

Memorandum of Understanding

between

The European Plate Observing System European Research Infrastructures Consortium (hereinafter referred to as “EPOS ERIC”), established by Commission Implementing Decision (EU) 2018/1732 of 30 October 2018 (Official Journal of the European Journal, L288/10), having its headquarter and statutory seat at Via di Vigna Murata, 605 - 00143 Rome, Italy which is represented for the purpose of signature of this Memorandum of Understanding by its Executive Director

on the one hand,

and

The Reference Frame Sub-commission 1.3a for Europe of the International Association of Geodesy (IAG), (hereinafter referred to as “EUREF”), established in 1988, which is represented for the purpose of signature of this Memorandum of Understanding by its Chairperson

on the other hand.

EPOS ERIC and EUREF (hereinafter referred to individually as ‘the Party’ or collectively as “the Parties”) have expressed their mutual desire to co-operate on a range of issues in the field of Solid Earth science and on the implementation of the activities specified in this Memorandum of Understanding (hereinafter referred to as “MoU”).

Background

EPOS ERIC, the European Plate Observing System, is the European research infrastructure aimed at ensuring sustainable and universal use and re-use of multidisciplinary solid Earth science data and products fostering state-of-the-art research and innovation. EPOS ERIC brings together Earth scientists, national research infrastructures, ICT experts and decision makers to establish and underpin a sustainable and long-term access to solid Earth science data and services integrating diverse European Research Infrastructures under a common federated framework. EPOS ERIC relies on e-science innovation to foster progress in research to support a safe and sustainable society. EPOS, through the EPOS Thematic Core Service (TCS) “GNSS Data and Products”, has developed new procedures and software to harmonise, and standardise the collection and processing of Global Navigation Satellite System (GNSS) data with the objectives to share and distribute GNSS data, metadata and products, and store metadata and products. Among its missions, it has to maintain and further develop the underlying infrastructure and endeavour to enhance the data coverage and consequently product density. This is done in collaboration with national and pan-European infrastructures. More than 1300 GNSS stations have agreed so far to share their data with EPOS.

EUREF’s primary mission is to establish and maintain the European coordinate reference system and physical height reference system which are the basis for precise geo-referencing in Europe, and are endorsed by the European Union INSPIRE (Infrastructure for Spatial Information in the European Community) directive, EuroControl and EuroGeographics. These systems are also used for Earth Science research and several

multidisciplinary applications. EUREF maintains the EUREF Permanent Network (EPN), which is the key infrastructure for the collection, archiving, processing, and analysis of a GNSS data stemming from a network exceeding 300 stations homogeneously covering the European continent. EPN can be considered as the European regional densification of the global IGS (International GNSS Service) and contributes to the ITRS (International Terrestrial Reference System) realizations. The EPN-related services (EPN Data Centers, Central Bureau, Analysis Centers, Product Coordinators) and products are providing the backbone of the European Terrestrial Reference System, ETRS89.

Purpose

Considering the i. importance of cooperation between scientific and geodetic communities in Europe and ii. that data and services provided by each party are of value for both parties and their users,

the Parties agree:

- on a mutual interest in scientific and technological cooperation in the field of Solid Earth and Geodetic Reference Frames;
- to raise awareness of the services they offer;
- to investigate the possibility for using, or contributing to, each other's services;
- to work together towards common standards and guidelines for the exchange of data and the generation of reference frame and Solid Earth related products;
- to elaborate common position and mutual support towards other international bodies;
- to take into account user requirements from the user communities of both parties;
- to establish regular meetings or fora where the Parties will inform each other on plans, progress etc.;
- to monitor the collaboration based on this MoU on a regular basis.

In the Articles below, except for Articles 4 and 5 which shall be legally binding on the Parties, this MoU is not legally binding and the Parties acknowledge that this MoU does not place them under any obligation to enter into any subsequent agreement or arrangement. This MoU is designed to assist and inform the Parties' ongoing discussions and, other than the binding sections, neither Party wishes for this MoU to give rise to any binding commitment or legal obligation.

Article 1 – Scope of the MoU

In order to fully achieve the purpose of this MoU, the Parties will take the following actions:

1. establish or use existing fora for cooperation at strategic as well as technical levels;
2. identify areas of potential collaboration and establish mechanisms to create synergies to optimise complementarity;
3. establish or use regular meetings where the Parties will inform each other on progress;
4. keep each other informed about new projects and other initiatives related to the activities of each of the Parties;
5. investigate opportunities for concrete collaboration on the development of standards and guidelines for the exchange of data and information between the infrastructures;
6. investigate opportunities for the development of common components of use in both Parties; and
7. raise awareness of the complementarity of the two initiatives in each of the two communities.

A developed cooperation between the EUREF permanent network, EPN, including EUREF's working groups on crustal motions, and the EPOS GNSS Thematic Core Service (TCS), can be identified as obvious. But also,

other parts of geo-scientific observations and products are of common interest for both Parties, e.g. gravity related heights, observations of gravity change, and the gravity field, to mention some.

Article 2 – Activities

2.1 EPOS ERIC, through the EPOS Thematic Core Service (TCS) “GNSS Data and Products”, shall use reasonable efforts to carry out the following activities:

- make navigational and observational data and metadata (in international standard format) from EPOS-GNSS stations (after agreement of the station manager) accessible to EUREF and maintain the necessary interface to do so;
- make high-precision GNSS-based coordinate, velocity, time series, and deformation model products (in international standard formats) discoverable to EUREF and keep EUREF informed about any change to the products;
- encourage agencies operating EPOS-GNSS stations to contribute to the EPN, if EUREF identifies these stations as valuable for increasing the reliability of its core products;
- inform EUREF about any changes to the EPOS data policy.

2.2 EUREF shall use reasonable efforts to carry out the following activities:

- make navigational and observational data of EPN stations (after agreement of the station manager) accessible to EPOS and maintain the necessary interface to do so;
- make metadata (in the international standard format) of EPN and EPN Densification stations discoverable to EPOS;
- make high-precision EUREF coordinate and velocity products (in the international standard format) discoverable to EPOS and keep EPOS informed about any change to the products;
- encourage agencies operating GNSS stations contributing to the EUREF activities to also make their GNSS station data available to EPOS;
- select EPOS-GNSS stations that can improve the EUREF core products and invite them to contribute to the EPN;
- inform EPOS about any changes to the EUREF data policy.

2.3 In order to optimally achieve the objectives of this MoU, the Parties identify the following areas for collaboration and development:

- investigate opportunities for the development and maintenance of common data products, such as a GNSS-based dense velocity field or dense velocity model;
- work towards interoperability of GNSS data and metadata taking into account that data FAIRness¹ is considered a necessary target;
- investigate opportunities for concrete collaboration on the development of standards and guidelines for the exchange of data and information between both Parties;
- investigate opportunities for the usage, development and maintenance of common components of use in both Parties;
- investigate opportunities for common metadata handling;
- investigate opportunities for collaboration on the data processing and the analysis of results;
- establish or use existing fora for cooperation at strategic as well as technical levels;
- establish or use regular meetings where the Parties will inform each other on progress;
- raise awareness of the complementarity of the two initiatives in each of the two communities.

¹ Findable, Accessible, Interoperable, Reusable.

Article 3 - Financing

- 3.1 The collaboration envisaged through this MoU does not involve exchange of funding, either in the form of reimbursement or contribution of funds between the Parties: each party will cover their own costs in establishing and developing this relationship.
- 3.2 Nothing in this MoU shall be construed as obligating EPOS ERIC or EUREF to expend money or other resources. By signing this MoU, neither EPOS ERIC nor EUREF incur any obligation for present or future payment of money in excess of appropriations authorized by law and administratively allocated for work undertaken pursuant to this MoU.
- 3.3 This document is neither a fiscal nor a funds obligation document, nor does it supplement existing statutory authorities of the signatories.

Article 4 - Confidentiality

- 4.1 The Parties agree and undertake to keep confidential any information, document or other material that may be exchanged in connection with any activity conducted pursuant to this MoU and communicated to them as confidential, until, or unless, where such information is already in the public domain or is required to be disclosed by any applicable law or regulations, or where the extent of such disclosure is authorised in writing by the other. In case of disclosing confidential information to a third party, the third party shall commit to respect such confidentiality obligation by signing an agreement with the provisions set in the MoU. The obligations of the Parties under this Article shall continue following the expiry or termination of this MoU.
- 4.2 It is acknowledged that various types of restrictions may exist in relation to confidentiality, such as legislative stipulations and contractual obligations, which may govern the use of data and other materials provided by the Parties.
- 4.3 All requests from third parties for confidential data or other material shall be handled on a case-by-case basis in a separate agreement in accordance with EPOS ERIC best practice and EUREF.
- 4.4 It is acknowledged that the parties are subject to Freedom of Information legislation ("Legislation") which may require a Party to make certain information available to members of the public on request. Wherever possible, and in accordance with any applicable Code of Practice issued with the Legislation, the Parties will consult with each other before making any disclosure pursuant to the Legislation.
- 4.5 All future work which makes use of, is derived from (in part or in whole), or relies on, information or data provided under this MoU shall also be considered confidential, as per clause 4.1.

Article 5 – Intellectual Property

- 5.1 All Intellectual Property Rights, background technology, know-how, assets and resources deposited with EPOS ERIC or EUREF under this MoU shall and will remain vested in the owning Party.
- 5.2 Each Party shall ensure that any Intellectual Property Right has not resulted from the infringement of any third party's legitimate rights. Further, the concerned Party shall be liable for any claim made by any third party on the ownership and legality of the use of the Intellectual Property Right which is brought in by that Party for the implementation of the activities under this MoU.
- 5.3 Any information derived or created from the information and materials supplied shall be owned by the generating Party or owned jointly in the case of joint generation.

- 5.4 Each Party shall enjoy, on a royalty-free basis, access rights to background IP of the other Partner which is brought to the collaboration and is directly related and necessary to the activity carried out under this MoU.
- 5.5 Copyright on any publication resulting from activities under this MoU shall belong to the Party of the first author, unless agreed otherwise. Other Parties contributing to the publication will be granted the right to reproduce the material for their own purposes.
- 5.6 Termination of this MoU shall not affect the rights and/or obligations with respect to Intellectual Property Rights, ownership of any patent, copyright of any publication, and 'right to use' arrangements.

Article 6 – Entry into force and duration

- 6.1 This MoU shall enter into force on the date of its signature by the last party and will have effect for a period of 3 (three) years from said date. This MoU shall be renewed by signing new MoU for a new 3 (three) year periods under the same conditions. Renewal does not imply any modification or deferment of existing obligations.
- 6.2 Either party may terminate this MoU at any time upon 3 (three) months prior written notice to the other party giving justifiable reasons for doing so. Activities in progress on the date of such written notice and the rights and obligations ensuing from them shall proceed to completion, unless the parties otherwise agree in writing.
- 6.3 The parties shall evaluate the implementation of this MoU after it has been in force for 3 (three) years. On the basis of this evaluation, the Parties may make modifications for the purpose of better fulfilling the objective of this MoU. Any amendment to this MoU shall be the subject of a written agreement signed by the duly authorised representatives of both parties.

Article 7 – Nominated Personnel

General communication between the parties for the purposes of this MoU shall be addressed to:

EPOS ERIC

Carmela Freda, EPOS ERIC Executive Director, at the time of writing
E-mail: executive.director@epos-eric.eu
Tel: +3906 51860502

EPOS-GNSS

Rui Fernandes, Chairperson of GNSS EPOS, at the time of writing
E-mail: rui@segal.ubi.pt
Tel: +351 919999300

EUREF


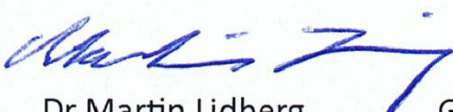
Martin Lidberg, Chairperson of EUREF, at the time of writing
E-mail: Martin.Lidberg@lm.se
Tel: +46 (0)26 633842

Article 8 – General provisions

- 8.1 A Party may not assign the rights and obligations arising from this MoU, in whole or in part, without the prior and express written agreement of the other Party.
- 8.2 In case any provision of this MoU is or becomes void, this does not affect the validity of the other provisions of this MoU or the MoU as a whole. The parties will undertake to replace the ineffective provision by an effective provision which comes as close as possible to the purpose of the ineffective provision.
- 8.3 Nothing in this MoU will be construed as creating a partnership or joint venture.
- 8.4 In case of any dispute or difference between the parties arising out of or in connection with this MoU, the parties hereto shall settle it by mutual agreement. Such effort shall be deemed to have failed when one of the parties so notifies the other in writing. In that case, this MoU shall be governed and construed in accordance with the substantive law of Belgium.

Date and signatures

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For and on behalf of EPOS ERIC Date

 
Dr Martin Lidberg, Gävle 2022-09-12
Chairman of EUREF.

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For and on behalf of EUREF Date