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| **World Meteorological Organization**  **COMMISSION FOR BASIC SYSTEMS**  **Sixteenth Session** Guangzhou, China, 23 to 29 November 2016 | **CBS-16/Doc. 5.6(1)** |
| Submitted by: Secretary-General  6.X.2016  **DRAFT 1** |

**AGENDA ITEM 5: DECISIONS ON THE WORK PLAN FOR THE COMMISSION**

**AGENDA ITEM 5.6: DECISIONS ON THE DEVELOPMENT OF THE SEAMLESS GLOBAL DATA PROCESSING AND FORECASTING SYSTEM**

# SUMMARY

### DECISIONS/ACTIONS REQUIRED:

(a) Adopt draft Decision [5.6(1)/1](#_Draft_Decision_X.X.X(X)/1) — *Implementation Plan for the future Seamless GDPFS;*

(b) Adopt draft Recommendation [5.6(1)/1](#_Title_of_the_1) *— Resources for the implementation of the Seamless GDPFS.*

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# DRAFT DECISION

## Draft Decision 5.6(1)/1 (CBS-16)

### IMPLEMENTATION PLAN FOR THE FUTURE Seamless GDPFS

THE COMMISSION FOR BASIC SYSTEMS,

**Recalling:**

(a) Resolution 11 (Cg-17) – Towards a future enhanced integrated and seamless WMO Data-processing and Forecasting System,

(b) Decision 8.1/1 (EC-68) – Towards implementation of seamless Data-processing and Forecasting System,

**Noting with satisfaction** that the work to advance this initiative had been initiated at an expert meeting held in Geneva, in February 2016, which was attended by representatives of technical commissions, who had developed the draft vision, scope and white paper ,

**Acknowledging** that Decision 8.1/1 (EC-68) endorsed the vision for the Seamless Data-processing and Forecasting System, as provided in the [Annex](#_Annex_to_Draft), and requested CBS to complete the implementation plan for the process, for consideration by EC-69,

**Mindful** of the deadline for the submission of the implementation plan to EC-69,

**Decides:**

1. To speed up the process by using the results of the first meeting on the seamless GDPFS (Geneva, Switzerland, February 2016);
2. That the membership of the Steering Group for the seamless GDPFS be composed of the same representatives of the technical commission at the February 2016 meeting;
3. That the Steering group first order of priority is the completion of the white paper and the development of the implementation plan for tabling at EC-69;

**Urges** technical commissions and regional associations to provide their full support in addressing Resolution 11 (Cg-17);

**Urges further** the Secretary-General to provide full support for the realization of this initiative;

**Calls upon** advanced GDPFS centres to assist the Steering Group with assessment of proof of concept of seamless GDPFS.

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[Annex: 1](#_Annex_to_Draft)

## Annex to Draft Decision 5.6(1)/1 (CBS-16)

### VISION FOR THE Seamless GDPFS AS Approved BY EC-68

• The GDPFS will be an effective and adaptable monitoring and prediction system to enable Members and partners in supporting decision-makers to take better-informed decisions.

• The GDPFS will facilitate the provision of impact-based forecasts and risk-based warnings through partnership and collaboration.

• The GDPFS will do so through the sharing of weather, water, climate and related environmental data, products and services in a cost-effective, timely and agile way, with the effect of benefitting all WMO Members, while also reducing the gaps between developed and developing Members.

One may imagine the GDPFS in 2031, 16 years later:

• The overall accuracy of state-of-the-art global prediction models have improved enough to add 1.5 days of overall predictability, if the historical rate of progress of one day per decade is sustained: The goal set by Jule Charney and others when they launched GARP in the 1970s was achieved. Global models have resolutions below 5km, and mesoscale models significantly below 1km, down to a few tens of meters in urban areas for example.

• The sub-seasonal time scales are achieved, ensembles have routinely hundreds of members, shared between many global centers, and forecast products provide accurate and detailed information on such things as closed water budgets over most watersheds, wind, temperature and air quality information in urban street canyons and outwards to the surrounding country side, finely detailed agromet information from hourly cycles to seasonal, precise storm surges and wind damage estimates for cyclone landfall, sea state, including rogue waves, and dangerous shore currents, telecommunications and electricity blackouts from solar eruptions form the surface to satellites orbital heights, toxic algae blooms , pest migrations, etc.

• Most or even all this information are accessible as a public good product to all WMO Members, and their partners, and most of this information is available either in raw format, or directly as impact information. It is disseminated and presented in accordance with users formats, and using point-to-point or, increasingly, cloud to point communication broadband technologies. It is quality controlled, validated and have metadata information associated, and in the case of forecast information, it is verified. Imbedded in the design of the system is a two-way feedback real-time communication capacity between the provider and the receiver of the data.

• The system has evolved through partnership agreements that allow it to absorb or carry information produced either by the private sector, or by other closely related organizations to the traditional NMHSs.

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# DRAFT RECOMMENDATION

## Draft Recommendation 5.6(1)/1 (CBS-16)

### RESOURCES FOR THE IMPLEMENTATION OF THE SEAMLESS GDPFS

THE COMMISSION FOR BASIC SYSTEMS,

**Recalling** Resolution 11 (Cg-17) – Towards a future enhanced integrated and seamless WMO Data-processing and Forecasting System,

**Noting** that addressing Resolution 11 (Cg-17) is a major undertaking for the GDPFS, similar to WIGOS and WIS, which are the expansion of GOS and GTS components of the World Weather Watch (WWW),

**Noting further:**

1. That the GDPFS is one of the important operational pillars systems in providing services to a number of socio-economic sectors,
2. That users’ demands are evolving in high pace as a result of technological and climate changes,
3. That the requirement for impact-based forecasting and risk-based warning services will necessitate an integration of non-conventional information such as exposure and vulnerability into the operational system,

**Recalling** [draft Decision 5.6(1)/1 (CBS-16) – *Implementation plan for the seamless GDPFS*](#_Draft_Decision_5.6(1)/1),

**Mindful** of the urgency to move forward with the implementation of seamless GDPFS to rise to the challenges of meeting users’ needs,

**Recommends**:

1. To approve a special allotment for the implementation of the seamless GDPFS;
2. To identify seamless GDPFS as one of the strategic pillars/priorities for the WMO 2019-2023 Strategic Plan, to highlight its importance to future WMO services;

**Requests** the Secretary-General to facilitate the implementation of this draft Recommendation, as appropriate.

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# BACKGROUND INFORMATION SUPPORTING DECISIONS/RESOLUTIONS/RECOMMENDATIONS

# NOT TO BE INCLUDED IN THE SESSION REPORT

### References:

1. Seventeenth World meteorological Congress: Abridge final report with resolutions
2. Report of the meeting of the technical commissions’ representatives on seamless GDPFS (Geneva, Feb 2016)
3. Report of the meeting of the CBS Management Group (Geneva, Feb 2016)
4. Executive Council – Sixty-eighth session: Abridged final report with resolutions
5. **Introduction**

The World Meteorological Congress, at its 16th Session (Cg-16), noted that the output of the GDPFS enable Members to meet their diverse service provision requirements including: immediate meteorological support to emergency management organizations, routine weather forecasts and warnings for the general public and for air traffic operations, environmental predictions such as sea-state or air quality, products that create economic advantage for members, tailored products and services to different economic sectors.

The World Meteorological Congress, at its 17th Session (Cg-17), through Resolution 11 (Cg-17), decided to initiate a process for the “gradual establishment of a future enhanced, integrated and seamless WMO Data-processing and Forecasting System”, in light of the conclusions of the first World Weather Open Science Conference (WWOSC-2014, Montreal, Canada, August 2014). It requested the Executive Council to formulate Terms of Reference for this process, and a description of the set of products the system should produce, for consideration by the eighteen session of the World Meteorological Congress (Cg-18) in 2019.

1. Meeting of Representatives of Technical Commissions (Geneva, Feb 2016)

A first meeting of the Experts, composed of representatives of Technical Commissions, including the President of CBS and the Co-chairs of the OPAG on DPFS was held in Feb 10-12 to discuss how to address the resolution 11 (Cg-17). The meeting resulted in the definition of the Vision of the future GDPFS. Rough outlines of a white paper were discussed including the idea to set up a task team to focus on the issue.

1. **Meeting of the CBS Management Group (Geneva, Feb 2016)**

The results of the meeting of representatives of technical commissions were briefed to the CB-Management Group (MG). The MG felt that it is better to establish a Steering Group. It was agreed to bring forward to EC-68 the vision, scope and the white paper for approval.

1. **EC-68 (Geneva, June 2015)**

EC-68 decided to establish a Steering group for the seamless GDPFS with the Chair being the president of CBS. This makes this SG an EC working group. EC-68 also endorsed the ToR for the SG on Seamless GDPFS and also the Vision. It requested CBS to develop the implementation and a white paper for its consideration at EC-69 (June 2017).

1. \* On a PC, in MS Word 2010 go to “**View**” and tick the “**Navigation Pane**” checkbox in the “**Show**” section. In MS Word 2007 or 2003, go to “**View**” > “**Document Map**”. On a Mac, go to “**View**” > “**Navigation Pane**” and select “**Document Map**” in the drop-down list on the left. [↑](#footnote-ref-1)