

COOPERATION ARRANGEMENT BETWEEN THE DEPARTMENT OF THE ENVIRONMENT AND CLIMATE CHANGE CANADA AND THE EUROPEAN CENTRE FOR MEDIUM-RANGE WEATHER FORECASTS ON THE EXCHANGE OF METEOROLOGICAL AND ENVIRONMENT-RELATED RESOURCES

The **Department of the Environment and Climate Change Canada** (“**ECCC**”) and the **European Centre for Medium-Range Weather Forecasts**, an inter-governmental organization governed by its Convention and Protocol on Privileges and immunities (“**ECMWF**”), hereinafter referred to as “the Participants” or individually as “Participant”,

HAVING DISCUSSED the mutual interest of the Participants in collaborating on numerical weather and environmental prediction and oceanic and atmospheric research;

CONSIDERING that the Participants each have experience in developing numerical prediction systems, using the observations from these systems and conducting weather and climate research;

RECOGNIZING the value of the ECMWF numerical weather predictions in North America;

GIVEN the utility of the ECCC Earth observation data to the ECMWF Integrated Forecasting System;

CONSIDERING the contribution of ECCC to the ECMWF-hosted World Meteorological Organization Global Producing Centre for Sub-Seasonal Forecasts and the ECMWF-hosted TIGGE global ensemble forecast data;

CONSIDERING the contribution of ECCC to the ECMWF Copernicus Climate Change Service seasonal multi-model ensemble forecast products;

GIVEN that ECMWF supports the ECCC-hosted World Meteorological Organization Vegetation Fire and Smoke Pollution Warning Advisory and Assessment System;

CONSIDERING that the Participants have entered into several technical operating arrangements with each other; AND

NOTING that ECCC and ECMWF have a long history of knowledge sharing and communication;

HAVE REACHED the following understanding:

1. Objective

The purpose of this Cooperation Arrangement (“CA”) is to enhance cooperation between the Participants by outlining the resources, including data and personnel, that can be exchanged between the Participants.

2. Expected Outcomes

(a) The Participants will cooperate in exchanging data, including:

(i) ECCC will provide ECMWF with:

(A) feedback, upon request, on the performance of ECMWF’s numerical predictions, particularly in the North America region;

(B) efficient and dedicated access to ECCC Earth observation data not available via the GTS or WIS.

(ii) ECMWF will provide ECCC with:

(A) ECMWF products;

(B) Feedback, upon request, on ECMWF’s use of ECCC Earth observation data.

(b) Other Areas of Cooperation:

The Participants will explore opportunities to cooperate, including in the following areas:

(i) research and development of numerical weather, environmental and AI/ML prediction systems and the use of observations in these systems;

(ii) promote international share of surface-based, space-based observations and numerical weather prediction data;

(iii) provide access to technical and scientific reports and notes from research and development;

(iv) share experiences in managing high-performance computers and support systems; and

(v) provide access to training related to numerical prediction and artificial intelligence/machine learning.

3. Exchange of Personnel

(a) The personnel of a Participant may be exchanged with the other Participant to carry out a cooperative activity.

- (b) Each exchange personnel will remain an employee of their home organization and the terms and conditions of their employment at their home organization continues to apply.
- (c) Each Participant hosting exchange personnel will be in charge of their day-to-day roles and responsibilities.

4. Data Policy

The Participants understand that:

- (i) data exchanged between them may not be disclosed to third parties or used for commercial purposes unless the Participant that provided the data approves of such disclosure or use;
- (ii) prior approval is not needed if the data being disclosed or used is open data.

5. Public Relations

Each Participant will coordinate with the other Participant any independent or joint public relations activities related to the subjects covered by this CA. In all such public relations activities, the role of each Participant is expected to be clearly identified.

6. Separate Instruments

When carrying out a cooperative activity, the Participants may enter into separate and appropriate instruments, which will include the following:

- (i) a description of the tasks;
- (ii) the roles of each Participant;
- (iii) the availability of resources of each Participant to complete the cooperative activity;
- (iv) a description of the terms of use of any data that is shared between the Participants;
- (v) a final and binding arbitration provision if such separate instruments are intended to be legally binding.

7. Meetings

The Participants will hold ad-hoc virtual meetings as they may jointly decide upon.

8. Intellectual Property

Any intellectual property matters that arise between the Participants as a result of this CA will be dealt with in separate and appropriate instruments.

9. Funding

- (a) The Participants understand that their cooperation under this CA is subject to the availability of their respective resources.
- (b) There will be no exchange of funds between the Participants under this CA.
- (c) There will be no exchange of funds between the Participants under any separate and appropriate instruments that are entered into between the Participants in this CA.

10. Points of Contact

- (a) The Participants designate the following respective points of contact:

- (i) For ECCC:

Radenko Pavlovic (or successor)
Acting Executive Director, National Prediction Development Division
Canadian Centre for Meteorological and Environmental Prediction (CCMEP)
Meteorological Service of Canada
Department of the Environment and Climate Change Canada

Jean-François Ferry (or successor)
Director, Meteorological Research Division
Atmospheric Science and Technology Division (ASTD)
Science and Technology Branch
Department of the Environment and Climate Change Canada

- (ii) For ECMWF:

Umberto Modigliani (or successor)
Deputy Director
Department of Forecasts and Services
European Centre for Medium-Range Weather Forecasts

Fabio Venuti (or successor)
Head of Cabinet
Office of the Director-General
European Centre for Medium-Range Weather Forecasts

- (b) A Participant may change its designated point of contact by signalling its intention in writing to the other Participant and sharing the name and coordinates of the new point of contact.

11. Differences in Interpretation and Application

The Participants will resolve any differences regarding the interpretation or application of this CA through consultations.

12. Legal Status

This CA is not legally binding.

13. Final Dispositions

- (a) This CA will come into effect on the date of its last signature by the Participants and will remain valid for a period of five (5) years.
- (b) The Participants may amend this CA at any time upon their mutual written consent.
- (c) Either Participant may terminate this CA by giving the other Participant ninety (90) days written notice of its intent to terminate.
- (d) The termination of this CA does not affect any separate and appropriate instruments that are entered into for specific cooperative activities unless mutually agreed to by the Participants.

Signed in the English language.

For the Department of the Environment and Climate Change Canada:

For the Department of the Environment and Climate Change Canada:

At (place): _____

At (place): _____

On: _____

On: _____

Signature: _____

Signature: _____

Véronique Bouchet
Director General, CCMEP
Department of the Environment
Government of Canada

Nathalie Morin
Director General, ASTD
Department of the Environment
Government of Canada

For the European Centre for Medium-Range Weather Forecasts:

At (place): _____

On: _____

Signature: _____

Florence Rabier
Director-General
European Centre for Medium-Range
Weather Forecasts