



EUROPEAN RESEARCH EXECUTIVE AGENCY (REA)

REA.C – Future Society
C.4 – Reforming European R&I and Research Infrastructures

GRANT AGREEMENT

Project 101130949 — POLARIN

PREAMBLE

This **Agreement** ('the Agreement') is **between** the following parties:

on the one part,

the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and

on the other part,

1. 'the coordinator':

ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI), PIC 999497507, established in AM HANDELSHAFEN 12, BREMERHAVEN 27570, Germany,

and the following other beneficiaries, if they sign their 'accession form' (see Annex 3 and Article 40):

2. **OULUN YLIOPISTO (UOULU)**, PIC 999844670, established in PENTTI KAITERAN KATU 1, OULU 90014, Finland,

3. **INTERACT-INTERNATIONAL NETWORK FOR TERRESTRIAL RESEARCH AND MONITORING (INPA)**, PIC 893223337, established in LIMHAMNSVAGEN 108, LIMHAMN 216 13, Sweden,

4. **LUNDS UNIVERSITET (ULUND)**, PIC 999901318, established in Paradisgatan 5c, LUND 22100, Sweden,

5. **CONSIGLIO NAZIONALE DELLE RICERCHE (CNR)**, PIC 999979500, established in PIAZZALE ALDO MORO 7, ROMA 00185, Italy,

6. **ISTITUTO NAZIONALE DI OCEANOGRAFIA E DI GEOFISICA SPERIMENTALE (OGS)**, PIC 999625644, established in Borgo Grotta Gigante 42/C, SGONICO-TRIESTE 34010, Italy,

7. **INKODE SOCIETA COOPERATIVA (INKODE)**, PIC 903762872, established in VIA DELLO SMISTAMENTO 7, BOLOGNA 40127, Italy,

8. **AARHUS UNIVERSITET (AU)**, PIC 999997736, established in NORDRE RINGGADE 1, AARHUS C 8000, Denmark,
9. **CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS (CNRS)**, PIC 999997930, established in RUE MICHEL ANGE 3, PARIS 75794, France,
10. **KOBENHAVNS UNIVERSITET (UCPH)**, PIC 999991043, established in NORREGADE 10, KOBENHAVN 1165, Denmark,
11. **EUROPEAN POLAR BOARD (EPB)**, PIC 918597470, established in LAAN VAN NIEUW OOST INDIE 300, DEN HAAG 2593 CE, Netherlands,
12. **ETT SPA (ETT)**, PIC 991672808, established in VIA SESTRI 37 1 2, GENOVA 16154, Italy,
13. **UNIVERSITETET I TROMSOE - NORGES ARKTISKE UNIVERSITET (UiT)**, PIC 999874643, established in HANSINE HANSENS VEG 14, TROMSO 9019, Norway,
14. **AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (CSIC)**, PIC 999991722, established in CALLE SERRANO 117, MADRID 28006, Spain,
15. **SIOS SVALBARD AS (SIOS)**, PIC 907144777, established in VEI 231, LONGYEARBYEN 9170, Norway,
16. **STIFTELSEN NILU (NILU)**, PIC 999654162, established in INSTITUTTVEIEN 18, KJELLER 2007, Norway,
17. **NATIONAL ANTARCTIC SCIENTIFIC CENTER (NASC)**, PIC 983358453, established in TARASA SHEVCHENKO BLVD 16, Kyiv 01601, Ukraine,
18. **INSTITUTO DE GEOGRAFIA E ORDENAMENTO DO TERRITORIO DA UNIVERSIDADE DELISBOA (IGOT UL)**, PIC 986958026, established in EDIFICIO IGOT RUA BRANCA EDMEE MARQUES, LISBOA 1600 276, Portugal,
19. **HELMHOLTZ-ZENTRUM POTSDAM DEUTSCHES GEOFORSCHUNGSZENTRUM - GFZ (GFZ)**, PIC 999994341, established in TELEGRAFENBERG 17, POTSDAM 14473, Germany,
20. **DANMARKS TEKNISKE UNIVERSITET (DTU)**, PIC 999990655, established in ANKER ENGELUNDS VEJ 101, KONGENS LYNGBY 2800, Denmark,
21. **INSTITUT POLAIRE FRANCAIS PAUL-EMILE-VICTOR GIP (IPEV)**, PIC 999450753, established in TECHNOPOLE BREST IROISE ZI DE LA POINTE DU DIABLE, PLOUZANE 29280, France,
22. **COMPAGNIE DU PONANT (PONANT)**, PIC 885528909, established in 408, AVENUE DU PRADO, MARSEILLE 13008, France,
23. **HAFRANNSOKNASTOFNUN, RANNSOKNA- OG RADGJAFARSTOFNUN HAFS OG VATNA (MFRI)**, PIC 909894145, established in Fornubúðum 5, Hafnarfjörður 220, Iceland,
24. **GRONLANDS NATURINSTITUT (GINR)**, PIC 998297908, established in Kivioq 2, NUUK 3900, Greenland,

25. **MINISTERIO DE CIENCIA E INNOVACION (MCIN)**, PIC 905411775, established in Paseo de la Castellana 162, MADRID 28046, Spain,
26. **POLARFORSKNINGSSEKRETARIETET (SPRS)**, PIC 984574348, established in c/o Lulea tekniska universitet, Lulea 971 87, Sweden,
27. **SUDURNES SCIENCE AND LEARNING CENTER (SSLC)**, PIC 924309412, established in GARDVEGI 1, SANDGERDI 245, Iceland,
28. **DANMARKS METEOROLOGISKE INSTITUT (DMI)**, PIC 999509438, established in LYNGBYVEJ 100, KOBENHAVN 2100, Denmark,
29. **UNIVERSITE LAVAL (ULAAVAL)**, PIC 998082180, established in ALLEE DES BIBLIOTHEQUES 2345, QUEBEC G1V 0A6, Canada,
30. **TURUN YLIOPISTO (UTU)**, PIC 999903064, established in YLIOPISTONMAKI, Turku 20014, Finland,
31. **NORSK POLARINSTITUTT (NPI)**, PIC 998675432, established in HJALMAR JOHANNESSENS 14, TROMSOE 9296, Norway,
32. **UNIVERSITAET GRAZ (UGRAZ)**, PIC 999873188, established in UNIVERSITATSPLATZ 3, GRAZ 8010, Austria,
33. **RANNSOKNARSTODIN RIF (RIF)**, PIC 937536138, established in ADALBRAUT 23, RAUFARHOFN 675, Iceland,
34. **STOCKHOLMS UNIVERSITET (SU)**, PIC 999885022, established in UNIVERSITETSVAGEN 10, STOCKHOLM 10691, Sweden,
35. **UNIWERSYTET IM. ADAMA MICKIEWICZA W POZNANIU (AMU)**, PIC 999886865, established in ULICA HENRYKA WIENIAWSKIEGO 1, POZNAN 61 712, Poland,
36. **AURORA COLLEGE (ARI)**, PIC 919704919, established in 50 CONIBEAR CRESCENT, FORT SMITH X0E 0P0, Canada,
37. **Instytut Geofizyki Polskiej Akademii Nauk (IGF PAS)**, PIC 996625337, established in Ksiecia Janusza 64, Warsaw 01-452, Poland,
38. **UNIWERSYTET MIKOLAJA KOPERNIKA W TORUNIU (UMK)**, PIC 999836619, established in UL. JURIJA GAGARINA 11, TORUN 87100, Poland,
39. **University of Alaska (UAF)**, PIC 987205958, established in North Koyukuk Drive 902, Fairbanks 99775, United States,
40. **MARINE INSTITUTE (MI)**, PIC 999522824, established in RINVILLE ORANMORE, GALWAY H91 R673, Ireland,
41. **UNITED KINGDOM RESEARCH AND INNOVATION (UKRI)**, PIC 906446474, established in POLARIS HOUSE NORTH STAR AVENUE, SWINDON SN2 1FL, United Kingdom,
42. **HELSINGIN YLIOPISTO (UH)**, PIC 999994535, established in YLIOPISTONKATU 3, HELSINGIN YLIOPISTO 00014, Finland,

43. **ILMATIETEEN LAITOS (FMI)**, PIC 999591306, established in Erik Palmenin aukio 1, HELSINKI 00560, Finland,

44. **BULGARSKI ANTARKTICHESKI INSTITUT ASSOCIATION (BAI)**, PIC 998835870, established in TZAR OSVOBODITEL BLVD 15, SOFIA 1504, Bulgaria,

45. **UIC SCIENCE LLC (UICS)**, PIC 919608889, established in 6700 ARCTIC SPUR ROAD, ANCHORAGE 99518, United States,

46. **CAFF SKRIFSTOFAN A ISLANDI (CAFF)**, PIC 937088677, established in NOROURSLOO BORGUM, AKUREYRI 600, Iceland,

47. **FONDATION TARA (TARA)**, PIC 916064024, established in 8 RUE DE PRAGUE, PARIS 75012, France,

Unless otherwise specified, references to ‘beneficiary’ or ‘beneficiaries’ include the coordinator and affiliated entities (if any).

If only one beneficiary signs the grant agreement (‘mono-beneficiary grant’), all provisions referring to the ‘coordinator’ or the ‘beneficiaries’ will be considered — mutatis mutandis — as referring to the beneficiary.

The parties referred to above have agreed to enter into the Agreement.

By signing the Agreement and the accession forms, the beneficiaries accept the grant and agree to implement the action under their own responsibility and in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

The Agreement is composed of:

Preamble

Terms and Conditions (including Data Sheet)

Annex 1 Description of the action¹

Annex 2 Estimated budget for the action

Annex 2a Additional information on unit costs and contributions (if applicable)

Annex 3 Accession forms (if applicable)²

Annex 3a Declaration on joint and several liability of affiliated entities (if applicable)³

Annex 4 Model for the financial statements

Annex 5 Specific rules (if applicable)

¹ Template published on [Portal Reference Documents](#).

² Template published on [Portal Reference Documents](#).

³ Template published on [Portal Reference Documents](#).

TERMS AND CONDITIONS

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DATA SHEET

1. General data

Project summary:

Project summary
<p>The polar regions play a key role in the Earth's system. They are essential for our climate and are sentinels of climate change, human expansion, and the hunt of new resources. The polar regions are losing ice, and their oceans and land are changing rapidly. The consequences of this polar transition extend to the whole planet and are affecting people in multiple ways. Evidence-based policy recommendations are needed, but the polar regions are difficult to reach, and research infrastructures able to operate in these regions are scarce. To understand and predict key processes in the polar regions and provide evidence-based information, the polar research community needs access to world-class research infrastructure operating in these regions. POLARIN is an international network of polar research infrastructures and their services, aiming at addressing the scientific challenges of the polar regions. The network includes a wide array of complementary and interdisciplinary top level research infrastructures: Arctic and Antarctic research stations, research vessels and icebreakers operating at both poles, observatories, data infrastructures and ice and sediment core repositories. POLARIN will provide integrated, challenge-driven, and combined access to these infrastructures to facilitate interdisciplinary research on complex processes. POLARIN will: 1. Provide challenge-driven transnational access to a large portfolio of research infrastructures. 2. Improve the access to data by improving data availability and interoperability between data infrastructures. 3. Provide virtual access to data and data services. 4. Provide data products for the scientific community and decision makers. 5. Train the young generation of polar researchers in optimally exploiting the infrastructures for their research. 6. Duly advertise the services offered by POLARIN and engage the infrastructure users to share their research outcomes with society.</p>

Keywords:

- Polar research, Arctic, Antarctic, Challenges, Research Infrastructures, Services, Infrastructure Users, Transnational Access, Virtual Access, Training,

Project number: 101130949

Project name: POLARIN: POLAR RESEARCH INFRASTRUCTURE NETWORK

Project acronym: POLARIN

Call: HORIZON-INFRA-2023-SERV-01

Topic: HORIZON-INFRA-2023-SERV-01-01

Type of action: HORIZON Research and Innovation Actions

Granting authority: European Research Executive Agency

Grant managed through EU Funding & Tenders Portal: Yes (eGrants)

Project starting date: fixed date: 1 March 2024

Project end date: 28 February 2029

Project duration: 60 months

Consortium agreement: Yes

2. Participants

List of participants:

N°	Role	Short name	Legal name	Ctry	PIC	Total eligible costs (BEN and AE)	Max grant amount
1	COO	AWI	ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG	DE	999497507	2 956 870.00	2 956 870.00
2	BEN	UOULU	OULUN YLIOPISTO	FI	999844670	553 052.50	553 052.50

N°	Role	Short name	Legal name	Ctry	PIC	Total eligible costs (BEN and AE)	Max grant amount
3	BEN	INPA	INTERACT-INTERNATIONAL NETWORK FOR TERRESTRIAL RESEARCH AND MONITORING	SE	893223337	285 000.00	285 000.00
4	BEN	ULUND	LUNDS UNIVERSITET	SE	999901318	337 985.00	337 985.00
5	BEN	CNR	CONSIGLIO NAZIONALE DELLE RICERCHE	IT	999979500	764 133.00	764 133.00
6	BEN	OGS	ISTITUTO NAZIONALE DI OCEANOGRAFIA E DI GEOFISICA SPERIMENTALE	IT	999625644	555 106.00	555 106.00
7	BEN	INKODE	INKODE SOCIETA COOPERATIVA	IT	903762872	202 500.00	202 500.00
8	BEN	AU	AARHUS UNIVERSITET	DK	999997736	833 100.00	833 100.00
9	BEN	CNRS	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS	FR	999997930	194 750.00	194 750.00
10	BEN	UCPH	KOBENHAVNS UNIVERSITET	DK	999991043	337 048.00	337 048.00
11	BEN	EPB	EUROPEAN POLAR BOARD	NL	918597470	366 250.00	366 250.00
12	BEN	ETT	ETT SPA	IT	991672808	351 250.00	351 250.00
13	BEN	UiT	UNIVERSITETET I TROMSOE - NORGES ARKTISKE UNIVERSITET	NO	999874643	180 000.00	180 000.00
14	BEN	CSIC	AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS	ES	999991722	215 912.50	215 912.50
15	BEN	SIOS	SIOS SVALBARD AS	NO	907144777	382 000.00	382 000.00
16	BEN	NILU	STIFTELSEN NILU	NO	999654162	128 068.75	128 068.75
17	BEN	NASC	NATIONAL ANTARCTIC SCIENTIFIC CENTER	UA	983358453	700 835.00	700 835.00
18	BEN	IGOT UL	INSTITUTO DE GEOGRAFIA E ORDENAMENTO DO TERRITORIO DA UNIVERSIDADE DELISBOA	PT	986958026	151 410.00	151 410.00
19	BEN	GFZ	HELMHOLTZ-ZENTRUM POTSDAM DEUTSCHES GEOFORSCHUNGSZENTRUM - GFZ	DE	999994341	135 181.25	135 181.25
20	BEN	DTU	DANMARKS TEKNISKE UNIVERSITET	DK	999990655	298 726.25	298 726.25
21	BEN	IPEV	INSTITUT POLAIRE FRANCAIS PAUL-EMILE-VICTOR GIP	FR	999450753	232 358.00	232 358.00
22	BEN	PONANT	COMPAGNIE DU PONANT	FR	885528909	387 500.00	387 500.00
23	BEN	MFRI	HAFRANNSOKNASTOFNUN, RANNSOKNA- OG RADGJAFARSTOFNUN HAFS OG VATNA	IS	909894145	328 062.50	328 062.50
24	BEN	GINR	GRONLANDS NATURINSTITUT	GL	998297908	85 525.00	85 525.00
25	BEN	MCIN	MINISTERIO DE CIENCIA E INNOVACION	ES	905411775	326 766.50	326 766.50
26	BEN	SPRS	POLARFORSKNINGSSEKRETARIETET	SE	984574348	129 885.00	129 885.00
27	BEN	SSLC	SUDURNES SCIENCE AND LEARNING CENTER	IS	924309412	70 459.00	70 459.00
28	BEN	DMI	DANMARKS METEOROLOGISKE INSTITUT	DK	999509438	98 156.25	98 156.25
29	BEN	ULAVAL	UNIVERSITE LAVAL	CA	998082180	597 036.00	597 036.00
30	BEN	UTU	TURUN YLIOPISTO	FI	999903064	80 231.50	80 231.50
31	BEN	NPI	NORSK POLARINSTITUTT	NO	998675432	611 107.50	611 107.50
32	BEN	UGRAZ	UNIVERSITAET GRAZ	AT	999873188	48 228.00	48 228.00
33	BEN	RIF	RANNSOKNARSTODIN RIF	IS	937536138	76 250.00	76 250.00
34	BEN	SU	STOCKHOLMS UNIVERSITET	SE	999885022	103 031.25	103 031.25
35	BEN	AMU	UNIWIERSYTET IM. ADAMA MICKIEWICZA W POZNANIU	PL	999886865	46 625.00	46 625.00
36	BEN	ARI	AURORA COLLEGE	CA	919704919	98 407.75	98 407.75
37	BEN	IGF PAS	Instytut Geofizyki Polskiej Akademii Nauk	PL	996625337	86 740.00	86 740.00
38	BEN	UMK	UNIWIERSYTET MIKOLAJA KOPERNIKA W TORUNIU	PL	999836619	105 301.25	105 301.25
39	BEN	UAF	University of Alaska	US	987205958	63 370.00	63 370.00
40	BEN	MI	MARINE INSTITUTE	IE	999522824	273 000.00	273 000.00

N°	Role	Short name	Legal name	Ctry	PIC	Total eligible costs (BEN and AE)	Max grant amount
41	BEN	UKRI	UNITED KINGDOM RESEARCH AND INNOVATION	UK	906446474	127 203.00	127 203.00
42	BEN	UH	HELSINGIN YLIOPISTO	FI	999994535	90 406.25	90 406.25
43	BEN	FMI	ILMATIETEEN LAITOS	FI	999591306	130 985.00	130 985.00
44	BEN	BAI	BULGARSKI ANTARKTICHESKI INSTITUT ASSOCIATION	BG	998835870	144 651.00	144 651.00
45	BEN	UICS	UIC SCIENCE LLC	US	919608889	109 900.00	109 900.00
46	BEN	CAFF	CAFF SKRIFSTOFAN A ISLANDI	IS	937088677	75 000.00	75 000.00
47	BEN	TARA	FONDATION TARA	FR	916064024	132 750.00	132 750.00
Total						14 588 114.00	14 588 114.00

Coordinator:

- ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI)

3. Grant**Maximum grant amount, total estimated eligible costs and contributions and funding rate:**

Total eligible costs (BEN and AE)	Funding rate (%)	Maximum grant amount (Annex 2)	Maximum grant amount (award decision)
14 588 114.00	100	14 588 114.00	14 588 114.00

Grant form: Budget-based**Grant mode:** Action grant**Budget categories/activity types:**

- A. Personnel costs
 - A.1 Employees, A.2 Natural persons under direct contract, A.3 Seconded persons
 - A.4 SME owners and natural person beneficiaries
- B. Subcontracting costs
- C. Purchase costs
 - C.1 Travel and subsistence
 - C.2 Equipment
 - C.3 Other goods, works and services
- D. Other cost categories
 - D.2 Internally invoiced goods and services
 - D.3 Transnational access to research infrastructure unit costs
 - D.4 Virtual access to research infrastructure unit costs
- E. Indirect costs

Cost eligibility options:

- In-kind contributions eligible costs
- Parental leave

- Project-based supplementary payments
- Average personnel costs (unit cost according to usual cost accounting practices)
- Limitation for subcontracting
- Travel and subsistence:
 - Travel: Actual costs
 - Accommodation: Actual costs
 - Subsistence: Actual costs
- Equipment: depreciation only
- Indirect cost flat-rate: 25% of the eligible direct costs (categories A-D, except volunteers costs, subcontracting costs, financial support to third parties and exempted specific cost categories, if any)
- VAT: Yes
- Other ineligible costs

Budget flexibility: Yes (no flexibility cap)

4. Reporting, payments and recoveries

4.1 Continuous reporting (art 21)

Deliverables: see Funding & Tenders Portal Continuous Reporting tool

4.2 Periodic reporting and payments

Reporting and payment schedule (art 21, 22):

Reporting					Payments	
Reporting periods			Type	Deadline	Type	Deadline (time to pay)
RP No	Month from	Month to				
					Initial prefinancing	30 days from entry into force/10 days before starting date – whichever is the latest
1	1	18	Periodic report	60 days after end of reporting period	Interim payment	90 days from receiving periodic report
2	19	42	Periodic report	60 days after end of reporting period	Interim payment	90 days from receiving periodic report
3	43	60	Periodic report	60 days after end of reporting period	Final payment	90 days from receiving periodic report

Prefinancing payments and guarantees:

Prefinancing payment	
Type	Amount
Prefinancing 1 (initial)	7 779 841.20

Reporting and payment modalities (art 21, 22):

Mutual Insurance Mechanism (MIM): Yes

MIM contribution: 5% of the maximum grant amount (729 405.70), retained from the initial prefinancing

Restrictions on distribution of initial prefinancing: The prefinancing may be distributed only if the minimum number of beneficiaries set out in the call conditions (if any) have acceded to the Agreement and only to beneficiaries that have acceded.

Interim payment ceiling (if any): 90% of the maximum grant amount

Exception for revenues: Yes

No-profit rule: Yes

Late payment interest: ECB + 3.5%

Bank account for payments:

DE12292400240349192500

Conversion into euros: Double conversion

Reporting language: Language of the Agreement

4.3 Certificates (art 24):

Certificates on the financial statements (CFS):

Conditions:

Schedule: only at final payment, if threshold is reached

Standard threshold (beneficiary-level):

- financial statement: requested EU contribution to costs \geq EUR 430 000.00

Special threshold for beneficiaries with a systems and process audit(see Article 24): financial statement: requested EU contribution to costs \geq EUR 725 000.00

4.4 Recoveries (art 22)

First-line liability for recoveries:

Beneficiary termination: Beneficiary concerned

Final payment: Each beneficiary for their own debt

After final payment: Beneficiary concerned

Joint and several liability for enforced recoveries (in case of non-payment):

Individual financial responsibility: Each beneficiary is liable only for its own debts (and those of its affiliated entities, if any)

Joint and several liability of affiliated entities — n/a

5. Consequences of non-compliance, applicable law & dispute settlement forum

Suspension and termination:

Additional suspension grounds (art 31)

Additional termination grounds (art 32)

Applicable law (art 43):

Standard applicable law regime: EU law + law of Belgium

Dispute settlement forum (art 43):

Standard dispute settlement forum:

EU beneficiaries: EU General Court + EU Court of Justice (on appeal)

Non-EU beneficiaries: Courts of Brussels, Belgium (unless an international agreement provides for the enforceability of EU court judgements)

6. Other

Specific rules (Annex 5): Yes

Standard time-limits after project end:

Confidentiality (for X years after final payment): 5

Record-keeping (for X years after final payment): 5 (or 3 for grants of not more than EUR 60 000)

Reviews (up to X years after final payment): 2

Audits (up to X years after final payment): 2

Extension of findings from other grants to this grant (no later than X years after final payment): 2

Impact evaluation (up to X years after final payment): 5 (or 3 for grants of not more than EUR 60 000)

CHAPTER 1 GENERAL

ARTICLE 1 — SUBJECT OF THE AGREEMENT

This Agreement sets out the rights and obligations and terms and conditions applicable to the grant awarded for the implementation of the action set out in Chapter 2.

ARTICLE 2 — DEFINITIONS

For the purpose of this Agreement, the following definitions apply:

Actions — The project which is being funded in the context of this Agreement.

Grant — The grant awarded in the context of this Agreement.

EU grants — Grants awarded by EU institutions, bodies, offices or agencies (including EU executive agencies, EU regulatory agencies, EDA, joint undertakings, etc.).

Participants — Entities participating in the action as beneficiaries, affiliated entities, associated partners, third parties giving in-kind contributions, subcontractors or recipients of financial support to third parties.

Beneficiaries (BEN) — The signatories of this Agreement (either directly or through an accession form).

Affiliated entities (AE) — Entities affiliated to a beneficiary within the meaning of Article 187 of EU Financial Regulation 2018/1046⁴ which participate in the action with similar rights and obligations as the beneficiaries (obligation to implement action tasks and right to charge costs and claim contributions).

Associated partners (AP) — Entities which participate in the action, but without the right to charge costs or claim contributions.

Purchases — Contracts for goods, works or services needed to carry out the action (e.g. equipment, consumables and supplies) but which are not part of the action tasks (see Annex 1).

Subcontracting — Contracts for goods, works or services that are part of the action tasks (see Annex 1).

In-kind contributions — In-kind contributions within the meaning of Article 2(36) of EU Financial

⁴ For the definition, see Article 187 Regulation (EU, Euratom) 2018/1046 of the European Parliament and of the Council of 18 July 2018 on the financial rules applicable to the general budget of the Union, amending Regulations (EU) No 1296/2013, (EU) No 1301/2013, (EU) No 1303/2013, (EU) No 1304/2013, (EU) No 1309/2013, (EU) No 1316/2013, (EU) No 223/2014, (EU) No 283/2014, and Decision No 541/2014/EU and repealing Regulation (EU, Euratom) No 966/2012 ('EU Financial Regulation') (OJ L 193, 30.7.2018, p. 1): "**affiliated entities** [are]:

- (a) entities that form a sole beneficiary [(i.e. where an entity is formed of several entities that satisfy the criteria for being awarded a grant, including where the entity is specifically established for the purpose of implementing an action to be financed by a grant)];
- (b) entities that satisfy the eligibility criteria and that do not fall within one of the situations referred to in Article 136(1) and 141(1) and that have a link with the beneficiary, in particular a legal or capital link, which is neither limited to the action nor established for the sole purpose of its implementation".

Regulation 2018/1046, i.e. non-financial resources made available free of charge by third parties.

Fraud — Fraud within the meaning of Article 3 of EU Directive 2017/1371⁵ and Article 1 of the Convention on the protection of the European Communities' financial interests, drawn up by the Council Act of 26 July 1995⁶, as well as any other wrongful or criminal deception intended to result in financial or personal gain.

Irregularities — Any type of breach (regulatory or contractual) which could impact the EU financial interests, including irregularities within the meaning of Article 1(2) of EU Regulation 2988/95⁷.

Grave professional misconduct — Any type of unacceptable or improper behaviour in exercising one's profession, especially by employees, including grave professional misconduct within the meaning of Article 136(1)(c) of EU Financial Regulation 2018/1046.

Applicable EU, international and national law — Any legal acts or other (binding or non-binding) rules and guidance in the area concerned.

Portal — EU Funding & Tenders Portal; electronic portal and exchange system managed by the European Commission and used by itself and other EU institutions, bodies, offices or agencies for the management of their funding programmes (grants, procurements, prizes, etc.).

CHAPTER 2 ACTION

ARTICLE 3 — ACTION

The grant is awarded for the action **101130949 — POLARIN** ('action'), as described in Annex 1.

ARTICLE 4 — DURATION AND STARTING DATE

The duration and the starting date of the action are set out in the Data Sheet (see Point 1).

CHAPTER 3 GRANT

ARTICLE 5 — GRANT

5.1 Form of grant

The grant is an action grant⁸ which takes the form of a budget-based mixed actual cost grant (i.e. a

⁵ Directive (EU) 2017/1371 of the European Parliament and of the Council of 5 July 2017 on the fight against fraud to the Union's financial interests by means of criminal law (OJ L 198, 28.7.2017, p. 29).

⁶ OJ C 316, 27.11.1995, p. 48.

⁷ Council Regulation (EC, Euratom) No 2988/95 of 18 December 1995 on the protection of the European Communities financial interests (OJ L 312, 23.12.1995, p. 1).

⁸ For the definition, see Article 180(2)(a) EU Financial Regulation 2018/1046: '**action grant**' means an EU grant to finance "an action intended to help achieve a Union policy objective".

grant based on actual costs incurred, but which may also include other forms of funding, such as unit costs or contributions, flat-rate costs or contributions, lump sum costs or contributions or financing not linked to costs).

5.2 Maximum grant amount

The maximum grant amount is set out in the Data Sheet (see Point 3) and in the estimated budget (Annex 2).

5.3 Funding rate

The funding rate for costs is 100% of the action's eligible costs.

Contributions are not subject to any funding rate.

5.4 Estimated budget, budget categories and forms of funding

The estimated budget for the action is set out in Annex 2.

It contains the estimated eligible costs and contributions for the action, broken down by participant and budget category.

Annex 2 also shows the types of costs and contributions (forms of funding)⁹ to be used for each budget category.

If unit costs or contributions are used, the details on the calculation will be explained in Annex 2a.

5.5 Budget flexibility

The budget breakdown may be adjusted — without an amendment (see Article 39) — by transfers (between participants and budget categories), as long as this does not imply any substantive or important change to the description of the action in Annex 1.

However:

- changes to the budget category for volunteers (if used) always require an amendment
- changes to budget categories with lump sums costs or contributions (if used; including financing not linked to costs) always require an amendment
- changes to budget categories with higher funding rates or budget ceilings (if used) always require an amendment
- addition of amounts for subcontracts not provided for in Annex 1 either require an amendment or simplified approval in accordance with Article 6.2
- other changes require an amendment or simplified approval, if specifically provided for in Article 6.2
- flexibility caps: not applicable.

⁹ See Article 125 EU Financial Regulation 2018/1046.

ARTICLE 6 — ELIGIBLE AND INELIGIBLE COSTS AND CONTRIBUTIONS

In order to be eligible, costs and contributions must meet the **eligibility** conditions set out in this Article.

6.1 General eligibility conditions

The **general eligibility conditions** are the following:

- (a) for actual costs:
 - (i) they must be actually incurred by the beneficiary
 - (ii) they must be incurred in the period set out in Article 4 (with the exception of costs relating to the submission of the final periodic report, which may be incurred afterwards; see Article 21)
 - (iii) they must be declared under one of the budget categories set out in Article 6.2 and Annex 2
 - (iv) they must be incurred in connection with the action as described in Annex 1 and necessary for its implementation
 - (v) they must be identifiable and verifiable, in particular recorded in the beneficiary's accounts in accordance with the accounting standards applicable in the country where the beneficiary is established and with the beneficiary's usual cost accounting practices
 - (vi) they must comply with the applicable national law on taxes, labour and social security and
 - (vii) they must be reasonable, justified and must comply with the principle of sound financial management, in particular regarding economy and efficiency
- (b) for unit costs or contributions (if any):
 - (i) they must be declared under one of the budget categories set out in Article 6.2 and Annex 2
 - (ii) the units must:
 - be actually used or produced by the beneficiary in the period set out in Article 4 (with the exception of units relating to the submission of the final periodic report, which may be used or produced afterwards; see Article 21)
 - be necessary for the implementation of the action and
 - (iii) the number of units must be identifiable and verifiable, in particular supported by records and documentation (see Article 20)
- (c) for flat-rate costs or contributions (if any):
 - (i) they must be declared under one of the budget categories set out in Article 6.2 and Annex 2

- (ii) the costs or contributions to which the flat-rate is applied must:
 - be eligible
 - relate to the period set out in Article 4 (with the exception of costs or contributions relating to the submission of the final periodic report, which may be incurred afterwards; see Article 21)
- (d) for lump sum costs or contributions (if any):
 - (i) they must be declared under one of the budget categories set out in Article 6.2 and Annex 2
 - (ii) the work must be properly implemented by the beneficiary in accordance with Annex 1
 - (iii) the deliverables/outputs must be achieved in the period set out in Article 4 (with the exception of deliverables/outputs relating to the submission of the final periodic report, which may be achieved afterwards; see Article 21)
- (e) for unit, flat-rate or lump sum costs or contributions according to usual cost accounting practices (if any):
 - (i) they must fulfil the general eligibility conditions for the type of cost concerned
 - (ii) the cost accounting practices must be applied in a consistent manner, based on objective criteria, regardless of the source of funding
- (f) for financing not linked to costs (if any): the results must be achieved or the conditions must be fulfilled as described in Annex 1.

In addition, for direct cost categories (e.g. personnel, travel & subsistence, subcontracting and other direct costs) only costs that are directly linked to the action implementation and can therefore be attributed to it directly are eligible. They must not include any indirect costs (i.e. costs that are only indirectly linked to the action, e.g. via cost drivers).

In-kind contributions provided by third parties free of charge may be declared as eligible direct costs by the beneficiaries which use them (under the same conditions as if they were their own, provided that they concern only direct costs and that the third parties and their in-kind contributions are set out in Annex 1 (or approved ex post in the periodic report, if their use does not entail changes to the Agreement which would call into question the decision awarding the grant or breach the principle of equal treatment of applicants; ‘simplified approval procedure’).

6.2 Specific eligibility conditions for each budget category

For each budget category, the **specific eligibility conditions** are as follows:

Direct costs

A. Personnel costs

A.1 Costs for employees (or equivalent) are eligible as personnel costs if they fulfil the general eligibility conditions and are related to personnel working for the beneficiary under an employment contract (or equivalent appointing act) and assigned to the action.

They must be limited to salaries (including net payments during parental leave), social security contributions, taxes and other costs linked to the remuneration, if they arise from national law or the employment contract (or equivalent appointing act) and be calculated on the basis of the costs actually incurred, in accordance with the following method:

{daily rate for the person
multiplied by
number of day-equivalents worked on the action (rounded up or down to the nearest half-day)}.

The daily rate must be calculated as:

{annual personnel costs for the person
divided by
215}.

The number of day-equivalents declared for a person must be identifiable and verifiable (see Article 20).

The actual time spent on parental leave by a person assigned to the action may be deducted from the 215 days indicated in the above formula.

The total number of day-equivalents declared in EU grants, for a person for a year, cannot be higher than 215, minus time spent on parental leave (if any).

For personnel which receives supplementary payments for work in projects (project-based remuneration), the personnel costs must be calculated at a rate which:

- corresponds to the actual remuneration costs paid by the beneficiary for the time worked by the person in the action over the reporting period
- does not exceed the remuneration costs paid by the beneficiary for work in similar projects funded by national schemes ('national projects reference')
- is defined based on objective criteria allowing to determine the amount to which the person is entitled

and

- reflects the usual practice of the beneficiary to pay consistently bonuses or supplementary payments for work in projects funded by national schemes.

The national projects reference is the remuneration defined in national law, collective labour agreement or written internal rules of the beneficiary applicable to work in projects funded by national schemes.

If there is no such national law, collective labour agreement or written internal rules or if the project-based remuneration is not based on objective criteria, the national project reference will be the average

remuneration of the person in the last full calendar year covered by the reporting period, excluding remuneration paid for work in EU actions.

If the beneficiary uses average personnel costs (unit cost according to usual cost accounting practices), the personnel costs must fulfil the general eligibility conditions for such unit costs and the daily rate must be calculated:

- using the actual personnel costs recorded in the beneficiary's accounts and excluding any costs which are ineligible or already included in other budget categories; the actual personnel costs may be adjusted on the basis of budgeted or estimated elements, if they are relevant for calculating the personnel costs, reasonable and correspond to objective and verifiable information

and

- according to usual cost accounting practices which are applied in a consistent manner, based on objective criteria, regardless of the source of funding.

A.2 and A.3 Costs for natural persons working under a direct contract other than an employment contract and costs for **seconded persons by a third party against payment** are also eligible as personnel costs, if they are assigned to the action, fulfil the general eligibility conditions and:

- (a) work under conditions similar to those of an employee (in particular regarding the way the work is organised, the tasks that are performed and the premises where they are performed) and
- (b) the result of the work belongs to the beneficiary (unless agreed otherwise).

They must be calculated on the basis of a rate which corresponds to the costs actually incurred for the direct contract or secondment and must not be significantly different from those for personnel performing similar tasks under an employment contract with the beneficiary.

A.4 The work of **SME owners** for the action (i.e. owners of beneficiaries that are small and medium-sized enterprises¹⁰ not receiving a salary) or **natural person beneficiaries** (i.e. beneficiaries that are natural persons not receiving a salary) may be declared as personnel costs, if they fulfil the general eligibility conditions and are calculated as unit costs in accordance with the method set out in Annex 2a.

B. Subcontracting costs

Subcontracting costs for the action (including related duties, taxes and charges, such as non-deductible or non-refundable value added tax (VAT)) are eligible, if they are calculated on the basis of the costs actually incurred, fulfil the general eligibility conditions and are awarded using the

¹⁰ For the definition, see Commission Recommendation 2003/361/EC: micro, small or medium-sized enterprise (SME) are enterprises

- engaged in an economic activity, irrespective of their legal form (including, in particular, self-employed persons and family businesses engaged in craft or other activities, and partnerships or associations regularly engaged in an economic activity) and
- employing fewer than 250 persons (expressed in 'annual working units' as defined in Article 5 of the Recommendation) and which have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million.

beneficiary's usual purchasing practices — provided these ensure subcontracts with best value for money (or if appropriate the lowest price) and that there is no conflict of interests (see Article 12).

Beneficiaries that are 'contracting authorities/entities' within the meaning of the EU Directives on public procurement must also comply with the applicable national law on public procurement.

Subcontracting may cover only a limited part of the action.

The tasks to be subcontracted and the estimated cost for each subcontract must be set out in Annex 1 and the total estimated costs of subcontracting per beneficiary must be set out in Annex 2 (or may be approved ex post in the periodic report, if the use of subcontracting does not entail changes to the Agreement which would call into question the decision awarding the grant or breach the principle of equal treatment of applicants; 'simplified approval procedure').

C. Purchase costs

Purchase costs for the action (including related duties, taxes and charges, such as non-deductible or non-refundable value added tax (VAT)) are eligible if they fulfil the general eligibility conditions and are bought using the beneficiary's usual purchasing practices — provided these ensure purchases with best value for money (or if appropriate the lowest price) and that there is no conflict of interests (see Article 12).

Beneficiaries that are 'contracting authorities/entities' within the meaning of the EU Directives on public procurement must also comply with the applicable national law on public procurement.

C.1 Travel and subsistence

Purchases for **travel, accommodation and subsistence** must be calculated as follows:

- travel: on the basis of the costs actually incurred and in line with the beneficiary's usual practices on travel
- accommodation: on the basis of the costs actually incurred and in line with the beneficiary's usual practices on travel
- subsistence: on the basis of the costs actually incurred and in line with the beneficiary's usual practices on travel .

C.2 Equipment

Purchases of **equipment, infrastructure or other assets** used for the action must be declared as depreciation costs, calculated on the basis of the costs actually incurred and written off in accordance with international accounting standards and the beneficiary's usual accounting practices.

Only the portion of the costs that corresponds to the rate of actual use for the action during the action duration can be taken into account.

Costs for **renting or leasing** equipment, infrastructure or other assets are also eligible, if they do not exceed the depreciation costs of similar equipment, infrastructure or assets and do not include any financing fees.

C.3 Other goods, works and services

Purchases of **other goods, works and services** must be calculated on the basis of the costs actually incurred.

Such goods, works and services include, for instance, consumables and supplies, promotion, dissemination, protection of results, translations, publications, certificates and financial guarantees, if required under the Agreement.

D. Other cost categories

D.2 Internally invoiced goods and services

Costs for internally invoiced goods and services directly used for the action may be declared as unit cost according to usual cost accounting practices, if and as declared eligible in the call conditions, if they fulfil the general eligibility conditions for such unit costs and the amount per unit is calculated:

- using the actual costs for the good or service recorded in the beneficiary's accounts, attributed either by direct measurement or on the basis of cost drivers, and excluding any cost which are ineligible or already included in other budget categories; the actual costs may be adjusted on the basis of budgeted or estimated elements, if they are relevant for calculating the costs, reasonable and correspond to objective and verifiable information

and

- according to usual cost accounting practices which are applied in a consistent manner, based on objective criteria, regardless of the source of funding.

'Internally invoiced goods and services' means goods or services which are provided within the beneficiary's organisation directly for the action and which the beneficiary values on the basis of its usual cost accounting practices.

This cost will not be taken into account for the indirect cost flat-rate.

D.3 Transnational access to research infrastructure unit costs

Unit costs for providing transnational access to research infrastructure are eligible, if and as declared eligible in the call conditions, if they fulfil the general eligibility conditions, are calculated in accordance with the method set out in Annex 2a and exclude any cost which are ineligible or already included in other budget categories.

Beneficiaries that declare costs under this cost category cannot use other cost categories such as internally invoiced goods and services or equipment costs (for charging the capital costs of the infrastructure), unless explicitly allowed in the call conditions.

This cost will not be taken into account for the indirect cost flat-rate.

D.4 Virtual access to research infrastructure unit costs

Unit costs for providing virtual access to research infrastructure are eligible, if and as declared eligible in the call conditions, if they fulfil the general eligibility conditions, are calculated in accordance with the method set out in Annex 2a and exclude any cost which are ineligible or already included in other budget categories.

Beneficiaries that declare costs under this cost category cannot use other cost categories such as internally invoiced goods and services or equipment costs (for charging the capital costs of the infrastructure), unless explicitly allowed by the call conditions.

This cost will not be taken into account for the indirect cost flat-rate.

Indirect costs

E. Indirect costs

Indirect costs will be reimbursed at the flat-rate of 25% of the eligible direct costs (categories A-D, except volunteers costs, subcontracting costs, financial support to third parties and exempted specific cost categories, if any).

Contributions

Not applicable

6.3 Ineligible costs and contributions

The following costs or contributions are **ineligible**:

- (a) costs or contributions that do not comply with the conditions set out above (Article 6.1 and 6.2), in particular:
 - (i) costs related to return on capital and dividends paid by a beneficiary
 - (ii) debt and debt service charges
 - (iii) provisions for future losses or debts
 - (iv) interest owed
 - (v) currency exchange losses
 - (vi) bank costs charged by the beneficiary's bank for transfers from the granting authority
 - (vii) excessive or reckless expenditure
 - (viii) deductible or refundable VAT (including VAT paid by public bodies acting as public authority)
 - (ix) costs incurred or contributions for activities implemented during grant agreement suspension (see Article 31)
 - (x) in-kind contributions by third parties: not applicable
- (b) costs or contributions declared under other EU grants (or grants awarded by an EU Member State, non-EU country or other body implementing the EU budget), except for the following cases:
 - (i) Synergy actions: not applicable

- (ii) if the action grant is combined with an operating grant¹¹ running during the same period and the beneficiary can demonstrate that the operating grant does not cover any (direct or indirect) costs of the action grant
- (c) costs or contributions for staff of a national (or regional/local) administration, for activities that are part of the administration’s normal activities (i.e. not undertaken only because of the grant)
- (d) costs or contributions (especially travel and subsistence) for staff or representatives of EU institutions, bodies or agencies
- (e) other :
 - (i) country restrictions for eligible costs: not applicable
 - (ii) costs or contributions declared specifically ineligible in the call conditions.

6.4 Consequences of non-compliance

If a beneficiary declares costs or contributions that are ineligible, they will be rejected (see Article 27).

This may also lead to other measures described in Chapter 5.

CHAPTER 4 GRANT IMPLEMENTATION

SECTION 1 CONSORTIUM: BENEFICIARIES, AFFILIATED ENTITIES AND OTHER PARTICIPANTS

ARTICLE 7 — BENEFICIARIES

The beneficiaries, as signatories of the Agreement, are fully responsible towards the granting authority for implementing it and for complying with all its obligations.

They must implement the Agreement to their best abilities, in good faith and in accordance with all the obligations and terms and conditions it sets out.

They must have the appropriate resources to implement the action and implement the action under their own responsibility and in accordance with Article 11. If they rely on affiliated entities or other participants (see Articles 8 and 9), they retain sole responsibility towards the granting authority and the other beneficiaries.

They are jointly responsible for the *technical* implementation of the action. If one of the beneficiaries fails to implement their part of the action, the other beneficiaries must ensure that this part is implemented by someone else (without being entitled to an increase of the maximum grant amount and subject to an amendment; see Article 39). The *financial* responsibility of each beneficiary in case of recoveries is governed by Article 22.

¹¹ For the definition, see Article 180(2)(b) of EU Financial Regulation 2018/1046: ‘**operating grant**’ means an EU grant to finance “the functioning of a body which has an objective forming part of and supporting an EU policy”.

The beneficiaries (and their action) must remain eligible under the EU programme funding the grant for the entire duration of the action. Costs and contributions will be eligible only as long as the beneficiary and the action are eligible.

The **internal roles and responsibilities** of the beneficiaries are divided as follows:

(a) Each beneficiary must:

- (i) keep information stored in the Portal Participant Register up to date (see Article 19)
- (ii) inform the granting authority (and the other beneficiaries) immediately of any events or circumstances likely to affect significantly or delay the implementation of the action (see Article 19)
- (iii) submit to the coordinator in good time:
 - the prefinancing guarantees (if required; see Article 23)
 - the financial statements and certificates on the financial statements (CFS) (if required; see Articles 21 and 24.2 and Data Sheet, Point 4.3)
 - the contribution to the deliverables and technical reports (see Article 21)
 - any other documents or information required by the granting authority under the Agreement
- (iv) submit via the Portal data and information related to the participation of their affiliated entities.

(b) The coordinator must:

- (i) monitor that the action is implemented properly (see Article 11)
- (ii) act as the intermediary for all communications between the consortium and the granting authority, unless the Agreement or granting authority specifies otherwise, and in particular:
 - submit the prefinancing guarantees to the granting authority (if any)
 - request and review any documents or information required and verify their quality and completeness before passing them on to the granting authority
 - submit the deliverables and reports to the granting authority
 - inform the granting authority about the payments made to the other beneficiaries (report on the distribution of payments; if required, see Articles 22 and 32)
- (iii) distribute the payments received from the granting authority to the other beneficiaries without unjustified delay (see Article 22).

The coordinator may not delegate or subcontract the above-mentioned tasks to any other beneficiary or third party (including affiliated entities).

However, coordinators which are public bodies may delegate the tasks set out in Point (b)(ii) last indent and (iii) above to entities with ‘authorisation to administer’ which they have created or which are controlled by or affiliated to them. In this case, the coordinator retains sole responsibility for the payments and for compliance with the obligations under the Agreement.

Moreover, coordinators which are ‘sole beneficiaries’¹² (or similar, such as European research infrastructure consortia (ERICs)) may delegate the tasks set out in Point (b)(i) to (iii) above to one of their members. The coordinator retains sole responsibility for compliance with the obligations under the Agreement.

The beneficiaries must have **internal arrangements** regarding their operation and co-ordination, to ensure that the action is implemented properly.

If required by the granting authority (see Data Sheet, Point 1), these arrangements must be set out in a written **consortium agreement** between the beneficiaries, covering for instance:

- the internal organisation of the consortium
- the management of access to the Portal
- different distribution keys for the payments and financial responsibilities in case of recoveries (if any)
- additional rules on rights and obligations related to background and results (see Article 16)
- settlement of internal disputes
- liability, indemnification and confidentiality arrangements between the beneficiaries.

The internal arrangements must not contain any provision contrary to this Agreement.

ARTICLE 8 — AFFILIATED ENTITIES

Not applicable

ARTICLE 9 — OTHER PARTICIPANTS INVOLVED IN THE ACTION

9.1 Associated partners

Not applicable

9.2 Third parties giving in-kind contributions to the action

Other third parties may give in-kind contributions to the action (i.e. personnel, equipment, other goods, works and services, etc. which are free-of-charge) if necessary for the implementation.

Third parties giving in-kind contributions do not implement any action tasks. They may not charge costs or contributions to the action, but the costs for the in-kind contributions are eligible and may be

¹² For the definition, see Article 187(2) EU Financial Regulation 2018/1046: “Where several entities satisfy the criteria for being awarded a grant and together form one entity, that entity may be treated as the **sole beneficiary**, including where it is specifically established for the purpose of implementing the action financed by the grant.”

charged by the beneficiaries which use them, under the conditions set out in Article 6. The costs will be included in Annex 2 as part of the beneficiaries' costs.

The third parties and their in-kind contributions should be set out in Annex 1.

The beneficiaries must ensure that the bodies mentioned in Article 25 (e.g. granting authority, OLAF, Court of Auditors (ECA), etc.) can exercise their rights also towards the third parties giving in-kind contributions.

9.3 Subcontractors

Subcontractors may participate in the action, if necessary for the implementation.

Subcontractors must implement their action tasks in accordance with Article 11. The costs for the subcontracted tasks (invoiced price from the subcontractor) are eligible and may be charged by the beneficiaries, under the conditions set out in Article 6. The costs will be included in Annex 2 as part of the beneficiaries' costs.

The beneficiaries must ensure that their contractual obligations under Articles 11 (proper implementation), 12 (conflict of interest), 13 (confidentiality and security), 14 (ethics), 17.2 (visibility), 18 (specific rules for carrying out action), 19 (information) and 20 (record-keeping) also apply to the subcontractors.

The beneficiaries must ensure that the bodies mentioned in Article 25 (e.g. granting authority, OLAF, Court of Auditors (ECA), etc.) can exercise their rights also towards the subcontractors.

9.4 Recipients of financial support to third parties

If the action includes providing financial support to third parties (e.g. grants, prizes or similar forms of support), the beneficiaries must ensure that their contractual obligations under Articles 12 (conflict of interest), 13 (confidentiality and security), 14 (ethics), 17.2 (visibility), 18 (specific rules for carrying out action), 19 (information) and 20 (record-keeping) also apply to the third parties receiving the support (recipients).

The beneficiaries must also ensure that the bodies mentioned in Article 25 (e.g. granting authority, OLAF, Court of Auditors (ECA), etc.) can exercise their rights also towards the recipients.

ARTICLE 10 — PARTICIPANTS WITH SPECIAL STATUS

10.1 Non-EU participants

Participants which are established in a non-EU country (if any) undertake to comply with their obligations under the Agreement and:

- to respect general principles (including fundamental rights, values and ethical principles, environmental and labour standards, rules on classified information, intellectual property rights, visibility of funding and protection of personal data)
- for the submission of certificates under Article 24: to use qualified external auditors which

are independent and comply with comparable standards as those set out in EU Directive 2006/43/EC¹³

- for the controls under Article 25: to allow for checks, reviews, audits and investigations (including on-the-spot checks, visits and inspections) by the bodies mentioned in that Article (e.g. granting authority, OLAF, Court of Auditors (ECA), etc.).

Special rules on dispute settlement apply (see Data Sheet, Point 5).

10.2 Participants which are international organisations

Participants which are international organisations (IOs; if any) undertake to comply with their obligations under the Agreement and:

- to respect general principles (including fundamental rights, values and ethical principles, environmental and labour standards, rules on classified information, intellectual property rights, visibility of funding and protection of personal data)
- for the submission of certificates under Article 24: to use either independent public officers or external auditors which comply with comparable standards as those set out in EU Directive 2006/43/EC
- for the controls under Article 25: to allow for the checks, reviews, audits and investigations by the bodies mentioned in that Article, taking into account the specific agreements concluded by them and the EU (if any).

For such participants, nothing in the Agreement will be interpreted as a waiver of their privileges or immunities, as accorded by their constituent documents or international law.

Special rules on applicable law and dispute settlement apply (see Article 43 and Data Sheet, Point 5).

10.3 Pillar-assessed participants

Pillar-assessed participants (if any) may rely on their own systems, rules and procedures, in so far as they have been positively assessed and do not call into question the decision awarding the grant or breach the principle of equal treatment of applicants or beneficiaries.

‘Pillar-assessment’ means a review by the European Commission on the systems, rules and procedures which participants use for managing EU grants (in particular internal control system, accounting system, external audits, financing of third parties, rules on recovery and exclusion, information on recipients and protection of personal data; see Article 154 EU Financial Regulation 2018/1046).

Participants with a positive pillar assessment may rely on their own systems, rules and procedures, in particular for:

- record-keeping (Article 20): may be done in accordance with internal standards, rules and procedures

¹³ Directive 2006/43/EC of the European Parliament and of the Council of 17 May 2006 on statutory audits of annual accounts and consolidated accounts or similar national regulations (OJ L 157, 9.6.2006, p. 87).

- currency conversion for financial statements (Article 21): may be done in accordance with usual accounting practices
- guarantees (Article 23): for public law bodies, prefinancing guarantees are not needed
- certificates (Article 24):
 - certificates on the financial statements (CFS): may be provided by their regular internal or external auditors and in accordance with their internal financial regulations and procedures
 - certificates on usual accounting practices (CoMUC): are not needed if those practices are covered by an ex-ante assessment

and use the following specific rules, for:

- recoveries (Article 22): in case of financial support to third parties, there will be no recovery if the participant has done everything possible to retrieve the undue amounts from the third party receiving the support (including legal proceedings) and non-recovery is not due to an error or negligence on its part
- checks, reviews, audits and investigations by the EU (Article 25): will be conducted taking into account the rules and procedures specifically agreed between them and the framework agreement (if any)
- impact evaluation (Article 26): will be conducted in accordance with the participant's internal rules and procedures and the framework agreement (if any)
- grant agreement suspension (Article 31): certain costs incurred during grant suspension are eligible (notably, minimum costs necessary for a possible resumption of the action and costs relating to contracts which were entered into before the pre-information letter was received and which could not reasonably be suspended, reallocated or terminated on legal grounds)
- grant agreement termination (Article 32): the final grant amount and final payment will be calculated taking into account also costs relating to contracts due for execution only after termination takes effect, if the contract was entered into before the pre-information letter was received and could not reasonably be terminated on legal grounds
- liability for damages (Article 33.2): the granting authority must be compensated for damage it sustains as a result of the implementation of the action or because the action was not implemented in full compliance with the Agreement only if the damage is due to an infringement of the participant's internal rules and procedures or due to a violation of third parties' rights by the participant or one of its employees or individual for whom the employees are responsible.

Participants whose pillar assessment covers procurement and granting procedures may also do purchases, subcontracting and financial support to third parties (Article 6.2) in accordance with their internal rules and procedures for purchases, subcontracting and financial support.

Participants whose pillar assessment covers data protection rules may rely on their internal standards, rules and procedures for data protection (Article 15).

The participants may however not rely on provisions which would breach the principle of equal treatment of applicants or beneficiaries or call into question the decision awarding the grant, such as in particular:

- eligibility (Article 6)
- consortium roles and set-up (Articles 7-9)
- security and ethics (Articles 13, 14)
- IPR (including background and results, access rights and rights of use), communication, dissemination and visibility (Articles 16 and 17)
- information obligation (Article 19)
- payment, reporting and amendments (Articles 21, 22 and 39)
- rejections, reductions, suspensions and terminations (Articles 27, 28, 29-32)

If the pillar assessment was subject to remedial measures, reliance on the internal systems, rules and procedures is subject to compliance with those remedial measures.

Participants whose assessment has not yet been updated to cover (the new rules on) data protection may rely on their internal systems, rules and procedures, provided that they ensure that personal data is:

- processed lawfully, fairly and in a transparent manner in relation to the data subject
- collected for specified, explicit and legitimate purposes and not further processed in a manner that is incompatible with those purposes
- adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed
- accurate and, where necessary, kept up to date
- kept in a form which permits identification of data subjects for no longer than is necessary for the purposes for which the data is processed and
- processed in a manner that ensures appropriate security of the personal data.

Participants must inform the coordinator without delay of any changes to the systems, rules and procedures that were part of the pillar assessment. The coordinator must immediately inform the granting authority.

Pillar-assessed participants that have also concluded a framework agreement with the EU, may moreover — under the same conditions as those above (i.e. not call into question the decision awarding the grant or breach the principle of equal treatment of applicants or beneficiaries) — rely on the provisions set out in that framework agreement.

SECTION 2 RULES FOR CARRYING OUT THE ACTION

ARTICLE 11 — PROPER IMPLEMENTATION OF THE ACTION

11.1 Obligation to properly implement the action

The beneficiaries must implement the action as described in Annex 1 and in compliance with the provisions of the Agreement, the call conditions and all legal obligations under applicable EU, international and national law.

11.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28).

Such breaches may also lead to other measures described in Chapter 5.

ARTICLE 12 — CONFLICT OF INTERESTS

12.1 Conflict of interests

The beneficiaries must take all measures to prevent any situation where the impartial and objective implementation of the Agreement could be compromised for reasons involving family, emotional life, political or national affinity, economic interest or any other direct or indirect interest ('conflict of interests').

They must formally notify the granting authority without delay of any situation constituting or likely to lead to a conflict of interests and immediately take all the necessary steps to rectify this situation.

The granting authority may verify that the measures taken are appropriate and may require additional measures to be taken by a specified deadline.

12.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28) and the grant or the beneficiary may be terminated (see Article 32).

Such breaches may also lead to other measures described in Chapter 5.

ARTICLE 13 — CONFIDENTIALITY AND SECURITY

13.1 Sensitive information

The parties must keep confidential any data, documents or other material (in any form) that is identified as sensitive in writing ('sensitive information') — during the implementation of the action and for at least until the time-limit set out in the Data Sheet (see Point 6).

If a beneficiary requests, the granting authority may agree to keep such information confidential for a longer period.

Unless otherwise agreed between the parties, they may use sensitive information only to implement the Agreement.

The beneficiaries may disclose sensitive information to their personnel or other participants involved in the action only if they:

- (a) need to know it in order to implement the Agreement and
- (b) are bound by an obligation of confidentiality.

The granting authority may disclose sensitive information to its staff and to other EU institutions and bodies.

It may moreover disclose sensitive information to third parties, if:

- (a) this is necessary to implement the Agreement or safeguard the EU financial interests and
- (b) the recipients of the information are bound by an obligation of confidentiality.

The confidentiality obligations no longer apply if:

- (a) the disclosing party agrees to release the other party
- (b) the information becomes publicly available, without breaching any confidentiality obligation
- (c) the disclosure of the sensitive information is required by EU, international or national law.

Specific confidentiality rules (if any) are set out in Annex 5.

13.2 Classified information

The parties must handle classified information in accordance with the applicable EU, international or national law on classified information (in particular, Decision 2015/444¹⁴ and its implementing rules).

Deliverables which contain classified information must be submitted according to special procedures agreed with the granting authority.

Action tasks involving classified information may be subcontracted only after explicit approval (in writing) from the granting authority.

Classified information may not be disclosed to any third party (including participants involved in the action implementation) without prior explicit written approval from the granting authority.

Specific security rules (if any) are set out in Annex 5.

13.3 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28).

Such breaches may also lead to other measures described in Chapter 5.

ARTICLE 14 — ETHICS AND VALUES

14.1 Ethics

¹⁴ Commission Decision 2015/444/EC, Euratom of 13 March 2015 on the security rules for protecting EU classified information (OJ L 72, 17.3.2015, p. 53).

The action must be carried out in line with the highest ethical standards and the applicable EU, international and national law on ethical principles.

Specific ethics rules (if any) are set out in Annex 5.

14.2 Values

The beneficiaries must commit to and ensure the respect of basic EU values (such as respect for human dignity, freedom, democracy, equality, the rule of law and human rights, including the rights of minorities).

Specific rules on values (if any) are set out in Annex 5.

14.3 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28).

Such breaches may also lead to other measures described in Chapter 5.

ARTICLE 15 — DATA PROTECTION

15.1 Data processing by the granting authority

Any personal data under the Agreement will be processed under the responsibility of the data controller of the granting authority in accordance with and for the purposes set out in the Portal Privacy Statement.

For grants where the granting authority is the European Commission, an EU regulatory or executive agency, joint undertaking or other EU body, the processing will be subject to Regulation 2018/1725¹⁵.

15.2 Data processing by the beneficiaries

The beneficiaries must process personal data under the Agreement in compliance with the applicable EU, international and national law on data protection (in particular, Regulation 2016/679¹⁶).

They must ensure that personal data is:

- processed lawfully, fairly and in a transparent manner in relation to the data subjects
- collected for specified, explicit and legitimate purposes and not further processed in a manner that is incompatible with those purposes

¹⁵ Regulation (EU) 2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC (OJ L 295, 21.11.2018, p. 39).

¹⁶ Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC ('GDPR') (OJ L 119, 4.5.2016, p. 1).

- adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed
- accurate and, where necessary, kept up to date
- kept in a form which permits identification of data subjects for no longer than is necessary for the purposes for which the data is processed and
- processed in a manner that ensures appropriate security of the data.

The beneficiaries may grant their personnel access to personal data only if it is strictly necessary for implementing, managing and monitoring the Agreement. The beneficiaries must ensure that the personnel is under a confidentiality obligation.

The beneficiaries must inform the persons whose data are transferred to the granting authority and provide them with the Portal Privacy Statement.

15.3 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28).

Such breaches may also lead to other measures described in Chapter 5.

ARTICLE 16 — INTELLECTUAL PROPERTY RIGHTS (IPR) — BACKGROUND AND RESULTS — ACCESS RIGHTS AND RIGHTS OF USE

16.1 Background and access rights to background

The beneficiaries must give each other and the other participants access to the background identified as needed for implementing the action, subject to any specific rules in Annex 5.

‘Background’ means any data, know-how or information — whatever its form or nature (tangible or intangible), including any rights such as intellectual property rights — that is:

- (a) held by the beneficiaries before they acceded to the Agreement and
- (b) needed to implement the action or exploit the results.

If background is subject to rights of a third party, the beneficiary concerned must ensure that it is able to comply with its obligations under the Agreement.

16.2 Ownership of results

The granting authority does not obtain ownership of the results produced under the action.

‘Results’ means any tangible or intangible effect of the action, such as data, know-how or information, whatever its form or nature, whether or not it can be protected, as well as any rights attached to it, including intellectual property rights.

16.3 Rights of use of the granting authority on materials, documents and information received for policy, information, communication, dissemination and publicity purposes

The granting authority has the right to use non-sensitive information relating to the action and materials and documents received from the beneficiaries (notably summaries for publication, deliverables, as well as any other material, such as pictures or audio-visual material, in paper or electronic form) for policy, information, communication, dissemination and publicity purposes — during the action or afterwards.

The right to use the beneficiaries' materials, documents and information is granted in the form of a royalty-free, non-exclusive and irrevocable licence, which includes the following rights:

- (a) **use for its own purposes** (in particular, making them available to persons working for the granting authority or any other EU service (including institutions, bodies, offices, agencies, etc.) or EU Member State institution or body; copying or reproducing them in whole or in part, in unlimited numbers; and communication through press information services)
- (b) **distribution to the public** (in particular, publication as hard copies and in electronic or digital format, publication on the internet, as a downloadable or non-downloadable file, broadcasting by any channel, public display or presentation, communicating through press information services, or inclusion in widely accessible databases or indexes)
- (c) **editing or redrafting** (including shortening, summarising, inserting other elements (e.g. meta-data, legends, other graphic, visual, audio or text elements), extracting parts (e.g. audio or video files), dividing into parts, use in a compilation)
- (d) **translation**
- (e) **storage** in paper, electronic or other form
- (f) **archiving**, in line with applicable document-management rules
- (g) the right to authorise **third parties** to act on its behalf or sub-license to third parties the modes of use set out in Points (b), (c), (d) and (f), if needed for the information, communication and publicity activity of the granting authority
- (h) **processing**, analysing, aggregating the materials, documents and information received and **producing derivative works**.

The rights of use are granted for the whole duration of the industrial or intellectual property rights concerned.

If materials or documents are subject to moral rights or third party rights (including intellectual property rights or rights of natural persons on their image and voice), the beneficiaries must ensure that they comply with their obligations under this Agreement (in particular, by obtaining the necessary licences and authorisations from the rights holders concerned).

Where applicable, the granting authority will insert the following information:

“© – [year] – [name of the copyright owner]. All rights reserved. Licensed to the [name of granting authority] under conditions.”

16.4 Specific rules on IPR, results and background

Specific rules regarding intellectual property rights, results and background (if any) are set out in Annex 5.

16.5 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28).

Such a breach may also lead to other measures described in Chapter 5.

ARTICLE 17 — COMMUNICATION, DISSEMINATION AND VISIBILITY

17.1 Communication — Dissemination — Promoting the action

Unless otherwise agreed with the granting authority, the beneficiaries must promote the action and its results by providing targeted information to multiple audiences (including the media and the public), in accordance with Annex 1 and in a strategic, coherent and effective manner.

Before engaging in a communication or dissemination activity expected to have a major media impact, the beneficiaries must inform the granting authority.

17.2 Visibility — European flag and funding statement

Unless otherwise agreed with the granting authority, communication activities of the beneficiaries related to the action (including media relations, conferences, seminars, information material, such as brochures, leaflets, posters, presentations, etc., in electronic form, via traditional or social media, etc.), dissemination activities and any infrastructure, equipment, vehicles, supplies or major result funded by the grant must acknowledge EU support and display the European flag (emblem) and funding statement (translated into local languages, where appropriate):



Funded by the
European Union



Co-funded by the
European Union



Funded by the
European Union



Co-funded by the
European Union

The emblem must remain distinct and separate and cannot be modified by adding other visual marks, brands or text.

Apart from the emblem, no other visual identity or logo may be used to highlight the EU support.

When displayed in association with other logos (e.g. of beneficiaries or sponsors), the emblem must be displayed at least as prominently and visibly as the other logos.

For the purposes of their obligations under this Article, the beneficiaries may use the emblem without first obtaining approval from the granting authority. This does not, however, give them the right to exclusive use. Moreover, they may not appropriate the emblem or any similar trademark or logo, either by registration or by any other means.

17.3 Quality of information — Disclaimer

Any communication or dissemination activity related to the action must use factually accurate information.

Moreover, it must indicate the following disclaimer (translated into local languages where appropriate):

“Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or [name of the granting authority]. Neither the European Union nor the granting authority can be held responsible for them.”

17.4 Specific communication, dissemination and visibility rules

Specific communication, dissemination and visibility rules (if any) are set out in Annex 5.

17.5 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28).

Such breaches may also lead to other measures described in Chapter 5.

ARTICLE 18 — SPECIFIC RULES FOR CARRYING OUT THE ACTION

18.1 Specific rules for carrying out the action

Specific rules for implementing the action (if any) are set out in Annex 5.

18.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28).

Such a breach may also lead to other measures described in Chapter 5.

SECTION 3 GRANT ADMINISTRATION

ARTICLE 19 — GENERAL INFORMATION OBLIGATIONS

19.1 Information requests

The beneficiaries must provide — during the action or afterwards and in accordance with Article 7 — any information requested in order to verify eligibility of the costs or contributions declared, proper implementation of the action and compliance with the other obligations under the Agreement.

The information provided must be accurate, precise and complete and in the format requested, including electronic format.

19.2 Participant Register data updates

The beneficiaries must keep — at all times, during the action or afterwards — their information stored in the Portal Participant Register up to date, in particular, their name, address, legal representatives, legal form and organisation type.

19.3 Information about events and circumstances which impact the action

The beneficiaries must immediately inform the granting authority (and the other beneficiaries) of any of the following:

- (a) **events** which are likely to affect or delay the implementation of the action or affect the EU's financial interests, in particular:
 - (i) changes in their legal, financial, technical, organisational or ownership situation (including changes linked to one of the exclusion grounds listed in the declaration of honour signed before grant signature)
 - (ii) linked action information: not applicable
- (b) **circumstances** affecting:
 - (i) the decision to award the grant or
 - (ii) compliance with requirements under the Agreement.

19.4 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 28).

Such breaches may also lead to other measures described in Chapter 5.

ARTICLE 20 — RECORD-KEEPING

20.1 Keeping records and supporting documents

The beneficiaries must — at least until the time-limit set out in the Data Sheet (see Point 6) — keep records and other supporting documents to prove the proper implementation of the action in line with the accepted standards in the respective field (if any).

In addition, the beneficiaries must — for the same period — keep the following to justify the amounts declared:

- (a) for actual costs: adequate records and supporting documents to prove the costs declared (such

as contracts, subcontracts, invoices and accounting records); in addition, the beneficiaries' usual accounting and internal control procedures must enable direct reconciliation between the amounts declared, the amounts recorded in their accounts and the amounts stated in the supporting documents

- (b) for flat-rate costs and contributions (if any): adequate records and supporting documents to prove the eligibility of the costs or contributions to which the flat-rate is applied
- (c) for the following simplified costs and contributions: the beneficiaries do not need to keep specific records on the actual costs incurred, but must keep:
 - (i) for unit costs and contributions (if any): adequate records and supporting documents to prove the number of units declared
 - (ii) for lump sum costs and contributions (if any): adequate records and supporting documents to prove proper implementation of the work as described in Annex 1
 - (iii) for financing not linked to costs (if any): adequate records and supporting documents to prove the achievement of the results or the fulfilment of the conditions as described in Annex 1
- (d) for unit, flat-rate and lump sum costs and contributions according to usual cost accounting practices (if any): the beneficiaries must keep any adequate records and supporting documents to prove that their cost accounting practices have been applied in a consistent manner, based on objective criteria, regardless of the source of funding, and that they comply with the eligibility conditions set out in Articles 6.1 and 6.2.

Moreover, the following is needed for specific budget categories:

- (e) for personnel costs: time worked for the beneficiary under the action must be supported by declarations signed monthly by the person and their supervisor, unless another reliable time-record system is in place; the granting authority may accept alternative evidence supporting the time worked for the action declared, if it considers that it offers an adequate level of assurance
- (f) additional record-keeping rules: not applicable

The records and supporting documents must be made available upon request (see Article 19) or in the context of checks, reviews, audits or investigations (see Article 25).

If there are on-going checks, reviews, audits, investigations, litigation or other pursuits of claims under the Agreement (including the extension of findings; see Article 25), the beneficiaries must keep these records and other supporting documentation until the end of these procedures.

The beneficiaries must keep the original documents. Digital and digitalised documents are considered originals if they are authorised by the applicable national law. The granting authority may accept non-original documents if they offer a comparable level of assurance.

20.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, costs or contributions insufficiently

substantiated will be ineligible (see Article 6) and will be rejected (see Article 27), and the grant may be reduced (see Article 28).

Such breaches may also lead to other measures described in Chapter 5.

ARTICLE 21 — REPORTING

21.1 Continuous reporting

The beneficiaries must continuously report on the progress of the action (e.g. **deliverables, milestones, outputs/outcomes, critical risks, indicators**, etc; if any), in the Portal Continuous Reporting tool and in accordance with the timing and conditions it sets out (as agreed with the granting authority).

Standardised deliverables (e.g. progress reports not linked to payments, reports on cumulative expenditure, special reports, etc; if any) must be submitted using the templates published on the Portal.

21.2 Periodic reporting: Technical reports and financial statements

In addition, the beneficiaries must provide reports to request payments, in accordance with the schedule and modalities set out in the Data Sheet (see Point 4.2):

- for additional prefinancings (if any): an **additional prefinancing report**
- for interim payments (if any) and the final payment: a **periodic report**.

The prefinancing and periodic reports include a technical and financial part.

The technical part includes an overview of the action implementation. It must be prepared using the template available in the Portal Periodic Reporting tool.

The financial part of the additional prefinancing report includes a statement on the use of the previous prefinancing payment.

The financial part of the periodic report includes:

- the financial statements (individual and consolidated; for all beneficiaries/affiliated entities)
- the explanation on the use of resources (or detailed cost reporting table, if required)
- the certificates on the financial statements (CFS) (if required; see Article 24.2 and Data Sheet, Point 4.3).

The **financial statements** must detail the eligible costs and contributions for each budget category and, for the final payment, also the revenues for the action (see Articles 6 and 22).

All eligible costs and contributions incurred should be declared, even if they exceed the amounts indicated in the estimated budget (see Annex 2). Amounts that are not declared in the individual financial statements will not be taken into account by the granting authority.

By signing the financial statements (directly in the Portal Periodic Reporting tool), the beneficiaries confirm that:

- the information provided is complete, reliable and true
- the costs and contributions declared are eligible (see Article 6)
- the costs and contributions can be substantiated by adequate records and supporting documents (see Article 20) that will be produced upon request (see Article 19) or in the context of checks, reviews, audits and investigations (see Article 25)
- for the final periodic report: all the revenues have been declared (if required; see Article 22).

Beneficiaries will have to submit also the financial statements of their affiliated entities (if any). In case of recoveries (see Article 22), beneficiaries will be held responsible also for the financial statements of their affiliated entities.

21.3 Currency for financial statements and conversion into euros

The financial statements must be drafted in euro.

Beneficiaries with general accounts established in a currency other than the euro must convert the costs recorded in their accounts into euro, at the average of the daily exchange rates published in the C series of the *Official Journal of the European Union* (ECB website), calculated over the corresponding reporting period.

If no daily euro exchange rate is published in the *Official Journal* for the currency in question, they must be converted at the average of the monthly accounting exchange rates published on the European Commission website (InforEuro), calculated over the corresponding reporting period.

Beneficiaries with general accounts in euro must convert costs incurred in another currency into euro according to their usual accounting practices.

21.4 Reporting language

The reporting must be in the language of the Agreement, unless otherwise agreed with the granting authority (see Data Sheet, Point 4.2).

21.5 Consequences of non-compliance

If a report submitted does not comply with this Article, the granting authority may suspend the payment deadline (see Article 29) and apply other measures described in Chapter 5.

If the coordinator breaches its reporting obligations, the granting authority may terminate the grant or the coordinator's participation (see Article 32) or apply other measures described in Chapter 5.

ARTICLE 22 — PAYMENTS AND RECOVERIES — CALCULATION OF AMOUNTS DUE

22.1 Payments and payment arrangements

Payments will be made in accordance with the schedule and modalities set out in the Data Sheet (see Point 4.2).

They will be made in euro to the bank account indicated by the coordinator (see Data Sheet, Point 4.2)

and must be distributed without unjustified delay (restrictions may apply to distribution of the initial prefinancing payment; see Data Sheet, Point 4.2).

Payments to this bank account will discharge the granting authority from its payment obligation.

The cost of payment transfers will be borne as follows:

- the granting authority bears the cost of transfers charged by its bank
- the beneficiary bears the cost of transfers charged by its bank
- the party causing a repetition of a transfer bears all costs of the repeated transfer.

Payments by the granting authority will be considered to have been carried out on the date when they are debited to its account.

22.2 Recoveries

Recoveries will be made, if — at beneficiary termination, final payment or afterwards — it turns out that the granting authority has paid too much and needs to recover the amounts undue.

Each beneficiary's financial responsibility in case of recovery is in principle limited to their own debt and undue amounts of their affiliated entities.

In case of enforced recoveries (see Article 22.4), affiliated entities will be held liable for repaying debts of their beneficiaries, if required by the granting authority (see Data Sheet, Point 4.4).

22.3 Amounts due

22.3.1 Prefinancing payments

The aim of the prefinancing is to provide the beneficiaries with a float.

It remains the property of the EU until the final payment.

For **initial prefinancings** (if any), the amount due, schedule and modalities are set out in the Data Sheet (see Point 4.2).

For **additional prefinancings** (if any), the amount due, schedule and modalities are also set out in the Data Sheet (see Point 4.2). However, if the statement on the use of the previous prefinancing payment shows that less than 70% was used, the amount set out in the Data Sheet will be reduced by the difference between the 70% threshold and the amount used.

The contribution to the Mutual Insurance Mechanism will be retained from the prefinancing payments (at the rate and in accordance with the modalities set out in the Data Sheet, see Point 4.2) and transferred to the Mechanism.

Prefinancing payments (or parts of them) may be offset (without the beneficiaries' consent) against amounts owed by a beneficiary to the granting authority — up to the amount due to that beneficiary.

For grants where the granting authority is the European Commission or an EU executive agency, offsetting may also be done against amounts owed to other Commission services or executive agencies.

Payments will not be made if the payment deadline or payments are suspended (see Articles 29 and 30).

22.3.2 Amount due at beneficiary termination — Recovery

In case of beneficiary termination, the granting authority will determine the provisional amount due for the beneficiary concerned. Payments (if any) will be made with the next interim or final payment.

The **amount due** will be calculated in the following step:

Step 1 — Calculation of the total accepted EU contribution

Step 1 — Calculation of the total accepted EU contribution

The granting authority will first calculate the ‘accepted EU contribution’ for the beneficiary for all reporting periods, by calculating the ‘maximum EU contribution to costs’ (applying the funding rate to the accepted costs of the beneficiary), taking into account requests for a lower contribution to costs and CFS threshold cappings (if any; see Article 24.5) and adding the contributions (accepted unit, flat-rate or lump sum contributions and financing not linked to costs, if any).

After that, the granting authority will take into account grant reductions (if any). The resulting amount is the ‘total accepted EU contribution’ for the beneficiary.

The **balance** is then calculated by deducting the payments received (if any; see report on the distribution of payments in Article 32), from the total accepted EU contribution:

$$\left\{ \begin{array}{l} \text{total accepted EU contribution for the beneficiary} \\ \text{minus} \\ \text{prefinancing and interim payments received (if any)} \end{array} \right\}.$$

If the balance is **positive**, the amount will be included in the next interim or final payment to the consortium.

If the balance is **negative**, it will be **recovered** in accordance with the following procedure:

The granting authority will send a **pre-information letter** to the beneficiary concerned:

- formally notifying the intention to recover, the amount due, the amount to be recovered and the reasons why and
- requesting observations within 30 days of receiving notification.

If no observations are submitted (or the granting authority decides to pursue recovery despite the observations it has received), it will confirm the amount to be recovered and ask this amount to be paid to the coordinator (**confirmation letter**).

If payment is not made to the coordinator by the date specified in the confirmation letter, the granting authority may call on the Mutual Insurance Mechanism to intervene, if continuation of the action is guaranteed and the conditions set out in the rules governing the Mechanism are met.

In this case, it will send a **beneficiary recovery letter**, together with a **debit note** with the terms and date for payment.

The debit note for the beneficiary will include the amount calculated for the affiliated entities which also had to end their participation (if any).

If payment is not made by the date specified in the debit note, the granting authority will **enforce recovery** in accordance with Article 22.4.

The amounts will later on also be taken into account for the next interim or final payment.

22.3.3 Interim payments

Interim payments reimburse the eligible costs and contributions claimed for the implementation of the action during the reporting periods (if any).

Interim payments (if any) will be made in accordance with the schedule and modalities set out the Data Sheet (see Point 4.2).

Payment is subject to the approval of the periodic report. Its approval does not imply recognition of compliance, authenticity, completeness or correctness of its content.

The **interim payment** will be calculated by the granting authority in the following steps:

Step 1 — Calculation of the total accepted EU contribution

Step 2 — Limit to the interim payment ceiling

Step 1 — Calculation of the total accepted EU contribution

The granting authority will calculate the ‘accepted EU contribution’ for the action for the reporting period, by first calculating the ‘maximum EU contribution to costs’ (applying the funding rate to the accepted costs of each beneficiary), taking into account requests for a lower contribution to costs, and CFS threshold cappings (if any; see Article 24.5) and adding the contributions (accepted unit, flat-rate or lump sum contributions and financing not linked to costs, if any).

After that, the granting authority will take into account grant reductions from beneficiary termination (if any). The resulting amount is the ‘total accepted EU contribution’.

Step 2 — Limit to the interim payment ceiling

The resulting amount is then capped to ensure that the total amount of prefinancing and interim payments (if any) does not exceed the interim payment ceiling set out in the Data Sheet (see Point 4.2).

Interim payments (or parts of them) may be offset (without the beneficiaries’ consent) against amounts owed by a beneficiary to the granting authority — up to the amount due to that beneficiary.

For grants where the granting authority is the European Commission or an EU executive agency, offsetting may also be done against amounts owed to other Commission services or executive agencies.

Payments will not be made if the payment deadline or payments are suspended (see Articles 29 and 30).

22.3.4 Final payment — Final grant amount — Revenues and Profit — Recovery

The final payment (payment of the balance) reimburses the remaining part of the eligible costs and contributions claimed for the implementation of the action (if any).

The final payment will be made in accordance with the schedule and modalities set out in the Data Sheet (see Point 4.2).

Payment is subject to the approval of the final periodic report. Its approval does not imply recognition of compliance, authenticity, completeness or correctness of its content.

The **final grant amount for the action** will be calculated in the following steps:

Step 1 — Calculation of the total accepted EU contribution

Step 2 — Limit to the maximum grant amount

Step 3 — Reduction due to the no-profit rule

Step 1 — Calculation of the total accepted EU contribution

The granting authority will first calculate the ‘accepted EU contribution’ for the action for all reporting periods, by calculating the ‘maximum EU contribution to costs’ (applying the funding rate to the total accepted costs of each beneficiary), taking into account requests for a lower contribution to costs, CFS threshold cappings (if any; see Article 24.5) and adding the contributions (accepted unit, flat-rate or lump sum contributions and financing not linked to costs, if any).

After that, the granting authority will take into account grant reductions (if any). The resulting amount is the ‘total accepted EU contribution’.

Step 2 — Limit to the maximum grant amount

If the resulting amount is higher than the maximum grant amount set out in Article 5.2, it will be limited to the latter.

Step 3 — Reduction due to the no-profit rule

If the no-profit rule is provided for in the Data Sheet (see Point 4.2), the grant must not produce a profit (i.e. surplus of the amount obtained following Step 2 plus the action’s revenues, over the eligible costs and contributions approved by the granting authority).

‘Revenue’ is all income generated by the action, during its duration (see Article 4), for beneficiaries that are profit legal entities (— with the exception of income generated by the exploitation of results, which are not considered as revenues).

If there is a profit, it will be deducted in proportion to the final rate of reimbursement of the eligible costs approved by the granting authority (as compared to the amount calculated following Steps 1 and 2 minus the contributions).

The **balance** (final payment) is then calculated by deducting the total amount of prefinancing and interim payments already made (if any), from the final grant amount:

{final grant amount
minus

{prefinancing and interim payments made (if any)}.

If the balance is **positive**, it will be **paid** to the coordinator.

The amount retained for the Mutual Insurance Mechanism (see above) will be released and **paid** to the coordinator (in accordance with the rules governing the Mechanism).

The final payment (or part of it) may be offset (without the beneficiaries' consent) against amounts owed by a beneficiary to the granting authority — up to the amount due to that beneficiary.

For grants where the granting authority is the European Commission or an EU executive agency, offsetting may also be done against amounts owed to other Commission services or executive agencies.

Payments will not be made if the payment deadline or payments are suspended (see Articles 29 and 30).

If — despite the release of the Mutual Insurance Mechanism contribution — the balance is **negative**, it will be **recovered** in accordance with the following procedure:

The granting authority will send a **pre-information letter** to the coordinator:

- formally notifying the intention to recover, the final grant amount, the amount to be recovered and the reasons why
- requesting a report on the distribution of payments to the beneficiaries within 30 days of receiving notification and
- requesting observations within 30 days of receiving notification.

If no observations are submitted (or the granting authority decides to pursue recovery despite the observations it has received) and the coordinator has submitted the report on the distribution of payments, it will calculate the **share of the debt per beneficiary**, by:

- (a) identifying the beneficiaries for which the amount calculated as follows is negative:

$$\left\{ \left\{ \begin{array}{l} \text{total accepted EU contribution for the beneficiary} \\ \text{divided by} \\ \text{total accepted EU contribution for the action} \end{array} \right\} \right.$$

multiplied by

$$\left. \left\{ \begin{array}{l} \text{final grant amount for the action} \end{array} \right\}, \right.$$

minus

$$\left. \left\{ \text{prefinancing and interim payments received by the beneficiary (if any)} \right\} \right\}$$

and

- (b) dividing the debt:

$$\left\{ \text{amount calculated according to point (a) for the beneficiary concerned} \right.$$

divided by

the sum of the amounts calculated according to point (a) for all the beneficiaries identified according to point (a)}

multiplied by

the amount to be recovered}.

and confirm the amount to be recovered from each beneficiary concerned (**confirmation letter**), together with **debit notes** with the terms and date for payment.

The debit notes for beneficiaries will include the amounts calculated for their affiliated entities (if any).

If the coordinator has not submitted the report on the distribution of payments, the granting authority will **recover** the full amount from the coordinator (**confirmation letter** and **debit note** with the terms and date for payment).

If payment is not made by the date specified in the debit note, the granting authority will **enforce recovery** in accordance with Article 22.4.

22.3.5 Audit implementation after final payment — Revised final grant amount — Recovery

If — after the final payment (in particular, after checks, reviews, audits or investigations; see Article 25) — the granting authority rejects costs or contributions (see Article 27) or reduces the grant (see Article 28), it will calculate the **revised final grant amount** for the beneficiary concerned.

The **beneficiary revised final grant amount** will be calculated in the following step:

Step 1 — Calculation of the revised total accepted EU contribution

Step 1 — Calculation of the revised total accepted EU contribution

The granting authority will first calculate the ‘revised accepted EU contribution’ for the beneficiary, by calculating the ‘revised accepted costs’ and ‘revised accepted contributions’.

After that, it will take into account grant reductions (if any). The resulting ‘revised total accepted EU contribution’ is the beneficiary revised final grant amount.

If the revised final grant amount is lower than the beneficiary’s final grant amount (i.e. its share in the final grant amount for the action), it will be **recovered** in accordance with the following procedure:

The **beneficiary final grant amount** (i.e. share in the final grant amount for the action) is calculated as follows:

{total accepted EU contribution for the beneficiary

divided by

total accepted EU contribution for the action}

multiplied by

final grant amount for the action}.

The granting authority will send a **pre-information letter** to the beneficiary concerned:

- formally notifying the intention to recover, the amount to be recovered and the reasons why and
- requesting observations within 30 days of receiving notification.

If no observations are submitted (or the granting authority decides to pursue recovery despite the observations it has received), it will confirm the amount to be recovered (**confirmation letter**), together with a **debit note** with the terms and the date for payment.

Recoveries against affiliated entities (if any) will be handled through their beneficiaries.

If payment is not made by the date specified in the debit note, the granting authority will **enforce recovery** in accordance with Article 22.4.

22.4 Enforced recovery

If payment is not made by the date specified in the debit note, the amount due will be recovered:

- (a) by offsetting the amount — without the coordinator or beneficiary's consent — against any amounts owed to the coordinator or beneficiary by the granting authority.

In exceptional circumstances, to safeguard the EU financial interests, the amount may be offset before the payment date specified in the debit note.

For grants where the granting authority is the European Commission or an EU executive agency, debts may also be offset against amounts owed by other Commission services or executive agencies.

- (b) financial guarantee(s): not applicable
- (c) joint and several liability of beneficiaries: not applicable
- (d) by holding affiliated entities jointly and severally liable (if any, see Data Sheet, Point 4.4)
- (e) by taking legal action (see Article 43) or, provided that the granting authority is the European Commission or an EU executive agency, by adopting an enforceable decision under Article 299 of the Treaty on the Functioning of the EU (TFEU) and Article 100(2) of EU Financial Regulation 2018/1046.

If the Mutual Insurance Mechanism was called on by the granting authority to intervene, recovery will be continued in the name of the Mutual Insurance Mechanism. If two debit notes were sent, the second one (in the name of the Mutual Insurance Mechanism) will be considered to replace the first one (in the name of the granting authority). Where the MIM intervened, offsetting, enforceable decisions or any other of the above-mentioned forms of enforced recovery may be used *mutatis mutandis*.

The amount to be recovered will be increased by **late-payment interest** at the rate set out in Article 22.5, from the day following the payment date in the debit note, up to and including the date the full payment is received.

Partial payments will be first credited against expenses, charges and late-payment interest and then against the principal.

Bank charges incurred in the recovery process will be borne by the beneficiary, unless Directive 2015/2366¹⁷ applies.

For grants where the granting authority is an EU executive agency, enforced recovery by offsetting or enforceable decision will be done by the services of the European Commission (see also Article 43).

22.5 Consequences of non-compliance

22.5.1 If the granting authority does not pay within the payment deadlines (see above), the beneficiaries are entitled to **late-payment interest** at the rate applied by the European Central Bank (ECB) for its main refinancing operations in euros ('reference rate'), plus the rate specified in the Data Sheet (Point 4.2). The reference rate is the rate in force on the first day of the month in which the payment deadline expires, as published in the C series of the *Official Journal of the European Union*.

If the late-payment interest is lower than or equal to EUR 200, it will be paid to the coordinator only on request submitted within two months of receiving the late payment.

Late-payment interest is not due if all beneficiaries are EU Member States (including regional and local government authorities or other public bodies acting on behalf of a Member State for the purpose of this Agreement).

If payments or the payment deadline are suspended (see Articles 29 and 30), payment will not be considered as late.

Late-payment interest covers the period running from the day following the due date for payment (see above), up to and including the date of payment.

Late-payment interest is not considered for the purposes of calculating the final grant amount.

22.5.2 If the coordinator breaches any of its obligations under this Article, the grant may be reduced (see Article 28) and the grant or the coordinator may be terminated (see Article 32).

Such breaches may also lead to other measures described in Chapter 5.

ARTICLE 23 — GUARANTEES

Not applicable

ARTICLE 24 — CERTIFICATES

24.1 Operational verification report (OVR)

Not applicable

24.2 Certificate on the financial statements (CFS)

If required by the granting authority (see Data Sheet, Point 4.3), the beneficiaries must provide

¹⁷ Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC (OJ L 337, 23.12.2015, p. 35).

certificates on their financial statements (CFS), in accordance with the schedule, threshold and conditions set out in the Data Sheet.

The coordinator must submit them as part of the periodic report (see Article 21).

The certificates must be drawn up using the template published on the Portal, cover the costs declared on the basis of actual costs and costs according to usual cost accounting practices (if any), and fulfil the following conditions:

- (a) be provided by a qualified approved external auditor which is independent and complies with Directive 2006/43/EC¹⁸ (or for public bodies: by a competent independent public officer)
- (b) the verification must be carried out according to the highest professional standards to ensure that the financial statements comply with the provisions under the Agreement and that the costs declared are eligible.

The certificates will not affect the granting authority's right to carry out its own checks, reviews or audits, nor preclude the European Court of Auditors (ECA), the European Public Prosecutor's Office (EPPO) or the European Anti-Fraud Office (OLAF) from using their prerogatives for audits and investigations under the Agreement (see Article 25).

If the costs (or a part of them) were already audited by the granting authority, these costs do not need to be covered by the certificate and will not be counted for calculating the threshold (if any).

24.3 Certificate on the compliance of usual cost accounting practices (CoMUC)

Not applicable

24.4 Systems and process audit (SPA)

Beneficiaries which:

- use unit, flat rate or lump sum costs or contributions according to documented (i.e. formally approved and in writing) usual costs accounting practices (if any) or
- have formalised documentation on the systems and processes for calculating their costs and contributions (i.e. formally approved and in writing), have participated in at least 150 actions under Horizon 2020 or the Euratom Research and Training Programme (2014-2018 or 2019-2020) and participate in at least 3 ongoing actions under Horizon Europe or the Euratom Research and Training Programme (2021-2025 or 2026-2027)

may apply to the granting authority for a systems and process audit (SPA).

This audit will be carried out as follows:

Step 1 – Application by the beneficiary.

Step 2 – If the application is accepted, the granting authority will carry out the systems and process

¹⁸ Directive 2006/43/EC of the European Parliament and of the Council of 17 May 2006 on statutory audits of annual accounts and consolidated accounts or similar national regulations (OJ L 157, 9.6.2006, p. 87).

audit, complemented by an audit of transactions (on a sample of the beneficiary's Horizon Europe or the Euratom Research and Training Programme financial statements).

Step 3 – The audit result will take the form of a risk assessment classification for the beneficiary: low, medium or high.

Low-risk beneficiaries will benefit from less (or less in-depth) ex-post audits (see Article 25) and a higher threshold for submitting certificates on the financial statements (CFS; see Articles 21 and 24.2 and Data Sheet, Point 4.3).

24.5 Consequences of non-compliance

If a beneficiary does not submit a certificate on the financial statements (CFS) or the certificate is rejected, the accepted EU contribution to costs will be capped to reflect the CFS threshold.

If a beneficiary breaches any of its other obligations under this Article, the granting authority may apply the measures described in Chapter 5.

ARTICLE 25 — CHECKS, REVIEWS, AUDITS AND INVESTIGATIONS — EXTENSION OF FINDINGS

25.1 Granting authority checks, reviews and audits

25.1.1 Internal checks

The granting authority may — during the action or afterwards — check the proper implementation of the action and compliance with the obligations under the Agreement, including assessing costs and contributions, deliverables and reports.

25.1.2 Project reviews

The granting authority may carry out reviews on the proper implementation of the action and compliance with the obligations under the Agreement (general project reviews or specific issues reviews).

Such project reviews may be started during the implementation of the action and until the time-limit set out in the Data Sheet (see Point 6). They will be formally notified to the coordinator or beneficiary concerned and will be considered to start on the date of the notification.

If needed, the granting authority may be assisted by independent, outside experts. If it uses outside experts, the coordinator or beneficiary concerned will be informed and have the right to object on grounds of commercial confidentiality or conflict of interest.

The coordinator or beneficiary concerned must cooperate diligently and provide — within the deadline requested — any information and data in addition to deliverables and reports already submitted (including information on the use of resources). The granting authority may request beneficiaries to provide such information to it directly. Sensitive information and documents will be treated in accordance with Article 13.

The coordinator or beneficiary concerned may be requested to participate in meetings, including with the outside experts.

For **on-the-spot visits**, the beneficiary concerned must allow access to sites and premises (including to the outside experts) and must ensure that information requested is readily available.

Information provided must be accurate, precise and complete and in the format requested, including electronic format.

On the basis of the review findings, a **project review report** will be drawn up.

The granting authority will formally notify the project review report to the coordinator or beneficiary concerned, which has 30 days from receiving notification to make observations.

Project reviews (including project review reports) will be in the language of the Agreement.

25.1.3 Audits

The granting authority may carry out audits on the proper implementation of the action and compliance with the obligations under the Agreement.

Such audits may be started during the implementation of the action and until the time-limit set out in the Data Sheet (see Point 6). They will be formally notified to the beneficiary concerned and will be considered to start on the date of the notification.

The granting authority may use its own audit service, delegate audits to a centralised service or use external audit firms. If it uses an external firm, the beneficiary concerned will be informed and have the right to object on grounds of commercial confidentiality or conflict of interest.

The beneficiary concerned must cooperate diligently and provide — within the deadline requested — any information (including complete accounts, individual salary statements or other personal data) to verify compliance with the Agreement. Sensitive information and documents will be treated in accordance with Article 13.

For **on-the-spot** visits, the beneficiary concerned must allow access to sites and premises (including for the external audit firm) and must ensure that information requested is readily available.

Information provided must be accurate, precise and complete and in the format requested, including electronic format.

On the basis of the audit findings, a **draft audit report** will be drawn up.

The auditors will formally notify the draft audit report to the beneficiary concerned, which has 30 days from receiving notification to make observations (contradictory audit procedure).

The **final audit report** will take into account observations by the beneficiary concerned and will be formally notified to them.

Audits (including audit reports) will be in the language of the Agreement.

25.2 European Commission checks, reviews and audits in grants of other granting authorities

Where the granting authority is not the European Commission, the latter has the same rights of checks, reviews and audits as the granting authority.

25.3 Access to records for assessing simplified forms of funding

The beneficiaries must give the European Commission access to their statutory records for the periodic assessment of simplified forms of funding which are used in EU programmes.

25.4 OLAF, EPPO and ECA audits and investigations

The following bodies may also carry out checks, reviews, audits and investigations — during the action or afterwards:

- the European Anti-Fraud Office (OLAF) under Regulations No 883/2013¹⁹ and No 2185/96²⁰
- the European Public Prosecutor's Office (EPPO) under Regulation 2017/1939
- the European Court of Auditors (ECA) under Article 287 of the Treaty on the Functioning of the EU (TFEU) and Article 257 of EU Financial Regulation 2018/1046.

If requested by these bodies, the beneficiary concerned must provide full, accurate and complete information in the format requested (including complete accounts, individual salary statements or other personal data, including in electronic format) and allow access to sites and premises for on-the-spot visits or inspections — as provided for under these Regulations.

To this end, the beneficiary concerned must keep all relevant information relating to the action, at least until the time-limit set out in the Data Sheet (Point 6) and, in any case, until any ongoing checks, reviews, audits, investigations, litigation or other pursuits of claims have been concluded.

25.5 Consequences of checks, reviews, audits and investigations — Extension of results of reviews, audits or investigations

25.5.1 Consequences of checks, reviews, audits and investigations in this grant

Findings in checks, reviews, audits or investigations carried out in the context of this grant may lead to rejections (see Article 27), grant reduction (see Article 28) or other measures described in Chapter 5.

Rejections or grant reductions after the final payment will lead to a revised final grant amount (see Article 22).

Findings in checks, reviews, audits or investigations during the action implementation may lead to a request for amendment (see Article 39), to change the description of the action set out in Annex 1.

Checks, reviews, audits or investigations that find systemic or recurrent errors, irregularities, fraud or breach of obligations in any EU grant may also lead to consequences in other EU grants awarded under similar conditions ('extension to other grants').

¹⁹ Regulation (EU, Euratom) No 883/2013 of the European Parliament and of the Council of 11 September 2013 concerning investigations conducted by the European Anti-Fraud Office (OLAF) and repealing Regulation (EC) No 1073/1999 of the European Parliament and of the Council and Council Regulation (Euratom) No 1074/1999 (OJ L 248, 18/09/2013, p. 1).

²⁰ Council Regulation (Euratom, EC) No 2185/96 of 11 November 1996 concerning on-the-spot checks and inspections carried out by the Commission in order to protect the European Communities' financial interests against fraud and other irregularities (OJ L 292, 15/11/1996, p. 2).

Moreover, findings arising from an OLAF or EPPO investigation may lead to criminal prosecution under national law.

25.5.2 Extension from other grants

Results of checks, reviews, audits or investigations in other grants may be extended to this grant, if:

- (a) the beneficiary concerned is found, in other EU grants awarded under similar conditions, to have committed systemic or recurrent errors, irregularities, fraud or breach of obligations that have a material impact on this grant and
- (b) those findings are formally notified to the beneficiary concerned — together with the list of grants affected by the findings — within the time-limit for audits set out in the Data Sheet (see Point 6).

The granting authority will formally notify the beneficiary concerned of the intention to extend the findings and the list of grants affected.

If the extension concerns **rejections of costs or contributions**: the notification will include:

- (a) an invitation to submit observations on the list of grants affected by the findings
- (b) the request to submit revised financial statements for all grants affected
- (c) the correction rate for extrapolation, established on the basis of the systemic or recurrent errors, to calculate the amounts to be rejected, if the beneficiary concerned:
 - (i) considers that the submission of revised financial statements is not possible or practicable or
 - (ii) does not submit revised financial statements.

If the extension concerns **grant reductions**: the notification will include:

- (a) an invitation to submit observations on the list of grants affected by the findings and
- (b) the **correction rate for extrapolation**, established on the basis of the systemic or recurrent errors and the principle of proportionality.

The beneficiary concerned has **60 days** from receiving notification to submit observations, revised financial statements or to propose a duly substantiated **alternative correction method/rate**.

On the basis of this, the granting authority will analyse the impact and decide on the implementation (i.e. start rejection or grant reduction procedures, either on the basis of the revised financial statements or the announced/alternative method/rate or a mix of those; see Articles 27 and 28).

25.6 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, costs or contributions insufficiently substantiated will be ineligible (see Article 6) and will be rejected (see Article 27), and the grant may be reduced (see Article 28).

Such breaches may also lead to other measures described in Chapter 5.

ARTICLE 26 — IMPACT EVALUATIONS

26.1 Impact evaluation

The granting authority may carry out impact evaluations of the action, measured against the objectives and indicators of the EU programme funding the grant.

Such evaluations may be started during implementation of the action and until the time-limit set out in the Data Sheet (see Point 6). They will be formally notified to the coordinator or beneficiaries and will be considered to start on the date of the notification.

If needed, the granting authority may be assisted by independent outside experts.

The coordinator or beneficiaries must provide any information relevant to evaluate the impact of the action, including information in electronic format.

26.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the granting authority may apply the measures described in Chapter 5.

CHAPTER 5 CONSEQUENCES OF NON-COMPLIANCE

SECTION 1 REJECTIONS AND GRANT REDUCTION

ARTICLE 27 — REJECTION OF COSTS AND CONTRIBUTIONS

27.1 Conditions

The granting authority will — at beneficiary termination, interim payment, final payment or afterwards — reject any costs or contributions which are ineligible (see Article 6), in particular following checks, reviews, audits or investigations (see Article 25).

The rejection may also be based on the extension of findings from other grants to this grant (see Article 25).

Ineligible costs or contributions will be rejected.

27.2 Procedure

If the rejection does not lead to a recovery, the granting authority will formally notify the coordinator or beneficiary concerned of the rejection, the amounts and the reasons why. The coordinator or beneficiary concerned may — within 30 days of receiving notification — submit observations if it disagrees with the rejection (payment review procedure).

If the rejection leads to a recovery, the granting authority will follow the contradictory procedure with pre-information letter set out in Article 22.

27.3 Effects

If the granting authority rejects costs or contributions, it will deduct them from the costs or contributions declared and then calculate the amount due (and, if needed, make a recovery; see Article 22).

ARTICLE 28 — GRANT REDUCTION

28.1 Conditions

The granting authority may — at beneficiary termination, final payment or afterwards — reduce the grant for a beneficiary, if:

- (a) the beneficiary (or a person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed:
 - (i) substantial errors, irregularities or fraud or
 - (ii) serious breach of obligations under this Agreement or during its award (including improper implementation of the action, non-compliance with the call conditions, submission of false information, failure to provide required information, breach of ethics or security rules (if applicable), etc.), or
- (b) the beneficiary (or a person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed — in other EU grants awarded to it under similar conditions — systemic or recurrent errors, irregularities, fraud or serious breach of obligations that have a material impact on this grant (see Article 25).

The amount of the reduction will be calculated for each beneficiary concerned and proportionate to the seriousness and the duration of the errors, irregularities or fraud or breach of obligations, by applying an individual reduction rate to their accepted EU contribution.

28.2 Procedure

If the grant reduction does not lead to a recovery, the granting authority will formally notify the coordinator or beneficiary concerned of the reduction, the amount to be reduced and the reasons why. The coordinator or beneficiary concerned may — within 30 days of receiving notification — submit observations if it disagrees with the reduction (payment review procedure).

If the grant reduction leads to a recovery, the granting authority will follow the contradictory procedure with pre-information letter set out in Article 22.

28.3 Effects

If the granting authority reduces the grant, it will deduct the reduction and then calculate the amount due (and, if needed, make a recovery; see Article 22).

SECTION 2 — SUSPENSION AND TERMINATION

ARTICLE 29 — PAYMENT DEADLINE SUSPENSION

29.1 Conditions

The granting authority may — at any moment — suspend the payment deadline if a payment cannot be processed because:

- (a) the required report (see Article 21) has not been submitted or is not complete or additional information is needed
- (b) there are doubts about the amount to be paid (e.g. ongoing audit extension procedure, queries about eligibility, need for a grant reduction, etc.) and additional checks, reviews, audits or investigations are necessary, or
- (c) there are other issues affecting the EU financial interests.

29.2 Procedure

The granting authority will formally notify the coordinator of the suspension and the reasons why.

The suspension will **take effect** the day the notification is sent.

If the conditions for suspending the payment deadline are no longer met, the suspension will be **lifted** — and the remaining time to pay (see Data Sheet, Point 4.2) will resume.

If the suspension exceeds two months, the coordinator may request the granting authority to confirm if the suspension will continue.

If the payment deadline has been suspended due to the non-compliance of the report and the revised report is not submitted (or was submitted but is also rejected), the granting authority may also terminate the grant or the participation of the coordinator (see Article 32).

ARTICLE 30 — PAYMENT SUSPENSION

30.1 Conditions

The granting authority may — at any moment — suspend payments, in whole or in part for one or more beneficiaries, if:

- (a) a beneficiary (or a person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed or is suspected of having committed:
 - (i) substantial errors, irregularities or fraud or
 - (ii) serious breach of obligations under this Agreement or during its award (including improper implementation of the action, non-compliance with the call conditions, submission of false information, failure to provide required information, breach of ethics or security rules (if applicable), etc.), or
- (b) a beneficiary (or a person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed — in other EU grants awarded to it under similar conditions — systemic or recurrent errors, irregularities, fraud or serious breach of obligations that have a material impact on this grant.

If payments are suspended for one or more beneficiaries, the granting authority will make partial

payment(s) for the part(s) not suspended. If suspension concerns the final payment, the payment (or recovery) of the remaining amount after suspension is lifted will be considered to be the payment that closes the action.

30.2 Procedure

Before suspending payments, the granting authority will send a **pre-information letter** to the beneficiary concerned:

- formally notifying the intention to suspend payments and the reasons why and
- requesting observations within 30 days of receiving notification.

If the granting authority does not receive observations or decides to pursue the procedure despite the observations it has received, it will confirm the suspension (**confirmation letter**). Otherwise, it will formally notify that the procedure is discontinued.

At the end of the suspension procedure, the granting authority will also inform the coordinator.

The suspension will **take effect** the day after the confirmation notification is sent.

If the conditions for resuming payments are met, the suspension will be **lifted**. The granting authority will formally notify the beneficiary concerned (and the coordinator) and set the suspension end date.

During the suspension, no prefinancing will be paid to the beneficiaries concerned. For interim payments, the periodic reports for all reporting periods except the last one (see Article 21) must not contain any financial statements from the beneficiary concerned (or its affiliated entities). The coordinator must include them in the next periodic report after the suspension is lifted or — if suspension is not lifted before the end of the action — in the last periodic report.

ARTICLE 31 — GRANT AGREEMENT SUSPENSION

31.1 Consortium-requested GA suspension

31.1.1 Conditions and procedure

The beneficiaries may request the suspension of the grant or any part of it, if exceptional circumstances — in particular *force majeure* (see Article 35) — make implementation impossible or excessively difficult.

The coordinator must submit a request for **amendment** (see Article 39), with:

- the reasons why
- the date the suspension takes effect; this date may be before the date of the submission of the amendment request and
- the expected date of resumption.

The suspension will **take effect** on the day specified in the amendment.

Once circumstances allow for implementation to resume, the coordinator must immediately request

another **amendment** of the Agreement to set the suspension end date, the resumption date (one day after suspension end date), extend the duration and make other changes necessary to adapt the action to the new situation (see Article 39) — unless the grant has been terminated (see Article 32). The suspension will be **lifted** with effect from the suspension end date set out in the amendment. This date may be before the date of the submission of the amendment request.

During the suspension, no prefinancing will be paid. Costs incurred or contributions for activities implemented during grant suspension are not eligible (see Article 6.3).

31.2 EU-initiated GA suspension

31.2.1 Conditions

The granting authority may suspend the grant or any part of it, if:

- (a) a beneficiary (or a person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed or is suspected of having committed:
 - (i) substantial errors, irregularities or fraud or
 - (ii) serious breach of obligations under this Agreement or during its award (including improper implementation of the action, non-compliance with the call conditions, submission of false information, failure to provide required information, breach of ethics or security rules (if applicable), etc.), or
- (b) a beneficiary (or a person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed — in other EU grants awarded to it under similar conditions — systemic or recurrent errors, irregularities, fraud or serious breach of obligations that have a material impact on this grant
- (c) other:
 - (i) linked action issues: not applicable
 - (ii) the action has lost its scientific or technological relevance, for EIC Accelerator actions: the action has lost its economic relevance, for challenge-based EIC Pathfinder actions and Horizon Europe Missions: the action has lost its relevance as part of the Portfolio for which it has been initially selected

31.2.2 Procedure

Before suspending the grant, the granting authority will send a **pre-information letter** to the coordinator:

- formally notifying the intention to suspend the grant and the reasons why and
- requesting observations within 30 days of receiving notification.

If the granting authority does not receive observations or decides to pursue the procedure despite the observations it has received, it will confirm the suspension (**confirmation letter**). Otherwise, it will formally notify that the procedure is discontinued.

The suspension will **take effect** the day after the confirmation notification is sent (or on a later date specified in the notification).

Once the conditions for resuming implementation of the action are met, the granting authority will formally notify the coordinator a **lifting of suspension letter**, in which it will set the suspension end date and invite the coordinator to request an amendment of the Agreement to set the resumption date (one day after suspension end date), extend the duration and make other changes necessary to adapt the action to the new situation (see Article 39) — unless the grant has been terminated (see Article 32). The suspension will be **lifted** with effect from the suspension end date set out in the lifting of suspension letter. This date may be before the date on which the letter is sent.

During the suspension, no prefinancing will be paid. Costs incurred or contributions for activities implemented during suspension are not eligible (see Article 6.3).

The beneficiaries may not claim damages due to suspension by the granting authority (see Article 33).

Grant suspension does not affect the granting authority's right to terminate the grant or a beneficiary (see Article 32) or reduce the grant (see Article 28).

ARTICLE 32 — GRANT AGREEMENT OR BENEFICIARY TERMINATION

32.1 Consortium-requested GA termination

32.1.1 Conditions and procedure

The beneficiaries may request the termination of the grant.

The coordinator must submit a request for **amendment** (see Article 39), with:

- the reasons why
- the date the consortium ends work on the action ('end of work date') and
- the date the termination takes effect ('termination date'); this date must be after the date of the submission of the amendment request.

The termination will **take effect** on the termination date specified in the amendment.

If no reasons are given or if the granting authority considers the reasons do not justify termination, it may consider the grant terminated improperly.

32.1.2 Effects

The coordinator must — within 60 days from when termination takes effect — submit a **periodic report** (for the open reporting period until termination).

The granting authority will calculate the final grant amount and final payment on the basis of the report submitted and taking into account the costs incurred and contributions for activities implemented before the end of work date (see Article 22). Costs relating to contracts due for execution only after the end of work are not eligible.

If the granting authority does not receive the report within the deadline, only costs and contributions

which are included in an approved periodic report will be taken into account (no costs/contributions if no periodic report was ever approved).

Improper termination may lead to a grant reduction (see Article 28).

After termination, the beneficiaries' obligations (in particular Articles 13 (confidentiality and security), 16 (IPR), 17 (communication, dissemination and visibility), 21 (reporting), 25 (checks, reviews, audits and investigations), 26 (impact evaluation), 27 (rejections), 28 (grant reduction) and 42 (assignment of claims)) continue to apply.

32.2 Consortium-requested beneficiary termination

32.2.1 Conditions and procedure

The coordinator may request the termination of the participation of one or more beneficiaries, on request of the beneficiary concerned or on behalf of the other beneficiaries.

The coordinator must submit a request for **amendment** (see Article 39), with:

- the reasons why
- the opinion of the beneficiary concerned (or proof that this opinion has been requested in writing)
- the date the beneficiary ends work on the action ('end of work date')
- the date the termination takes effect ('termination date'); this date must be after the date of the submission of the amendment request.

If the termination concerns the coordinator and is done without its agreement, the amendment request must be submitted by another beneficiary (acting on behalf of the consortium).

The termination will **take effect** on the termination date specified in the amendment.

If no information is given or if the granting authority considers that the reasons do not justify termination, it may consider the beneficiary to have been terminated improperly.

32.2.2 Effects

The coordinator must — within 60 days from when termination takes effect — submit:

- (i) a **report on the distribution of payments** to the beneficiary concerned
- (ii) a **termination report** from the beneficiary concerned, for the open reporting period until termination, containing an overview of the progress of the work, the financial statement, the explanation on the use of resources, and, if applicable, the certificate on the financial statement (CFS; see Articles 21 and 24.2 and Data Sheet, Point 4.3)
- (iii) a second **request for amendment** (see Article 39) with other amendments needed (e.g. reallocation of the tasks and the estimated budget of the terminated beneficiary; addition of a new beneficiary to replace the terminated beneficiary; change of coordinator, etc.).

The granting authority will calculate the amount due to the beneficiary on the basis of the report

submitted and taking into account the costs incurred and contributions for activities implemented before the end of work date (see Article 22). Costs relating to contracts due for execution only after the end of work are not eligible.

The information in the termination report must also be included in the periodic report for the next reporting period (see Article 21).

If the granting authority does not receive the termination report within the deadline, only costs and contributions which are included in an approved periodic report will be taken into account (no costs/contributions if no periodic report was ever approved).

If the granting authority does not receive the report on the distribution of payments within the deadline, it will consider that:

- the coordinator did not distribute any payment to the beneficiary concerned and that
- the beneficiary concerned must not repay any amount to the coordinator.

If the second request for amendment is accepted by the granting authority, the Agreement is **amended** to introduce the necessary changes (see Article 39).

If the second request for amendment is rejected by the granting authority (because it calls into question the decision awarding the grant or breaches the principle of equal treatment of applicants), the grant may be terminated (see Article 32).

Improper termination may lead to a reduction of the grant (see Article 31) or grant termination (see Article 32).

After termination, the concerned beneficiary's obligations (in particular Articles 13 (confidentiality and security), 16 (IPR), 17 (communication, dissemination and visibility), 21 (reporting), 25 (checks, reviews, audits and investigations), 26 (impact evaluation), 27 (rejections), 28 (grant reduction) and 42 (assignment of claims)) continue to apply.

32.3 EU-initiated GA or beneficiary termination

32.3.1 Conditions

The granting authority may terminate the grant or the participation of one or more beneficiaries, if:

- (a) one or more beneficiaries do not accede to the Agreement (see Article 40)
- (b) a change to the action or the legal, financial, technical, organisational or ownership situation of a beneficiary is likely to substantially affect the implementation of the action or calls into question the decision to award the grant (including changes linked to one of the exclusion grounds listed in the declaration of honour)
- (c) following termination of one or more beneficiaries, the necessary changes to the Agreement (and their impact on the action) would call into question the decision awarding the grant or breach the principle of equal treatment of applicants
- (d) implementation of the action has become impossible or the changes necessary for its

continuation would call into question the decision awarding the grant or breach the principle of equal treatment of applicants

- (e) a beneficiary (or person with unlimited liability for its debts) is subject to bankruptcy proceedings or similar (including insolvency, winding-up, administration by a liquidator or court, arrangement with creditors, suspension of business activities, etc.)
- (f) a beneficiary (or person with unlimited liability for its debts) is in breach of social security or tax obligations
- (g) a beneficiary (or person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has been found guilty of grave professional misconduct
- (h) a beneficiary (or person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed fraud, corruption, or is involved in a criminal organisation, money laundering, terrorism-related crimes (including terrorism financing), child labour or human trafficking
- (i) a beneficiary (or person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) was created under a different jurisdiction with the intent to circumvent fiscal, social or other legal obligations in the country of origin (or created another entity with this purpose)
- (j) a beneficiary (or person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed:
 - (i) substantial errors, irregularities or fraud or
 - (ii) serious breach of obligations under this Agreement or during its award (including improper implementation of the action, non-compliance with the call conditions, submission of false information, failure to provide required information, breach of ethics or security rules (if applicable), etc.)
- (k) a beneficiary (or person having powers of representation, decision-making or control, or person essential for the award/implementation of the grant) has committed — in other EU grants awarded to it under similar conditions — systemic or recurrent errors, irregularities, fraud or serious breach of obligations that have a material impact on this grant (extension of findings from other grants to this grant; see Article 25)
- (l) despite a specific request by the granting authority, a beneficiary does not request — through the coordinator — an amendment to the Agreement to end the participation of one of its affiliated entities or associated partners that is in one of the situations under points (d), (f), (e), (g), (h), (i) or (j) and to reallocate its tasks, or
- (m) other:
 - (i) linked action issues: not applicable
 - (ii) the action has lost its scientific or technological relevance, for EIC Accelerator actions: the action has lost its economic relevance, for challenge-based EIC Pathfinder actions

and Horizon Europe Missions: the action has lost its relevance as part of the Portfolio for which it has been initially selected

32.3.2 Procedure

Before terminating the grant or participation of one or more beneficiaries, the granting authority will send a **pre-information letter** to the coordinator or beneficiary concerned:

- formally notifying the intention to terminate and the reasons why and
- requesting observations within 30 days of receiving notification.

If the granting authority does not receive observations or decides to pursue the procedure despite the observations it has received, it will confirm the termination and the date it will take effect (**confirmation letter**). Otherwise, it will formally notify that the procedure is discontinued.

For beneficiary terminations, the granting authority will — at the end of the procedure — also inform the coordinator.

The termination will **take effect** the day after the confirmation notification is sent (or on a later date specified in the notification; ‘termination date’).

32.3.3 Effects

(a) for **GA termination**:

The coordinator must — within 60 days from when termination takes effect — submit a **periodic report** (for the last open reporting period until termination).

The granting authority will calculate the final grant amount and final payment on the basis of the report submitted and taking into account the costs incurred and contributions for activities implemented before termination takes effect (see Article 22). Costs relating to contracts due for execution only after termination are not eligible.

If the grant is terminated for breach of the obligation to submit reports, the coordinator may not submit any report after termination.

If the granting authority does not receive the report within the deadline, only costs and contributions which are included in an approved periodic report will be taken into account (no costs/contributions if no periodic report was ever approved).

Termination does not affect the granting authority’s right to reduce the grant (see Article 28) or to impose administrative sanctions (see Article 34).

The beneficiaries may not claim damages due to termination by the granting authority (see Article 33).

After termination, the beneficiaries’ obligations (in particular Articles 13 (confidentiality and security), 16 (IPR), 17 (communication, dissemination and visibility), 21 (reporting), 25 (checks, reviews, audits and investigations), 26 (impact evaluation), 27 (rejections), 28 (grant reduction) and 42 (assignment of claims)) continue to apply.

(b) for **beneficiary termination**:

The coordinator must — within 60 days from when termination takes effect — submit:

- (i) a **report on the distribution of payments** to the beneficiary concerned
- (ii) a **termination report** from the beneficiary concerned, for the open reporting period until termination, containing an overview of the progress of the work, the financial statement, the explanation on the use of resources, and, if applicable, the certificate on the financial statement (CFS; see Articles 21 and 24.2 and Data Sheet, Point 4.3)
- (iii) a **request for amendment** (see Article 39) with any amendments needed (e.g. reallocation of the tasks and the estimated budget of the terminated beneficiary; addition of a new beneficiary to replace the terminated beneficiary; change of coordinator, etc.).

The granting authority will calculate the amount due to the beneficiary on the basis of the report submitted and taking into account the costs incurred and contributions for activities implemented before termination takes effect (see Article 22). Costs relating to contracts due for execution only after termination are not eligible.

The information in the termination report must also be included in the periodic report for the next reporting period (see Article 21).

If the granting authority does not receive the termination report within the deadline, only costs and contributions included in an approved periodic report will be taken into account (no costs/contributions if no periodic report was ever approved).

If the granting authority does not receive the report on the distribution of payments within the deadline, it will consider that:

- the coordinator did not distribute any payment to the beneficiary concerned and that
- the beneficiary concerned must not repay any amount to the coordinator.

If the request for amendment is accepted by the granting authority, the Agreement is **amended** to introduce the necessary changes (see Article 39).

If the request for amendment is rejected by the granting authority (because it calls into question the decision awarding the grant or breaches the principle of equal treatment of applicants), the grant may be terminated (see Article 32).

After termination, the concerned beneficiary's obligations (in particular Articles 13 (confidentiality and security), 16 (IPR), 17 (communication, dissemination and visibility), 21 (reporting), 25 (checks, reviews, audits and investigations), 26 (impact evaluation), 27 (rejections), 28 (grant reduction) and 42 (assignment of claims)) continue to apply.

SECTION 3 OTHER CONSEQUENCES: DAMAGES AND ADMINISTRATIVE SANCTIONS

ARTICLE 33 — DAMAGES

33.1 Liability of the granting authority

The granting authority cannot be held liable for any damage caused to the beneficiaries or to third parties as a consequence of the implementation of the Agreement, including for gross negligence.

The granting authority cannot be held liable for any damage caused by any of the beneficiaries or other participants involved in the action, as a consequence of the implementation of the Agreement.

33.2 Liability of the beneficiaries

The beneficiaries must compensate the granting authority for any damage it sustains as a result of the implementation of the action or because the action was not implemented in full compliance with the Agreement, provided that it was caused by gross negligence or wilful act.

The liability does not extend to indirect or consequential losses or similar damage (such as loss of profit, loss of revenue or loss of contracts), provided such damage was not caused by wilful act or by a breach of confidentiality.

ARTICLE 34 — ADMINISTRATIVE SANCTIONS AND OTHER MEASURES

Nothing in this Agreement may be construed as preventing the adoption of administrative sanctions (i.e. exclusion from EU award procedures and/or financial penalties) or other public law measures, in addition or as an alternative to the contractual measures provided under this Agreement (see, for instance, Articles 135 to 145 EU Financial Regulation 2018/1046 and Articles 4 and 7 of Regulation 2988/95²¹).

SECTION 4 FORCE MAJEURE

ARTICLE 35 — FORCE MAJEURE

A party prevented by force majeure from fulfilling its obligations under the Agreement cannot be considered in breach of them.

‘Force majeure’ means any situation or event that:

- prevents either party from fulfilling their obligations under the Agreement,
- was unforeseeable, exceptional situation and beyond the parties’ control,
- was not due to error or negligence on their part (or on the part of other participants involved in the action), and
- proves to be inevitable in spite of exercising all due diligence.

Any situation constituting force majeure must be formally notified to the other party without delay, stating the nature, likely duration and foreseeable effects.

²¹ Council Regulation (EC, Euratom) No 2988/95 of 18 December 1995 on the protection of the European Communities financial interests (OJ L 312, 23.12.1995, p. 1).

The parties must immediately take all the necessary steps to limit any damage due to force majeure and do their best to resume implementation of the action as soon as possible.

CHAPTER 6 FINAL PROVISIONS

ARTICLE 36 — COMMUNICATION BETWEEN THE PARTIES

36.1 Forms and means of communication — Electronic management

EU grants are managed fully electronically through the EU Funding & Tenders Portal ('Portal').

All communications must be made electronically through the Portal, in accordance with the Portal Terms and Conditions and using the forms and templates provided there (except if explicitly instructed otherwise by the granting authority).

Communications must be made in writing and clearly identify the grant agreement (project number and acronym).

Communications must be made by persons authorised according to the Portal Terms and Conditions. For naming the authorised persons, each beneficiary must have designated — before the signature of this Agreement — a 'legal entity appointed representative (LEAR)'. The role and tasks of the LEAR are stipulated in their appointment letter (see Portal Terms and Conditions).

If the electronic exchange system is temporarily unavailable, instructions will be given on the Portal.

36.2 Date of communication

The sending date for communications made through the Portal will be the date and time of sending, as indicated by the time logs.

The receiving date for communications made through the Portal will be the date and time the communication is accessed, as indicated by the time logs. Formal notifications that have not been accessed within 10 days after sending, will be considered to have been accessed (see Portal Terms and Conditions).

If a communication is exceptionally made on paper (by e-mail or postal service), general principles apply (i.e. date of sending/receipt). Formal notifications by registered post with proof of delivery will be considered to have been received either on the delivery date registered by the postal service or the deadline for collection at the post office.

If the electronic exchange system is temporarily unavailable, the sending party cannot be considered in breach of its obligation to send a communication within a specified deadline.

36.3 Addresses for communication

The Portal can be accessed via the Europa website.

The address for paper communications to the granting authority (if exceptionally allowed) is the official mailing address indicated on its website.

For beneficiaries, it is the legal address specified in the Portal Participant Register.

ARTICLE 37 — INTERPRETATION OF THE AGREEMENT

The provisions in the Data Sheet take precedence over the rest of the Terms and Conditions of the Agreement.

Annex 5 takes precedence over the Terms and Conditions; the Terms and Conditions take precedence over the Annexes other than Annex 5.

Annex 2 takes precedence over Annex 1.

ARTICLE 38 — CALCULATION OF PERIODS AND DEADLINES

In accordance with Regulation No 1182/71²², periods expressed in days, months or years are calculated from the moment the triggering event occurs.

The day during which that event occurs is not considered as falling within the period.

‘Days’ means calendar days, not working days.

ARTICLE 39 — AMENDMENTS

39.1 Conditions

The Agreement may be amended, unless the amendment entails changes to the Agreement which would call into question the decision awarding the grant or breach the principle of equal treatment of applicants.

Amendments may be requested by any of the parties.

39.2 Procedure

The party requesting an amendment must submit a request for amendment signed directly in the Portal Amendment tool.

The coordinator submits and receives requests for amendment on behalf of the beneficiaries (see Annex 3). If a change of coordinator is requested without its agreement, the submission must be done by another beneficiary (acting on behalf of the other beneficiaries).

The request for amendment must include:

- the reasons why
- the appropriate supporting documents and
- for a change of coordinator without its agreement: the opinion of the coordinator (or proof that this opinion has been requested in writing).

The granting authority may request additional information.

²² Regulation (EEC, Euratom) No 1182/71 of the Council of 3 June 1971 determining the rules applicable to periods, dates and time-limits (OJ L 124, 8/6/1971, p. 1).

If the party receiving the request agrees, it must sign the amendment in the tool within 45 days of receiving notification (or any additional information the granting authority has requested). If it does not agree, it must formally notify its disagreement within the same deadline. The deadline may be extended, if necessary for the assessment of the request. If no notification is received within the deadline, the request is considered to have been rejected.

An amendment **enters into force** on the day of the signature of the receiving party.

An amendment **takes effect** on the date of entry into force or other date specified in the amendment.

ARTICLE 40 — ACCESSION AND ADDITION OF NEW BENEFICIARIES

40.1 Accession of the beneficiaries mentioned in the Preamble

The beneficiaries which are not coordinator must accede to the grant by signing the accession form (see Annex 3) directly in the Portal Grant Preparation tool, within 30 days after the entry into force of the Agreement (see Article 44).

They will assume the rights and obligations under the Agreement with effect from the date of its entry into force (see Article 44).

If a beneficiary does not accede to the grant within the above deadline, the coordinator must — within 30 days — request an amendment (see Article 39) to terminate the beneficiary and make any changes necessary to ensure proper implementation of the action. This does not affect the granting authority's right to terminate the grant (see Article 32).

40.2 Addition of new beneficiaries

In justified cases, the beneficiaries may request the addition of a new beneficiary.

For this purpose, the coordinator must submit a request for amendment in accordance with Article 39. It must include an accession form (see Annex 3) signed by the new beneficiary directly in the Portal Amendment tool.

New beneficiaries will assume the rights and obligations under the Agreement with effect from the date of their accession specified in the accession form (see Annex 3).

Additions are also possible in mono-beneficiary grants.

ARTICLE 41 — TRANSFER OF THE AGREEMENT

In justified cases, the beneficiary of a mono-beneficiary grant may request the transfer of the grant to a new beneficiary, provided that this would not call into question the decision awarding the grant or breach the principle of equal treatment of applicants.

The beneficiary must submit a request for **amendment** (see Article 39), with

- the reasons why
- the accession form (see Annex 3) signed by the new beneficiary directly in the Portal Amendment tool and

- additional supporting documents (if required by the granting authority).

The new beneficiary will assume the rights and obligations under the Agreement with effect from the date of accession specified in the accession form (see Annex 3).

ARTICLE 42 — ASSIGNMENTS OF CLAIMS FOR PAYMENT AGAINST THE GRANTING AUTHORITY

The beneficiaries may not assign any of their claims for payment against the granting authority to any third party, except if expressly approved in writing by the granting authority on the basis of a reasoned, written request by the coordinator (on behalf of the beneficiary concerned).

If the granting authority has not accepted the assignment or if the terms of it are not observed, the assignment will have no effect on it.

In no circumstances will an assignment release the beneficiaries from their obligations towards the granting authority.

ARTICLE 43 — APPLICABLE LAW AND SETTLEMENT OF DISPUTES

43.1 Applicable law

The Agreement is governed by the applicable EU law, supplemented if necessary by the law of Belgium.

Special rules may apply for beneficiaries which are international organisations (if any; see Data Sheet, Point 5).

43.2 Dispute settlement

If a dispute concerns the interpretation, application or validity of the Agreement, the parties must bring action before the EU General Court — or, on appeal, the EU Court of Justice — under Article 272 of the Treaty on the Functioning of the EU (TFEU).

For non-EU beneficiaries (if any), such disputes must be brought before the courts of Brussels, Belgium — unless an international agreement provides for the enforceability of EU court judgements.

For beneficiaries with arbitration as special dispute settlement forum (if any; see Data Sheet, Point 5), the dispute will — in the absence of an amicable settlement — be settled in accordance with the Rules for Arbitration published on the Portal.

If a dispute concerns administrative sanctions, offsetting or an enforceable decision under Article 299 TFEU (see Articles 22 and 34), the beneficiaries must bring action before the General Court — or, on appeal, the Court of Justice — under Article 263 TFEU.

For grants where the granting authority is an EU executive agency (see Preamble), actions against offsetting and enforceable decisions must be brought against the European Commission (not against the granting authority; see also Article 22).

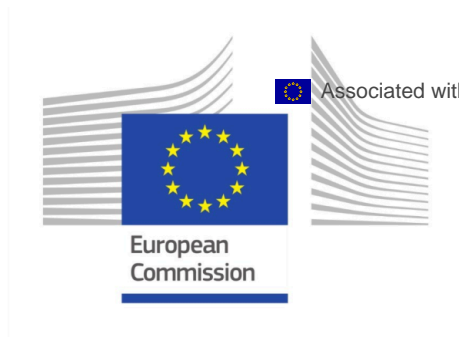
ARTICLE 44 — ENTRY INTO FORCE

The Agreement will enter into force on the day of signature by the granting authority or the coordinator, depending on which is later.

SIGNATURES

For the coordinator

For the granting authority



ANNEX 1



Horizon Europe (HORIZON)

Description of the action (DoA)

Part A

Part B

DESCRIPTION OF THE ACTION (PART A)

COVER PAGE

Part A of the Description of the Action (DoA) must be completed directly on the Portal Grant Preparation screens.

PROJECT	
<i>Grant Preparation (General Information screen) — Enter the info.</i>	
Project number:	101130949
Project name:	POLARIN: POLAR RESEARCH INFRASTRUCTURE NETWORK
Project acronym:	POLARIN
Call:	HORIZON-INFRA-2023-SERV-01
Topic:	HORIZON-INFRA-2023-SERV-01-01
Type of action:	HORIZON-RIA
Service:	REA/C/04
Project starting date:	fixed date: 1 March 2024
Project duration:	60 months

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List of work packages	6
Staff effort	25
List of deliverables	27
List of milestones (outputs/outcomes)	53
List of critical risks	54
Project reviews	57
Research infrastructure	57

PROJECT SUMMARY

Project summary

Grant Preparation (General Information screen) — Provide an overall description of your project (including context and overall objectives, planned activities and main achievements, and expected results and impacts (on target groups, change procedures, capacities, innovation etc)). This summary should give readers a clear idea of what your project is about.

Use the project summary from your proposal.

The polar regions play a key role in the Earth's system. They are essential for our climate and are sentinels of climate change, human expansion, and the hunt of new resources. The polar regions are losing ice, and their oceans and land are changing rapidly. The consequences of this polar transition extend to the whole planet and are affecting people in multiple ways. Evidence-based policy recommendations are needed, but the polar regions are difficult to reach, and research infrastructures able to operate in these regions are scarce. To understand and predict key processes in the polar regions and provide evidence-based information, the polar research community needs access to world-class research infrastructure operating in these regions.

POLARIN is an international network of polar research infrastructures and their services, aiming at addressing the scientific challenges of the polar regions. The network includes a wide array of complementary and interdisciplinary top level research infrastructures: Arctic and Antarctic research stations, research vessels and icebreakers operating at both poles, observatories, data infrastructures and ice and sediment core repositories. POLARIN will provide integrated, challenge-driven, and combined access to these infrastructures to facilitate interdisciplinary research on complex processes.

POLARIN will:

1. Provide challenge-driven transnational access to a large portfolio of research infrastructures.
2. Improve the access to data by improving data availability and interoperability between data infrastructures.
3. Provide virtual access to data and data services.
4. Provide data products for the scientific community and decision makers.
5. Train the young generation of polar researchers in optimally exploiting the infrastructures for their research.
6. Duly advertise the services offered by POLARIN and engage the infrastructure users to share their research outcomes with society.

LIST OF PARTICIPANTS

PARTICIPANTS

Grant Preparation (Beneficiaries screen) — Enter the info.

Number	Role	Short name	Legal name	Country	PIC
1	COO	AWI	ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG	DE	999497507
2	BEN	UOULU	OULUN YLIOPISTO	FI	999844670
3	BEN	INPA	INTERACT-INTERNATIONAL NETWORK FOR TERRESTRIAL RESEARCH AND MONITORING	SE	893223337
4	BEN	ULUND	LUNDS UNIVERSITET	SE	999901318
5	BEN	CNR	CONSIGLIO NAZIONALE DELLE RICERCHE	IT	999979500
6	BEN	OGS	ISTITUTO NAZIONALE DI OCEANOGRAFIA E DI GEOFISICA SPERIMENTALE	IT	999625644
7	BEN	INKODE	INKODE SOCIETA COOPERATIVA	IT	903762872

PARTICIPANTS					
<i>Grant Preparation (Beneficiaries screen) — Enter the info.</i>					
Number	Role	Short name	Legal name	Country	PIC
8	BEN	AU	AARHUS UNIVERSITET	DK	999997736
9	BEN	CNRS	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS	FR	999997930
10	BEN	UCPH	KOBENHAVNS UNIVERSITET	DK	999991043
11	BEN	EPB	EUROPEAN POLAR BOARD	NL	918597470
12	BEN	ETT	ETT SPA	IT	991672808
13	BEN	UiT	UNIVERSITETET I TROMSOE - NORGES ARKTISKE UNIVERSITET	NO	999874643
14	BEN	CSIC	AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS	ES	999991722
15	BEN	SIOS	SIOS SVALBARD AS	NO	907144777
16	BEN	NILU	STIFTELSEN NILU	NO	999654162
17	BEN	NASC	NATIONAL ANTARCTIC SCIENTIFIC CENTER	UA	983358453
18	BEN	IGOT UL	INSTITUTO DE GEOGRAFIA E ORDENAMENTO DO TERRITORIO DA UNIVERSIDADE DELISBOA	PT	986958026
19	BEN	GFZ	HELMHOLTZ-ZENTRUM POTSDAM DEUTSCHES GEOFORSCHUNGSZENTRUM - GFZ	DE	999994341
20	BEN	DTU	DANMARKS TEKNISKE UNIVERSITET	DK	999990655
21	BEN	IPEV	INSTITUT POLAIRE FRANCAIS PAUL-EMILE-VICTOR GIP	FR	999450753
22	BEN	PONANT	COMPAGNIE DU PONANT	FR	885528909
23	BEN	MFRI	HAFRANNSOKNASTOFNUN, RANNSOKNA-OG RADGJAFARSTOFNUN HAFS OG VATNA	IS	909894145
24	BEN	GINR	GRONLANDS NATURINSTITUT	GL	998297908
25	BEN	MCIN	MINISTERIO DE CIENCIA E INNOVACION	ES	905411775
26	BEN	SPRS	POLARFORSKNINGSSEKRETARIETET	SE	984574348
27	BEN	SSLC	SUDURNES SCIENCE AND LEARNING CENTER	IS	924309412
28	BEN	DMI	DANMARKS METEOROLOGISKE INSTITUT	DK	999509438
29	BEN	ULAVAL	UNIVERSITE LAVAL	CA	998082180
30	BEN	UTU	TURUN YLIOPISTO	FI	999903064
31	BEN	NPI	NORSK POLARINSTITUTT	NO	998675432
32	BEN	UGRAZ	UNIVERSITAET GRAZ	AT	999873188
33	BEN	RIF	RANNSOKNARSTODIN RIF	IS	937536138
34	BEN	SU	STOCKHOLMS UNIVERSITET	SE	999885022

PARTICIPANTS*Grant Preparation (Beneficiaries screen) — Enter the info.*

Number	Role	Short name	Legal name	Country	PIC
35	BEN	AMU	UNIWERSYTET IM. ADAMA MICKIEWICZA W POZNANIU	PL	999886865
36	BEN	ARI	AURORA COLLEGE	CA	919704919
37	BEN	IGF PAS	Instytut Geofizyki Polskiej Akademii Nauk	PL	996625337
38	BEN	UMK	UNIWERSYTET MIKOLAJA KOPERNIKA W TORUNIU	PL	999836619
39	BEN	UAF	University of Alaska	US	987205958
40	BEN	MI	MARINE INSTITUTE	IE	999522824
41	BEN	UKRI	UNITED KINGDOM RESEARCH AND INNOVATION	UK	906446474
42	BEN	UH	HELSINGIN YLIOPISTO	FI	999994535
43	BEN	FMI	ILMATIETEEN LAITOS	FI	999591306
44	BEN	BAI	BULGARSKI ANTARKTICHESKI INSTITUT ASSOCIATION	BG	998835870
45	BEN	UICS	UIC SCIENCE LLC	US	919608889
46	BEN	CAFF	CAFF SKRIFSTOFAN A ISLANDI	IS	937088677
47	BEN	TARA	FONDATION TARA	FR	916064024

LIST OF WORK PACKAGES

Work packages						
<i>Grant Preparation (Work Packages screen) — Enter the info.</i>						
Work Package No	Work Package name	Lead Beneficiary	Effort (Person-Months)	Start Month	End Month	Deliverables
WP1	Enabling science for understanding and predicting key processes in polar regions	9 - CNRS	74.00	1	58	D1.1 – Implementation of the SLP with Terms of Reference D1.2 – Report on procedure for provision of TA D1.3 – Description of the evaluation process, evaluation criteria, code of conduct, and guidelines and templates for external reviewers D1.4 – Overview report of existing science priorities by major Arctic and Antarctic organisations and validation/calibration needs by in-situ observation, remote sensing and modelling communities D1.5 – Polar Knowledge gaps and potential of POLARIN RIs in addressing them D1.6 – Selection report of the first call for proposals D1.7 – Selection report of the second call for proposals D1.8 – Selection report of the third call for proposals D1.9 – Synthesis report on the scientific input, significance, and preliminary results of Transnational access and funded projects
WP2	TA Proposal management service	2 - UOULU	108.00	1	60	D2.1 – Report on requisites for access and description of the logistic evaluation procedure

Work packages						
<i>Grant Preparation (Work Packages screen) — Enter the info.</i>						
Work Package No	Work Package name	Lead Beneficiary	Effort (Person-Months)	Start Month	End Month	Deliverables
						D2.2 – Quality Assurance Programme report for access provision D2.3 – Logistic evaluation report of the first call D2.4 – Logistic evaluation report of the second call D2.5 – Report on integrated access provision; planning and execution D2.6 – Logistic evaluation report of the third call D2.7 – Report on access provision (calls, volume, statistics) and lessons learned D2.8 – Report on plans forward for INTERACCESS
WP3	RIs offered for transnational access	1 - AWI	0.10	12	60	D3.1 – Synthetic report on TA provided to date
WP4	Improvement of data services and customised data products	5 - CNR	49.00	1	60	D4.1 – Data Management Plan for generated and collected data incl. ethical guidelines for data and derived data products D4.2 – POLARIN graphic products package for multiple audiences and gap analysis D4.3 – POLARIN web portal D4.4 – Guidance on dataset granularity D4.5 – Use case documents for data discovery processes D4.6 – General guidance material on FAIR data D4.7 – Guidance material for research infrastructures

Work packages						
<i>Grant Preparation (Work Packages screen) — Enter the info.</i>						
Work Package No	Work Package name	Lead Beneficiary	Effort (Person-Months)	Start Month	End Month	Deliverables
						D4.8 – Dockerised open-source software components that cover architecture implementation requirements D4.9 – POLARIN Data services D4.10 – Usability report of POLARIN data access hub and data services
WP5	Provision of virtual access	15 - SIOS	52.00	1	60	D5.1 – A unified semantically consistent virtual data catalogue with machine interfaces D5.2 – A web portal providing guidance documentation and a graphical user interface to the virtual data catalogue D5.3 – VA Assessment Report (I) D5.4 – VA Assessment Report (II) D5.5 – VA Assessment Report (III)
WP6	RIs offered for virtual access	17 - NASC	111.00	12	60	D6.1 – Synthetic report on VA
WP7	Training for infrastructure users	10 - UCPH	72.00	1	60	D7.1 – Online material on data stewardship training D7.2 – Training material for in-the-field course on polar expedition safety and sustainability D7.3 – Online training material on optimal use POLARIN RIs D7.4 – Package of short information material on optimal use of POLARIN RIs D7.5 – Package of short information material on data stewardship D7.6 – Assessment of the training on

Work packages						
<i>Grant Preparation (Work Packages screen) — Enter the info.</i>						
Work Package No	Work Package name	Lead Beneficiary	Effort (Person-Months)	Start Month	End Month	Deliverables
						optimal use of POLARIN RI's and on data stewardship D7.7 – Assessment report of the in-the-field course on polar safety and sustainability
WP8	Outreach, Engagement and Impact	11 - EPB	49.00	1	60	D8.1 – Implement POLARIN website and social media channels D8.2 – Brand Identity and guidelines package (logos, general lay-out etc.) D8.3 – POLARIN promotional materials (press releases, promotion video, flyers, roll-ups etc.) D8.4 – POLARIN Communication, dissemination, and engagement plan D8.5 – Content Creation Guidelines (short video tutorials) for POLARIN service users to support outreach and engagement D8.6 – Assessment of communications, outreach and engagement activities to date, and update of the Communication, dissemination, and engagement plan D8.7 – Online seminar of POLARIN service users' stories call 1 D8.8 – Online seminar of POLARIN service users' call 2 D8.9 – Online Seminar of POLARIN service user stories call 3 D8.10 – “POLARIN Stories” a service users and ambassadors seminar series D8.11 – Final report on POLARIN communications, outreach, and

Work packages						
<i>Grant Preparation (Work Packages screen) — Enter the info.</i>						
Work Package No	Work Package name	Lead Beneficiary	Effort (Person-Months)	Start Month	End Month	Deliverables
						engagement activities, including POLARIN Ambassadors activities D8.12 – Report on POLARIN publication repository D8.13 – Impact evaluation report
WP9	Project Management	1 - AWI	99.00	1	60	D9.1 – Internal website of POLARIN implemented D9.2 – Organisation and minutes of the first POLARIN GA (in-person) D9.3 – Quality Assurance Plan, including guidelines, best practise, and project handbook D9.4 – Implementation of the project Advisory Board (AB) incl. Terms of Reference D9.5 – Organisation and minutes of the second POLARIN GA (virtual) D9.6 – Rreport on TA implemented to date D9.7 – Budget allocations for TA to date (I) D9.8 – First Policy briefing D9.9 – Organisation and minutes of the third POLARIN GA and mid-term retreat (inperson) D9.10 – Organisation and minutes of the fourth POLARIN GA (virtual) D9.11 – Budget allocations for TA to date (II) D9.12 – Second policy briefing D9.13 – Organisation and minutes of the final POLARIN GA (in-person)

Work packages						
<i>Grant Preparation (Work Packages screen) — Enter the info.</i>						
Work Package No	Work Package name	Lead Beneficiary	Effort (Person-Months)	Start Month	End Month	Deliverables
						D9.14 – Report on the contribution of POLARIN to the EU Polar Cluster, international polar organisation, and the ESA – EC cooperation D9.15 – Organisation and minutes of the POLARIN final conference D9.16 – Budget allocations for TA to date (III) D9.17 – Third Policy briefing

Work package WP1 – Enabling science for understanding and predicting key processes in polar regions

Work Package Number	WP1	Lead Beneficiary	9. CNRS
Work Package Name	Enabling science for understanding and predicting key processes in polar regions		
Start Month	1	End Month	58

Objectives
<p>POLARIN will offer access to a large set of infrastructures to tackle the grand scientific challenges of the polar regions. TA1/WP1's main objective is to define the scientific needs and the framework that will guide the coordination, implementation, and evaluation of TA to POLARIN RIs. TA1/WP1 will promote excellence and interdisciplinarity in research, in combination with optimal use of resources based on multiplatform access (research stations, vessels, data infrastructures...). It will develop the scientific framework, define the evaluation criteria for selecting applications, perform the scientific evaluation of submitted proposals, and assess the contributions of POLARIN's funded projects towards the challenges, to adapt the subsequent calls for proposals accordingly.</p> <p>The WP team will be assisted in its tasks by a Scientific Liaison Panel (SLP) which will advise TA1/WP1 in defining the themes for the calls, with particular attention to promoting interdisciplinarity and multi-platform operations (Task 1.1), assessing the performed work and suggesting themes for subsequent calls (Task 1.1 and Task 1.3), and implementing the scientific evaluation process and approving the report of funded projects (Task 1.2).</p> <p>Relation with other WPs and International partners, organisations</p> <ul style="list-style-type: none"> • International partners and organisations (e.g., SCAR, IASC, SAON, SOOS, IPCC, IPBES) will be fully involved in POLARIN via participation of representatives in the SLP. Through their science plans and strategies, they will support the process of identifying scientific priorities for each of the TA calls. • The work in TA1/WP1 will be carried out in strong connection with TA2/WP2 to complete the evaluation of proposals. TA1/WP1 implements the scientific evaluation, the first step of the two-step evaluation system in POLARIN, while TA2/WP2 implements the logistic/feasibility evaluation. • Tools and data products used in Task 1.3 to depict knowledge gaps within the overarching POLARIN themes will be developed in collaboration with WP4. WP4 and WP8 will also benefit from information about the funded projects and the assessment of project outcomes in TA1/WP1.

Description
<p>Task 1.1 Challenge driven call definition and integration (CNRS, IGOT-UL) (M1-M42)</p> <p>The objective of Task 1.1 is to develop the scientific framework for regular TA calls to POLARIN RIs. Through a careful analysis of recommendations from international assessment reports, major polar projects and international science organisations and networks, Task 1.1 will evaluate, define, and update overarching science priorities as inputs to the call design. Such priorities will cover the six overarching science themes identified by POLARIN and identify knowledge gaps, uncertainties, and validation/calibration needs from the in-situ observing, Earth observation and modelling communities. Task 1.1 will contribute to the establishment of the evaluation criteria that will be developed in Task 1.2. The activities in Task 1.1 will be supported by a Scientific Liaison Panel (SLP) which will be implemented as part of the task.</p> <p>Task 1.1 will:</p> <ul style="list-style-type: none"> • Establish the SLP to assist in implementing the scientific framework and the priority topics of the calls for proposals. The panel will be composed of scientific experts and representatives from major polar science organisations expert groups (e.g., IASC, SCAR). The range of expertise of the SLP will cover the major domains and scientific disciplines contributing to the project overarching themes in both polar regions. The SLP, at least 50% external to the POLARIN consortium, will be nominated in consultation with Task 1.2. • Describe the procedure for provision of access to services including eligibility criteria and terms and conditions. • Review existing science priorities identified by major Arctic and Antarctic science organisations and networks (e.g., AMAP, IASC, SCAR, EU-PolarNet, EPB) and identify validation/calibration needs by the Earth Observation (e.g., ESA, Copernicus, EMODnet) and modelling (e.g., WCRP-ESMO/CMIP) communities. • Provide annual updates of new science priorities identified by major science organisations and networks, to the extent that these changes are relevant to the design of subsequent calls. • Update the scientific framework (priorities) for each of the subsequent calls for proposals. <p>Task 1.2 Scientific evaluation (OGS, UOULU) (M1-M48)</p> <p>Task 1.2 will take care of the entire scientific evaluation and ranking of the proposals submitted in response to the access</p>

calls and the follow up of selected projects after their implementation (e.g., approval of project reports). The evaluation process will ensure that only proposals that are developing excellent and innovative science addressing the challenges in polar regions will be considered for their logistic evaluation (process taking place in WP2) and TA implementation.

Task 1.2 will:

- Define and agree a shared evaluation system to access POLARIN RIs. This system will be based on the successful evaluation systems from ARICE and INTERACT and it will be adapted to address the diverse nature of POLARIN's RIs. This must take place very early on in the project life.
- Collaborate with Task 1.1 and the SLP, to ensure objectivity, transparency, equality of treatment, and confidentiality throughout the call procedure.
- Draft all call documentation related to the evaluation of proposals: Define, in collaboration with the SLP, the Code of Conduct on conflict of interest and confidentiality, the evaluation templates and criteria (with input from Task 1.1), and the guidelines for external reviewers to be integrated in the INTERACCESS online application system (TA2/WP2, Task 2.1)
- Coordinate the scientific evaluation of proposals submitted to POLARIN's access calls. Proposals will be evaluated by at least 2 external experts recommended by the SLP. After the proposal ranking by the SLP, the recommendations will be added to the INTERACCESS platform for the logistic evaluation (TA2/WP2, Task 2.2).
- Provide evaluation reports for each of the calls for proposals.

Task 1.3 Optimising the scientific outcome of the access programme (AU) (M7-M58)

Task 1.3 will focus on identifying knowledge gaps and evaluating the capacity of POLARIN RIs in addressing them. This task will cooperate with Task 4.3 to create graphic products (conceptual diagrams, maps, and time series) based on available datasets providing information on 'thematic gaps', 'geographical gaps' and 'validation/calibration gaps' to advise T1.1. in the call design process. This information will be merged with the results from POLARIN TA calls to identify potential gaps as soon as possible.

Task 1.3 will:

- Identify data products in cooperation with WP4, that will help to identify current knowledge gaps (thematic, geographical, and/or validation/calibration) based on existing data sets and by evaluating how representative these data are under current and future climate scenarios. Superimposed with POLARIN RIs, these data products can be used to identify infrastructures that potentially can fill geographical gaps and hence be key in addressing the challenges.
- Analyse how TA projects scheduled for implementation help addressing the POLARIN science themes, science priorities and gaps to determine the scientific focus of subsequent POLARIN calls for proposals.
- In collaboration with T1.1 and T1.2, review the granted access projects to report on how POLARIN TA has contributed to addressing the identified challenges.

Work package WP2 – TA Proposal management service

Work Package Number	WP2	Lead Beneficiary	2. UOULU
Work Package Name	TA Proposal management service		
Start Month	1	End Month	60

Objectives

The main objective of this work package is to ensure the technical management of the calls for proposals, including the launch of calls, proposal submission, logistic evaluation, and follow-up (e.g., to ensure the reporting and answers to feedback questionnaires are provided). The INTERACCESS on-line application, evaluation and reporting system from INTERACT will be expanded to handle all kinds of research infrastructure offering access, and to include several new features for streamlined and efficient access provision across domains and geographical regions. TA2/WP2 will provide the online system (INTERACCESS) procedure (Task 2.1), the platform for consultation and co-design (Task 2.2) and the quality assurance programme (Task 2.3) for TA provision in POLARIN. Altogether these tasks ensure integration, efficiency, and high quality of access provision across POLARIN RIs, across access modalities, and across domains and geographical regions. This will enable the operation of TA as a coherent and streamlined instrument responding to the grand challenges in the polar regions and supporting cross-cutting world-class research on these RIs. Ultimately, the well-integrated, streamlined, and high-quality access provision system developed will carry on as legacy beyond POLARIN, paving the way and potentially serving as the foundation for an Integrated Polar Observing System (IPOS). TA2/WP2 brings together operators and managers from Arctic and Antarctic research stations, polar vessels, and core repositories.

Relation with other WPs, International partners and organisations

Relation with International partners and organisations: Access to polar terrestrial and marine infrastructures depends

on their national operators. However, there are international organisations that already carry out coordination and best practices tasks for polar operators (e.g., FARO, COMNAP, EPB, ERVO). POLARIN will collaborate with them throughout the duration of the project to be attentive to their initiatives, common procedures, and best practices.

Relation to TA1/WP1: TA2/WP2 provides the system for TA call implementation, with embedded functionality and a user interface for the scientific evaluation done by TA1/WP1. TA3/WP3 & VA2/WP6: TA2/WP2 provides the platform for consultations, development, implementation, coordination, quality assurance and reporting of TA (and partially also of VA) provided in TA3/WP3 and VA2/WP6. VA1/WP5: TA2/WP2 supports (via Tasks 2.1 and 2.2.) the consultation and integration of virtual access procedures and system development done in VA1/WP5 (e.g., INKODE is the system developer for both the INTERACCESS and the INTERACT VA platform).

Description

Task 2.1 Integration of access procedures and call implementation (INPA, INKODE, UOULU, ULUND) (M1-M60)

The objective of this task is to integrate TA access modes (in person and remote access) into an integrated access system that will handle the TA applications from call opening to proposal submission and reporting, with a quality assurance programme covering the whole chain of access provision. The INTERACCESS system will be developed further to integrate and manage the access to Arctic and Antarctic research stations, marine infrastructures, and core repositories, considering the different types of POLARIN RIs.

The INTERACCESS development activities will include:

- Access application system updates,
- Scientific evaluation interface updates according to the evaluation procedure and criteria defined in TA1/WP1 by the SLP,
- Updates in the logistic and feasibility evaluation and access decision section defined in Task 2.2 by the infrastructure operators,
- Modifications of feedback collection by adding of a section for feedback from infrastructure operators,
- An entry point to international infrastructure catalogues (e.g., INTERACT GIS and POLARDEX) for enhanced and optimised infrastructure selection by TA applicants,
- Project cost reporting updates, adding e.g., costs details and control and alert functionalities. For example, a specific alert will be developed to identify cross-invoicing between project partners.

This task will:

- Further develop the INTERACCESS system to give access to all POLARIN TA RIs,
- Upgrade all frameworks and libraries of INTERACCESS to ensure the optimal level of security and reliability of the system performance,
- Update the user interfaces and navigation flows to improve the usability and user experience of end users,
- Apply best practices and lessons learnt in the system development, based on the experience of INTERACT,
- Perform periodic security checks and constant monitoring of all software components.

Task 2.2 Logistic evaluation of proposals (UTM-CSIC, AWI) (M1-M48)

Task 2.2 will develop and coordinate the logistic evaluation of proposals recommended for implementation by the SLP. For this, the task will implement an “Infrastructure Operators Forum” (IOF) that will gather all POLARIN RI operators offering TA. Access decisions will be done by the infrastructure operators themselves in INTERACCESS, according to the guidelines, procedure and criteria developed in Task 2.1.

At the IOF meetings, the infrastructure operators will design the criteria and procedure for the logistic evaluation of access proposals to be fed into INTERACCESS developments by Task 2.1 and nominate among themselves representatives of the geographical regions and/or domains as a sort of “operational watchdog” to oversee the implementation of selected proposals and provide consultation and support when needed.

The IOF meetings will take place on-line at regular intervals to:

- Discuss the access procedures to POLARIN RIs,
- Define the procedure for logistic evaluation of access proposals for INTERACCESS developments,
- Provide guidance on logistic and feasibility evaluation for access decisions (done by each operator individually for their infrastructure).
- Provide feedback for the Quality Assurance and lessons learnt (Task 2.3).

The content of the meetings will be planned in consultation with Task 2.1 to ensure that the work is feeding into and is in synergy with the activities in Task 2.1

Task 2.2 will:

- Implement the “Infrastructure Operators Forum” (IOF),
- Develop the logistic evaluation procedure to be implemented in INTERACCESS (Task 2.1),
- Coordinate the logistic evaluation of proposals,
- Safeguard the logistic evaluation process done by POLARIN RIs,
- Support Quality Assurance and lessons learnt (Task 2.3)

The IOF will:

- Provide updated descriptions of their infrastructure, updated conditions of access, scientific equipment and availability.
- Do the beta-testing of the new features developed in INTERACCESS before the updates are applied to the production version. This will help to ensure the functionality and usability of the system developments in practice.
- Evaluate the logistical feasibility of proposals recommended by the SLP in the first step of the evaluation process (in T1.3) and provide a preliminary schedule for implementation of feasible proposals.

Task 2.3 Quality Assurance and follow-up implementation (UOULU, ULUND) (M9-M60)

The objective of Task 2.3 is to develop a Quality Assurance Programme (QAP) on access provision for POLARIN, covering the whole chain of access provision from call opening to proposal submission and reporting. The comprehensive QAP will ensure the integration, efficiency, and high quality of access provision services across the different POLARIN RIs, their access modalities, across the different domains and geographical regions, enabling the operation of TA as a coherent and streamlined instrument.

• This task will:

- Develop the Quality Assurance Programme with several Key Indicator parameters to monitor the quality of access provision and all related procedures.
- Collect feedback via INTERACCESS (by developing a feedback form for TA user groups and infrastructure operators) and via the IOF to create a synthesis on the lessons learned.
- Report the used access, e.g., by providing TA statistics to project management and for periodic reports.

Work package WP3 – RIs offered for transnational access

Work Package Number	WP3	Lead Beneficiary	1. AWI
Work Package Name	RIs offered for transnational access		
Start Month	12	End Month	60

Objectives

The objective of TA3/WP3 is to inform about the access conditions for POLARIN’s infrastructures offering TA. Access is either in-person, provided to selected users that visit the installation, or remote, through the provision of remote scientific services (e.g., reference materials, samples, or installation of sensors). TA will be free of charge – including logistical, technological, and scientific support and the specific training that is usually provided to external researchers using the infrastructure. POLARIN offers 2.538 units of TA to Arctic stations and observatories, and 1.290 units of TA to Antarctic stations and observatories. As most of the observatories are part of the research stations, access to them is offered via the respective station. The only exception is the deep-sea observatory FRAM which is an independent installation. In addition, the project offers 2087 units of TA to research vessels and research icebreakers and 210 units of TA to core repositories.

The RIs have been chosen because of their contribution to addressing the six major overarching scientific challenges. This is highlighted for each infrastructure by the following numbers:

1. Sea-ice and Polar Oceans
2. Sea level, glacier stability and melt
3. Carbon balance and permafrost
4. Polar ecosystems and biodiversity
5. Atmosphere dynamics
6. (Paleo)climate processes

Description

Support offered under this proposal

Successful user groups will benefit from access free of charge. Access will include logistical, technological, and scientific support and specific training that is usually provided to external researchers using the infrastructure. TA can be either in-person (hands-on), offered to selected users that visit the installation to use it, or remote, through remote scientific services (e.g., provision of reference materials or samples). Transport and shipping costs to and from the RI will be covered by the project as well. The users’ proposed research will be embedded in the regular infrastructure schedules and users will benefit from “ad hoc” training.

Ukrainian researchers from government-controlled territories will be supported by extended ad-hoc training.

Outreach to new users

The outreach of TA/RA opportunities will be conducted in WP8. POLARIN, its call for proposals and the RIs offering access will be actively communicated and advertised on the project website, in workshops, conferences, regular newsletters and social media posts to attract potential users from the scientific community and SMEs, including new areas of research. The project will promote equal opportunities in advertising access. The participation of Ukrainian researchers from government-controlled territories will be facilitated with specific outreach activities in the official language(s).

Review procedure under this proposal

A single-entry portal for TA application will be implemented to submit proposals to access POLARIN’s infrastructures at both poles (TA2/WP2). The portal will be based on the INTERACCESS portal developed by INTERACT, as it has been proved to be very useful in handling big volumes of applications.

The peer review procedure that will be used to select users among the applicants will be implemented in TA1/WP1 (Task 1.3). The user groups must request access by submitting a written description of the work through the POLARIN access portal. A selection panel (SLP, implemented in TA1/WP1) comprised of international experts in the field, at least half of whom will be independent from the consortium, will recommend external reviewers to evaluate the proposals according to evaluation criteria, templates, and guidelines for reviewers. The SLP will assess all proposals and reviews received and recommend a short-list of user groups that should benefit from access.

The selection panel will apply the principles of transparency, fairness, and impartiality and will base their selection on scientific merit, considering that priority should be given to user groups composed of users who: (i) have not previously used the installation, and (ii) are working in countries where no equivalent research infrastructure exists and (iii) Ukrainian researchers from government-controlled territories will get selection priority at equal scientific merit.

A logistic evaluation will follow to evaluate the feasibility of implementing the selected projects at the requested RIs. This second step in the evaluation system ensures that only excellent and feasible proposals are recommended for funding. In addition, the following criteria will apply in the selection of users:

1. The majority of users must work in a country other than the country(ies) where the installation is located (unless access is provided by an international organisation, the Joint Research Centre (JRC), an ERIC or similar legal entity).
2. Only user groups that will disseminate the results they have generated under the action may benefit from access (unless users are working for SMEs).
3. If a visit to an installation will be planned to exceed 3 months, the coordinator of POLARIN will request written approval from the EC to implement this access.

The access for user groups with a majority of users not working in a EU Member State or Horizon Europe associated country is limited to 20% of the total amount of units of access provided under the grant.

Work package WP4 – Improvement of data services and customised data products

Work Package Number	WP4	Lead Beneficiary	5. CNR
Work Package Name	Improvement of data services and customised data products		
Start Month	1	End Month	60

Objectives

Addressing the general data user as a stakeholder, WP4 aims at facilitating the discovery and consumption of data that is already available by ensuring that databases, datasets and/or data initiatives from polar regions are identifiable, and by facilitating access to them. It will improve workflows among data initiatives by reducing data fragmentation in support of data interoperability. In addition, tools will be developed to facilitate the access of data from multiple providers. These include tools that guide users (not necessarily data experts) towards the proper data queries in a stepwise/wizard-based approach. This approach helps the user to refine and better identify the fit-for-its-purpose datasets and data products.

Environmental data collected and stored in databases that very often consist of raw, unprocessed, collections. This limitation in the data value chain is hampering the capacity to develop knowledge from these valuable collections and their full potential may not reach some scientists, policy makers, local governments, or other organisations. POLARIN wants to make data products from existing databases available and to develop data products that can be directly used by a wide variety of stakeholders (for example to interpret atmospheric measurements).

- Establish a web portal with workflow-based access to data for various data consumer communities.
- Provide data products and tools integrating data across data repositories.

Relation with other WPs and International Partners, Organisations

- Utilising machine-to-machine interfaces for the unified virtual data catalogue established in VA1/WP5.
- A web portal solution that could serve both the access to data and the VA.

- Implementation of dedicated data products and services for the virtual catalogue in VA1/WP5 and for the challenge-driven call definition in TA1/WP1.

Description

Task 4.1 Improving access to polar data (ETT, CNR) (M1-M60)

The Arctic/polar data management “ecosystem” is fragmented if looked at from a multi-disciplinary perspective. End users are discouraged by such complexity and fail to reach all the information that is available. Mapping activities initiated by the SAON/IASC Arctic Data Committee, now continued as a polar activity in collaboration with SCADM, SOOS and IARPC and supported by the EU project Arctic PASSION, will provide the basis for a series of new interfaces/tools for exploration/mining of data (developed in Task 4.2 and 4.3). Particular attention will be on user friendly interfaces for a wide range of users, including non-expert users. These interfaces, together with the capitalisation of previous efforts of RIs (e.g., SIOS, INTERACT, ISAFFIK, ACTRIS), should serve the needs of a VA interface for VA1/WP5 and end users of polar data, regardless of previous expertise. The current status of data availability and interoperability of POLARIN infrastructures offering VA will be addressed by VA1/WP5.

This task will:

- Establish a hub where experts as well as non-expert users/intermediaries are guided (e.g., by a wizard tool, visual data discovery tree) to find data and information necessary to match their specific needs. In a very fragmented data management “universe”, this innovative approach will provide a significant improvement to the “findable” part of the FAIR principle.
- Establish web browser access to data based on workflow patterns to provide a wider user community with selected higher order services on top of data.

Task 4.2 Improving polar data availability and interoperability (CNR, AU) (M1-M60)

Data interoperability relies on the FAIR guiding principles and in particular the adoption of standardised interfaces of metadata and data, file formats (including structures), semantic annotation (i.e., adding variables and use information to data) and core information like persistent identifiers, licenses and origin. State-of-the-art data discovery, data use and interoperability approaches, in combination with OGC API approaches, will be promoted using various tools. These also include the adoption of common open-source tools to search for and view data collections and data products.

While the primary goal of this task is to assess and document the full framework of these interoperability approaches, a second goal is to provide the partners with tools and guidelines to improve interoperability in practice. Existing best practices and tools from partners will be evaluated along with e.g., ENVRI-FAIR recommendations and their use will be promoted. Because data availability and interoperability are highly dependent on data policy, following EC recommendations the project will promote the Creative Commons Attribution license (CC-BY-4.0 or higher) as much as possible. New non-sensitive data will be published CC-BY no later than 2 years after the collection. In case of sensitive data, a clear instruction on how to access, legal constraints and how to use this data will be provided. A dedicated effort will be focused on guidance documentation for dataset granularity.

This task will:

- Improve accessibility and interoperability of the data management landscape, with a specific focus on cross-platforms serving diverse disciplines. Current practices in data management are still using different formats, a wide diversity of datasets, and disparate data management structures. POLARIN will extend the current effort for harmonising data workflows from one domain to an ecosystemic and multidisciplinary approach.
- Improve data interoperability through promotion of FAIR compliant community standards supported by provision of selected software components to data repositories.

Task 4.3 Data products, tools and data services (SIOS, NILU) (M1-M60)

A dedicated effort is put into the production of graphic products (conceptual diagrams, maps and time series) based on existing data sets to depict the state of key climate and ecosystem variables under current and future climate scenarios (using e.g., ESA CCI remote sensing products and CMIP6 Earth System Models) and targeted at key stakeholder groups (e.g., research community, policy makers and general public). In cooperation with Task 1.3, selected data products (maps with key climate and ecosystem variables from existing raw data) will be developed to contribute to the identification of gaps in geographical coverage and gaps in process understanding, and to identify POLARIN infrastructures that can potentially be used to fill such gaps.

The following additional data products and data services have already been identified as outcomes of this Task:

- In cooperation with the POSEDA network: Glacier tomography in Greenland and Antarctica derived from seismic networks, providing information on glacier dynamics.
- In cooperation with the ESFRI Landmark ACTRIS: Footprint products of short-lived atmospheric species (e.g., black carbon) for analysis of measurement data.
- In cooperation with SIOS, regional cryosphere datasets covering snow, glacier and permafrost aspects will be established. These datasets will address both calibration and validation (cal/val) and process understanding needs.

This task will:

- Make data more usable for wider community and show the benefit of harmonised data documentation and access

Work package WP5 – Provision of virtual access

Work Package Number	WP5	Lead Beneficiary	15. SIOS
Work Package Name	Provision of virtual access		
Start Month	1	End Month	60

Objectives

This WP will manage the VA to infrastructures (observatories, research stations, data infrastructures). A web portal (single entry point) accompanied by machine interfaces will be provided. This will allow monitoring and evaluating the VA provided by POLARIN RIs. The virtual access is permanently open for access and users are not selected. The budget provided to VA providers consists mainly of person months, to include new data from the projects carried out within POLARIN, to digitise old data, and/or to further develop open access.

VA1/WP5 will:

- Establish a unified virtual data catalogue giving access to data from all POLARIN RIs offering VA.
 - Address the current status of data availability and interoperability of POLARIN RIs offering VA.
 - Monitor the virtual access of connected infrastructures.
- The VA provision will be monitored (with follow-up of user statistics by web-analytics tools), and periodically assessed (three times in the project lifetime) by an external board of experts in providing free online access to data.
- Relation with other WPs and International Partners, Organisations
- Providing backend functionality for WP4
 - Preferably sharing web portal solution with WP4
 - Enabling brokering of regional European and Polar data management frameworks at discovery level

Description

Task 5.1 Development of a virtual access portal (SIOS, ETT, INKODE) (M1-M24)

Existing data catalogues of polar RIs will be connected by relying on regional and Arctic interoperability standards. This will provide a unified semantically consistent catalogue by federating data nodes. The data catalogue will be made available by machine readable end points which may be integrated into various decision support systems, including Virtual Research Environments (VRE). A graphical user interface to the catalogue will be established through the web portal. The web portal solution will be decided in WP4 to avoid duplication of efforts but implemented and integrated with the aggregated catalogue as well as operated in this task.

For the aggregated catalogue, existing discovery metadata brokering approaches available within the consortium (e.g., SIOS, INTERACT), in other European projects (e.g., Arctic PASSION, ENVRI-FAIR, EOSC) and in the polar data management community (e.g., POLDER) will be evaluated and reused whenever possible and cost efficient. The web services established, and data made accessible through the federated catalogue will provide the base for developing dedicated data products and services in WP4. Partners contributing to the VA activity with their data repositories (VA2/WP6) will provide the exchange protocols and semantics agreed upon in VA2/WP6.

This task will:

- Establish a unified virtual data catalogue with interactive and machine interfaces.

Task 5.2 Monitoring and evaluation of the virtual access (CNR, SIOS, INPA) (M13-M60)

The performance and progress of connected research infrastructures of offering VA will be monitored continuously and reported three times in the project lifetime. Elements of the progress report should identify the number of infrastructures that have connected their data repositories, the number of datasets shared from each repository and in total, as well as an estimate of the FAIRness compliance of web services and shared data. In this context, FAIRness is based on the principles identified in WP4 to establish sufficient interoperability at the discovery and data level and how this evolves over the project duration. Thus, for all contributions to VA there is a need to establish a reference evaluation at the very start of the project.

The provision of VA during the project lifetime will be measured through the units of access defined for each infrastructure and periodically assessed by an external board of experts in providing free online access to data.

This task will:

- Monitor the progress of connected infrastructures offering VA.

Work package WP6 – RIs offered for virtual access

Work Package Number	WP6	Lead Beneficiary	17. NASC
Work Package Name	RIs offered for virtual access		
Start Month	12	End Month	60

Objectives
POLARIN is offering user-friendly, online access to scientific data, metadata, and data products from two observational networks, seven data infrastructures, ten Arctic and two Antarctic research stations. The objective of VA2/WP6 is to show the access conditions to POLARIN's infrastructures that are offering access as VA. Virtual Access is provided through online services to users complying with the RI's access policy, without selecting them. It includes the provision of access via a single-entry portal, and the access to data services. VA is permanently open and users are not selected.

Description
Support offered under this proposal The access includes the technological and scientific support researchers need to effectively use the services. VA1/WP5 will develop a virtual data catalogue and a single-entry portal accompanied by machine interfaces to allow user-friendly access to all VA services. The portal will also allow the monitoring and evaluation of how the VA is evolving for those infrastructures offering VA. The budget provided to the VA providers consists mainly of person months, to include new data from the projects carried out within POLARIN or to digitise old data or to further develop open access. Outreach to new users The dissemination and outreach of VA opportunities will be done through WP8. The VA portal will be actively communicated and advertised on the project website, in workshops, conferences, regular newsletters and social media to attract potential users from a wide spectrum of scientific fields, and SMEs, including new areas of research. Assessment of VA The provision of VA during the project lifetime will be measured through the units of access defined for each infrastructure and will be periodically assessed by an external board in VA1/WP5.

Work package WP7 – Training for infrastructure users

Work Package Number	WP7	Lead Beneficiary	10. UCPH
Work Package Name	Training for infrastructure users		
Start Month	1	End Month	60

Objectives
Acquisition of scientific data in the polar regions is very expensive and logistically demanding in comparison with sampling of similar data anywhere else on Earth. It often includes the use of facilities (research stations, observatories, or vessels) with a working environment that is very different from what is usually experienced at a university or research institute. In addition, the work often takes place in vulnerable ecosystems and pristine environments that need to be preserved by reducing the impact of research activities as much as possible. WP7 will organise training programmes to ensure that the new generations of researchers and RI users are able to fully utilise polar infrastructures efficiently, safely, and with minimum impact on polar environments. In addition, a training programme on data acquisition and sharing (data stewardship) will also be implemented. The specific objectives of WP7 are: <ul style="list-style-type: none"> • Develop training material for polar RI users, focusing on the new generation of polar researchers. • Use this material in different online seminars/courses and information packages to secure that research expeditions supported by POLARIN are carried out in a safe, efficient, cost effective, ethical and as environmentally sustainable as possible. • Provide polar RI users with knowledge to manage the data acquired in expeditions to ensure compliance with FAIR principles, to benefit from the available data collections and products, and the digital tools provided by WP4 and VA1/WP5.

• Actively engage early career researchers in POLARIN overall, so its impact is carried forward with participants' careers, past the project period.

Relation with other WPs and International Partners, Organisations

As such, WP7 will have direct importance on the successful accomplishment of WP' 2, 4 and 5, and will be dependent on input from WP' 1, 2, 8 and 9.

Description

Task 7.1. Training for ECRs and technical personnel to optimally use leading-edge RIs (UiT (APECS), UCPH) (M1-M60)

Based on well-established best practices, Task 7.1 will prepare a new generation of researchers to optimally use leading edge RIs on land and at sea in the Arctic and Antarctica. The target groups for the training are PhD students, postdoctoral researchers, technicians, and engineers. The training programme will be connected to the three calls for TA grants and will educate the participants in the following topics of relevance for an efficient use of the RIs: (i) polar RIs and their environment, (ii) how to plan and accomplish a research expedition successfully, (iii) safety in polar environments and at sea, (iv) how to secure the highest possible level of environmental, ethical, and economic sustainability of work in polar regions, (v) how and where to obtain permits of relevance (Antarctic treaty, Arctic governance, national and international regulations of relevance to research in polar regions), (vi) how to get freight to/from polar RIs and/or install your equipment on marine RIs, and (vii) scientific instrumentation at polar RIs and how to obtain their data. Following each call, the beneficiaries of TA grants will be trained when they start planning their work. The researchers will be contacted immediately after receiving the grant to set up training sessions. The training package will be widely advertised and open to all interested users of polar RIs (not only POLARIN grantees), and will consist of:

- An e-learning package consisting of online training material and recorded online seminars to educate infrastructure users in the topics (i)-(vii) listed above.
- A four-hour online seminar to be held after each round of the TA grants, three times in total.
- Printed material (brochures or similar) on some of the important topics (i)-(vii) listed above e.g. 'How to plan a safe and sustainable stay at a polar research infrastructure'.

The training will be evaluated based on questionnaires filled in by the users after each of the three online seminars.

Task 7.2. Training on data stewardship (OGS, SIOS) (M1-M55)

Data value and data stewardship is largely depending on the quality checking and flagging procedures. This task is going to develop (digital and printed) training material to ensure that users become knowledgeable of various data-related topics including:

- Open Science requirements,
- Practical implications of the FAIR principles,
- Purpose and use of data management plans,
- Collaboration between scientists and data managers,
- Data centres that are curating data,
- Standardised semantic annotations for understanding by different communities,
- Tools and services developed within POLARIN.

The training will facilitate learning and learning-by-doing procedures to curate data as well as to make new data collections ready for and compliant with WP4 and VA1/WP5 data management and interoperability tools. POLARIN online courses will be open to all interested researchers but will specifically address the user groups awarded with TA access to prepare them to use the POLARIN data management infrastructure and data value chain procedures.

This task will use practical examples based on the WP4 and VA1/WP5 recommendations to provide training focused on the above-mentioned data stewardship topics by:

- Developing e-learning packages consisting of written material in the form of notebooks on GitHub, YouTube videos, and online training material on how to collect, curate, store and share the data.
- Publishing short guidelines in print on the handling of data collected on research expeditions.
- Organising online seminars after the results of each of the calls for proposals are published.

Task 7.3. Training to perform safe and sustainable polar expeditions (FLPO, UCPH, AU) (M1-M55)

Polar regions are in general characterised by vulnerable ecosystems in a harsh and sometimes even potentially dangerous environment, and data acquisition at polar RIs often involves a much higher daily use of energy and other resources than what is normal at most other places on Earth. It is therefore important that users of polar RIs are considerate to a high level of safety and sustainability in relation to their work in these regions. A training concept (in the field) with experienced trainers and in compliance with the Polar Code will be implemented, to ensure that PIs of polar expeditions are able to deal with emergency situations and are trained in the use of group and personal survival equipment for survival on the ice, on water, and on remote shores for no less than five days. The training will further educate the PI's on how to reduce the environmental impacts of their work in the polar regions.

The task will:

- Produce training material on how to perform safe and sustainable polar expeditions and make it available online.
 - Implement a safety training under Arctic conditions to train PI's of POLARIN expeditions according to the Polar Code
 - Train participants in the field on how to reduce the environmental impacts of a polar expedition.
- The experiences gained from the training will be gathered in a report to be used for future development of similar training.

Work package WP8 – Outreach, Engagement and Impact

Work Package Number	WP8	Lead Beneficiary	11. EPB
Work Package Name	Outreach, Engagement and Impact		
Start Month	1	End Month	60

Objectives

The main objective of WP8 is the communication and outreach of POLARIN's services and outcomes to users and other target groups. Efficient communication is crucial to the success of engaging identified target groups with the services of POLARIN WP8 will ensure that communication, outreach and engagement are efficient, WP8 will assess its activities throughout the POLARIN project. WP8 will assess the impact of POLARIN on multiple stakeholders.

WP8 will:

- Ensure there is efficient communication to POLARIN target groups by implementing communication tools developed in Task 8.1.

- Engage (potential) RI users with POLARIN services with several outreach methods (such as promotional materials developed in Task 8.1, online seminars (Task 8.2) and sustaining contact with RI users (Task 8.3).

- Assess the communication, outreach, and engagement activities, implement a POLARIN Publications Repository which contains publications linked to POLARIN services, and assess the impact of POLARIN on multiple stakeholders.

Relation with other WPs and International Partners, Organisations

Relation with International Partners and Organisations: There will be continued communication with project partners of POLARIN and other international organisations like SCAR, SOOS, IASC, FARO, COMNAP, and the EU Polar Cluster (in particular EU-PolarNet 2, their Catalyst Platform, and the upcoming EPCO), that work on polar regions and can aid with the efficient communication, outreach and visibility of POLARIN.

Relationship of WP8 with other Work Packages: Work in WP8 will be carried out in strong connection with: (i) TA2/WP2 to coordinate the outreach regarding POLARIN service calls, (ii) TA3/WP3 to reach new TA/RA users, (iii) WP4 to disseminate POLARIN products including the data discovery hub, (iv) VA1/WP5 to engage users with the virtual access portal, (v) WP7 to engage potential training-users (also design of flyers, brochures) and (vi) WP9 to reach the science community through the EU Polar Cluster.

Description

Task 8.1 Visibility and communication of POLARIN (EPB, INACH, IGOT-UL) (M1-M60)

The objective of Task 8.1 is to create a high visibility of the POLARIN project and to set up and implement channels for efficient communication of POLARIN. To achieve this, Task 8.1 will develop communication tools such as a website, social media channels, and dedicated groups on the Catalyst Platform and will map potential service users (in synergy with the development of the POLARIN Communication, Dissemination and Engagement Plan in Task 8.2). To ensure visibility for POLARIN from the beginning of the project, Task 8.1 will develop promotional materials such as press releases, a video, flyers, and roll-ups to share with POLARIN target groups. Task 8.1 will develop a professional lay-out for POLARIN communication, outreach, and engagement to ensure POLARIN communication is consistently recognisable. WP8 will continuously connect with other POLARIN WPs throughout the lifespan of the project to ensure all POLARIN services are communicated effectively with identified POLARIN target groups.

Task 8.1 will:

- Implement the tools for effective communication, develop promotional materials, set up media channels (website, social media, regular newsletters etc.), collect content updates and maintain them throughout the project.

- Develop consistent templates (for all media) and lay-outs for POLARIN communications activities (through a Brand Identity Package, including the logo, colour template, etc).

- Set up promotional materials (press releases, promotion video, flyers, roll-ups etc.) to communicate and promote the services of POLARIN.

Task 8.2 Engagement of Service Users and Ambassadors (EPB, IGOT-UL, INACH) (M1-M60)

The objective of Task 8.2 is to engage (potential) RI users with POLARIN services. This task will develop and implement Communication, Dissemination and Engagement Plan, that will:

- Specify the target groups for communicating about various POLARIN tools and services,
- Link communication tools to target groups, and to ensure that POLARIN RI users apply these tools to share their research most effectively,
- Outline when and how potential service users can be engaged with POLARIN tools and services.

Task 8.2 will organise an online seminar series to engage potential POLARIN users, with each seminar planned around the POLARIN calls. The online seminar series will start with an introductory seminar to introduce POLARIN and attract potential service users. Further seminars will be organised around each planned call for proposals and will highlight the stories of successful users. A final concluding online seminar will ensure all the achievements of POLARIN are showcased and highlighted, including those of the POLARIN Ambassadors.

Task 8.2 will work with POLARIN users to produce content that could be utilised for communication (e.g., blogs, videos or photos as relevant from research expeditions) in the second half of the project. The main aim of this content is to showcase experiences of past POLARIN users, and to attract potential applicants for using POLARIN services. To ensure material delivered by POLARIN users can be used for outreach and engagement, Task 8.2 will also set up clear instructive guidelines that will be disseminated to POLARIN users. This task will also set up “POLARIN Ambassadors”, a selected subset of physical TA users. Contact with POLARIN Ambassadors will be maintained as required (using for example a Catalyst Platform group dedicated to POLARIN Ambassadors) to facilitate exchange of experiences of using POLARIN services.

Task 8.2 will:

- Develop and implement a communication, dissemination and engagement plan, ensuring the most effective communication to and engagement of service users.
- Organise an online seminar series highlighting POLARIN Service Users’ (and Ambassadors’) success stories: “POLARIN Stories”,
- Provide guidelines and templates for the appropriate communication tools, to ensure that POLARIN participants can efficiently use and share their research,
- Set up and maintain continued contact with POLARIN Ambassadors as required to facilitate exchange of experiences of using POLARIN services, with each Ambassador producing one communication product (either blog, vlog, photo series, or any other communication product as chosen by the Ambassador).

Task 8.3 Evaluation of the communication and engagement activities and the impact of POLARIN (EPB, IGOT-UL) (M13-M60)

The main objective of Task 8.3 is to assess and evaluate the impact of all engagement, outreach, and communication activities from POLARIN, including those of users, and Ambassadors, in close cooperation with Task 8.1 and 8.2, and other WPs. The assessments will ensure that engagement, outreach, and communication will be conducted in a most effective manner throughout the project. Task 8.3 will also create the POLARIN Publication Repository (publications by POLARIN users). Task 8.3 will closely work with Task 8.2, and all WPs, connecting with POLARIN service users to ensure all publications associated with POLARIN service users will be added to the POLARIN Publication Repository. Task 8.3 will also develop a strategy to find a suitable location/host/place for the POLARIN repository after the project is completed.

Task 8.3 will:

- Assess and evaluate the impact of POLARIN engagement, dissemination and communication activities,
- Set up and maintain the POLARIN publications repository, ensuring open access to publications, and ensure availability after project is completed.

Work package WP9 – Project Management

Work Package Number	WP9	Lead Beneficiary	1. AWI
Work Package Name	Project Management		
Start Month	1	End Month	60

Objectives

POLARIN will bring together the expertise and knowledge of 50 partners from 21 countries, forming an excellent network for achieving its objectives. Considering the size of the consortium, the organisational structure of POLARIN must be extremely efficient, allowing a fast and coherent decision-making process. WP9 will implement the necessary management routines to assure an effective and efficient project management of POLARIN. WP9 will guarantee

the effective, smooth, and high-quality performance of the POLARIN project, with respect to contractual, financial, operational, and strategic management. It will provide support to all other POLARIN WPs by organising the general assemblies and the meetings of the Steering Board consisting of all WP leads.

The objectives of this work package are to:

- Conduct the contractual and financial management of the project (T9.1).
- Guarantee effective operational and strategic management and integrate all consortium partners (T9.2).
- Ensure appropriate links with relevant European and international initiatives (T9.3).

Relation with other WPs and International Partners, Organisations

WP9 will support all the other WPs and therefore closely interacts with all of them.

Description

Task 9.1 Contractual and financial management (AWI) (M1-M60)

This task comprises the main financial and contractual management of POLARIN. AWI, as the coordinator, will hold functional responsibility for direct contacts with the European Commission (EC) project officer on behalf of the consortium and will manage and oversee the activities of the consortium. This includes the preparation of periodic reports with the input from all work package and task leaders and the Management Team (MT). As part of the project management, a quality assurance routine will be adopted. The quality assurance will be under the supervision of the project coordinator (PC) and POLARIN Steering Board (SB), with support of the MT. The quality assurance routine will be formally accepted by the consortium, as part of the consortium agreement. This task will be managed by AWI as the coordinator, and the WP and Task leaders will contribute to it.

Task 9.1 will:

- Develop and implement a Consortium Agreement which, at the outset of the project, will be signed by all project partners and will define the duties and deliverables of each partner.
- Develop and implement a quality assurance routine.
- Effectively manage the financial and contractual obligations of POLARIN, including the management of strategic changes and the direction of funding over the 60-month term of the project.
- Handle the legal requirements for the submission of audit certificates and financial reporting to the EC.
- Ensure the generation and submission of the POLARIN periodic reports.

Task 9.2 Operational management (AWI) (M1-M60)

Task 9.2 focusses on the daily management of the project, on the delivery of project reports and on ensuring an efficient workflow within the consortium. POLARIN will set up a Steering Board (SB), which consists of all WP leaders, and which will support the MT in the management of the project. Chaired by the PC, the SB will meet at least quarterly, or more often as required, throughout the course of the project. The executive management of POLARIN is the responsibility of the MT under guidance of an experienced Project Manager (PM) with support of the Steering Board (SB). The MT is the permanent contact for all partners regarding their participation in the project. The PC will support all partners in their decision-making processes and in resolving any potentially difficult situations. AWI, as the coordinator, will lead this task, and all project partners will be required to contribute.

Task 9.2 will

- Ensure the due release of project deliverables according to the work plan based on the inputs of WP leaders.
- Assist project partners by checking that the reports provided are in line with EC rules and requirements.
- Organise and conduct the General Assemblies (GA), Steering Board meetings, a mid-term retreat and other project meetings if needed.
- Ensure that the decisions made by the GA will be accomplished.
- Monitor gender equality and inclusiveness, and ensure gender balance in advisory bodies, expert groups and evaluation panels, with a target of 50% women.
- Implement and administer an interactive internal website that will enable the workflow between all partners by sharing and storing documents, following the work plan, organising meetings and discussing special issues online.
- Closely monitor all activity that collects or uses personal data and ensure that it is in compliance with the GDPR72. By default, all project personal data will be handled with rigorous care.
- Promote interaction among the consortium partners and ensuring that all project partners are fully engaged; this will be achieved through regular contacts (e.g., Email, videoconferences).
- Organise POLARIN's final conference.

Task 9.3 Clustering with other initiatives (ULUND, EPB, AWI) (M1-M60)

The objective of Task 9.3 is to develop strong linkages between POLARIN and relevant international partners and programmes. Task 9.3 will seek close collaboration with non-governmental and international polar organisations such as FARO, COMNAP, IASC, and SCAR and organisations which have a more global approach such as the UNDOS, WMO and UNFCCC. In Europe, ESA and Copernicus services are prominent contributors in advancing polar research and will

be important cooperation partners. POLARIN will support ESA and DG RTD in implementing joint EC-ESA scientific activities and Copernicus observational priorities. Task 9.3 will also assist implementing the All-Atlantic Ocean Research and Innovation Alliance. It will ensure good cooperation with the EU Polar Cluster projects by actively contributing to the Cluster and by informing them regularly about the opportunities for RI access that POLARIN offers. Task 9.3 will closely cooperate with the AQUARIUS project (submitted under the same call) by sharing best practises and assuring complementarity and avoiding duplication. It will also initiate a collaboration with the projects addressing climate risks and sustainable aquaculture under the HORIZON-INFRA-2023-SERV-01-01call. Task 9.3 has already established a cooperation with the AMRIT project (submitted under the INFRA-2023-DEV-01-04) call and will benefit from the services AMRIT will develop for marine platforms.

Task 9.3 will:

- Develop strong linkages and identify areas of common interest between POLARIN and relevant international polar organisations and other Horizon Europe projects.
- Support the EC in implementing the ESA-EC RTD Earth science initiative.
- Actively engage in the EU Polar Cluster by contributing to action groups and by advertising POLARIN's access programme intensively to the Cluster projects.

STAFF EFFORT

Staff effort per participant										
<i>Grant Preparation (Work packages - Effort screen) — Enter the info.</i>										
Participant	WP1	WP2	WP3	WP4	WP5	WP6	WP7	WP8	WP9	Total Person-Months
1 - AWI	4.00	2.00	0.10				4.00	15.00	81.00	106.10
2 - UOULU	12.00	30.00			6.00	4.00				52.00
3 - INPA		24.00			2.00	7.00				33.00
4 - ULUND		24.00						1.00	9.00	34.00
5 - CNR	6.00			15.00	15.00	14.00	6.00			56.00
6 - OGS	12.00						15.00			27.00
7 - INKODE		17.00			5.00					22.00
8 - AU	15.00			6.00		21.00	8.00	1.00		51.00
9 - CNRS	12.00									12.00
10 - UCPH							19.00			19.00
11 - EPB		5.00						21.00	6.00	32.00
12 - ETT				15.00	15.00	5.00	6.00			41.00
13 - UiT	2.00						8.00			10.00
14 - CSIC		6.00								6.00
15 - SIOS				6.00	9.00	12.00	6.00			33.00
16 - NILU				7.00						7.00
17 - NASC	3.00							2.00		5.00
18 - IGOT UL	6.00							9.00		15.00
19 - GFZ						12.00				12.00

Staff effort per participant										
<i>Grant Preparation (Work packages - Effort screen) — Enter the info.</i>										
Participant	WP1	WP2	WP3	WP4	WP5	WP6	WP7	WP8	WP9	Total Person-Months
26 - SPRS						6.00				6.00
29 - ULAVAL						4.00				4.00
30 - UTU						4.00				4.00
34 - SU						3.00				3.00
36 - ARI						5.00				5.00
42 - UH						4.00				4.00
43 - FMI	2.00					5.00			3.00	10.00
46 - CAFF						5.00				5.00
Total Person-Months	74.00	108.00	0.10	49.00	52.00	111.00	72.00	49.00	99.00	614.10

LIST OF DELIVERABLES

Deliverables						
<i>Grant Preparation (Deliverables screen) — Enter the info.</i>						
<i>The labels used mean:</i>						
<i>Public — fully open (🚩 automatically posted online)</i>						
<i>Sensitive — limited under the conditions of the Grant Agreement</i>						
<i>EU classified — RESTREINT-UE/EU-RESTRICTED, CONFIDENTIEL-UE/EU-CONFIDENTIAL, SECRET-UE/EU-SECRET under Decision 2015/444</i>						
Deliverable No	Deliverable Name	Work Package No	Lead Beneficiary	Type	Dissemination Level	Due Date (month)
D1.1	Implementation of the SLP with Terms of Reference	WP1	9 - CNRS	R — Document, report	PU - Public	5
D1.2	Report on procedure for provision of TA	WP1	18 - IGOT UL	R — Document, report	PU - Public	6
D1.3	Description of the evaluation process, evaluation criteria, code of conduct, and guidelines and templates for external reviewers	WP1	6 - OGS	R — Document, report	PU - Public	7
D1.4	Overview report of existing science priorities by major Arctic and Antarctic organisations and validation/calibration needs by in-situ observation, remote sensing and modelling communities	WP1	9 - CNRS	R — Document, report	PU - Public	8
D1.5	Polar Knowledge gaps and potential of POLARIN RIs in addressing them	WP1	8 - AU	R — Document, report	PU - Public	12
D1.6	Selection report of the first call for proposals	WP1	6 - OGS	R — Document, report	PU - Public	18
D1.7	Selection report of the second call for proposals	WP1	6 - OGS	R — Document, report	PU - Public	30
D1.8	Selection report of the third call for proposals	WP1	2 - UOULU	R — Document, report	PU - Public	42

Deliverables						
<i>Grant Preparation (Deliverables screen) — Enter the info.</i>						
<i>The labels used mean:</i>						
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<i>EU classified — RESTREINT-UE/EU-RESTRICTED, CONFIDENTIEL-UE/EU-CONFIDENTIAL, SECRET-UE/EU-SECRET under Decision 2015/444</i>						
Deliverable No	Deliverable Name	Work Package No	Lead Beneficiary	Type	Dissemination Level	Due Date (month)
D1.9	Synthesis report on the scientific input, significance, and preliminary results of Transnational access and funded projects	WP1	8 - AU	R — Document, report	PU - Public	58
D2.1	Report on requisites for access and description of the logistic evaluation procedure	WP2	14 - CSIC	R — Document, report	PU - Public	7
D2.2	Quality Assurance Programme report for access provision	WP2	2 - UOULU	R — Document, report	PU - Public	18
D2.3	Logistic evaluation report of the first call	WP2	2 - UOULU	R — Document, report	PU - Public	20
D2.4	Logistic evaluation report of the second call	WP2	2 - UOULU	R — Document, report	PU - Public	32
D2.5	Report on integrated access provision; planning and execution	WP2	4 - ULUND	R — Document, report	PU - Public	36
D2.6	Logistic evaluation report of the third call	WP2	2 - UOULU	R — Document, report	PU - Public	44
D2.7	Report on access provision (calls, volume, statistics) and lessons learned	WP2	2 - UOULU	R — Document, report	PU - Public	60
D2.8	Report on plans forward for INTERACCESS	WP2	7 - INKODE	R — Document, report	PU - Public	60
D3.1	Synthetic report on TA provided to date	WP3	2 - UOULU	R — Document, report	PU - Public	16
D4.1	Data Management Plan for generated and	WP4	12 - ETT	DMP — Data Management Plan	PU - Public	6

Deliverables						
<i>Grant Preparation (Deliverables screen) — Enter the info.</i>						
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<i>EU classified — RESTREINT-UE/EU-RESTRICTED, CONFIDENTIEL-UE/EU-CONFIDENTIAL, SECRET-UE/EU-SECRET under Decision 2015/444</i>						
Deliverable No	Deliverable Name	Work Package No	Lead Beneficiary	Type	Dissemination Level	Due Date (month)
	collected data incl. ethical guidelines for data and derived data products					
D4.2	POLARIN graphic products package for multiple audiences and gap analysis	WP4	8 - AU	DEM — Demonstrator, pilot, prototype	PU - Public	10
D4.3	POLARIN web portal	WP4	12 - ETT	OTHER	PU - Public	12
D4.4	Guidance on dataset granularity	WP4	5 - CNR	R — Document, report	PU - Public	12
D4.5	Use case documents for data discovery processes	WP4	12 - ETT	R — Document, report	PU - Public	14
D4.6	General guidance material on FAIR data	WP4	8 - AU	R — Document, report	PU - Public	15
D4.7	Guidance material for research infrastructures	WP4	5 - CNR	R — Document, report	PU - Public	15
D4.8	Dockerised open-source software components that cover architecture implementation requirements	WP4	5 - CNR	OTHER	PU - Public	18
D4.9	POLARIN Data services	WP4	15 - SIOS	OTHER	PU - Public	24
D4.10	Usability report of POLARIN data access hub and data services	WP4	12 - ETT	R — Document, report	PU - Public	24
D5.1	A unified semantically consistent virtual data catalogue with machine interfaces	WP5	15 - SIOS	OTHER	PU - Public	12
D5.2	A web portal providing guidance	WP5	3 - INPA	OTHER	PU - Public	18

Deliverables						
<i>Grant Preparation (Deliverables screen) — Enter the info.</i>						
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Deliverable No	Deliverable Name	Work Package No	Lead Beneficiary	Type	Dissemination Level	Due Date (month)
	documentation and a graphical user interface to the virtual data catalogue					
D5.3	VA Assessment Report (I)	WP5	5 - CNR	R — Document, report	PU - Public	24
D5.4	VA Assessment Report (II)	WP5	5 - CNR	R — Document, report	PU - Public	40
D5.5	VA Assessment Report (III)	WP5	5 - CNR	R — Document, report	PU - Public	55
D6.1	Synthetic report on VA	WP6	5 - CNR	R — Document, report	PU - Public	60
D7.1	Online material on data stewardship training	WP7	15 - SIOS	DEC — Websites, patent filings, videos, etc	PU - Public	14
D7.2	Training material for in-the-field course on polar expedition safety and sustainability	WP7	1 - AWI	R — Document, report	PU - Public	15
D7.3	Online training material on optimal use POLARIN RIs	WP7	10 - UCPH	DEC — Websites, patent filings, videos, etc	PU - Public	23
D7.4	Package of short information material on optimal use of POLARIN RIs	WP7	8 - AU	R — Document, report	PU - Public	30
D7.5	Package of short information material on data stewardship	WP7	8 - AU	R — Document, report	PU - Public	35
D7.6	Assessment of the training on optimal use of POLARIN RI's and on data stewardship	WP7	6 - OGS	R — Document, report	PU - Public	53
D7.7	Assessment report of the in-the-field course on polar safety and sustainability	WP7	10 - UCPH	R — Document, report	PU - Public	53

Deliverables						
<i>Grant Preparation (Deliverables screen) — Enter the info.</i>						
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Deliverable No	Deliverable Name	Work Package No	Lead Beneficiary	Type	Dissemination Level	Due Date (month)
D8.1	Implement POLARIN website and social media channels	WP8	18 - IGOT UL	DEC —Websites, patent filings, videos, etc	PU - Public	2
D8.2	Brand Identity and guidelines package (logos, general lay-out etc.)	WP8	1 - AWI	OTHER	PU - Public	2
D8.3	POLARIN promotional materials (press releases, promotion video, flyers, roll-ups etc.)	WP8	1 - AWI	OTHER	PU - Public	3
D8.4	POLARIN Communication, dissemination, and engagement plan	WP8	11 - EPB	R — Document, report	PU - Public	4
D8.5	Content Creation Guidelines (short video tutorials) for POLARIN service users to support outreach and engagement	WP8	11 - EPB	DEC —Websites, patent filings, videos, etc	PU - Public	8
D8.6	Assessment of communications, outreach and engagement activities to date, and update of the Communication, dissemination, and engagement plan	WP8	11 - EPB	R — Document, report	PU - Public	24
D8.7	Online seminar of POLARIN service users' stories call 1	WP8	11 - EPB	DEC —Websites, patent filings, videos, etc	PU - Public	36
D8.8	Online seminar of POLARIN service users' call 2	WP8	11 - EPB	DEC —Websites, patent filings, videos, etc	PU - Public	48

Deliverables						
<i>Grant Preparation (Deliverables screen) — Enter the info.</i>						
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Deliverable No	Deliverable Name	Work Package No	Lead Beneficiary	Type	Dissemination Level	Due Date (month)
D8.9	Online Seminar of POLARIN service user stories call 3	WP8	11 - EPB	DEC —Websites, patent filings, videos, etc	PU - Public	56
D8.10	“POLARIN Stories” a service users and ambassadors seminar series	WP8	11 - EPB	R — Document, report	PU - Public	58
D8.11	Final report on POLARIN communications, outreach, and engagement activities, including POLARIN Ambassadors activities	WP8	11 - EPB	R — Document, report	PU - Public	60
D8.12	Report on POLARIN publication repository	WP8	18 - IGOT UL	R — Document, report	PU - Public	60
D8.13	Impact evaluation report	WP8	1 - AWI	R — Document, report	PU - Public	60
D9.1	Internal website of POLARIN implemented	WP9	1 - AWI	DEC —Websites, patent filings, videos, etc	SEN - Sensitive	2
D9.2	Organisation and minutes of the first POLARIN GA (in-person)	WP9	1 - AWI	R — Document, report	SEN - Sensitive	3
D9.3	Quality Assurance Plan, including guidelines, best practise, and project handbook	WP9	1 - AWI	R — Document, report	PU - Public	4
D9.4	Implementation of the project Advisory Board (AB) incl. Terms of Reference	WP9	1 - AWI	OTHER	PU - Public	6
D9.5	Organisation and minutes of the second POLARIN GA (virtual)	WP9	1 - AWI	R — Document, report	SEN - Sensitive	14

Deliverables						
<i>Grant Preparation (Deliverables screen) — Enter the info.</i>						
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<i>EU classified — RESTREINT-UE/EU-RESTRICTED, CONFIDENTIEL-UE/EU-CONFIDENTIAL, SECRET-UE/EU-SECRET under Decision 2015/444</i>						
Deliverable No	Deliverable Name	Work Package No	Lead Beneficiary	Type	Dissemination Level	Due Date (month)
D9.6	Rreport on TA implemented to date	WP9	1 - AWI	R — Document, report	PU - Public	16
D9.7	Budget allocations for TA to date (I)	WP9	1 - AWI	R — Document, report	PU - Public	16
D9.8	First Policy briefing	WP9	11 - EPB	R — Document, report	PU - Public	18
D9.9	Organisation and minutes of the third POLARIN GA and mid-term retreat (inperson)	WP9	1 - AWI	R — Document, report	SEN - Sensitive	26
D9.10	Organisation and minutes of the fourth POLARIN GA (virtual)	WP9	1 - AWI	R — Document, report	SEN - Sensitive	38
D9.11	Budget allocations for TA to date (II)	WP9	1 - AWI	R — Document, report	PU - Public	40
D9.12	Second policy briefing	WP9	1 - AWI	R — Document, report	PU - Public	42
D9.13	Organisation and minutes of the final POLARIN GA (in-person)	WP9	1 - AWI	R — Document, report	SEN - Sensitive	50
D9.14	Report on the contribution of POLARIN to the EU Polar Cluster, international polar organisation, and the ESA – EC cooperation	WP9	11 - EPB	R — Document, report	PU - Public	55
D9.15	Organisation and minutes of the POLARIN final conference	WP9	1 - AWI	R — Document, report	PU - Public	57
D9.16	Budget allocations for TA to date (III)	WP9	1 - AWI	R — Document, report	PU - Public	58
D9.17	Third Policy briefing	WP9	11 - EPB	R — Document, report	PU - Public	60

Deliverable D1.1 – Implementation of the SLP with Terms of Reference

Deliverable Number	D1.1	Lead Beneficiary	9. CNRS
Deliverable Name	Implementation of the SLP with Terms of Reference		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	5	Work Package No	WP1

Description
Implementation of the SLP with Terms of Reference

Deliverable D1.2 – Report on procedure for provision of TA

Deliverable Number	D1.2	Lead Beneficiary	18. IGOT UL
Deliverable Name	Report on procedure for provision of TA		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	6	Work Package No	WP1

Description
Report on procedure for provision of TA

Deliverable D1.3 – Description of the evaluation process, evaluation criteria, code of conduct, and guidelines and templates for external reviewers

Deliverable Number	D1.3	Lead Beneficiary	6. OGS
Deliverable Name	Description of the evaluation process, evaluation criteria, code of conduct, and guidelines and templates for external reviewers		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	7	Work Package No	WP1

Description
Description of the evaluation process, evaluation criteria, code of conduct, and guidelines and templates for external reviewers

Deliverable D1.4 – Overview report of existing science priorities by major Arctic and Antarctic organisations and validation/calibration needs by in-situ observation, remote sensing and modelling communities

Deliverable Number	D1.4	Lead Beneficiary	9. CNRS
Deliverable Name	Overview report of existing science priorities by major Arctic and Antarctic organisations and validation/calibration needs by in-situ observation, remote sensing and modelling communities		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	8	Work Package No	WP1

Description			
Overview report of existing science priorities by major Arctic and Antarctic organisations and validation/calibration needs by in-situ observation, remote sensing and modelling communities. This deliverable will be updated in the course of the project when needed at M22 and M33.			

Deliverable D1.5 – Polar Knowledge gaps and potential of POLARIN RIs in addressing them

Deliverable Number	D1.5	Lead Beneficiary	8. AU
Deliverable Name	Polar Knowledge gaps and potential of POLARIN RIs in addressing them		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	12	Work Package No	WP1

Description			
Polar Knowledge gaps and potential of POLARIN RIs in addressing them. This deliverable will be updated in the course of the project when needed at M21 and M32.			

Deliverable D1.6 – Selection report of the first call for proposals

Deliverable Number	D1.6	Lead Beneficiary	6. OGS
Deliverable Name	Selection report of the first call for proposals		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	18	Work Package No	WP1

Description			
Selection report of the first call for proposals			

Deliverable D1.7 – Selection report of the second call for proposals

Deliverable Number	D1.7	Lead Beneficiary	6. OGS
Deliverable Name	Selection report of the second call for proposals		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	30	Work Package No	WP1

Description			
Selection report of the second call for proposals			

Deliverable D1.8 – Selection report of the third call for proposals

Deliverable Number	D1.8	Lead Beneficiary	2. UOULU
Deliverable Name	Selection report of the third call for proposals		
Type	R — Document, report	Dissemination Level	PU - Public

Due Date (month)	42	Work Package No	WP1
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Description
Selection report of the third call for proposals

Deliverable D1.9 – Synthesis report on the scientific input, significance, and preliminary results of Transnational access and funded projects

Deliverable Number	D1.9	Lead Beneficiary	8. AU
Deliverable Name	Synthesis report on the scientific input, significance, and preliminary results of Transnational access and funded projects		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	58	Work Package No	WP1

Description
Synthesis report on the scientific input, significance, and preliminary results of Transnational access and funded projects

Deliverable D2.1 – Report on requisites for access and description of the logistic evaluation procedure

Deliverable Number	D2.1	Lead Beneficiary	14. CSIC
Deliverable Name	Report on requisites for access and description of the logistic evaluation procedure		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	7	Work Package No	WP2

Description
Report on requisites for access and description of the logistic evaluation procedure

Deliverable D2.2 – Quality Assurance Programme report for access provision

Deliverable Number	D2.2	Lead Beneficiary	2. UOULU
Deliverable Name	Quality Assurance Programme report for access provision		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	18	Work Package No	WP2

Description
Quality Assurance Programme report for access provision

Deliverable D2.3 – Logistic evaluation report of the first call

Deliverable Number	D2.3	Lead Beneficiary	2. UOULU
Deliverable Name	Logistic evaluation report of the first call		

Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	20	Work Package No	WP2

Description
Logistic evaluation report of the first call

Deliverable D2.4 – Logistic evaluation report of the second call

Deliverable Number	D2.4	Lead Beneficiary	2. UOULU
Deliverable Name	Logistic evaluation report of the second call		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	32	Work Package No	WP2

Description
Logistic evaluation report of the second call

Deliverable D2.5 – Report on integrated access provision; planning and execution

Deliverable Number	D2.5	Lead Beneficiary	4. ULUND
Deliverable Name	Report on integrated access provision; planning and execution		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	36	Work Package No	WP2

Description
Report on integrated access provision; planning and execution

Deliverable D2.6 – Logistic evaluation report of the third call

Deliverable Number	D2.6	Lead Beneficiary	2. UOULU
Deliverable Name	Logistic evaluation report of the third call		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	44	Work Package No	WP2

Description
Logistic evaluation report of the third call

Deliverable D2.7 – Report on access provision (calls, volume, statistics) and lessons learned

Deliverable Number	D2.7	Lead Beneficiary	2. UOULU
Deliverable Name	Report on access provision (calls, volume, statistics) and lessons learned		
Type	R — Document, report	Dissemination Level	PU - Public

Due Date (month)	60	Work Package No	WP2
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Description
Report on access provision (calls, volume, statistics) and lessons learned

Deliverable D2.8 – Report on plans forward for INTERACCESS

Deliverable Number	D2.8	Lead Beneficiary	7. INKODE
Deliverable Name	Report on plans forward for INTERACCESS		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	60	Work Package No	WP2

Description
Report on plans forward for INTERACCESS

Deliverable D3.1 – Synthetic report on TA provided to date

Deliverable Number	D3.1	Lead Beneficiary	2. UOULU
Deliverable Name	Synthetic report on TA provided to date		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	16	Work Package No	WP3

Description
This deliverable will be updated preceeding each reporting period.

Deliverable D4.1 – Data Management Plan for generated and collected data incl. ethical guidelines for data and derived data products

Deliverable Number	D4.1	Lead Beneficiary	12. ETT
Deliverable Name	Data Management Plan for generated and collected data incl. ethical guidelines for data and derived data products		
Type	DMP — Data Management Plan	Dissemination Level	PU - Public
Due Date (month)	6	Work Package No	WP4

Description
Data Management Plan for generated and collected data incl. ethical guidelines for data and derived data products
This deliverable will be updated before each periodic report.

Deliverable D4.2 – POLARIN graphic products package for multiple audiences and gap analysis

Deliverable Number	D4.2	Lead Beneficiary	8. AU
Deliverable Name	POLARIN graphic products package for multiple audiences and gap analysis		
Type	DEM — Demonstrator, pilot, prototype	Dissemination Level	PU - Public
Due Date (month)	10	Work Package No	WP4

Description
POLARIN graphic products package for multiple audiences and gap analysis. This deliverable will be updated at M24 and M33 if needed.

Deliverable D4.3 – POLARIN web portal

Deliverable Number	D4.3	Lead Beneficiary	12. ETT
Deliverable Name	POLARIN web portal		
Type	OTHER	Dissemination Level	PU - Public
Due Date (month)	12	Work Package No	WP4

Description
POLARIN web portal

Deliverable D4.4 – Guidance on dataset granularity

Deliverable Number	D4.4	Lead Beneficiary	5. CNR
Deliverable Name	Guidance on dataset granularity		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	12	Work Package No	WP4

Description
Guidance on dataset granularity

Deliverable D4.5 – Use case documents for data discovery processes

Deliverable Number	D4.5	Lead Beneficiary	12. ETT
Deliverable Name	Use case documents for data discovery processes		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	14	Work Package No	WP4

Description
Use case documents for data discovery processes

Deliverable D4.6 – General guidance material on FAIR data

Deliverable Number	D4.6	Lead Beneficiary	8. AU
Deliverable Name	General guidance material on FAIR data		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	15	Work Package No	WP4

Description
General guidance material on FAIR data

Deliverable D4.7 – Guidance material for research infrastructures

Deliverable Number	D4.7	Lead Beneficiary	5. CNR
Deliverable Name	Guidance material for research infrastructures		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	15	Work Package No	WP4

Description
Guidance material for research infrastructures

Deliverable D4.8 – Dockerised open-source software components that cover architecture implementation requirements

Deliverable Number	D4.8	Lead Beneficiary	5. CNR
Deliverable Name	Dockerised open-source software components that cover architecture implementation requirements		
Type	OTHER	Dissemination Level	PU - Public
Due Date (month)	18	Work Package No	WP4

Description
Dockerised open-source software components that cover architecture implementation requirements

Deliverable D4.9 – POLARIN Data services

Deliverable Number	D4.9	Lead Beneficiary	15. SIOS
Deliverable Name	POLARIN Data services		
Type	OTHER	Dissemination Level	PU - Public
Due Date (month)	24	Work Package No	WP4

Description
POLARIN Data services

Deliverable D4.10 – Usability report of POLARIN data access hub and data services

Deliverable Number	D4.10	Lead Beneficiary	12. ETT
Deliverable Name	Usability report of POLARIN data access hub and data services		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	24	Work Package No	WP4

Description
Usability report of POLARIN data access hub and data services. this deliverable will be updated at M36 and M55

Deliverable D5.1 – A unified semantically consistent virtual data catalogue with machine interfaces

Deliverable Number	D5.1	Lead Beneficiary	15. SIOS
Deliverable Name	A unified semantically consistent virtual data catalogue with machine interfaces		
Type	OTHER	Dissemination Level	PU - Public
Due Date (month)	12	Work Package No	WP5

Description
A unified semantically consistent virtual data catalogue with machine interfaces

Deliverable D5.2 – A web portal providing guidance documentation and a graphical user interface to the virtual data catalogue

Deliverable Number	D5.2	Lead Beneficiary	3. INPA
Deliverable Name	A web portal providing guidance documentation and a graphical user interface to the virtual data catalogue		
Type	OTHER	Dissemination Level	PU - Public
Due Date (month)	18	Work Package No	WP5

Description
A web portal providing guidance documentation and a graphical user interface to the virtual data catalogue

Deliverable D5.3 – VA Assessment Report (I)

Deliverable Number	D5.3	Lead Beneficiary	5. CNR
Deliverable Name	VA Assessment Report (I)		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	24	Work Package No	WP5

Description

VA Assessment Report

Deliverable D5.4 – VA Assessment Report (II)

Deliverable Number	D5.4	Lead Beneficiary	5. CNR
Deliverable Name	VA Assessment Report (II)		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	40	Work Package No	WP5

Description

VA Assessment Report

Deliverable D5.5 – VA Assessment Report (III)

Deliverable Number	D5.5	Lead Beneficiary	5. CNR
Deliverable Name	VA Assessment Report (III)		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	55	Work Package No	WP5

Description

VA Assessment Report

Deliverable D6.1 – Synthetic report on VA

Deliverable Number	D6.1	Lead Beneficiary	5. CNR
Deliverable Name	Synthetic report on VA		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	60	Work Package No	WP6

Description

Synthetic report on VA.

Deliverable D7.1 – Online material on data stewardship training

Deliverable Number	D7.1	Lead Beneficiary	15. SIOS
Deliverable Name	Online material on data stewardship training		
Type	DEC — Websites, patent filings, videos, etc	Dissemination Level	PU - Public
Due Date (month)	14	Work Package No	WP7

Description

Online material on data stewardship training
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Deliverable D7.2 – Training material for in-the-field course on polar expedition safety and sustainability

Deliverable Number	D7.2	Lead Beneficiary	1. AWI
Deliverable Name	Training material for in-the-field course on polar expedition safety and sustainability		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	15	Work Package No	WP7

Description

Training material for in-the-field course on polar expedition safety and sustainability

Deliverable D7.3 – Online training material on optimal use POLARIN RIs

Deliverable Number	D7.3	Lead Beneficiary	10. UCPH
Deliverable Name	Online training material on optimal use POLARIN RIs		
Type	DEC — Websites, patent filings, videos, etc	Dissemination Level	PU - Public
Due Date (month)	23	Work Package No	WP7

Description

Online training material on optimal use POLARIN RIs

Deliverable D7.4 – Package of short information material on optimal use of POLARIN RIs

Deliverable Number	D7.4	Lead Beneficiary	8. AU
Deliverable Name	Package of short information material on optimal use of POLARIN RIs		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	30	Work Package No	WP7

Description

Package of short information material on optimal use of POLARIN RIs

Deliverable D7.5 – Package of short information material on data stewardship

Deliverable Number	D7.5	Lead Beneficiary	8. AU
Deliverable Name	Package of short information material on data stewardship		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	35	Work Package No	WP7

Description

Package of short information material on data stewardship

Deliverable D7.6 – Assessment of the training on optimal use of POLARIN RI's and on data stewardship

Deliverable Number	D7.6	Lead Beneficiary	6. OGS
Deliverable Name	Assessment of the training on optimal use of POLARIN RI's and on data stewardship		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	53	Work Package No	WP7

Description

Assessment of the training on optimal use of POLARIN RI's and on data stewardship

Deliverable D7.7 – Assessment report of the in-the-field course on polar safety and sustainability

Deliverable Number	D7.7	Lead Beneficiary	10. UCPH
Deliverable Name	Assessment report of the in-the-field course on polar safety and sustainability		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	53	Work Package No	WP7

Description

Assessment report of the in-the-field course on polar safety and sustainability

Deliverable D8.1 – Implement POLARIN website and social media channels

Deliverable Number	D8.1	Lead Beneficiary	18. IGOT UL
Deliverable Name	Implement POLARIN website and social media channels		
Type	DEC — Websites, patent filings, videos, etc	Dissemination Level	PU - Public
Due Date (month)	2	Work Package No	WP8

Description

Implement POLARIN website and social media channels

Deliverable D8.2 – Brand Identity and guidelines package (logos, general lay-out etc.)

Deliverable Number	D8.2	Lead Beneficiary	1. AWI
Deliverable Name	Brand Identity and guidelines package (logos, general lay-out etc.)		
Type	OTHER	Dissemination Level	PU - Public
Due Date (month)	2	Work Package No	WP8

Description	
Brand Identity and guidelines package (logos, general lay-out etc.)	

Deliverable D8.3 – POLARIN promotional materials (press releases, promotion video, flyers, roll-ups etc.)

Deliverable Number	D8.3	Lead Beneficiary	1. AWI
Deliverable Name	POLARIN promotional materials (press releases, promotion video, flyers, roll-ups etc.)		
Type	OTHER	Dissemination Level	PU - Public
Due Date (month)	3	Work Package No	WP8

Description	
POLARIN promotional materials (press releases, promotion video, flyers, roll-ups etc.)	

Deliverable D8.4 – POLARIN Communication, dissemination, and engagement plan

Deliverable Number	D8.4	Lead Beneficiary	11. EPB
Deliverable Name	POLARIN Communication, dissemination, and engagement plan		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	4	Work Package No	WP8

Description	
POLARIN Communication, dissemination, and engagement plan	

Deliverable D8.5 – Content Creation Guidelines (short video tutorials) for POLARIN service users to support outreach and engagement

Deliverable Number	D8.5	Lead Beneficiary	11. EPB
Deliverable Name	Content Creation Guidelines (short video tutorials) for POLARIN service users to support outreach and engagement		
Type	DEC — Websites, patent filings, videos, etc	Dissemination Level	PU - Public
Due Date (month)	8	Work Package No	WP8

Description	
Content Creation Guidelines (short video tutorials) for POLARIN service users to support outreach and engagement	

Deliverable D8.6 – Assessment of communications, outreach and engagement activities to date, and update of the Communication, dissemination, and engagement plan

Deliverable Number	D8.6	Lead Beneficiary	11. EPB
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Deliverable Name	Assessment of communications, outreach and engagement activities to date, and update of the Communication, dissemination, and engagement plan		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	24	Work Package No	WP8

Description
Assessment of communications, outreach and engagement activities to date, and update of the Communication, dissemination, and engagement plan. This deliverable will be updated at M49.

Deliverable D8.7 – Online seminar of POLARIN service users’ stories call 1

Deliverable Number	D8.7	Lead Beneficiary	11. EPB
Deliverable Name	Online seminar of POLARIN service users’ stories call 1		
Type	DEC —Websites, patent filings, videos, etc	Dissemination Level	PU - Public
Due Date (month)	36	Work Package No	WP8

Description
Online seminar of POLARIN service users’ stories call 1

Deliverable D8.8 – Online seminar of POLARIN service users’ call 2

Deliverable Number	D8.8	Lead Beneficiary	11. EPB
Deliverable Name	Online seminar of POLARIN service users’ call 2		
Type	DEC —Websites, patent filings, videos, etc	Dissemination Level	PU - Public
Due Date (month)	48	Work Package No	WP8

Description
Online seminar of POLARIN service users’ call 2

Deliverable D8.9 – Online Seminar of POLARIN service user stories call 3

Deliverable Number	D8.9	Lead Beneficiary	11. EPB
Deliverable Name	Online Seminar of POLARIN service user stories call 3		
Type	DEC —Websites, patent filings, videos, etc	Dissemination Level	PU - Public
Due Date (month)	56	Work Package No	WP8

Description
Online Seminar of POLARIN service user stories call 3

Deliverable D8.10 – “POLARIN Stories” a service users and ambassadors seminar series

Deliverable Number	D8.10	Lead Beneficiary	11. EPB
Deliverable Name	“POLARIN Stories” a service users and ambassadors seminar series		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	58	Work Package No	WP8

Description
“POLARIN Stories” a service users and ambassadors seminar series

Deliverable D8.11 – Final report on POLARIN communications, outreach, and engagement activities, including POLARIN Ambassadors activities

Deliverable Number	D8.11	Lead Beneficiary	11. EPB
Deliverable Name	Final report on POLARIN communications, outreach, and engagement activities, including POLARIN Ambassadors activities		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	60	Work Package No	WP8

Description
Final report on POLARIN communications, outreach, and engagement activities

Deliverable D8.12 – Report on POLARIN publication repository

Deliverable Number	D8.12	Lead Beneficiary	18. IGOT UL
Deliverable Name	Report on POLARIN publication repository		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	60	Work Package No	WP8

Description
Report on POLARIN publication repository

Deliverable D8.13 – Impact evaluation report

Deliverable Number	D8.13	Lead Beneficiary	1. AWI
Deliverable Name	Impact evaluation report		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	60	Work Package No	WP8

Description
Impact evaluation report

Deliverable D9.1 – Internal website of POLARIN implemented

Deliverable Number	D9.1	Lead Beneficiary	1. AWI
Deliverable Name	Internal website of POLARIN implemented		
Type	DEC — Websites, patent filings, videos, etc	Dissemination Level	SEN - Sensitive
Due Date (month)	2	Work Package No	WP9

Description
Internal website of POLARIN implemented

Deliverable D9.2 – Organisation and minutes of the first POLARIN GA (in-person)

Deliverable Number	D9.2	Lead Beneficiary	1. AWI
Deliverable Name	Organisation and minutes of the first POLARIN GA (in-person)		
Type	R — Document, report	Dissemination Level	SEN - Sensitive
Due Date (month)	3	Work Package No	WP9

Description
Organisation and minutes of the first POLARIN GA (in-person)

Deliverable D9.3 – Quality Assurance Plan, including guidelines, best practise, and project handbook

Deliverable Number	D9.3	Lead Beneficiary	1. AWI
Deliverable Name	Quality Assurance Plan, including guidelines, best practise, and project handbook		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	4	Work Package No	WP9

Description
Quality Assurance Plan, including guidelines, best practise, and project handbook

Deliverable D9.4 – Implementation of the project Advisory Board (AB) incl. Terms of Reference

Deliverable Number	D9.4	Lead Beneficiary	1. AWI
Deliverable Name	Implementation of the project Advisory Board (AB) incl. Terms of Reference		
Type	OTHER	Dissemination Level	PU - Public
Due Date (month)	6	Work Package No	WP9

Description
Implementation of the project Advisory Board (AB) incl. Terms of Reference

Deliverable D9.5 – Organisation and minutes of the second POLARIN GA (virtual)

Deliverable Number	D9.5	Lead Beneficiary	1. AWI
Deliverable Name	Organisation and minutes of the second POLARIN GA (virtual)		
Type	R — Document, report	Dissemination Level	SEN - Sensitive
Due Date (month)	14	Work Package No	WP9

Description
Organisation and minutes of the second POLARIN GA (virtual)

Deliverable D9.6 – Rreport on TA implemented to date

Deliverable Number	D9.6	Lead Beneficiary	1. AWI
Deliverable Name	Rreport on TA implemented to date		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	16	Work Package No	WP9

Description
Report on TA implemented to date. This deliverable will collect details of the proejects implemented to date: infrastructure, dates , title , abstract, topic, participants). It will be updated before each reporting period.

Deliverable D9.7 – Budget allocations for TA to date (I)

Deliverable Number	D9.7	Lead Beneficiary	1. AWI
Deliverable Name	Budget allocations for TA to date (I)		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	16	Work Package No	WP9

Description
Budget allocations for TA to date

Deliverable D9.8 – First Policy briefing

Deliverable Number	D9.8	Lead Beneficiary	11. EPB
Deliverable Name	First Policy briefing		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	18	Work Package No	WP9

Description
First Policy briefing

Deliverable D9.9 – Organisation and minutes of the third POLARIN GA and mid-term retreat (inperson)

Deliverable Number	D9.9	Lead Beneficiary	1. AWI
Deliverable Name	Organisation and minutes of the third POLARIN GA and mid-term retreat (inperson)		
Type	R — Document, report	Dissemination Level	SEN - Sensitive
Due Date (month)	26	Work Package No	WP9

Description
Organisation and minutes of the third POLARIN GA and mid-term retreat (inperson)

Deliverable D9.10 – Organisation and minutes of the fourth POLARIN GA (virtual)

Deliverable Number	D9.10	Lead Beneficiary	1. AWI
Deliverable Name	Organisation and minutes of the fourth POLARIN GA (virtual)		
Type	R — Document, report	Dissemination Level	SEN - Sensitive
Due Date (month)	38	Work Package No	WP9

Description
Organisation and minutes of the fourth POLARIN GA (virtual)

Deliverable D9.11 – Budget allocations for TA to date (II)

Deliverable Number	D9.11	Lead Beneficiary	1. AWI
Deliverable Name	Budget allocations for TA to date (II)		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	40	Work Package No	WP9

Description
Budget allocations for TA to date

Deliverable D9.12 – Second policy briefing

Deliverable Number	D9.12	Lead Beneficiary	1. AWI
Deliverable Name	Second policy briefing		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	42	Work Package No	WP9

Description
Second policy briefing

Deliverable D9.13 – Organisation and minutes of the final POLARIN GA (in-person)

Deliverable Number	D9.13	Lead Beneficiary	1. AWI
Deliverable Name	Organisation and minutes of the final POLARIN GA (in-person)		
Type	R — Document, report	Dissemination Level	SEN - Sensitive
Due Date (month)	50	Work Package No	WP9

Description
Organisation and minutes of the final POLARIN GA (in-person)

Deliverable D9.14 – Report on the contribution of POLARIN to the EU Polar Cluster, international polar organisation, and the ESA – EC cooperation

Deliverable Number	D9.14	Lead Beneficiary	11. EPB
Deliverable Name	Report on the contribution of POLARIN to the EU Polar Cluster, international polar organisation, and the ESA – EC cooperation		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	55	Work Package No	WP9

Description
Report on the contribution of POLARIN to the EU Polar Cluster, international polar organisation, and the ESA – EC cooperation

Deliverable D9.15 – Organisation and minutes of the POLARIN final conference

Deliverable Number	D9.15	Lead Beneficiary	1. AWI
Deliverable Name	Organisation and minutes of the POLARIN final conference		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	57	Work Package No	WP9

Description
Organisation and minutes of the POLARIN final conference

Deliverable D9.16 – Budget allocations for TA to date (III)

Deliverable Number	D9.16	Lead Beneficiary	1. AWI
Deliverable Name	Budget allocations for TA to date (III)		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	58	Work Package No	WP9

Description
Budget allocations for TA to date

Deliverable D9.17 – Third Policy briefing

Deliverable Number	D9.17	Lead Beneficiary	11. EPB
Deliverable Name	Third Policy briefing		
Type	R — Document, report	Dissemination Level	PU - Public
Due Date (month)	60	Work Package No	WP9

Description
Third Policy briefing

LIST OF MILESTONES

Milestones					
<i>Grant Preparation (Milestones screen) — Enter the info.</i>					
Milestone No	Milestone Name	Work Package No	Lead Beneficiary	Means of Verification	Due Date (month)
1	Scientific evaluation procedure provided for INTERACCESS updates	WP1	9-CNRS	D1.4	7
2	Initial definition of scientific priorities	WP1	6-OGS	D1.3	8
3	Scientific evaluation of first call	WP1	6-OGS	D1.6	18
4	Logistic evaluation procedure provided for INTERACCESS updates	WP2	14-CSIC	D2.1	7
5	Beta testing of INTERACCESS	WP2	7-INKODE	INTERACCESS portal up and running	10
6	Launching of the first call for proposals	WP2	2-UOULU	Calls open on website	12
7	Launching of the second call for proposals	WP2	2-UOULU	Calls open on website	24
8	Launching of the third call for proposals	WP2	2-UOULU	Calls open on website	36
9	POLARIN web data portal implemented	WP4	12-ETT	D4.3	12
10	Machine interfaces to catalogue established	WP5	15-SIOS	D5.1	14
11	VA portal established	WP5	3-INPA	D5.2	18
12	First guidelines on the handling of data collected on research expeditions published	WP7	15-SIOS	D7.1	24
13	First training course for POLARIN TA-users on optimal use of POLARIN RI's accomplished	WP7	10-UCPH	Training course performed	30
14	Field course on safe and sustainable polar expeditions accomplished	WP7	1-AWI	Training course performed	45

Milestones					
<i>Grant Preparation (Milestones screen) — Enter the info.</i>					
Milestone No	Milestone Name	Work Package No	Lead Beneficiary	Means of Verification	Due Date (month)
15	Introductory online seminar to POLARIN call 1	WP8	11-EPB	Recordings of seminar	10
16	Online photo exhibition on POLARIN website	WP8	11-EPB	Compilation of photo exhibition	40
17	Mid-term retreat and internal evaluation of POLARIN's achievements and progress	WP9	1-AWI	D9.6	26

LIST OF CRITICAL RISKS

Critical risks & risk management strategy			
<i>Grant Preparation (Critical Risks screen) — Enter the info.</i>			
Risk number	Description	Work Package No(s)	Proposed Mitigation Measures
1	A partner is not collaborating, leaves the consortium, or is unable to fulfil his task -Low/Medium	WP1, WP9, WP6, WP2, WP3, WP7, WP8, WP4, WP5	Even though the risk of one partner not collaborating is very low, the organisations involved have the sufficient experience to overcome this and, in that case, an experienced alternative partner can take over.
2	Coordination and communication between the interlinked tasks are insufficient – Low/Low	WP1, WP9, WP6, WP7, WP3, WP2, WP8, WP4, WP5	The Project Coordinator and Management Team will regularly monitor and coordinate interlinked activities.
3	Basic deliverables necessary to progress in following tasks are delivered late or incomplete - Low	WP1, WP9, WP6, WP7, WP3, WP2, WP8, WP4, WP5	The management structure of the project is designed with several levels of responsibility and coordination to avoid this. The Management Team is experienced in managing large consortiums and will closely follow the work plan.

Critical risks & risk management strategy			
<i>Grant Preparation (Critical Risks screen) — Enter the info.</i>			
Risk number	Description	Work Package No(s)	Proposed Mitigation Measures
			The WP leaders and Task leaders will continuously monitor WP and Task progression until the deliverable submission. WP leaders will report to the Steering Board regularly to monitor the project progress.
4	Quality of deliverables is unsatisfying – Low/high	WP1, WP6, WP9, WP2, WP3, WP7, WP8, WP4, WP5	A quality management routine will be implemented to ensure the structure and quality of deliverables. The Steering Board will review all deliverables before submission.
5	TA cancellations due to “force majeure” or inaccessible working area – Low/Medium	WP2, WP3	The COVID-19 crisis has taught us that travel restrictions (associated with a pandemic in the recent case, but also due to other natural phenomena) can take place even at global scale. The duration of this project will be set to five years to ensure that the implementation of TA can take place as expected within the duration of the project. This will allow the infrastructures to reorganise their schedules in case of “force majeure” without major implications for the project.
6	Proposal submission platform not ready in time to integrate all infrastructures simultaneously – Low/Medium	WP2	The submission platform will be based on the INTERACCESS system developed by INTERACT to handle very large volumes of proposals. Its modification to allow the submission of proposals to very different RIs will start right at the beginning of the project to ensure it is ready in time.
7	Few applications are received to apply for POLARIN infrastructure access – Low/Medium	WP1, WP2, WP8	As shown in the communication and engagement plan, POLARIN will apply effective measures to reach the research community. POLARIN will actively advertise its services, i.e.: TA to RIs, VA to data, data tools, data services and data products, training opportunities and project results to relevant target audiences, also engaging different target audiences in certain project activities. The communication activities will involve various communication channels and tools (see section 2.2.1 in Part B). They will start at the onset of the project and will continue throughout the full project’s lifetime.

Critical risks & risk management strategy			
<i>Grant Preparation (Critical Risks screen) — Enter the info.</i>			
Risk number	Description	Work Package No(s)	Proposed Mitigation Measures
8	External reviewers are difficult to engage – Medium/Medium	WP1	This is a problem infrastructure projects face regularly. POLARIN will encourage researchers to review proposals by implementing a pool of reviewers and by providing certificates of contribution to project evaluations.

PROJECT REVIEWS

Project Reviews

Grant Preparation (Reviews screen) — Enter the info.

Review No	Timing (month)	Location	Comments
RV1	21	TBD	
RV2	45	TBD	
RV3	63	TBD	

RESEARCH INFRASTRUCTURE

Transnational/virtual access to research infrastructure

Grant Preparation (Research Infrastructure screen) — Enter the info.

The labels used mean:

Access provider short name — Short name of the beneficiary, affiliated entity or associated partner. It can be the infrastructure owner or, if the owner of the infrastructure is another third party contributing resources, the beneficiary/affiliated entity who they are provided to (and who coordinates access to them).

Installation number — Number progressively the installations of a same infrastructure. An installation is a part or a service of an infrastructure that can be used independently from the rest.

Country — Enter the code of the country where the installation is located (or INT if access is provided by an international organisation, ERIC, or similar legal entity with international membership. For mobile installations (e.g. a research vessel), give the country of its usual location (e.g. the homeport).

Type of access — Use the following access codes:

- ‘TA-UC’ or ‘VA-UC’ for transnational/virtual access with access costs declared on the basis of unit cost
- ‘TA-AC’ or ‘VA-AC’ for transnational/virtual access with access costs declared as actual costs
- ‘TA-CB’ or ‘VA-CB’ for transnational/virtual access with access costs declared as a combination of actual costs and unit cost.

Associated partners must indicate actual cost (TA-AC or VA-AC) and put 0 in the actual cost column.

Amount per unit — To be filled in only if you have installations for which you use unit costs (or a combination of actual costs and unit costs) (VA-UC, TA-UC, TA-CB or VA-CB).

Access costs — Cost of the access provided under the project. For access costs on the basis of unit costs, multiply the amount per unit by the quantity of access to be provided.

*Columns with * should be filled only for transnational access, not for virtual access.*

Access Provider Short Name	Infrastructure Short Name	Installation		Country	Type of Access	Unit of Access	Estimated Quantity of Access	Amount per Unit (€)	Access Costs		Estimated Number of Users	Estimated Number of User Projects *
		Number	Short Name						as Unit Costs	as Actual Costs		
1 - AWI	AWI-ICE	1	52_AWI-ICE	DE	TA - UC	days	60.0	471.25	28 275.00		5	5
1 - AWI	AWI-SED	1	53_AWI-SED	DE	TA - UC	days	60.0	305.00	18 300.00		5	5
1 - AWI	AWIPEV	1	05_AWIPEV_AWI	NO	TA - UC	days	60.0	693.00	41 580.00		4	2
1 - AWI	FRAM	1	28_FRAM	GL	TA - AC	sensor	8.0			150 132.00	1	1
1 - AWI	NEUMAYER	1	36_NEUMAYER	AQ	TA - UC	days	90.0	3 047.00	274 230.00		2	1
1 - AWI	POLARSTERN	1	50_POLARSTERN	DE	TA - UC	days	315.0	1 867.625	588 300.00		4	1
2 - UOULU	OULANKA	1	15_OULANKA_TA	FI	TA - UC	days	60.0	346.00	20 760.00		4	2
2 - UOULU	OULANKA	2	15_OULANKA_VA	FI	VA - AC	User login and downloads	1.0			25 907.50	1	
3 - INPA	IDP	1	61_IDP_VA	SE	VA - AC	User login and downloads	1.0			52 500.00	1	
5 - CNR	CONCORDIA	1	31_CONCORDIA_CNR	CNR	TA - UC	days	50.0	2 950.561	147 528.00		1	1
5 - CNR	DIR-ITA	1	08_DIR-ITA_TA	NO	TA - UC	days	80.0	206.70	16 536.00		5	2
5 - CNR	DIR-ITA	2	08_DIR-ITA_VA	NO	VA - AC	User login and downloads	1.0			28 000.00	1	
5 - CNR	IADC	1	60_IADC_VA	IT	VA - AC	User login and downloads	1.0			35 000.00	1	
5 - CNR	MZS	1	35_MZS	AQ	TA - UC	days	120.0	916.201	109 944.00		4	2
5 - CNR	NADC	1	62_NADC_VA	AQ	VA - AC	User login and downloads	1.0			35 000.00	1	

Access Provider Short Name	Infrastructure Short Name	Installation		Country	Type of Access	Unit of Access	Estimated Quantity of Access	Amount per Unit (€)	Access Costs		Estimated Number of Users	Estimated Number of User Projects *
		Number	Short Name						as Unit Costs	as Actual Costs		
6 - OGS	LAURA	1	48_LAURA	AQ	TA - UC	days	6.0	46 371.76	278 231.00		4	1
8 - AU	ARC-MO	1	56_ARC-MO_VA	GL	VA - AC	User login and downloads	1.0			105 000.00	1	
8 - AU	GEM	1	57_GEM_VA	GL	VA - AC	User login and downloads	1.0			105 487.50	1	
8 - AU	VRS	1	25_VRS	GL	TA - UC	days	100.0	620.00	62 000.00		7	3
8 - AU	ZAC	1	27_ZAC	GL	TA - UC	days	120.0	685.00	82 200.00		8	4
10 - UCPH	ARCST	1	04_ARCST	DK	TA - UC	days	120.0	296.00	35 520.00		8	4
10 - UCPH	SER	1	19_SER_UCPH	GL	TA - UC	days	60.0	178.80	10 728.00		4	2
12 - ETT	ADI	1	59_ADI_VA	IT	VA - AC	User login and downloads	1.0			37 500.00	1	
13 - UiT	UIT-CORES	1	55_UIT-CORES	NO	TA - AC	days	60.0			32 500.00	5	5
14 - CSIC	JCI	1	34_JCI	AQ	TA - UC	days	150.0	654.00	98 100.00		5	2
15 - SIOS	SDMS	1	64_SDMS_VA	NO	VA - AC	User login and downloads	1.0			123 000.00	1	
17 - NASC	AVS	1	29_AVS	AR	TA - UC	days	120.0	1 000.00	120 000.00		4	2
17 - NASC	NOOSHERE	1	49_NOOSPHERE	AQ	TA - UC	days	8.0	55 491.80	443 935.00		6	1
19 - GFZ	POSEDA	1	63_POSEDA_VA	DE	VA - AC	User login and downloads	1.0			88 145.00	1	
20 - DTU	ARC-DTU	1	03_ARC-DTU	DK	TA - UC	days	100.0	81.00	8 100.00		7	3

Access Provider Short Name	Infrastructure Short Name	Installation		Country	Type of Access	Unit of Access	Estimated Quantity of Access	Amount per Unit (€)	Access Costs		Estimated Number of Users	Estimated Number of User Projects *
		Number	Short Name						as Unit Costs	as Actual Costs		
20 - DTU	DANA	1	44_DANA	DK	TA - UC	days	8.0	27 215.00	217 720.00		8	1
21 - IPEV	AWIPEV	2	05_AWIPEV_IPEV	VNO	TA - UC	days	60.0	693.00	41 580.00		4	2
21 - IPEV	CONCORDIA	2	31_CONCORDIA_IPEV	NO	TA - UC	days	50.0	2 950.56	147 528.00		1	1
22 - PONANT	CHARCOT	1	43_CHARCOT	FR	TA - UC	days	1400.0	0.00	0.00		100	20
23 - MFRI	ARNI	1	41_ARNI	IS	TA - UC	days	8.0	35 000.00	280 000.00		6	1
24 - GINR	GINR	1	09_GINR	DK	TA - UC	days	120.0	280.00	33 600.00		8	4
25 - MCIN	GABRIEL	1	33_GABRIEL	AQ	TA - UC	days	150.0	344.30	51 645.00		5	2
25 - MCIN	HESPERIDES	1	46_HESPERIDES	ES	TA - UC	days	180.0	946.16	170 309.00		6	1
26 - SPRS	ABISKO	1	01_ABISKO_TA	SE	TA - UC	days	100.0	162.00	16 200.00		7	3
26 - SPRS	ABISKO	2	01_ABISKO_VA	SE	VA - AC	User login and downloads	1.0			37 748.00	1	
26 - SPRS	WASA	1	39_WASA	AQ	TA - UC	days	50.0	600.00	30 000.00		1	5
27 - SSLC	SUDURNES	1	20_SUDURNES	IS	TA - UC	days	60.0	659.73	39 584.00		4	2
28 - DMI	QAANAAQ	1	17_QAANAAQ	GL	TA - UC	days	100.0	315.00	31 500.00		7	3
29 - ULAVAL	AMUNDSEN	1	40_AMUNDSEN	CA	TA - UC	days	6.0	72 107.55	432 646.00		6	1
29 - ULAVAL	CEN WK	1	07_CEN WK_TA	CA	TA - UC	days	75.0	409.00	30 675.00		5	2
29 - ULAVAL	CEN WK	2	07_CEN WK_VA	CA	VA - AC	User login and downloads	1.0			26 697.00	1	
30 - UTU	KEVO	1	11_KEVO_TA	FI	TA - UC	days	80.0	185.17	14 814.00		5	2
30 - UTU	KEVO	2	11_KEVO_VA	FI	VA - AC	User login and downloads	1.0			17 834.00	1	

Access Provider Short Name	Infrastructure Short Name	Installation		Country	Type of Access	Unit of Access	Estimated Quantity of Access	Amount per Unit (€)	Access Costs		Estimated Number of Users	Estimated Number of User Projects *
		Number	Short Name						as Unit Costs	as Actual Costs		
31 - NPI	HAAKON	1	45_HAAKON	NO	TA - UC	days	180.0	1 839.00	331 020.00		6	1
31 - NPI	SVERDRUP	1	21_SVERDRUP	NO	TA - UC	days	100.0	289.00	28 900.00		7	3
31 - NPI	TROLL	1	38_TROLL	AQ	TA - UC	days	120.0	600.00	72 000.00		4	2
32 - UGRAZ	SER	2	19_SER_UGRAZ	GL	TA - UC	days	60.0	178.80	10 728.00		4	2
33 - RIF	RIF	1	18_RIF	IS	TA - UC	days	80.0	500.00	40 000.00		5	2
34 - SU	TRS	1	22_TRS_TA	SE	TA - UC	days	100.0	291.25	29 125.00		7	3
34 - SU	TRS	2	22_TRS_VA	SE	VA - AC	User login and downloads	1.0			20 000.00	1	
35 - AMU	AMUPS	1	02_AMUPS	NO	TA - UC	days	100.0	60.00	6 000.00		7	3
36 - ARI	WARC	1	26_WARC_TA	CA	TA - UC	days	75.0	229.32	17 199.00		5	2
36 - ARI	WARC	2	26_WARC_VA	CA	VA - AC	User login and downloads	1.0			37 467.00	1	
37 - IGF PAS	HORNSUND	1	10_HORNSUND	NO	TA - UC	days	120.0	202.00	24 240.00		8	4
38 - UMK	NCUPS	1	14_NCUPS	NO	TA - AC	days	120.0			22 800.00	7	3
39 - UAF	TOOLIK	1	23_TOOLIK	US	TA - UC	days	80.0	109.00	8 720.00		5	2
40 - MI	CELTIC	1	42_CELTIC	IE	TA - UC	days	8.0	28 000.00	224 000.00		8	1
41 - UKRI	PSCF	1	54_PSCF	AQ	TA - AC	days	30.0			14 718.00	5	5
41 - UKRI	UK-AS	1	24_UK-AS	NO	TA - UC	days	80.0	564.60	45 168.00		5	2
42 - UH	KILPIS	1	12_KILPIS_TA	FI	TA - AC	days	80.0			20 724.80	5	2
42 - UH	KILPIS	2	12_KILPIS_VA	FI	VA - AC	User login and downloads	1.0			28 500.00	1	

Access Provider Short Name	Infrastructure Short Name	Installation		Country	Type of Access	Unit of Access	Estimated Quantity of Access	Amount per Unit (€)	Access Costs		Estimated Number of Users	Estimated Number of User Projects *
		Number	Short Name						as Unit Costs	as Actual Costs		
43 - FMI	PAL-SOD	1	16_PAL-SOD_TA	FI	TA - UC	days	60.0	446.00	26 760.00		4	2
43 - FMI	PAL-SOD	2	16_PAL-SOD_VA	FI	VA - AC	User login and downloads	1.0			33 258.00	1	
44 - BAI	BAB	1	30_BAB	AQ	TA - UC	days	120.0	468.96	56 276.00		6	3
45 - UICS	BARC	1	06_BARC	US	TA - UC	days	120.0	390.00	46 800.00		8	4
46 - CAFF	ABDS	1	58_ABDS_VA	IS	VA - AC	User login and downloads	1.0			50 000.00	1	
47 - TARA	TARA	1	51_TARA	FR	TA - UC	days	100.0	1 000.00	100 000.00		2	1

PART A		
date	Section	Nature of change and reason / justification of change proposed (if applicable)
20.07.23	Deliverables	<p>List of deliverables changed: Added D3.1 Access provision and lessons learned: WP3 needs a deliverable otherwise the system does not accept the WP description. D3.1 is compatible with D2.7 Changed: D4.1: Title changed into: Data Management Plan for generated and collected data incl. ethical guidelines for data and derived data products Added: D4.9, D4.15 & D4.17 Update of the data management plan for generated and collected data Added D6.1 Final VA Assessment Report. WP6 needs a deliverable otherwise the system does not accept the WP description. D6.1 is compatible with D5.5 Added D9.6, D9.11, D9.17: Synthetic report on implemented TA to date Added D9.7, D9.12, D9.18: Budget allocations for TA to date</p> <p>Added D9.8, D9.13, D9.14: Update on policy briefings</p>
20.07.2023	Critical Risks	<p>Text changed for risk No. 7 into: As shown in the communication and engagement plan, POLARIN will apply effective measures to reach the research community. POLARIN will actively advertise its services, i.e.: TA to RIs, VA to data, data tools, data services and data products, training opportunities and project results to relevant target audiences, also engaging different target audiences in certain project activities. The communication activities will involve various communication channels and tools (see section 2.2.1 in Part B). They will start at the onset of the project and will continue throughout the full project's lifetime.</p>
11.09.23	Deliverables	<p>List of deliverables changed: Merged D1.4, D1.8 and D1.11 to D1.4. Overview report of existing science priorities by major Arctic and Antarctic organisations and validation /calibration needs by in-situ observation, remote sensing and modelling communities. This deliverable will be updated in the course of the project when needed at M22 and M33.</p> <p>Merged D1.5, D1.7, D1.10 to D1.5 Polar knowledge gaps and potential of POLARIN RIs in addressing them. This deliverable will be updated in the course of the project when needed at M21 and M32.</p> <p>Delivery month changed: D3.1 Synthetic report on TA provided to date. From M60 to M16. Description: This deliverable will be updated preceding each reporting period.</p> <p>Merged D4.9, D4.15 & D4.17 to D4.1: Data Management Plan for generated and collected data incl. ethical guidelines for data and derived data products. Description: This deliverable will be updated preceding each reporting period.</p> <p>Merged D4.2, 4.10 and 4.13 to D4.2 "POLARIN graphic products package for multiple audiences and gap analysis". Description: This deliverable will be updated at M24 and M33 if needed</p> <p>Merged D4.12, D.14 and D.16 Usability report of POLARIN data access hub and data services.</p>

		<p>Description: This deliverable will be updated at M36 and M55.</p> <p>Changed title D6.1 from “Final VA assessment report” to “Synthetic report on VA”. Changed delivery date to M60.</p> <p>Merged D8.6 and D8.9 to D8.6 Assessment of communications, outreach and engagement activities to date, and update of the Communication dissemination, and engagement plan. Description: This deliverable will be updated at M49.</p> <p>Removed “D8.12 Report on POLARIN Ambassador program activities”, as this report will be included in “D8.11 Final report on POLARIN communications, outreach, and engagement activities, including POLARIN Ambassadors activities. “</p> <p>Changed title of D8.13 from “Final report on POLARIN communications, outreach, and engagement activities” to “ Final report on POLARIN communications, outreach, and engagement activities, including POLARIN Ambassadors activities”.</p> <p>Changed title of D9.6 from “Synthetic report on implemented TA to date” to “Report on TA implemented to date”. Description: This deliverable will collect details of the projects implemented to date (infrastructure, dates, title, abstract, topic, participants). It will be updated before each reporting period.</p> <p>Removed deliverables D9.11 and 9.17 as this is redundant with D3.1</p> <p>Changed title of D9.8, 9.13 and 9.19 to First, second and third policy briefing”, respectively.</p> <p>The deliverables have been renumbered according to their delivery date within the WPs.</p>
11.09.23	Infrastructures tab	Units of access marked with “1” have been changed to “User login and downloads”
20.09.2023	Changes resulting from removing the partners FLPO, SAVN and INACH	
	List of beneficiaries	Beneficiaries No. 19 (FLPO), No. 20 (INACH) and No. 35 (SAVN) removed Numbering of partners following FLPO was automatically rearranged.
	Financial information	Budget of partners FLPO, INACH and SAVN shifted to AWI (coordinator), who will take over the tasks
	Infrastructures	Installation of INACH (32 ESCUDERO, 37 PRAT, 47 KARPUL) and SAVN (No. 13 KOLTUR) removed. Budget shifted to AWI installations (28 FRAM, 50 POLARSTERN)
	List of researchers	Researchers from FLPO, SAVN and INACH removed
	Work Packages - Effort	WP1: PM of AWI changed from 2 to 4, INACH removed WP7: PM of AWI changed from 0 to 4, FLPO removed WP8: PM of AWI changed from 5 to 15, INACH removed
	List of deliverables	D7.2 Training material for in-the-field course on polar expedition safety and sustainability, from FLPO to AWI D8.2 Brand Identity and guidelines package (logos, general layout etc.), from INACH to AWI D8.3 POLARIN promotional materials (press releases, promotion video, flyers, roll-ups etc.), from INACH to AWI

	List of milestones	M14 Field course on safe and sustainable polar expeditions accomplished, from FLPO to AWI
		Numbering of partners has been changed automatically.
28.09.23	Financial information	Sum of travel costs and other goods and services for partners with CFS corrected
	Infrastructures	Infrastructure costs for AWI (POLARSTERN), SPRS (WASA) and ARI (WARC) corrected

PART B		
date	Page/section	Nature of change and reason / justification of change proposed (if applicable)
12.07.2023	Page 22/ Section 1.2.3 Interdisciplinarity and integration of expertise and methods	<p>Text added:</p> <ul style="list-style-type: none"> Challenge driven calls will be opened by POLARIN and those challenges are multidisciplinary by nature and need to be addressed by an interdisciplinary approach. To foster interdisciplinarity of funded projects, proposals addressing key challenges with an interdisciplinary approach, making full use of the requested RI, will be given priority in the evaluation process.
12.07.2023	Page 24/ Section 1.2.6 Research data management and management of other research outputs	<p>Text added: Ethical, legal and social aspects of data and derived research products</p> <p>Even though no particularly sensitive data (e.g. health data, information on religion or sexual orientation) will be managed by the consortium, the consortium will ensure that ethical guidelines are followed in the course of data collection, processing, storage, archiving and subsequent use of data. In addition, to prevent the misuse of the data, the consortium will ensure that <u>data protection</u> and ethical as well as legal considerations are taken into account when sharing and publishing research data.</p>
18.07.2023	Page 31/Section 2.2.1 Communication plan – other target groups – Maritime industry	<p>Text added:</p> <p>This target group will be engaged with the support of the beneficiaries 24 PONANT (tourism) and 19 FLPO (shipping) and via presentations at dedicated industry events such as the SMM in Hamburg</p>
20.07.2023	Page 38. 3.1.2 Gantt chart	New deliverables added to the Gantt chart
11.09.2023	Gantt chart	New version
11.09.2023	Page 59	The letter from ESA has been removed
18.09.2023	Page 43-48	Table 3.1h corrected: <ul style="list-style-type: none"> - CFS added for partner requesting EU contribution >430k€ - Ben 23. Total sum corrected from 27.300 to 34.600
20.09.2023	Changes resulting from removing the partners FLPO, SAVN and INACH	
	Page 7: Figure 1	Changed to accommodate the new number of RIs offered
	Page 31/Section 2.2.1 Communication plan – other target groups – Maritime industry	This target group will be engaged with the support of the beneficiary 24 PONANT (tourism) and via presentations at dedicated industry events such as the SMM in Hamburg.
	Page 44 / Table 3.1h	Budget of AWI revised, Budget of FLPO, INACH and SAVN deleted
	Page 51 / Table 3.1k	Renumbered / order changed Infrastructures of INACH and SAVN removed Cost for AWI infrastructure adapted
	Page 53/Section 3.2 Capacity of participants and consortium as a whole	Text changed from: The project also includes three business partners (Ponant, FLPO and ETT) which offer free access to a unique and modern PC3 icebreaker operating as a cruise ship at both poles (Ponant), ensure that polar research is safe and sustainable by performing safety

		<p>training according to the Polar Code (FLPO) and support the project in making polar data interoperable and available and link it to EMODnet physics and Copernicus (ETT).</p> <p>To: The project also includes two business partners (Ponant and ETT) which offer free access to a unique and modern PC3 icebreaker operating as a cruise ship at both poles (Ponant), and support the project in making polar data interoperable and available and link it to EMODnet physics and Copernicus (ETT).</p>
	Page 53/Section 3.2 Capacity of participants and consortium as a whole	<p>Text changed from: POLARIN comprises 7 international partners from Canada (ULAVAL, ARI); USA (UAF, UICS), UK (UKRI), Ukraine (NASC), and Chile (INACH) as full partners in the consortium.</p> <p>To: POLARIN comprises 6 non EU partners from Canada (ULAVAL, ARI); USA (UAF, UICS), UK (UKRI), and Ukraine (NASC) as full partners in the consortium.</p>
		Numbering of partners has been changed accordingly
		The number of infrastructures offered has been changed throughout the text, from 64 to 61, as the withdrawal of three partners removes 1 Arctic station, 1 Antarctic station and 1 vessel operating in Antarctic waters.
28.09.2023	Page 44 / Table 3.1h	<p>Budget of partners with CFS corrected (shift of budget from travel costs to other goods and services)</p> <p>CFS included for partner 8 AU</p>
	Page 51 / Table 3.1k	<p>Last two columns corrected to be in accordance with Part A</p> <p>Access and unit costs for AWI POLARSTERN corrected</p>

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Abstract

The polar regions play a key role in the Earth's system. They are essential for our climate and are sentinels of climate change, human expansion, and the hunt of new resources. The polar regions are losing ice, and their oceans and land are changing rapidly. The consequences of this polar transition extend to the whole planet and are affecting people in multiple ways. Evidence-based policy recommendations are needed to support a sustainable development of the Arctic and to effectively protect the Antarctic realm. However, the polar regions are remote, difficult to reach, and research infrastructures able to operate in these regions are scarce. Research data is fragmented and scattered in a variety of databases with little interoperability. **To understand and predict key processes in the polar regions and provide evidence-based information in support of the European Green Deal and the EU Arctic policy, the polar research community needs access to world-class research infrastructure operating in these regions.**

POLARIN is an international network of polar research infrastructures and their services, aiming at addressing the scientific challenges of the polar regions. The network includes a wide array of complementary and interdisciplinary top level research infrastructures: Arctic and Antarctic research stations, research vessels and icebreakers operating at both poles, observatories, data infrastructures and ice and sediment core repositories. POLARIN will provide integrated, challenge-driven, and combined access to these infrastructures to facilitate interdisciplinary research on complex processes.

POLARIN will:

1. Provide challenge-driven transnational access to a large portfolio of research infrastructures.
2. Improve the access to data by improving data availability and interoperability between data infrastructures.
3. Provide virtual access to data and data services.
4. Provide data products for the scientific community and decision makers.
5. Train the young generation of polar researchers in optimally exploiting the infrastructures for their research.
6. Duly advertise the services offered by POLARIN and engage the infrastructure users to share their research outcomes with society.

The polar regions

The polar regions are recognised as being geopolitically and economically important and extremely vulnerable to current and projected climate change. They are integral parts of the Earth climate system, interacting with the rest of the world through shared oceans, atmosphere, and ecological and societal systems (IPCC 2007, 2019, 2021 and references therein) 1. Climate change is amplified in the polar regions, and the northern and southern reaches of the planet are warming faster than any area on Earth, with the Arctic warming twice as much as elsewhere. Greenland and the Antarctic ice sheets are both losing their ice mass to the ocean, through increased melting, impacting global sea level rise.

However, there are important differences in the physical setting of the two polar regions – the Arctic, an ocean surrounded by land, the Antarctic, a continent surrounded by an ocean – that structure the nature and magnitude of interactions of cryosphere and atmosphere, ocean, and ecosystems (both terrestrial and marine) and their global linkages. The different physical settings have also led to the evolution of unique marine and terrestrial biology in each polar region and shape effects, impacts and adaptation of polar ecosystems.

With **eleven out of sixteen identified climate tipping elements² lying in the polar regions** (McKay et al., 2022)³, it is imperative to advance the understanding of the polar climate system, enhance data collection and facilitate the access to sustained comprehensive databases. Still, the polar regions are difficult to reach: the extreme weather conditions and the lack of infrastructures make research in these

1 <https://www.ipcc.ch/reports/>

2 A climate tipping element is a part of the climate system that can reach a climate tipping point, a condition beyond which changes become self-perpetuating.

3 McKay et al., Exceeding 1.5°C global warming could trigger multiple climate tipping points. Science. 2022 Sep 9; <https://www.science.org/doi/10.1126/science.abn7950>

regions logistically and financially very challenging. Access to and integration of research infrastructures (RIs) are key for strengthening European research, and increasing the observing and modelling capacities to address the grand challenges that these regions are facing.

POLARIN Research Infrastructures

POLARIN has assembled a unique set of **61** polar RIs (Figure 1.1) ranging from small research stations in the Arctic and Antarctic to large research icebreakers operating at both poles. In order to improve the understanding of the complex polar processes and systems and to better predict their change, POLARIN focuses on key regions that are particularly vulnerable to climate change. These key regions are Greenland (**9** RIs, some of which including several installations), Svalbard (**7** RIs) and the Atlantic sector of the Arctic Ocean (**4** RIs) in the northern hemisphere, and the Antarctic Peninsula (**6** RIs) and the Weddell Sea/Dronning Maud Land area (**4** RIs) in the southern hemisphere (Figure 1.2). These regions are not only the areas in which European polar programmes operate most of their RIs, but also the sentinels of climate change. This set of polar RIs is completed by ice- and sediment core repositories offering several thousand meters of cores from both poles and data infrastructures that offer virtual access to data that has been collected for nearly half a century at the poles. **Such a wide variety of RIs has never been offered for access before.**

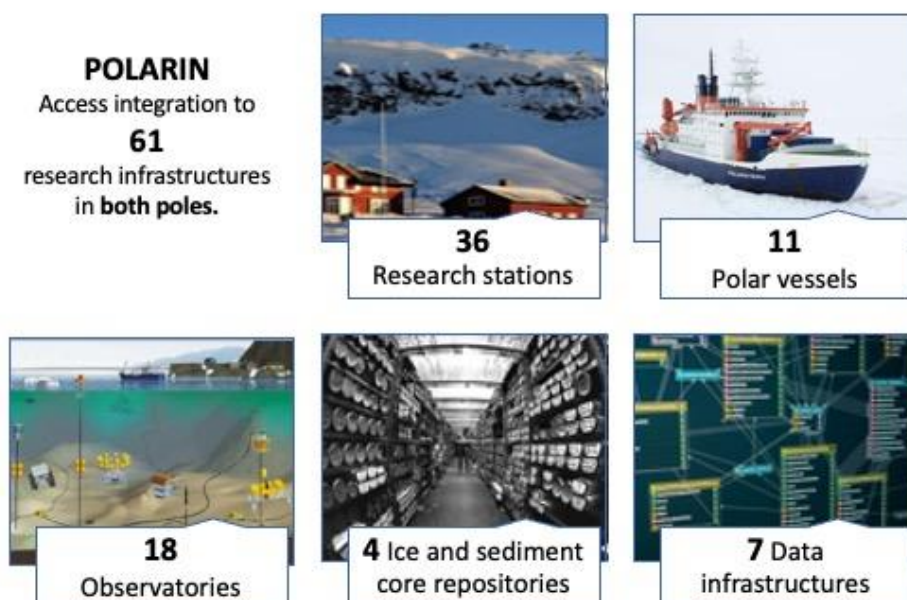


Figure 1.1. Suite of research infrastructures offered in POLARIN.

Transnational access (TA) to Arctic RIs is very well established thanks to the very successful INTERACT and ARICE projects but access to Antarctic RIs has never been offered before. Access to the Antarctic is, on the one hand, heavily regulated by the Antarctic Treaty to minimise the impact of human activities on the continent's pristine environment and, on the other hand, challenging and expensive due to very difficult logistics and time-consuming travel.

The POLARIN RIs are not only operated by national polar programmes but also by private foundations such as the Foundation Tara, which provides access to a sailing boat drifting through the Arctic Ocean or companies, and the French cruise ship company Ponant, providing 1400 units of access as in-kind contribution to the modern and state of the art icebreaking cruise ship Le Commandant Charcot.

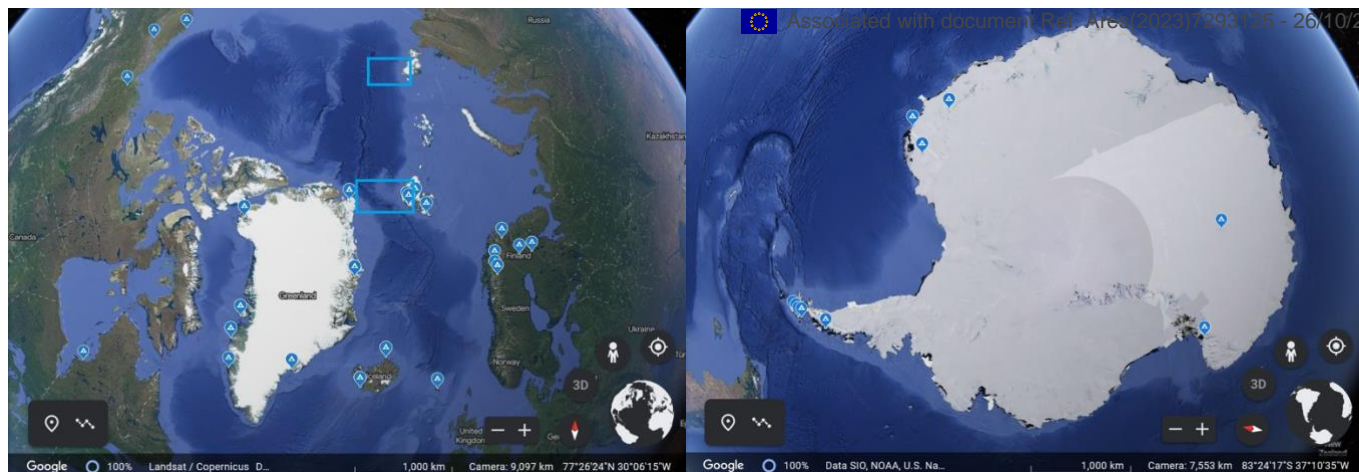


Figure 1.2. Location of research stations offered for Transnational Access (TA) (blue symbol). The FRAM observatory areas are marked with blue rectangles.

1.1 Objectives and ambition #@PRJ-OBJ-PO@#

1.1.1 Objectives and relation to the work programme

1.1.1.1 Objectives

POLARIN's overall aim is **to provide efficient and customised research infrastructure (RI) services to address the scientific challenges of the polar regions**, including access to a **wide portfolio of complementary and interdisciplinary top level RIs**. Building on past EU-funded projects that offered access to terrestrial research stations (INTERACT) and research icebreakers (ARICE) in the Arctic, POLARIN will further **integrate and combine the access to Arctic and Antarctic research stations, polar vessels including icebreakers, observatories (on land and at sea), data infrastructures and ice and sediment core repositories**. POLARIN will **improve online services, data access and interoperability** by enabling the connection between initiatives, improving workflows, and reducing data fragmentation. POLARIN will ensure that the **new generations** are trained to exploit the leading edge RIs.

POLARIN has the following **six specific objectives**, coherent with the work packages, each with measurable outcomes:

1. Enable science for understanding and predicting key processes in polar regions.
2. Provide efficient challenge-driven transnational access (TA) to top level RIs in the polar regions.
3. Improve data services and provide customised data products.
4. Provide virtual access (VA) to data and data services.
5. Provide training for infrastructure users.
6. Advertise RI services and engage RI users.

Objective 1: Enabling science for understanding and predicting key processes in polar regions (TA1/WP1)

The polar regions are complex systems that, despite improved observations, remain a challenge to understand due to their vastness, extreme environmental conditions, and low population density. Ongoing European and international observing and research efforts are thus not yet fully able to meet the demands for comprehensive and integrated information on polar environments and of their role in influencing climatic or other processes at lower latitudes. POLARIN will ensure that the research performed on its RIs will contribute to the specific challenges identified by international organisations and programmes

projects, by directing its calls for proposals towards addressing specific challenges and by monitoring key results and contributions of the funded projects towards solving them.

In doing so, POLARIN will enable and facilitate science for understanding and predicting key processes in polar regions in the context of climate change. The proposals granted for access through POLARIN should contribute at least to one of the following topics (for further information **see section 1.2.1.1.**):

Understanding and predicting the effects of the changing climate on:

1. Sea-ice and Polar Oceans
2. Sea level, glacier stability and melt
3. Carbon balance and permafrost
4. Polar ecosystems and biodiversity
5. Atmosphere dynamics
6. (Paleo)climate processes

Successive calls will be redirected to ensure that all challenges are fully addressed.

Measurable outcomes:

- Scientific framework for challenge-driven calls for proposals.
- Joint model of access to international polar RIs, incl. governance documents and access policies for researchers.
- Scientific evaluation of challenge driven calls.
- Identification of current knowledge gaps.
- Report on contribution of POLARIN funded access to addressing the scientific challenges in the polar regions.

Objective 2: Provide efficient challenge-driven transnational access (TA) to top level research infrastructures in the polar regions (TA2/WP2 & TA3/WP3)

European nations and their international partners operate world-class RIs in the Arctic and Antarctic, which result from a long history of polar research and significant investments made by national polar programmes. These infrastructures are of extreme scientific value, as they are either strategically located or their mobile capabilities provide them with unique capacities. These RIs are based over a large geographical breadth, providing a critical network and a valuable asset for the European Research Area. Access to these top-level RIs and their services is essential to support excellent research addressing the grand challenges induced by the changing climate and for providing evidence-based advice to decision-making.

For the first time ever, POLARIN will provide TA to a set of complementary and multidisciplinary European and International RIs covering both poles including:

- 26 Arctic stations,
- 10 Antarctic stations
- 11 Research vessels including icebreakers
- 1 deep-sea observatory, 2 observational networks and 15 key observatories associated to research stations
- 4 Ice and sediment core repositories

The RIs offered in POLARIN have been carefully selected to address the key challenges in polar regions. They show not only a wide geographic distribution but cover the whole polar environment from the top of

4 EU-PolarNet, <https://eu-polarnet.eu>

5 European Space Agency, <https://www.esa.int>

6 Scientific Committee on Antarctic, Research <https://www.scar.org>

7 International Arctic Science Committee, <https://iasc.info>

8 United Nations Decade of Ocean Science for Sustainable Development, <https://oceandecade.org>

the glaciers to the deep sea. They are described in detail in **Section 3.1.3 Work Packages “TA3/WP3 Infrastructures offered for Transnational Access”**.

A web-based single-stop shop will be implemented to apply for TA to all RIs offered in POLARIN, integrating the full proposal management process from application to reporting. Access to these RIs will be granted as TA either in person or remote. Challenge-driven access calls will be launched to allow access provision to integrated and customised RI and RI services. Multi-platform access to different kinds of infrastructures will ensure that multidisciplinary research projects can integrate results from multiple realms. The large portfolio of POLARIN RIs will allow for example the integration of land-based with marine studies, or recent observations with paleo-data from ice-and/or sediment cores samples. TA will be provided free of charge to selected users or user groups.

Measurable outcomes:

- Integrated proposal management platform for POLARIN RIs.
- Amount of TA to polar RIs.

Objective 3: Improvement of data services and data products (WP4)

There is an increasing demand from the scientific community, public, politicians and other stakeholders for information on the status of the polar regions and for associated products describing future scenarios. Our ability to manage, sustain and understand the polar regions will depend on the collected data and the information and knowledge derived from it. POLARIN will facilitate the discovery and consumption of data that is already available by ensuring that databases, datasets and/or data initiatives from the polar regions are identifiable, and by facilitating the access to them. It will improve workflows among data initiatives by reducing data fragmentation in support of data interoperability. In addition, it will create tools to facilitate the access of data from multiple providers.

Environmental data collected and stored in databases is very often raw, unprocessed, and the knowledge that can be derived from it does not reach potential users that are not able to process the data, such as policy makers, local governments, or other organisations. POLARIN will create data products from existing databases that can directly be used by a wide variety of stakeholders. It will also develop customised products to improve the services the RIs offer. In particular, it will implement a calibration/validation service for Earth Observation (EO) data.

Measurable outcomes:

- Inventory of databases from polar regions.
- Identification of workflows to improve interoperability among databases.
- Creation of tools to facilitate the consumption of data.
- Customised data products (e.g., atmospheric distribution of black carbon).
- Customised data services (e.g., calibration/validation service for earth observation data).

Objective 4: Provide virtual access (VA) to research infrastructures (VA1/WP5 & VA2/WP6)

High quality data from the polar regions is becoming increasingly valuable in contributing to a global framework of scientific knowledge. Such a reliable framework is indispensable to effectively address pressing issues, such as the impact of climate change or the effects of human activity on the polar regions. Moreover, due to the harsh environmental conditions that characterise the polar regions, such as extreme cold, limited accessibility of remote places, or polar night, the collection of data is often logistically difficult and expensive. Europe has a long tradition of scientific interest in both the Arctic and the Antarctic, and data records can sometimes date back to the 19th century. These provide irreplaceable benchmarks that are essential to understand the current rates of environmental change. POLARIN will offer user friendly free online access to scientific data and metadata via virtual access (VA) through a single-entry portal to 7 data infrastructures, 2 observational networks and 10 research stations and their associated observatories in both polar regions. VA will be permanently open during the project lifetime. The RIs offering VA are described in detail in **Section 3.1.3 Work Packages “VA2/WP6 Infrastructures offered for Virtual Access”**.

Measurable outcomes:

- A unified semantically consistent virtual data catalogue with machine interfaces.
- A web portal providing guidance documentation and a graphical user interface to the virtual data catalogue.
- Amount of VA to polar RIs, data infrastructures and data services.
- Amount of data downloaded from the POLARIN data hub.

Objective 5: Training for infrastructure users (WP7)

The rapidly changing climate results in complex interactions between the physical and biological spheres, involving both small- and large-scale processes. While these interactions are cross-disciplinary, science and education are to a large degree disciplinary. To progress in polar research, there is a need for transferring competences to the new generations. Effective training of early career researchers (ECRs) and professionals will not only help them to optimally use the RIs in polar regions and exploit their data, but it will also contribute to consolidating their careers. In turn, they may transfer the knowledge acquired to many students they mentor at their home institutions.

To meet this challenge, POLARIN will develop training programmes to ensure that early career researchers, professionals and RI users are able to fully exploit the services that the RIs are offering. It will implement a series of online seminars and other training resources to teach current and futures users of RIs on how to plan their field work campaigns/cruises, to optimally use the scientific equipment and to act in a sustainable way. A dedicated training programme on data management and data processing (data stewardship) will complement this training. In addition, POLARIN will implement a safety training under polar conditions compliant with the Polar Code, to ensure that PIs of polar expeditions are able to deal with emergency situations.

Measurable outcomes:

- Training resources, recordings of online seminars and other training materials on POLARIN website.
- Number of published training resources.
- Number of participants to the training sessions.
- Implementation of safety training on-site and online.

Objective 6: Advertise RI services and engage RI users (WP8)

POLARIN will offers a unique portfolio of polar RIs and their services allowing scientists to access RIs they might never be able to use without the support of this project or to work in areas which their national polar programmes do not cover. To ensure that the services offered by POLARIN are duly advertised and reach potential applicants (such as the research community, industry, and SMEs⁹) POLARIN will develop a sophisticated communication, outreach and engagement plan (see Section 2.2: Measures to maximise impact - Dissemination, exploitation, and communication). To help TA participants disseminate their research and research outcomes, POLARIN will implement a POLARIN Ambassadors programme and develop guidelines for expedition blogs and videos. Participants will be encouraged to share their research with multiple audiences including universities, schools, and work with national media channels. Publications derived from access funded through this project will be monitored and stored in a publication repository.

Measurable outcomes:

- Communication and engagement plan.
- POLARIN website, social media, newsletters, regular updates on project progress.
- Summary report of the engagement of the POLARIN Ambassadors (videos, blogs, photo exhibitions etc.).
- POLARIN publications repository.

⁹ SME: Small and Medium Enterprise

1.1.1.2 Relation to the work programme

POLARIN contributes to the topic HORIZON-INFRAIA-2023-SERV-01-01 “Research infrastructure services to enable RI addressing main challenges and EU priorities” and the subtopic RI services for sustainable Arctic /polar regions in the following way:

Provide access to a wide portfolio of complementary research infrastructures and their services needed to address the scientific challenges of polar regions.

TA3/WP3, VA2/WP6: POLARIN has assembled a wide portfolio of 61 complementary polar RIs, including Arctic and Antarctic research stations, polar vessels, observatories, data infrastructures, and ice and sediment core repositories.

TA1/WP1: POLARIN will define challenge driven calls for TA proposals to ensure that the access to RIs will contribute to addressing the most-pressing scientific questions in polar regions. Progress will be monitored, and successive calls for access will be adapted to fill knowledge gaps.

Provide transnational access (on-site or remote) and/or virtual access to terrestrial stations, fixed and mobile observing platforms, research vessels operating in Polar Regions including icebreakers, core repositories and data infrastructures building on past integration.

TA3/WP3, VA2/WP6: POLARIN will provide both TA and VA to all types of complementary European and International polar RIs listed under the topic (see Figure 1.1).

TA2/WP2, VA1/WP5: POLARIN will build on EU funded projects such as INTERACT10, ARICE11, EUROFLEETS12, SIOS13, FixO314 and will integrate these into one joint activity. Representatives of all these projects are beneficiaries of POLARIN.

Provide training courses and ad hoc user’s training to prepare the new generations of researchers to properly exploit leading edge RIs and provide them with appropriate skills for data stewardship.

WP7: POLARIN will organise training programmes to ensure that new generations of researchers and RI users are able to fully exploit the RIs’ services. This includes training on data management and data processing (data stewardship), sustainability and the use of scientific equipment. POLARIN will implement a safety training in Arctic conditions in compliance with the Polar Code.

Integrate, customise or combine services and adapt modalities of access to facilitate interdisciplinary research on complex processes in polar regions.

TA2/WP2, VA1/WP5: To facilitate and integrate the access procedure, a single-entry portal to apply for access to all types of European and International RIs in both polar regions will be implemented. The application, proposal management and evaluation system of previous RI projects will be integrated and customised to facilitate the combination of services and interdisciplinary/multiplatform research.

Provision of existing services and limited development of new services relevant to the challenges.

WP4, VA1/WP5: While POLARIN focuses its access provision on existing services, a limited development of new (data) services will be implemented. This is needed to adopt, adapt and update current services, and it includes a front-end data portal to access data from multiple databases, VA to data and data services, and products generated from raw data.

Further develop the remote or virtual provision of services.

TA2/WP2, TA3/WP3, VA1/WP5, VA2/WP6: POLARIN will implement remote access (RA) to research vessels, research stations, observatories, and core repositories to collect data, samples and to install

10 International Network for Terrestrial Research and Monitoring in the Arctic, <https://eu-interact.org>

11 Arctic Research Icebreaker Consortium, <https://arice-h2020.eu>

12 <https://www.eurofleets.eu>

13 Svalbard Integrated Arctic Earth Observing System, <https://sios-svalbard.org>

14 Fixed Point Open Ocean Observatories Network, <https://cordis.europa.eu/project/id/312463>

sensors (TA2/WP2, TA3/WP3). The RA will be performed by technical personnel or staff scientists on site. VA to data and data services will be offered by data infrastructures, observatories and research stations in the Arctic and Antarctic. A web-based single-entry portal will be developed via which all VA will be performed (VA1/WP5, VA2/WP6).

To improve, customise and harmonise the services the infrastructures offer, including for better serving the needs of open EU industrial research and innovation.

WP4: POLARIN will improve the RI services by facilitating the discovery and consumption of data (reuse) by ensuring that databases, datasets and/or data initiatives from the polar regions are identifiable, and by facilitating the access to them. It will improve workflows among data initiatives by reducing data fragmentation and supporting of data interoperability. It will create data products and customise data services to be used by a wide variety of stakeholders.

To adhere to the guidelines and principles of the European Charter for Access to RIs.

TA1/WP1, TA2/WP2: POLARIN will use the “European Charter for Access to RIs” when defining access policies to its RIs by following the principles and the guidelines defined by the Charter. POLARIN will promote the Charter’s provisions among the RI providers.

To address data management (and related ethics issues), interoperability, as well as the connection of digital services (e.g., data services) to the European Open Science Cloud

WP4: POLARIN data management builds on existing initiatives and FAIR principles. It aims at improving workflows among data initiatives, to reduce data fragmentation and support data interoperability. POLARIN will adopt and extend (open) tools to facilitate the access of data from multiple providers (e.g., ERDDAP¹⁵, GeoNetWork¹⁶, etc.).

To ensure appropriate links with relevant European and international initiatives and with projects developing under Horizon Europe and ongoing coordination efforts such as in the EU Polar Cluster.

WP9: POLARIN will contribute to the research themes prioritised by EU-PolarNet for both poles in the European Polar Research Programme¹⁷, by IASC, SAON¹⁸ and AMAP¹⁹ for the Arctic and SCAR and SOOS²⁰ for the Antarctic as well as UNDOS for both poles. POLARIN will cooperate with ESA Earth Observation Programmes²¹ (ESA-EOP) to support validation and calibration of earth observation data by ground-truthing investigations. POLARIN will actively contribute to the EU Polar Cluster and will support the Cluster projects with access to RIs and their data.

Involve as beneficiaries, affiliated entities, third parties, or external providers of purchased services, the necessary interdisciplinary set of research infrastructures of European interest that provide such services.

With 64 RIs in both polar regions, across multiple (geographic and disciplinary) domains, the inclusiveness and interdisciplinarity of the RI portfolio is extensive. POLARIN involves several RIs of European interest as e.g., the ESFRI²² landmark ACTRIS²³ (represented by FMI & NILU) and the former ESFRI project SIOS. PRV Polarstern and Neumayer Station III are large scale infrastructures of

¹⁵ Environmental Research Division's Data Access Program, <https://coastwatch.pfeg.noaa.gov/erddap/index.html>

¹⁶ <https://geonetwork-opensource.org>

¹⁷ Integrated European Polar Research Programme, https://eu-polarnet.eu/wp-content/uploads/2020/11/EPRP_final_version-1.pdf

¹⁸ Sustaining Arctic Observing Networks, <https://arcticobserving.org/>

¹⁹ Arctic Monitoring and Assessment Programme, <https://www.amap.no>

²⁰ Southern Ocean Observing System, <https://soos.aq/>

²¹ European Space Agency - Earth Observation Programmes, https://www.esa.int/About_Us/Business_with_ESA/Business_Opportunities/Earth_Observation_Programmes

²² European Strategy Forum on Research Infrastructures, <https://www.esfri.eu/about>

²³ Aerosol, Clouds and Trace Gases Research Infrastructure, <https://www.actris.eu>

the German Helmholtz Association, which means that they must host more than 50% external users per year, most of these are Europeans. The majority of the POLARIN RIs frequently host scientists from other European countries as these assets are rare and polar research can only be successfully performed in close international cooperation.

Research infrastructures from third countries offering complementary or more advanced services than those available in Europe.

The RI portfolio of POLARIN includes infrastructures from third countries that complement the services available in Europe.

Canada: Access to CCGS Amundsen and research stations in the Canadian Arctic.

USA: Access to research stations in the US Arctic.

UK: Access to core repository and research station on Svalbard

Ukraine: Access to RV NOOSFERA and research station on the Antarctic Peninsula

Chile: Access to two research stations on the Antarctic Peninsula, with access to a research vessel on site.

Include an outreach and engagement plan to actively advertise their services to targeted research communities and, if applicable, to relevant industries including SMEs.

WP8: The outreach and engagement plan of POLARIN will ensure that the potential RI users are aware of the opportunities offered by the project. RI users will be engaged to communicate their results efficiently to ensure that the data gathered through the project contributes not only to addressing the scientific challenges, but also to evidence-based decision making.

To exploit synergies and to ensure complementarity and coherence with other EU grants supporting access provision.

POLARIN includes beneficiaries from the following EU grants which provide(d) access to RIs, and by that ensures complementary and coherence with them:

ARICE (Access to research icebreakers in the high Arctic).

EUROFLEETS (Access to research vessels in open waters).

INTERACT (Access to Arctic research stations).

FixO3 (Access to fixed-point open ocean observatories).

SIOS (Access to research stations, observatories, and data from Svalbard).

EMODnet24 Physics (access to in situ observations from international programmes).

In addition, POLARIN will ensure cooperation with EU Polar Cluster projects and other Horizon Europe funded projects supporting access provision to complementary research infrastructures or developing tools that could improve the use of POLARIN's infrastructures (WP9).

Research infrastructure services should benefit from Copernicus, GEOSS and EMODNET initiatives. Similarly, relevant data generated by the projects should be made available to these initiatives.

POLARIN has a close relation to EMODnet Physics and Copernicus via POLARIN's beneficiary ETT. ETT is the EMODnet Physics coordinator and Copernicus25 Marine Service MDS/DU deputy coordinator and will assure that the polar RIs will benefit from these initiatives. Relevant data generated by the project will be made available to Copernicus, GEOSS26 and EMODnet initiatives. ETT is also developing the SOOSmap27 data portal and the data management infrastructures for the H2020 project SO-CHIC28 and the Horizon Europe project OCEAN:ICE29. These three initiatives will largely benefit from POLARIN and ETT will guarantee a smooth collaboration and interoperability among each other.

24 European Marine Observation and Data Network, <https://emodnet.ec.europa.eu/en>

25 Earth observation component of the European Union's Space programme, <https://www.copernicus.eu/en>

26 Global Earth Observation System of Systems <https://www.earthobservations.org/geoss.php>

27 <https://soos.aq/data/soosmap>

28 Southern Ocean Carbon and Heat Impact on Climate, <http://www.sochic-h2020.eu>

29 Ocean-Cryosphere Exchanges in Antarctica: Impacts on Climate and the Earth System, <https://ocean-ice.eu>

POLARIN will ensure synergies and complementarity with proposals submitted to relevant subtopics in this call such as:

“RI services for healthy ocean and waters” by ensuring the connection between the polar oceans without overlapping the services offered with the submitted proposal AQUARIUS.

“RI services for climate change risks” by addressing relevant challenges related to climate change.

“RI services for sustainable agriculture, fisheries and blue economy” by addressing sustainability and ecosystems in polar regions.

1.1.2 Ambition: Beyond the state of the art

Access to polar RIs

POLARIN will integrate a pioneer, free of charge, access provision programme. **European and international researchers will benefit for the first time from an overarching, excellence driven, and simplified access to key international polar RIs and their associated services. The provision of challenge driven access to a large set of different types of RIs from different research fields all contributing to the grand scientific challenges goes far beyond the state of the art.** POLARIN will also assure that its access programme contributes to international programmes and initiatives. The project has established a unique cooperation with the ESA-EOP (see the letter of support from ESA at the end of this document) to ensure that data generated by POLARIN projects will contribute to the calibration and validation of Earth observation data. On the other hand, ESA will support POLARIN by fostering the cooperation between the “ground-based” and EO community in its call for tenders, by training scientists in the use of EO data and by linking their Open Science Data Portal to the portal POLARIN will establish.

Transnational access (TA)

Access to RIs in the Antarctic, or combined access to so many different polar RIs, has never been offered before. Very successful examples of TA and VA provision are the EU funded projects INTERACT (I, II and III) providing access to terrestrial research stations and ARICE to research icebreakers in the Arctic Ocean; as well as EUROFLEETS (1, 2 and +) offering access to research vessels in open waters including the margins of the Arctic and the Southern Ocean (not-ice covered), and FixO3 to fixed open ocean observatories. All these projects worked in the Arctic or the northern margins of the Southern Ocean. POLARIN builds on their experiences and will expand the access to a polar RI network in a very ambitious way, including **a wide array of multidisciplinary, international, complementary, state of the art infrastructures at both poles.** It will offer access to 61 RIs including:

- 36 Arctic and Antarctic research stations
- 11 Research vessels and research icebreakers operating in the Arctic and the Southern Ocean
- 18 Atmospheric, terrestrial, and marine observatories at both poles
- 4 Ice and sediment core repositories with material from both poles
- 7 Data infrastructures

The POLARIN infrastructure network has been carefully selected to address the scientific challenges identified in the polar regions and has a comprehensive geographic coverage. It integrates most service providers from both poles, and includes not only RIs belonging to EU countries, but also key international research infrastructures from Canada, USA, Chile, UK, and Ukraine.

POLARIN offers European scientists a unique opportunity to access RIs from different domains proposal-based and through a single-entry system. In most countries access to polar RIs is regulated through their national polar programmes. It is difficult for a scientist to access RIs belonging to a different country if there is not an already established cooperation or if the scientist wants to perform independent research. Until now, there is no mechanism (beyond EU funding) supporting TA to RIs. Scientists must rely on personal contacts and private networks to complement multidisciplinary research already planned by nationals. For a researcher to gain access to the RIs as Principal Investigator (PI) as in POLARIN is rare and only possible under very special circumstances.

Virtual access (VA)

VA to metadata, data and data services will be offered **user-friendly and free of charge to users** complying with the RI's access policy, through a single-entry portal and without selecting them. With that, **data that is currently not publicly available will be made available through the project.** POLARIN will build a **single-entry portal** harvesting data from different RIs and making it available via the web portal. To achieve widespread open access data, a variety of significant activities are required such as data interoperability, data quality control, standardisation and harmonisation, data analyses in case of derived process data, data visualisation, data provision to users, publicising of accessibility and monitoring of the use of data.

Improving data services

POLARIN will significantly improve access to polar data by harmonising data management standards and workflows covering the complete life cycle of data from acquisition to long-term archiving. High-quality observational data and information are crucial to empower decision makers with evidence-based information for sustainable management of the environment in response to climate change. However, data collected by the different RIs is still fragmented and there is a lack of workflows between data initiatives. The sources of information are diverse, and it is difficult to find and retrieve relevant data even for experts. **POLARIN will concentrate its efforts on improving the data landscape and the consumption of data.** It will address legal and data policy aspects aiming to identify transnational barriers. The goal is to improve standardisation, interoperability, and compliance with major international initiatives. All collected data and metadata will be harmonised with EMODnet, Copernicus and SeaDataNet30, among others.

Data is generally stored in raw format and there is a **lack of ready-to-consume data products** that can be applied to multidisciplinary research. Therefore, **POLARIN will coordinate, harmonise, and optimise the implementation and integration of data services and products.** It will create data products from environmental databases that can be directly used by researchers and decision makers.

Training services

POLARIN will create a source for multidisciplinary and multi-platform training dedicated to optimally use polar RIs which is not available to date. The training will be specially designed for early career researchers, technicians, and engineers. Educating the young generations of polar scientists and professionals is key to ensure that modern RIs are used best, and technical developments are continuously implemented. Training will include regular open-access online seminars that will address topics ranging from cruise or field work planning, freight handling, legal prerequisites (e.g., Antarctic Treaty regulations), sustainable use of RIs, to implementing new technological developments of RIs and communicating results.

POLARIN will organise dedicated training **for data stewardship**, to ensure that data sets are not only collected, but also curated and able to deliver accurate, reliable environmental data sets.

The polar regions are pristine and remote, and the environmental conditions are harsh and partially life threatening but to date, **specific safety training for polar regions in compliance with the Polar Code has not been widely implemented.** Researchers working in these areas need to learn to react correctly in dangerous situations. POLARIN will implement a safety training under Arctic conditions, with experienced trainers and in compliance with the Polar Code.

1.1.3 Integration of research infrastructures

Optimising the use of existing RIs requires that all European users can access them effectively. Thus, TA to all polar RIs will be provided through a **single-entry portal** to maximise the use of the services offered. Multidisciplinary, integrating, and overarching research will clearly benefit from this process, **as access to multiple kinds of polar RIs from different domains in a single application has never been offered before.** The access, proposal management and evaluation system of previous TA projects will be combined, integrated, and customised to allow interdisciplinary and multiplatform research. Challenge driven access calls will be launched to ensure that the implemented projects contribute to the most pressing scientific challenges, of global interest and with societal impact.

For the first time, applicants will be able to apply not only for one kind of RI, but to several RIs simultaneously to address the grand scientific challenges appropriately. For example, land to sea expeditions, including stations and coastal vessels, or cruises associated with previously collected sediment or ice cores or data, could be combined if requested by the scientific community.

1.1.4 R&I maturity

POLARIN's work is ready for application. Past experiences in coordinating major TA and VA in EU projects by members of this consortium (e.g., INTERACT, ARICE etc.) make this consortium able to expand the network of RIs to different domains and geographic settings. The project's maturity can be considered as a TRL31 7 (TRL 7 – system prototype demonstration in operational environment) as TA and VA to most of the infrastructures has been proven very successful in operational environments.

#§PRJ-OBJ-PO§#

1.2 Methodology #@CON-MET-CM@# #@COM-PLE-CP@#

1.2.1 Concepts, models and assumptions that underpin the project, overall methodology, and challenges in the methodology

1.2.1.1. Concepts, models and assumptions that underpin the project

Scientific challenges of polar regions

The poles are subject to multiple stressors, including environmental, economic, political, cultural, and societal changes, which have regional impacts but also affect the entire globe through multiple, complex connections. While the changes, and especially climate change, are particularly evident at the poles compared to other regions of the globe, there are many aspects which are poorly understood in terms of driving processes, their interconnections, and the actual impacts on the socio-ecological systems and their potential to shape or constrain the future of the society at local, regional, and global scale. Several international initiatives have defined key research challenges to be addressed in both polar regions (e.g., IPCC32, EU-PolarNet, UNDOS), or in the Arctic (e.g., IASC) and the Antarctic (e.g., SCAR) separately. All the initiatives point towards a similar set of challenges whose consequences are of high societal relevance. POLARIN, through its infrastructure network and access to samples and data, will contribute to advance in understanding and predicting the effects of the changing climate on:

1. Sea-ice and Polar Oceans
2. Sea level, glacier stability and melt
3. Carbon balance and permafrost
4. Polar ecosystems and biodiversity
5. Atmosphere dynamics
6. (Paleo)climate processes

The overarching challenges identified above will be narrowed down to achievable challenges that can be addressed with the suit of infrastructures that POLARIN has gathered. TA to RIs offered by POLARIN will be granted to users or user-groups addressing challenges of high societal relevance and of international (and European) interest. This will enhance and increase our knowledge and prediction capability, support evidence-based decision making and our long-term problem-solving capacity.

1.2.1.2 Overall methodology

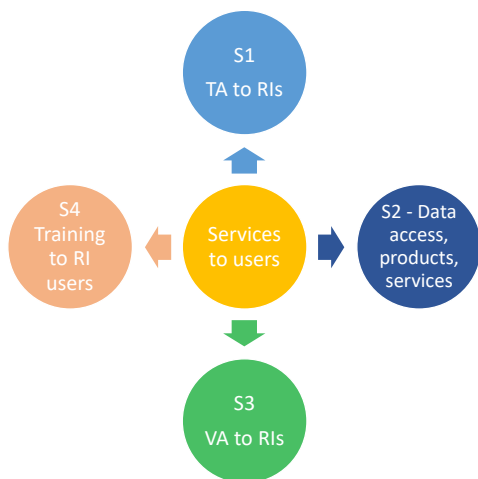
The overall objective of POLARIN is to provide **efficient and customised RI services** including the access to a wide portfolio of complementary and interdisciplinary top level RIs needed to address the scientific challenges of the polar regions.

To fulfil this goal, POLARIN has assembled a consortium consisting of 47 partners from all over Europe and beyond offering access to 61 infrastructures from multiple domains. By that, POLARIN represents a joint international cooperation network which ensures excellent research contributing to identified research challenges in polar regions. The uniqueness of this set of complementary polar RIs, both on land

31 Technology Readiness Level

32 The Intergovernmental Panel on Climate Change, <https://www.ipcc.ch>

and at sea, will open new research opportunities for European and international scientists. The overall methodology explains how POLARIN will work to fulfil its objectives.



POLARIN will offer four kinds of services to infrastructure users (Figure 1.3):

- 1) Challenge driven TA to research infrastructures
- 2) Improvement of data services and data products
- 3) VA to research infrastructures
- 4) Training for research infrastructure users

In addition to the WPs directly related to the services, a WP on outreach, engagement and impact will ensure that the services offered by POLARIN and the outcomes of the project reach the relevant audiences: from infrastructure users to policy makers and society.

Figure 1.3. Services offered by POLARIN.

A WP on project management will facilitate the scientific and financial coordination of the project, the internal communication, and the linkage with international initiatives.

The project methodology aims at ensuring that:

- a) The integration of RIs and multidisciplinary science are achieved.
- b) The services are implemented efficiently and improve the current landscape.
- c) The project services contribute significantly beyond the lifetime of the project.

The project activities are organised in three pillars (integration, implementation, and assessment) to ensure a smooth service provision (Figure 1.4):

POLAR RI SERVICES			
	Integration	Implementation	Assessment
WP1. TA1: Enabling science for understanding and predicting key processes in polar regions	Scientific framework: Challenge driven approach (T1.1); Redirecting the access in the lifetime of the project (T1.1)	Scientific evaluation of proposals (T1.3)	Assessment of the access provided in relation to the polar challenges (Task 1.2)
WP2. TA2: Proposal management service	Development of joint access portal for all RIs in TA (T2.1)	Launch of calls for proposals (T2.1); Logistic evaluation (T.2.2)	Follow up implementation (T2.3); Access reports (T2.3); Quality assurance (T2.3)
WP3. TA3: RIs offered for Transnational Access	Description of infrastructures offering TA		
WP4. Improvement of data services and customised data products	Standardisation and harmonisation of polar data (T4.1); Development of data access portal (T4.1); Improvement of access to polar data data (T4.1)	Improving polar data availability and interoperability (T4.2), Data tools, products and services (T4.3)	Usability of POLARIN data portals (T4.3)
WP5. VA1: Provision of Virtual Access	Development of joint access portal for VA (T5.1)	Development of joint access portal for VA (T5.1)	Monitoring and evaluation of VA with an external Board (T5.1)
WP6. VA2: RIs offered for Virtual Access	Description of infrastructures offering VA		
WP7. Training for infrastructure users	Planning of training activities for multidisciplinary/multiplatform RI users (T7.1, T7.2, T7.3)	Implementation of the training activities for RI users (T7.1, T7.2, T7.3)	Assessment of the training activities (T7.1, T7.2, T7.3)
WP8. Outreach, engagement and impact	Visibility, communication and outreach plan (T8.1)	Communication of activities and engagement of service users (T8.1, T8.2)	Assessment of communication and engagement activities and impact of POLARIN (T8.3)
WP9. Project management	Contractual and financial management (T9.1)	Operational management (T9.2)	Clustering with other initiatives (T9.3)

Figure 1.4. Relation between work packages, tasks, and methodology.

Service 1: Challenge driven transnational access to research infrastructures (TA1/WP1, TA2/WP2 & TA3/WP3)

Integration

TA1/WP1: POLARIN will ensure that the research performed on its RIs will contribute to the specific challenges identified by international organisations and programmes. A Scientific Liaison Panel (SLP) composed of experts (more than 50 % external) covering all relevant scientific disciplines will develop the scientific framework of the calls for proposals. It will revise the scientific challenges during the project and will recommend the prioritisation of scientific topics to be addressed by RI users. **TA2/WP2:** An easy access portal (single stop shop) will allow researchers to apply for access to any RI (or a combination of several RIs) offered in the project. For that, the INTERACCESS proposal management system developed and implemented in the EU-funded project INTERACT will be modified to allow the management of multiple infrastructures that, due to their nature, require specific information in the application. INTERACCESS is a platform that allows the handling of big volumes of proposals and thus it will be very efficient in the management of POLARIN calls for access. The project will implement a joint model of access to the participating infrastructures by creating governance documents and access policies for researchers.

POLARIN will:

Implement a Scientific Liaison Panel.

Settle the scientific framework to ensure that the proposals selected for funding actively contribute to addressing the most pressing scientific challenges in polar regions.

Develop a joint access portal to apply for TA to all POLARIN RIs.

Implementation

TA1/WP1 & TA2/WP2: Challenge driven calls for proposals will be launched to invite researchers to apply for TA. POLARIN will implement an internationally accepted review system for proposals to access EU and non-EU infrastructures under the same call for proposals. It will build on the evaluation system implemented in the EU-project ARICE which ensures that only excellent proposals are recommended for implementation. The **evaluation** will follow a “**two-step**” process to ensure that only proposals ranked as “Excellent” in the scientific evaluation will be forwarded to the logistic evaluation to be considered for access.

Step 1: Scientific evaluation of proposals (TA1/WP1)

Independent and international external experts will evaluate the proposals. In addition, the SLP will determine the evaluation criteria, give advice on the selection of external referees for the evaluation of proposals, and will rank and recommend proposals for funding based on the evaluation by the external experts.

Step 2: Logistic evaluation of excellent proposals (TA2/WP2)

Proposals ranked as “Excellent” in the scientific evaluation will proceed to the logistic evaluation. The infrastructure managers will evaluate the logistic feasibility of each of the proposals and integrate the highest scientifically ranked / logistically feasible project in their infrastructure schedules.

POLARIN will:

Open regular calls for proposals to access RI either in person or remotely (yearly, starting in M12)

Evaluate, rank, and implement in person or remote TA on POLARIN RIs in the polar regions.

Assessment

TA1/WP1: The outcomes of the TA projects will be monitored to assess their contribution towards the identified scientific challenges. **TA2/WP2:** To justify the access provided, a record will be kept on the names, nationalities, and home institutions of the user teams, as well as the nature and quantity of access provided to them. Dedicated logistic watchdogs from the project will oversee the implementation of TA on the different infrastructures. To monitor the effectiveness and quality of TA, feedback will be collected from applicants and RI operators to judge and improve the service provision, from the management of the calls for proposals to the project implementation.

POLARIN will:

Monitor and report the access provided.

Assess the quality of the service provision.

Service 2: Improvement of data services and data products (WP4)

a) Integration

POLARIN aims at improving the RI services by ensuring that databases and the data generated by the project contribute to the FAIR principles (findable, accessible, interoperable, and reusable). As previously mentioned, the actual data landscape is not optimal to ensure that available data is ready to consume.

POLARIN will:

Contribute to reduce data fragmentation by connecting and implementing workflows between data initiatives and by developing tools to facilitate the consumption of data.

Build on data tools implemented in previously funded EU projects (ARICE, INTERACT) and data initiatives and benefit from the integration with EMODnet and Copernicus.

Improve accessibility and interoperability of the data management landscape, with a specific focus on cross-platforms serving diverse disciplines. Current practices in data management are still using different formats, a wide diversity of datasets, and disparate data management structures. POLARIN will extend the current effort for harmonising data workflows from one domain to an ecosystemic and multidisciplinary approach.

b) Implementation

A front-end data portal will be implemented to find polar data matching user needs.

POLARIN will:

Establish a hub where experts as well as non-experts/intermediaries are guided (e.g., by a wizard tool, visual data discovery tree) to find data and information necessary to match their specific needs. In a very fragmented data management “universe”, this innovative approach will provide a significant improvement to the “findable” part of the FAIR principle.

To further develop the online services, the RIs offer, POLARIN will implement and/or further develop tools and services for intermediaries and end-users (both experts and non-experts). It will create ready to consume data products from raw data to visualise relevant parameters monitored by data repositories and data infrastructures for the research community, policy makers and the public. Examples of data products to be generated by the project will include:

In cooperation with POSEDA (GLISN33 network): Ice tomography in Greenland and Antarctica derived from seismic networks, providing information on glacier dynamics.

In cooperation with the ESFRI Landmark ACTRIS: Distribution maps of short-lived atmospheric species (e.g., black carbon).

In cooperation with selected databases, distribution maps of ecological variables.

c) Assessment

To assess the activities related to data services and data access, POLARIN will:

Report on the usability of the data hub, data services and data products generated in the project.

Service 3: Virtual access to research infrastructures (VA1/WP5 & VA2/WP6)

a) Integration

A single-entry portal will be created to make the data offered by POLARIN’s RIs accessible for VA. This will include the access to metadata and new data made available through the project via internet and data deposition services.

POLARIN will:

Create a VA single-entry portal for data from POLARIN’s RIs.

b) Implementation

POLARIN will provide VA to data free of charge to users complying with the RI’s access policy, without selecting them. In total, 21 infrastructures will be providing VA by extending the currently available

datasets and by implementing new services. This will include the provision of new data, digitalisation of old data and maintaining the flow of freely available data. The VA will be permanently open as soon as the single-entry portal is established.

c) Assessment

The VA provision will be monitored (with follow-up of the user statistics by web-analytical tools), and periodically assessed (three times in the project lifetime) by an external board comprising experts in providing free online access data.

POLARIN will:

Report on the statistics of VA and its evaluation by an external board.

Service 4: Training for research infrastructure users (WP7)

a) Integration

POLARIN will develop a training programme that addresses the needs of multidisciplinary polar RI users. It will ensure that RI users are able to optimally benefit from the services the RIs offer.

b) Implementation

POLARIN will implement three types of training activities for infrastructure users:

Training for early career scientists and professionals to ensure that the new generations are able to fully exploit the services of the diverse RIs. It will include a series of online seminars dedicated to scientific equipment and tools, expedition planning and legal, safety and sustainability requirements to work in the polar regions. Target groups will be PhD students and postdoctoral researchers, technicians, and engineers.

Training on data stewardship to ensure that data sets are adequately preserved and documented, and that they remain accessible and usable to end users. The usefulness of data sets depends also on the ability of data providers and stewards to assess, demonstrate, and describe the quality of the information, and their ability to adopt community best practices and standards. POLARIN will organise a dedicated training on data stewardship as a series of online seminars and workshops to ensure that data sets are not only collected, but also curated and able to deliver accurate, reliable environmental data sets.

Safety training to ensure that infrastructure users are prepared to deal with emergency conditions on land and at sea. POLARIN will organise a safety training under Arctic conditions in compliance with the Polar Code for a group of users. The safety training will prepare for marine and land expeditions. It will be accompanied by online and written training material.

Recordings of training activities will be available for visualisation/download at the POLARIN website.

c) Assessment

POLARIN will evaluate the effectiveness/success of the training activities by monitoring the attendance, collecting participants opinions and by monitoring the visualisation/download of recorded webinars and training materials.

Support to services: Outreach and engagement (WP8)

a) Integration

POLARIN will ensure that the most efficient outreach and engagement strategies are adopted:

- A dedicated project website will host all resources generated by the project, including training resources, information on TA activities, VA, and access to data in general. Newsletters and dedicated outreach activities will ensure that all interested parties are informed of planned activities and project progress.

Implementation

- The services offered by POLARIN will be publicised widely and across domains, to ensure that researchers interested in accessing the RIs and/or use the services are aware of the possibilities opened by the project.
- Training activities will be publicised widely to ensure they reach all potential candidates.

- A set of publications generated by the project will address common topics in polar areas, highlight project results and TA activities.
- TA users will be engaged as POLARIN Ambassadors to share their experiences and the results of their research work at the POLARIN RIs. A communication and outreach plan will be mandatory for all TA proposals and will be evaluated. Possible outreach activities of TA users are short videos, blogs, and storytelling publications.

Assessment

The outreach and engagement activities will be monitored periodically to evaluate their effectiveness. Correction measures will be applied throughout the project to ensure a smooth and effective outreach and engagement activity.

1.2.1.3 Risks and challenges identified in the methodology and how to overcome them.

POLARIN brings together a well-skilled team that builds on past experiences of TA projects such as ARICE, INTERACT and EUROFLEETS. The consortium includes infrastructure operators, users, and industry with extensive knowledge in collaborative projects, including both scientific and infrastructure projects. Nevertheless, critical risks have been identified in the project methodology, for which the following mitigating actions apply:

Description of risk (level of likelihood: Low/Medium/High)	WP(s) involved	Risk mitigation measures
The project does not contribute to addressing the scientific challenges – Very low	TA1/WP 1	POLARIN’s RIs have been carefully selected to represent different environments, from deep sea to glaciers, all range of vegetation cover, permafrost, etc. TA1/WP1 will ensure that proposals selected for funding address the key scientific challenges when accessing the infrastructures.
The joint TA access portal does not allow the inclusion of all RIs – Very low	TA2/WP 2	POLARIN relies on the functionality of the INTERACCESS portal to manage the TA application process. The portal is very flexible and by opening the first call for proposals 12 months after the project begins, there will be sufficient time to further develop and improve the portal. The developers and operators of this portal are consortium partners and members of TA2/WP2.
RIs are dropping out or are inaccessible - Low	TA3/WP 3	With 61 RIs, POLARIN offers a large suite of RIs. It offers several RIs in the key investigation areas so that other RIs can take over if one RI drops out.
Data products are not needed – Very low	WP4 & WP8	Databases store raw/unprocessed data which is difficult to process/ understand/visualise for non-experts in that very specific field. POLARIN will generate data products of interest ready to use by scientists, policy makers and society and will widely advertise them.
Single-entry portal does not allow to reach all VA providers – Very low	WP4 & VA1/WP 5	POLARIN will provide VA to different kinds of RIs (data infrastructures, observatories, research stations) through one portal. This can be challenging for the developers of the portal but the partners working in WP4 & VA1/WP5 are very experienced and have successfully developed such single-entry portals before in other projects (SIOS, INKODE, ETT). In addition, the five years duration of POLARIN allows sufficient time to prepare the portal and continuously improve it.

Training is insufficient - Low	WP7	Training will be implemented by experienced partners and professionals in multiple ways to ensure an efficient knowledge transfer. Each training module will be assessed by the audience to ensure it fulfils the expectations generated. All training material will be available on POLARIN’s website.
The right audiences are not reached - Low	WP8	POLARIN has developed a clear outreach plan addressing the pre-defined targeted audiences. It will adapt its outreach to each audience. It will also provide outreach in different languages, e.g., in Ukrainian to reach Ukrainian researchers more easily.

1.2.1.3 Compliance with the “do no significant harm” principle as per Article 17 of Regulation (EU) No 2020/852 on the establishment of a framework to facilitate sustainable investment.

The project methodology complies with the “do not significant harm” principle. The objectives of the project contribute and have the ultimate goal to safeguarding the environment, and the methodology is designed no to harm any of the six environmental objectives. The six environmental objectives that this Regulation covers are: climate change mitigation; climate change adaptation; the sustainable use and protection of water and marine resources; the transition to a circular economy; pollution prevention and control; and the protection and restoration of biodiversity and ecosystems.

1.2.2 National and international research and innovation activities that feed into the project.

This proposal gathers the legacies of the EU projects **INTERACT I, II and III, and ARICE**, by integrating the access to research stations with the access to research icebreakers in the Arctic region. POLARIN will directly build on the results of these two projects as a large part of the POLARIN consortium are part of the two networks. Both projects serve as an example for further expanding TA to RIs for the Antarctic region, as well as to observatories, sediment and ice core repositories and polar data infrastructures and services. POLARIN will benefit from successful data tools and management tools (e.g., the proposal management platform INTERACCESS) to effectively manage a big volume of proposals. The tools will be integrated and modified to help POLARIN in addressing both poles with multidisciplinary and multi-platform research and research projects.

POLARIN will further benefit from established collaborations with the EU projects **EUROFLEETS** for research vessel TA and **FixO3** for TA and VA to observatories.

POLARIN has a very close relation to **EU-PolarNet 1 and 2**. The coordinator of POLARIN is also coordinating EU-PolarNet, which in its first phase compiled the European Polar Infrastructure Catalogue³⁴, developed the European Polar Research Programme and published white papers on European polar infrastructure access and interoperability³⁵, and on Polar data Accessibility³⁶. POLARIN will directly benefit from all these achievements, the vast network, and the experience of EU-PolarNet in interacting with the European polar community and decision makers. As EU-PolarNet 2 is also coordinating the **EU Polar Cluster**, POLARIN will be immediately integrated in this network of polar EU projects, and it is self-evident that it will contribute intensively to all activities of the Cluster.

Due to the hard conditions and remoteness of the polar regions, strong and extensive international cooperation is a prerequisite for successful polar research. POLARIN complements and goes well beyond current national polar capacities. It will leverage the links with European and international initiatives through its consortium partners. The European Polar Board³⁷ (**EPB**), especially, brings together almost all European national polar programmes and polar operators. POLARIN will strongly benefit from this network and its experience in operating RIs at both poles.

POLARIN will cooperate as well with international organisations playing a key role in the polar regions, such as **SCAR and COMNAP**³⁸ for the Antarctic, and **IASC and FARO**³⁹ for the Arctic, as consortium

34 https://eu-polar.net/wp-content/uploads/2020/11/D3_2__European_Polar_Infrastructure_Catalogue.pdf

35 https://eu-polar.net/wp-content/uploads/2020/11/EU_PolarNet_Infrastructure-final_version-1.pdf

36 https://eu-polar.net/wp-content/uploads/2020/11/EU-PolarNet_D3_8_White_paper_on_Polar_data_accessibility.pdf

37 <https://www.europeanpolarboard.org>

38 Council of Managers of National Antarctic Programs, <http://comnap.aq>

39 Forum of Arctic Research Operators, <http://faro-arctic.org>

members are well represented in the governance of all the organisations or even acting as their chairs (MICIN for COMNAP and UKRI for IASC). POLARIN will contribute to relevant polar data initiatives such as the Arctic Data Committee (**ADC40**) of SAON and IASC, and the Standing Committee on Antarctic Data Management (**SCADM41**) of SCAR and SOOS. It will collaborate and contribute to programmes such as **EMODnet, Copernicus and GEOSS** and will ensure that relevant data is shared with these initiatives.

1.2.3 Interdisciplinarity and integration of expertise and methods

Since the key challenges in polar regions are multidisciplinary by nature, research in these areas must be implemented by cooperative multinational and interdisciplinary users or user teams that integrate expertise and methods. Although there is this strong scientific need for interdisciplinary collaboration, polar research is still to a large degree disciplinary. The marine research community does not interact a lot with the terrestrial one, and Arctic researchers not with the Antarctic ones. POLARIN aims at changing that by fostering interdisciplinary and multi-national research teams at its RIs. The following measures will be applied to achieve that:

- POLARIN will integrate and facilitate access to a diverse array of key infrastructure and their services, from the Arctic to the Antarctic, marine and terrestrial-based, data infrastructures and ice and sediment core repositories from both poles.
- The access to all kinds of POLARIN research infrastructures will be offered simultaneously, to allow user teams to build their research project integrating one or multiple infrastructures or to study and compare processes at both poles.
- Challenge driven calls will be opened by POLARIN and those challenges are multidisciplinary by nature and need to be addressed by an interdisciplinary approach.
- To foster interdisciplinarity of funded projects, proposals addressing key challenges with an interdisciplinary approach, making full use of the requested RI, will be given priority in the evaluation process.
- Since TA and VA has not been offered in the Antarctic before, expertise in TA and VA from the Arctic RIs will be transferred to the Antarctic.

This approach shall help to avoid duplication, minimise fragmentation, and foster cooperation between partners that are currently not used to working closely together such as land based, marine communities, and data scientists. Users and user teams will be asked to judge if this approach has been successful, so that the RI capacities and access procedure can be optimised.

1.2.4 Gender equality and inclusiveness

The integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement in the HORIZON-INFRA-2023-SERV-01-01 call.

The EU has made significant progress in gender equality over the last decades. It has implemented equal treatment legislation, gender mainstreaming and specific measures for the advancement of women. However, gender gaps still occur, also in polar science, a research field that historically has been largely male dominated. By promoting gender equality, POLARIN will contribute to the EU Gender Equality Strategy 2020-2025⁴². POLARIN will take measures to ensure equal opportunities of infrastructure users and user groups, independently of gender and socio-cultural factors. Users and user teams will be encouraged to respect and promote gender equality starting at the proposal stage by encouraging women's participation in field research and training programmes. Particular attention will be paid to ensuring **gender balance**, with a target of 50% women in advisory bodies such as boards and expert groups, as well as in evaluation panels. The gender equality and inclusiveness will be monitored by WP9.

40 Arctic Data Committee, <https://arcticdc.org>

41 Standing Committee on Antarctic Data Management of SCAR, <https://www.scar.org/resources/scadm/overview/>

42 https://commission.europa.eu/strategy-and-policy/policies/justice-and-fundamental-rights/gender-equality/gender-equality-strategy_en

POLARIN's WP8 "Outreach, engagement and impact" will oversee the implementation and monitoring of open science practices within the project and project outcomes. Publications and conference proceedings arising from the project will be published according to open access principles, either through external service (Gold or hybrid Open Access) or by self-archiving to a current research information system (Green Open Access). If full Open Access is not possible, a parallel repository (arXiv.org, OpenDOAR, OpenAIRE or Zenodo) will be used. POLARIN users will be prompted to use the platform Open Research Europe (ORE), an open access publishing platform with no publishing fees, for their publications. In addition, all training materials, such as online seminars, will be made public and accessible on the POLARIN website. Project data will be available at the European Open Science Cloud, the European Open Data Portal.

1.2.6 Research data management and management of other research outputs

All digital research data or research outputs generated or supported by POLARIN will be managed in line with the FAIR principles. Applying the FAIR principles means making the research data Findable, Accessible, Interoperable and Reusable throughout the entire data lifecycle. The first version of the POLARIN Data Management Plan (DMP) will be submitted in M6 (D4.1), and later updated in M30 (D4.12). The DMP will ensure that data and research outputs comply with the FAIR⁴³ principles. The DMP will describe the adopted tools/methods concerning data repository backend, frontend, catalogues, and how to create a reliable, free, open, and easily searchable service that are natively integrated with the regional datacentres and global polar initiatives. This will guarantee POLARIN data being interoperable, discoverable, and persistent across both the project interface and these networks, avoiding duplication of effort/storage.

POLARIN open access to research data via trusted repositories will be ensured under the principle 'as open as possible, as closed as necessary'. Deposition of (meta)data will take place as soon as possible after the data generation/processing/quality control has taken place.

Types of data/research outputs: Research teams funded by POLARIN will generate large volumes of *in situ* data. POLARIN will produce products and data processing outputs in the form of raw data (e.g., text, CSV, shapefile), metadata, postprocessed data for the scientific community (e.g., NetCDF), processing code (e.g., Jupyter notebooks) and end-products (e.g., journal articles, animations).

Findability of data/research outputs: POLARIN adopts all necessary measure to ensure data traceability. This applies to data and data products that are going to be (re)used in the project and is achieved by documenting the sources and methods (references, DOI, or any other identifier whenever available/applicable). It also applies data products that are collected and produced by POLARIN by properly documenting and assigning a DOI to each of them.

Accessibility of data/research outputs: The POLARIN data management policy is committed to open science practices, following the European Commission requirements and the European Research Council best practices. Nevertheless, data usability strongly depends on the data policy license. There is an increasing push for adopting the Common Creative framework. Whenever possible, the most permissive CC-BY (with the only limitation that credit must be given to creator)⁴⁴ should be preferred. An Embargo period may also be applied. The Embargo is the period during which access to a dataset is temporarily restricted. Usually, embargoes are applied while researchers are awaiting publication or pursuing a patent. Typical embargo periods range from 6 to 24 months from the data collection time. Open access to research data via trusted repositories will be ensured under the principle 'as open as possible, as closed as necessary'. Deposition of (meta)data will take place as soon as possible after the data generation/processing/quality control has taken place.

Interoperability of research outputs: POLARIN will contribute to the development of needed extensions and will share these outcomes via open repositories (e.g., GitHub, StackOverflow) (WP4 and VA1/WP5) and educational materials to use them (WP7).

Reusability of data/research outputs: Metadata will be open under CC 0 or equivalent (to the extent legitimate interests or constraints are safeguarded), in line with the FAIR principles and provide information about the licensing terms and persistent identifiers, amongst others. Besides adopting open

⁴³ The FAIR Data Principles (Findable, Accessible, Interoperable, and Reusable)

⁴⁴ CC BY-NC/CC BY-ND are allowed for long-text formats

data management software tools (e.g., ERDDAP, GeoNetwork), POLARIN will move beyond open access in implementing open science practices while following FAIR principles and whenever possible a link to data.europe.eu will be established. Authors will be encouraged to make pre-prints available via repositories such as Zenodo and ArXiv and publish in journals offering an open peer review process.

Curation and storage/preservation costs: POLARIN's consortium includes experts in the data management team that are closely linked with EU data repositories initiatives (e.g., SIOS, EMODnet, Copernicus Marine Service, EOSC45, GEOSS) to ensure maximum international data visibility and coordination in data management workflow and best practices. These are also key stakeholders for POLARIN's reuse of data as well as POLARIN's long term preservation of data.

Publication in open access journals will be encouraged, but if authors choose non-open access platforms, they will be required to pay the extra fees for gold, or at minimum, green level open access. They will be required to modify copyright agreements such that articles may be made available via institutional repositories and the POLARIN website.

Personal data: Personal data is needed to contact the applicants that submit a proposal to POLARIN or apply for any of its services. The data will be the minimal necessary for contact information and EC reporting (name, address, email, institution, country, nationality). POLARIN will request the explicit consent of applicants to store their data for the duration of the project and will inform which consortium members will have access to this personal data. Contact data from applicants to POLARIN services will be treated with rigorous care. POLARIN will use GDPR-compliant tools to collect, process and store research subjects' personal data; The project coordinator will ensure that all treatment of personal data will be according to GDPR regulations.

Ethical, legal and social aspects of data and derived research products

Even though no particularly sensitive data (e.g. health data, information on religion or sexual orientation) will be managed by the consortium, the consortium will ensure that ethical guidelines are followed in the course of data collection, processing, storage, archiving and subsequent use of data. In addition, to prevent the misuse of the data, the consortium will ensure that data protection and ethical as well as legal considerations are taken into account when sharing and publishing research data.

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2.1 Project's pathways towards impact

2.1.1 Expected outcomes

Project results are expected to contribute to all the following **expected outcomes (EO)**:

EO1: To provide innovative, customised and efficient RI services enhancing and increasing society's long-term and consistent problem-solving capacity and evidence-based policy making. POLARIN will increase society's long-term and consistent problem-solving capacity and supports evidence-based policy making by integrating and combining the access to a large portfolio of RIs from both poles in one single project. VA to data and data services will significantly improve the access to different databases hosting polar records from diverse scientific realms. Custom-made data products derived from a combination of raw data will provide scientists but also other users including decision makers with the appropriate tools to increase their problem-solving capacity. By extension, all the generated knowledge and products will allow evidence-based policy making.

Scale and significance: The consortium includes a comprehensive set of polar RIs from the EU, and international RIs from USA, Canada, UK, Chile and Ukraine at key sites in the polar regions. In total, access will be provided to **61 RIs operating at both poles**. We estimate that **at least 1000 users will benefit from the access** to infrastructures through this project in any of the access modalities.

Target groups: Infrastructure users (researchers, data experts, international climate initiatives and programmes, the private sector), and policy makers.

EO2: Enabling/facilitating science for understanding and predicting key processes in polar regions in the context of climate change.

The RIs offered in POLARIN have been carefully chosen according to their ability to address the grand challenges in the polar regions. They present a wide geographical coverage allowing comprehensive process studies. They are located at key sites to investigate specific topics. For example, some stations and vessels on the Antarctic Peninsula are located or operate in areas where glacier melt is highest in Antarctica.

Challenge driven calls for proposals will ensure that the funded projects address the understanding and predicting of key processes in polar regions, contribute to larger European and international initiatives and support policy making. The collaboration with the Earth Observation community via the cooperation with ESA-EOP will extend the observations performed in POLARIN in an unprecedented way.

An external evaluation of the submitted proposals by internationally well-known experts will assure that only scientifically excellent projects will be funded and that these add new and highly valuable knowledge to our understanding of the changing polar regions.

The inclusiveness of the polar infrastructure portfolio in POLARIN, and the integration of RI capacities in polar regions, will for the first time, provide researchers with an exceptional opportunity to access all assets and tools needed to tackle the grand challenges in polar research.

Scale and significance: 6125 units of infrastructure use will be provided for TA, either in person or as remote access. VA to data will be provided continuously throughout the five years of project duration.

Target groups: Infrastructure users (data experts, researchers, international climate initiatives and programmes).

EO3: Enhanced and further integrated RI capacities in polar regions in support of EU Arctic Policy, European Green Deal and international climate initiatives.

The new **Integrated European Union policy for the Arctic** highlights the importance of a safe, stable, and prosperous Arctic for the EU and recommends that all EU actions shall put science, research, innovation, and technology at the heart of their action. The EU has identified the following priorities for its engagement in the Arctic to which POLARIN will directly contribute with new knowledge:

Promote research and collection of data on the long-term implications of thawing permafrost.

Support the designation of Marine Protected Areas in the Arctic Ocean.

Boost Earth and ocean observation, forecasting and climate prediction through greater capacity for Copernicus and EMODnet to better anticipate the effects of global warming and extreme weather events.

Support the possible implementation of a Copernicus Arctic thematic hub to present as a one-stop shop all relevant services to monitor the poles, both inland and at sea.

With the **European Green Deal** communication, the EU committed to implement the Paris Agreement and the United Nations (UN) 2030 Agenda for Sustainable Development, and therefore EU activities taking place in, and relating to, the polar regions shall contribute to the success of these important protocols. POLARIN will provide background information for the implementation of the European Green Deal, as e.g., on the drivers of biodiversity loss and the effects of climate change in the polar regions. It will also improve the scientific information for increasing the coverage of protected biodiversity-rich land and sea areas in the polar regions. POLARIN will directly contribute to the availability of FAIR data with its WP4 and VA1/WP5 and to the establishment of the digital twins of Antarctica, the ocean and our climate system as requested in the European Green Deal.

The **IPCC Special Report on the Ocean and Cryosphere** in a Changing Climate clearly shows the dramatic effects of the ongoing climate change on the polar regions and its inhabitants, but also how the changing climate in the polar regions is significantly influencing the climate and weather patterns of the lower latitudes. The IPCC has observed several critical knowledge gaps in the understanding of the functioning of the polar regions and has recommended future assessments to increase confidence in models and predictions. **The scientific challenges that POLARIN will address in its call will be based on the knowledge gaps which the IPCC has identified and POLARIN will contribute to close these gaps.**

POLARIN will improve international cooperation with the Arctic States and major players in the Arctic, as they are all (except Russia) partners in the consortium and offer their infrastructures for joint research. On an international level, the **Arctic Science Ministerial (ASM)** also puts emphasis on improved and better coordinated international scientific cooperation in research and observations to advance our understanding of Arctic Change, of its impacts on other regions of the world, and on our ability to respond by providing appropriate and evidence-based information for decision-making processes. It especially encourages multinational participation in field station and ship-based research.

Scale and significance: Coordinated access to 61 infrastructures will be offered to the polar research community. This will support challenge driven research contributing to international climate initiatives and policy-making.

Target groups: Infrastructure users (researchers, data experts, international climate initiatives and programmes), infrastructure operators, policy makers.

2.1.2 Wider impacts

Project results are expected to contribute to all the following expected **wider impacts (WI)**:

WI1: Reinforced research infrastructures capacity to provide at scale and across the EU services to support excellent research to address societal challenges, and Horizon Europe missions and partnerships' objectives.

The polar regions lie at the epicentre of climate change, facing rapid changes and new challenges due to biodiversity loss and increased economic interest. Access to RIs in the polar regions is not easy as they are very difficult to reach. Only few countries operate RIs at the poles, as these are very expensive to operate. Building on previous achievements, POLARIN will further develop the services that the polar RIs currently offer. It will implement targeted data services in support of challenge driven research. With that, POLARIN will provide the scientific community with the tools and assets needed for tackling the most pressing **societal challenges** in the polar regions. POLARIN will support the Pillar II Clusters addressing “Global Challenges” in Horizon Europe by contributing to Cluster 5 “Climate, Energy and Mobility” in aspects related to climate change in polar regions; and to Cluster 6 “Food, Bioeconomy, Natural Resources, Agriculture and Environment” addressing the natural resources and environment challenges. POLARIN will collaborate and engage with other projects under the EU Polar Cluster. International cooperation will be reinforced ensuring a better use of RIs through improved coordinated operations.

The EU has implemented dedicated **Horizon Europe missions** to implement the European Green Deal. “Lighthouses” within the Mission “Restore our Oceans and Waters by 2030” shall support regional engagement and cooperation for major sea/river basins. One of these lighthouses addresses the Atlantic-

Arctic and aims at protecting and restoring ecosystems and marine biodiversity. POLARIN will contribute to the mission through its lighthouse Atlantic-Arctic, by enabling and supporting research that investigates the status of polar ecosystems and marine biodiversity. POLARIN will also contribute to the Mission “Adaptation to climate change” by providing baselines and scientific evidence to prepare for and adjust to both the current and the predicted impacts and effects of climate change. POLARIN will provide reinforced RI capacity and data from the polar regions in support of at least the following partnerships’ objectives:

Rescuing Biodiversity to Safeguard Life on Earth: by providing access to observatories for biodiversity monitoring, and by providing an evidence base for the development and deployment of nature-based solutions.

Climate neutral, sustainable, and productive Blue Economy: by supporting evidence-based policy making.

European Open Science Cloud (EOSC): by ensuring maximum international data visibility and coordination in data management workflow and best practices.

Additionally, POLARIN will contribute to the following political agreements of the EU by closing eminent data gaps, improving knowledge and knowledge transfer and by supporting cooperation between European and International polar researchers on its RIs:

the **All-Atlantic Ocean Research and Innovation Alliance (AAORIA)** which brings together and systematically connects all relevant actors across the Atlantic Ocean from Pole to Pole. AAORIA aim is to identify concrete research and innovation activities with a long-lasting potential and impact across a range of six key areas one of which is polar research.

the **ESA-EOP and EC-RTD joint Earth System Science Initiative** signed in 2020, which is aiming at joining forces to advance Earth System Science in the collective response to the global challenges that society is facing. One of its flagship actions on “*Polar changes and global impacts*” shall advance observation capabilities, basic understanding and prediction capacity of changes taking place in polar regions, its interactions and feedbacks with the Earth and climate systems and its expected impacts on society and ecosystems from regional to global scales.


Scale and significance: The research work funded in POLARIN will significantly increase the knowledge gained. International initiatives and international cooperation will benefit from that and will be reinforced.

Target groups: Infrastructure users (data experts, researchers, international climate initiatives and programmes), infrastructure operators, decision makers.

WI2: Enhanced and increased society’s long-term and consistent problem-solving capacity and evidence-based policy making in areas linked to health, and the green and digital transition, including a better understanding of socio-economic implications, through the provision of innovative, customised and efficient RI services.

Problem solving involves determining the cause of the problem, identifying, prioritising, and selecting alternatives for a solution and, in the end, implementing a solution. But this is only possible if high quality information is available. As generators of knowledge and drivers of scientific excellence, RIs are key in enabling research and innovation. The provision of access will accelerate addressing the key challenges in the polar regions and the provision of solutions. POLARIN will foster data collection in an international and multidisciplinary approach. It will reinforce and shorten the bridge between the research community and policy makers by providing data products ready to consume in support of evidence-based policy-making. POLARIN will ensure that research activities at both poles are addressing the most pressing challenges in the polar regions. In turn, the increase in data recovered from the polar regions and improved access to databases will foster better and improved climate models and future predictions. Ready to use data products will serve not only the research community in different fields, but also the policy makers in sustaining the decisions made by governments.

Scale and significance: As society is the ultimate beneficiary of this action, the scale of this impact is enormous. It has major implications for climate modelling, sea level rise estimations and future predictions as well as for our understanding of the polar regions and their changes and for society readiness and adaptation measures.

Target groups: Policy makers, society, infrastructure users (data experts, researchers, international climate initiatives and programmes).  (Associated with document Ref. Ares(2023)7293125) 26/10/2023

WI3: New discoveries and knowledge breakthroughs enabled by access provision to the best and in some cases unique state-of-the-art RIs.

Access to the polar regions through state-of-the-art RIs is needed to ensure that the most pressing challenges in the polar regions are addressed. New discoveries and knowledge breakthroughs enabled by POLARIN are expected in several natural sciences disciplines. Understanding the processes and interactions among sea ice, ocean, and atmosphere, the thawing of permafrost, the fate of glaciers and ice sheets (and its implications on sea level rise), and biodiversity changes are only a few examples of critical knowledge gaps that projects funded through POLARIN will address. Those challenges are multidisciplinary by nature and can only be tackled by accessing state-of-the-art polar RIs. POLARIN will ensure that researchers can access the best infrastructure according to their needs and do not depend only on the RIs available through their national pools. POLARIN's set of RI comprises unique state-of-the-art RIs. It includes RIs located or operating in key geographic/environmental areas crucial for addressing the scientific challenges. It comprises new cutting-edge research icebreakers (e.g., RV Kronprins Haakon), key research stations in the Arctic and Antarctic, unique observatories such as FRAM in the deep Arctic Ocean, access to main sediment and ice core repositories, and data infrastructures.

Scale and significance: The increase in data collection and the improvement of databases and data infrastructure online services will positively impact the research environment, accelerating the development of discoveries and knowledge breakthroughs. The increase in data collection will be reflected in scientific publications arising from the TA activities and number of datasets created through the project.

Target groups: Infrastructure users (data experts, researchers, international climate initiatives and programmes), policy makers.

WI4: A new generation of researchers trained to optimally exploit all the essential and advanced tools for their research.

The Association of Polar Early Scientists (APECS) will implement a training programme in POLARIN which focusses especially on the demands of Early Career Researchers (ECR) as RI users. APECS is very experienced in organising training through its wide network of mentors and e.g., provided the training for ECRs in the very successful MOSAiC school⁴⁶ within ARICE. The training for the new generation of researchers will include all skills necessary to do field work or cruises in the polar regions. It will range from the use of scientific equipment, expedition planning and research tools, to training of safe and sustainable behaviour and the information on legal frameworks (Antarctic Treaty) that need to be respected in the polar regions. In addition, POLARIN will ensure that ECRs are educated on how to collect, curate, store and share their data to ensure that the data they collect throughout their career is accessible, trustworthy, usable, and secure. POLARIN will promote the inclusion of ECRs in research cruises or field expeditions by requesting it in the calls for proposals and by evaluating the training concept of the applicants. The training programme of POLARIN will include an in-person survival training course in accordance with the Polar Code and targeted at expedition leaders.

Scale and significance: As most of the training in POLARIN will be online, and training materials (video recordings and other training materials) will be uploaded to the project's website, they have the potential to impact thousands of early careers and senior researchers worldwide.

Target groups: Early career researchers and experienced researchers.

WI5: Cross-fertilisation and a wider sharing of knowledge and technologies across disciplines and between academia and industry and businesses.

Polar challenges are multidisciplinary by nature. To address them, POLARIN will foster multidisciplinary research expeditions through its diverse pool of RIs and through providing easy access to them via its single-entry portal. Selected proposals will be implemented in the RI regular schedules, thus ensuring that

⁴⁶ <https://arice-h2020.eu/training/mosaic-school-2019/>

the teams will benefit from cross fertilisation and an even wider multidisciplinary environment. The integration of land-sea studies, together with existing samples from core repositories and analysis of data from data infrastructures will promote cross-fertilisation and the sharing of knowledge, technologies, and best practices among scientific disciplines. Industry and business will also benefit from the access to RI, and from the data, data products, and tools generated in POLARIN.

Scale and significance: All access offered in POLARIN will be multidisciplinary and open to participants from science, academia, and industry.

Target groups: Infrastructure users (researchers, data experts, international climate initiatives and programmes), industry, business.

Potential negative environmental outcome/ impact

The polar regions remain pristine and fragile areas that need to be protected. But due to the retreat of sea ice (commercial) traffic in the polar regions (and especially in the Arctic) has increased significantly in the last decade. On the one hand, any access to the polar regions encompasses risks for the fragile environment, for expedition participants and for the RIs that cannot be neglected. On the other hand, it is imperative to investigate these remote regions to establish (ecologic/knowledge) baselines, to understand the processes occurring there and to monitor their changes. Data from the polar regions is necessary to better forecast weather and sea ice to reduce human and infrastructure risk, and the risk of commercial operations in those regions and elsewhere. Adaptation and mitigation strategies also depend to a large degree on the data collected in the polar regions.

2.1.3 Potential barriers beyond the scope and duration of the project

Description of risk (level of likelihood: Low/Medium/High)	WP(s) involved	Risk mitigation measures
Expedition cancellations due to “force majeure” or inaccessible working area - Medium	TA2/WP2, TA3/WP3	The COVID-19 crisis has taught us that travel restrictions (associated with a pandemic in the recent case, but also due to natural phenomena) can take place even at a global scale. The duration of POLARIN has been set to five years to ensure that the implementation of TA can take place as expected within the duration of the project. This will allow the infrastructures to reorganise their schedules in case of “force majeure” without major implications for the project.
Escalating prices (e.g., energy) within the project duration - Medium	TA2/WP2, TA3/WP3	Escalating energy prices have a major impact on the RI operation. The Unit costs of the POLARIN RIs will be significantly affected by this if the prices continue to escalate. Since the project budget is fixed and in case the unit price varies considerably, the consortium will have to adjust the number of units offered by the different RIs. On the contrary, should the energy prices decrease considerably, the RIs will be able to offer additional days in compensation.
International conflicts of political nature among partner countries impede cooperation in the project - Low	All WPs	The consortium is broad enough to compensate a missing partner or a missing RI by offering additional TA to similar RIs.

2.2 Measures to maximise impact - Dissemination, exploitation, and communication

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Proposals submitted to this call are not required to include a plan for the exploitation and dissemination of the results as the main objective of these actions is the service provision.

POLARIN’s measures to maximise the impact rely on an effective communication of the services offered by the project, ranging from TA and VA to RIs, data services, tools, products, and training. To maximise the impact, the project results will be disseminated through different channels.

2.2.1 Communication plan

The communication activities will start at the onset of the project and will continue throughout the project’s entire lifetime. The overall objectives of the communication activities are:

- CO1:** To promote the project throughout the full lifespan of the project,
- CO2:** To actively advertise POLARIN’s services: TA to RIs, VA to data, data tools, data services and data products, and training opportunities.
- CO3:** To inform and reach out to society and show the activities performed, and the use and benefits the project will have for citizens.
- CO4:** To contribute to evidence-based policy-making.
- CO5:** To support internal communication.

POLARINs communication activities will be directed to relevant target audiences, with the aim of informing and engaging them in the project activities. These activities will rely on the corporate design (branding) of POLARIN, which will support the consortium members to communicate the project in a consistent and uniform manner. Communication channels and tools will include a logo, website, social media platforms, templates for presenting and reporting, a project presentation video, and a project description. Internal communication tools will be developed to ensure a smooth flow of information among the project members, including mailing lists for internal communication purposes, a document sharing platform (intranet/document storage and communication platforms) and in-person and online meetings. The communication activities are strategically planned to ensure a comprehensive communication plan with clear objectives and for different target audiences.

Target audiences

End users of POLARIN’s services	
Specific target group	Description of target group in relation to POLARIN
Scientific community	POLARIN will provide the scientific community with access to polar RIs and further opportunities/services opened by the project.
Early career researchers	POLARIN will actively inform the ECR community of the specific opportunities to access the POLARIN RIs and of training activities dedicated to this community. By actively reaching out, POLARIN can engage ECR’s with their services. Examples: APECS, national APECS divisions, universities (see higher education institutions)
National polar programmes and research institutions	POLARIN will provide research institutions with an overview of the opportunities/services offered by the project.
Funded (polar) projects or projects that need polar data	POLARIN will provide other Horizon Europe projects with an overview of its services. Utilising entities such as the EU Polar Cluster can help POLARIN to effectively address a large part of the polar science community. Examples: EU Polar Cluster, ESA Polar Science Cluster
Technicians and engineers	Training for use of state-of-the-art technical equipment and data stewardship will be organised by POLARIN. In addition, technicians and engineers will benefit from better capacities for research in the polar regions and TA to RIs when they are part of user groups.
Multilateral and international organisations	International and multilateral organisations which either represent polar research institutes or are involved in/engaged with polar science will benefit from the services offered through POLARIN. Examples: European Polar Board (EPB), Asian Forum of Polar Sciences (AFoPS), Managers of the Latin American Antarctic Programs (RAPAL), Arctic Research Consortium of the United States (ARCUS)

Other target groups	
Specific target group	Description of target group in relation to POLARIN
POLARIN consortium members	POLARIN consortium members will receive internal communication for an efficient coordination of the project and to be made aware of project related news.
User groups	Once their proposals for TA have been approved, successful call participants will receive support from WP8 to follow their own outreach and engagement plan.
Research infrastructure operators	Research infrastructure operators are key partners in discussing, planning, and implementing a better scientific and logistic coordination of RI access. They will benefit from a coherent and more efficient process of granting access to RIs and an optimised and cost-effective use of these.
International agreements and international partnerships	An integrated and harmonised access to polar RIs will increase the understanding of the polar regions and thus ease the task of developing evidence-based policy recommendations for a sustainable usage of the polar regions that are subjected to international agreements or partnerships. Examples: Arctic Council (Enhancement of International Cooperation of Arctic Science), Antarctic Treaty System
Policy and decision makers	An integrated and harmonised access to the polar RIs will increase the understanding of the polar regions and thus ease the task of developing evidence-based policy recommendations for a sustainable usage of the polar regions and their resources. This will be beneficial to support the EU Arctic Policy, the European Green Deal and other policy-based climate initiatives. Providing TA to international infrastructures moreover supports science diplomacy efforts by building bridges between countries and promoting scientific cooperation as an essential element of foreign policy. Examples: EC, local, regional, national decision makers
Maritime industry	Maritime industry partners have a critical need for better polar information in support of safe, responsible, and effective industry operations and of the European policy for cleaner and better oceans.- Furthermore, commercial vessels and structures could serve to host or deploy instruments for environmental data collection and provide possibilities to increase monitoring capabilities. Logistics, suppliers, IAATO, AECO. This target group will be engaged with the support of the beneficiary 22 PONANT (tourism) and via presentations at dedicated industry events such as the SMM in Hamburg.
News outlets	Media can contribute to underlining the importance of polar science, by reflecting on expeditions, expedition results, data tools and products. Example: National newspapers, dedicated journals for science news.
Civil society, public at large	POLARIN will regularly inform the public about the project to show the activities performed and the use and benefits the project has for citizens.
Educators	The recordings of online seminars, and other training materials will be available for education and training. Examples: Universities, schools, Polar Educators International (PEI).

Communication channels and tools

POLARIN will develop and use various communication channels and tools to effectively communicate both internally and externally and to effectively engage the defined target groups. It is important to note that many of the following channels and tools will be used for both outreach and engagement activities.

Channel/tool	Purpose/objective	Target group(s)	KPIs	WP/Month
Corporate identity (logo, templates)	To identify the project and project activities through branding.	All	Not applicable	WP8/M1

Website	A regularly updated website will serve as a reference platform for all target groups to find relevant information about the project – including the opportunities offered by POLARIN (call for proposals, data tools and services), its objectives, achievements, the consortium, news, events, how to get involved, etc.	All	Continuous evaluation of global visitors (list top 10 visiting countries)	WP9, WP8/ set up in M1, ongoing
Internal website	An internal website will enable project members to download current working materials, such as reports, deliverables, and presentations.	POLARIN consortium members	Not applicable	WP9, WP8 / Set up in M1, ongoing
Social Media	Regularly used social media accounts will raise awareness for the project and engage the defined target groups. Accounts will be set up for: Facebook, Instagram, YouTube or Vimeo, LinkedIn, Twitter/Mastodon. A social media strategy following EC guidelines will include the initial launch combined with a main event and be further developed at the start of the project.	All target groups	Continuous evaluation of engagement (clicked links/comments/reposts)	WP8/Set up in M1, ongoing
Newsletter	Quarterly newsletters will be sent to newsletter subscribers providing project updates, highlights, achievements, upcoming events, etc.	All	Number of readers	WP8/Subscription set up in M1 (on website), ongoing
Flyers, brochures, posters, roll-ups	POLARIN will create a diverse set of brochures and project material developed for training, data products and project results. All print material will be made available as e-files.	Target groups depend on outreach material	Number of downloads / printed material	WP8/ On demand
Press releases	Timely press releases will be issued for specific project activities and events to create credibility and impact.	Media	Number of news items stemming from press release	WP8/ On demand
Videos	Short videos will be produced to introduce the POLARIN project, its aims, and objectives. Videos will be published online on POLARIN’s YouTube or Vimeo channel.	All	Number of visitors on YouTube /Vimeo channels	WP8/ M6
Email	Formal email communication channels to target specific target groups for e.g., policy briefings etc.	Depends on content	Not applicable	WP8/ On demand
Guidelines for content creation of RI users	Create a set of broad guidelines to ensure usable content being developed by access users of POLARIN RIs	Scientific community, RI users	Not applicable	WP8/ M8

Publications resulting from service users	POLARIN will gather the scientific achievements/ publications from RI users that were granted access through POLARIN	Scientific community, policy and decision makers, POLARIN Consortium Members, Media	Number of publications	WP8/ Ongoing
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Communication activities and events

POLARIN’s communication activities and events will actively advertise its services to and effectively inform and engage the defined target groups, specifically the scientific community. The table below is a starting point of the planned communication activities and events and will be updated during the project.

Activity/event	Purpose/objective	Target group(s)	KPIs	WP/Month
Consortium meetings	Consortium meetings, i.e., general assemblies, will be organised during the project. These include a kick-off meeting at the beginning of the project, annual meetings, and a closing meeting at the end of project.	Project Members, (invited external representatives if necessary)	Number of meetings	WP9/ M1, then annually
Clustering with other initiatives	The project will connect and work with other active initiatives such as the EU Polar Cluster to maximise knowledge sharing and better distribution and communication among the target audience.	Scientific Community, POLARIN Consortium Partners	Number of partnerships / joint activities	WP8, WP9/ Ongoing
Scientific and non-scientific events	Partners will attend scientific and non-scientific events to disseminate project results	All	Number of visited events	All WPs/ On demand
International fora	Promotion of established cooperation efforts of POLARIN	Depends on forum	Number of fora participated in	All WPs/ On demand
Promotion of project results	Promotion of research expeditions funded through the project, data access, tools and data products, training, and materials generated by the project.	All	Number of participants to the events	WP8/ On demand
Outreach beyond Europe	Translations of outreach activities (e.g., social media posts) into native languages of consortium partners to ensure that many researchers are made aware of relevant opportunities and services.	Scientific community	Number of translated posts / # non-European followers	WP8/ Ongoing
Dedicated outreach to Ukraine	Outreach in national language(s) to Ukrainian researchers and scientists.	Scientific community in Ukraine	Number of activities (e.g., posts, press releases)	WP8/ Ongoing

2.2.2 Strategy for the management of intellectual property

The access to RIs has, in most of the cases, the objective of collecting environmental data to better understand the processes, the status, and the evolution of the natural environment. However, in some

cases, there might be a need to manage intellectual property if the outcomes of the access can be valorised, for example if the recovery of data or samples leads to the discovery of natural resources, or chemical compounds that can be commercialised by e.g. pharmaceutical companies. Depending on the context, IP rights results might belong to the researcher or to her/his employing organisation or is shared by both. A common situation is that the author keeps the moral rights on his production, while the economic rights are owned by the employing organisation. This must be checked carefully by the researcher before applying for specific protection rights and before deploying any exploitation initiative. In most cases, the end user institutions have their own “technology transfer/exploitation” units that manage intellectual property cases. In other cases, POLARIN will refer to the European IP Helpdesk (<http://www.iprhelpdesk.eu/>), a service funded by the EC and managed by EASME⁴⁷. It provides free-of-charge, first-line advice and information on Intellectual Property (IP).

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2.3 Summary

SPECIFIC NEEDS: The polar regions are facing rapid changes and new challenges due to climate change, biodiversity loss and increasing economic interest. There is a need to: understand and predict these changes including their impact in other regions, identify solutions and provide evidenced-based information in support of the European Green deal and EU Arctic Policy. Inclusive access to services provided by state-of-the-art RIs in the polar regions is essential to address key challenges, EU priorities, and the training of researchers.

D&E&C MEASURES: The overall objective of the communication strategy is to actively advertise POLARIN's services, i.e.,: TA to RIs, VA to data, data tools, data services and data products, training opportunities and project results to relevant target audiences, as well as to engage different target audiences in project activities. The communication activities will start at the onset of the project and will continue throughout the full project's lifetime. They will involve various communication channels, tools, and activities to effectively communicate both internally and externally and to effectively engage the defined target groups.

TARGET GROUPS: Scientific community (including early career researchers, research institutions, science projects, user groups); Skilled staff (technicians and engineers, Research infrastructure operators); International organisations; Governmental bodies; Industry; Civil society; Educators; Media.

EXPECTED RESULTS: POLARIN will efficiently integrate and combine access to a wide portfolio of Arctic and Antarctic RIs services: research vessels including icebreakers, research stations, fixed and mobile observatories, and ice and sediment core repositories. The inclusiveness of the polar infrastructure portfolio in POLARIN, together with VA to data and improved data services, will provide the polar research community with the appropriate tools and problem-solving capacity to address multidisciplinary challenges in polar research. It will significantly increase the data collection in the polar regions. POLARIN will train researchers to optimally exploit state-of-the-art polar RIs, to manage their data according to FAIR principles, and to survive under extreme conditions.

OUTCOMES: POLARIN will accelerate the research cycle by providing a coordinated and inclusive TA to a wide array of RIs to support multidisciplinary research. Results from expeditions funded through the project will boost the knowledge progress on understanding the processes governing polar regions. Relevant key data products will be generated to facilitate the integration into ongoing research and policy-making. POLARIN will contribute to increasing international cooperation. The improvement of online services will allow the use of data currently hidden and the publication of homeless data. POLARIN will improve data access and interoperability by enabling the connection between initiatives, improving workflows, and reducing data fragmentation. New generations of researchers will be ready to take over modern polar research in multidisciplinary contexts, to comply with the Polar Code regulations and to properly exploit the RIs and their tools, including their data.

IMPACT: By providing coordinated and integrated challenge driven access to RIs, POLARIN will contribute to wider impacts in the following domains:

Societal: Key challenges in polar regions have strong societal implications: from sea level rise to ecosystem (and fisheries) changes, weather forecast and climate predictions. By enabling access to RIs services, POLARIN will accelerate the delivery of solutions.

Institutional: POLARIN will contribute to consolidating international cooperation and cooperation between RI operators. It will provide the tools for evidence-based policy-making.

Scientific: POLARIN's access to RI services will boost data collection, and it will accelerate the research capacity of Europe.

Economic: The coordinated access to RIs and their services, together with an improvement of data-bases access and interoperability, will contribute to a more efficient use of resources and to less duplication of efforts.

Environmental: Projects funded within POLARIN will contribute to establishing baselines in polar ecosystems, needed to evaluate measures to protect biodiversity, for the conservation of species, to identify threats from climate change and to understand processes governing sea-ice, ocean, and atmosphere.

3.1 Work plan and resources

3.1.1 Overall structure of the work plan

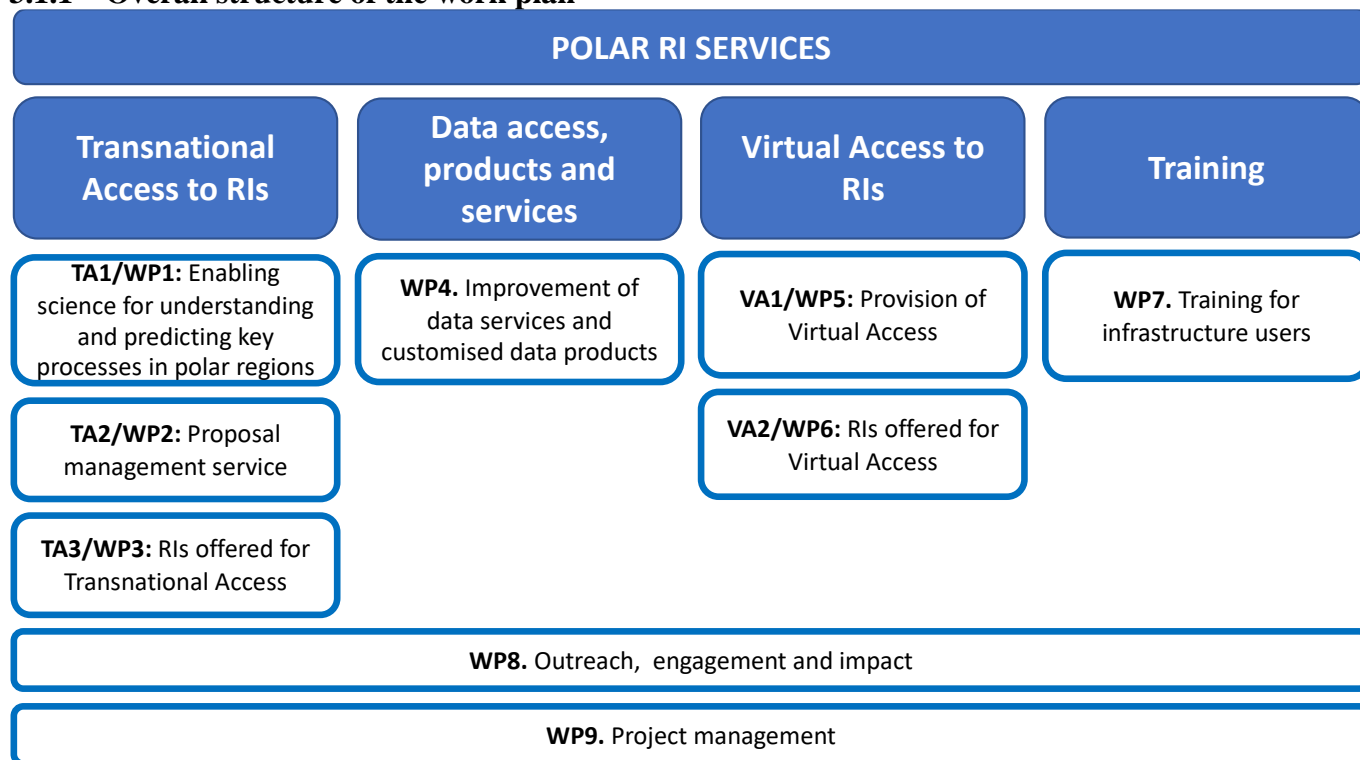


Figure 3.1: Overall structure of the work packages.

POLARIN will integrate polar RI capacities to facilitate science for understanding and predicting key processes in polar regions in the context of climate change, to enhance the society’s problem-solving capacity and to support evidence-based policy making. The services offered by POLARIN are:

1. Challenge driven TA (in person and remote) to selected polar RIs of European interest,
2. Data access, data products and data services
3. VA to multidisciplinary polar data
4. Training for infrastructure users

TA1/WP1 will establish the background of research challenges to ensure that access to POLARIN RIs contributes to the specific challenges identified by international organisations and programmes such as ESA⁴⁸, SCAR⁴⁹, IASC⁵⁰, UNDOS, and past and ongoing EU Polar Cluster projects. This WP will oversee the scientific evaluation of proposals (by an external board) and will assess the contribution of the projects and the infrastructure capability towards addressing the challenges.

TA2/WP2 will implement an easy access portal (one-stop shop) to POLARIN RIs to allow researchers to apply for any (or a combination of several) RI(s) in support of excellent multidisciplinary research. For that, the INTERACCESS proposal management system developed and implemented in the EU-funded project INTERACT, will be modified to allow the management of multiple infrastructures that, due to their nature, require specific information in the application. Challenge-driven calls for proposals will be launched to invite researchers to apply for TA. This WP is the link between the scientific frame (challenges, evaluation in TA1/WP1) and the RI operators. It will perform the logistic evaluation of proposals recommended by TA1/WP1.

TA3/WP3 describes all infrastructures offered for TA (either in-person or remote), including their description of work, outreach to new users and review procedure.

⁴⁸ European Space Agency, <https://www.esa.int>

⁴⁹ Scientific Committee on Antarctic, Research <https://www.scar.org>

⁵⁰ International Arctic Science Committee, <https://iasc.info>

WP4 is dedicated to improving the access to data, development of online services and data products. It will improve the accessibility and interoperability of the data management landscape and it will establish a hub to find data suiting the user's needs. This WP will also create data products from raw data to facilitate the consumption of data generated by the RIs.

VA1/WP5 will create a gate to the VA of data offered within POLARIN, periodically monitoring the access through an external assessment board.

VA2/WP6 describes all infrastructures offering VA of data, including their description of work and outreach to new users.

WP7 will implement training for infrastructure users in different formats. It will implement 1) online seminars for a broad audience on scientific tools and equipment, land and sea expedition planning, and safety and sustainability. 2) online training on data stewardship, and 3) an in-person safety training in compliance with the Polar Code, to ensure selected expedition leaders are trained to guide their team to survive at least 5 days in extreme conditions.

WP8 will support all services as the Outreach, Engagement, and Impact work package to ensure that the services offered by POLARIN reach and engage a large audience. It will create the project website, regular newsletters and will advertise the opportunities opened by POLARIN. It will engage the community of users in an Ambassador programme and evaluate the communication and engagement activities and the impact of POLARIN on multiple stakeholders.

WP9 will ensure a smooth project management and implementation of the project. It will enable synergies across the consortium, managing the information and communication flow, and with other projects and entities such as the EU Polar Cluster and ESA. It will implement an Advisory Board with relevant stakeholders to enhance the connection with international partners and organisations as well as with other European initiatives and projects.

3.1.2 Gantt chart

	2024												2025												2026												2027												2028														
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D			
	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60			
WP1 Understanding key processes in polar regions						M1.1	M1.2													M1.3																																											
T1.1 Challenge driven call definition and integration					D1.1	D1.2	D1.4																																																								
T1.2 Scientific evaluation							D1.3													D1.6																																											
T1.3 Optimising the scientific outcome of the access programme											D1.5																																																				
WP2 TA Proposal management service							M2.1		M2.2	M2.3																																																					
T2.1 Integration of access procedures and call implementation																																																															
T2.2 Logistic evaluation of proposals							D2.1															D2.3																																									
T2.3 Quality assurance and follow-up implementation																				D2.2																																											
WP3 RIs offered for TA																																																															
TA access																																																															
WP4 Improve data services and provide data products																																																															
T4.1 Improving access to polar data							D4.1																																																								
T4.2 Improving polar data availability and interoperability																																																															
T4.3 Data products, tools and data services																																																															
WP5 Implementation of VA and improving online services																																																															
T5.1 Development of a virtual access portal																																																															
T5.2 Monitoring and evaluation of the access																																																															
WP6 RIs offered for VA																																																															
VA access																																																															
WP7 Training for infrastructure users																																																															
T7.1 Training for ECRs and technical personnel																																																															
T7.2 Training on data stewardship																																																															
T7.3 Training for safe and sustainable polar expeditions																																																															
WP8 Outreach and engagement																																																															
T8.1 Visibility and communication of POLARIN																																																															
T8.2 Engagement of service users and ambassadors																																																															
T8.3 Evaluation of communication and engagement activities																																																															
WP9 Project management																																																															
T9.1 Contractual and financial management																																																															
T9.2 Operational management																																																															
T9.3 Clustering with other initiatives																																																															
D Deliverables	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50	M51	M52	M53	M54	M55	M56	M57	M58	M59	M60			
M Milestones	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D			

Table 3.1g: ‘Subcontracting costs’ items

Not applicable

Table 3.1h: ‘Purchase costs’ items (travel and subsistence, equipment and other goods, works and services)

1/AWI		
	Cost (€)	Justification
Travel and subsistence	259.650,00	128.000 for travel to GAs, retreat, final conference, and other project meetings, 131.650 for travel related to TA.
Other goods, works and services	425.632,00	90.000 for organisation of 3 GAs, 50.000 for travel and allowance for SLP and AB members, 55.000 organisation of retreat and final conference, 5.000 audit costs (CFS), 10.000 shipment related to TA, 95.632 purchase costs related to TA (FRAM), 120.000 for in-person safety training under Arctic conditions.
Total	685.282,00	
2/UOULU		
Travel and subsistence	40.460,00	30.000 for travel to GAs, retreat, final conference, and other project meetings, 10.460 for travel related to TA.
Other goods, works and services	65.194,00	50.000 for services related to INTERACT GIS, and 10.194 for purchase costs related to VA, 5.000 audit costs (CFS),
Total	105.654,00	
3/INPA		
Travel and subsistence	30.000,00	30.000 for travel to GAs, retreat, final conference, and other project meetings.
Total	30.000,00	
4/ULUND		
Travel and subsistence	33.000,00	33.000 for travel to GAs, retreat, final conference, and other project meetings.
Total	33.000,00	
5/CNR		
Travel and subsistence	68.500,00	35.000 for travel to GAs, retreat, final conference, and other project meetings, 33.500 for travel related to TA.
Other goods, works and services	10.000,00	5.000 for shipment related to TA, 5.000 audit costs (CFS),
Total	78.500,00	
6/OGS		
Travel and subsistence	37.000,00	25.000 for travel to GAs, retreat, final conference, and other project meetings, 12.000 for travel related to TA.
Other goods, works and services	9.000,00	4.000 purchase costs related to TA , 5.000 audit costs (CFS),
Total	46.000,00	
7/INKODE		
Travel and subsistence	30.000,00	30.000 for travel to GAs, retreat, final conference, and other project meetings
Total	30.000,00	
8/AU		

Travel and subsistence	123.180,00	33.000 for travel to GAs, retreat, final conference, and other project meetings, 90.180 for travel related to TA.
Other goods, works and services	20.000,00	15.000 purchase costs related to VA. , 5.000 audit costs (CFS)
Total	143.180,00	
9/CNRS		
Travel and subsistence	25.000,00	25.000 for travel to GAs, retreat, final conference, and other project meetings.
Total	25.000,00	
10/UCPH		
Travel and subsistence	51.000,00	25.000 for travel to GAs, retreat, final conference, and other project meetings, 26.000 for travel related to TA.
Total	51.000,00	
11/EPB		
Travel and subsistence	35.000,00	35.000 for travel to GAs, retreat, final conference, and other project meetings.
Other goods, works and services	50.000,00	50.000 for outreach material, videos, and printed brochures
Total	85.000,00	
12/ETT		
Travel and subsistence	35.000,00	35.000 for travel to GAs, retreat, final conference, and other project meetings.
Total	35.000,00	
13/UiT (incl. APECS)		
Travel and subsistence	35.000,00	30.000 for travel to GAs, retreat, final conference, and other project meetings, 5.000 for travel related to TA.
Other goods, works and services	6.000,00	6.000 purchase costs related to TA.
Total	41.000,00	
14/CSIC		
Travel and subsistence	62.250,00	25.000 for travel to GAs, retreat, final conference, and other project meetings, 37.250 for travel related to TA.
Other goods, works and services	5.000,00	5.000 purchase costs related to TA.
Total	67.250,00	
15/SIOS		
Travel and subsistence	35.000,00	35.000 for travel to GAs, retreat, final conference, and other project meetings.
Total	35.000,00	
16/NILU		
Travel and subsistence	25.000,00	25.000 for travel to GAs, retreat, final conference, and other project meetings.
Total	25.000,00	
17/NASC		
Travel and subsistence	84.520,00	25.000 for travel to GAs, retreat, final conference, and other project meetings, 59.520 related to TA.
Other goods, works and services	15.000,00	10.000 shipment related to TA, 5.000 audit costs (CFS),
Total	99.520,00	
18/IGOT-UL		
Travel and subsistence	30.000,00	30.000 for travel to GAs, retreat, final conference, and other project meetings.

Total	30.000,00	
19/GFZ		
Travel and subsistence	20.000,00	20.000 for travel to GAs, retreat, final conference, and other project meetings.
Total	20.000,00	
20/DTU		
	Cost (€)	Justification
Travel and subsistence	50.325,00	20.000 for travel to GAs, retreat, final conference, and other project meetings, 30.325 related to TA.
Other goods, works and services	8.000,00	8.000 shipment related to TA.
Total	58.325,00	
21/IPEV		
Travel and subsistence	33.600,00	20.000 for travel to GAs, retreat, final conference, and other project meetings, 13.600 related to TA.
Other goods, works and services	1.000,00	1.000 shipment related to TA.
Total	34.600,00	
22/PONANT		
Travel and subsistence	210.000,0 0	20.000 for travel to GAs, retreat, final conference, and other project meetings, 190.000 related to TA.
Other goods, works and services	100.000,0 0	100.000 shipment related to TA.
Total	310.000,0 0	
23/MFRI		
Travel and subsistence	32.450,00	20.000 for travel to GAs, retreat, final conference, and other project meetings, 12.450 related to TA.
Other goods, works and services	6.000,00	6.000 shipment related to TA.
Total	38.450,00	
24/GINR		
Travel and subsistence	41.540,00	20.000 for travel to GAs, retreat, final conference, and other project meetings, 21.540 related to TA.
Total	41.540,00	
25/MICN		
Travel and subsistence	72.850,00	20.000 for travel to GAs, retreat, final conference, and other project meetings, 52.850 related to TA.
Other goods, works and services	11.000,00	11.000 shipment related to TA.
Total	83.850,00	
26/SPRS		
Travel and subsistence	29.200,00	20.000 for travel to GAs, retreat, final conference, and other project meetings, 9.200 related to TA.
Other goods, works and services	1.638,00	1.638 purchase costs related to VA.
Total	30.838,00	
27/SSLC		
Travel and subsistence	24.700,00	20.000 for travel to GAs, retreat, final conference, and other project meetings, 4.700 related to TA.
Total	24.700,00	
28/DMI		

Travel and subsistence	53.325,00	20.000 for travel to GAs, retreat, final conference, and other project meetings, 33.325 related to TA.
Total	53.325,00	
29/ULAVAL		
Travel and subsistence	69.275,00	15.000 for travel to GAs, retreat, final conference, and other project meetings, 5.000 audit costs (CFS), 54.275 related to TA.
Other goods, works and services	11.000,00	6.000 shipment related to TA, 5.000 audit costs (CFS),
Total	80.275,00	
30/UTU		
Travel and subsistence	34.500,00	20.000 for travel to GAs, retreat, final conference, and other project meetings, 14.500 related to TA.
Total	34.500,00	
31/NPI		
Travel and subsistence	128.350,00	15.000 for travel to GAs, retreat, final conference, and other project meetings, 113.350 related to TA.
Other goods, works and services	15.000,00	10.000 shipment related to TA, 5.000 audit costs (CFS),
Total	143.350,00	
32/UGRAZ		
Travel and subsistence	30.000,00	20.000 for travel to GAs, retreat, final conference, and other project meetings, 10.000 related to TA.
Total	30.000,00	
33/RIF		
Travel and subsistence	29.000,00	20.000 for travel to GAs, retreat, final conference, and other project meetings, 9.000 related to TA.
Total	29.000,00	
34/SU		
Travel and subsistence	39.125,00	20.000 for travel to GAs, retreat, final conference, and other project meetings, 19.125 related to TA.
Total	39.125,00	
35/AMU		
Travel and subsistence	32.500,00	20.000 for travel to GAs, retreat, final conference, and other project meetings, 12.500 related to TA.
Total	32.500,00	
36/ARI		
Travel and subsistence	27.500,00	20.000 for travel to GAs, retreat, final conference, and other project meetings, 7.500 related to TA.
Total	27.500,00	
37/IGF PAS		
Travel and subsistence	50.000,00	20.000 for travel to GAs, retreat, final conference, and other project meetings, 30.000 related to TA.
Total	50.000,00	
38/UMK		
Travel and subsistence	66.000,00	20.000 for travel to GAs, retreat, final conference, and other project meetings, 46.000 related to TA.
Other goods, works and services	14.031,00	14.031 purchase costs related to TA.
Total	80.031,00	
39/UAF		
Travel and subsistence	43.720,00	20.000 for travel to GAs, retreat, final conference, and other project meetings, 23.720 related to TA.

Total	43.720,00	
40/MI		
Travel and subsistence	31.200,00	20.000 for travel to GAs, retreat, final conference, and other project meetings, 11.200 related to TA.
Other goods, works and services	8.000,00	8.000 shipment related to TA.
Total	39.200,00	
41/UKRI		
Travel and subsistence	48.910,00	20.000 for travel to GAs, retreat, final conference, and other project meetings, 28.910 related to TA.
Other goods, works and services	3.821,00	2.000 shipment related to TA, 1.821 for purchase costs related to TA.
Total	52.731,00	
42/UH		
Travel and subsistence	32.944,00	20.000 for travel to GAs, retreat, final conference, and other project meetings, 12.944 related to TA.
Other goods, works and services	7.688,00	7.688 purchase costs related to TA.
Total	40.632,00	
43/FMI		
Travel and subsistence	31.000,00	25.000 for travel to GAs, retreat, final conference, and other project meetings, 6.000 related to TA.
Other goods, works and services	833,00	833,00 purchase costs related to VA.
Total	31.833,00	
44/BAI		
Travel and subsistence	64.700,00	20.000 for travel to GAs, retreat, final conference, and other project meetings, 44.700 related to TA.
Other goods, works and services	6.000,00	6.000 shipment related to TA.
Total	70.700,00	
45/UICS		
Travel and subsistence	50.480,00	20.000 for travel to GAs, retreat, final conference, and other project meetings, 30.480 related to TA.
Total	50.480,00	
46/CAFF		
Travel and subsistence	20.000,00	20.000 for travel to GAs, retreat, final conference, and other project meetings.
Total	20.000,00	
47/TARA		
Travel and subsistence	24.200,00	20.000 for travel to GAs, retreat, final conference, and other project meetings, 4.200 related to TA.
Other goods, works and services	2.000,00	2.000 shipment related to TA.
Total	26.200,00	

Table 3.1i: ‘Other costs categories’ items (e.g. internally invoiced goods and services)
Not applicable

Table 3.1j: ‘In-kind contributions’ provided by third parties

The following beneficiaries are offering their infrastructures at a reduced unit cost rate:

Participant Number/Short Name			
Third party name	Category	Cost (€)	Justification
PONANT	Infrastructure access	500.00 0	As a cruise ship company, PONANT wants to make sure that their regular tourist cruises contribute to excellent science. It offers participation, laboratory space and technical support for max. 4 users per cruise in-kind. Requested EC Contribution for PONANT TA = 0 EUR instead of 500k EUR.
CNR	Infrastructure access	60.000	CNR offers VA to its Antarctic stations as in-kind access, as it is a routine procedure. Requested EC Contribution for CNR VA Antarctic stations = 0 EUR instead of 60k EUR.
NPI	Infrastructure access	385.00 0	NPI offers TA to TROLL for a reduced rate. Requested EC contribution for Troll Station TA = 72k EUR instead of 385k EUR.

Table 3.1k: Summary of trans-national/virtual access provision

<i>Access provider short name</i>	<i>Short name of infrastructure</i>	<i>Installation Nr</i>	<i>Installation Short name</i>	<i>IC C [51]</i>	<i>Type of access</i>	<i>Unit of access</i>	<i>AQ [52]</i>	<i>Unit cost (UC) (€)</i>	<i>Access costs based on UC</i>	<i>Access costs as actual costs</i>	<i>TA user [53]</i>	<i>NA[54]</i>
01_AWI	AWIPEV	5	AWIPEV	NO	TA	User/day	60	693	41.580,00		4	2
01_AWI	FRAM	28	FRAM	GL	TA	Sensor deployed				150.132,00	1	1
01_AWI	NEUMAYER	36	NEUMAYER	AQ	TA	User/day	90	3.047,00	274.230,00		2	1
01_AWI	POLARSTERN	50	POLARSTERN	DE	TA	User/day	316	1.867,00	588.300,00		4	1
01_AWI	AWI-ICE	52	AWI-ICE	DE	TA	Sampling day	60	471,25	28.275,00		5	5
01_AWI	AWI-SED	53	AWI-SED	DE	TA	Sampling day	60	305	18.300,00		5	5
02_UOULU	OULANKA	15	OULANKA	FI	TA, VA	User/day, Downloads	60	346	20.760,00	25.907,50	4 (TA) 1 (VA)	2
03_INPA	IDP	61	IDP	SE	VA	Downloads	cont.			52.500,00	1	
05_CNR	DIR-ITA	8	DIR-ITA	NO	TA, VA	User/day, Downloads	80	206,7	16.536,00	28.000,00	5 (TA), 1 (VA)	2
05_CNR	CONCORDIA	31	CONCORDIA	AQ	TA, VA	User/day; Downloads	50	2950,56	147.528,00		1	1
05_CNR	MZS	35	MZS	AQ	TA, VA	User/day; Downloads	120	916,2	109.944,00		4	2
05_CNR	IADC	60	IADC	IT	VA	Downloads	cont.			35.000,00	1	
05_CNR	NADC	62	NADC	AQ	VA	Downloads	cont.			35.000,00	1	

06_OGS	LAURA	48	LAURA	AQ	TA	RI/day	6	46.371,76	278.231,00		4	1
08_AU	VRS	25	VRS	GL	TA	User/day	100	620	62.000,00		7	3
08_AU	ZAC	27	ZAC	GL	TA	User/day	120	685	82.200,00		8	4
08_AU	ARC-MO	56	ARC-MO	GL	VA	Downloads	cont.			105.000,00	1	
08_AU	GEM	57	GEM	GL	VA	Downloads	cont.			105.487,50	1	
10_UCPH	ARCST	4	ARCST	DK	TA	User/day	120	296	35.520,00		8	4
10_UCPH	SER	19	SER	GL	TA	User/day	60	178,8	10.728,00		4	2
12_ETT	ADI	59	ADI	IT	VA	Downloads	cont.			37.500,00	1	
13_UiT	UIT-CORES	55	UIT-CORES	NO	TA	Sampling day	60			32.500,00	5	5
14_CSIC	JC I	34	JC I	AQ	TA	User/day	150	654	98.100,00		5	2
15_SIOS	SDMS	64	SDMS	NO	VA	Downloads	cont.			123.000,00	1	
17_NASC	AVS	29	AVS	AR	TA	User/day	120	1.000,00	120.000,00		4	2
17_NASC	NOOSPHERE	49	NOOSPHERE	AQ	TA	RI/day	8	55.491,80	443.935,00		6	1
19_GFZ	POSEDA	63	POSEDA	DE	VA	Downloads	cont.			88.145,00	1	
20_DTU	ARC-DTU	3	ARC-DTU	DK	TA	User/day	100	81	8.100,00		7	3
20_DTU	DANA	44	DANA	DK	TA	RI/day	8	27.215,00	217.720,00		8	1
21_IPEV	AWIPEV	5	AWIPEV	NO	TA	User/day	60	693	41.580,00		4	2
21_IPEV	CONCORDIA	31	CONCORDIA	AQ	TA, VA	User/day; Downloads	50	2950,56	147.528,00		1	1
22_PONANT	CHARCOT	43	CHARCOT	FR	TA	User/day	1400	0	0		100	20
23_HAFRO	ARNI	41	ARNI	IS	TA	RI/day	8	35.000,00	280.000,00		6	1

24_GINR	GINR	9	GINR	DK	TA	User/day	120	280	33.600,00	8	4	
25_MICIN	GABRIEL	33	GABRIEL	AQ	TA	User/day	150	344,3	51.645,00	5	2	
25_MICIN	HESPERIDES	46	HESPERIDES	ES	TA	User/day	180	946,16	170.309,00	6	1	
26_SPRS	ABISKO	1	ABISKO	SE	TA, VA	User/day, downloads	100	162	16.200,00	37.748,00	7 (TA), 1 (VA)	3
26_SPRS	WASA	39	WASA	AQ	TA	Sampling day	50	600	30	1	5	
27_SSLC	SUDURNES	20	SUDURNES	IS	TA	User/day	60	659,73	39.584,00	4	2	
28_DMI	QAANAAQ	17	QAANAAQ	GL	TA	User/day	100	315	31.500,00	7	3	
29_ULAVALL	CEN WK	7	CEN WK	CA	TA, VA	User/day, Downloads	75	409	30.675,00	26.697,00	5 (TA), 1 (VA)	2
29_ULAVALL	AMUNDSEN	40	AMUNDSEN	CA	TA	RI/day	6	72.107,55	432.646,00	6	1	
30_UTU	KEVO	11	KEVO	FI	TA, VA	User/day, Downloads	80	185,17	14.814,00	17.834,00	5 (TA), 1 (VA)	2
31_NPI	SVERDRUP	21	SVERDRUP	NO	TA	User/day	100	289	28.900,00	7	3	
31_NPI	TROLL	38	TROLL	AQ	TA	User/day	120	600	72.000,00	4	2	
31_NPI	HAAKON	45	HAAKON	NO	TA	User/day	180	1.839,00	331.020,00	6	1	
32_UGRAZ	SER	19	SER	GL	TA	User/day	60	178,8	10.728,00	4	2	
33_RIF	RIF	18	RIF	IS	TA	User/day	80	500	40.000,00	5	2	
34_SU	TRS	22	TRS	SE	TA, VA	User/day, Downloads	100	291,25	29.125,00	20.000,00	7 (TA), 1 (VA)	3
35_AMU	AMUPS	2	AMUPS	NO	TA	User/day	100	60	6.000,00	7	3	
36_ARI	WARC	26	WARC	CA	TA, VA	User/day, Downloads	75	229,32	17.199,00	37.467,00	5 (TA), 1 (VA)	2
37_IGF PAS	HORNSUND	10	HORNSUND	NO	TA	User/day	120	202	24.240,00	8	4	
38_UMK	NCUPS	14	NCUPS	NO	TA	User/day	120		22.800,00	7	3	

39_UAF	TOOLIK	23	TOOLIK	US	TA	User/day	80	109	8.720,00	8.720,00	5	2
40_MI	CELTIC	42	CELTIC	IE	TA	RI/day	8	28.000,00	224.000,00		8	1
41_UKRI	UK-AS	24	UK-AS	NO	TA	User/day	80	564,6	45.168,00		5	2
41_UKRI	PSCF	54	PSCF	AQ	TA	Sampling day	30			14.718,00	5	5
42_UH	KILPIS	12	KILPIS	FI	TA, VA	User/day, Downloads	80			49.225,00	5 (TA), 1 (VA)	2
43_FMI	PAL-SOD	16	PAL-SOD	FI	TA, VA	User/day, Downloads	60	446	26.760,00	33.258,00	4 (TA), 1 (VA)	2
44_BAI	BAB	30	BAB	AQ	TA	User/day	120	468,97	56.276,00		6	3
45_UICS	BARC	6	BARC	US	TA	User/day	120	390	46.800,00		8	4
46_CAFF	ABDS	58	ABDS	IS	VA	Downloads	cont.			50.000,00	1	
47_TARA	TARA	51	TARA	FR	TA	User/day	100	1.000	100.000,00		2	1

51 Installation Country code

52 Estimated quantity of access to be provided.

53 Estimated number of users

54 Estimated number of TA applications.

3.2 Capacity of participants and consortium as a whole # @CON-SOR-CS@##@PRJ-MGT-PM@#

The **POLARIN consortium** brings together 47 partners representing **most of the** European Member States and Associated Countries (Iceland, Faroe Islands, Norway, and the EU overseas territory of Greenland) which are operating world-class infrastructures in the polar regions and have well-established Polar Programmes. POLARIN comprises European world-leading polar research institutions with strong experience in operating unique infrastructures in the Arctic and Antarctic (e.g., AWI, IPEV, CNR-ISP, NPI, SPRS) as well as polar research institutions and universities without their own infrastructures (CNRS, IGOT-UL,) but with unique scientific expertise guaranteeing that the infrastructure access is contributing to the high-priority scientific challenges in the polar regions. With APECS and the EPB, the consortium includes important international polar organisations, making sure that Early Career Scientists (APECS) and those European countries which are not members of the consortium (EPB) are engaged in POLARIN. The project also includes **two business partners** (Ponant and ETT) which offer free access to a unique and modern PC3 icebreaker operating as a cruise ship at both poles (Ponant), and support the project in making polar data interoperable and available and link it to **EMODnet physics and Copernicus** (ETT).

Most POLARIN partners have previously worked together successfully e.g., in INTERACT, ARICE, EUROFLEETS, EU-PolarNet 1 & 2 and the EU Polar Cluster. POLARIN can built on the expertise and the spirit of cooperation gathered in these projects. The project consortium includes a balance of Arctic and Antarctic experience and expertise. All partners are distinguished for their high levels of reliability, expertise and experience derived from previous joint projects and from their engagement in international polar organisations such as IASC, FARO, SCAR, COMNAP and SAON.

POLARIN assembles partners offering complementary **polar infrastructures** ranging from 27 research stations in the Arctic and 11 stations in the Antarctic to 10 research vessels operating in regional (polar) seas and 2 research icebreakers performing marine science at both poles (AWI, NPI). Important networks observing the atmospheric parameters (ACTRIS), ecological parameters (GEM), changing air, ice, land, and ocean conditions (GIOS) and glaciological parameters (POSEDA) are participating as well.

POLARIN will provide access to the FRAM observatory operated by AWI which allows synchronous year-round integrated observations from the sea-surface to the sea floor in Fram strait and the central Arctic Ocean and is the only deep-sea observatory in the polar oceans. Access will be provided to ice-cores from Greenland and Antarctica (AWI) including the currently oldest ice-core and a wide geographical coverage of sediment cores from the Arctic and Antarctic by AWI, UiT and UKRI. Finally, with the data infrastructures from SIOS, INPA, CNR and ETT virtual access to a major set of Arctic and Antarctic data is guaranteed. All these infrastructures provide unique services and fulfil specific scientific requirements or needs to allow POLARIN to progress in understanding the consequences of the changing polar regions.

POLARIN comprises 6 **non-EU partners** from Canada (ULAVAL, ARI); USA (UAF, UICS), UK (UKRI), and Ukraine (NASC) as full partners in the consortium. Their inclusion is essential because they are operating unique infrastructures in the Arctic, Antarctic or provide access to unique samples from these areas. They are often located in specific areas that are otherwise not accessible or provide services critical to addressing the scientific challenges in the polar regions. Access to these RIs allows European researchers to work in areas in which they are usually not working (e.g., CCGS Amundsen in the Canadian Arctic) or which they can only access via these international research stations (Canadian and US Arctic, selected islands in the Antarctic Peninsula).

POLARIN will be supported in its activities by the following boards:

Steering Board (SB)

The role of the SB is to ensure the successful execution of the project. The SB will report to and will be accountable to the General Assembly. The SB will consist of the project coordinator (PC) and the project manager (PM), and the WP leaders. The SB will oversee the delivery of the work plan, which includes the approval of project deliverables, and periodic and final reports to the EC. Chaired by the PC, the SB will meet at least quarterly, or more often as required, throughout the course of the project. Any member of the SB will have the right to call for an extraordinary meeting by a written request. The meetings will be scheduled in conjunction with other meetings and videoconferencing will be used whenever possible to reduce travel costs and environmental impacts.

Advisory Board (AB)

An Advisory Board (AB) will be implemented at the onset of the project to provide recommendations and support to the strategic steering of the project, in close cooperation with the GA and SB. It will be fundamental in stimulating connections with international partners and organisations as well as with other European initiatives and projects. Its role will be also to ensure the transparency of the evaluation process for TA, avoid any conflicts of interest, and advise the Management Team (MT) in any disputes that may occur. The AB will be comprised of respected international representatives of Polar-related organisations (e.g., SCAR, IASC, COMNAP, FARO, ESA) and representatives from large-scale infrastructure projects. The chair of the AB will be elected from the board members and recommended to the GA for approval. Members of the AB will be invited to meetings of the GA but will have no voting rights. Meetings of the AB will take place adjacent to the annual GA to give the AB members the possibility to closely follow the project's progress and to be directly involved in discussions leading to strategic decisions. All AB members serve as volunteers for the full project duration. The AB will provide independent advice to the GA and SB to support strategic decisions. It will also critically review the project progress to ensure its relevance and excellence and to provide important feedback to the POLARIN consortium. It will support the evaluation process for TA to make sure that the funding decisions are fair and transparent and that they follow the strategy of POLARIN.

Scientific Liaison Panel

The Scientific Liaison Panel (SLP) will be comprised of internationally recognised experts in the fields of polar research more of 50 % external to the POLARIN consortium. The members of the SLP are identified by TA1/WP1 and appointed by the GA. The role of the SLP is to assist POLARIN in the development of the scientific framework of the TA calls and the evaluation process. It will act as liaison of the POLARIN project and the scientific community, maintaining communication and coordinated actions with research and other marine organisations. The chair of the SLP will be elected from the board and recommended to the GA for approval. Meetings of the SLP will take place to perform a consensus evaluation of the proposals. The chair of the SLP will take part on the GA meetings and advise on scientific issues.

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4 ETHICS SELF ASSESSMENT

4.1. Ethical dimension of the objectives, methodology and likely impact

1. Objectives: The main objective of this proposal is to offer access to research infrastructures (RIs) in polar regions. RI users will apply to POLARIN calls for proposals and the proposals will be evaluated, ranked and if successful, implemented. The ethics dimension of the proposals will be assessed after submission.
2. Methodology: Personal data will be collected from the applicants to contact them for evaluation results and implementation if necessary. A registration for newsletter will be implemented in the website to distribute news from the project.
3. Any activity performed in the polar regions has a risk. However, the operators of vessels and stations are very experienced and no participant will take any unnecessary risk.

4.2. Compliance with ethical principles and relevant legislations

- 1) Personal data: Personal data is needed to contact the applicants that submit a proposal to POLARIN or apply for any of its services. Only data necessary to organise the TA, for contact information and EC

reporting (name, address, email, institution, country, nationality) will be collected. POLARIN will request the explicit consent of applicants to store their data for the duration of the project, and will inform which consortium members will have access to this personal data.

2) POLARIN will use GDPR-compliant tools to collect, process and store research subjects' personal data. The project coordinator will ensure that all treatment of personal data will be according to GDPR regulations.

3) Research permits: all selected applications will be carefully checked to ensure that they comply with local/international regulations. All necessary permits will be requested by the applicants in order to be able to access the RIs.

4) POLARIN will assure that the Convention on Biological Diversity and Declaration of Helsinki and the Global code of conduct for research in resource-poor settings will be respected.

Proposals to use POLARIN RIs will comply with the Nagoya Protocol on Access and Benefit Sharing and with EU Regulation 511/2014.

5) Next to that POLARIN will apply the highest ethical standards and all applicable international, EU and national law (in particular, the GDPR, national data protection laws and other relevant legislation). It will ensure fairness, transparency and accountability of the data processing, data quality and confidentiality

List of acronyms and abbreviations used in the text

Acronym/Abbreviation	Definition / link
a.s.l.	above sea level.
AB	Advisory Board
ACTRIS	Aerosol, Clouds and Trace Gases Research Infrastructure, https://www.actris.eu
ADC	Arctic Data Committee, https://arcticdc.org
AFoPS	Asian Forum of Polar Sciences, https://afops.org/home/about
AMAP	Arctic Monitoring and Assessment Programme, https://www.amap.no
AOC	Annual operating costs (excl. investment costs) of the infrastructure
AON	Arctic Observing Network, https://beta.nsf.gov/funding/opportunities/arctic-observing-network-aon
ARCUS	Arctic Research Consortium of the United States, https://www.arcus.org
ARICE	Arctic Research Icebreaker Consortium, https://arice-h2020.eu
CIMO Testbed,	https://community.wmo.int/en/activity-areas/imop/cimo-testbeds-and-lead-centres
COMNAP	[1] Council of Managers of National Antarctic Programs, http://comnap.aq
Copernicus	Earth observation component of the European Union's Space programme, https://www.copernicus.eu/en
DMP	Data Management Plan
EISCAT	Incoherent scatter radar system, operated by EISCAT Scientific Association, https://eiscat.se
eLTER	Integrated European Long-Term Ecosystem, critical zone and socio-ecological Research, https://elter-ri.eu
EMEPDEIMS(-SDR)	European Monitoring and Evaluation Programme (EMEP), https://deims.org/networks/a020d91b-500b-474e-948b-cf5856121cb2
EMODnet	European Marine Observation and Data Network, https://emodnet.ec.europa.eu/en
EO	Earth Observation
EOSC	European Open Science Cloud, https://eosc-portal.eu
EPB	European Polar Board, https://www.europeanpolarboard.org
EPOS	European Plate Observing System, https://www.epos-eu.org
EPRP	Integrated European Polar Research Programme, https://eu-polarnet.eu/wp-content/uploads/2020/11/EPRP_final_version-1.pdf
ERDDAP	Environmental Research Division's Data Access Program, https://coastwatch.pfeg.noaa.gov/erddap/index.html
ESA	European Space Agency, https://www.esa.int
ESA EOP	European Space Agency - Earth Observation Programmes
ESFRI	European Strategy Forum on Research Infrastructures, https://www.esfri.eu/about
EU-PolarNet	Eu-PolarNet, https://eu-polarnet.eu
EUBREWNET	Brewer Ozone Spectrophotometer Network, https://eubrewnet.aemet.es/eubrewnet
EUROFLEETS	https://www.eurofleets.eu
EUVDB	European UV Database, http://uv.fmi.fi/uvdb/
FAIR	Findable, Accessible, Interoperable, and Reusable
FARO	Forum of Arctic Research Operators, http://faro-arctic.org
FIX-O3	Fixed Point Open Ocean Observatories Network, https://cordis.europa.eu/project/id/312463
Fix-O3	Fixed Point Open Ocean Observatories Network, https://cordis.europa.eu/project/id/312463
FLUXNET	https://fluxnet.org

GAW, ,	Global Atmosphere Watch, https://community.wmo.int/en/activity-areas/gaw
GCW	Global Cryosphere Watch, https://globalcryospherewatch.org/cryonet/
GEM	Greenland Ecosystem Monitoring, https://g-e-m.dk
GeoNetWork	https://geonetwork-opensource.org
GEOSS	Global Earth Observation System of Systems https://www.earthobservations.org/geoss.php
GLISN	Greenland Ice Sheet Monitoring Network, http://www.glisn.info
GRUAN	Global Climate Observing System (GCOS) Reference Upper-Air Network, https://www.gruan.org/
IASC	International Arctic Science Committee http://iasc.info
ICOS	Integrated Carbon Observation System, https://www.icos-cp.eu
INTERACCESS	Proposal management system developed and implemented in the EU-funded project INTERACT
INTERACT	International Network for Terrestrial Research and Monitoring in the Arctic, https://eu-interact.org
IPCC	The Intergovernmental Panel on Climate Change, https://www.ipcc.ch
ISMN	International Soil Moisture Network, https://ismn.earth/en/networks/?id=METEROBS
MT	Management Team
NDACC	Network for the Detection of Atmospheric Composition Change, https://ndacc.larc.nasa.gov
NEON	National Ecological Observatory Network, https://www.neonscience.org
NetCDF	Network Common Data Form
OCEAN:ICE	Ocean-Cryosphere Exchanges in ANtarctica: Impacts on Climate and the Earth System, https://ocean-ice.eu
PC	Project Coordinator
PI	Principal Investigator
PM	Project Manager
PRV	Polar Research Vessel
RA	Remote access
RAPAL	Managers of the Latin American Antarctic Programs
RI	Research Infrastructure
RV	Research Vessel
SAON	Sustaining Arctic Observing Networks, https://arcticobserving.org/
SAON ADC	Arctic Data Committee of SAON
SB	Steering Board
SCADM	Committee on Antarctic Data Management of SCAR
SCAR	Scientific Committee on Antarctic, Research https://www.scar.org
SeaDataNet	Pan-European Infrastructure for Ocean and Marine Data Management, https://www.seadatanet.org
SIOS	Svalbard Integrated Arctic Earth Observing System, https://sios-svalbard.org
SLP	Scientific Liaison Panel
SME	SME: Small and Medium Enterprise
SO-CHIC	Southern Ocean Carbon and Heat Impact on Climate, http://www.sochic-h2020.eu
SOOS	Southern Ocean Observing System, https://soos.aq/
SOOSmap	https://soos.aq/data/soosmap
TA	Transnational Access
TCCON	Total Carbon Column Observing Network, http://www.tcon.caltech.edu

TRL	Technology Readiness Level
UNDOS	United Nations Decade of Ocean Science for Sustainable Development, https://oceandecade.org
VA	Virtual access
WOUDC	World Ozone and Ultraviolet Radiation Data Centre, https://woudc.org

ANNEX 2

ESTIMATED BUDGET FOR THE ACTION

Estimated eligible ¹ costs (per budget category)												Estimated EU contribution ²				
Direct costs											Indirect costs	Total costs	EU contribution to eligible costs			Maximum grant amount ⁶
A. Personnel costs			B. Subcontracting costs	C. Purchase costs			D. Other cost categories			E. Indirect costs ³	Funding rate % ⁴		Maximum EU contribution ⁵	Requested EU contribution		
Forms of funding	A.1 Employees (or equivalent)		A.4 SME owners and natural person beneficiaries	B. Subcontracting	C.1 Travel and subsistence	C.2 Equipment	C.3 Other goods, works and services	D.2 Internally invoiced goods and services	D.3 Transnational access to research infrastructure unit costs	D.4 Virtual access to research infrastructure unit costs	E. Indirect costs	Flat-rate costs ⁸	U	g = f * U%	h	m
	Actual costs	Unit costs (usual accounting practices)	Unit costs ⁷	Actual costs	Actual costs	Actual costs	Actual costs	Unit costs (usual accounting practices)	Unit costs ⁷	Unit costs ⁷						
	a1	a2	a3	b	c1	c2	c3	d2	d3	d4	e = 0,25 * (a1 + a2 + a3 + c1 + c2 + c3)	f = a + b + c + d + e				
1 - AWI	919 666.00	0.00	0.00	0.00	259 650.00	0.00	425 632.00	0.00	950 685.00	0.00	401 237.00	2 956 870.00	100	2 956 870.00	2 956 870.00	2 956 870.00
2 - UOULU	320 180.00	0.00	0.00	0.00	40 460.00	0.00	65 194.00	0.00	20 760.00	0.00	106 458.50	553 052.50	100	553 052.50	553 052.50	553 052.50
3 - INPA	198 000.00	0.00	0.00	0.00	30 000.00	0.00	0.00	0.00	0.00	0.00	57 000.00	285 000.00	100	285 000.00	285 000.00	285 000.00
4 - ULUND	237 388.00	0.00	0.00	0.00	33 000.00	0.00	0.00	0.00	0.00	0.00	67 597.00	337 985.00	100	337 985.00	337 985.00	337 985.00
5 - CNR	313 600.00	0.00	0.00	0.00	68 500.00	0.00	10 000.00	0.00	274 008.00	0.00	98 025.00	764 133.00	100	764 133.00	764 133.00	764 133.00
6 - OGS	175 500.00	0.00	0.00	0.00	37 000.00	0.00	9 000.00	0.00	278 231.00	0.00	55 375.00	555 106.00	100	555 106.00	555 106.00	555 106.00
7 - INKODE	132 000.00	0.00	0.00	0.00	30 000.00	0.00	0.00	0.00	0.00	0.00	40 500.00	202 500.00	100	202 500.00	202 500.00	202 500.00
8 - AU	407 940.00	0.00	0.00	0.00	123 180.00	0.00	20 000.00	0.00	144 200.00	0.00	137 780.00	833 100.00	100	833 100.00	833 100.00	833 100.00
9 - CNRS	130 800.00	0.00	0.00	0.00	25 000.00	0.00	0.00	0.00	0.00	0.00	38 950.00	194 750.00	100	194 750.00	194 750.00	194 750.00
10 - UCPH	181 640.00	0.00	0.00	0.00	51 000.00	0.00	0.00	0.00	46 248.00	0.00	58 160.00	337 048.00	100	337 048.00	337 048.00	337 048.00
11 - EPB	208 000.00	0.00	0.00	0.00	35 000.00	0.00	50 000.00	0.00	0.00	0.00	73 250.00	366 250.00	100	366 250.00	366 250.00	366 250.00
12 - ETT	246 000.00	0.00	0.00	0.00	35 000.00	0.00	0.00	0.00	0.00	0.00	70 250.00	351 250.00	100	351 250.00	351 250.00	351 250.00
13 - UiT	103 000.00	0.00	0.00	0.00	35 000.00	0.00	6 000.00	0.00	0.00	0.00	36 000.00	180 000.00	100	180 000.00	180 000.00	180 000.00
14 - CSIC	27 000.00	0.00	0.00	0.00	62 250.00	0.00	5 000.00	0.00	98 100.00	0.00	23 562.50	215 912.50	100	215 912.50	215 912.50	215 912.50
15 - SIOS	270 600.00	0.00	0.00	0.00	35 000.00	0.00	0.00	0.00	0.00	0.00	76 400.00	382 000.00	100	382 000.00	382 000.00	382 000.00
16 - NILU	0.00	77 455.00	0.00	0.00	25 000.00	0.00	0.00	0.00	0.00	0.00	25 613.75	128 068.75	100	128 068.75	128 068.75	128 068.75
17 - NASC	10 000.00	0.00	0.00	0.00	84 520.00	0.00	15 000.00	0.00	563 935.00	0.00	27 380.00	700 835.00	100	700 835.00	700 835.00	700 835.00
18 - IGOT UL	91 128.00	0.00	0.00	0.00	30 000.00	0.00	0.00	0.00	0.00	0.00	30 282.00	151 410.00	100	151 410.00	151 410.00	151 410.00
19 - GFZ	88 145.00	0.00	0.00	0.00	20 000.00	0.00	0.00	0.00	0.00	0.00	27 036.25	135 181.25	100	135 181.25	135 181.25	135 181.25
20 - DTU	0.00	0.00	0.00	0.00	50 325.00	0.00	8 000.00	0.00	225 820.00	0.00	14 581.25	298 726.25	100	298 726.25	298 726.25	298 726.25
21 - IPEV	0.00	0.00	0.00	0.00	33 600.00	0.00	1 000.00	0.00	189 108.00	0.00	8 650.00	232 358.00	100	232 358.00	232 358.00	232 358.00
22 - PONANT	0.00	0.00	0.00	0.00	210 000.00	0.00	100 000.00	0.00	0.00	0.00	77 500.00	387 500.00	100	387 500.00	387 500.00	387 500.00
23 - MFRI	0.00	0.00	0.00	0.00	32 450.00	0.00	6 000.00	0.00	280 000.00	0.00	9 612.50	328 062.50	100	328 062.50	328 062.50	328 062.50
24 - GINR	0.00	0.00	0.00	0.00	41 540.00	0.00	0.00	0.00	33 600.00	0.00	10 385.00	85 525.00	100	85 525.00	85 525.00	85 525.00
25 - MCIN	0.00	0.00	0.00	0.00	72 850.00	0.00	11 000.00	0.00	221 954.00	0.00	20 962.50	326 766.50	100	326 766.50	326 766.50	326 766.50
26 - SPRS	36 110.00	0.00	0.00	0.00	29 200.00	0.00	1 638.00	0.00	46 200.00	0.00	16 737.00	129 885.00	100	129 885.00	129 885.00	129 885.00
27 - SSLC	0.00	0.00	0.00	0.00	24 700.00	0.00	0.00	0.00	39 584.00	0.00	6 175.00	70 459.00	100	70 459.00	70 459.00	70 459.00
28 - DMI	0.00	0.00	0.00	0.00	53 325.00	0.00	0.00	0.00	31 500.00	0.00	13 331.25	98 156.25	100	98 156.25	98 156.25	98 156.25
29 - ULVAL	26 697.00	0.00	0.00	0.00	69 275.00	0.00	11 000.00	0.00	463 321.00	0.00	26 743.00	597 036.00	100	597 036.00	597 036.00	597 036.00
30 - UTU	0.00	17 834.00	0.00	0.00	34 500.00	0.00	0.00	0.00	14 814.00	0.00	13 083.50	80 231.50	100	80 231.50	80 231.50	80 231.50

Estimated eligible ¹ costs (per budget category)												Estimated EU contribution ²				
Direct costs											Indirect costs	Total costs	EU contribution to eligible costs			Maximum grant amount ⁶
A. Personnel costs			B. Subcontracting costs	C. Purchase costs			D. Other cost categories			E. Indirect costs ³	Funding rate % ⁴		Maximum EU contribution ⁵	Requested EU contribution		
Forms of funding	A.1 Employees (or equivalent)		A.4 SME owners and natural person beneficiaries	B. Subcontracting	C.1 Travel and subsistence	C.2 Equipment	C.3 Other goods, works and services	D.2 Internally invoiced goods and services	D.3 Transnational access to research infrastructure unit costs	D.4 Virtual access to research infrastructure unit costs	E. Indirect costs	f = a + b + c + d + e	U	g = f * U%	h	m
	Actual costs	Unit costs (usual accounting practices)	Unit costs ⁷	Actual costs	Actual costs	Actual costs	Actual costs	Unit costs (usual accounting practices)	Unit costs ⁷	Unit costs ⁷	Flat-rate costs ⁸					
	a1	a2	a3	b	c1	c2	c3	d2	d3	d4	e = 0,25 * (a1 + a2 + a3 + c1 + c2 + c3)					
31 - NPI	0.00	0.00	0.00	0.00	128 350.00	0.00	15 000.00	0.00	431 920.00	0.00	35 837.50	611 107.50	100	611 107.50	611 107.50	611 107.50
32 - UGRAZ	0.00	0.00	0.00	0.00	30 000.00	0.00	0.00	0.00	10 728.00	0.00	7 500.00	48 228.00	100	48 228.00	48 228.00	48 228.00
33 - RIF	0.00	0.00	0.00	0.00	29 000.00	0.00	0.00	0.00	40 000.00	0.00	7 250.00	76 250.00	100	76 250.00	76 250.00	76 250.00
34 - SU	20 000.00	0.00	0.00	0.00	39 125.00	0.00	0.00	0.00	29 125.00	0.00	14 781.25	103 031.25	100	103 031.25	103 031.25	103 031.25
35 - AMU	0.00	0.00	0.00	0.00	32 500.00	0.00	0.00	0.00	6 000.00	0.00	8 125.00	46 625.00	100	46 625.00	46 625.00	46 625.00
36 - ARI	37 467.00	0.00	0.00	0.00	27 500.00	0.00	0.00	0.00	17 199.00	0.00	16 241.75	98 407.75	100	98 407.75	98 407.75	98 407.75
37 - IGF PAS	0.00	0.00	0.00	0.00	50 000.00	0.00	0.00	0.00	24 240.00	0.00	12 500.00	86 740.00	100	86 740.00	86 740.00	86 740.00
38 - UMK	4 210.00	0.00	0.00	0.00	66 000.00	0.00	14 031.00	0.00	0.00	0.00	21 060.25	105 301.25	100	105 301.25	105 301.25	105 301.25
39 - UAF	0.00	0.00	0.00	0.00	43 720.00	0.00	0.00	0.00	8 720.00	0.00	10 930.00	63 370.00	100	63 370.00	63 370.00	63 370.00
40 - MI	0.00	0.00	0.00	0.00	31 200.00	0.00	8 000.00	0.00	224 000.00	0.00	9 800.00	273 000.00	100	273 000.00	273 000.00	273 000.00
41 - UKRI	12 897.00	0.00	0.00	0.00	48 910.00	0.00	3 821.00	0.00	45 168.00	0.00	16 407.00	127 203.00	100	127 203.00	127 203.00	127 203.00
42 - UH	0.00	31 693.00	0.00	0.00	32 944.00	0.00	7 688.00	0.00	0.00	0.00	18 081.25	90 406.25	100	90 406.25	90 406.25	90 406.25
43 - FMI	51 547.00	0.00	0.00	0.00	31 000.00	0.00	833.00	0.00	26 760.00	0.00	20 845.00	130 985.00	100	130 985.00	130 985.00	130 985.00
44 - BAI	0.00	0.00	0.00	0.00	64 700.00	0.00	6 000.00	0.00	56 276.00	0.00	17 675.00	144 651.00	100	144 651.00	144 651.00	144 651.00
45 - UICS	0.00	0.00	0.00	0.00	50 480.00	0.00	0.00	0.00	46 800.00	0.00	12 620.00	109 900.00	100	109 900.00	109 900.00	109 900.00
46 - CAFF	40 000.00	0.00	0.00	0.00	20 000.00	0.00	0.00	0.00	0.00	0.00	15 000.00	75 000.00	100	75 000.00	75 000.00	75 000.00
47 - TARA	0.00	0.00	0.00	0.00	24 200.00	0.00	2 000.00	0.00	100 000.00	0.00	6 550.00	132 750.00	100	132 750.00	132 750.00	132 750.00
Σ consortium	4 289 515.00	126 982.00	0.00	0.00	2 460 954.00	0.00	801 837.00	0.00	4 989 004.00	0.00	1 919 822.00	14 588 114.00		14 588 114.00	14 588 114.00	14 588 114.00

¹ See Article 6 for the eligibility conditions. All amounts must be expressed in EUR (see Article 21 for the conversion rules).

² The consortium remains free to decide on a different internal distribution of the EU funding (via the consortium agreement; see Article 7).

³ Indirect costs already covered by an operating grant (received under any EU funding programme) are ineligible (see Article 6.3). Therefore, a beneficiary/affiliated entity that receives an operating grant during the action duration cannot declare indirect costs for the year(s)/reporting period(s) covered by the operating grant, unless they can demonstrate that the operating grant does not cover any costs of the action. This requires specific accounting tools. Please immediately contact us via the EU Funding & Tenders Portal for details.

⁴ See Data Sheet for the funding rate(s).

⁵ This is the theoretical amount of the EU contribution to costs, if the reimbursement rate is applied to all the budgeted costs. This theoretical amount is then capped by the 'maximum grant amount'.

⁶ The 'maximum grant amount' is the maximum grant amount decided by the EU. It normally corresponds to the requested grant, but may be lower.

⁷ See Annex 2a 'Additional information on the estimated budget' for the details (units, cost per unit).

⁸ See Data Sheet for the flat-rate.

ANNEX 2a

ADDITIONAL INFORMATION ON UNIT COSTS AND CONTRIBUTIONS

SME owners/natural person beneficiaries without salary (Decision C(2020) 7115¹)

Type: unit costs

Units: days spent working on the action (rounded up or down to the nearest half-day)

Amount per unit (daily rate): calculated according to the following formula:

{EUR 5 080 / 18 days = **282,22**}
 multiplied by
 {country-specific correction coefficient of the country where the beneficiary is established}

The country-specific correction coefficients used are those set out in the Horizon Europe Work Programme (section Marie Skłodowska-Curie actions) in force at the time of the call (see [Portal Reference Documents](#)).

HE and Euratom Research Infrastructure actions²

Type: unit costs

Units³: see (for each access provider and installation) the unit cost table in Annex 2b

Amount per unit^{*}: see (for each access provider and installation) the unit cost table in Annex 2b

* Amount calculated as follows:

For trans-national access:

$$\frac{\text{average annual total trans-national access costs to the installation (over past two years}^4\text{)}}{\text{average annual total quantity of trans-national access to the installation (over past two years}^5\text{)}}$$

For virtual access:

$$\frac{\text{total virtual access costs to the installation (over the last year}^6\text{)}}{\text{total quantity of virtual access to the installation (over the last year}^7\text{)}}$$

Euratom staff mobility costs⁸

Monthly living allowance

Type: unit costs

¹ Commission [Decision](#) of 20 October 2020 authorising the use of unit costs for the personnel costs of the owners of small and medium-sized enterprises and beneficiaries that are natural persons not receiving a salary for the work carried out by themselves under an action or work programme (C(2020)7715).

² [Decision](#) of 19 April 2021 authorising the use of unit costs for the costs of providing trans-national and virtual access in Research Infrastructure actions under the Horizon Europe Programme (2021-2027) and the Research and Training Programme of the European Atomic Energy Community (2021-2025).

³ Unit of access (e.g. beam hours, weeks of access, sample analysis) fixed by the access provider in proposal.

⁴ In exceptional and duly justified cases, the granting authority may agree to a different reference period.

⁵ In exceptional and duly justified cases, the granting authority may agree to a different reference period.

⁶ In exceptional and duly justified cases, the granting authority may agree to a different reference period.

⁷ In exceptional and duly justified cases, the granting authority may agree to a different reference period.

⁸ [Decision](#) of 15 March 2021 authorising the use of unit costs for mobility in co-fund actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).

Units: months spent by the seconded staff member(s) on research and training in fission and fusion activities (person-month)

Amount per unit*: see (for each beneficiary/affiliated entity and secondment) the unit cost table in Annex 2b

* Amount calculated as follows from 1 January 2021:

{**EUR 4 300** multiplied by country-specific correction coefficient** of the country where the staff member is seconded}⁹

**Country-specific correction coefficients as from 1 January 2021¹⁰

EU-Member States¹¹

Country / Place	Coefficient (%)
Bulgaria	59,1
Czech Rep.	85,2
Denmark	131,3
Germany	101,9
Bonn	95,8
Karlsruhe	98
Munich	113,9
Estonia	82,3
Ireland	129
Greece	81,4
Spain	94,2
France	120,5
Croatia	75,8
Italy	95
Varese	90,7
Cyprus	78,2
Latvia	77,5
Lithuania	76,6
Hungary	71,9
Malta	94,7
Netherlands	113,9
Austria	107,9
Poland	70,9
Portugal	91,1
Romania	66,6
Slovenia	86,1

⁹ Unit costs for living allowances are calculated by using a method of calculation similar to that applied for the secondment to the European Commission of seconded national experts (SNEs).

¹⁰ ⚠ For the financial statements, the amount must be adjusted according to the actual place of secondment. The revised coefficients were adopted in the Decision authorising the use of unit costs for the Fusion Programme co-fund action under the Research and training Programme of the European Atomic Energy Community 2021-2025. They are based on the 2020 Annual update of the remuneration and pensions of the officials and other servants of the European Union and the correction coefficients applied thereto (OJ C 428, 11.12.2020) to ensure purchasing power parity. The revised coefficient are applied as from 1 January 2021 through an amendment to the grant agreement.

¹¹ No correction coefficient shall be applicable in Belgium and Luxembourg.

Slovakia	80,6
Finland	118,4
Sweden	124,3

Third countries

Country/place	Coefficient (%)
China	82,2
India	72,3
Japan	111,8
Russia	92,7
South Korea	92,3
Switzerland	129,2
Ukraine	82,3
United Kingdom	97,6
United States	101,4 (New-York) 90,5 (Washington)

Mobility allowance

Type: Unit costs

Units: months spent by the seconded staff member(s) on research and training in fission and fusion activities (person-month)

Amount per unit: **EUR 600** per person-month; see (for each beneficiary/affiliated entity and secondment) the unit cost table in Annex 2b

Family allowance

Type: unit costs

Units: months spent by the seconded staff member(s) on research and training in fission and fusion activities (person-month)

Amount per unit: **EUR 660** per person-month; see (for each beneficiary/affiliated entity and secondment) the unit cost table in Annex 2b

Education allowance

Type: Unit costs

Units: months spent by the seconded staff member(s) on research and training in fission and fusion activities (person-month)

Amount per unit*: see (for each beneficiary/affiliated entity and secondment) the unit cost table in Annex 2b

*Amount calculated as follows from 1 January 2021:
{**EUR 283.82** x number of dependent children¹²}

¹² For the estimated budget (Annex 2): an average should be used. (⚠ For the financial statements, the number of children (and months) must be adjusted according to the actual family status at the moment the secondment starts.)

ADDITIONAL INFORMATION ON CUSTOMISED UNIT COSTS AND CONTRIBUTIONS

HE and Euratom Research Infrastructure actions

Unit cost table (Transnational access to research infrastructure unit cost and virtual access to research infrastructure unit cost)

Access provider short name	Short name of infrastructure	Installation Nr	Installation Short name	Unit of access	Amount per Unit	Estimated No of units	Total unit costs
01 AWI	AWIPEV	5	AWIPEV	User/day	693	60	41.580,00
01 AWI	NEUMAYER	36	NEUMAYER	User/day	3.047,00	90	274.230,00
01 AWI	POLARSTERN	50	POLARSTERN	User/day	1.867,62	315	588.300,00
01 AWI	AWI-ICE	52	AWI-ICE	Sampling day	471,25	60	28.275,00
01 AWI	AWI-SED	53	AWI-SED	Sampling day	305	60	18.300,00
02 UOULU	OULANKA	15	OULANKA	User/day, Downloads	346	60	20.760,00
05 CNR	DIR-ITA	8	DIR-ITA	User/day, Downloads	206,7	80	16.536,00
05 CNR	CONCORDIA	31	CONCORDIA	User/day; Downloads	2950,56	50	147.528,00
05 CNR	MZS	35	MZS	User/day; Downloads	916,2	120	109.944,00
06 OGS	LAURA	48	LAURA	RI/day	46.371,76	6	278.231,00
08 AU	VRS	25	VRS	User/day	620	100	62.000,00
08 AU	ZAC	27	ZAC	User/day	685	120	82.200,00
10 UCPH	ARCST	4	ARCST	User/day	296	120	35.520,00
10 UCPH	SER	19	SER	User/day	178,8	60	10.728,00
14 CSIC	JC I	34	JC I	User/day	654	150	98.100,00
17 NASC	AVS	29	AVS	User/day	1.000,00	120	120.000,00
17 NASC	NOOSPHERE	49	NOOSPHERE	RI/day	55.491,80	8	443.935,00
20 DTU	ARC-DTU	3	ARC-DTU	User/day	81	100	8.100,00
20 DTU	DANA	44	DANA	RI/day	27.215,00	8	217.720,00
21 IPEV	AWIPEV	5	AWIPEV	User/day	693	60	41.580,00
21 IPEV	CONCORDIA	31	CONCORDIA	User/day; Downloads	2950,56	50	147.528,00
23 HAFRO	ARNI	41	ARNI	RI/day	35.000,00	8	280.000,00
24 GINR	GINR	9	GINR	User/day	280	120	33.600,00
25 MICIN	GABRIEL	33	GABRIEL	User/day	344,3	150	51.645,00
25 MICIN	HESPERIDES	46	HESPERIDES	User/day	946,16	180	170.309,00
26 SPRS	ABISKO	1	ABISKO	User/day, downloads	162	100	16.200,00
26 SPRS	WASA	39	WASA	Sampling day	600	50	30.000,00
27 SSLC	SUDURNES	20	SUDURNES	User/day	659,73	60	39.584,00
28 DMI	QAANAAQ	17	QAANAAQ	User/day	315	100	31.500,00
29 ULAVAL	CEN WK	7	CEN WK	User/day, Downloads	409	75	30.675,00
29 ULAVAL	AMUNDSEN	40	AMUNDSEN	RI/day	72.107,55	6	432.646,00
30 UTU	KEVO	11	KEVO	User/day, Downloads	185,17	80	14.814,00
31 NPI	SVERDRUP	21	SVERDRUP	User/day	289	100	28.900,00
31 NPI	TROLL	38	TROLL	User/day	600	120	72.000,00
31 NPI	HAAKON	45	HAAKON	User/day	1.839,00	180	331.020,00
32 UGRAZ	SER	19	SER	User/day	178,8	60	10.728,00
33 RIF	RIF	18	RIF	User/day	500	80	40.000,00
34 SU	TRS	22	TRS	User/day, Downloads	291,25	100	29.125,00
35 AMU	AMUPS	2	AMUPS	User/day	60	100	6.000,00
36 ARI	WARC	26	WARC	User/day, Downloads	229,32	75	17.199,00
37 IGF PAS	HORNSUND	10	HORNSUND	User/day	202	120	24.240,00
39 UAF	TOOLIK	23	TOOLIK	User/day	109	80	8.720,00
40 MI	CELTIC	42	CELTIC	RI/day	28.000,00	8	224.000,00
41 UKRI	UK-AS	24	UK-AS	User/day	564,6	80	45.168,00
43 FMI	PAL-SOD	16	PAL-SOD	User/day, Downloads	446	60	26.760,00
44 BAI	BAB	30	BAB	User/day	468,97	120	56.276,00
45 UICS	BARC	6	BARC	User/day	390	120	46.800,00
47 TARA	TARA	51	TARA	User/day	1.000	100	100.000,00

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

OULUN YLIOPISTO (UOULU), PIC 999844670, established in PENTTI KAITERAN KATU 1, OULU 90014, Finland,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN (‘the Agreement’)

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** (‘EU executive agency’ or ‘granting authority’), under the powers delegated by the European Commission (‘European Commission’),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

INTERACT-INTERNATIONAL NETWORK FOR TERRESTRIAL RESEARCH AND MONITORING (INPA), PIC 893223337, established in LIMHAMNSVAGEN 108, LIMHAMN 216 13, Sweden,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

LUNDS UNIVERSITET (ULUND), PIC 999901318, established in Paradisgatan 5c, LUND 22100, Sweden,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

CONSIGLIO NAZIONALE DELLE RICERCHE (CNR), PIC 999979500, established in PIAZZALE ALDO MORO 7, ROMA 00185, Italy,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

ISTITUTO NAZIONALE DI OCEANOGRAFIA E DI GEOFISICA SPERIMENTALE (OGS),
PIC 999625644, established in Borgo Grotta Gigante 42/C, SGONICO-TRIESTE 34010, Italy,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

INKODE SOCIETA COOPERATIVA (INKODE), PIC 903762872, established in VIA DELLO SMISTAMENTO 7, BOLOGNA 40127, Italy,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

AARHUS UNIVERSITET (AU), PIC 999997736, established in NORDRE RINGGADE 1, AARHUS C 8000, Denmark,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS (CNRS), PIC 999997930,
established in RUE MICHEL ANGE 3, PARIS 75794, France,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

KOBENHAVNS UNIVERSITET (UCPH), PIC 999991043, established in NORREGADE 10, KOBENHAVN 1165, Denmark,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

EUROPEAN POLAR BOARD (EPB), PIC 918597470, established in LAAN VAN NIEUW OOST INDIE 300, DEN HAAG 2593 CE, Netherlands,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN (‘the Agreement’)

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** (‘EU executive agency’ or ‘granting authority’), under the powers delegated by the European Commission (‘European Commission’),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

ETT SPA (ETT), PIC 991672808, established in VIA SESTRI 37 1 2, GENOVA 16154, Italy,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN (‘the Agreement’)

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** (‘EU executive agency’ or ‘granting authority’), under the powers delegated by the European Commission (‘European Commission’),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

UNIVERSITETET I TROMSOE - NORGES ARKTISKE UNIVERSITET (UiT), PIC 999874643, established in HANSINE HANSENS VEG 14, TROMSO 9019, Norway,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (CSIC), PIC 999991722, established in CALLE SERRANO 117, MADRID 28006, Spain,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN (‘the Agreement’)

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and the European Research Executive Agency (REA)** (‘EU executive agency’ or ‘granting authority’), under the powers delegated by the European Commission (‘European Commission’),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

SIOS SVALBARD AS (SIOS), PIC 907144777, established in VEI 231, LONGYEARBYEN 9170, Norway,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

STIFTELSEN NILU (NILU), PIC 999654162, established in INSTITUTTVEIEN 18, KJELLER 2007, Norway,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

NATIONAL ANTARCTIC SCIENTIFIC CENTER (NASC), PIC 983358453, established in TARASA SHEVCHENKO BLVD 16, Kyiv 01601, Ukraine,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and the European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

INSTITUTO DE GEOGRAFIA E ORDENAMENTO DO TERRITORIO DA UNIVERSIDADE DELISBOA (IGOT UL), PIC 986958026, established in EDIFICIO IGOT RUA BRANCA EDMEE MARQUES, LISBOA 1600 276, Portugal,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

HELMHOLTZ-ZENTRUM POTSDAM DEUTSCHES GEOFORSCHUNGSZENTRUM - GFZ (GFZ), PIC 999994341, established in TELEGRAFENBERG 17, POTSDAM 14473, Germany,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

DANMARKS TEKNISKE UNIVERSITET (DTU), PIC 999990655, established in ANKER ENGELUNDS VEJ 101, KONGENS LYNGBY 2800, Denmark,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

INSTITUT POLAIRE FRANCAIS PAUL-EMILE-VICTOR GIP (IPEV), PIC 999450753, established in TECHNOPOLE BREST IROISE ZI DE LA POINTE DU DIABLE, PLOUZANE 29280, France,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

COMPAGNIE DU PONANT (PONANT), PIC 885528909, established in 408, AVENUE DU PRADO, MARSEILLE 13008, France,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN (‘the Agreement’)

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** (‘EU executive agency’ or ‘granting authority’), under the powers delegated by the European Commission (‘European Commission’),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

HAFRANNSOKNASTOFNUN, RANNSOKNA- OG RADGJAFARSTOFNUN HAFS OG VATNA (MFRI), PIC 909894145, established in Fornubúðum 5, Hafnarfjörður 220, Iceland,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN (‘the Agreement’)

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** (‘EU executive agency’ or ‘granting authority’), under the powers delegated by the European Commission (‘European Commission’),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

GRONLANDS NATURINSTITUT (GINR), PIC 998297908, established in Kivioq 2, NUUK 3900, Greenland,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

MINISTERIO DE CIENCIA E INNOVACION (MCIN), PIC 905411775, established in Paseo de la Castellana 162, MADRID 28046, Spain,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN (‘the Agreement’)

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and the European Research Executive Agency (REA)** (‘EU executive agency’ or ‘granting authority’), under the powers delegated by the European Commission (‘European Commission’),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

POLARFORSKNINGSSEKRETARIETET (SPRS), PIC 984574348, established in c/o Lulea tekniska universitet, Lulea 971 87, Sweden,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

SUDURNES SCIENCE AND LEARNING CENTER (SSLC), PIC 924309412, established in GARDVEGI 1, SANDGERDI 245, Iceland,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and the European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

DANMARKS METEOROLOGISKE INSTITUT (DMI), PIC 999509438, established in LYNGBYVEJ 100, KOBENHAVN 2100, Denmark,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

UNIVERSITE LAVAL (ULaval), PIC 998082180, established in ALLEE DES BIBLIOTHEQUES 2345, QUEBEC G1V 0A6, Canada,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

TURUN YLIOPISTO (UTU), PIC 999903064, established in YLIOPISTONMAKI, Turku 20014, Finland,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

NORSK POLARINSTITUTT (NPI), PIC 998675432, established in HJALMAR JOHANNESSENS 14, TROMSOE 9296, Norway,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN (‘the Agreement’)

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** (‘EU executive agency’ or ‘granting authority’), under the powers delegated by the European Commission (‘European Commission’),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

UNIVERSITAET GRAZ (UGRAZ), PIC 999873188, established in UNIVERSITATSPLATZ 3, GRAZ 8010, Austria,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

RANNSOKNARSTODIN RIF (RIF), PIC 937536138, established in ADALBRAUT 23, RAUFARHOFN 675, Iceland,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

STOCKHOLMS UNIVERSITET (SU), PIC 999885022, established in UNIVERSITETSVAGEN 10, STOCKHOLM 10691, Sweden,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and the European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

UNIWERSYTET IM. ADAMA MICKIEWICZA W POZNANIU (AMU), PIC 999886865,
established in ULICA HENRYKA WIENIAWSKIEGO 1, POZNAN 61 712, Poland,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and the European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

AURORA COLLEGE (ARI), PIC 919704919, established in 50 CONIBEAR CRESCENT, FORT SMITH X0E 0P0, Canada,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN (‘the Agreement’)

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** (‘EU executive agency’ or ‘granting authority’), under the powers delegated by the European Commission (‘European Commission’),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

Instytut Geofizyki Polskiej Akademii Nauk (IGF PAS), PIC 996625337, established in Ksiecia Janusza 64, Warsaw 01-452, Poland,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and the European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

UNIWERSYTET MIKOLAJA KOPERNIKA W TORUNIU (UMK), PIC 999836619,
established in UL. JURIJA GAGARINA 11, TORUN 87100, Poland,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and the European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

University of Alaska (UAF), PIC 987205958, established in North Koyukuk Drive 902, Fairbanks 99775, United States,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

MARINE INSTITUTE (MI), PIC 999522824, established in RINVILLE ORANMORE, GALWAY H91 R673, Ireland,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN (‘the Agreement’)

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** (‘EU executive agency’ or ‘granting authority’), under the powers delegated by the European Commission (‘European Commission’),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

UNITED KINGDOM RESEARCH AND INNOVATION (UKRI), PIC 906446474, established in POLARIS HOUSE NORTH STAR AVENUE, SWINDON SN2 1FL, United Kingdom,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

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By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

HELSINGIN YLIOPISTO (UH), PIC 999994535, established in YLIOPISTONKATU 3, HELSINGIN YLIOPISTO 00014, Finland,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

ILMATIETEEN LAITOS (FMI), PIC 999591306, established in Erik Palmenin aukio 1, HELSINKI 00560, Finland,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN (‘the Agreement’)

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** (‘EU executive agency’ or ‘granting authority’), under the powers delegated by the European Commission (‘European Commission’),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

BULGARSKI ANTARKTICHESKI INSTITUT ASSOCIATION (BAI), PIC 998835870, established in TZAR OSVOBODITEL BLVD 15, SOFIA 1504, Bulgaria,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN (‘the Agreement’)

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and the European Research Executive Agency (REA)** (‘EU executive agency’ or ‘granting authority’), under the powers delegated by the European Commission (‘European Commission’),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

UIC SCIENCE LLC (UICS), PIC 919608889, established in 6700 ARCTIC SPUR ROAD, ANCHORAGE 99518, United States,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN (‘the Agreement’)

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** (‘EU executive agency’ or ‘granting authority’), under the powers delegated by the European Commission (‘European Commission’),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

CAFF SKRIFSTOFAN A ISLANDI (CAFF), PIC 937088677, established in NOROURSLOO BORGUM, AKUREYRI 600, Iceland,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

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By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 3

ACCESSION FORM FOR BENEFICIARIES

FONDATION TARA (TARA), PIC 916064024, established in 8 RUE DE PRAGUE, PARIS 75012, France,

hereby agrees

to become beneficiary

in Agreement No 101130949 — POLARIN ('the Agreement')

between ALFRED-WEGENER-INSTITUT HELMHOLTZ-ZENTRUM FUR POLAR- UND MEERESFORSCHUNG (AWI) **and** the **European Research Executive Agency (REA)** ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'),

and mandates

the coordinator to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 39.

By signing this accession form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and terms and conditions it sets out.

SIGNATURE

For the beneficiary

ANNEX 4 HORIZON EUROPE MGA — MULTI + MONO

FINANCIAL STATEMENT FOR [PARTICIPANT NAME] FOR REPORTING PERIOD [NUMBER]

Eligible ¹ costs (per budget category)																	EU contribution ²				Revenues
Direct costs															Indirect costs	Total costs	EU contribution to eligible costs			Total requested EU contribution	Income generated by the action
A. Personnel costs			B. Subcontracting costs	C. Purchase costs			D. Other cost categories						E. Indirect costs ²	Funding rate % ³	Maximum EU contribution ⁴		Requested EU contribution				
Forms of funding	Actual costs	Unit costs (usual accounting practices)	Unit costs ⁵	Actual costs	Actual costs	Actual costs	Actual costs	/ Actual costs	Unit costs (usual accounting practices)	/ Unit costs ⁵	/ Unit costs ⁵	/ Actual costs	/ Unit costs ⁵	/ Actual costs	/ Actual costs	Flat-rate costs ⁶	U	g = f*U%	h	m	n
	a1	a2	a3	b	c1	c2	c3	/ d1a	d2	/ d3	/ d4	/ d5	/ d6	/ d7	/ d8	e = 0,25 * (a1 + a2 + a3 + b + c1 + c2 + c3 + d1a + d2 + d3 + d4 + d5 + d6 + d7 + d8)					
XX - [short name beneficiary/affiliated entity]																					

The beneficiary/affiliated entity hereby confirms that:
 The information provided is complete, reliable and true.
 The costs and contributions declared are eligible (see Article 6).
 The costs and contributions can be substantiated by adequate records and supporting documentation that will be produced upon request or in the context of checks, reviews, audits and investigations (see Articles 19, 20 and 25).
 For the last reporting period: that all the revenues have been declared (see Article 22).

¹ Please declare all eligible costs and contributions, even if they exceed the amounts indicated in the estimated budget (see Annex 2). Only amounts that were declared in your individual financial statements can be taken into account later on, in order to replace costs/contributions that are found to be ineligible.

² See Article 6 for the eligibility conditions. All amounts must be expressed in EUR (see Article 21 for the conversion rules).
³ If you have also received an EU operating grant during this reporting period, you cannot claim indirect costs - unless you can demonstrate that the operating grant does not cover any costs of the action. This requires specific accounting tools. Please contact us immediately via the Funding & Tenders Portal for details.
⁴ See Data Sheet for the reimbursement rate(s).
⁵ This is the *theoretical* amount of EU contribution to costs that the system calculates automatically (by multiplying the reimbursement rates by the costs declared). The amount you request (in the column 'requested EU contribution') may be less.
⁶ See Annex 2a 'Additional information on the estimated budget' for the details (units, cost per unit).
⁷ See Data Sheet for the flat-rate.

ANNEX 5

SPECIFIC RULES

CONFIDENTIALITY AND SECURITY (— ARTICLE 13)

Sensitive information with security recommendation

Sensitive information with a security recommendation must comply with the additional requirements imposed by the granting authority.

Before starting the action tasks concerned, the beneficiaries must have obtained all approvals or other mandatory documents needed for implementing the task. The documents must be kept on file and be submitted upon request by the coordinator to the granting authority. If they are not in English, they must be submitted together with an English summary.

For requirements restricting disclosure or dissemination, the information must be handled in accordance with the recommendation and may be disclosed or disseminated only after written approval from the granting authority.

EU classified information

If EU classified information is used or generated by the action, it must be treated in accordance with the security classification guide (SCG) and security aspect letter (SAL) set out in Annex 1 and Decision 2015/444¹ and its implementing rules — until it is declassified.

Deliverables which contain EU classified information must be submitted according to special procedures agreed with the granting authority.

Action tasks involving EU classified information may be subcontracted only with prior explicit written approval from the granting authority and only to entities established in an EU Member State or in a non-EU country with a security of information agreement with the EU (or an administrative arrangement with the Commission).

EU classified information may not be disclosed to any third party (including participants involved in the action implementation) without prior explicit written approval from the granting authority.

ETHICS (— ARTICLE 14)

Ethics and research integrity

The beneficiaries must carry out the action in compliance with:

- ethical principles (including the highest standards of research integrity)

¹ Commission Decision 2015/444/EC, Euratom of 13 March 2015 on the security rules for protecting EU classified information (OJ L 72, 17.3.2015, p. 53).

and

- applicable EU, international and national law, including the EU Charter of Fundamental Rights and the European Convention for the Protection of Human Rights and Fundamental Freedoms and its Supplementary Protocols.

No funding can be granted, within or outside the EU, for activities that are prohibited in all Member States. No funding can be granted in a Member State for an activity which is forbidden in that Member State.

The beneficiaries must pay particular attention to the principle of proportionality, the right to privacy, the right to the protection of personal data, the right to the physical and mental integrity of persons, the right to non-discrimination, the need to ensure protection of the environment and high levels of human health protection.

The beneficiaries must ensure that the activities under the action have an exclusive focus on civil applications.

The beneficiaries must ensure that the activities under the action do not:

- aim at human cloning for reproductive purposes
- intend to modify the genetic heritage of human beings which could make such modifications heritable (with the exception of research relating to cancer treatment of the gonads, which may be financed)
- intend to create human embryos solely for the purpose of research or for the purpose of stem cell procurement, including by means of somatic cell nuclear transfer, or
- lead to the destruction of human embryos (for example, for obtaining stem cells).

Activities involving research on human embryos or human embryonic stem cells may be carried out only if:

- they are set out in Annex 1 or
- the coordinator has obtained explicit approval (in writing) from the granting authority.

In addition, the beneficiaries must respect the fundamental principle of research integrity — as set out in the European Code of Conduct for Research Integrity².

This implies compliance with the following principles:

- reliability in ensuring the quality of research reflected in the design, the methodology, the analysis and the use of resources
- honesty in developing, undertaking, reviewing, reporting and communicating research in a transparent, fair and unbiased way

² European Code of Conduct for Research Integrity of ALLEA (All European Academies).

- respect for colleagues, research participants, society, ecosystems, cultural heritage and the environment
- accountability for the research from idea to publication, for its management and organisation, for training, supervision and mentoring, and for its wider impacts

and means that beneficiaries must ensure that persons carrying out research tasks follow the good research practices including ensuring, where possible, openness, reproducibility and traceability and refrain from the research integrity violations described in the Code.

Activities raising ethical issues must comply with the additional requirements formulated by the ethics panels (including after checks, reviews or audits; see Article 25).

Before starting an action task raising ethical issues, the beneficiaries must have obtained all approvals or other mandatory documents needed for implementing the task, notably from any (national or local) ethics committee or other bodies such as data protection authorities.

The documents must be kept on file and be submitted upon request by the coordinator to the granting authority. If they are not in English, they must be submitted together with an English summary, which shows that the documents cover the action tasks in question and includes the conclusions of the committee or authority concerned (if any).

VALUES (— ARTICLE 14)

Gender mainstreaming

The beneficiaries must take all measures to promote equal opportunities between men and women in the implementation of the action and, where applicable, in line with the gender equality plan. They must aim, to the extent possible, for a gender balance at all levels of personnel assigned to the action, including at supervisory and managerial level.

INTELLECTUAL PROPERTY RIGHTS (IPR) — BACKGROUND AND RESULTS — ACCESS RIGHTS AND RIGHTS OF USE (— ARTICLE 16)

Definitions

Access rights — Rights to use results or background.

Dissemination — The public disclosure of the results by appropriate means, other than resulting from protecting or exploiting the results, including by scientific publications in any medium.

Exploit(ation) — The use of results in further research and innovation activities other than those covered by the action concerned, including among other things, commercial exploitation such as developing, creating, manufacturing and marketing a product or process, creating and providing a service, or in standardisation activities.

Fair and reasonable conditions — Appropriate conditions, including possible financial terms or royalty-free conditions, taking into account the specific circumstances of the request for access, for example the actual or potential value of the results or background to which access is requested and/or the scope, duration or other characteristics of the exploitation envisaged.

FAIR principles — ‘findability’, ‘accessibility’, ‘interoperability’ and ‘reusability’.

Open access — Online access to research outputs provided free of charge to the end-user.

Open science — An approach to the scientific process based on open cooperative work, tools and diffusing knowledge.

Research data management — The process within the research lifecycle that includes the organisation, storage, preservation, security, quality assurance, allocation of persistent identifiers (PIDs) and rules and procedures for sharing of data including licensing.

Research outputs — Results to which access can be given in the form of scientific publications, data or other engineered results and processes such as software, algorithms, protocols, models, workflows and electronic notebooks.

Scope of the obligations

For this section, references to ‘beneficiary’ or ‘beneficiaries’ do not include affiliated entities (if any).

Agreement on background

The beneficiaries must identify in a written agreement the background as needed for implementing the action or for exploiting its results.

Where the call conditions restrict control due to strategic interests reasons, background that is subject to control or other restrictions by a country (or entity from a country) which is not one of the eligible countries or target countries set out in the call conditions and that impact the exploitation of the results (i.e. would make the exploitation of the results subject to control or restrictions) must not be used and must be explicitly excluded from it in the agreement on background — unless otherwise agreed with the granting authority.

Ownership of results

Results are owned by the beneficiaries that generate them.

However, two or more beneficiaries own results jointly if:

- they have jointly generated them and
- it is not possible to:
 - establish the respective contribution of each beneficiary, or
 - separate them for the purpose of applying for, obtaining or maintaining their protection.

The joint owners must agree — in writing — on the allocation and terms of exercise of their joint ownership (**‘joint ownership agreement’**), to ensure compliance with their obligations under this Agreement.

Unless otherwise agreed in the joint ownership agreement or consortium agreement, each joint owner may grant non-exclusive licences to third parties to exploit the jointly-owned results (without any right to sub-license), if the other joint owners are given:

- at least 45 days advance notice and
- fair and reasonable compensation.

The joint owners may agree — in writing — to apply another regime than joint ownership.

If third parties (including employees and other personnel) may claim rights to the results, the beneficiary concerned must ensure that those rights can be exercised in a manner compatible with its obligations under the Agreement.

The beneficiaries must indicate the owner(s) of the results (results ownership list) in the final periodic report.

Protection of results

Beneficiaries which have received funding under the grant must adequately protect their results — for an appropriate period and with appropriate territorial coverage — if protection is possible and justified, taking into account all relevant considerations, including the prospects for commercial exploitation, the legitimate interests of the other beneficiaries and any other legitimate interests.

Exploitation of results

Beneficiaries which have received funding under the grant must — up to four years after the end of the action (see Data Sheet, Point 1) — use their best efforts to exploit their results directly or to have them exploited indirectly by another entity, in particular through transfer or licensing.

If, despite a beneficiary's best efforts, the results are not exploited within one year after the end of the action, the beneficiaries must (unless otherwise agreed in writing with the granting authority) use the Horizon Results Platform to find interested parties to exploit the results.

If results are incorporated in a standard, the beneficiaries must (unless otherwise agreed with the granting authority or unless it is impossible) ask the standardisation body to include the funding statement (see Article 17) in (information related to) the standard.

Additional exploitation obligations

Where the call conditions impose additional exploitation obligations (including obligations linked to the restriction of participation or control due to strategic assets, interests, autonomy or security reasons), the beneficiaries must comply with them — up to four years after the end of the action (see Data Sheet, Point 1).

Where the call conditions impose additional exploitation obligations in case of a public emergency, the beneficiaries must (if requested by the granting authority) grant for a limited period of time specified in the request, non-exclusive licences — under fair and reasonable conditions — to their results to legal entities that need the results to address the public emergency and commit to rapidly and broadly exploit the resulting products and services at fair and reasonable conditions. This provision applies up to four years after the end of the action (see Data Sheet, Point 1).

Additional information obligation relating to standards

Where the call conditions impose additional information obligations relating to possible standardisation, the beneficiaries must — up to four years after the end of the action (see Data Sheet, Point 1) — inform the granting authority, if the results could reasonably be expected to contribute to European or international standards.

Transfer and licensing of results

Transfer of ownership

The beneficiaries may transfer ownership of their results, provided this does not affect compliance with their obligations under the Agreement.

The beneficiaries must ensure that their obligations under the Agreement regarding their results are passed on to the new owner and that this new owner has the obligation to pass them on in any subsequent transfer.

Moreover, they must inform the other beneficiaries with access rights of the transfer at least 45 days in advance (or less if agreed in writing), unless agreed otherwise in writing for specifically identified third parties including affiliated entities or unless impossible under the applicable law. This notification must include sufficient information on the new owner to enable the beneficiaries concerned to assess the effects on their access rights. The beneficiaries may object within 30 days of receiving notification (or less if agreed in writing), if they can show that the transfer would adversely affect their access rights. In this case, the transfer may not take place until agreement has been reached between the beneficiaries concerned.

Granting licences

The beneficiaries may grant licences to their results (or otherwise give the right to exploit them), including on an exclusive basis, provided this does not affect compliance with their obligations.

Exclusive licences for results may be granted only if all the other beneficiaries concerned have waived their access rights.

Granting authority right to object to transfers or licensing — Horizon Europe actions

Where the call conditions in Horizon Europe actions provide for the right to object to transfers or licensing, the granting authority may — up to four years after the end of the action (see Data Sheet, Point 1) — object to a transfer of ownership or the exclusive licensing of results, if:

- the beneficiaries which generated the results have received funding under the grant
- it is to a legal entity established in a non-EU country not associated with Horizon Europe, and
- the granting authority considers that the transfer or licence is not in line with EU interests.

Beneficiaries that intend to transfer ownership or grant an exclusive licence must formally notify the granting authority before the intended transfer or licensing takes place and:

- identify the specific results concerned
- describe in detail the new owner or licensee and the planned or potential exploitation of the results, and
- include a reasoned assessment of the likely impact of the transfer or licence on EU interests, in particular regarding competitiveness as well as consistency with ethical principles and security considerations.

The granting authority may request additional information.

If the granting authority decides to object to a transfer or exclusive licence, it must formally notify the beneficiary concerned within 60 days of receiving notification (or any additional information it has requested).

No transfer or licensing may take place in the following cases:

- pending the granting authority decision, within the period set out above
- if the granting authority objects
- until the conditions are complied with, if the granting authority objection comes with conditions.

A beneficiary may formally notify a request to waive the right to object regarding intended transfers or grants to a specifically identified third party, if measures safeguarding EU interests are in place. If the granting authority agrees, it will formally notify the beneficiary concerned within 60 days of receiving notification (or any additional information requested).

Granting authority right to object to transfers or licensing — Euratom actions

Where the call conditions in Euratom actions provide for the right to object to transfers or licensing, the granting authority may — up to four years after the end of the action (see Data Sheet, Point 1) — object to a transfer of ownership or the exclusive or non-exclusive licensing of results, if:

- the beneficiaries which generated the results have received funding under the grant
- it is to a legal entity established in a non-EU country not associated to the Euratom Research and Training Programme 2021-2025 and
- the granting authority considers that the transfer or licence is not in line with the EU interests.

Beneficiaries that intend to transfer ownership or grant a licence must formally notify the granting authority before the intended transfer or licensing takes place and:

- identify the specific results concerned
- describe in detail the results, the new owner or licensee and the planned or potential exploitation of the results, and
- include a reasoned assessment of the likely impact of the transfer or licence on EU interests, in particular regarding competitiveness as well as consistency with

ethical principles and security considerations (including the defence interests of the EU Member States under Article 24 of the Euratom Treaty).

The granting authority may request additional information.

If the granting authority decides to object to a transfer or licence, it will formally notify the beneficiary concerned within 60 days of receiving notification (or any additional information requested).

No transfer or licensing may take place in the following cases:

- pending the granting authority decision, within the period set out above
- if the granting authority objects
- until the conditions are complied with, if the granting authority objection comes with conditions.

A beneficiary may formally notify a request to waive the right to object regarding intended transfers or grants to a specifically identified third party, if measures safeguarding EU interests are in place. If the granting authority agrees, it will formally notify the beneficiary concerned within 60 days of receiving notification (or any additional information requested).

Limitations to transfers and licensing due to strategic assets, interests, autonomy or security reasons of the EU and its Member States

Where the call conditions restrict participation or control due to strategic assets, interests, autonomy or security reasons, the beneficiaries may not transfer ownership of their results or grant licences to third parties which are established in countries which are not eligible countries or target countries set out in the call conditions (or, if applicable, are controlled by such countries or entities from such countries) — unless they have requested and received prior approval by the granting authority.

The request must:

- identify the specific results concerned
- describe in detail the new owner and the planned or potential exploitation of the results, and
- include a reasoned assessment of the likely impact of the transfer or license on the strategic assets, interests, autonomy or security of the EU and its Member States.

The granting authority may request additional information.

Access rights to results and background

Exercise of access rights — Waiving of access rights — No sub-licensing

Requests to exercise access rights and the waiver of access rights must be in writing.

Unless agreed otherwise in writing with the beneficiary granting access, access rights do not include the right to sub-license.

If a beneficiary is no longer involved in the action, this does not affect its obligations to grant access.

If a beneficiary defaults on its obligations, the beneficiaries may agree that that beneficiary no longer has access rights.

Access rights for implementing the action

The beneficiaries must grant each other access — on a royalty-free basis — to background needed to implement their own tasks under the action, unless the beneficiary that holds the background has — before acceding to the Agreement —:

- informed the other beneficiaries that access to its background is subject to restrictions, or
- agreed with the other beneficiaries that access would not be on a royalty-free basis.

The beneficiaries must grant each other access — on a royalty-free basis — to results needed for implementing their own tasks under the action.

Access rights for exploiting the results

The beneficiaries must grant each other access — under fair and reasonable conditions — to results needed for exploiting their results.

The beneficiaries must grant each other access — under fair and reasonable conditions — to background needed for exploiting their results, unless the beneficiary that holds the background has — before acceding to the Agreement — informed the other beneficiaries that access to its background is subject to restrictions.

Requests for access must be made — unless agreed otherwise in writing — up to one year after the end of the action (see Data Sheet, Point 1).

Access rights for entities under the same control

Unless agreed otherwise in writing by the beneficiaries, access to results and, subject to the restrictions referred to above (if any), background must also be granted — under fair and reasonable conditions — to entities that:

- are established in an EU Member State or Horizon Europe associated country
- are under the direct or indirect control of another beneficiary, or under the same direct or indirect control as that beneficiary, or directly or indirectly controlling that beneficiary and
- need the access to exploit the results of that beneficiary.

Unless agreed otherwise in writing, such requests for access must be made by the entity directly to the beneficiary concerned.

Requests for access must be made — unless agreed otherwise in writing — up to one year after the end of the action (see Data Sheet, Point 1).

Access rights for the granting authority, EU institutions, bodies, offices or agencies and national authorities to results for policy purposes — Horizon Europe actions

In Horizon Europe actions, the beneficiaries which have received funding under the grant must grant access to their results — on a royalty-free basis — to the granting authority, EU institutions, bodies, offices or agencies for developing, implementing and monitoring EU policies or programmes. Such access rights do not extend to beneficiaries' background.

Such access rights are limited to non-commercial and non-competitive use.

For actions under the cluster 'Civil Security for Society', such access rights also extend to national authorities of EU Member States for developing, implementing and monitoring their policies or programmes in this area. In this case, access is subject to a bilateral agreement to define specific conditions ensuring that:

- the access rights will be used only for the intended purpose and
- appropriate confidentiality obligations are in place.

Moreover, the requesting national authority or EU institution, body, office or agency (including the granting authority) must inform all other national authorities of such a request.

Access rights for the granting authority, Euratom institutions, funding bodies or the Joint Undertaking Fusion for Energy — Euratom actions

In Euratom actions, the beneficiaries which have received funding under the grant must grant access to their results — on a royalty-free basis — to the granting authority, Euratom institutions, funding bodies or the Joint Undertaking Fusion for Energy for developing, implementing and monitoring Euratom policies and programmes or for compliance with obligations assumed through international cooperation with non-EU countries and international organisations.

Such access rights include the right to authorise third parties to use the results in public procurement and the right to sub-license and are limited to non-commercial and non-competitive use.

Additional access rights

Where the call conditions impose additional access rights, the beneficiaries must comply with them.

COMMUNICATION, DISSEMINATION, OPEN SCIENCE AND VISIBILITY (— ARTICLE 17)

Dissemination

Dissemination of results

The beneficiaries must disseminate their results as soon as feasible, in a publicly available format, subject to any restrictions due to the protection of intellectual property, security rules or legitimate interests.

A beneficiary that intends to disseminate its results must give at least 15 days advance notice to the other beneficiaries (unless agreed otherwise), together with sufficient information on the results it will disseminate.

Any other beneficiary may object within (unless agreed otherwise) 15 days of receiving notification, if it can show that its legitimate interests in relation to the results or background would be significantly harmed. In such cases, the results may not be disseminated unless appropriate steps are taken to safeguard those interests.

Additional dissemination obligations

Where the call conditions impose additional dissemination obligations, the beneficiaries must also comply with those.

Open Science

Open science: open access to scientific publications

The beneficiaries must ensure open access to peer-reviewed scientific publications relating to their results. In particular, they must ensure that:

- at the latest at the time of publication, a machine-readable electronic copy of the published version or the final peer-reviewed manuscript accepted for publication, is deposited in a trusted repository for scientific publications
- immediate open access is provided to the deposited publication via the repository, under the latest available version of the Creative Commons Attribution International Public Licence (CC BY) or a licence with equivalent rights; for monographs and other long-text formats, the licence may exclude commercial uses and derivative works (e.g. CC BY-NC, CC BY-ND) and
- information is given via the repository about any research output or any other tools and instruments needed to validate the conclusions of the scientific publication.

Beneficiaries (or authors) must retain sufficient intellectual property rights to comply with the open access requirements.

Metadata of deposited publications must be open under a Creative Common Public Domain Dedication (CC 0) or equivalent, in line with the FAIR principles (in particular machine-actionable) and provide information at least about the following: publication (author(s), title, date of publication, publication venue); Horizon Europe or Euratom funding; grant project name, acronym and number; licensing terms; persistent identifiers for the publication, the authors involved in the action and, if possible, for their organisations and the grant. Where applicable, the metadata must include persistent identifiers for any research output or any other tools and instruments needed to validate the conclusions of the publication.

Only publication fees in full open access venues for peer-reviewed scientific publications are eligible for reimbursement.

Open science: research data management

The beneficiaries must manage the digital research data generated in the action ('data') responsibly, in line with the FAIR principles and by taking all of the following actions:

- establish a data management plan ('DMP') (and regularly update it)

- as soon as possible and within the deadlines set out in the DMP, deposit the data in a trusted repository; if required in the call conditions, this repository must be federated in the EOSC in compliance with EOSC requirements
- as soon as possible and within the deadlines set out in the DMP, ensure open access — via the repository — to the deposited data, under the latest available version of the Creative Commons Attribution International Public License (CC BY) or Creative Commons Public Domain Dedication (CC 0) or a licence with equivalent rights, following the principle ‘as open as possible as closed as necessary’, unless providing open access would in particular:
 - be against the beneficiary’s legitimate interests, including regarding commercial exploitation, or
 - be contrary to any other constraints, in particular the EU competitive interests or the beneficiary’s obligations under this Agreement; if open access is not provided (to some or all data), this must be justified in the DMP
- provide information via the repository about any research output or any other tools and instruments needed to re-use or validate the data.

Metadata of deposited data must be open under a Creative Commons Public Domain Dedication (CC 0) or equivalent (to the extent legitimate interests or constraints are safeguarded), in line with the FAIR principles (in particular machine-actionable) and provide information at least about the following: datasets (description, date of deposit, author(s), venue and embargo); Horizon Europe or Euratom funding; grant project name, acronym and number; licensing terms; persistent identifiers for the dataset, the authors involved in the action, and, if possible, for their organisations and the grant. Where applicable, the metadata must include persistent identifiers for related publications and other research outputs.

Open science: additional practices

Where the call conditions impose additional obligations regarding open science practices, the beneficiaries must also comply with those.

Where the call conditions impose additional obligations regarding the validation of scientific publications, the beneficiaries must provide (digital or physical) access to data or other results needed for validation of the conclusions of scientific publications, to the extent that their legitimate interests or constraints are safeguarded (and unless they already provided the (open) access at publication).

Where the call conditions impose additional open science obligations in case of a public emergency, the beneficiaries must (if requested by the granting authority) immediately deposit any research output in a repository and provide open access to it under a CC BY licence, a Public Domain Dedication (CC 0) or equivalent. As an exception, if the access would be against the beneficiaries’ legitimate interests, the beneficiaries must grant non-exclusive licenses — under fair and reasonable conditions — to legal entities that need the research output to address the public emergency and commit to rapidly and broadly exploit the resulting products and services at fair and reasonable conditions. This provision applies up to four years after the end of the action (see Data Sheet, Point 1).

Plan for the exploitation and dissemination of results including communication activities

Unless excluded by the call conditions, the beneficiaries must provide and regularly update a plan for the exploitation and dissemination of results including communication activities.

SPECIFIC RULES FOR CARRYING OUT THE ACTION (— ARTICLE 18)

Implementation in case of restrictions due to strategic assets, interests, autonomy or security of the EU and its Member States

Where the call conditions restrict participation or control due to strategic assets, interests, autonomy or security, the beneficiaries must ensure that none of the entities that participate as affiliated entities, associated partners, subcontractors or recipients of financial support to third parties are established in countries which are not eligible countries or target countries set out in the call conditions (or, if applicable, are controlled by such countries or entities from such countries) — unless otherwise agreed with the granting authority.

The beneficiaries must moreover ensure that any cooperation with entities established in countries which are not eligible countries or target countries set out in the call conditions (or, if applicable, are controlled by such countries or entities from such countries) does not affect the strategic assets, interests, autonomy or security of the EU and its Member States.

Recruitment and working conditions for researchers

The beneficiaries must take all measures to implement the principles set out in the Commission Recommendation on the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers³, in particular regarding:

- working conditions
- transparent recruitment processes based on merit, and
- career development.

The beneficiaries must ensure that researchers and all participants involved in the action are aware of them.

Specific rules for access to research infrastructure activities

Definitions

Research Infrastructures — Facilities that provide resources and services for the research communities to conduct research and foster innovation in their fields. This definition includes the associated human resources, and it covers major equipment or sets of instruments; knowledge-related facilities such as collections, archives or scientific data infrastructures; computing systems, communication networks, and any other infrastructure, of a unique nature and open to external users, essential to achieve excellence in research and innovation. Where relevant, they may be used beyond research, for example

³ Commission Recommendation 2005/251/EC of 11 March 2005 on the European Charter for Researchers and on a Code of Conduct for the Recruitment of Researchers (OJ L 75, 22.3.2005, p. 67).

for education or public services, and they may be ‘single-sited’, ‘virtual’ or ‘distributed’⁴:

When implementing access to research infrastructure activities, the beneficiaries must respect the following conditions:

- for transnational access:

- access which must be provided:

The access must be free of charge, transnational access to research infrastructure or installations for selected user-groups.

The access must include the logistical, technological and scientific support and the specific training that is usually provided to external researchers using the infrastructure. Transnational access can be either in person (hands-on), provided to selected users that visit the installation to make use of it, or remote, through the provision to selected user-groups of remote scientific services (e.g. provision of reference materials or samples, remote access to a high-performance computing facility).

- categories of users that may have access:

Transnational access must be provided to selected user-groups, i.e. teams of one or more researchers (users).

The majority of the users must work in a country other than the country(ies) where the installation is located (unless access is provided by an international organisation, the Joint Research Centre (JRC), an ERIC or similar legal entity).

Only user groups that are allowed to disseminate the results they have generated under the action may benefit from the access (unless the users are working for SMEs).

Access for user groups with a majority of users not working in a EU Member State or Horizon Europe associated country is limited to 20% of the total amount of units of access provided under the grant (unless a higher percentage is foreseen in Annex 1).

- procedure and criteria for selecting user groups:

The user groups must request access by submitting (in writing) a description of the work that they wish to carry out and the names, nationalities and home institutions of the users.

The user groups must be selected by (one or more) selection panels set up by the consortium.

⁴ See Article 2(1) of the Horizon Europe Framework Programme Regulation 2021/695.

The selection panels must be composed of international experts in the field, at least half of them independent from the consortium (unless otherwise specified in Annex 1).

The selection panels must assess all proposals received and recommend a short-list of the user groups that should benefit from access.

The selection panels must base their selection on scientific merit, taking into account that priority should be given to user groups composed of users who:

- have not previously used the installation and
- are working in countries where no equivalent research infrastructure exist.

It will apply the principles of transparency, fairness and impartiality.

Where the call conditions impose additional rules for the selection of user groups, the beneficiaries must also comply with those.

- other conditions:

The beneficiaries must request written approval from the granting authority for the selection of user groups requiring visits to the installations exceeding 3 months (unless such visits are foreseen in Annex 1).

In addition, the beneficiaries must:

- advertise widely, including on a their websites, the access offered under the Agreement
- promote equal opportunities in advertising the access and take into account the gender dimension when defining the support provided to users
- ensure that users comply with the terms and conditions of the Agreement
- ensure that its obligations under Articles 12, 13, 17 and 33 also apply to the users
- keep records of the names, nationalities, and home institutions of users, as well as the nature and quantity of access provided to them

- for virtual access:

- access which must be provided:

The access must be free of charge, virtual access to research infrastructure or installations.

‘Virtual access’ means open and free access through communication networks to digital resources and services needed for research, without selecting the users to whom access is provided.

The access must include the support that is usually provided to external users.

Where allowed by the call conditions, beneficiaries may in justified cases define objective eligibility criteria (e.g. affiliation to a research or academic institution) for specific users.

- other conditions:

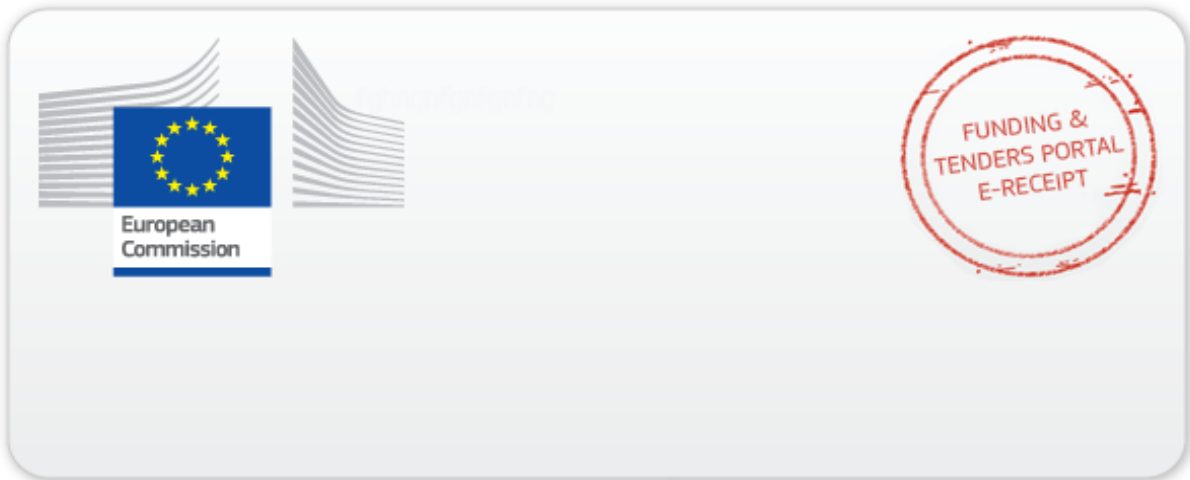
The beneficiaries must have the virtual access services assessed periodically by a board composed of international experts in the field, at least half of whom must be independent from the consortium (unless otherwise specified in Annex 1). For this purpose, information and statistics on the users and the nature and quantity of the access provided, must be made available to the board.

The beneficiaries must advertise widely, including on a dedicated website, the access offered under the grant and the eligibility criteria, if any.

Where the call conditions impose additional traceability⁵ obligations, information on the traceability of the users and the nature and quantity of access must be provided by the beneficiaries.

These obligations apply regardless of the form of funding or budget categories used to declare the costs (unit costs or actual costs or a combination of the two).

⁵ According to the definition given in ISO 9000, i.e.: “Traceability is the ability to trace the history, application, use and location of an item or its characteristics through recorded identification data.” The users can be traced, for example, by authentication and/or by authorization or by other means that allows for analysis of the type of users and the nature and quantity of access provided.



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