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| **World Meteorological Organization** | **CAeM-MG/2016/Doc. 4.1(1)** | |
| **COMMISSION FOR AERONAUTICAL METEOROLOGY** |  | 3.XI.2016 |
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| **MANAGEMENT GROUP 2016**  Hall (Innsbruck), Austria  8-10 November 2016 |  | ITEM 4.1 |
|  | English only |

**REVIEW OF THE WORK PROGRAMME IMPLEMENTATION**

Report of the Expert Team on Governance (ET-GOV)

*(Submitted by Jan Sondij and Kent Johnson, Co-chairs of ET-GOV)*

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| **Summary and Purpose of Document**  This document provides an overview of the activities of the ET-GOV since the last meeting of the CAeM Management Group held from 12 to 14 May 2015 together with information on the working arrangements and work plan of the expert team. |

**ACTION PROPOSED**

The Management Group (MG) is invited to review the progress made by ET-GOV since May 2015, to review the work plan and to provide guidance for future priorities.

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1. **EXECUTIVE SUMMARY**
   1. The survey for Members on aviation weather service provision was made available at the end of October 2016.
   2. Recommendations and structure for new document to replace WMO-No. 731 and WMO-No. 732 were developed and provided to the Secretariat for review.
   3. Juana RAVINES RUIZ (Peru) was unable to continue as a core-member of the ET-GOV due to changes in her home organization. ET-GOV is pleased to welcome Miriam Andrioli, SMN Argentina, as new core-member of the team.
2. **PROGRESS/ACTIVITY REPORT**

The key tasks and activities of the ET-GOV since the previous MG meeting are described below.

***Monitor global landscape of aeronautical meteorological service provision (activity 1)***

2.1 The Members’ survey was completed and published in October 2016 (task 1.1). For this purpose, an updated CAeM Members list with focal points was created by the ET-CCP. The compilation of the survey questions was a joint effort of ET-GOV and the Secretariat. Thanks to the ET-CCP and to the Secretariat (D. Ivanov, G. Brock and Y. Wang) for their efforts. Preliminary results should be available in December 2016. Informal communication will be used with contacts and focal points in order to optimize the response level. A first report on the global landscape and compliancy is expected in March 2017.

***Guidance on oversight of aeronautical meteorological service provision (activity 2)***

2.2 This activity has been delayed. ET-GOV will work closely with the ET-ETC on this topic. A summary report will be completed in mid-2017.

***Governance issues (activity 3)***

2.3 Seeking input from the MG in order to clarify this activity in terms of responsibilities of CAeM and those of the ICAO Met Panel, in particular to the METP Ad Hoc MCRGG.

The draft information paper on global cost recovery models for aeronautical meteorological service provision (task 3.1, task 3.2) is progressing slowly. Main reason for this is delayed response of input by Members. Members will be asked to provide inputs before March 30th 2017.

The request for updates on current best practices on cost recovery in WMO-No. 904 (task 3.1) has not been sent out yet awaiting clear vision on how to amend this document.

Although identifying issues with cost recovery (task 3.3.A) is depending on input from tasks 3.1 and 3.2, a first set of issues has been identified during the ET-ETC-GOV meeting in Wellington and is included in the report of the meeting.

A report on regional service provision models (task 3.5) is in progress and expected in December 2016. This report will examine service delivery models in larger countries as well as in the ASECNA consortium.

***Guidance on roles and responsibilities of meteorological authorities and meteorological service providers (activity 4).***

2.4 This activity has been delayed pending analysis of the landscape survey (activity 1). A draft skeleton (task 4.1) is provided in Annex 2. The final report is expected before the end of 2017.

***Review of WMO-No. 732, Guide to practices for meteorological offices serving aviation (activity 5)***

2.5 A revised skeleton for WMO-No. 732 (task 5.1) to replace WMO-No. 731 and WMO-No. 732 has been developed and is provided to the Secretariat for review. The draft skeleton is included as Annex 3 and can be agreed upon during the CAeM-MG meeting in Innsbruck.

***Address WMO and ICAO data management and governance policies (activity 6)***

2.6 No deliverables have been determined yet for this activity. Awaiting further clarification for this activity.

***Coordination of evolution of WMO regulatory and guidance material on aeronautical meteorology (activity 7)***

2.7 The provision of a first proposal (task 7.1) has been delayed due to resource shortage and will start in 2017. The activity is expected to be completed at the end of 2017.

***Reporting on progress of WMO CAeM ET-GOV (activity 8)***

2.9 This document acts as the annual progress report for 2016. The updated work plan v0.62 is included as Annex 1. With this milestone 8 is closed.

2.10 After the MG Meeting in Innsbruck, an ET-GOV Webex will be organized in November to structure the work of the team to be carried out in 2017.

***Face-to-face meetings***

A joint meeting of ET-GOV and ET-ETC took place at MetService in Wellington, Nov/Dec 2015. The meeting was instrumental in aligning the work plans of the two expert teams. The report is available on the [WMO AEMP website](https://www.wmo.int/aemp/ET-ETC/GOV-2015) and contains the ET-GOV work plan v0.6.

ET-GOV (Jan Sondij) attended the face-to-face meeting of ET-CCP in St. Petersburg, Russian Federation, May 2016. Coordination between ET-GOV and ET-CCP is crucial with regard to the global survey of ET-GOV (activity 1) in identifying the correct focal points. The report of the meeting is available on the [WMO AEMP website](https://www.wmo.int/aemp/ET-CCP-1).

ET-GOV (Jan Sondij) attended the first meeting of the ad-hoc ICAO METP Meteorological Cost Recovery Guidance and Governance Group(METP Ad Hoc – MCRGG) which took place following the ET-ETC-GOV meeting in Wellington. The second METP MCRGG meeting took place at WMO in Geneva in July 2016 and was attended by ET-GOV (Kent Johnson and Jan Sondij). Both meetings were also attended by the Secretariat (Dimitar Ivanov).

A two-day meeting was organized with the Secretariat in April 2016 at WMO in Geneva to draft the strawman for WMO-No. 732. Attendees on behalf of ET-GOV were Jaakko Nuottokari en Jan Sondij.

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| **version 0.62 02/11/2016 TEAM** | | | | |
| **Commission** | **WMO Commission for Aeronautical Meteorology (CAeM)** | | | |
| **Expert Team on** | Expert Team on Governance (ET-GOV) | | | |
| **Start Date / End Date** | October 2014 | | August 2018 | |
| **Stakeholders** | Air Traffic Management (ATM) community, Aeronautical Meteorological Service Providers (AMSPs), National Meteorological Services (NMHSs), ICAO MET Panel, WMO CAeM MG | | | |
| **Team** | **Name** | **Organization / Country** | | **E-mail** |
| **Co-chairs** | Kent JOHNSON  Jan SONDIJ | Environmental Canada, Canada  KNMI, The Netherlands | | [kent.johnson@ec.gc.ca](mailto:kent.johnson@ec.gc.ca)  [jan.sondij@knmi.nl](mailto:jan.sondij@knmi.nl) |
| **Core Members** | Yuki KATO  Peter LECHNER  Jaakko NUOTTOKARI  Miriam Andrioli  ZHANG Zhong Feng | JMA, Japan  CAA, New Zealand  FMI, Finland  SMN, Argentina  CMA, China | | [yukikato@met.kishou.go.jp](mailto:yukikato@met.kishou.go.jp)  [peter.lechner@caa.govt.nz](mailto:peter.lechner@caa.govt.nz)  [Jaakko.nuottokari@fmi.fi](mailto:Jaakko.nuottokari@fmi.fi)  [andrioli@smn.gov.ar](mailto:andrioli@smn.gov.ar)  [mazzf@vip.sina.com](mailto:mazzf@vip.sina.com) |
| **Non Core Members** | Goama ILBOUDO  Olga PETROVA | ASECNA  Roshydromet, Russian Federation | | [ilboudogoa@gmail.com](mailto:ilboudogoa@gmail.com)  [olpetrova2004@yandex.ru](mailto:olpetrova2004@yandex.ru) |

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| **DESCRIPTION** | |
| **Objectives** | To provide guidance and address governance issues related to service improvements and institutional changes stemming from the ICAO Global Air Navigation Plan and the ICAO Aviation System Block upgrades (GANP/ASBU framework), including but not limited to cost recovery and the regionalization of aeronautical meteorological services. The results will be put forward to WMO CAeM and ICAO MET Panel during the intersession period and shall be reported to the WMO CAeM 16th session in 2018. |
| **Background** | One of the purposes of WMO is to further the application of meteorology to aviation. The [Aeronautical Meteorology Programme (AeMP)](http://www.wmo.int/aemp/) has the main long-term objective of ensuring worldwide, reliable provision of high quality, timely and cost-effective meteorological service to aviation users.  In July 2014 the ICAO Meteorology Divisional Meeting ([METDIV14](http://www.icao.int/meetings/METDIV14/Pages/default.aspx)), in part conjointly with the Fifteenth Session of the WMO CAeM (CAeM-15), took place in Montreal. The meeting addressed issues vital to the current and future provision of aeronautical meteorological services, in support of the "One Sky" concept and the related ICAO GANP/ASBU framework. The recommendations developed by METDIV14, see [yellow cover report](http://www.icao.int/Meetings/METDIV14/Pages/YellowCoverReport.aspx), direct the course of work for enhancing the provision of meteorological service to international air navigation.  During CAeM-15 the Expert Team on Governance (ET-GOV) was established ([CAeM-15 Final Report](http://www.wmo.int/aemp/?q=node/53)) and the objectives are listed in the final report. The [CAeM Management Group Meeting](https://www.wmo.int/aemp/sites/default/files/MG_2015_final-report_v05_0.pdf) (Cape Town May 2015) revised the Terms of Reference of ET-GOV and are described below. The connection of the ET-GOV objectives with the METDIV14 recommendations are listed as well.  In April 2015 the first meeting of the [ICAO Meteorology Panel](http://www.icao.int/airnavigation/METP/Documents/Invitation%20and%20TOR.pdf) (METP) took place in Montreal. The METP was established by the ICAO Air Navigation Commission to define and elaborate concepts and to develop ICAO provisions for aeronautical meteorological (MET) services consistent with operational improvements envisioned by the Global Air Navigation Plan (GANP) (Doc 9750) and in keeping with the Working Arrangements between the International Civil Aviation Organization and the World Meteorological Organization  The METP shall collaboratively determine operational requirements for aeronautical MET service provision as an enabling function for a future globally interoperable air traffic management system and identify solutions, in coordination with WMO, to effectively and efficiently fulfil the requirements through sound scientific and/or technological capabilities. The activities of the METP are defined via Job Cards and the relation between the current Job Cards and the WMO ET-GOV objectives are described underneath. |
| **Terms of Reference**  **of WMO**  **ET-GOV** | **Terms of Reference of WMO ET-GOV**  (a) To work in coordination with the ICAO METP to review/update/consolidate existing service delivery guidance material e.g. WMO-No. 732, 904 and 1001 in collaboration with the appropriate CAeM ETs and WMO bodies;  (b) To work in coordination with the ICAO METP on developing governance and cost-recovery guidance material to support the development of provisions for regional service provision, including Regional Hazardous Weather Advisory Centres;  (c) To address relevant WMO and ICAO data management and governance policies in consultation with the ICAO METP and relevant WMO bodies (*revised December 2015*);  (d) To collect and share best practices in relation to competency of aviation MET service oversight personnel and provide inputs to ICAO in developing guidance material;`  (e) To collect and share best practices of roles and responsibilities of meteorological authority and meteorological service provider and provide inputs to ICAO in developing guidance material;  (f) To coordinate on the evolution of the WMO regulatory material on aeronautical MET in line with ICAO plans for restructuring Annex 3;  (g) To report regularly on progress to the president of the Commission; |
| **ET-GOV (a/b/c)**  **ET-GOV (d)**  **ET-GOV (e)**  **ET-GOV (f)** | **Connection with METDIV14 recommendations**  **Recommendation 2/4 Review of MET information service provision framework to reflect GANP objectives**  **b)( iv)** development of guidance for States concerning how their ICAO obligations may be met in the context of local, sub-regional, regional, multi-regional and global MET, including cost recovery and governance considerations.  **d)**ensure that guiding principles respecting the mandates of both ICAO and WMO are developed for States to facilitate inclusive MET service provisions to be done locally, sub-regionally, regionally, multi-regionally and globally when required and local, sub-regional, regional, multi-regional and global user communities could use this information in their operations.  **Recommendation 2/7 Development of provisions for information concerning space weather**  **b)** selection criteria and associated capability for the designation of global and regional space weather centers, including the optimum number thereof;  **c)** appropriate governance and cost recovery arrangements for the provision of space weather information services on a global and regional basis.  **Recommendation 2/9 Implementation of a regional advisory system for select en-route hazardous meteorological conditions**  **a)** expeditiously develop provisions supporting the implementation of a phenomenon-based regional advisory system for select en-route hazardous meteorological conditions consistent with the evolving users' long-standing requirements, especially in those States where notable SIGMET-related deficiencies persist using, as appropriate, the strategic, governance and cost-recovery assessments provided in Appendices D and E;  **c)** develop appropriate guidance material to support the selection criteria of regional hazardous weather advisory centers taking account of cost effectiveness, the processes for the preparation and dissemination of the advisory information, mutual cooperation, sustainability of the existing meteorological infrastructure and use of local expertise.  **Recommendation 3/2 Inclusion of aeronautical meteorological information in the future SWIM-enabled environment**  d) the evolution towards an information management environment should be guided by a roadmap including a transparent system of governance and risk mitigation actions and the foreseen role of existing ICAO information exchange functions for aeronautical meteorology such as regional OPMET databanks (RODB), inter-regional OPMET gateways (IROG) and internet based services.  **Recommendation 4/4 Guidance/guidelines on the recovery of costs of aeronautical meteorological service provision**  That ICAO and WMO undertake a review and, as necessary, update of the ICAO Manual on *Air Navigation Service Economics* (DOC 9161) and WMO *Guide on Aeronautical Meteorological Service Cost Recovery* (WMO Publication No. 904) so as to ensure that they appropriately reflect agreed and equitable cost recovery practices in those instances where aeronautical meteorological service provision is fulfills on a multi-regional, regional or sub-regional (multi-State) basis.  **Recommendation 4/3 Oversight of aeronautical meteorological service provision**  **a)** urge States to ensure that the personnel performing safety oversight functions of the aeronautical meteorological service are adequately qualified and competent meeting the requirements of Annex 19 - *Safety Management*; and  **b)** develop appropriate guidance material to assist States in establishing oversight of aeronautical meteorological service provision  **Recommendation 4/2 Definition of meteorological authority**  That ICAO, in coordination with MWO, further clarify the notion of meteorological authority, through appropriate amendments to ICAO provisions and supporting guidance material.  **Recommendation 5/2 Reorganization of provisions relating to aeronautical meteorology**  **a)** a restructuring of Annex 3/Technical Regulations as part of amendment 78; and  **b)** the development of a Procedures for Air Navigation Services - Meteorology (PANS-MET) so that a first edition be available concurrent with Amendment 78 referenced in a) above  based on a roadmap (to be developed and published by ICAO) and the principles contained in Appendix E. |
| **ICAO MET Panel Job Cards** | **Connection of ET-GOV with ICAO MET Panel Job Cards**  **The following ICAO MET Panel Job Cards have a link with the WMO ET-GOV**  METP.003.01 Further development of the International Airways Volcano Watch (IAVW)  METP.004.01 Inclusion of aeronautical meteorological information in the SWIM-enabled environment and further development of SWIM relating to MET  METP.005.01 Reorganization of provisions relating to aeronautical meteorology  METP.007.01 Implementation of a regional advisory system for select en-route hazardous MET conditions  METP.008.01 Further development of the satellite distribution system for information relating to air navigation (SADIS)  METP.009.01 Development of provisions for information on space weather to international air navigation  METP.010.01 Further development of the World Area Forecast System (WAFS)  METP.011.01 Development of cost-recovery implementation guidance and governance considerations  Job Cards METP.003, METP.007, METP.008, METP.009 and METP.010 have a link with the overall governance principles and cost recovery of regionalized service provision as described in ET-GOV activity 3 governance issues.  Job Card METP.004 is linked to ET-GOV activity 6 address WMO and ICAO data management and governance policies.  Job Card METP.005 is linked to ET-GOV activity 7 coordination of evolution of WMO regulatory and guidance material on aeronautical meteorology.  Job Card METP.011 is linked to ET-GOV activity 3 governance issues. The ICAO MET Panel Ad-hoc Working Group on Meteorological Cost Recovery Guidance and Governance (AG-MCRGG/1) deals with the development of cost-recovery implementation guidance and governance. The METP MCRGG members have attended the ET-GOV meeting in Wellington (December 2015) as invited experts, and the ET-GOV works in cooperation with the METP MCRGG.  Members of the METP MCRGG are Peter Lechner – New Zealand, CAA (Chair), Dennis Hart – EUROCONTROL, Michael Berechree – Australia, BoM. Klaus Sturm – Germany, DWD, Christiane Givone – France, Meteo, Colin Hord – United Kingdom, CAA, Dirk Engelbart – Germany, BMVI, Kent Johnson –  Canada, Env, Jan Sondij – Netherlands, KNMI. |

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| **Communication Strategies** | | | | |
| **Description** | **Target Audience** | **Delivery Method** | **Frequency / Date** | **Responsibility** |
| **Work Plan** | CAeM MG, ET-GOV, aviation stakeholders | CAeM website | Annual review from March 2015 | ET-GOV co-chairs |
| **General correspondence** | ET-GOV | Email | As required | ET-GOV |
| **Team Meetings** | ET-GOV | Teleconference | As required, approx. 4-monthly  from March 2015 | ET-GOV co-chairs |
| **Team Meetings** | ET-GOV | Face-to face meeting | Q4 2015 | ET-GOV co-chairs & WMO |
| **Team Meetings** | ET-GOV | Face to face meeting | 2017 TBC | ET-GOV co-chairs &WMO |
| **Milestone Reports** | CAeM MG, ICAO MET Panel, aviation stakeholders | CAeM website  ICAO/WMO papers | See milestones / workplan | ET-GOV co-chairs |
| **Final report** | CAeM-16 | Working paper(s) and presentation | February 2018 | ET-GOV co-chairs |

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| **MILESTONES / WORKPLAN** | | | | | |
| **Milestone / Activity / Task** | **ET**  **TOR(s)** | **Accountability** | **Deliverables** | **Dates** | **Status**  **(not started, ongoing, closed)** |
| **ACTIVITY 1: Monitor global landscape of aeronautical meteorological service provision** | | | | | |
| Task 1: Monitor global landscape of aeronautical meteorological service provision. This includes organization of regulator, oversight and service provider and the various meteorological functions (AMS, AMO, MWO etc.), legislatory framework, implementation of QMS, SMS and competency assessment, and cost recovery. | ET-GOV (c) | ET-GOV |  |  |  |
| Task 1.1: Organize a first global web survey (targeted information gathering) using survey monkey in such a way that regular updates can easily be performed with limited effort. |  | Jan Sondij | - First set of questions available in survey monkey. 🡪 completed in October 2016  - Target date of sending out the web based survey using updated CAeM Member list 🡪 completed in November 2016 with assistance of ET-CCP  - First report on global landscape and compliancy | February 29th 2016  May 2016  March 2017 | completed  completed  ongoing |
| Task 1:2: Provide regular updates of global landscape and compliance monitoring of aeronautical meteorological service provision using web based surveys. |  | ET-GOV | Regular updates of targeted information reporting. | ----- | not started |
| **ACTIVITY 2: Guidance on oversight of aeronautical meteorological service provision** | | | | | |
| Task 2: Develop appropriate guidance material to assist States in ensuring that the personnel performing safety oversight functions of the aeronautical meteorological service are adequately competent meeting the requirements of Annex 19 - *Safety Management.* | ET-GOV (d)  METDIV14  recomm 4/3 |  |  |  |  |
| Task 2.1: Provide a draft skeleton document for guidance and current practices with regard to qualifications of personnel performing safety oversight in the context of the ICAO Universal Safety Audit Oversight Program (USAOP). |  | Lead: Christiane Givone (METP MCRGG)  Dennis Hart (METP)  ET-GOV  METP | Provide a draft skeleton document for the guidance document  Provide information on the EUROCONTROL course for oversight staff of National Supervisory Authorities in Europe 🡪 Module on MET regulatory Context provided in July 2016 to use as background information  Provide feedback on the draft skeleton document | January 22nd 2016  January 22nd  2016  April 2016 | ongoing  completed  not started |
| Task 2.2: Provide best practices with regard to qualifications of personnel performing safety oversight in the context of the ICAO Universal Safety Audit Oversight Program (USAOP) |  | Yuki Kato (ET-GOV)  Juana Ravines (ET-GOV)  Christiane Givone (METP) Andrea Henderson (ET-ETC) | Provide best practice material to be included in the document | April 2016 | ongoing |
| Task 2.3: Prepare draft report based on input from task 2.1 and 2.2 containing current practices and guidance on the qualifications of personnel performing safety oversight. |  | ET-GOV with input from Andrea Henderson (ET-ETC) | Draft report. | September 2016 | not started |
| *Milestone 1:Final report containing recommendations, current practices and guidance on the competencies of personnel performing safety oversight of aeronautical meteorological services.*  The final report will be provided to ICAO METP and be published on the CAeM website. The report is also input for activity 5, the review of WMO-No. 732. |  | ET-GOV | *Final report containing recommendations, current practices and guidance material on the competencies of personnel performing safety oversight of aeronautical meteorological services.* | November 2016 | not started |

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| **ACTIVITY 3: Governance issues** | | | | | |
| Task 3: Address governance issues related to service improvements and institutional changes stemming from the meteorological components of the Global Air Navigation Plan and the Aviation System Block Upgrades, including but not limited to cost recovery (A) and the regionalization of aeronautical meteorological services (B). | ET-GOV (b)  METDIV14  recomm  2/4b(iv), 2.4d, 2/7b,  2/7c, 2/9a,  2/9c, 3/2d,  4/4 | ET-GOV  METP  Support: Christiane Givone (METP) | Meet with representatives of ICAO MET Panel to discuss governance issues, determine responsibilities and set priorities.  . |  |  |
| Task 3.1: (A) Update information on cost-recovery models applied in different countries and regions (e.g. ASECNA) and EU (e.g. via EUMETNET AVIMET, NAMCON) and share best practices.  Provide an update on the current best practice on cost recovery in WMO-No. 904. |  | Jaakko Nuottokari (ET-GOV)  Michael Berechree (METP)  Ilboudo Goama (ET-GOV)  Jan Sondij (ET-GOV)  Dennis Hart (METP)  Juana Ravines (ET-GOV)  Klaus Sturm (METP)  Chistiane Givone (METP)  Olga Petrova (ET-GOV  Colin Hord (METP) | Draft information paper on global cost-recovery models for aeronautical meteorological service provision.  NAMCOM  Australia  ASECNA  EUMETNET  Europe  COSESNA  Germany  France  Russia  United Kingdom | May 1st 2016  May 1st 2016  June 1st  2016 | ongoing  ongoing |
| Task 3.2: (A) Provide an overview of the governance and cost recovery issues with regard to Small Island Developing States (SIDS). |  | Dimitar Ivanov (WMO)  Peter Lechner (METP)  Keith Mackersy (METP) | Information paper on governance and cost recovery issues for SIDS. | February 29th 2016 | ongoing |
| Task 3.3: (A) Identify questions, among others based on task 3.1 and 3.2, relating to cost recovery and convey these to ICAO for clarification or to update the ICAO policies. |  | All | List with cost recovery related issues and questions sent to ICAO for clarification or to update the policy. | June 2016 | not started |
| Task 3.4: (A) Prepare a draft report on cost recovery issues, proposals and existing practices based on the output of task 3.1, 3.2 and task 3.3. |  | Jan Sondij (ET-GOV)  Support ET-GOV and METP | Draft report on cost recovery issues, proposals and existing practices. | April 2017 | not started |
| Task 3.5 (B) Study existing models on regionalization of services including ASECNA and NAMCON and other forms of international cooperation e.g. MET Alliance in Europe and service provision in European Functional Airspace Blocks. |  | Lead: Kent Johnson (ET-GOV)  Support: ET-GOV | Draft information paper on existing models on regionalization of aeronautical meteorological service provision, providing a MET Service provider view on governance and regionalization. | February 2017 | not started |
| Task 3.6: (B) Examine different levels of regionalization (forecasting) within larger countries such as Canada, China, the Russian Federation and USA. |  | Lead: Kent Johnson (ET-GOV)  Support:  Olga Petrova (ET-GOV)  Feng Zhang (ET-GOV)  Kent Johnson (ET-GOV)  Olga Petrova (ET-GOV)  Feng Zhang (ET-GOV) | Draft paper on regionalization (forecasting) within larger countries of aeronautical meteorological service provision.  USA and Canada  Russia  China | November 2016 🡪 report expected in December 2016 | Ongoing |
| Task 3.7: (B) Develop summary paper on regionalization of aeronautical meteorological service provision including cost recovery |  | Kent Johnson  Support ET-GOV | Draft paper on regionalization of aeronautical meteorological service provision. | to be determined | not started |
| *Milestone 2:Final report containing best practice and guidance, and proposed amendments to WMO documentation, on governance of aeronautical meteorological service provision in line with ICAO GANP and ASBU developments.* |  | *ICAO MET Panel with support from ET-GOV* | *Final report containing best practice and guidance, and proposed amendments to ICAO and WMO documentation, on governance of aeronautical meteorological service provision in line with ICAO GANP and ASBU developments.* | *to be determined* | *not started* |
| *Milestone 3: Update of WMO-No. 904 - Guide on aeronautical meteorological services cost recovery - Principles and guidance* |  | *TBD* | *Update of WMO-No. 904 - Guide on aeronautical meteorological services cost recovery - Principles and guidance* | *November 2017* |  |
| **ACTIVITY 4: Guidance on roles and responsibilities of meteorological authorities and meteorological service providers** | | | | | |
| Task 4: Share examples and assist Members in establishing optimal governance at national level with regard to meteorological authorities and meteorological service providers and their roles and responsibility, and provide inputs to ICAO in developing guidance material. | ET-GOV (d)  METDIV14  recomm  4/2, 5/2 |  |  |  |  |
| Task 4.1:Prepare a skeleton for a guidance document that provides information on these roles and responsibilities and related topics, seen from an NMHS perspective. Included will be links to various documents where these functions are addressed, legislatory framework, the relationship with cost recovering the services, and various service delivery models including cross border service provision and the link with commercial service providers. Included in the document will be a number of national and regional good practices. |  | Lead: Christiane Givone (METP MCRGG)  Support : ET-GOV  ET-GOV  METP | Provide a draft skeleton document for the guidance document 🡪 completed in April  Provide feedback on skeleton | March 2016  August 2016 | ongoing  not started |
| Task 4.2: To provide best practices, including legislatory framework, to be included in the document. |  | Dennis Hart (METP)  Keith Mackersy/Michael Berechree (METP)  Ilboudo Goama (ET-GOV)  Kent Johnson (ET-GOV)  *Juana Ravines (ET-GOV)*  Feng Zhang (ET-GOV)  Yuki Kato (ET-GOV) | Best practices for inclusion in the document  EU situation  New Zealand and Australia  ASECNA  USA and Canada  Peru  China  Japan | April 2016 | on going |
| Task 4.3: Prepare draft report based on input from task 4.1 and 4,2 containing best practices and optimal governance at national level with regard to meteorological authorities and meteorological service providers and their roles and responsibility . |  | Christiane Givone (METP)  with support of ET-GOV | Draft report | August 2016 | not started |
| *Milestone 4: Final report containing guidance on the roles and responsibilities of meteorological authorities and meteorological service providers.*    The final report will be provided to ICAO METP and be published on the CAeM website. |  | ET-GOV | *Final report containing current practices and guidance on the roles and responsibilities of meteorological authorities and meteorological service providers – as an input to relevant ICAO and WNO regulatory and guidance material* | December 2016 | not started |
| **ACTIVITY 5: Review of WMO- No. 732, Guide to practices for meteorological offices serving aviation** | | | | | |
| Task 5: Conduct a review of [WMO- No. 732](https://drive.google.com/file/d/0BwdvoC9AeWjUaUVGcnN3aERvQjg/edit), Guide to practices for meteorological offices serving aviation and consider the possibility to use this document for publication of the output of the ET GOV in the form of guidance material. The WMO-No. 732 will be complementary material to ICAO Doc 8896 Manual of Aeronautical Meteorological Practice. | ET-GOV (a) | ET-GOV + contracted expert |  |  |  |
| Task 5.1: Perform a first review of the WMO- No. 732 Guide to practices for meteorological offices serving aviation and provide a revised draft skeleton. The review will consider the name of the document, a possible merge with WMO-No.731, the current situation on data policies, and input of ET-ETC on training and competence. |  | Lead: Jaakko Nuottokari  Support:  Christiane Givone (METP)  Chris Webster (ET-ETC) | Revised draft skeleton for WMO-No. 732 🡪 available in April 2016 | February 29th 2016 | completed |
| Task 5.2: Decide on document structure and select contractor for drafting updated document. |  | ET-GOV  ET-ETC  WMO | Agreed upon skeleton of updated document and contract awarded to expert in charge of revision, due date February 2017. | June 2016 | not started |
| Task 5.3: Review updated WMO-No.732. |  | ET-GOV  ET-ETC | Final review of updated WMO-No. 732 | May 2017 | not started |
| *Milestone 5: Publication of revised WMO- No. 732.* |  | Dimitar Ivanov (WMO) | Publication of revised WMO-No. 732 | August 2017 | not started |
| **ACTIVITY 6: Address WMO and ICAO data management and governance policies** | | | | | |
| Task 7: To address relevant WMO and ICAO data management and governance policies in consultation with the ICAO METP and relevant WMO bodies;  Currently no formal task of ET-GOV awaiting the outcome of SWIM developments, and the WMO task team on data policies. Take note that SWIM does not mean that data will be available for free to the public. | ET-GOV (c) | ET-GOV co-chairs | No deliverables determined yet | ------- | not started |
| **ACTIVITY 7: Coordination of evolution of WMO regulatory and guidance material on aeronautical meteorology** | | | | | |
| Task 7: To coordinate on the evolution of the WMO regulatory material on aeronautical meteorological service provision in line with ICAO plans for restructuring Annex 3, and review/update/consolidate existing service delivery guidance material. | ET-GOV (e,f) |  |  |  |  |
| Task 7.1: Provide a first draft of existing ICAO and WMO regulatory material and a proposal to review/update/consolidate this material. |  | ET-GOV co-chairs  Lead: Jan Sondij  Support: Kent Johnson | First draft of existing ICAO and WMO regulatory material and a proposal to review/update/consolidate this material. | October 2016 🡪 April 2017 | ongoing |
| Task 7.2: Provide a draft proposal on ICAO and WMO regulatory material on aeronautical meteorological service provision. |  | ET-GOV co-chairs | Draft proposal on ICAO and WMO regulatory material on aeronautical meteorological service provision. | September 2017 | not started |
| *Milestone 6: Final report providing proposal on WMO and ICAO regulatory material on aeronautical meteorological service provision.*  The final report will be put on the agenda for CAeM 16 in April 2018 and the WMO Congress 18 in 2019. |  | ET-GOV co-chairs | Final report providing proposal on WMO and ICAO regulatory material on aeronautical meteorological service provision. | October 2017 | not started |
| **ACTIVITY 8: Reporting on progress of WMO CAeM ET-GOV** | | | | | |
| Task 8: To report regularly on progress to the president of the Commission via annual progress reports and updated work plan. | ET-GOV (g) | ET-GOV co-chairs |  |  |  |
| *Milestone 7: Provide annual progress report and updated work plan 2015* |  | *ET-GOV co-chairs* | *Progress report and updated work plan*   * *Report of Wellington meeting* * *Updated ET-GOV work plan v0.6* * *Powerpoint for MG WebEx December 2015* | *December 2015* | *closed* |
| *Milestone 8: Provide annual progress report and updated work plan 2016* |  | *ET-GOV co-chairs* | *Progress report and updated work plan*   * *Report of MG Meeting Innsbruck November 2016* * *Updated ET-GOV work plan v0.62* | *December 2016* | *closed* |
| *Milestone 9: Provide annual progress report and updated work plan 2017* |  | *ET-GOV co-chairs* | *Progress report and updated work plan* | *December 2017* | *not started* |
| *Milestone 10: Provide final report and presentation for CAeM16,* |  | *All,*  *ET-GOV co-chairs* | *Final report and presentation for CAeM16* | *February 2018* | *not started* |

Guidance material about MET Authority and MET Service provider

Recommendations to amend the existing material

I - Introduction

II – Inventory of the documents where these functions are already addressed

1. Article 28 of the Chicago Convention: requires each Contracting State to provide in its territory meteorological services to facilitate international air navigation
2. ICAO Annex 3 : Meteorological Authority: the authority providing or arranging for the provision of meteorological service for international air navigation on behalf of a contracting state

- two different notions (sometimes even more)

1. Doc 8896 (Manual of Aeronautical Meteorological Practice) :
2. Doc 9873 (manual on the Quality management System for the Provision of Meteorological Service for International Air Navigation) : to be completed, voir MET/14-WP30 CAeM-15/Doc.30
3. SES Legislative framework

* national/civil aviation authority
* competent authorities

1. WMO n°1112 Guidelines on the Role, Operation and Management of the National Meteorological and Hydrometeorological Service (NHMS)
2. …

III - MET Authority

1. Definition
2. Role and Responsibilities
   1. regulation
   2. safety oversight of aeronautical meteorological service provision
   3. …

IV- NMHS/MET Service Provider

1. Definition
2. Role and Responsibilities

V – Organization Principles and Relationships between MET Authority and NMHS/MET service provider

VI – Cost recovery of services and various business models

1. Using outcome of the global survey, highlighting trend toward cross border service provision in some regions, and commercial service providers
2. ….

VII - Recommendations to amend the existing (annex 3, doc 8896, …) and upcoming material (PANS-MET)

- Annex 3 SARPs

- Doc 8896

- WMO n°1112

- PANS-MET

- …

Annex 1: Examples of national and regional good practices including legislatory framework

1. New Zealand and Australia
2. France
3. European Union
4. ASECNA
5. China
6. Japan
7. USA and Canada
8. Argentina
9. …..