012. The report included reflections and recommendations of the CIPM in early June 2012 and the subsequent follow-up meeting which was held at the BIPM headquarters on 25 June 2012 and attended by Dr F. Weritz (representative of the German government), Dr R. Kaarls (Secretary of the CIPM), Prof. M. Kühne (Director of the BIPM), Mrs B. Perent (BIPM Financial and Administrative Director) and Mr A. Henson (BIPM International Liaison and Communication Director). The follow-up meeting resulted in a series of detailed recommendations on how future reporting might be planned, whilst recognizing the need to allow some operational flexibility in the implementation.

14. ADMINISTRATIVE AND FINANCIAL AFFAIRS

14.1 Member States in financial arrears

A report was given by Mrs B. Perent on the Member States in financial arrears for more than six years and the many contacts that the BIPM has had with each of them. The Member States concerned are the Republic of Cameroon, the Dominican Republic, the Islamic Republic of Iran and the Democratic People's Republic of Korea. Each of these States was notified by *Note Verbale* of 26 October 2011 of Resolution 6 (2011) adopted by the CGPM by which it decided to grant them a period of 12 months from the date of adoption of Resolution 6 (2011) to conclude a rescheduling agreement with the CIPM by 21 October 2012, failing which they would be excluded.

A rescheduling agreement with the Dominican Republic was approved by correspondence by the CIPM and signed by Mrs B. Perent on behalf of the CIPM on 1 August 2012. This agreement provides a payment of 1.15 million Euros over 20 years. A rescheduling agreement was discussed with the Islamic Republic of Iran on 17 October 2012. This rescheduling agreement is subject to final approval by the CIPM and involves the payment of 1.5 million Euros over seven years .

Decision CIPM/101-56: The CIPM approved the rescheduling agreement with the Islamic Republic of Iran and mandated the BIPM Director to sign it on behalf of the CIPM.

Action CIPM/101-19: The BIPM Director will sign the rescheduling agreement with the Islamic Republic of Iran on behalf of the CIPM.

There has been no positive reply from either Cameroon or the Democratic People's Republic of Korea. If no agreement can be reached before 21 October 2012, the exclusion of these two States will proceed and the French Ministry of Foreign Affairs will be informed in accordance with Resolution 6 (2011).

14.2 Amendment to the BIPM Financial Regulations

The CGPM adopted in 2011 Resolution 4 on the status of Associate State of the CGPM and Resolution 5 on the acceptance of Economies as Associate of the CGPM. These Resolutions brought changes to the calculation of the subscriptions of Associates effective immediately. Therefore Article 15 of the BIPM Financial Regulations had to be amended accordingly. The full text of the amended Article 15 – *Subscriptions of Associates* was presented to the CIPM for approval. After a brief discussion the amendment to Article 15 of the BIPM Financial Regulations was approved by the CIPM.

Decision CIPM/101-55: The CIPM agreed with the proposed revised Article 15 of the BIPM Financial Regulations.

14.3 Progress report on 2012

The estimated outturn for 2012 was presented.

Estimated outturn for 2012

Revenue	Euros
Total revenue (estimated)	12 748 103
Total revenue (budget)	12 568 996
Difference	179 107
Expenses	
Total expenses (estimated)	12 110 500
Total expenses (budget)	12 087 300
Difference	23 200
2012 budget surplus (as budgeted)	481 696
Estimated cash budget surplus	637 603

The revenue surplus was mainly attributed to the 2012 contribution and the entry contribution from Tunisia following its accession to the Metre Convention, to about 40 000 Euros extra subscriptions from new Associates of the CGPM and some voluntary contributions.

The lower level of expenses compared to the budget was due to two new appointments being budgeted for 2012 which did not take place, as well as a reduction due to some efficiency savings. The 2012 estimated expenses include the purchase of platinum-iridium material needed to manufacture five mass prototypes for Member States. As a result of the above, the 2012 budget surplus is expected to be higher than budgeted by 155 907 Euros.

Decision CIPM/101-57: The CIPM took note of the BIPM estimated outturn for 2012.

14.4 Budget for 2013

2013 Revenue	Euros
Contributions from Member States	11 632 570
Interest	218 000
Miscellaneous income	369 700
Subscriptions from Associates	554 541
<i>Metrologia</i>	123 500
Total revenue	<u>12 898 311</u>
2013 Expenses	Euros
Staff expenditure	6 728 100
Contribution to the Pension Fund	2 328 500
Operating expenses	1 028 900
Laboratory expenditure	1 487 000
Buildings (maintenance and renovation)	879 500
Miscellaneous	446 311
Total expenses	<u>12 898 311</u>
Budget balance	<u>0</u>

It was noted that expenditure on building maintenance and renovation is 207 100 Euros more than the 2012 estimated outturn of 672 400 Euros due to significant renovations being required to some buildings and replacement of air conditioning equipment that contains the refrigerant R22, that has been banned by the European Union. It was further noted that there was a request at the 24th meeting of the CGPM for the BIPM to review its operating costs. Efficiency savings are made on an on-going basis, which have allowed in 2012 a 10 % reduction compared with 2011, and every effort will be made to maintain this trend.

Decision CIPM/101-58: The CIPM approved the BIPM 2013 budget.

14.5 Cost accounting system

A presentation was given on the progress of setting up a cost accounting system for the BIPM. The BIPM currently operates an accrual accounting system but a cost accounting system is being developed as a management tool that would support the BIPM's long-term scientific and financial strategy. An Enterprise Resource Planning (ERP) system is being investigated that would provide information for decision making and planning.

Decision CIPM/101-59: The CIPM took note of the progress on setting up a cost accounting system.

14.6 BIPM staff: recruitment, departures and other changes since the 100th meeting of the CIPM

Appointments

- Dr Martin Milton took up the position of Deputy Director/Director Designate of the BIPM on 1 October 2012.
- Mr José María Los Arcos took up the position of Director of the Ionizing Radiation Department on 1 July 2012.
- The appointment of Dr Norbert Stoppacher as a Research Fellow in the Chemistry Department was extended until 31 December 2013.
- The appointment of Ms Nina De Sousa Dias as a Secretary in the International Liaison and Communication Department and in the Secretariat Section was extended until 13 April 2013.

Secondments

- Mr Chingis Kuanbayev, on secondment from KazInMetr, Kazakhstan, was appointed JCRB Executive Secretary, from 3 December 2012.
- Mr Ahmet Ömer Altan, on secondment from UME, Turkey, will leave on 30 November 2012 at the end of his two-year contract as JCRB Executive Secretary.

Departures

- Dr Penelope Allisy-Roberts retired as Director of the Ionizing Radiation Department at the end of May 2012.
- Mr Bruno Amaro Coelho, Quality, Health and Safety Manager, is on a fixed-term appointment which will expire on 31 December 2012.
- Mrs Françoise Joly will retire as Head of the Secretariat Section and PA to the Director of the BIPM on 31 December 2012.
- Prof. Michael Kühne will retire as Director of the BIPM on 31 December 2012.

The BIPM Director reported that the BIPM underwent an organizational restructuring on 1 January 2012. The International Liaison and Communication Department, under the Directorship of Mr A. Henson, was created. The Department incorporates the publications, library, KCDB and JCRB staff. At the same time, the management of the BIPM IT Services was transferred from the Secretariat to Dr R. Wielgosz, Director of the Chemistry Department.

14.7 Amendment to the Financial Regulations of the BIPM Pension and Provident Fund

It was noted that the bureau of the CIPM had discussed a proposed amendment to the Financial Regulations of the BIPM Pension and Provident Fund and will report to the CIPM. This will be reviewed by the CIPM Sub-Committee on the BIPM Pension and Provident Fund and Health Insurance.

15. OTHER BUSINESS

It was noted that the presentation for the BIPM Workshop on Challenges in Metrology for Dynamic Measurement is available on the CIPM restricted access webpage for information and comment. The workshop will be held at the BIPM headquarters on 15 to 16 November 2012.

It was remarked that CIPM membership can place a financial burden on individual members in terms of the costs incurred to attend meetings. It was suggested that the financial commitment required from individuals to fulfil the appointment as a CIPM member should be considered during the review of criteria for membership.

The President of the CIPM commented that this is the final meeting to be attended by Dr F. Hengstberger and Dr W. Schwitz who have been members of the CIPM for 11 and 10 years respectively. He thanked them both on behalf of the CIPM for their contributions and friendship.

The President of the CIPM paid tribute to Prof. M. Kühne, who is retiring as Director of the BIPM on 31 December 2012. He thanked Prof. M. Kühne on behalf of the CIPM and wished him well in his retirement.

The President of the CIPM concluded the meeting by paying tribute to Mrs F. Joly, Head of the Secretariat Section and PA to the Director of the BIPM, who also is retiring on 31 December 2012 after 15 years service. He thanked Mrs F. Joly on behalf of the CIPM and wished her well in her retirement.

Annexe 1

RAPPORT DU SECRÉTAIRE ET ACTIVITÉS DU BUREAU DU CIPM

(octobre 2011 - juin 2012)

1. Réunions du bureau du CIPM

Le bureau du Comité international des poids et mesures (CIPM) s'est réuni deux fois au siège du BIPM depuis la précédente session du CIPM : les 9 et 10 mars 2012, et les 4 et 5 juin 2012. Le 9 mars 2012, le bureau a eu une réunion avec l'auditeur financier externe chargé de l'audit des états financiers du BIPM et de ceux de la Caisse de retraite et de prévoyance du BIPM. Le secrétaire s'est rendu à plusieurs reprises au siège du BIPM entre octobre 2011 et juin 2012 ; par ailleurs, le secrétaire et le président du CIPM ont passé une semaine au siège du BIPM en mars 2012 afin de faire le point sur les conclusions de la réunion du Groupe de travail *ad hoc* sur le rôle, la mission, les objectifs, la stabilité financière à long terme, la direction stratégique et la gouvernance du BIPM et de rencontrer les membres du personnel du BIPM.

Le bureau du CIPM a tenu sa réunion annuelle avec l'Organisation internationale de métrologie légale (OIML) et l'International Laboratory Accreditation Cooperation (ILAC) les 7 et 8 mars 2012. Malheureusement, le secrétaire général de l'Organisation internationale de normalisation (ISO) n'a pas pu assister à la réunion quadripartite entre le BIPM, l'ILAC, l'ISO et l'OIML.

Le comité de sélection relatif au recrutement du prochain directeur du BIPM, composé du bureau du CIPM assisté de João Jornada, président du laboratoire national de métrologie brésilien, Instituto Nacional de Metrologia, Qualidade e Tecnologia (INMETRO), s'est réuni les 12 et 13 mars 2012 à Paris.

2. Composition du CIPM

Depuis la précédente session du CIPM en octobre 2011, trois membres du CIPM ont annoncé qu'ils démissionnaient de leurs fonctions de membre du CIPM. La démission de M. Seton Bennett est effective à compter du 31 décembre 2011, celle de MM. Mitsuru Tanaka et Lev Issaev à compter du 30 juin 2012.

Le bureau du CIPM suggère de procéder à l'élection de trois nouveaux membres du CIPM selon les règles en vigueur. De nouvelles règles seront adoptées par suite aux recommandations du Groupe de travail *ad hoc* sur le rôle, la mission, les objectifs, la stabilité financière à long terme, la direction stratégique et la gouvernance du BIPM. Les CV de candidats potentiels ont été communiqués aux membres du CIPM.

3. États Parties à la Convention du Mètre (États Membres) et Associés à la CGPM (Associés)

La République de Tunisie, précédemment Associée à la Conférence générale des poids et mesures (CGPM), a accédé à la Convention du Mètre le 1er février 2012 portant ainsi à 56 le nombre d'États Parties à la Convention du Mètre.

Le nombre d'Associés a été porté à 36 avec l'accès à ce statut du Sultanat d'Oman le 8 mai 2012, du Botswana le 30 mai 2012 et de la République arabe syrienne le 31 mai 2012.

4. États Membres ayant des contributions arriérées datant de plus de six ans

Quatre États continuent à avoir des contributions arriérées datant de plus de six ans : il s'agit de la République du Cameroun, de la République dominicaine, de la République islamique d'Iran et de la République populaire démocratique de Corée.

Par suite à la Résolution 6 adoptée par la CGPM à sa 24^e réunion (2011), le BIPM a entrepris un certain nombre d'actions afin de remédier à la question des arriérés de ces États. Des contacts ont été repris de façon intense avec les gouvernements de ces États par l'intermédiaire de leur ambassade ou représentation à Paris, ainsi que par le biais de contacts personnels. Conformément à la Résolution 6 (2011), chacun des États a été informé qu'à défaut d'accord de rééchelonnement conclu avant le 21 octobre 2012, l'État concerné serait automatiquement exclu.

5. Communication et sensibilisation

En raison de l'accession à la Convention du Mètre de l'Arabie saoudite, l'évolution de la situation s'accélère dans la région du Golfe et une nouvelle organisation régionale de métrologie, dénommée GULFMET, a ainsi été créée. On s'attend à ce qu'un certain nombre d'autres États de la région du Golfe envisagent d'accéder à la Convention du Mètre ou de devenir Associé à la CGPM.

Le secrétaire du CIPM et le directeur du Département des relations internationales et de la communication du BIPM ont assisté à une réunion des organisations régionales de métrologie qui s'est tenue le 29 mars 2012 au laboratoire national de métrologie allemand, Physikalisch-Technische Bundesanstalt (PTB). La réunion avait pour thème de savoir comment organiser de façon plus efficace le soutien apporté aux laboratoires nationaux de métrologie des pays en développement. Il a été conclu que la mise en place sur le site internet du BIPM d'une page plus visible et facilement accessible consacrée aux laboratoires nationaux de métrologie des pays en développement serait très utile et permettrait d'apporter un soutien efficace au développement de l'infrastructure métrologique internationale. Cette page internet permettra de publier des documents de sensibilisation, des études d'impact économique et d'autres documents pertinents en matière d'organisation et de formation.

Les progrès concernant les activités effectuées par les organisations membres du réseau DCMAS¹ (le BIPM, l'IAF², la CEI³, l'ILAC⁴, l'ISO⁵, le CCI⁶, l'UIT⁷, l'OIML⁸ et la CEE-NU⁹) ont été soulignés lors d'une réunion qui s'est tenue le 17 avril 2012 à la Commission économique pour l'Europe des Nations Unies à Genève, Suisse. Aucun membre du personnel du BIPM n'a pu participer à cette réunion en raison d'autres engagements mais l'OIML qui était représentée est intervenue sur toutes les questions liées à la métrologie.

¹ Réseau pour la coordination de l'assistance aux pays en voie de développement dans les domaines de la métrologie, de l'accréditation et de la normalisation

² International Accreditation Forum

³ Commission électrotechnique internationale

⁴ International Laboratory Accreditation Cooperation

⁵ Organisation internationale de normalisation

⁶ Centre du commerce international

⁷ Union internationale des télécommunications

⁸ Organisation internationale de métrologie légale

⁹ Commission économique pour l'Europe des Nations Unies

6. Groupe de travail *ad hoc* sur le rôle, la mission, les objectifs, la stabilité financière à long terme, la direction stratégique et la gouvernance du BIPM

Dans la Résolution 10 adoptée par la CGPM à sa 24^e réunion (2011), la CGPM invite le CIPM à établir un Groupe de travail *ad hoc* présidé par le président du CIPM, chargé de conduire un examen du rôle, de la mission, des objectifs, de la stabilité financière à long terme, de la direction stratégique et de la gouvernance du BIPM.

En janvier 2012, la composition du Groupe de travail *ad hoc* ainsi créé a été finalisée comme suit :

- Barry Inglis président du CIPM (président du Groupe de travail *ad hoc*)
- Robert Kaarls secrétaire du CIPM
- Michael Kühne directeur du BIPM
- João Jornada Brésil
- Xiaokang Kong Chine
- Corinne Lagauterie France
- Friederike Weritz Allemagne
- Yukinobu Miki Japon
- Tim Armstrong Nouvelle-Zélande
- Lev Issaev Fédération de Russie
- Molefi Motuku Afrique du Sud
- Christian Bock Suisse
- Robert Gunn Royaume-Uni de Grande Bretagne et d'Irlande du Nord
- Patrick Gallagher États-Unis d'Amérique
- Claudia Santo Uruguay

Le bureau du CIPM et le BIPM, en consultation avec le CIPM, ont soigneusement préparé la première réunion du Groupe de travail *ad hoc* qui s'est tenue du 14 au 16 mars 2012 au siège du BIPM. Le secrétaire du CIPM a été nommé rapporteur par le Groupe de travail *ad hoc*.

Les conclusions de la réunion du Groupe de travail *ad hoc* sont présentées dans les documents suivants¹⁰ :

- un résumé des conclusions et recommandations de la réunion qui s'est tenue du 14 au 16 mars 2012 (*Summary of key findings and recommendations of the meeting 14-16 March 2012*) ;
- le compte rendu de la réunion du Groupe de travail *ad hoc* (*Notes of the Ad Hoc WG 14-16 March 2012, Sèvres, Paris*).

Ces conclusions seront présentées et discutées lors de la prochaine réunion des États Parties à la Convention du Mètre et des directeurs des laboratoires nationaux de métrologie qui se tiendra les 16 et 17 octobre 2012 au siège du BIPM.

¹⁰ Uniquement disponibles en anglais.

7. Prochain directeur du BIPM

Comme le poste de directeur du BIPM sera vacant lorsque l'actuel directeur, Michael Kühne, partira à la retraite, le CIPM a décidé lors de sa session en juin 2011 de publier un avis de vacance pour le poste de directeur du BIPM en septembre 2011 et de le communiquer également aux États Membres et aux laboratoires nationaux de métrologie. La clôture des candidatures était fixée au 1er décembre 2011 : quarante-et-une candidatures ont été reçues.

Le comité de sélection mis en place par le CIPM, composé des membres du bureau du CIPM et de João Jornada, président d'INMETRO, a invité neuf candidats pour le poste de directeur du BIPM à passer un entretien les 12 et 13 mars 2012 à Paris. Une liste restreinte de quatre candidats, accompagnée d'un rapport et de recommandations du comité de sélection, a été soumise au CIPM pour examen afin qu'une décision finale soit prise.

8. Questions administratives et relatives au personnel du BIPM

8.1 Des comptes rendus sur la situation financière du BIPM sont présentés au bureau du CIPM lors de chacune de ses réunions. Le directeur administratif et financier du BIPM a présenté au bureau du CIPM le projet d'états financiers de 2011 du BIPM et le projet d'états financiers de 2011 de la Caisse de retraite et de prévoyance du BIPM. Les états financiers du BIPM, préparés conformément aux normes IPSAS, ont mis en évidence quelques points à aborder dans la situation financière du BIPM, notamment en ce qui concerne le niveau insuffisant de dépenses d'investissement par rapport aux amortissements et le niveau des engagements du BIPM au titre de l'assurance-maladie.

8.2 Le 9 mars 2012, le bureau du CIPM a rencontré l'auditeur financier externe en charge de l'audit des états financiers de 2011. L'auditeur a présenté ses conclusions préliminaires au bureau du CIPM concernant les états financiers du BIPM et ceux de la Caisse de retraite et de prévoyance du BIPM pour l'année 2011. L'auditeur a observé que c'était la deuxième année qu'il audite les états financiers du BIPM et qu'il considérait avoir pu effectuer son audit sans rencontrer de problèmes.

Concernant les états financiers de la Caisse de retraite et de prévoyance du BIPM, l'auditeur a conclu qu'en se fondant sur le principe de continuité d'exploitation du BIPM et la garantie des États Membres, les états financiers sont fidèles à la situation financière. L'auditeur présentera également oralement son rapport au CIPM.

8.3 Par suite aux décisions prises par la CGPM lors de sa 24^e réunion (2011), le BIPM a révisé son programme de travail pour les années 2013 à 2015. Ce programme de travail et le budget correspondant seront présentés au CIPM par le directeur du BIPM afin que le CIPM puisse en discuter et l'approuver.

8.4 Le bureau du CIPM a été informé par le directeur du BIPM de certains changements qui sont intervenus au début de l'année 2012 concernant la structure organisationnelle du BIPM dans le but d'améliorer l'efficacité du BIPM. Le Département des relations internationales et de la communication, dirigé par Andy Henson, précédemment responsable des relations internationales du BIPM, a ainsi été créé.

9. Le CIPM MRA

Le directeur du laboratoire national du Monténégro a signé le CIPM MRA le 19 octobre 2011, ce qui porte le nombre de signataires du CIPM MRA à 87 laboratoires appartenant à 51 États Membres, 33 Associés et trois organisations internationales ; y participent également 142 laboratoires désignés par les organismes signataires.

Le processus d'approbation d'un addendum au CIPM MRA n'est pas encore terminé, un grand nombre de signataires n'ayant pas encore donné leur réponse.

10. Relations avec d'autres organisations

- 10.1 La coopération avec l'OIML progresse très bien et permet au BIPM et à l'OIML d'examiner des questions d'intérêt commun. Le BIPM a ainsi apporté son aide à l'OIML dans un certain nombre de projets administratifs et informatiques. Le BIPM a préparé un document présentant quelles seraient les conséquences d'un transfert du Bureau international de métrologie légale (BIML) au siège du BIPM d'un point de vue institutionnel, administratif, financier et pratique. Ce document a été soumis à l'OIML.
- 10.2 La coopération avec l'ILAC continue de façon satisfaisante.
- 10.3 L'intérêt croissant d'autres organisations intergouvernementales et organismes internationaux vis-à-vis de nouveaux domaines métrologiques constituant de véritables défis et considérés comme possibles domaines de coopération avec le BIPM et les Comités consultatifs du CIPM, tels que le changement climatique, la santé, la pharmacopée, la physiologie, la médecine légale, la microbiologie et la nanotechnologie, continue à être observé. Les Comités consultatifs concernés sont invités à faire preuve d'ouverture d'esprit et d'engagement lorsqu'il est pertinent et requis de traiter ces nouveaux domaines métrologiques.
- 10.4 L'atelier commun au BIPM et à l'Organisation météorologique mondiale (OMM) sur la métrologie et le changement climatique qui s'est tenu en 2010 au siège de l'OMM a conduit à la création d'un Groupe de liaison commun au BIPM et à l'OMM. Ce Groupe de liaison commun a convenu d'une approche stratégique visant à améliorer la comparabilité et la traçabilité des résultats de mesure, en particulier pour les 50 variables climatiques considérées comme fondamentales, qui sont mesurées sur diverses plateformes.
- 10.5 Mme Nicole Moreau, précédente présidente de l'International Union of Pure and Applied Chemistry (IUPAC), a présenté la position de l'IUPAC au sujet de la redéfinition de la mole lors d'un atelier du Comité consultatif pour la quantité de matière (CCQM) en avril 2012. Elle a souligné que la position de l'IUPAC, telle qu'exprimée précédemment par l'Interdivisional Committee on Terminology, Nomenclature and Symbols (ICTNS) de l'IUPAC, n'a pas changé : l'IUPAC approuve la redéfinition de la mole s'appuyant sur la constante d'Avogadro.
- 10.6 Le protocole d'accord entre le BIPM et l'Agence internationale de l'énergie atomique (AIEA), qui est un projet de longue date, est prêt à être signé.

11. Préparation de la 25^e réunion de la CGPM

Le BIPM doit commencer à préparer en 2012 le projet de *Programme de travail et budget pour les années 2016 à 2019* afin que le document puisse être présenté à la CGPM lors de sa 25^e réunion (2014). Les directeurs des laboratoires nationaux de métrologie et les représentants des États Membres ont demandé à être impliqués en temps utile dans la préparation des futurs programmes de travail du BIPM et souhaitent que ces programmes de travail soient élaborés avec une perspective plus large et à plus long terme. Les Comités consultatifs doivent ainsi préparer leurs plans stratégiques et leurs perspectives à moyen et long termes aussi tôt que possible.

Appendix 1

REPORT OF THE SECRETARY AND ACTIVITIES OF THE BUREAU OF THE CIPM

(October 2011 - June 2012)

1. Meetings of the bureau of the CIPM ("the bureau")

The bureau of the CIPM ("the bureau") has met on two occasions since the previous meeting of the CIPM: 9-10 March 2012 and 4-5 June 2012. These meetings took place at the BIPM headquarters. On 9 March 2012 the bureau had a meeting with the external financial auditor responsible for auditing the financial statements of the BIPM and of the BIPM Pension and Provident Fund. The Secretary made additional visits to the BIPM headquarters between October 2011 and June 2012, and in March 2012 the Secretary and President of the CIPM spent one week at the BIPM reporting on the outcomes of the meeting of the *ad hoc* Working Group on the role, mission, objectives, long-term financial stability, strategic direction and governance of the BIPM and meeting with staff.

The bureau held its annual meeting with the International Organization of Legal Metrology (OIML) and the International Laboratory Accreditation Cooperation (ILAC) on 7-8 March 2012. Regrettably, the Secretary General of the International Organization for Standardization (ISO) was unable to attend the joint meeting with the BIPM, the ILAC and the OIML.

The bureau, together with Prof. J. Jornada, President of the Brazilian National Metrology Institute, Instituto Nacional de Metrologia, Qualidade e Tecnologia (INMETRO), acted as the Selection Committee for the next BIPM Director. The Selection Committee met on 12-13 March 2012 in Paris.

2. CIPM Membership

Since the previous meeting of the CIPM in October 2011 three CIPM members announced their resignation. Dr S. Bennett resigned from the CIPM effective from 31 December 2011. Dr M. Tanaka and Dr L. Issaev will resign from the CIPM effective from 30 June 2012.

The bureau proposes to proceed with filling without delay the vacancies in the CIPM in accordance with the existing rules. New rules will be agreed further to the recommendations of the *ad hoc* Working Group on the role, mission, objectives, long-term financial stability, strategic direction and governance of the BIPM. The CVs of potential candidates have been circulated to the CIPM.

3. States Parties to the Metre Convention (Member States) and Associates of the CGPM (Associates)

The Republic of Tunisia, formerly an Associate of the General conference on Weights and Measures (CGPM), became the 56th State Party to the Metre Convention on 1 February 2012.

There has been an increase in the number of Associates to 36 with the association of the Sultanate of Oman on 8 May 2012, Botswana on 30 May 2012 and the Syrian Arab Republic on 31 May 2012.

4. Member States in financial arrears for more than six years

Four States continue to be in financial arrears for more than six years: the Republic of Cameroon, the Dominican Republic, the Islamic Republic of Iran and the Democratic People's Republic of Korea.

Further to Resolution 6 adopted at the 24th meeting of the CGPM (2011) a number of actions have been undertaken by the BIPM addressing the arrears of the Member States mentioned above. Many renewed and intensified contacts took place with the governments of these States through their Embassies or Representatives in Paris as well as a number of personal contacts. With reference to Resolution 6 (2011) each of the States concerned was notified that, if no rescheduling agreement has been agreed by the BIPM before 21 October 2012, the State will automatically be excluded as a Member State of the Metre Convention.

5. Outreach

As a consequence of the accession of Saudi Arabia to the Metre Convention, developments in the Gulf area are accelerating and have led to the creation of a new regional metrology organization (RMO) under the name GULFMET. It is expected that a number of other States in the Gulf area will now prepare to become a Member State or an Associate of the CGPM.

The Secretary of the CIPM and the Director of the BIPM International Liaison and Communications department attended an inter-RMO meeting, held on 29 March 2012 at the German National Metrology Institute, Physikalisch-Technische Bundesanstalt (PTB). The meeting addressed how support for developing national metrology institutes (NMIs) could be organized more effectively and efficiently. It was concluded that a more visible and accessible webpage on the BIPM website, dedicated to developing NMIs would be very helpful and would give good support to the development of the global metrology infrastructure. The webpage will be used to publish awareness materials, economic impact studies and other relevant organizational and training materials.

Progress in the activities carried out by the co-operating organizations in the DCMAS Network¹ (BIPM, IAF², IEC³, ILAC⁴, ISO⁵, ITC⁶, ITU⁷, OIML⁸ and UNECE⁹) was reported in a meeting on 17 April 2012 at the office of the UNECE in Geneva, Switzerland. No BIPM staff members attended this meeting due to other commitments, but the OIML which was represented, addressed all matters related to metrology.

6. *Ad hoc* Working Group on the role, mission, objectives, long-term financial stability, strategic direction and governance of the BIPM

Resolution 10, adopted at the 24th meeting of the CGPM (2011), invited the CIPM to create an *ad hoc* Working Group (*ad hoc* WG), chaired by the President of the CIPM, to conduct a review of the role, mission, objectives, long-term financial stability, strategic direction and governance of the BIPM.

¹ Network on Metrology, Accreditation and Standardization for Developing Countries

² International Accreditation Forum

³ International Electrotechnical Commission

⁴ International Laboratory Accreditation Cooperation

⁵ International Organization for Standardization

⁶ International Trade Center

⁷ International Telecommunication Union

⁸ International Organization of Legal Metrology

⁹ United Nations Economic Commission for Europe

In January 2012 the composition of the *ad hoc* WG was completed as follows:

- Barry Inglis CIPM President (*ad hoc* Working Group Chair)
- Robert Kaarls CIPM Secretary
- Michael Kühne BIPM Director
- João Jornada Brazil
- Xiaokang Kong China
- Corinne Lagauterie France
- Friederike Weritz Germany
- Yukinobu Miki Japan
- Tim Armstrong New Zealand
- Lev Issaev Russian Federation
- Molefi Motuku South Africa
- Christian Bock Switzerland
- Robert Gunn United Kingdom of Great Britain and Northern Ireland
- Patrick Gallagher United States of America
- Claudia Santo Uruguay

The bureau and the BIPM, with input from the CIPM, carefully prepared for the first meeting of this *ad hoc* WG, which took place on 14-16 March 2012 at the BIPM headquarters. The Secretary of the CIPM was appointed *Rapporteur* by the *ad hoc* WG.

The outcome of the meeting of the *ad hoc* WG was reported in the following documents:

- Summary of key findings and recommendations of the meeting 14-16 March 2012;
- Notes of the *Ad Hoc* WG 14-16 March 2012, Sèvres, Paris.

The outcome of the *ad hoc* WG meeting will be presented and discussed in the next joint meeting of NMI Directors and Representatives of States Parties to the Metre Convention, which will take place on 16-17 October 2012 at the BIPM headquarters.

7. Next Director of the BIPM

As the post of Director of the BIPM will become vacant when the current Director of the BIPM, Prof. M. Kühne, will retire in the near future, the CIPM decided at its June 2011 meeting to publish a vacancy notice for this post, which was sent to Member States and their NMIs in September 2011. The deadline for applications was set as 1 December 2011: 41 applications were received.

The Selecting Committee, set up by the CIPM, was composed of the members of the bureau and Prof. J. Jornada, President of INMETRO. Nine potential candidates for the post of Director of the BIPM were invited for interview on 12-13 March 2012 in Paris. A shortlist of 4 candidates, together with the report and recommendations of the Selection Committee, will be presented to the CIPM for its consideration and final decision.

8. BIPM administrative and staff matters

8.1 At each meeting, the bureau receives reports on the financial situation of the BIPM throughout the year. The Financial and Administrative Director presented the draft 2011 BIPM Financial Statements and draft 2011 BIPM Pension and Provident Fund Financial Statements to the bureau. The BIPM financial statements prepared under the IPSAS have highlighted a few issues to be addressed in the financial situation of the BIPM, in particular the insufficient level of investment expenditure compared to depreciation and the level of the BIPM's liabilities regarding health insurance.

8.2 The bureau met with the external financial auditor who was responsible for the audit of the 2011 financial statements on 9 March 2012. The auditor reported his preliminary findings to the bureau on the audit of the 2011 BIPM and BIPM Pension and Provident Fund Financial Statements. The auditor commented that it was the second year he had audited the BIPM Financial Statements and considered that he had performed his audit without any issues, drawback or problems.

With respect to the BIPM Pension and Provident Fund Financial Statements, the auditor reported that based on the on a going-concern basis of the BIPM and the guarantee of the Member States, the financial statements give a true and fair view of the financial position. The auditor will give an oral presentation of his report to the CIPM.

8.3 As a consequence of the decisions made at the 24th meeting of the CGPM (2011), the BIPM reconsidered the proposed Programme of Work for 2013-2015. This Programme of Work and its corresponding budget will be presented to the CIPM for discussion and approval by the Director.

8.4 The bureau was advised by the Director of some changes in the organizational structure of the BIPM at the beginning of 2012 with a view to improving the efficiency of the BIPM. The reorganization created an International Liaison and Communication Department, headed by Mr A. Henson, former International Liaison Officer of the BIPM.

9. The CIPM MRA

The Director of the NMI of Montenegro signed the CIPM MRA on 19 October 2011, bringing the number of signatories of the CIPM MRA to 87 institutes from 51 Member States, 33 Associates and 3 international organizations, and covering a further 142 institutes designated by the signatory bodies.

The process of approving an addendum to the CIPM MRA is not yet finished pending approval by a large number of signatory bodies.

10. Relations with other bodies

10.1 Cooperation with the OIML is developing very well and is addressing issues of common interest, while the BIPM has also been able to support the OIML in a number of administrative and IT areas. A note on the consequences of transferring the International Bureau of Legal Metrology (BIML) to the BIPM headquarters has been prepared by the BIPM addressing institutional, administrative, financial and practical consequences. The note has been presented to the OIML for consideration.

10.2 The cooperation with ILAC is continuing in a satisfactory way.

10.3 In new and challenging areas of metrology, such as climate change, health care, pharmacopoeia, physiology, forensics, micro-biology and nano-technology, an increased interest by other intergovernmental organizations and international bodies for cooperation with the BIPM and the CIPM Consultative Committees continues to be observed. The Consultative Committees concerned are invited

to be open minded and active in addressing these new areas of metrology where relevant and when requested.

- 10.4 The BIPM – World Meteorological Organization (WMO) workshop on metrology and climate change, held in 2010 at the WMO headquarters has been followed up with the creation of a BIPM-WMO Joint Liaison Group. The Group agreed on a strategic approach, aiming to improve the comparability and traceability of measurement results, especially for the 50 “Essential Climate Variables”, which are measured on different platforms.
- 10.5 Prof. N. Moreau, the Past-President of the International Union of Pure and Applied Chemistry (IUPAC), gave a presentation about IUPAC’s view on the redefinition of the mole during a Consultative Committee for Amount of Substance (CCQM) workshop in April 2012. She stated that the point of view of IUPAC, as expressed earlier by the IUPAC Interdivisional Committee on Terminology, Nomenclature and Symbols (ICTNS) has not changed, namely that IUPAC agrees with a redefinition of the mole in terms of the Avogadro number.
- 10.6 The Memorandum of Understanding with the International Atomic Energy Agency (IAEA) is ready for signature. This represents a longstanding proposal.

11. Preparations for the 25th meeting of the CGPM

The BIPM has to start the preparation of the Programme of Work for the period 2016-2019 during 2012 so that it will be ready to be presented at the 25th meeting of the CGPM (2014). The NMI Directors and representatives of States Parties to the Metre Convention have requested timely involvement in the development of future BIPM Programmes of Work and wish these programmes to be drafted with a wider and long-term view. As a result, the Consultative Committees must prepare their mid- and long-term strategic plans and perspectives as soon as possible.

Annexe/Appendix 2***Ad hoc Working Group on the Role, Mission, Objectives, Long-Term Financial Stability, Strategic Direction and Governance of the BIPM*****Summary of key findings and recommendations of the meeting 14-16 March 2012****Mission**

There is a continued role for the BIPM

Recommendation 1

Develop a compact and clear statement on the role, mission and objectives based on the original objectives set by the Metre Convention, but reinterpreted for the 21st Century: Draft statement: See draft statement in Annex, work in progress.

Programme of Work, strategic planning and budgeting process

The development of the BIPM Programme of Work and Budget has to be developed in a transparent way with timely involvement of the stakeholders following an agreed strategy

Recommendation 2

The BIPM/CIPM to develop a consolidated planning process requiring:

- a) Consultative Committee mid- and long-term strategic plans and derived key comparison plans to be forwarded to NMI Directors by e-mail and via the BIPM website for input and comment,*
- b) Input and comments from NMI Directors to be forwarded to the CIPM for consolidation with the strategic plans, prioritization and the development of the strategy of the BIPM and its Programme of Work and Budget,*
- c) The consolidation and prioritization to be forwarded to Government Representatives and NMI Directors, together with financial analysis, for comment and input,*
- d) The final draft BIPM Programme of Work, Budget and analysis to be presented to a joint meeting of NMI Directors and Government Representatives.*

taking into account that:

- BIPM activities should focus on those that add value over and above what can be delivered by the NMIs,*
- priority setting should be done in the context of the consolidated planning process, identifying both the wider metrology needs and the role and capabilities of the BIPM in delivering the required activities*
- options should include all budgetary implications*
- an annual update of the Consultative Committee's plans will take place in consultation with the NMI Directors*

Recommendation 3

NMI Directors and Government Representatives are asked to take an active interest in the development of the BIPM long-term strategy and successive Programmes of Work and Budget, by timely responding to the proposals (failure to respond means: assent)

Recommendation 4

The long-term financial plan, including capital investments, should be provided to Member States (addressing building, equipment, staff, assets and liabilities such as the Pension and Provident Fund) with a number of possible scenarios.

Developing countries/NMIs and the role of the RMOs

Membership of the RMOs is in general wider than the current number of Member States of the Metre Convention and includes not only Metre Convention Member States, but also Associates of the CGPM as well as other states and economies. The RMOs are all involved in awareness raising and support to developing countries/NMIs.

Recommendation 5

RMO chairs should be invited to attend the NMI Directors meetings, while RMO Technical Committee chairs should be invited to attend the Consultative Committee Strategy and Key Comparisons Working Groups.

Governance

Governance structures and procedures require clear, more direct and frequent consultation with the stakeholders.

Recommendation 6

The CIPM will produce and maintain compact, easily readable and understandable document(s), including a compilation of all currently applicable rules, and describing the BIPM (including Terms of Reference etc. for the CIPM, as the governance board, and for all other committees) and its operational and decision making processes. All in one place and easily accessible.

Recommendation 7

An annual four page summary of achievements, planning, financial situation, audits, human resources, relations with other organizations complemented by an index of detailed reports be prepared and sent to Member States and NMIs.

Recommendation 8

In addition to the complete Annual Financial Statements, a summary highlighting the key issues, including long-term consequences, trends and risk analysis should be annexed.

Recommendation 9

In all relevant reports, a short summary should be added, addressing the major issues, e.g. those to be brought to the attention of governments.

Recommendation 10

All meetings should result in a rapidly distributed summary of decisions and actions. In general, minutes should not be produced in detail.

Recommendation 11

Official documentation should not only be sent via the embassies, but also directly to the Government Representatives concerned and NMI Directors. (e.g. summary of the CIPM meetings)

Recommendation 12

Regular yearly meetings with the NMI Directors and Member State Representatives should be held and may be combined if appropriate, depending on the agenda.

CIPM

Although the composition of the CIPM is a reflection of the global metrological situation and interests, the composition of the CIPM, the election process of CIPM members and role and tasks of the CIPM need to be modernized and made more transparent.

Recommendation 13

CIPM Members be elected for a fixed-term of 4 years, renewable. Every two years, half of the CIPM Members will go up for (re-)election (see also Rec.17).

Recommendation 14

The CIPM will review the list of criteria to be fulfilled by CIPM candidates. The full range of skills necessary to oversee the BIPM in the modern era will be taken into account.

Recommendation 15

All CIPM candidates will be scrutinized against these criteria and the results of this with the names of the potential candidates will be provided to a CGPM Election WG. The CGPM WG to give recommendations to the CGPM. Privacy protection of candidates will be taken into account.

Recommendation 16

On balance it is suggested that Consultative Committee Presidents not be drawn from the CIPM in order that the CIPM maintains a global and independent view.

CGPM

Meetings of the CGPM should become more effective and efficient and held more frequently.

Recommendation 17

Full CGPM meetings should be held every 4 years and a CGPM with limited agenda should be held in between (so every two years a CGPM).

The full CGPM should decide on the BIPM budget for a four year period.

Recommendation 18

The duration of CGPM meetings should become reduced to two or at most three days. Consultative Committee Presidents will only present a very short summary report and will be available to answer questions (reports should be provided in advance).

Pension and Provident Fund

In accordance with earlier decisions made by the CGPM, the BIPM Pension and Provident Fund is maintained by the CIPM and is kept in good shape and covers its liabilities for the coming 30 to 40 years, assuming that the BIPM will continue to exist and the number of staff will be more or less at a stable level. Actuarial studies are carried out regularly, as well as yearly financial management audits, and confirm a sustainable situation, based on the assumptions mentioned.

Recommendation 19

The management structure of the BIPM Pension and Provident Fund will be reviewed by the CIPM with eventual recommendations to the CGPM.

General

Implementation of the proposed changes in the governance of the BIPM should not be in conflict with the Metre Convention and its annexed Regulations and eventual other legislation.

Recommendation 20

The BIPM and CIPM are requested to determine how and when all proposals can be implemented without conflict with the Metre Convention and its annexed Regulations and eventual other legislation.

5 April 2012, v.4

R. Kaarls

Rapporteur of the ad hoc WG

Annex 1

Worldwide uniformity of measurement for trade, science and society

The BIPM is an inter-governmental organization established by the Metre Convention.

It implements the decisions of States Parties to the Metre Convention.

The overall goal is to

- promote a uniform, coherent and high level International System of Units (SI) which will:
 - facilitate trade
 - improve quality of life and sustainability
 - support innovation

The unique international role of the BIPM is

- coordination of activities for the realization and improvement of a world-wide accepted measurement system delivering comparable measurement results
- representation of scientific, industrial and societal metrology in international forums, in particular in collaboration with other International Organizations and Bodies
- as an independent Inter-governmental Organization to provide a forum for all Member States to make decisions about a worldwide measurement system
- to provide the means for scientific exchange in metrology
- to undertake activities defined by Member States of the Metre Convention

This unique role is achieved by

- organization of scientific meetings to identify existing and future measurement needs in industry and society with regard to technological progress and grand challenges
- organizing comparisons and carrying-out calibrations on behalf of the Member States as agreed in the BIPM Programme of Work
- carrying-out – if necessary and appropriate – scientific work at the BIPM
- technical services in support of National Metrology Institutes of the Member States
- contact with other Inter-governmental Organizations (like WHO, IAEA, WMO, OIML) and International Bodies (like ISDO, ILAC)
- informing the general public and decision makers about the International System of Units and its benefits

Annexe 3

PREMIÈRE PARTIE DE LA 101^e SESSION DU CIPM

Décisions et actions

Décision CIPM/101-1 Le CIPM convient que les procès-verbaux de la 100^e session du CIPM (2011) ont été confirmés par correspondance et que la version imprimée qui lui est présentée constitue une copie exacte de celle distribuée électroniquement.

Décision CIPM/101-2 Le CIPM approuve la prolongation de l'accord de coopération avec le NIST dans le domaine de la chimie.

Décision CIPM/101-3 Le CIPM approuve le programme de travail et budget pour les années 2013 à 2015 du BIPM. Notant le caractère prudent du budget tel qu'il a été adopté, le CIPM convient que les fonds supplémentaires qui deviendraient disponibles seraient utilisés, de préférence et en priorité, pour soutenir les activités du BIPM liées à la redéfinition du kilogramme.

Décision CIPM/101-4 Le CIPM convient de cesser, à compter du 1^{er} janvier 2013, de subventionner les cotisations des pensionnés à partir du Fonds de réserve pour l'assurance-maladie.

Décision CIPM/101-5 La Recommandation 1 du Groupe de travail *ad hoc* a été discutée par le CIPM et un groupe de travail a été établi afin d'examiner le texte proposé.

Décision CIPM/101-6 Le CIPM convient de la nécessité de changer le processus de consultation entre le CIPM, les directeurs des laboratoires nationaux de métrologie et les représentants des États Parties à la Convention du Mètre concernant les activités des Comités consultatifs et l'élaboration du programme de travail du BIPM. Les propositions de la Recommandation 2 sont soutenues dans l'esprit mais les modalités de mise en œuvre de cette recommandation font l'objet de préoccupations.

Action CIPM/101-1 Le directeur du BIPM et le directeur du Département des relations internationales et de la communication étudieront les mesures nécessaires à la mise en œuvre de la Recommandation 2 et élaboreront un plan à cette fin.

Décision CIPM/101-7 Le CIPM exprime son accord avec la Recommandation 3 du Groupe de travail *ad hoc*.

Décision CIPM/101-8 Le CIPM décide de créer deux Sous-comités permanents pour traiter des questions relatives (a) aux finances et (b) aux pensions et à l'assurance-maladie.

Décision CIPM/101-9 Le CIPM exprime son accord avec la Recommandation 5 du Groupe de travail *ad hoc*.

Action CIPM/101-2 Le directeur du BIPM invitera les présidents des organisations régionales de métrologie à la réunion des directeurs des laboratoires nationaux de métrologie. Par ailleurs, les présidents des Comités consultatifs inviteront les présidents des comités techniques des organisations régionales de métrologie aux réunions des Groupes de travail des Comités consultatifs sur la stratégie et sur les comparaisons clés.

Décision CIPM/101-10 Le CIPM exprime son accord avec les Recommandations 6, 7, 8, 9 et 10, et cherchera à obtenir des clarifications quant au niveau de détail souhaité par le Groupe de travail *ad hoc* concernant les documents produits par le BIPM.

Action CIPM/101-3 Le secrétaire du CIPM entrera en contact avec des membres du Groupe de travail *ad hoc* pour obtenir des clarifications quant aux Recommandations 6 à 10.

Décision CIPM/101-11 Le CIPM décide que les comptes rendus seront aussi succincts que possible tout en conservant le fondement des discussions et décisions. Des résumés et listes de décisions et actions devraient être mis à la disposition des parties concernées aussi tôt que possible après les réunions.

Action CIPM/101-4 Le directeur du BIPM examinera les rapports et informations préparés par le BIPM, en indiquant ceux qui sont spécifiquement requis par la Convention du Mètre ; il analysera les possibilités de rationalisation et présentera ses conclusions au CIPM.

Décision CIPM/101-12 Le CIPM exprime son accord avec la Recommandation 11 du Groupe de travail *ad hoc*.

Décision CIPM/101-13 Le CIPM exprime son accord avec la Recommandation 12 du Groupe de travail *ad hoc*.

Décision CIPM/101-14 Le CIPM est favorable au maintien des élections provisoires, qui pourraient être fondées sur une liste de candidats proposée par le CIPM à la CGPM et selon les critères établis conformément à la Recommandation 14. Le CIPM exprime son accord de principe avec la première partie de la Recommandation 13 mais est en désaccord avec la proposition de renouveler le CIPM par moitié tous les deux ans.

Décision CIPM/101-15 Le CIPM exprime son accord de principe avec la Recommandation 14 du Groupe de travail *ad hoc*.

Décision CIPM/101-16 Le CIPM exprime son accord de principe avec la Recommandation 15 du Groupe de travail *ad hoc*.

Action CIPM/101-5 Le CIPM établira un Groupe de travail *ad hoc* sur les règles et principes relatifs à la composition du CIPM afin d'étudier les exigences des Recommandations 13, 14 et 15.

Décision CIPM/101-17 Le CIPM n'est pas d'accord avec la Recommandation 16 du Groupe de travail *ad hoc*. Le CIPM a conscience qu'il peut être nécessaire, de façon occasionnelle, de choisir un président de Comité consultatif en dehors du CIPM si les compétences nécessaires ne sont pas disponibles au sein du CIPM.

Décision CIPM/101-18 Le CIPM convient que le budget du BIPM devrait être décidé par la CGPM pour une période de quatre ans mais s'interroge sur la nécessité d'organiser une réunion de la CGPM tous les deux ans et suggère que les objectifs pourraient être atteints par le biais des réunions régulières avec les représentants des États Parties à la Convention du Mètre.

Décision CIPM/101-19 Le CIPM convient que la durée des réunions de la CGPM devrait être réduite et décide que les présidents des Comités consultatifs présenteront uniquement des rapports brefs pendant la réunion de la CGPM et se tiendront disponibles pour répondre aux questions.

Action CIPM/101-6 Le bureau du CIPM et le BIPM étudieront les moyens de réduire davantage la durée des réunions de la CGPM.

Décision CIPM/101-20 Le CIPM exprime son accord avec la Recommandation 19 du Groupe de travail *ad hoc* qui sera examinée par le Sous-comité permanent sur les pensions et l'assurance-maladie.

Décision CIPM/101-21 Le CIPM prend note de la Recommandation 20 du Groupe de travail *ad hoc* et a entrepris les actions appropriées.

Action CIPM/101-7 Trois Sous-comités permanents sur la stratégie scientifique, sur les finances, et sur les pensions et l'assurance-maladie, et deux Groupes de travail *ad hoc* sur les règles et principes relatifs à la composition du CIPM et sur les conditions d'emploi des membres du personnel du BIPM seront mis en place par le CIPM afin de le conseiller sur ces sujets. Le BIPM a déjà commencé à étudier quelles Recommandations du Groupe de travail *ad hoc* peuvent être mises en œuvre sans entrer en conflit avec la Convention du Mètre.

Décision CIPM/101-22 Après lecture des états financiers audités de 2011 du BIPM, le CIPM approuve les états financiers du BIPM de 2011 et donne quitus de sa gestion au directeur du BIPM, au titre de l'exercice financier 2011. Le CIPM décide de transférer le résultat net de l'exercice 2011 qui s'élève à -1059 milliers d'euros en « Autres réserves ». Concernant les états financiers du BIPM, le CIPM note l'opinion de l'auditeur et se montre satisfait de ses commentaires, écrits et oraux.

Décision CIPM/101-23 Après lecture des états financiers de 2011 de la Caisse de retraite et de prévoyance du BIPM, le CIPM approuve les états financiers de la Caisse de retraite et de prévoyance du BIPM de 2011 et donne quitus de sa gestion au directeur du BIPM, au titre de l'exercice financier 2011. Le CIPM décide de transférer le résultat net de l'exercice 2011 qui s'élève à -847 milliers d'euros en « Autres réserves ». Concernant les états financiers de la Caisse de retraite et de prévoyance du BIPM, le CIPM note l'opinion de l'auditeur et se montre satisfait de ses commentaires, écrits et oraux.

Décision CIPM/101-24 Le CIPM approuve la modification proposée concernant la disposition 10.2 des SRI intitulée « Échelle des traitements », en vigueur à compter du 1^{er} janvier 2013.

Décision CIPM/101-25 Le CIPM approuve la modification proposée concernant la disposition 11.10.2 des SRI intitulée « Contrat d'assurance et cotisations », en vigueur à compter du 1^{er} janvier 2013.

Décision CIPM/101-26 Le CIPM approuve la modification proposée concernant la disposition 11.10.3 des SRI intitulée « Assurance-maladie et membres du personnel pensionnés », en vigueur à compter du 1^{er} janvier 2013.

Décision CIPM/101-27 Le CIPM approuve la proposition d'appliquer de façon temporaire un plafond de 1 % à la révision annuelle du point pour les années 2013 à 2015.

Décision CIPM/101-28 Étant donné que trois sièges du CIPM seront vacants le 30 juin 2012, et en prévision de l'élection visant à pourvoir ces trois vacances, le CIPM a discuté des candidats éligibles en se fondant sur les critères existants et procédera à un vote. Le processus d'élection sera achevé au 28 juin 2012.

Action CIPM/101-8 Le président du CIPM invitera R. Davis à présider l'atelier du CCM sur la mise en pratique de la nouvelle définition du kilogramme. Le prochain président du CCM sera désigné par le CIPM lors de sa réunion en octobre 2012.

Décision CIPM/101-29 Le CIPM convient de la composition de ses Sous-comités permanents et Groupes de travail *ad hoc*. Il est décidé que chaque Sous-Comité / Groupe de travail devra élaborer ses termes de référence et rédiger des réflexions préliminaires d'ici à la mi-septembre 2012 afin de les transmettre au CIPM pour considération, puis les présenter aux représentants des États Parties à la Convention du Mètre et aux directeurs des laboratoires nationaux de métrologie en octobre 2012.

Décision CIPM/101-30 Le CIPM soutient fortement le projet de résolution proposé et convient de le présenter lors de la réunion des représentants des États Parties à la Convention du mètre et des directeurs des laboratoires nationaux de métrologie en octobre 2012, une fois que la question du sigle de l'organisation aura été étudiée.

Action CIPM/101-9 Le BIPM étudiera la question du sigle de l'organisation.

Action CIPM/101-10 Le président ou le secrétaire du CIPM contactera les présidents des sous-groupes du Groupe de travail *ad hoc* sur la gouvernance afin qu'ils présentent les conclusions de leur sous-groupe lors de la réunion des représentants des États Parties à la Convention du Mètre et des directeurs des laboratoires nationaux de métrologie en octobre 2012.

Décision CIPM/101-31 Le CIPM décide que la prochaine réunion de la CGPM aura lieu en novembre 2014.

Décision CIPM/101-32 Le CIPM approuve les changements proposés concernant le document CIPM-D-01.

Décision CIPM/101-33 Le CIPM approuve les changements proposés concernant le document CIPM 2005-05. La nouvelle référence du document CIPM 2005-05 sera « CIPM 2005-05 Rev. June 2012 ».

Décision CIPM/101-34 Le CIPM approuve les changements proposés concernant le document CIPM MRA-D-05, à l'exception de la période de trois semaines qui est portée à six semaines.

Décision CIPM/101-35 Le CIPM approuve les résolutions 28/1 et 28/2 proposées par le JCRB.

Décision CIPM/101-36 Le CIPM autorise le directeur du BIPM à signer le protocole d'accord entre le BIPM et l'AIEA.

Décision CIPM/101-37 Avec une abstention (W.E. May), le CIPM approuve la signature du CIPM MRA par l'ESA selon les critères et règles appliqués aux autres organisations internationales signataires.

Action CIPM/101-11 Le CIPM et le BIPM multiplieront leurs efforts pour encourager d'autres organisations internationales (à caractère universel ou provenant de diverses régions) à signer le CIPM MRA.

Action CIPM/101-12 Le BIPM étudiera le niveau de participation aux activités du CIPM MRA de chacune des organisations internationales signataires du CIPM MRA afin que soit examinée la possibilité de les faire contribuer financièrement à la mise en œuvre du CIPM MRA.

Décision CIPM/101-38 Le CIPM soutient le document proposé par T.J. Quinn et accepte que ce dernier le présente lors de la réunion du Groupe de travail 2 du JCGM sur le VIM.

Décision CIPM/101-39 Le CIPM approuve l'initiative de réduire les coûts liés à ses réunions.

Décision CIPM/101-40 Le CIPM convient de changer la date de la première partie de la 102^e session du CIPM :

Bureau du CIPM 17 - 18 juin 2013

Session du CIPM 19 - 21 juin 2013.

Appendix 3

SESSION I OF THE 101ST MEETING OF THE CIPM

Decisions and actions

Decision CIPM/101-1 The CIPM agreed that the minutes of the 100th meeting (2011) were confirmed by correspondence and that the printed version tabled is a true copy of what was circulated.

Decision CIPM/101-2 The CIPM approved the extension of the cooperative agreement with the NIST in chemistry.

Decision CIPM/101-3 The CIPM approved the programme of work and budget of the BIPM for the years 2013 to 2015. Noting that the budget is conservative it was agreed that additional funds that become available would preferentially be used to support BIPM activities related to the redefinition of the kilogram, as a high priority.

Decision CIPM/101-4 The CIPM agreed to cease the subsidy of the pensioners' contributions out of the health insurance reserve fund starting 1 January 2013.

Decision CIPM/101-5 Recommendation 1 of the *ad hoc* Working Group was discussed by the CIPM and a Working Group was convened to refine the proposed text.

Decision CIPM/101-6 The CIPM agreed that there is a need to change the engagement process between the CIPM, NMI Directors and representatives of States Parties to the Metre Convention related to the activities of the Consultative Committees and development of the BIPM programme of work. The suggestions in Recommendation 2 were supported in spirit but there were some concerns about the mechanisms to implement it.

Action CIPM/101-1 The BIPM Director and the Director of the International Liaison and Communication Department will examine and formulate a plan for what is needed to implement Recommendation 2.

Decision CIPM/101-7 The CIPM agreed with Recommendation 3 of the *ad hoc* Working Group.

Decision CIPM/101-8 The CIPM decided that two standing sub-committees will be established for (a) finance and (b) pensions and health insurance.

Decision CIPM/101-9 The CIPM agreed with Recommendation 5 of the *ad hoc* Working Group.

Action CIPM/101-2 The BIPM Director will invite RMO chairs to the NMI Directors' Meeting. The Consultative Committee Presidents will also invite the RMO Technical Committee chairs to the Consultative Committee Strategy and Key Comparisons Working Group meetings.

Decision CIPM/101-10 The CIPM agreed with Recommendations 6 to 10, and will seek clarification of the level of detail recommended by the *ad hoc* Working Group for the documents produced by the BIPM.

Action CIPM/101-3 The CIPM Secretary will liaise with members of the *ad hoc* Working Group to seek clarification regarding Recommendations 6 to 10.

Decision CIPM/101-11 The CIPM decided that minutes be kept as short as possible while maintaining the rationale behind the discussions and decisions. Executive summaries and lists of decisions and actions should be made available to those entitled to them as soon as possible after meetings.

Action CIPM/101-4 The BIPM Director will examine the reports and information prepared by the BIPM, indicating those specifically required under the Metre Convention, analyze where rationalizations can be made and present the information to the CIPM.

Decision CIPM/101-12 The CIPM agreed with Recommendation 11 of the *ad hoc* Working Group.

Decision CIPM/101-13 The CIPM agreed with Recommendation 12 of the *ad hoc* Working Group.

Decision CIPM/101-14 The CIPM is in favour of retaining provisional elections, possibly based on a list of candidates put forward to the CGPM and based on the criteria developed in accordance with Recommendation 14. The CIPM agreed in principle with the first part of Recommendation 13 but disagreed with the re-election of half of the CIPM every two years.

Decision CIPM/101-15 The CIPM agreed in principle with Recommendation 14 of the *ad hoc* Working Group.

Decision CIPM/101-16 The CIPM agreed in principle with Recommendation 15 of the *ad hoc* Working Group.

Action CIPM/101-5 The CIPM will establish an *ad hoc* Working Group on CIPM membership to look at the requirements of Recommendations 13, 14 and 15.

Decision CIPM/101-17 The CIPM did not agree with Recommendation 16 of the *ad hoc* Working Group. The CIPM is mindful that on occasions it may be necessary to seek a CC President from outside the CIPM if the appropriate skills are not available in the CIPM.

Decision CIPM/101-18 The CIPM agreed that the BIPM budget should be decided by the CGPM for a four year period but questioned the need to have a CGPM meeting every two years and suggested that the

objectives could be achieved through regular meetings with representatives of States Parties to the Metre Convention.

Decision CIPM/101-19 The CIPM agreed that the duration of CGPM meetings should be reduced and decided that the CC Presidents will give only short reports during the CGPM and will be available for questions.

Action CIPM/101-6 The CIPM bureau and the BIPM will examine ways and means of further reducing the duration of the CGPM meetings.

Decision CIPM/101-20 The CIPM agreed with Recommendation 19 of the *ad hoc* Working Group which will be considered by the Standing Sub-Committee on pensions and health insurance.

Decision CIPM/101-21 The CIPM took note of Recommendation 20 and has initiated the appropriate actions.

Action CIPM/101-7 A series of three Standing Sub-Committees addressing science strategy, finance, pensions and health insurance and two *ad hoc* Working Groups addressing CIPM membership and conditions of employment of BIPM staff members will be set up by the CIPM to advise it on these matters. The BIPM has already started considering which of the Recommendations of the *ad hoc* Working Group can be implemented without conflicting with the Metre Convention.

Decision CIPM/101-22 After due consideration of the 2011 BIPM audited financial statements, the CIPM approved the 2011 BIPM financial statements and discharged the Director of the BIPM from all liability in respect of his administration for the 2011 financial period. The CIPM decided to transfer to the ‘Other reserves’ the net result for the 2011 period which amounts to –1059 thousand Euros. With regard to the BIPM financial statements, the CIPM noted the qualified opinion of the auditor and was satisfied by comments from the auditor, both written and oral.

Decision CIPM/101-23 After due consideration of the 2011 audited BIPM Pension and Provident Fund financial statements, the CIPM approved the 2011 BIPM Pension and Provident Fund financial statements and discharged the Director of the BIPM from all liability in respect of his administration for the 2011 financial period. The CIPM decided to transfer to the ‘Other reserves’ the net result for the 2011 period which amounts to –847 thousand Euros. With regard to the BIPM Pension and Provident Fund financial statements, the CIPM noted the qualified opinion of the auditor and was satisfied by comments from the auditor, both written and oral.

Decision CIPM/101-24 The CIPM approved the modification to Regulation 10.2 of the RRI, entitled Salaries scale, effective 1 January 2013.

Decision CIPM/101-25 The CIPM approved the modification to Rule 11.10.2 of the RRI, entitled Insurance contract and contributions, effective 1 January 2013.

Decision CIPM/101-26 The CIPM approved the modification to Rule 11.10.3 of the RRI, entitled Health insurance and retired staff members, effective 1 January 2013.

Decision CIPM/101-27 The CIPM approved the proposal that the point be adjusted temporarily during the period 2013-2015 by a maximum of 1 % on an annual basis.

Decision CIPM/101-28 As there will be three vacancies on 30 June 2012, and in view of the election to fill these 3 vacancies, the CIPM has discussed all eligible candidates in light of the existing criteria, and will go to a vote. The election process will be completed by 28 June 2012.

Action CIPM/101-8 The CIPM President will invite Dr R. Davis to chair the CCM Workshop on the *mise en pratique* of the new definition of the kilogram. The next President of the CCM will be decided at the CIPM meeting in October 2012.

Decision CIPM/101-29 The CIPM agreed on the composition of the CIPM Standing Sub-Committees and *ad hoc* Working Groups. It decided that each should draft terms of reference and preliminary thoughts available by mid-September 2012 for circulation and consideration by the CIPM and presentation to the representatives of States Parties to the Metre Convention and NMI Directors in October 2012.

Decision CIPM/101-30 The CIPM strongly supported this proposed Draft Resolution [on the name of the intergovernmental organization created by the Metre Convention] and agreed that this will be presented at the meeting of representatives of States Parties to the Metre Convention and NMI Directors in October 2012, after the question of the acronym of the organization has been addressed.

Action CIPM/101-9 The BIPM will address the question of the acronym of the organization.

Action CIPM/101-10 The CIPM President or Secretary will contact the chairs of the break-out groups of the *ad hoc* Working Group to make a presentation of their respective sessions at the meeting of representatives of States Parties to the Metre Convention and NMI Directors in October 2012.

Decision CIPM/101-31 The CIPM agreed that the next meeting of the CGPM will be held in November 2014.

Decision CIPM/101-32 The CIPM approved the proposed changes to document CIPM-D-01.

Decision CIPM/101-33 The CIPM approved the proposed changes to document CIPM 2005-05. The document CIPM 2005-05 will be referenced CIPM 2005-05 Rev. June 2012.

Decision CIPM/101-34 The CIPM approved the proposed changes to document CIPM MRA-D-05 with the exception of the three week period which will be extended to six weeks.

Decision CIPM/101-35 The CIPM approved the JCRB proposed resolutions 28/1 and 28/2.

Decision CIPM/101-36 The CIPM authorized the Director of the BIPM to sign the Memorandum of Understanding between the BIPM and the IAEA.

Decision CIPM/101-37 With one abstention (Dr W.E. May), the CIPM approved the signature of the CIPM MRA by the ESA under the same criteria and rules applying to the other signatory international organizations.

Action CIPM/101-11 The CIPM and BIPM will increase their efforts to encourage signature of the CIPM MRA by other relevant international organizations (world-wide and from other regions).

Action CIPM/101-12 The BIPM will examine the level of participation in the CIPM MRA of each international organization signatory of the CIPM MRA so as to review if they should contribute financially to the operation of the CIPM MRA.

Decision CIPM/101-38 The CIPM supported the document proposed by Dr T.J. Quinn and for him to make a presentation at the meeting of the JCGM Working Group 2 on the VIM.

Decision CIPM/101-39 The CIPM supported the initiative to reduce the costs in connection with its meetings.

Decision CIPM/101-40 The CIPM agreed to change the date of Session I of the 102nd meeting of the CIPM to the following:

CIPM bureau	17 to 18 June 2013
CIPM meeting	19 to 21 June 2013.

Annexe 4

RAPPORT DU SECRÉTAIRE ET ACTIVITÉS DU BUREAU DU CIPM

(juin 2012 - octobre 2012)

Ce rapport constitue la seconde partie du rapport du secrétaire présenté lors de la 101^e session du CIPM. La première partie du rapport a été soumise au CIPM le 6 juin 2012.

1. Réunions du bureau du CIPM

Depuis la précédente réunion du CIPM qui s'est tenue du 6 au 8 juin 2012, le bureau du CIPM s'est réuni les 14 et 15 octobre 2012 au siège du BIPM.

Par ailleurs, le secrétaire du CIPM s'est rendu à deux reprises au siège du BIPM : le 25 juin 2012 afin de discuter des questions d'information et de communication suite aux recommandations formulées par le Groupe de travail *ad hoc* sur le rôle, la mission, les objectifs, la stabilité financière à long terme, la direction stratégique et la gouvernance du BIPM, ainsi que le 5 octobre 2012 afin de participer à la réunion annuelle d'examen du Système de management de la qualité et à celle du Système de management de la santé et de la sécurité du BIPM.

Les membres du bureau du CIPM ont régulièrement communiqué par courriels et par téléphone entre juin et octobre 2012 afin de préparer la réunion des représentants des États Parties à la Convention du Mètre et des directeurs des laboratoires nationaux de métrologie (16 et 17 octobre 2012), ainsi que la réunion du CIPM (18 et 19 octobre 2012).

2. Composition du CIPM

Le CIPM a élu de façon provisoire trois nouveaux membres du CIPM en raison des sièges devenus vacants au sein du CIPM entre janvier et juin 2012 :

- Brian Bowsher, directeur général du laboratoire national de métrologie britannique, le National Physical Laboratory (NPL, Royaume-Uni de Grande Bretagne et d'Irlande du Nord) ;
- Vladimir Krutikov, directeur de l'Institut de recherche de Russie pour les mesures en optique physique VNIIOFI, Fédération de Russie, et président de l'organisation régionale de métrologie COOMET ;
- Takashi Usuda, directeur du Metrology Management Center (MMC) et directeur adjoint du laboratoire national de métrologie japonais, le National Metrology Institute of Japan (NMIJ, Japon).

Depuis la précédente réunion du CIPM, trois membres du CIPM ont informé le bureau du CIPM de leur intention de démissionner de leurs fonctions à la fin de 2012 : il s'agit de E.O. Göbel, F. Hengstberger et W. Schwitz. Conformément aux dispositions applicables, une élection provisoire, qui tiendra compte des conclusions des discussions de la réunion des représentants des États Parties à la Convention du Mètre et des directeurs des laboratoires nationaux de métrologie (16 et 17 octobre 2012), pourrait avoir lieu après le 30 novembre 2012.

Les *Curriculum Vitae* de candidats potentiels ont été précédemment distribués aux membres du CIPM.

3. Prochain directeur du BIPM

Au cours de la première partie de la 101^e session du CIPM en juin 2012, le CIPM a élu Martin Milton comme prochain directeur du BIPM. Le bureau du CIPM a notifié à M. Milton son engagement en tant que sous-directeur, directeur désigné à compter du 1^{er} octobre 2012 et en tant que directeur à compter du 1^{er} janvier 2013, ainsi que ses des conditions d'emploi associées. Martin Milton succèdera à Michael Kühne dont le départ à la retraite est prévu le 31 décembre 2012.

4. États Parties à la Convention du Mètre (États Membres) et Associés à la CGPM (Associés)

Aucun État n'a accédé à la Convention du Mètre depuis la première partie de la 101^e session du CIPM en juin 2012, le nombre d'États Membres demeure donc de 56. Il est à espérer que la Colombie devienne prochainement État Membre, ce qui doit néanmoins encore être confirmé.

La République de Namibie a accédé au statut d'Associé à la CGPM le 10 août 2012, ce qui porte le nombre d'Associés à 37.

5. États Membres ayant des contributions arriérées datant de plus de six ans

Un accord de rééchelonnement concernant les contributions arriérées de la République dominicaine a été signé entre le Gouvernement de la République dominicaine et le CIPM le 1^{er} août 2012. La République dominicaine reste donc Partie à la Convention du Mètre. La République dominicaine a versé sa contribution de 2012 mais n'a pas encore réglé le premier versement annuel convenu dans l'accord de rééchelonnement. À réception de ce premier versement, la République dominicaine pourra de nouveau bénéficier des avantages et prérogatives conférés par l'adhésion à la Convention du Mètre.

Un accord de rééchelonnement concernant les contributions arriérées de la République islamique d'Iran a été signé entre le Gouvernement de la République islamique d'Iran et le CIPM le 17 octobre 2012, après une série de réunions intensives avec des représentants de l'ambassade d'Iran à Paris.

Au 18 octobre 2012, aucun accord de rééchelonnement n'a été conclu avec les deux autres États ayant des arriérés depuis plus de six ans, la République du Cameroun et la République populaire démocratique de Corée bien que le directeur administratif et financier du BIPM ait maintenu des contacts réguliers avec les représentants de ces deux États. Chacun de ces États a été informé qu'en l'absence d'accord de rééchelonnement conclu avant le 21 octobre 2012, il serait automatiquement exclu, conformément à la Résolution 6 adoptée par la CGPM à sa 24^e réunion (2011). En application de la Résolution 8 adoptée par la CGPM à sa 23^e réunion (2007), si un État exclu souhaite de nouveau accéder à la Convention du Mètre, il doit acquitter le reliquat de ses contributions arriérées ainsi qu'une contribution d'entrée.

6. Questions administratives et de personnel

- 6.1 Le BIPM a commencé à examiner quelles actions étaient nécessaires pour mettre en œuvre les recommandations du Groupe de travail *ad hoc* et, en particulier, quelles recommandations pouvaient être mises en place immédiatement au vu des dispositions applicables de la Convention du Mètre. Il a par ailleurs étudié le contenu et le format des documents et informations fournis aux États Membres.

Le CIPM, lors de sa réunion de juin 2012, a proposé que le secrétaire du CIPM entre en contact avec des membres du Groupe de travail *ad hoc* afin d'obtenir des clarifications sur les Recommandations 6 à 10 formulées par le Groupe de travail *ad hoc*. Le secrétaire du CIPM a ainsi invité certains membres du

Groupe de travail *ad hoc* à discuter du niveau de détails souhaité concernant les rapports du BIPM et du CIPM. Une réunion a ainsi été organisée le 25 juin 2012 au siège du BIPM entre le secrétaire du CIPM, le directeur administratif et financier du BIPM, le directeur du Département des relations internationales et de la communication du BIPM, et F. Weritz (Allemagne); R. Gunn (Royaume-Uni de Grande Bretagne et d'Irlande du Nord), C. Lagauterie (France) et C. Bock (Suisse) avaient fait part de leurs commentaires par courriel. Le BIPM a depuis commencé à mettre en œuvre les propositions faites au cours de cette réunion.

- 6.2 Après avoir consulté le bureau du CIPM, le BIPM a préparé des modèles de tableau au format Excel donnant un aperçu général des comparaisons conduites par les Comités consultatifs afin d'aider les Comités à élaborer leur stratégie. L'objectif est de faciliter l'élaboration et d'harmoniser la présentation des plans stratégiques des Comités consultatifs.
- 6.3 En raison de l'absence temporaire de A. Picard, directeur du Département des masses du BIPM, M. Stock, directeur du Département de l'électricité, a été nommé directeur par intérim du Département des masses.
- 6.4 Le CIPM a décidé, par correspondance, d'autoriser le BIPM à acheter du platine iridium pour un montant de 300 000 euros dans le cadre du budget du BIPM de 2012. Cet achat permettra au BIPM de répondre aux demandes de plusieurs laboratoires nationaux de métrologie souhaitant que leur soient fournis des prototypes de masse de 1 kg en platine iridié. Cet achat sera financé à partir du Fonds d'investissement jusqu'à ce qu'il soit procédé au paiement de la fourniture des prototypes. Il sera procédé à un transfert vers le Fonds d'investissement à la réception des règlements aux fins de reconstituer le Fonds.

7. Présidence des Comités consultatifs

- 7.1 Les présidents du Comité consultatif de l'acoustique, des ultrasons et des vibrations (CCAUV) et du Comité consultatif des longueurs (CCL) étant dans l'incapacité d'assister à la réunion de leur Comité en 2012, et suite à une proposition faite par le bureau du CIPM, le CIPM a pris les dispositions nécessaires pour que les sessions de 2012 du CCAUV et du CCL puissent être présidées.
- 7.2 Le bureau du CIPM présentera une proposition pour discussion et vote concernant le siège vacant de président du Comité consultatif pour la masse et les grandeurs apparentées (CCM).

8. Système Qualité et Système de santé et de sécurité au travail du BIPM

- 8.1 Le Système de management de la qualité du BIPM a été examiné lors de la réunion annuelle d'examen qui s'est tenue le 5 octobre 2012 et à laquelle le secrétaire du CIPM a assisté.

Le Manuel Qualité du BIPM, conforme à la norme ISO/CEI 17025:2005 et au Guide ISO 34:2009, a été approuvé et mis en œuvre. Les résultats des examens sur site par les pairs qui ont eu lieu en septembre 2011 et en septembre 2012 (audits internes et externes) ont été discutés. Aucune non-conformité majeure n'a été observée. Des non-conformités mineures et des recommandations d'amélioration ont été traitées.

Une liste d'indicateurs clés de performance sera complétée et améliorée. Tous les résultats obtenus à l'aide de ces indicateurs sont très satisfaisants. Aucune réclamation majeure n'a été reçue. Un formulaire de satisfaction est envoyé aux clients du BIPM mais seules quelques réponses ont été retournées au BIPM. Il est suggéré de préparer à l'intention des auditeurs un document précisant les paragraphes pertinents de la norme ISO/CEI 17025:2005 et du Guide ISO 34:2009 qui s'appliquent au BIPM ainsi

qu'un modèle d'attestation concernant les résultats d'audit et les services du BIPM couverts par le Système Qualité est requise.

- 8.2 Un nouveau Manuel Santé et Sécurité au travail du BIPM, conforme à la norme BS OHSAS 18001:2007 et aux réglementations françaises pertinentes qui s'appliquent au BIPM, a été rédigé et approuvé ; il est en cours de mise en œuvre. La première des réunions régulières d'examen du Système de management de la santé et de la sécurité au travail a eu lieu le 5 octobre 2012 et le secrétaire du CIPM y a assisté.

Des audits internes et externes ont été, et seront, régulièrement menés concernant les points suivants :

- la sécurité incendie ;
- la présence d'amiante, de plomb et de mercure dans les bâtiments du BIPM ;
- le risque de fuites radioactives et de contamination liées aux rayonnements ionisants.

Les résultats finaux de ces audits devraient être disponibles en 2013 et pourraient conduire à prendre des mesures supplémentaires en matière de santé et de sécurité, telles que des travaux d'amélioration concernant les bâtiments, le déplacement de certains bureaux, la mise en place d'actions préventives, ainsi que l'installation d'équipements de surveillance mains/pieds à la sortie des laboratoires où sont manipulés des radionucléides

Dans le cadre du contrôle des accidents et incidents, aucun accident ou incident majeur n'est survenu entre juin et octobre 2012. La définition des termes « accident » et « incident » est en cours de révision.

La mise en œuvre du Manuel Santé et Sécurité au travail du BIPM sera finalisée en 2013. Les répercussions potentielles des audits effectués, et les coûts associés, seront présentés au CIPM.

La mise en œuvre du Système de management de la santé et de la sécurité au travail du BIPM constitue un progrès important et contribue au bien-être des membres du personnel et des visiteurs du BIPM.

9. **Questions relatives aux Recommandations formulées par le Groupe de travail *ad hoc* sur le rôle, la mission, les objectifs, la stabilité financière à long terme, la direction stratégique et la gouvernance du BIPM, et réunions des représentants des États Membres et des directeurs des laboratoires nationaux de métrologie**

Faisant suite aux recommandations du Groupe de travail *ad hoc* sur le rôle, la mission, les objectifs, la stabilité financière à long terme, la direction stratégique et la gouvernance du BIPM, les présidents des Sous-comités permanents du CIPM sur la stratégie scientifique, sur les finances, et sur les pensions et l'assurance-maladie, et des Groupes de travail *ad hoc* du CIPM sur les règles et principes relatifs à la composition du CIPM et sur les conditions d'emploi, qui ont été mis en place par le CIPM lors de la première partie de la 101^e session du CIPM en juin 2012, ont préparé leurs termes de référence afin de les soumettre au CIPM pour considération et approbation.

10. Le CIPM MRA

Le CIPM MRA a été signé par :

- le Botswana Bureau of Standards (BOBS), Botswana, le 26 juillet 2012,
- le National Standards and Calibration Laboratory (NSCL), République arabe syrienne, le 17 septembre 2012,
- le Centre européen de recherche et de technologie spatiales (ESTEC) au nom de l'Agence spatiale européenne (ESA) le 8 octobre 2012,
- le Namibian Standards Institution (NSI), Namibie, le 17 octobre 2012,

ce qui porte le nombre de signataires du CIPM MRA à 91, provenant de 51 États Membres, 36 Associés, et 4 organisations internationales (AIEA¹, IRMM², OMM³, ESA).

Le JCRB s'est réuni les 25 et 26 septembre 2012 au NIST, Gaithersburg, États-Unis d'Amérique. Un compte rendu des activités du JCRB sera présenté ultérieurement au CIPM.

11. Relations avec d'autres organisations

- 11.1 La coopération entre le BIPM, l'International Federation for Clinical Chemistry and Laboratory Medicine (IFCC) et l'International Laboratory Accreditation Cooperation (ILAC) au sein du Comité Commun pour la traçabilité en médecine de laboratoire (JCTLM) se fonde sur une déclaration de coopération. Le Comité exécutif du JCTLM a approuvé en décembre 2011 une version modifiée de la déclaration de coopération et de ses annexes, les changements apportés concernant la traçabilité et des exigences faisant référence à une série de normes ISO dans le domaine de la chimie clinique. Cette version a été soumise au CIPM pour commentaires et approbation.
- 11.2 En réponse aux discussions menées précédemment en 2012 avec les représentants des organisations régionales de métrologie, le BIPM a créé un espace de travail dénommé « DevMet workspace » sur son site internet : l'objectif est de faciliter et améliorer la communication et la coopération entre les organisations régionales de métrologie afin de soutenir les laboratoires nationaux de métrologie de petite taille, émergents ou en développement.
- 11.3 Les contacts et la coopération continuent dans le cadre du réseau DCMAS⁴. Le directeur du Département des relations internationales et de la communication du BIPM participera à une réunion du réseau DCMAS qui se tiendra à Rio de Janeiro, Brésil, en octobre 2012. Cette réunion est liée à des réunions de l'assemblée générale de l'ILAC, du Joint Development Support Committee de l'ILAC et de l'International Accreditation Forum (IAF), et du Comité de l'ILAC sur les questions d'accréditation.
- 11.4 Un protocole d'accord a été signé entre le BIPM et l'AIEA le 25 juin 2012 afin de formaliser plus de 50 années de coopération dans le domaine des rayonnements ionisants et, plus récemment, dans le domaine de la chimie.

¹ Agence internationale de l'énergie atomique

² Institut des matériaux et mesures de référence

³ Organisation météorologique mondiale

⁴ Réseau pour la coordination de l'assistance aux pays en voie de développement dans les domaines de la métrologie, de l'accréditation et de la normalisation

Appendix 4

REPORT OF THE SECRETARY AND ACTIVITIES OF THE BUREAU OF THE CIPM

(June 2012-October 2012)

This report is the second part of the Secretary's report to the CIPM at its 101st meeting. The first part was presented to the CIPM on 6 June 2012.

1. Meetings of the bureau of the CIPM (the "bureau")

Since the previous meeting of the CIPM on 6 to 8 June 2012, the bureau has met once on 14 to 15 October 2012 at the BIPM headquarters.

The Secretary visited the BIPM headquarters on two other occasions: on 25 June 2012, addressing information and communication issues as a result of the recommendations made by the *ad hoc* Working Group on the Role, Mission, Objectives, Long-Term Financial Stability, Strategic Direction and Governance of the BIPM; and on 5 October 2012 attending the annual Quality System Management Review and Health and Safety Management Review meetings.

During the period June-October 2012 frequent email and telephone communication between the members of the bureau took place in preparation for the meeting of representatives of States Parties to the Metre Convention and of Directors of National Metrology Institutes on 16 to 17 October 2012 and the meeting of the CIPM on 18 to 19 October 2012.

2. CIPM Membership

The CIPM provisionally elected the following three new members of the CIPM as a consequence of vacancies in the CIPM which arose during the period January-June 2012:

- Dr Brian Bowsher, Managing Director of the British National Metrology Institute, the National Physical Laboratory (NPL, UK)
- Prof. Vladimir Krutikov, Director of the Institute for Optico-Physical Measurements, Rostekhnregulirovaniye of Russia (VNIIOFI, Russian Federation), and President of the Regional Metrology Organization COOMET
- Dr Takashi Usuda, Director of the Metrology Management Center (MMC) and Deputy Director of the National Metrology Institute of Japan (NMIJ, Japan).

Since the previous meeting of the CIPM, the bureau had received announcements of intent to resign from the CIPM by the end of 2012 from three Members: Prof. Dr E. Göbel, Dr F. Hengstberger and Dr W. Schwitz. In accordance with the applicable rules, a provisional election may take place after 30 November 2012, taking into account the outcome of the discussions with the representatives of States Parties to the Metre Convention and NMI Directors on 16 to 17 October 2012.

The CVs of potential candidates had previously been circulated to the CIPM.

3. Director of the BIPM

The CIPM elected Dr Martin Milton as the next Director of the BIPM during session I of its 101st meeting in June 2012. The bureau notified Dr Milton of his appointment and conditions of employment as Deputy Director/Director Designate starting on 1 October 2012 and as Director starting on 1 January 2013. Dr Martin Milton will succeed Prof. Michael Kühne as the Director of the BIPM following his retirement on 31 December 2012.

4. Member States of the BIPM (Member States) and Associates of the CGPM (Associates)

No further States have acceded to the Metre Convention since session I of the 101st meeting of the CIPM which took place in June 2012. The number of Member States remains at 56. It is expected that Colombia will become a Member State in the near future, but this has still to be confirmed.

The Republic of Namibia became an Associate of the CGPM on 10 August 2012, bringing the number of Associates to 37.

5. Member States in financial arrears for more than six years

A rescheduling agreement of the financial arrears of the Dominican Republic was signed between the Government of the Dominican Republic and the CIPM on 1 August 2012. The Dominican Republic therefore remains a State Party to the Metre Convention. The Dominican Republic has settled its 2012 contribution but has still to settle the first annual payment in accordance with the rescheduling agreement. On receipt of this outstanding payment, the Dominican Republic will again benefit from the advantages and prerogatives conferred by accession to the Metre Convention.

A rescheduling agreement of the arrears of the Islamic Republic of Iran was signed between the Government of the Islamic Republic of Iran and the CIPM on 17 October 2012, following a series of intensive meetings with the staff of the Iranian Embassy in Paris.

On 18 October 2012, no rescheduling agreement had been concluded with the other two States, the Republic of Cameroon and the Democratic People's Republic of Korea, both having arrears of more than six years. Continued and regular contact has taken place between the BIPM Financial and Administrative Director and representatives of these two States. Each of the States concerned has been made aware that, if no agreement has been concluded before 21 October 2012, as a result of the Resolution 6 adopted by the CGPM at its 24th meeting (2011), they will automatically be excluded. In accordance with Resolution 8 adopted by the CGPM at its 23th meeting (2007), if the excluded States wish to accede to the Metre Convention in the future, each would have to pay its arrears together with an entrance contribution.

6. BIPM administrative and staff matters

- 6.1 The BIPM has started to review the necessary actions needed to implement the recommendations made by the *ad hoc* Working Group on the Role, Mission, Objectives, Long-Term Financial Stability, Strategic Direction and Governance of the BIPM, in particular which of the recommendations can be implemented without conflicting with the Metre Convention, and the content and format of the documentation and information provided to Member States.

The CIPM proposed in its June 2012 meeting that the Secretary of the CIPM would liaise with members of the *ad hoc* WG to clarify Recommendations 6 to 10 made by the *ad hoc* Working Group on the Role,

Mission, Objectives, Long-Term Financial Stability, Strategic Direction and Governance of the BIPM. The Secretary therefore invited some of the members of the *ad hoc* Working Group on the Role, Mission, Objectives, Long-Term Financial Stability, Strategic Direction and Governance of the BIPM to discuss in greater depth details of the content of BIPM and CIPM reports. The resultant meeting took place on 25 June 2012 at the BIPM headquarters between the Secretary of the CIPM, the BIPM Financial and Administrative Director, the BIPM International Liaison and Communication Department Director and F. Weritz (Germany), with email input from R. Gunn (United Kingdom), C. Lagauterie (France) and C. Bock (Switzerland). The BIPM has since begun to implement the suggestions made during this meeting.

- 6.2 Following consultation with the bureau, the BIPM has prepared Excel table templates with an overview of comparisons carried out by Consultative Committees (CCs) to support the CCs in their strategy discussions. The aim is to facilitate and harmonize the reporting and presentation of the strategic working plans of the Consultative Committees.
- 6.3 Due to the temporary absence of Mr A. Picard, Director of the BIPM Mass Department, Dr M. Stock, Director of the Electricity Department, has been appointed as *ad interim* Director of the Mass Department.
- 6.4 The CIPM decided by correspondence to authorize the BIPM to buy platinum-iridium for 300 000 Euros as part of the BIPM 2012 budget. This purchase will allow the BIPM to respond to requests by several NMIs for the supply of Pt-Ir kg mass prototypes. The purchase will be financed from the Capital Investment Fund (CIF) until payment for the supply of these prototypes is received. A transfer to the CIF will be made to replenish the CIF on receipt of these payments.

7. Presidency of Consultative Committees

- 7.1 Due to the unavailability of the Presidents of the Consultative Committee for Acoustics, Ultrasound and Vibration (CCAUV) and the Consultative Committee for Length (CCL) for their meetings in 2012, and further to a proposal made by the bureau, the CIPM has taken action to ensure the chairmanship of the 2012 meetings of the CCAUV and the CCL.
- 7.2 A proposal for the position of the next President of the Consultative Committee for Mass and Related Quantities (CCM) will be presented by the bureau for discussion and decision.

8. BIPM's Quality and Health and Safety Systems

- 8.1 The BIPM Quality Management System was reviewed in the annual Quality Management System Review meeting on 5 October 2012. This meeting was attended by the CIPM Secretary.

An integrated BIPM Quality Manual, which complies with ISO/IEC 17025:2005 and the ISO Guide 34:2009 has been approved and implemented. The results of the regular internal and external on-site peer reviews which took place during the period September 2011 and September 2012 were discussed. No major non-compliances had been observed. Minor non-compliances and recommendations for improvement have been addressed.

A list of Key Performance Indicators (KPIs) will be further completed and improved. All KPI scores are very satisfactory. No serious complaints had been received. Customers are sent a customer satisfaction form, but few responses are received. It was suggested that a template for auditors is developed which addresses all the relevant paragraphs in ISO/IEC 17025 and ISO Guide 34, and a clear attestation with respect to the audit results and the coverage of the BIPM services by the quality system is requested.

- 8.2 A new and complete BIPM Occupational Health and Safety Manual which complies with BS OHSAS 18001:2007 and with French regulations, where these are relevant, has been drafted and approved and is being implemented. The first systematic Occupational Health and Safety Management Review meeting took place on 5 October 2012. This meeting was attended by the CIPM Secretary.

Regular internal and external audits have been and will be carried out, and include:

- a fire audit;
- an asbestos, lead and mercury audit, and
- an ionizing radiation contamination/leakage audit.

The final results of these audits are expected in 2013 and may lead to extra measures being taken, for example, with respect to improvements to buildings, the relocation of bureau accommodation and prevention measures, as well as the installation of additional hand and foot monitoring equipment at the exit of the radionuclide handling laboratory.

Accidents and incidents are monitored and no serious accidents or incidents took place during the reporting period. The definition of accidents and incidents is under review.

Full implementation of the BIPM Occupational Health and Safety Manual will be completed in 2013. The eventual consequences of the audits will be presented together with the related costs.

Implementation of the Occupational Health and Safety System at the BIPM is an important improvement contributing to the well-being of both BIPM staff and visitors.

9. **Matters related to Recommendations made by the *ad hoc* Working Group on the Role, Mission, Objectives, Long-Term Financial Stability, Strategic Direction and Governance of the BIPM and meeting with Representatives of the Member States and NMI Directors**

As a follow-up to the recommendations made by the *ad hoc* Working Group on the Role, Mission, Objectives, Long-Term Financial Stability, Strategic Direction and Governance of the BIPM, the chairs of the CIPM Sub-Committees on Science Strategy, Finance and Pensions and Health Insurance, and *ad hoc* Working Groups on CIPM Membership and Conditions of Employment, created by the CIPM at session I of its 101st meeting in June 2012, have drafted Terms of Reference for consideration, development and approval by the CIPM.

10. **The CIPM MRA**

The CIPM MRA was signed by:

- the Botswana Bureau of Standards (BOBS), Botswana, on 26 July 2012,
- the National Standards and Calibration Laboratory (NSCL), Syrian Arab Republic, on 17 September 2012,
- the European Space Research and Technology Centre (ESTEC) on behalf of the European Space Agency (ESA), on 8 October 2012,
- the Namibian Standards Institution (NSI), Namibia, on 17 October 2012,

bringing the number of signatories of the CIPM MRA to 91 Institutes/NMIs from 51 Member States and 36 Associates and 4 international organizations (IAEA¹, IRMM², WMO³, ESA).

The JCRB met on 25 to 26 September 2012 at the NIST in Gaithersburg, USA. A report of JCRB activities will be given to the CIPM later in the agenda.

11. Relations with other bodies

- 11.1 The cooperation in the Joint Committee for Traceability in Laboratory Medicine (JCTLM) between the BIPM, the International Federation for Clinical Chemistry and Laboratory Medicine (IFCC) and the International Laboratory Accreditation Cooperation (ILAC) is based on a Declaration of Cooperation. A modified Declaration of Cooperation with its Appendices, with respect to traceability and other requirements that refer to a series of relevant clinical chemistry International Organization for Standardization (ISO) standards was approved by the JCTLM Executive in December 2011. This document has been tabled for consideration and approval by the CIPM.
- 11.2 As a result of discussions with representatives of RMOs held earlier in 2012, the BIPM has opened a so-called 'DevMet workspace' on its website. The aim is to facilitate better communication and cooperation between the RMOs in support of small, emerging and developing NMIs.
- 11.3 Contacts and cooperation within the scope of the DCMAS Network will continue. The BIPM International Liaison and Communication Department Director will attend a DCMAS Network meeting to be held in Rio de Janeiro, Brazil, in October 2012. The meeting is linked to meetings of the ILAC General Assembly, the International Accreditation Forum (IAF)/ILAC Joint Development Support Committee and the ILAC Accreditation Issues Committee (AIC).
- 11.4 A Memorandum of Understanding was signed by the BIPM and the IAEA on 25 June 2012 formalizing more than 50 years of cooperation in the field of ionizing radiation and more recently in the field of chemistry.

¹ International Atomic Energy Agency

² Institute for Reference Materials and Measurements

³ World Meteorological Organization

Annexe 5

**RÉUNION DES REPRÉSENTANTS DES ÉTATS PARTIES À LA CONVENTION DU MÈTRE
ET DES DIRECTEURS DES LABORATOIRES NATIONAUX DE MÉTROLOGIE
16-17 OCTOBRE 2012**

**CONCLUSIONS SUR LES RECOMMANDATIONS
DU GROUPE DE TRAVAIL AD HOC SUR LE RÔLE, LA MISSION, LES OBJECTIFS, LA
STRATÉGIE A LONG TERME ET LA GOUVERNANCE DU BIPM**

Recommandation 1 : « Formuler une déclaration claire et succincte sur le rôle, la mission et les objectifs du BIPM, en se fondant sur les objectifs initiaux fixés par la Convention du Mètre réinterprétés à la lumière du 21^e siècle. »

Conclusion

Les représentants des États Parties et les directeurs des laboratoires nationaux de métrologie soutiennent l'établissement d'une déclaration sur la mission, le rôle et les objectifs du BIPM et encouragent le CIPM à faire de rapides progrès afin de parvenir dès que possible à une déclaration acceptable.

Recommandation 2 : « Le BIPM/CIPM doit élaborer un processus de planification consolidé, ce qui nécessite :

- a) que les plans stratégiques à moyen et long termes des Comités consultatifs, ainsi que les programmes de comparaisons clés qui en résultent, soient mis à disposition sur le site internet du BIPM et envoyés par e-mail aux directeurs des laboratoires nationaux de métrologie pour commentaires et suggestions,*
- b) que les commentaires et suggestions des directeurs des laboratoires nationaux de métrologie soient transmis au CIPM afin que celui-ci consolide les plans stratégiques, fixe les priorités et élabore la stratégie du BIPM ainsi que son programme de travail et budget,*
- c) que les plans consolidés et les priorités fixées, accompagnés d'une analyse financière, soient transmis aux représentants des gouvernements et directeurs des laboratoires nationaux de métrologie pour commentaires et suggestions,*
- d) que la version finale du projet de programme de travail et budget du BIPM, ainsi que l'analyse, soient présentées lors d'une réunion commune aux directeurs des laboratoires nationaux de métrologie et aux représentants des gouvernements,*

et doit prendre en considération les points suivants :

- les activités du BIPM doivent se concentrer sur celles qui apportent une valeur ajoutée par rapport à ce qui peut être réalisé par les laboratoires nationaux de métrologie,*
- les priorités doivent être fixées dans le cadre du processus de planification consolidé, en identifiant à la fois les besoins de la métrologie dans son ensemble ainsi que le rôle et les aptitudes du BIPM dans l'exécution des activités requises,*

- *les options doivent inclure toutes les implications budgétaires,*
- *une mise à jour annuelle des plans des Comités consultatifs doit être effectuée en consultation avec les directeurs des laboratoires nationaux de métrologie. »*

Conclusion

Les représentants des États Parties et les directeurs des laboratoires nationaux de métrologie soutiennent les objectifs fixés, accueillent favorablement les progrès effectués et approuvent le calendrier prévu. Il est reconnu que l'élaboration d'un processus concernant la stratégie constitue une activité permanente et itérative. La structure de ce processus doit être préparée avant la fin de 2012.

Recommandation 3 : *« Il est demandé aux directeurs des laboratoires nationaux de métrologie et aux représentants des gouvernements de s'intéresser activement à l'élaboration de la stratégie à long terme du BIPM et des programmes de travail et budgets successifs, en répondant dans le délai imparti aux propositions soumises (absence de réponse valant acquiescement). »*

Conclusion

Les représentants des États Parties et les directeurs des laboratoires nationaux de métrologie expriment leur accord avec la Recommandation 3.

Recommandation 4 : *« Le plan financier à long terme, incluant les investissements (et couvrant les bâtiments, les équipements, le personnel, les actifs et les passifs tels que la Caisse de retraite et de prévoyance), devrait être fourni aux États Membres et inclure un certain nombre de scénarios possibles. »*

Conclusion

Les représentants des États Parties et les directeurs des laboratoires nationaux de métrologie encouragent le Sous-comité permanent du CIPM sur les finances à poursuivre son travail afin d'accroître la confiance et d'améliorer la transparence, et à mettre au point des mécanismes sur la façon de mettre en place les conclusions qu'il tirera de son examen des questions financières.

Recommandation 5 : *« Les présidents des organisations régionales de métrologie devraient être invités à participer aux réunions des directeurs des laboratoires nationaux de métrologie, et les présidents des comités techniques des organisations régionales de métrologie aux réunions des Groupes de travail des Comités consultatifs sur la stratégie et sur les comparaisons clés. »*

Conclusion

Les représentants des États Parties et les directeurs des laboratoires nationaux de métrologie soutiennent

la Recommandation 5.

Recommandation 6 : « *Le CIPM produira et tiendra à jour un(des) document(s) compact(s), facilement lisible(s) et compréhensible(s) comprenant une compilation de toutes les règles actuellement applicables et décrivant le BIPM dans ses processus de fonctionnement et de prise de décision (y compris les termes de référence, etc., du CIPM, en tant qu'organe directeur du BIPM, et des autres organes). Toutes ces informations devraient être disponibles à un seul endroit facilement accessible.* »

Recommandation 7 : « *Un résumé annuel de quatre pages, présentant les réalisations, la planification, la situation financière, les audits, les ressources humaines, les relations avec les autres organisations, et accompagné d'un index des rapports détaillés, devrait être préparé et envoyé aux États Membres et aux laboratoires nationaux de métrologie.* »

Recommandation 8 : « *Un résumé mettant en évidence les points clés et incluant les conséquences et tendances à long terme, ainsi qu'une analyse des risques, devrait être établi en sus des états financiers annuels complets.* »

Recommandation 9 : « *Tous les rapports pertinents devraient comprendre un résumé succinct des points principaux, par exemple ceux devant être portés à l'attention des gouvernements.* »

Recommandation 10 : « *Un résumé des décisions et actions devrait être distribué rapidement à l'issue de toutes les réunions. De façon générale, les comptes rendus de réunions ne devraient pas être trop détaillés.* »

Conclusion

Les représentants des États Parties et les directeurs des laboratoires nationaux de métrologie reconnaissent les progrès effectués concernant les Recommandations 6 à 10 et encouragent le BIPM à poursuivre ces progrès dans toute la mesure du possible.

Recommandation 11 : « *Les documents officiels (tels que les procès-verbaux des réunions du CIPM) devraient être envoyés non seulement par le biais des ambassades mais aussi directement aux représentants des gouvernements concernés et aux directeurs des laboratoires nationaux de métrologie.* »

Conclusion

Les représentants des États Parties et les directeurs des laboratoires nationaux de métrologie expriment leur accord avec la Recommandation 11. Les possibilités d'envoi électronique des documents officiels seront étudiées.

Recommandation 12: « Des réunions annuelles régulières avec les directeurs des laboratoires nationaux de métrologie et les représentants des États Membres devraient être organisées et pourraient être combinées, le cas échéant, en fonction de l'ordre du jour. »

Conclusion

Les représentants des États Parties et les directeurs des laboratoires nationaux de métrologie soutiennent la Recommandation 12 concernant l'organisation de réunions annuelles. Il est proposé que les réunions annuelles suivent un ordre du jour structuré (avec, par exemple, une première journée consacrée aux discussions techniques/scientifiques et une seconde journée aux questions de finances et stratégie) afin de laisser la possibilité aux participants d'assister en totalité ou en partie à ces réunions. De l'avis général, une réunion intermédiaire de la CGPM ne devrait pas être organisée.

Recommandation 13: « Les membres du CIPM devraient être élus pour un mandat de 4 ans, renouvelable. Tous les deux ans, la moitié des membres du CIPM seront soumis à (ré)élection (voir également Recommandation 17). »

Conclusion

Les représentants des États Parties et les directeurs des laboratoires nationaux de métrologie approuvent la proposition que les membres du CIPM soient élus pour un mandat de 4 ans, renouvelable. Le CIPM est chargé de définir les critères de sélection ainsi que le processus de sélection et d'élection des membres du CIPM, en veillant à ce que les États Parties soient impliqués de manière appropriée dans ce processus. Des projets de propositions devraient être préparés pour la fin de 2012.

Recommandation 14: « Le CIPM examinera la liste des critères à remplir par les candidats à un siège du CIPM. L'ensemble des compétences nécessaires pour superviser le BIPM à l'ère moderne seront prises en considération. »

Conclusion

Les représentants des États Parties et les directeurs des laboratoires nationaux de métrologie soutiennent la Recommandation 14. Des projets de propositions devraient être préparés pour la fin de 2012.

Recommandation 15 : « Toutes les candidatures à un siège du CIPM seront analysées à la lumière de ces critères et les résultats de cette analyse, ainsi que les noms des candidats potentiels, seront fournis à un Groupe de travail de la CGPM sur les élections du CIPM. Ce Groupe de travail de la CGPM présentera ses recommandations à la CGPM. La confidentialité des candidatures sera prise en compte. »

Conclusion

Le CIPM formulera des propositions qui seront présentées aux représentants des États Parties et aux directeurs des laboratoires nationaux de métrologie lors de leur(s) réunion(s) annuelle(s) en 2013 ; il préparera en outre un Projet de résolution pour la prochaine réunion de la CGPM.

Recommandation 16 : « Tout bien considéré, il est conseillé de ne pas sélectionner les présidents des Comités consultatifs parmi les membres du CIPM afin que celui-ci conserve une vision globale et indépendante. »

Conclusion

Les représentants des États Parties et les directeurs des laboratoires nationaux de métrologie conviennent que les présidents des Comités consultatifs ne devraient pas nécessairement être membres du CIPM. Le CIPM devrait nommer les personnes les plus appropriées : des critères permettant de sélectionner les présidents de Comités consultatifs seront définis. Les représentants des États Parties et les directeurs des laboratoires nationaux de métrologie approuvent la durée de 4 ans renouvelable du mandat des présidents des Comités consultatifs.

Recommandation 17 : « Une réunion « principale » de la CGPM devrait être organisée tous les quatre ans et une réunion avec un ordre du jour restreint devrait se tenir dans la période intermédiaire (d'où une réunion de la CGPM tous les deux ans). La CGPM, lors de sa réunion « principale », devrait décider du budget du BIPM pour une période de quatre ans. »

Conclusion

Les représentants des États Parties et les directeurs des laboratoires nationaux de métrologie parviennent à la conclusion qu'une réunion intermédiaire de la CGPM n'est pas souhaitable si le CIPM peut proposer des options acceptables concernant les questions de transparence et d'élection des membres du CIPM, d'autant qu'il a été décidé d'organiser des réunions annuelles des représentants des États Parties à la Convention du Mètre et des directeurs des laboratoires nationaux de métrologie.

Recommandation 18 : « La durée des réunions de la CGPM devrait être réduite à deux, voire trois jours. Les présidents des Comités consultatifs ne présenteront qu'un rapport très bref et se tiendront disponibles pour répondre à des questions (les rapports devront être fournis à l'avance). »

Conclusion

Les représentants des États Parties et les directeurs des laboratoires nationaux de métrologie conviennent de réduire la durée des réunions de la CGPM.

Recommandation 19 : « La structure de gestion de la Caisse de retraite et de prévoyance du BIPM sera examinée par le CIPM qui proposera, le cas échéant, des recommandations à la CGPM. »

Conclusion

Les représentants des États Parties et les directeurs des laboratoires nationaux de métrologie expriment leur accord avec la Recommandation 19. Les premières conclusions seront présentées en 2013.

Recommandation 20 : « Il est demandé au BIPM et au CIPM de déterminer comment et quand les propositions pourront être mises en œuvre sans entrer en conflit avec la Convention du Mètre et son Règlement annexé, ni avec toute autre disposition applicable. »

Conclusion

La Recommandation 20 est mise en œuvre à mesure que des progrès sont effectués concernant les autres recommandations.

Appendix 5

MEETING OF REPRESENTATIVES OF STATES PARTIES TO THE METRE CONVENTION AND DIRECTORS OF NATIONAL METROLOGY INSTITUTES 16-17 OCTOBER 2012

CONCLUSIONS ON THE *AD HOC* WORKING GROUP RECOMMENDATIONS ON THE ROLE, MISSION, OBJECTIVES, LONG-TERM STRATEGY AND GOVERNANCE OF THE BIPM

Recommendation 1: *“Develop a compact and clear statement on the role, mission and objectives based on the original objectives set by the Metre Convention, but reinterpreted for the 21st Century”*

Conclusion

Representatives of States Parties and NMI Directors supported the development of a statement on the BIPM mission, role and objectives and encouraged the CIPM to make rapid progress and achieve an acceptable statement as soon as possible.

Recommendation 2: *“The BIPM/CIPM to develop a consolidated planning process requiring:*

- a) *Consultative Committee mid- and long-term strategic plans and derived key comparison plans to be forwarded to NMI Directors by email and via the BIPM website for input and comment,*
- b) *Input and comments from NMI Directors to be forwarded to the CIPM for consolidation with the strategic plans, prioritization and the development of the strategy of the BIPM and its Programme of Work and Budget,*
- c) *The consolidation and prioritization to be forwarded to Government Representatives and NMI Directors, together with financial analysis, for comment and input,*
- d) *The final Draft of the BIPM Programme of Work and Budget and analysis to be presented to a joint meeting of NMI Directors and Government Representatives.*

taking into account that:

- *BIPM activities should focus on those that add value over and above what can be delivered by the NMIs,*
- *priority setting should be done in the context of the consolidated planning process, identifying both the wider metrology needs and the role and capabilities of the BIPM in delivering the required activities*
- *options should include all budgetary implications*
- *an annual update of the Consultative Committee’s plans will take place in consultation with the NMI Directors”.*

Conclusion

Representatives of States Parties and NMI Directors supported the objectives, welcomed the progress being made and agreed with the planned timescale. It was recognized that development of the strategy process is an ongoing and iterative activity. The framework should be developed before the end of 2012.

Recommendation 3: *“NMI Directors and Government Representatives are asked to take an active interest in the development of the BIPM long-term strategy and successive Programmes of Work and Budget by timely responding to the proposals (failure to respond means: assent)”*

Conclusion

Representatives of States Parties and NMI Directors agreed with Recommendation 3.

Recommendation 4: *“The long-term financial plan, including capital investments, should be provided to Member States (addressing building, equipment, staff, assets and liabilities such as the Pension and Provident Fund) with a number of possible scenarios.”*

Conclusion

Representatives of States Parties and NMI Directors encouraged the CIPM Standing Sub-Committee on Finance to continue its work to build confidence and improve transparency and to develop mechanisms on how to implement the findings.

Recommendation 5: *“RMO chairs should be invited to attend the NMI Directors meetings, while RMO Technical Committee chairs should be invited to attend the Consultative Committee Strategy and Key Comparisons Working Groups.”*

Conclusion

Representatives of States Parties and NMI Directors supported Recommendation 5.

Recommendation 6: *“The CIPM will produce and maintain compact, easily readable and understandable document(s), including a compilation of all currently applicable rules, and describing the BIPM (including Terms of Reference etc. for the CIPM, as the governance board, and for all other committees) and its operational and decision making processes. All in one place and easily accessible.”*

Recommendation 7: *“An annual four page summary of achievements, planning, financial situation, audits, human resources, relations with other organizations complemented by an index of detailed reports be prepared and sent to Member States and NMIs.”*

Recommendation 8: *“In addition to the complete Annual Financial Statements, a summary highlighting the key issues, including long-term consequences, trends and risk analysis should be annexed.”*

Recommendation 9: *“In all relevant reports, a short summary should be added, addressing the major issues, e.g. those to be brought to the attention of governments.”*

Recommendation 10: *“All meetings should result in a rapidly distributed summary of decisions and actions. In general, minutes should not be produced in detail.”*

Conclusion

Representatives of States Parties and NMI Directors recognized the progress regarding Recommendations 6 to 10 and encouraged continuation as far as possible.

Recommendation 11: *“Official documentation should not only be sent via the embassies, but also directly to the Government Representatives concerned and NMI Directors. (e.g. summary of the CIPM meetings).”*

Conclusion

Representatives of States Parties and NMI Directors agreed with Recommendation 11. Opportunities for electronic distribution should be explored wherever possible.

Recommendation 12: *“Regular yearly meetings with the NMI Directors and Member State Representatives should be held and may be combined if appropriate, depending on the agenda.”*

Conclusion

Representatives of States Parties and NMI Directors supported Recommendation 12 to hold yearly meeting(s). It was proposed that the yearly meeting(s) should follow a structured agenda (e.g. day 1 for technical/scientific discussions, day 2 for finance/strategy) to facilitate full or partial participation. The general opinion was that an intermediate CGPM meeting should not be held.

Recommendation 13: *“CIPM Members be elected for a fixed term of 4 years, renewable. Every two years, half of the CIPM Members will go up for (re-)election (see also Rec. 17).”*

Conclusion

Representatives of States Parties and NMI Directors agreed with the proposal that CIPM members be elected for a fixed 4-year term, renewable. The CIPM is charged to work out the selection criteria and the process of selecting and electing CIPM members, including appropriate involvement of States Parties. Draft proposals should be ready for the end of 2012.

Recommendation 14: *“The CIPM will review the list of criteria to be fulfilled by CIPM candidates. The full range of skills necessary to oversee the BIPM in the modern era will be taken into account.”*

Conclusion

Representatives of States Parties and NMI Directors supported Recommendation 14. Draft proposals should be ready for the end of 2012.

Recommendation 15: *“All CIPM candidates will be scrutinized against these criteria and the results of this with the names of the potential candidates will be provided to a CGPM Election WG. The CGPM WG to give recommendations to the CGPM. Privacy protection of candidates will be taken into account.”*

Conclusion

The CIPM will formulate proposals which will be presented to the Representatives of States Parties and NMI Directors at the 2013 yearly meeting(s) and prepare a Draft Resolution on the process for the next CGPM meeting.

Recommendation 16: *“On balance it is suggested that Consultative Committee Presidents not be drawn from the CIPM in order that the CIPM maintains a global and independent view.”*

Conclusion

Representatives of States Parties and NMI Directors agreed that Consultative Committee Presidents should not necessarily be CIPM members. The CIPM should appoint the best persons: criteria for selecting Consultative Committee Presidents will be formulated. Representatives of States Parties and NMI Directors agreed with a fixed term of 4 years, renewable.

Recommendation 17: *“Full CGPM meetings should be held every 4 years and a CGPM with limited agenda should be held in between (so every two years a CGPM). The full CGPM should decide on the BIPM budget for a four year period.”*

Conclusion

Representatives of States Parties and NMI Directors concluded that intermediate CGPM meetings are not favoured provided that the CIPM can develop acceptable options with respect to transparency and the election of CIPM members, mindful of the decision to hold regular yearly meetings of Representatives of States Parties and NMI Directors.

Recommendation 18: *“The duration of CGPM meetings should become reduced to two or at most three days. Consultative Committee Presidents will only present a very short summary report and will be available to answer questions (reports should be provided in advance).”*

Conclusion

Representatives of States Parties and NMI Directors agreed to reduce the duration of the CGPM meetings.

Recommendation 19: *“The management structure of the BIPM Pension and Provident Fund will be reviewed by the CIPM with eventual recommendations to the CGPM.”*

Conclusion

Representatives of States Parties and NMI Directors agreed with Recommendation 19 and first results will be presented in 2013.

Recommendation 20: *“The BIPM and CIPM are requested to determine how and when all proposals can be implemented without conflict with the Metre Convention and its annexed Regulations and eventual other legislation.”*

Conclusion

Recommendation 20 is being implemented as the other Recommendations are being progressed.



Visite du dépôt des prototypes métriques

PROCES-VERBAL

Le 18 octobre 2012 à 17 heures 30 en présence du Président du Comité international des poids et mesures, du directeur du Bureau international des poids et mesures et du Conservateur en charge des relations internationales qui représentait les Archives nationales, il a été procédé à la visite du dépôt des prototypes métriques internationaux du Pavillon de Breteuil.

On avait réuni les trois clefs qui ouvrent le dépôt : celle qui est confiée au directeur du Bureau international, celle qui est déposée aux Archives nationales, à Paris et que Madame Hélène Guichard-Spica, Conservateur en charge des relations internationales, avait apportée, celle enfin dont le Président du Comité international a la garde.

Les deux portes de fer du caveau ayant été ouvertes ainsi que le coffre-fort, on a constaté dans ce dernier la présence des prototypes et de leurs témoins.

On a relevé les indications suivantes sur les instruments de mesure placés dans le coffre-fort :

température actuelle	:	20 °C
température maximale	:	20 °C
température minimale	:	20 °C
état hygrométrique	:	54 %

On a alors refermé le coffre-fort ainsi que les portes du caveau.

Le Directeur
du BIPM

Le Conservateur en charge
des relations internationales

Le Président
du CIPM

M. Kühne

H. Guichard-Spica

B. Inglis

Annexe 7**DEUXIÈME PARTIE DE LA 101^e SESSION DU CIPM****Décisions and actions**

Décision CIPM/101-41 Le CIPM prend note du Rapport du secrétaire du CIPM.

Décision CIPM/101-42 Le CIPM a préparé un document résumant les conclusions telles qu'elles ont été discutées lors de la réunion des représentants des États Parties à la Convention du Mètre et des directeurs des laboratoires nationaux de métrologie.

Action CIPM/101-13 Le directeur du BIPM enverra le document résumant les conclusions dès que possible aux États Parties, aux directeurs des laboratoires nationaux de métrologie et aux membres du CIPM.

Action CIPM/101-14 Le directeur du BIPM et le directeur désigné définiront, en consultation avec la Commission des conditions d'emploi du BIPM (CCE), les modalités de participation des membres du personnel du BIPM au Groupe de travail *ad hoc* du CIPM sur les conditions d'emploi et au Sous-comité permanent du CIPM sur les pensions et l'assurance-maladie.

Action CIPM/101-15 Le directeur désigné du BIPM harmonisera le format de l'ensemble des termes de référence des Sous-comités permanents et Groupes de travail *ad hoc* du CIPM.

Décision CIPM/101-43 Le CIPM convient d'inviter Mme Friederike Weritz, représentante du gouvernement allemand, à participer au Groupe de travail *ad hoc* du CIPM sur les règles et les principes relatifs à la composition du CIPM.

Action CIPM/101-16 Le directeur du BIPM enverra une invitation à Mme Friederike Weritz.

Décision CIPM/101-44 Le CIPM décide de renommer le « Sous-comité permanent du CIPM sur la stratégie scientifique » « Sous-comité permanent du CIPM sur la stratégie ».

Décision CIPM/101-45 Le CIPM accepte la Recommandation CCTF 1 (2012), convient d'en faire une Recommandation du CIPM et demande au directeur du BIPM de préparer un Projet de résolution pour la 25^e réunion de la CGPM afin de le soumettre au bureau du CIPM en mars 2013.

Action CIPM/101-17 Le directeur du BIPM préparera un Projet de résolution pour la 25^e réunion de la CGPM afin de le soumettre au bureau du CIPM en mars 2013.

Décision CIPM/101-46 Le CIPM prend note de la Recommandation CCTF 2 (2012).

Décision CIPM/101-47 Le CIPM prend note de la Recommandation CCTF 3 (2012).

Décision CIPM/101-48 Le CIPM prend note de la Recommandation CCTF 4 (2012).

Décision CIPM/101-49 Le CIPM prend note de la Recommandation CCTF 5 (2012).

Décision CIPM/101-50 Le CIPM prend note de la Recommandation CCTF 6 (2012).

Action CIPM/101-18 Le directeur du BIPM préparera une réponse à l'UIT et la transmettra dès que possible au CIPM en précisant un délai bref pour soumission des commentaires.

Décision CIPM/101-51 Le CIPM prend note du projet de proposition du CCL sur les règles d'écriture des incertitudes des CMCs. Il note par ailleurs que le directeur du BIPM a examiné la question et qu'aucune action supplémentaire ne sera mise en œuvre.

Décision CIPM/101-52 Le CIPM approuve les changements suivants concernant la composition des Comités consultatifs :

- PMOD/WRC (Suisse) : membre du CCPR ;
- INMETRO (Brésil) : observateur au CCPR ;
- CMI (République tchèque) : observateur au CCPR ;
- INMETRO (Brésil) : membre du CCT ;
- HMI/FSB-LPM (Croatie) : observateur au CCT ;
- ON/DSHO (Brésil) : observateur au CCTF ;
- UME (Turquie) : membre du CCQM ;
- Laboratoire gouvernemental de Hong Kong (Chine) : observateur au CCQM.

Décision CIPM/101-53 Le CIPM nomme Philippe Richard (METAS, Suisse) président du Comité consultatif pour la masse et les grandeurs apparentées.

Décision CIPM/101-54 Le CIPM nomme Takashi Usuda (NMIJ, Japon) président du Comité consultatif pour la masse et les grandeurs apparentées.

Décision CIPM/101-55 Le CIPM accepte l'amendement proposé concernant l'Article 15 du Règlement financier du BIPM.

Décision CIPM/101-56 Le CIPM accepte l'accord de rééchelonnement conclu avec la République islamique d'Iran et autorise le directeur du BIPM à signer ledit accord pour le compte du CIPM.

Action CIPM/101-19 Le directeur du BIPM signera, pour le compte du CIPM, l'accord de rééchelonnement conclu avec la République islamique d'Iran.

Décision CIPM/101-57 Le CIPM prend note de l'estimation de l'exécution du budget 2012 du BIPM.

Décision CIPM/101-58 Le CIPM approuve le budget du BIPM pour 2013.

Décision CIPM/101-59 Le CIPM prend note des progrès concernant la mise en place d'un système de comptabilité analytique.

Décision CIPM/101-60 Le CIPM approuve les Recommandations 29/1 et 29/2 du JCRB.

Décision CIPM/101-61 Le CIPM approuve les modifications apportées à la Déclaration de coopération entre le CIPM, l'IFCC et l'ILAC pour l'établissement du Comité commun pour la traçabilité en médecine de laboratoire (JCTLM).

Décision CIPM/101-62 Le CIPM recommande au JCGM le développement d'une version annotée du VIM3 accessible en ligne comme projet de travail pour le Groupe de travail 2 du JCGM.

Action CIPM/101-20 Le directeur du BIPM prendra les mesures nécessaires [concernant le développement d'une version annotée du VIM3 disponible en ligne] et présentera un rapport au CIPM.

Décision CIPM/101-63 Le CIPM recommande au JCGM la rédaction d'un Vocabulaire international pour les propriétés qualitatives (VIN) comme projet de travail pour le Groupe de travail 2 du JCGM.

Action CIPM/101-21 Le directeur du BIPM prendra les mesures nécessaires [concernant la rédaction d'un VIN par le Groupe de travail 2 du JCGM] et présentera un rapport au CIPM.

Décision CIPM/101-64 Le CIPM autorise le directeur du BIPM à soumettre au CCM le projet de protocole concernant la campagne d'étalonnages du BIPM en vue de la redéfinition du kilogramme afin que le CCM l'examine et fasse une recommandation au CIPM.

Action CIPM/101-22 Le directeur du BIPM soumettra au CCM le protocole afin que le CCM l'examine, prépare une version finale et fasse une recommandation au CIPM pour approbation du protocole final. Le CIPM pourra approuver le protocole par correspondance.

Décision CIPM/101-65 Le CIPM accepte de réintégrer au programme de travail du BIPM pour les années 2013 à 2015 l'activité du Département de la chimie concernant une comparaison clé dans le domaine des molécules organiques de grande taille, étant donné le soutien supplémentaire apporté par des laboratoires nationaux de métrologie en termes de ressources financières et détachement.

Action CIPM/101-23 Les termes de référence des Sous-comités permanents et Groupes de travail *ad hoc* du CIPM seront envoyés par les présidents des Sous-comités/Groupes de travail aux membres du CIPM, de même que la déclaration révisée sur la mission, le rôle et les objectifs du BIPM. Un délai d'une semaine sera accordé pour soumettre des commentaires et un délai supplémentaire d'une semaine pour finaliser les documents. Le directeur désigné du BIPM coordonnera l'harmonisation du format de l'ensemble des documents dans un délai d'une semaine.

Décision CIPM/101-66 Le CIPM, après avoir discuté des actions à mettre en œuvre, prend note du calendrier concernant la préparation de la 25^e réunion de la CGPM.

Appendix 7

SESSION II OF THE 101ST MEETING OF THE CIPM Decisions and actions

Decision CIPM/101-41 The CIPM took note of the Secretary's Report.

Decision CIPM/101-42 The CIPM developed a document summarizing the conclusions agreed at the meeting of Representatives of States Parties to the Metre Convention and Directors of National Metrology Institutes.

Action CIPM/101-13 The BIPM Director will send the document summarizing the conclusions as soon as possible to all Member States, NMI Directors and CIPM members.

Action CIPM/101-14 The BIPM Director and the Director Designate will define, in consultation with the BIPM Commission for Conditions of Employment (CCE), the terms of engagement of the BIPM staff members invited to take part in the CIPM *ad hoc* Working Group on Conditions of Employment and Standing Sub-Committee on Pensions and Health Insurance.

Action CIPM/101-15 The BIPM Director Designate will set a common format for the Terms of Reference of the CIPM Standing Sub-Committees and *ad hoc* Working Groups.

Decision CIPM/101-43 The CIPM agreed to invite Dr Friederike Weritz, government representative of Germany, to take part in the *ad hoc* Working Group on CIPM Membership.

Action CIPM/101-16 The BIPM Director will send an invitation to Dr Friederike Weritz.

Decision CIPM/101-44 The CIPM decided to rename the 'CIPM Standing Sub-Committee on Science Strategy' the 'CIPM Standing Sub-Committee on Strategy'.

Decision CIPM/101-45 The CIPM accepted Recommendation CCTF 1 (2012), agreed to make it a CIPM recommendation and asked the BIPM Director to prepare a Draft Resolution for the 25th CGPM meeting and submit it to the CIPM bureau in March 2013.

Action CIPM/101-17 The BIPM Director will prepare a Draft Resolution for the 25th CGPM meeting and submit it to the CIPM bureau in March 2013.

Decision CIPM/101-46 The CIPM took note of Recommendation CCTF 2 (2012).

Decision CIPM/101-47 The CIPM took note of Recommendation CCTF 3 (2012).

Decision CIPM/101-48 The CIPM took note of Recommendation CCTF 4 (2012).

Decision CIPM/101-49 The CIPM took note of Recommendation CCTF 5 (2012).

Decision CIPM/101-50 The CIPM took note of Recommendation CCTF 6 (2012).

Action CIPM/101-18 The BIPM Director will formulate a draft response to the ITU and circulate it to the CIPM as soon as possible with a short deadline for comments.

Decision CIPM/101-51 The CIPM took note of the CCL Draft Proposal on CMC writing rules and noted that the BIPM Director has considered this matter and no further action will be taken.

Decision CIPM/101-52 The CIPM approved the following changes in Consultative Committee membership:

- PMOD/WRC (Switzerland) as a member of the CCPR;
- INMETRO (Brazil) as an observer in the CCPR;
- CMI (Czech Republic) as an observer in the CCPR;
- INMETRO (Brazil) as a member of the CCT;
- HMI/FSB-LPM (Croatia) as an observer in CCT;
- ON/DSHO (Brazil) as an observer in the CCTF;
- UME (Turkey) as a member of the CCQM;
- Government Laboratory in Hong Kong (China) as an observer in the CCQM.

Decision CIPM/101-53 The CIPM appointed Dr P. Richard (METAS, Switzerland) as President of the Consultative Committee for Mass and Related Quantities

Decision CIPM/101-54 The CIPM appointed Dr T. Usuda (NMIJ, Japan) as President of the Consultative Committee for Photometry and Radiometry.

Decision CIPM/101-55 The CIPM agreed with the proposed revised Article 15 of the BIPM Financial Regulations.

Decision CIPM/101-56 The CIPM approved the rescheduling agreement with the Islamic Republic of Iran and mandated the BIPM Director to sign it on behalf of the CIPM.

Action CIPM/101-19 The BIPM Director will sign the rescheduling agreement with the Islamic Republic of Iran on behalf of the CIPM.

Decision CIPM/101-57 The CIPM took note of the BIPM estimated outturn for 2012.

Decision CIPM/101-58 The CIPM approved the BIPM 2013 budget.

Decision CIPM/101-59 The CIPM took note of the progress on setting up a cost accounting system.

Decision CIPM/101-60 The CIPM approved JCRB Recommendations 29/1 and 29/2.

Decision CIPM/101-61 The CIPM approved the changes made in the Declaration of Cooperation between the CIPM, IFCC and ILAC, for the establishment of a Joint Committee for Traceability in Laboratory Medicine (JCTLM).

Decision CIPM/101-62 The CIPM decided to recommend to the JCGM the development of an on-line, annotated version of the VIM3 as a work item for JCGM WG2.

Action CIPM/101-20 The BIPM Director will take appropriate actions [with regard to Development of an on-line, annotated version of the VIM3] and report back to the CIPM.

Decision CIPM/101-63 The CIPM decided to recommend to the JCGM the development of a VIN (International Vocabulary for Nominal Properties) as a work item for JCGM WG2.

Action CIPM/101-21 The BIPM Director will inform the IUPAC [regarding the development of a VIN by JCGM WG2] and will take further appropriate actions and report back to the CIPM.

Decision CIPM/101-64 The CIPM authorized the BIPM Director to submit the draft protocol for “The BIPM Calibration Campaign in anticipation of the kilogram redefinition” to the CCM for review and provision of a recommendation to the CIPM.

Action CIPM/101-22 The Director to submit the protocol to the CCM for review and completion, with the request to draft provision of a recommendation to the CIPM to approve the completed protocol. CIPM approval can be obtained by correspondence.

Decision CIPM/101-65 The CIPM agreed with the reinstatement in the BIPM Programme of work for 2013 to 2015 of a key comparison in the field of large organic molecules carried out by the Chemistry Department as additional support both financially and by secondment will be received from NMIs.

Action CIPM/101-23 The chairs of the CIPM Standing Sub-Committees and *ad hoc* Working Groups will send their respective Terms of Reference to the CIPM members. A deadline of one week would be given for comments on these terms of reference as well as on the revised Statement on the BIPM mission, role and objectives. The BIPM Deputy Director will then coordinate the reformatting of the documents which will be formalized within one week.

Decision CIPM/101-66 The CIPM discussed the actions and noted the timeline for the preparation for the 25th meeting of the CGPM.

Annexe 8

RECOMMANDATION CCTF 1 (2012) :

Mises à jour de la liste des fréquences étalons

Le Comité consultatif du temps et des fréquences (CCTF)

considérant

- qu'une liste commune des « valeurs recommandées de fréquences étalons destinées à la mise en pratique de la définition du mètre et aux représentations secondaires de la seconde » a été établie,
- que le Groupe de travail commun au CCL et au CCTF sur les étalons de fréquence a examiné plusieurs fréquences candidates en vue de leur inclusion dans cette liste,

recommande

que les fréquences des transitions suivantes soient incluses ou mises à jour dans la liste des fréquences étalons recommandées :

- la transition optique non perturbée $3s^2\ ^1S_0 - 3s3p\ ^3P_0$ de l'ion de $^{27}\text{Al}^+$, à la fréquence de $f_{27\text{Al}^+} = 1\ 121\ 015\ 393\ 207\ 857,3$ Hz avec une incertitude-type relative estimée de $1,9 \times 10^{-15}$.

Il est recommandé que le CIPM approuve cette radiation comme représentation secondaire de la seconde ;

- la transition optique non perturbée $5d^{10}6s\ ^2S_{1/2} - 5d\ ^96s^2\ ^2D_{5/2}$ de l'ion de $^{199}\text{Hg}^+$, à la fréquence de $f_{199\text{Hg}^+} = 1\ 064\ 721\ 609\ 899\ 145,3$ Hz avec une incertitude-type relative estimée de $1,9 \times 10^{-15}$ (cette radiation a déjà été approuvée par le CIPM comme représentation secondaire de la seconde) ;
- la transition optique non perturbée $6s^2\ ^1S_0 - 6s6p\ ^3P_0$ de l'atome neutre de ^{199}Hg , à la fréquence de $f_{199\text{Hg}} = 1\ 128\ 575\ 290\ 808\ 162$ Hz avec une incertitude-type relative estimée de $1,7 \times 10^{-14}$;
- la transition optique non perturbée $6s\ ^2S_{1/2} - 4f^{13}6s^2\ ^2F_{7/2}$ de l'ion de $^{171}\text{Yb}^+$, à la fréquence de $f_{171\text{Yb}^+}$ (octupôle) = $642\ 121\ 496\ 772\ 645,6$ Hz avec une incertitude-type relative estimée de $1,3 \times 10^{-15}$.

Il est recommandé que le CIPM approuve cette radiation comme représentation secondaire de la seconde ;

- la transition optique non perturbée $6s\ ^2S_{1/2}$ ($F = 0, m_F = 0$) – $5d\ ^2D_{3/2}$ ($F = 2, m_F = 0$) de l'ion de $^{171}\text{Yb}^+$, à la fréquence de $f_{171\text{Yb}^+}$ (quadripôle) = $688\ 358\ 979\ 309\ 307,1$ Hz avec une incertitude-type relative estimée de 3×10^{-15} (cette radiation a déjà été approuvée par le CIPM comme représentation secondaire de la seconde) ;
- la transition optique non perturbée $5s\ ^2S_{1/2} - 4d\ ^2D_{5/2}$ de l'ion de $^{88}\text{Sr}^+$, à la fréquence de $f_{88\text{Sr}^+} = 444\ 779\ 044\ 095\ 485,3$ Hz avec une incertitude-type relative estimée de $4,0 \times 10^{-15}$ (cette radiation a déjà été approuvée par le CIPM comme représentation secondaire de la seconde) ;

- la transition optique non perturbée $4s\ ^2S_{1/2} - 3d\ ^2D_{5/2}$ de l'ion de $^{40}\text{Ca}^+$, à la fréquence de $f_{40\text{Ca}^+} = 411\ 042\ 129\ 776\ 395$ Hz avec une incertitude-type relative estimée de $1,5 \times 10^{-14}$;
- la transition optique non perturbée $1S - 2S$ de l'atome neutre de ^1H , à la fréquence de $f_{1\text{H}} = 1\ 233\ 030\ 706\ 593\ 518$ Hz avec une incertitude-type relative estimée de $1,2 \times 10^{-14}$.

Remarque : Cette fréquence correspond à la moitié de l'écart en énergie entre les états $1S$ et $2S$;

- la transition optique non perturbée $5s^2\ ^1S_0 - 5s5p\ ^3P_0$ de l'atome neutre de ^{87}Sr , à la fréquence de $f_{87\text{Sr}} = 429\ 228\ 004\ 229\ 873,4$ Hz avec une incertitude-type relative estimée de 1×10^{-15} (cette radiation a déjà été approuvée par le CIPM comme représentation secondaire de la seconde) ;
- la transition optique non perturbée $6s^2\ ^1S_0 - 6s6p\ ^3P_0$ de l'atome neutre de ^{171}Yb , à la fréquence de $f_{171\text{Yb}} = 518\ 295\ 836\ 590\ 865,0$ Hz avec une incertitude-type relative estimée de $2,7 \times 10^{-15}$.

Il est recommandé que le CIPM approuve cette radiation comme représentation secondaire de la seconde ;

- la transition quantique hyperfine non perturbée de l'état fondamental de l'atome de ^{87}Rb , à la fréquence de $f_{87\text{Rb}} = 6\ 834\ 682\ 610,904\ 312$ Hz avec une incertitude-type relative estimée de $1,3 \times 10^{-15}$ (cette radiation a déjà été approuvée par le CIPM comme représentation secondaire de la seconde).

Remarque : La valeur de l'incertitude-type est supposée correspondre à un niveau de confiance de 68 %. Toutefois, étant donné le nombre très limité de résultats disponibles, il se peut que, rétrospectivement, cela ne s'avère pas exact.

et requiert l'approbation du CIPM.

Appendix 8

RECOMMENDATION CCTF 1 (2012):

Updates to the list of standard frequencies

The Consultative Committee for Time and Frequency (CCTF),

considering that

- a common list of “Recommended values of standard frequencies for applications including the practical realization of the metre and secondary representations of the second” has been established,
- the CCL-CCTF Frequency Standards Working Group (FSWG) has reviewed several candidates for inclusion into the list,

recommends

that the following transition frequencies shall be included or updated in the list of recommended values of standard frequencies:

- the unperturbed optical transition $3s^2\ ^1S_0 - 3s3p\ ^3P_0$ of the $^{27}\text{Al}^+$ ion with a frequency of $f_{27\text{Al}^+} = 1\ 121\ 015\ 393\ 207\ 857.3$ Hz and an estimated relative standard uncertainty of 1.9×10^{-15} .

This radiation is recommended to be endorsed by the CIPM as a secondary representation of the second;

- the unperturbed optical transition $5d^{10}6s\ ^2S_{1/2} - 5d\ ^96s^2\ ^2D_{5/2}$ of the $^{199}\text{Hg}^+$ ion with a frequency of $f_{199\text{Hg}^+} = 1\ 064\ 721\ 609\ 899\ 145.3$ Hz and an estimated relative standard uncertainty of 1.9×10^{-15} (this radiation is already endorsed by the CIPM as a secondary representation of the second);
- the unperturbed optical transition $6s^2\ ^1S_0 - 6s6p\ ^3P_0$ of the ^{199}Hg neutral atom with a frequency of $f_{199\text{Hg}} = 1\ 128\ 575\ 290\ 808\ 162$ Hz and an estimated relative standard uncertainty of 1.7×10^{-14} ;
- the unperturbed optical transition $6s\ ^2S_{1/2} - 4f^{13}6s^2\ ^2F_{7/2}$ of the $^{171}\text{Yb}^+$ ion with a frequency of $f_{171\text{Yb}^+}$ (octupole) = $642\ 121\ 496\ 772\ 645.6$ Hz and an estimated relative standard uncertainty of 1.3×10^{-15} .

This radiation is recommended to be endorsed by the CIPM as a secondary representation of the second;

- the unperturbed optical transition $6s\ ^2S_{1/2}$ ($F = 0, m_F = 0$) – $5d\ ^2D_{3/2}$ ($F = 2, m_F = 0$) of the $^{171}\text{Yb}^+$ ion with a frequency of $f_{171\text{Yb}^+}$ (quadrupole) = $688\ 358\ 979\ 309\ 307.1$ Hz and an estimated relative standard uncertainty of 3×10^{-15} (this radiation is already endorsed by the CIPM as a secondary representation of the second);
- the unperturbed optical transition $5s\ ^2S_{1/2} - 4d\ ^2D_{5/2}$ of the $^{88}\text{Sr}^+$ ion with a frequency of $f_{88\text{Sr}^+} = 444\ 779\ 044\ 095\ 485.3$ Hz and an estimated relative standard uncertainty of 4.0×10^{-15} (this radiation is already endorsed by the CIPM as a secondary representation of the second);

- the unperturbed optical transition $4s\ ^2S_{1/2} - 3d\ ^2D_{5/2}$ of the $^{40}\text{Ca}^+$ ion with a frequency of $f_{40\text{Ca}^+} = 411\ 042\ 129\ 776\ 395$ Hz and an estimated relative standard uncertainty of 1.5×10^{-14} ;
- the unperturbed optical transition $1S - 2S$ of the ^1H neutral atom with a frequency of $f_{1\text{H}} = 1\ 233\ 030\ 706\ 593\ 518$ Hz and an estimated relative standard uncertainty of 1.2×10^{-14} .

Note: This frequency corresponds to half of the energy difference between the 1S and 2S states;

- the unperturbed optical transition $5s^2\ ^1S_0 - 5s5p\ ^3P_0$ of the ^{87}Sr neutral atom with a frequency of $f_{87\text{Sr}} = 429\ 228\ 004\ 229\ 873.4$ Hz and an estimated relative standard uncertainty of 1×10^{-15} (this radiation is already endorsed by the CIPM as a secondary representation of the second);
- the unperturbed optical transition $6s^2\ ^1S_0 - 6s6p\ ^3P_0$ of the ^{171}Yb neutral atom with a frequency of $f_{171\text{Yb}} = 518\ 295\ 836\ 590\ 865.0$ Hz and an estimated relative standard uncertainty of 2.7×10^{-15} .

This radiation is recommended to be endorsed by the CIPM as a secondary representation of the second;

- the unperturbed ground-state hyperfine transition of ^{87}Rb with a frequency of $f_{87\text{Rb}} = 6\ 834\ 682\ 610.904\ 312$ Hz and an estimated relative standard uncertainty of 1.3×10^{-15} (this radiation is already endorsed by the CIPM as a secondary representation of the second).

Note: The value of the standard uncertainty is assumed to correspond to a confidence level of 68 %. However, given the very limited number of available data there is a possibility that in hindsight this might not prove to be exact.

and asks the CIPM for approval.

Annexe/Appendix 9**LISTE DES SIGLES UTILISÉS DANS LE PRÉSENT VOLUME / ACRONYMS
USED IN THE PRESENT VOLUME**

AIC	ILAC Accreditation Issues Committee / Comité de l'ILAC sur les questions d'accréditation
AIEA	Agence internationale de l'énergie atomique
AMA	Agence mondiale antidopage
APMP	Asia Pacific Metrology Programme
BIML	Bureau international de métrologie légale / International Bureau of Legal Metrology
BIPM	Bureau international des poids et mesures / International Bureau of Weights and Measures
BOBS	Botswana Bureau of Standards (Botswana)
CAMCT	Conference on Advanced Metrology for Cancer Therapy
CC	Comité consultatif du CIPM / Consultative Committee of the CIPM
CCAUV	Comité consultatif de l'acoustique, des ultrasons et des vibrations / Consultative Committee for Acoustics, Ultrasound and Vibration
CCE	Commission des conditions d'emploi du BIPM / BIPM Commission for Conditions of Employment
CCEM	Comité consultatif d'électricité et magnétisme / Consultative Committee for Electricity and Magnetism
CCI	Centre du commerce international
CCL	Comité consultatif de longueurs / Consultative Committee for Length
CCM	Comité consultatif pour la masse et les grandeurs apparentées / Consultative Committee for Mass and Related Quantities
CCPR	Comité consultatif de photométrie et radiométrie / Consultative Committee for Photometry and Radiometry
CCQM	Comité consultatif pour la quantité de matière / Consultative Committee for Amount of Substance
CCRI	Comité consultatif de rayonnements ionisants / Consultative Committee for Ionizing Radiation
CCT	Comité consultatif de thermométrie / Consultative Committee for Thermometry
CCTF	Comité consultatif du temps et des fréquences / Consultative Committee for Time and Frequency
CCU	Comité consultatif des unités / Consultative Committee for Units
CEE-NU	Commission économique pour l'Europe des Nations Unies
CEI	Commission électrotechnique internationale
CENAM	<i>Centro Nacional de Metrología</i> (Mexique / Mexico)
CGPM	Conférence générale des poids et mesures / General Conference on Weights and Measures

CIE	Commission internationale de l'éclairage / International Commission on Illumination
CIPM	Comité international des poids et mesures / International Committee for Weights and Measures
CIPM MRA	CIPM Mutual Recognition Arrangement / Arrangement de reconnaissance mutuelle du CIPM
CMC	Calibration and Measurement Capability / Aptitude en matière de mesures et d'étalonnages
CMI	Czech Metrology Institute / <i>Ceský metrologický institut</i> (République tchèque / Czech Republic)
CMR	Conférence mondiale des radiocommunications
CNRC	Conseil national de recherches Canada
CODATA TGFC	Committee on Data for Science and Technology, Task Group on Fundamental Constants
Codex Alimentarius	Commission du Programme mixte de la FAO et de l'OMS sur les normes alimentaires / Commission under the Joint FAO/WHO Food Standards Programme
COOMET	Coopération métrologique entre les États d'Europe centrale / Euro-Asian Cooperation of National Metrological Institutions
CRM	Certified Reference Material
DCMAS Network:	Network on Metrology, Accreditation and Standardization for Developing Countries / Réseau pour la coordination de l'assistance aux pays en voie de développement dans les domaines de la métrologie, de l'accréditation et de la normalisation
DI	Designated institute
EIT	Échelle internationale de température
EMRP	European Metrology Research Programme / Programme européen de recherche en métrologie
ERP	Enterprise Resource Planning system
ESA	European Space Agency / Agence spatiale européenne
ESTEC	European Space Research and Technology Centre / Centre européen de recherche et de technologie spatiales
EURAMET	European Association of National Metrology Institutes
GNSS	Global Navigation Satellite System
GULFMET	Gulf Association for Metrology
GUM	Guide pour l'expression de l'incertitude de mesure / Guide to the Expression of Uncertainty in Measurement
HMI/FSB-LPM	FSB – Laboratory for Process Measurements (Croatie / Croatia)
IAEA	International Atomic Energy Agency
IAF	International Accreditation Forum
ICTNS	IUPAC Interdivisional Committee on Terminology, Nomenclature and Symbols
IEC	International Electrotechnical Commission
IFCC	International Federation of Clinical Chemistry and Laboratory Medicine / Fédération internationale de chimie clinique et médecine de laboratoire

ILAC	International Laboratory Accreditation Cooperation
INMETRO	<i>Instituto Nacional de Metrologia, Qualidade e Tecnologia</i> (Brésil / Brazil)
INRIM	<i>Istituto Nazionale di Ricerca Metrologica</i> (Italie / Italy)
INTI	<i>Instituto Nacional de Tecnología Industrial</i> (Argentine / Argentina)
IPK	International prototype of the kilogram
IPSAS	International Public Sector Accounting Standards
IRMM	Institute for Reference Materials and Measurements / Institut des matériaux et mesures de référence
ISO	Organisation internationale de normalisation / International Organization for Standardization
ISO CASCO	ISO Committee on Conformity Assessment / Comité pour l'évaluation de la conformité de l'ISO
ISO REMCO	ISO Committee on Reference Materials / Comité pour les matériaux de référence de l'ISO
ITC	International Trade Center
ITS	International Temperature Scale
ITU	International Telecommunication Union
ITU-R	International Telecommunication Union – Radiocommunication Sector
IUPAC	International Union of Pure and Applied Chemistry
IVD	<i>in vitro</i> diagnostic
JCGM	Joint Committee for Guides in Metrology / Comité commun pour les guides en métrologie
JCRB	Joint Committee of the Regional Metrology Organizations and the BIPM / Comité mixte des organisations régionales de métrologie et du BIPM
JCTLM	Joint Committee for Traceability in Laboratory Medicine / Comité commun pour la traçabilité en médecine de laboratoire
KazInMetr	Kazakhstan Institute of Metrology (Kazakhstan)
KCDB	BIPM Key Comparison Database / Base de données du BIPM sur les comparaisons clés
KPI	Key Performance Indicators
LNE	Laboratoire national de métrologie et d'essais (France)
METAS	Institut fédéral de métrologie / Federal Institute of Metrology (Suisse / Switzerland)
MoU	Memorandum of Understanding
NEWRAD	Conference on New Developments and Applications in Optical Radiometry
NIM	National Institute of Metrology (Chine / China)
NIST	National Institute of Standards and Technology (États-Unis d'Amérique / United States of America)
NMI	National Metrology Institute
NMIA	National Measurement Institute, Australia (Australie / Australia)
NMIJ	National Metrology Institute of Japan (Japon / Japan)
NMIJ/AIST	National Metrology Institute of Japan, National Institute of Advanced Industrial Science and Technology (Japon / Japan)
NML-SIRIM	National Metrology Laboratory, SIRIM Berhad (Malaisie / Malaysia)

NPL	National Physical Laboratory (Royaume-Uni de Grande-Bretagne et d'Irlande du Nord / UK)
NRC	National Research Council Canada (Canada)
NSCL	National Standards and Calibration Laboratory (République arabe syrienne / Syrian Arab Republic)
NSI	Namibian Standards Institution (Namibie / Namibia)
OIML	Organisation internationale de métrologie légale / International Organization for Legal Metrology
OMC	Organisation mondiale du commerce
OMM	Organisation météorologique mondiale
OMS	Organisation mondiale de la santé
ON/DSHO	<i>Observatório Nacional/Serviço Nacional da Hora</i> (Brésil / Brazil)
ONUDI	Organisation des Nations Unies pour le développement industriel
PMOD/WRC	<i>Physikalisch-Meteorologisches Observatorium Davos</i> and World Radiation Center (Suisse / Switzerland)
PTB	<i>Physikalisch-Technische Bundesanstalt</i> (Allemagne / Germany)
QMS	Quality Management System
RFHI	Reserve Fund for Health Insurance
RMO	Regional Metrology Organization
RRI	BIPM Regulations, Rules and Instructions
SASO	Saudi Standards, Metrology and Quality Organization (Arabie saoudite / Saudi Arabia)
SI	Système international d'unités / International System of Units
SRI	Statut, Règlement et Instructions applicables aux membres du personnel du BIPM
TAI	Temps atomique international / International Atomic Time
ToR	Terms of Reference
UIT	Union internationale des télécommunications
UIT-R	Union internationale des télécommunications – secteur Radiocommunications
UME	National Metrology Institute / <i>TÜBİTAK Ulusal Metroloji Enstitüsü</i> (Turquie / Turkey)
UNECE	United Nations Economic Commission for Europe
UNIDO	United Nations Industrial Development Organization
UTC	Temps universel coordonné / Coordinated Universal Time
UTCr	UTC rapide / rapid UTC
VAMAS	Versailles Project on Advanced Materials and Standards
VIM	Vocabulaire international de métrologie – Concepts fondamentaux et généraux et termes associés (3 ^e édition) / International Vocabulary of Metrology, Basic and General Concepts and Associated Terms (3rd edition)
VIN	Vocabulaire international pour les propriétés qualitatives / International Vocabulary for Nominal Properties
VNIIMS	Institute for Metrological Service, Rostekhnregulirovaniye of Russia (Fédération de Russie / Russian Federation)

VNIIOFI	Institute for Optico-Physical Measurements, Rostekhnregulirovaniye of Russia (Fédération de Russie / Russian Federation)
WADA	World Anti-Doping Agency
WGS	CCM Working Group on Strategy
WGSP	CCEM Working Group on Strategic Planning
WHO	World Health Organization
WMO	World Meteorological Organization
WRC	World Radiocommunication Conference
WTO	World Trade Organization

Inprimerie Centrale
15, rue du Commerce, L-1351 Luxembourg
ISBN 978-92-822-2252-2
ISSN 1016-5893
Achevé d'imprimer : juillet 2013