



2nd user workshop report

Ref.: D7.12_V1.0

Date: 30/12/2022

Euro-Argo Research Infrastructure Sustainability and
Enhancement Project (EA RISE Project) - 824131

This project has received funding from the European Union's Horizon 2020
research and innovation programme under grant agreement no 824131.
Call INFRADEV-03-2018-2019: Individual support to ESFRI
and other world-class research infrastructures





Disclaimer:

This Deliverable reflects only the author's views and the European Commission is not responsible for any use that may be made of the information contained therein.

Document Reference

Project	Euro-Argo RISE - 824131
Deliverable number	D7.12
Deliverable title	2nd user workshop report
Description	Report on the 7th Argo Science Workshop, organised jointly with Argo international
Work Package number	WP7
Work Package title	Euro-Argo RISE visibility: communication and dissemination towards user's community
Lead Institute	Euro-Argo ERIC
Lead authors	Claire Gourcuff, Estérine Evrard
Contributors	Francine Loubrieu
Submission date	30.12.2022
Due date	30.09.2021 - revised due date 31.12.2022
Comments	
Accepted by	Claire Gourcuff

Document History

Version	Issue Date	Author	Comments
0.1	21/12/2022	Claire Gourcuff, Estérine Evrard	Initial version
1.0	30/12/2022	Claire Gourcuff, Estérine Evrard	Final version



EXECUTIVE SUMMARY

This meeting report provides a summary of the main highlights and key messages delivered during this 7th international edition. Material from the event is available on the website: <https://www.euro-argo.eu/News-Meetings/Meetings/Others/7th-Argo-Science-Workshop-October-2022>

The workshop was hosted by Euro-Argo as a hybrid event, in Brussels, on October 11-12-13th. It was organised along three thematic sessions (1) Ocean climate, (2) Modelling & satellites, (3) Biogeochemistry. More than 100 participants attended the workshop in person, and more than 50 virtually, from about 15 countries. 45 live talks were given, and 57 posters were displayed online, some of them being introduced by flash-talks. The high-level science results presented highlighted the variety of applications enabled by OneArgo, and opened stimulating discussions between participants.

An Argo Town Hall was organised at the end of the first day, to give the opportunity to attendees to ask open questions to experts from the Argo community representing different fields. A roundtable discussion on “Ensuring the sustainability of OneArgo” was also organised at the end of the 2nd day with representatives from Copernicus and ECMWF, two major Argo data users in Europe, as well as EC delegates.

TABLE OF CONTENTS

1. Context	6
2. Workshop objectives	7
3. Workshop Organisation	7
3.1. Preparation	7
3.2. Committees	7
3.2.1. Scientific Committee	7
3.2.2. Organising Committee	8
4. Overview of participants	8
5. Sessions presentations	9
5.1. Opening	10
5.2. Session 1: Ocean Climate	10
5.3. Session 2 : Model & satellites	10
5.4. Session 3: BGC session	10
6. Focus on specific features	10
6.1. Argo Town Hall	10
6.2. Roundtable : Ensuring the sustainability of the OneArgo Programme	11
7. Conclusion	12
8. Annexes	14
Annex 1: Final Programme	14
Annex 2: Results of the short survey	27
Annex 3: Dashboard set up and access	30

1. Context

Euro-Argo organises its Science Meetings every other year. The last one (7th Euro-Argo Science Meeting, see [Euro-Argo RISE D7.3](#)) was organised in Athens in 2019, and the 8th edition was originally planned for 2021. However, due to the pandemic that would have forced the meeting to be held virtually, and because the 7th international Argo Workshop was planned for 2022, it was decided to propose to the international Argo Steering Team that Euro-Argo would host this 7th international Argo Science Workshop in 2022, in Brussels, during autumn 2022. This proposal was agreed in March 2021, and the 8th Euro-Argo Science Meeting became the 7th Argo Science Workshop, with an international dimension.

The dates were fixed in consultation with the international Argo Steering Team to 10-14 October 2022, and Brussels was chosen as a central destination in Europe for international participants, and to encourage the participation of European Commission representatives.

The event was organised at the Royal Belgian Institute of Natural Sciences, in a conference room with a capacity of 150 attendees. It was decided to go for a fully hybrid event, and a company was hired to help in the technical aspects that such an event requires.



Figure 1: 7th Argo Workshop participants

2. Workshop objectives

The 7th Argo Science Workshop aimed to bring together ocean science research that has employed Argo data and products to further improve our knowledge of the changing oceans and highlight the applications that the new OneArgo array is opening. Through this event, the organisers wanted to stimulate research activities that use Argo data, especially in combination with data from satellites and other in situ ocean observing networks, and underline the importance of Argo data for operational services, and for model and satellite validation.

The workshop was also meant as an opportunity to widen users' experience of the Argo community and to welcome new scientists into that community.

3. Workshop Organisation

3.1. Preparation

An international scientific committee (see following section) was formed early 2022, led by Euro-Argo ERIC and including all Euro-Argo RISE executive board members. Several virtual meetings were organised between February and September 2022 for the committee to agree on the format, content, call for abstracts, and abstracts selection. The call for abstracts was open from early May to mid-June 2022 and 112 abstracts (79 for an oral presentation and 33 for a poster) were received and reviewed by the scientific committee. Except a few abstracts that were out of scope, all the relevant abstracts were accepted, with a large fraction of them moved from oral to poster, with the possibility to advertise the poster through a 2-minute “flash-talk”. To allow as many speakers as possible to talk while avoiding too short presentations it was agreed to allocate 10 minutes per talk with 5 minutes questions. The abstracts were divided in 3 thematic sessions: Ocean Climate session, Model & Satellites session, Biogeochemical session, along 3 full days. The posters were 100% virtual, with dedicated time slots assigned aside the coffee breaks for participants to virtually exchange with the poster authors through dedicated chat channels.

An effort was made to propose to early career researchers to chair the different sessions, with both a gender and a national balance, and to allocate enough time for discussions, as a recommendation from the feedback we got after the last Euro-Argo meeting in Athens in 2019.

3.2. Committees

3.2.1. Scientific Committee

The scientific committee was composed of all the 8 Euro-Argo RISE WP leaders plus international scientists who answered our call for volunteers:

- Ingrid M. Angel-Benavides (BSH, Germany)
- Alan Berry (Marine Institute, Ireland)
- Christine Coatanoan (Ifremer, France)
- Fabrizio D’Ortenzio (CNRS, France)
- Estérine Evrard (Euro-Argo ERIC, France)
- Donata Giglio (University of Colorado Boulder, USA)
- Claire Gourcuff (Euro-Argo ERIC, France)
- Birgit Klein (BSH, Germany)
- Nicolas Kolodziejczyk (University of Brest, France)
- Giulio Notarstefano (National Institute of Oceanography and Applied Geophysics, Italy)
- Peter Oke (CSIRO, Australia)
- Emanuele Organelli (CNR, Italy)
- Elisabeth Rémy (Mercator Ocean International, France)
- Miguel Santos (IPMA, Portugal)
- Megan Scanderbeg (Scripps Institution of Oceanography, USA)
- Laura Tuomi (FMI, Finland)
- Luc van Dyck (Euro-Argo ERIC, France)
- Pedro Velez (IEO, Spain)
- Annie Wong (University of Washington, USA)
- Nathalie Zilberman (Scripps Institution of Oceanography, USA)

3.2.2. Organising Committee

- Estérine Evrard (Euro-Argo ERIC, France)
- Claire Gourcuff (Euro-Argo ERIC, France)
- Francine Loubrieu (Euro-Argo ERIC, France)

4. Overview of participants

In total, 305 persons registered for the workshop, 123 for an “in person” participation and the rest as virtual participants, with a wide international distribution among both groups of participants (Figure 2). Among the 123 “in person” registrations, 99 persons actually came to the workshop in Brussels. More than 50 persons attended the workshop virtually. However, as some remote participants only attended part of the sessions due to time lag and that some of those connected were also present in the conference room, it is difficult to provide an actual number of total virtual participants.

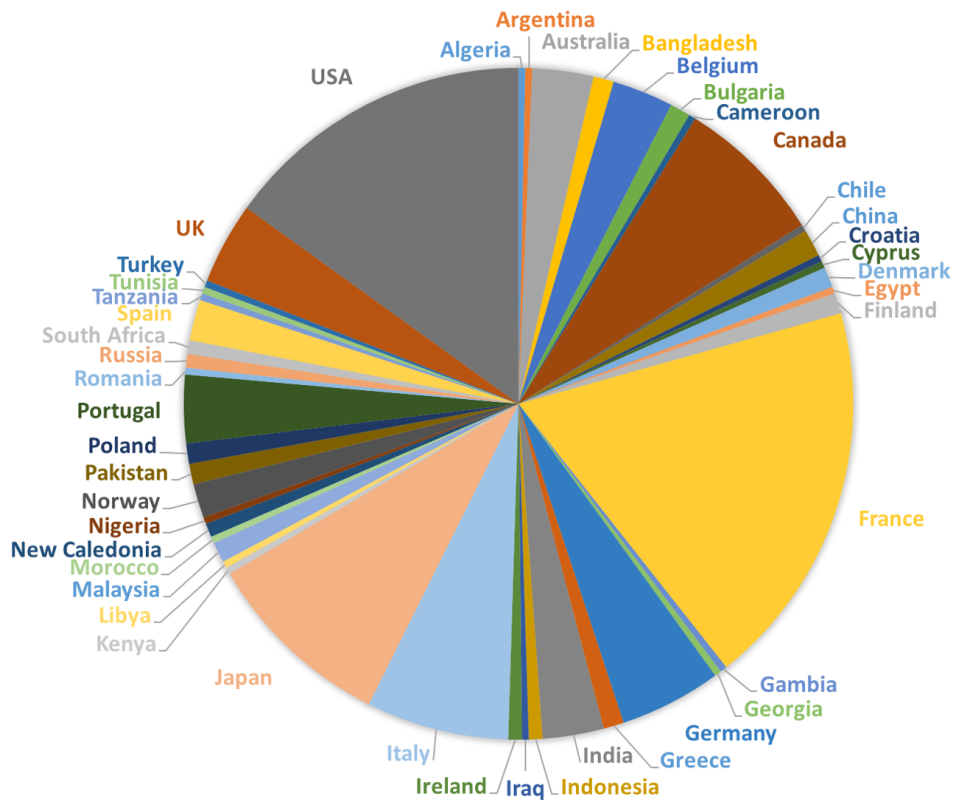


Figure 2: National distribution of the registered participants

5. Sessions presentations

The workshop was organised around three thematic sessions (see Annex 1).

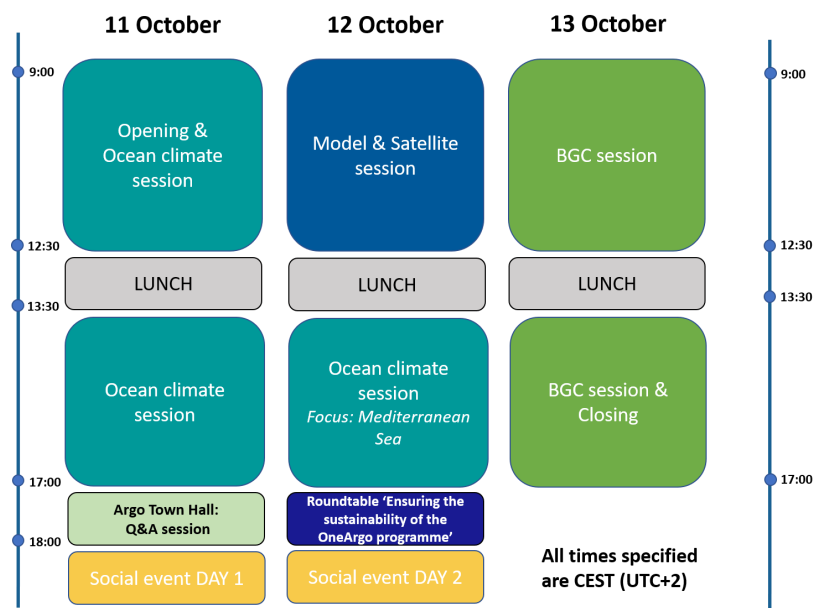


Figure 3: General organisation

5.1. Opening

The opening session was brief, in order to allocate more time for the scientific talks. It consisted in a short welcome by Isabelle Van Loo from the Museum, followed by an introduction talk by Birgit Klein (BSH, Germany), as Chair of the Euro-Argo ERIC Management Board. She presented Euro-Argo, its role in the international Argo programme, and the challenges that Argo is currently facing, in particular with the implementation of the new global, full-depth and multidisciplinary OneArgo design.

5.2. Session 1: Ocean Climate

The Ocean Climate session was run on the whole DAY 1 (11 October) and on the afternoon of DAY 2 (12 October). 21 talks were given and 10 flash-talks, with a total of 20 posters. Various subjects were discussed, from global studies to process studies in various regions of the global ocean (e.g. Irminger Sea, Argentine Basin, South West Pacific), and with a focus on the Mediterranean Sea on the afternoon of DAY 2.

5.3. Session 2 : Model & satellites

The morning of DAY 2 (12 October) was dedicated to model and satellite studies. A specific effort was made during the call for abstract period to try to attract these communities, as a need has been identified, both at international and at European level to foster the links with this important community of Argo data users, in order to better take into account their needs. The 5 talks and 5 flash-talks covered subjects such as altimetry, biogeochemical models validation, and impact of Argo observations (physical and biogeochemical) in operational systems.

5.4. Session 3: BGC session

The last day (DAY 3; 13 October) was dedicated to biogeochemical (BGC) subjects, with 14 talks and 8 flash talks, with a total of 21 posters. The morning presentations covered thematics in link with phytoplankton dynamics and community production and the afternoon session was dedicated to the biogeochemical pump.

6. Focus on specific features

6.1. Argo Town Hall

An Argo Town Hall was organised at the end of the first day, as an ice-breaker, to give the opportunity for the attendees to ask open questions to experts from the Argo community representing different fields. The expert panel was composed as follows:

- Nathalie Zilberman (Scripps Institution of Oceanography, USA)
- Ken Johnson (MBARI, USA)
- Megan Scandenberg (Scripps Institution of Oceanography, USA)
- Victor Turpin (OceanOPS, France)
- Catherine Schmechtig (CNRS, France)
- Romain Cancouët (Euro-Argo ERIC, France)

It was chaired by Brian King (NOC, UK) and moderated by Annie Wong (University of Washington, USA). Results of a short survey launched in the morning were presented to introduce the discussions (see annex 2).



Figure 4: Argo Town Hall panel

6.2. Roundtable : Ensuring the sustainability of the OneArgo Programme

A roundtable discussion on “Ensuring the sustainability of OneArgo” was organised at the end of the 2nd day with representatives from the main entities in Europe using Argo data in their daily activities (Copernicus and ECMWF), a representative of Argo USA to provide the view of one of the major contributors to the international Argo programmes outside Europe, and delegates from the European Commission. The discussion was moderated by Yann-Hervé De Roeck, new programme manager of Euro-Argo ERIC.

The panel was composed as follows:

- Zoi Konstantinou (DG MARE)
- Pierre-Yves Le Traon (Copernicus Marine Service)
- Emily Smith (US Argo)
- Hao Zuo (ECMWF)



Figure 5: The Roundtable discussion on the 2nd day.

The discussion was introduced by Emily Smith who presented OneArgo and the challenges faced by the Argo observing network.

The disparity between Europe where Argo funds mainly come from Research grants and the USA, relying more on operational funding lines, was highlighted. The importance of Argo for operational services such as Copernicus Marine Service and ECMWF was stated, as well as the need to sustain the OneArgo array. The key message from the discussion was the important need for advocacy efforts from the OneArgo community towards the funding bodies, including at national level to reach out to the European Commission.

7. Conclusion

Moving into its third decade of operation, Argo is expanding its observations into the deep seas, the sea ice covered regions, the marginal seas, and the biogeochemical realm. Implementation of the new global, full-depth and multidisciplinary OneArgo array has just started, opening new perspectives. In this context, the 7th Argo Science Workshop was successfully held in Brussels, on October 11-12-13th 2022 as an hybrid event, gathering more than 100 participants on site, and about 50 remote participants.

The high-level science results presented highlighted the variety of applications enabled by OneArgo, and opened stimulating discussions between participants.



A short satisfactory survey was sent to the participants after the event, which showed that the attendees were globally satisfied by the workshop. The virtual poster sessions were not fully satisfying but some ideas were collected to improve the way poster sessions are set up in hybrid events. More generally the feedback received will be used by Euro-Argo to improve the organisation of such future events.



8. Annexes

Annex 1: Final Programme

7th Argo Science Workshop

FINAL PROGRAMME



This meeting is endorsed by CLIVAR and the UN Ocean Decade



DAY 1 – Tuesday 11 October 2022

8:30	(Hall entrance - Registration Desk)		
9:00	Opening (Grand Auditorium)	B. KLEIN (BSH) Germany	In Person
Ocean Climate session (1) (Grand Auditorium) Chair: Nathalie ZILBERMAN, Moderator: Toshio SUGA			
9:30	Towards resolving the mean mesoscale upper ocean structure and circulation	S. WIJFFELS (Woods Hole) U.S.A	In Person
9:45	Three-dimensional observational estimates of mesoscale eddy kinetic energy in the global ocean	A. GRAY (University of Washington) U.S.A	In Person
10:00	Physical mechanisms driving oxygen subduction in the global ocean	E. PORTELA RODRIGUEZ (UTAS/LOPS) Australia	In Person
10:15	Flash talks		
10:30 – 11:30 Poster session (Virtual) + coffee break (VIP Room)			
11:30	Deep Eddy Kinetic Energy in the Tropical Pacific Revealed From Argo Floats	A. DELPECH, talk presented by S. CRAVATTE (IRD) France	Virtual
11:45	Combined use of Argo and Glider data to characterize the ocean: observing Meddies in the Eastern North Atlantic	L. LAMAS (Instituto Hidrográfico), Portugal	In Person
12:00	Warming-to-cooling reversal of overflow-derived water masses in the Irminger Sea during 2002-2021.	D. DESBRUYÈRES (Ifremer), France	In Person
12:15	Antarctic Bottom Water Warming and Circulation Slowdown in the Argentine Basin from Analysis of Deep Argo and Historical Shipboard Temperature Data	G. JOHNSON (NOAA/Pacific Marine Environmental Laboratory) U.S.A	In Person
12:30 – 13:30 Lunch break (VIP Room)			
Ocean Climate session (1) (Grand Auditorium) Chair: Nicolas KOLODZIEJCZYK, Moderator: Tammy MORRIS/Annie WONG			
13:30	Estimation of Horizontal Turbulent Diffusivity from Deep Argo Float Displacements	F. SÉVELLEC (LOPS-CNRS) France	Virtual
13:45	A study on cyclonic eddy-borne Argo floats in the Greater Agulhas Current System	T. MORRIS (South African Weather Service)	Virtual
14:00	A seasonal climatology of the upper ocean pycnocline	G. SÉRAZIN (LOPS-CNRS) France	In Person
14:15	Variability in the Deep Western Boundary Current of the Southwest Pacific Basin identified using Deep Argo	M. CHANDLER (Scripps Institution of Oceanography) U.S.A	In Person
14:30	Spiciness anomalies in the upper North Pacific based on Argo observations	T. WANG (Tohoku University) Japan	In Person
14:45	Flash talks		
15:00 – 16:30 Poster session (Virtual) + coffee break (VIP Room)			
16:30	Argo floats reveal the mechanisms controlling the deepening of anthropogenic carbon towards the deeper layers of the North Atlantic	R. ASSELOT (Ifremer) France	In Person
16:45	Atmospheric river impacts on the upper ocean: a study using Argo floats	D. GIGLIO (Univ. of Colorado Boulder) U.S.A	Virtual
17:00 – 18:00	Argo Town Hall - Q&A informal session	Argo experts panel	
18:00 – 19:00 Welcome Drink (VIP Room)			

DAY2 – Wednesday 12 October 2022

8:30 (Hall entrance - Registration Desk)			
Model & Satellite session (Grand Auditorium) Chair: Elisabeth REMY, Moderator: Peter OKE			
9:00	Introduction	P. OKE (CSIRO) Australia	Virtual
9:05	Unveiling the ocean dynamics at the mesoscale from Argo and satellite observations	S. SPEICH (LMD-IPSL, ENS-PSL), France	In Person
9:20	Impact of Argo observations in Ocean Operational Systems	E. REMY (Mercator Océan) France	In Person
9:35	Vertical Structure of Mesoscale Turbulence in the Azores Current System combining ARGO profiles, climatology, and altimetry	S. SILVA (IDL/FCUL) Portugal	Virtual
9:50	Observed seasonal variability of thermohaline structure and associated biological response in the Eastern Equatorial Indian Ocean using Argo profiling floats	T. BHATTACHARYA (INCOIS) India	Virtual
10:05	The Different Chlorophyll Structures in North Atlantic Cyclonic and Anticyclonic Eddies	G. QUARTLY (PML) U.K	In Person
10:20	Flash talks		
10:30 – 11:00		Poster session (Virtual) + coffee break (VIP Room)	
11:00	Experience, lessons learnt and challenges of biogeochemical model validation with BGC-Argo in the EU Marine Copernicus Service	G. COSSARINI (OGS) Italia	In Person
11:15	Can assimilating Biogeochemical-Argo data improve carbon flux estimates?	A. ROCHNER (University of Exeter) U.K	Virtual
11:30	Maximizing the integration of BGC Argo data and predicting systems	A. TERUZZI (OGS) Italia	In Person
11:45	Evaluation of biogeochemical ocean models from CMIP6 in the North Atlantic Ocean	M. MEHLMANN (Dalhousie University) Canada	In Person
12:00	Discussion time		
12:30 – 13:30		LUNCH BREAK (VIP Room)	
Ocean Climate session (2): focus on the Mediterranean Sea (Grand Auditorium) Chair: Elena MAURI, Moderator: Miguel PIECHO-SANTOS			
13:30	Heat content and temperature trends in the Mediterranean Sea as derived by Argo float data (2005 – 2020)	E. KUBIN (OGS) Italia	Virtual
13:45	Anticyclones in the Mediterranean sea have significantly deeper winter MLD and delayed maximum.	A. BARBONI (Ecole Polytechnique) France	In Person
14:00	Propagation in depth of marine heatwaves in the Mediterranean Sea as observed by the Argo network	M. JUZA (SOCIB) Spain	Virtual
14:15	Exceptionally high salinities in the Adriatic Sea since 2017 – multiplatform approach to monitoring and research	H. MIHANOVIC (IOF) Croatia	In Person
14:30	Impact of the Medicane Apollo on a cyclonic vortex of the Ionian Sea	M. MENNA (OGS) Italia	Virtual
14:45	Flash talks		

15:00 – 16:30	<i>Poster session (Virtual) + coffee break (VIP Room)</i>		
16:30	An update of North Aegean hydrography derived from autonomous profiling floats	D. KASSIS (HCMR) Greece	In Person
16:45	Characterization of the Atlantic Water and Levantine Intermediate Water in the Mediterranean Sea using 20 years of Argo data	G. FEDELE (CMCC) Italia	Virtual
17:00 – 18:00	Round Table: "Ensuring the sustainability of OneArgo programme"		
18:00 – 20:00	<i>Cocktail Reception (Mezzanine of the Gallery of Dinosaurs)</i>		

DAY 3 – Thursday 13 October 2022

8:30	(Hall entrance - Registration Desk)		
BGC session (Grand Auditorium) Chair: Emanuele ORGANELLI, Moderator: Marine FOURRIER			
9:00	Phytoplankton dynamics in the high nutrient – low chlorophyll regions: the northwestern subarctic Pacific	T. FUJIKI (JAMSTEC) Japan	In Person
9:15	Biogeochemical Argo floats reveal the evolution of subsurface biomass in South Indian Ocean eddies	STRUTTON (University of Tasmania) Australia	Virtual
9:30	Variability in the fluorescence signal in relation to phytoplankton community composition and implications for the retrieval of the chlorophyll a concentration from BGC-Argo floats	F. PETIT (LOV/SU) France	In Person
9:45	Retrieval of ocean net primary productivity from daily cycles of carbon biomass measured by profiling floats	A. STOER (Dalhousie University) Canada	In Person
10:00	Variability in Ocean Oxygen from GOBAI-O2: A Machine-Learning-Based Data Product	J. SHARP (Univ. of Washington CICOES / NOAA PMEL) U.S.A	In Person
10:15	Net community production in the Norwegian Sea estimated from nitrate fluxes using profiling floats	K.A. MORK (Inst. of Marine Research) Norway	In Person
10:30	Flash talks		
11 :00 –12 :00		Poster session (Virtual) + coffee break (VIP Room)	
12:00	Interannual variability of net community production in the Subantarctic Mode Water formation region estimated with autonomous platforms	P. TRUCCO-PIGNATA (Univ. of Southampton/NOC) U.K	Virtual
12:15	Quantifying the Biological Carbon Pump in the North Atlantic with BioGeoChemical Argo floats	M. CORNEC (NOAA-PMEL/Univ. of Washington) U.S.A	In Person
12:30	Mesoscale eddies: Potential coral bleaching drivers and relief in the Gulf of Mexico	J. Mc WHORTER (NOAA) U.S.A	In Person
12:45	Inequity in the deep: The amplified mesopelagic response to carbon accumulation	A. FASSBENDER (NOAA/PMEL) U.S.A	In Person
13:00 – 14:00		LUNCH BREAK (VIP Room)	
BGC session (Grand Auditorium) Chair: Hannah JOY-WARREN, Moderator: Henry BITTIG			
14:00	Latitudinal gradient in the flux of sinking particles driven by the phytoplankton community: a BioGeoChemical-Argo float investigation in the Southern Ocean.	L. TERRATS (LOV) France	Virtual
14:15	Using BGC-floats to observe particulate organic carbon dynamics in the southeast Pacific and southwest Atlantic Oceans	M. BIF (MBARI) U.S.A	In Person
14:30	Carbon to nitrogen uptake ratios observed across the Southern Ocean by the SOCCOM profiling float array	K. JOHNSON (MBARI) U.S.A	In Person

14:45	Role of Biology in Sustaining the Southern Ocean Carbon Sink	HUANG (NOAA Pacific Marine Environmental Laboratory) U.S.A	Virtual
15:00 – 16:30	<i>Poster session (Virtual) + coffee break (VIP Room)</i>		
16:30 – 17:00	Wrap up and concluding remarks		
17:00	<i>END OF THE WORKSHOP</i>		

POSTERS Sessions & Flash talks

ID	Speaker	Poster title		Flash talk slot
DAY 1 - Tuesday 11 October 10:30-11:30 & 15:00-16:30				
A01	JHA	Generation and Assessment of ARGO Sea Surface Temperature Climatology for the Indian Ocean Region	Virtual	10:15-10 :30
A02	RYKOVA	Feature Mapping: a method to refine ocean features in gridded products	Virtual	
A03	PAUTHENET	Four-dimensional temperature, salinity and mixed layer depth of the Gulf Stream, reconstructed from remote sensing and in situ observations with neural networks	Virtual	
A04	JONNAKUTI	Machine Learning-based approach for Delayed Mode quality control of salinity data from Argo floats.	Virtual	
A05	CHAMBERLAIN	The Performance of Present, Future, and Optimal Argo Infrastructure	In Person	
A06	LIU	Increasing Discrepancies in Salinity between Multiple Objective Analyses Since 2015	Virtual	14 :45 – 15 :00
A07	TVS	Can grounded Argo float data be used for validating bathymetry	Virtual	
A08	SIIRIÄ	Argo under-ice in the northern latitudes	In Person	
A09	BALEM	Argo floats deployed at the North Pole, will we see them again?	Virtual	
A10	WOOD/WILLIS	Ocean warming and Greenland ice loss: the case for expanding Argo to Greenland's continental shelf	In Person	
A11	CABANES	A improved Near Real Time Quality Control Tool for Argo trajectory files	Virtual	N/A
A12	GAO	Internal Wave Imprints on Temperature Fluctuations as Revealed by Rapid-Sampling Deep Profiling Floats	Virtual	
A13	HIRANO	SBE41CTD sensor pre-deployment screening in JAMSTEC	Virtual	
A14	HOSODA	Argo real-time QC procedure using signature-based neural network	In Person	
A15	KOBAYASHI	Salinity bias with negative pressure dependency caused by anisotropic deformation of CTD measuring cell under pressure examined with a dual-cylinder cell model	Virtual	
A16	PETIT	Deep through-flow in the Bight Fracture Zone and its role in the hydrological evolution of the Irminger Current	Virtual	

A17	ROGACHEV	Large Oyashio eddy drives interbasin exchange between the Sea of Okhotsk and the subpolar Pacific	Virtual	
A18	SAMBE	Classification of Argo Profiles in the Mid-latitude Northwest Pacific Ocean by Unsupervised Clustering and Their Potential Use	In Person	
A19	SATO	Performance evaluation of the optical dissolved oxygen sensor, ARO-FT, on Argo floats	Virtual	
A20	THIERRY	Assessing the extension of the argo array towards the deep ocean: an analysis of the long-term stability and accuracy of the SBE61, SBE41 and RBR CTD sensors	In Person	

ID	Speaker	Title		Flash talk slot
DAY 2 - Wednesday 12 October 10:30-11:00 & 15:00-16:30				
B01	FERNANDEZ CASTRO	Lagrangian pathways for heat, carbon and nutrients subduction with sub-antarctic mode waters	In Person	10:15-10 :30
B02	OKE	A demonstration of why only delayed-mode Argo data should be used for ocean reanalysis	Virtual	
B03	YUMRUKTEPE	BGC-Argo driven generic modeling framework for the Nordic Seas biogeochemistry	In Person	
B04	FUJII	Evaluation of Argo in the UN Ocean Decade Project SynObs	In Person	
B05	KIDO	An introduction of newly developed eddy-resolving quasi-global ocean reanalysis product -JCOPE-FGO-	Virtual	
B06	MAURI	Extremely high salinity in the water column of the South Adriatic Pit	In Person	14 :45 – 15:00
B07	TUOMI	Enhancing the monitoring of the Baltic Sea environmental state using Argo floats	In Person	
B08	LI	Improvements on the drift of dissolved oxygen sensor (ARO-FT)	In Person	
B09	ROCHA DE SOUZA	Equity, Diversity, and Inclusion: A case study using the Argo International Program	In Person	
B10	BENAVIDES	Argo in boundary currents: study cases using the VirtualFleet software	In Person	N/A
B11	DOI	Impact of BGC Argo data on state estimation by using the Estimated Ocean State for Climate Research (ESTOC)	Virtual	
B12	FROUIN	Additive varying coefficient model for estimating diffuse attenuation coefficient from satellite-derived water reflectance	Virtual	
B13	MACÉ	Calibration of an optical model using BGC-ARGO profiles	In Person	
B14	MERCHEL	Argo floats in the South Baltic Sea - five years of use	In Person	
B15	OULHEN	Reconstructing the ocean using Argo data and a data-driven method	In Person	
B16	ROUTABOUL	New satellite telemetry solutions to meet the new needs of ARGO profiling floats	In Person	
B17	SHULGA	Salinity recovery using regional bio optical products	Virtual	
B18	TRAYLOR	Assessing Integrated Satellite-Float Productivity Estimates in the NASA EXPORTS Campaigns	In Person	

ID	Speaker	Title		Flash talk slot
DAY 3 - Thursday 13 October 11:00-12:00 & 15:00-16:30				
C01	IZETT	Expanding the global coverage of gross primary production and net community production using biogeochemical profiling floats	In Person	10:30-11:00
C02	KOESTNER	A multivariable empirical algorithm for estimating particulate organic carbon concentration in marine environments from optical backscattering and chlorophyll-a measurements	In Person	
C03	GIDUGU	Estimation of Seasonal changes in Vertical distribution of phytoplankton biomass in Tropical Indian Ocean from Bio-Argo and remote sensing observations	Virtual	
C04	AHMED	Oxygen saturations of the Northwest Pacific subsurface waters using an array of Argo floats	Virtual	
C05	HONDA	Estimation of Particulate Organic Carbon Flux with BGC-Argo Backscatter data from the Western North Pacific	Virtual	
C06	JOY-WARREN	Connecting phytoplankton taxa distributions to air-sea CO ₂ fluxes in the Southern Ocean	In Person	
C07	MUNZIL	Application of Bio-Argo float in understanding denitrification in the northern Indian ocean.	Virtual	
C08	SCHMECHTIG	New method for Chlorophyll-A calibration	In Person	
C09	XU	Constraining the twilight zone remineralization rate in the South China Sea basin: insights from a multi-method intercomparison	Virtual	
C10	CORREDOR ACOSTA	Argo Float Reveals Biogeochemical Characteristics Along the Freshwater Gradient Off Western Patagonia	Virtual	
C11	EVRARD	Towards a new phase for Euro-Argo programme: the contribution of Euro-Argo RISE project	In Person	
C12	FEUCHER	Subpolar gyre decadal variability explains the recent oxygenation in the Irminger Sea	In Person	
C13	FRENZEL	OneArgo toolboxes for accessing and visualizing Argo data	In Person	
C14	KOŁODZIEJCZYK	Decadal patterns of dissolved oxygen in the global ocean (2009-2018)	In Person	
C15	MAZE	"argopy": a python library to focus on Argo science	Virtual	

C16	MORRIS	Best practices for Core Argo floats: Physical handling, metadata and data considerations	Virtual	
C17	ORGANELLI	Developing synergies between BGC-Argo and Earth Observation to assess the impact of ocean extremes on marine ecosystems	In Person	
C18	OSBORNE	Preliminary results from a new marginal sea biogeochemical-Argo array in the Gulf of Mexico	In Person	
C19	PARK	An Oxygen Mass Balance of the Labrador Sea from Biogeochemical Argo Float and Hydrographic Data	In Person	
C20	RENOSH	Vertically resolved light models for the global ocean based on machine learning techniques	In Person	
C21	ZHANG	Unveiling the fate of organic particles in the oligotrophic ocean	In Person	

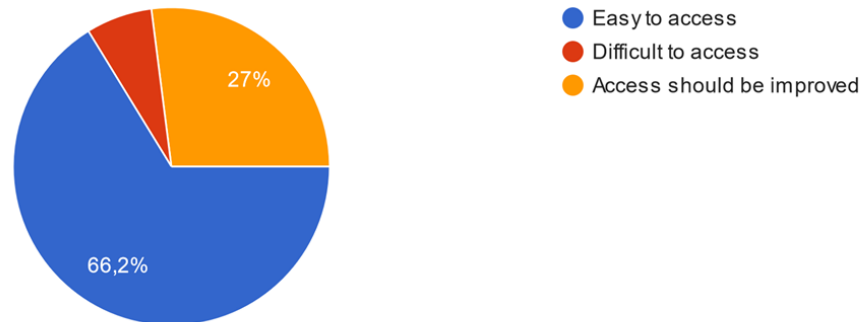
This meeting has received fundings from:
The European Union's Horizon 2020 research and innovation programme
under grant agreement No 824131 (Euro-Argo RISE project) and No 862626
(EuroSea project).



Annex 2: Results of the short survey

Question 1: Do you find Argo NetCDF files

74 réponses



You answered "Access should be improved", please provide comments.

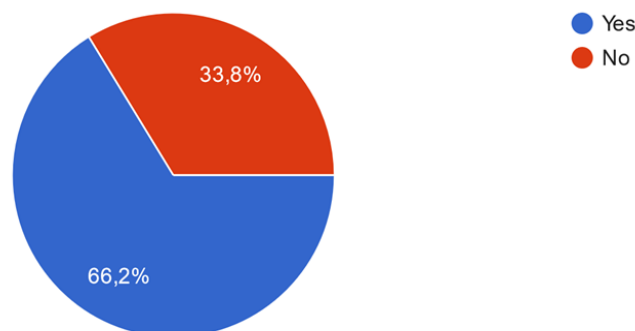
12 responses

- The profile files are easy to access, however I find that the **tech and Rtraj files to be difficult**.
- Should be more easily accessible
- Would like **cloud service**
- I think it may be **difficult for non-expert** users to "dig through" the Argo data system
- format is inherently difficult but shouldn't be changed quickly or rashly
- For new users, accessing Argo data via the DACs can be challenging. Providing a directory within the DACs of **scripts that can be used for data access/visualization** for multiple languages (Matlab, Python, R). The Euro-Argo website is an excellent resource for visualizing where active and Argo floats are and basic float visualization and email-based **data selection downloads**.
- **Changes communicated promptly**, tutorial and manual on meaning of metadata.

- ftp can be a pain, so **some other ways to access the data** (and possibly file formats other than netcdf, especially for the data captured in the Sprof) **would be useful**
- Would be great to have **simple code in common languages** (Python, R, MATLAB) to make the netCDFs immediately useable
- I think for first time users **accessing multiple float netcdfs can be challenging** if one doesn't want to sync the entire dac. I potentially think **providing clear instructions for download methods could be helpful**
- when downloading large amounts of data the queries sometimes disappear, **organisation of individual float profiles by DAC and float number is not practical** for access when using the data - still **very national approach rather than "One" Argo**, toolboxes for **downloading the float data are too slow to be feasible to use for large amounts of data** (webpage access is better),
- I am not sure to understand correctly the question. Argo data are available through various data aggregators and distributors... Copernicus Marine System In Situ TAC, or MetOffice (EN4) etc... that provide different types of access and dataset organization...

Question 2: Would you like to have more educational opportunities about Argo?

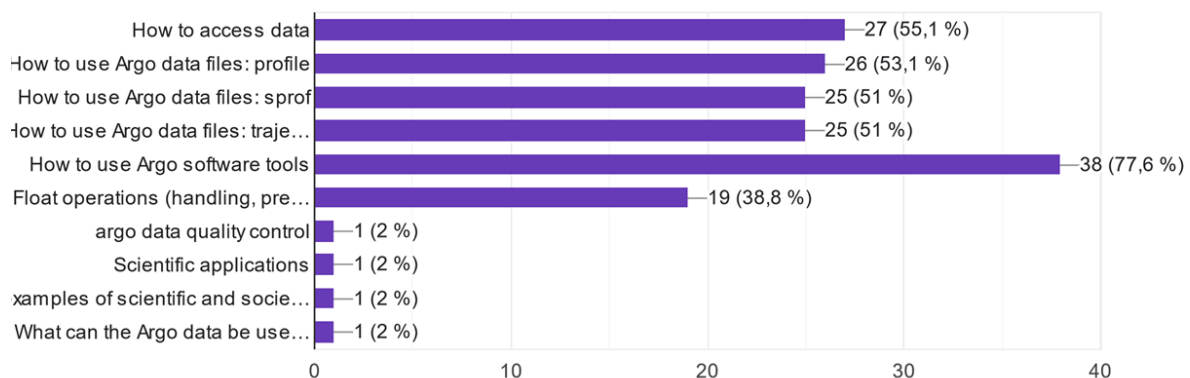
74 réponses



If you answered « yes »

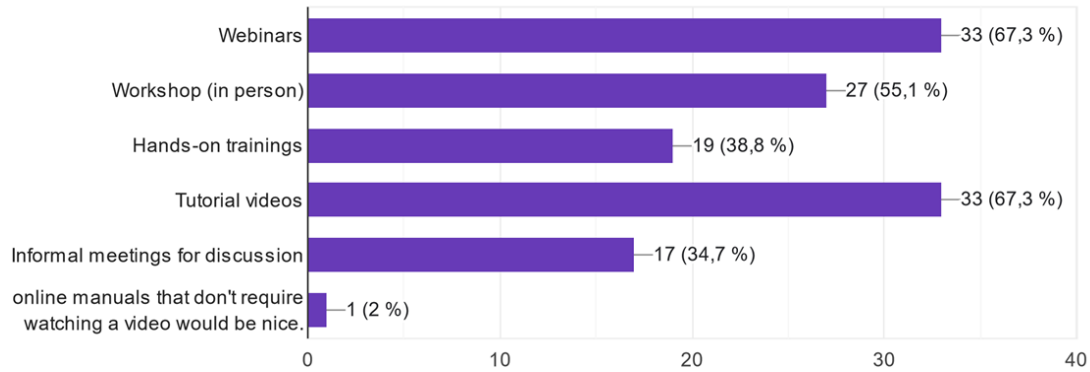
please indicate the topic(s) which should be addressed

49 réponses



what should be the format of these activities? Choose one or more of the following:

49 réponses



Question 3: If not already, would you be willing to engage in the Argo programme (e.g. buy floats, help in floats deployments, participate in data Quality Control, training, outreach, etc.)?

74 réponses



Annex 3: Dashboard set up and access

The dashboard was set up in order to duplicate the same environment as an in person conference: <https://premc.org/asw7/>

It consisted of a main page, the dashboard itself, leading to five tabs that presented the main information the in person and remote attendees would need, including a link to the ASW7 webpage. Some features are presented below.

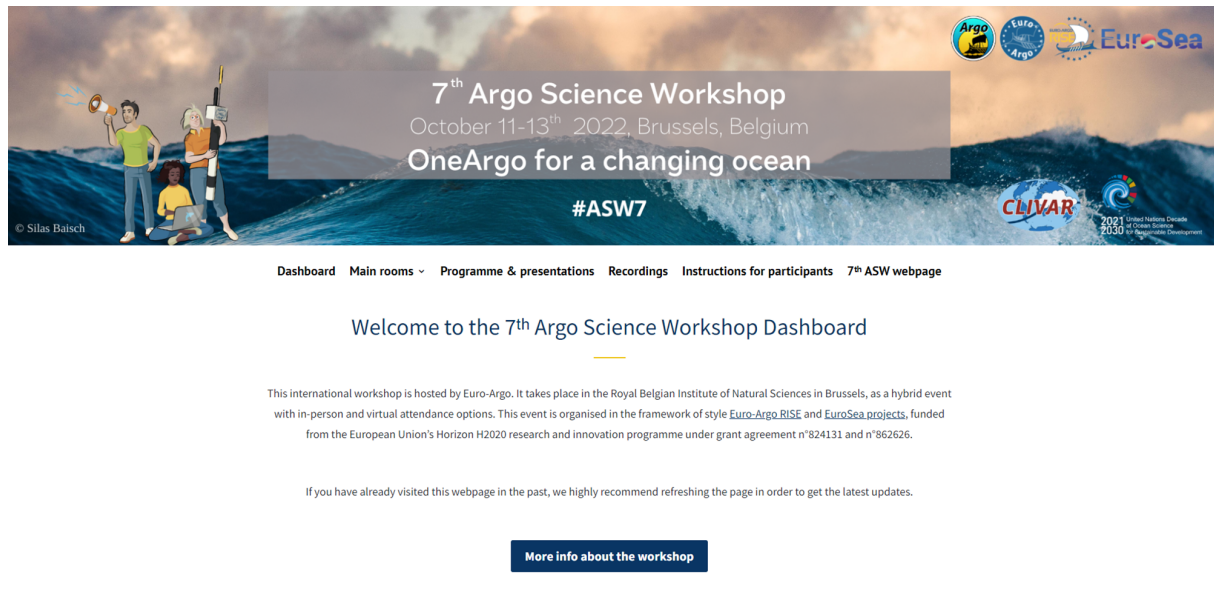


Figure 6: Main page of the dashboard. On the top, the five tabs are clearly accessible.

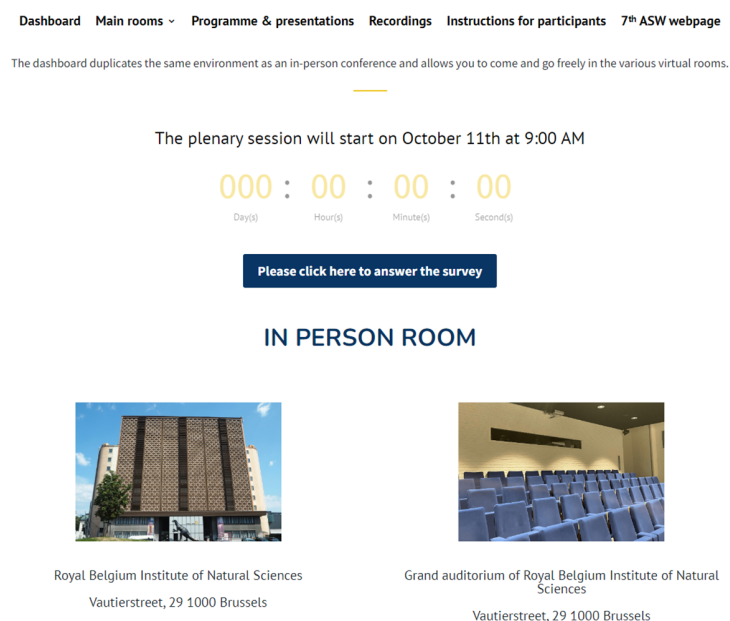
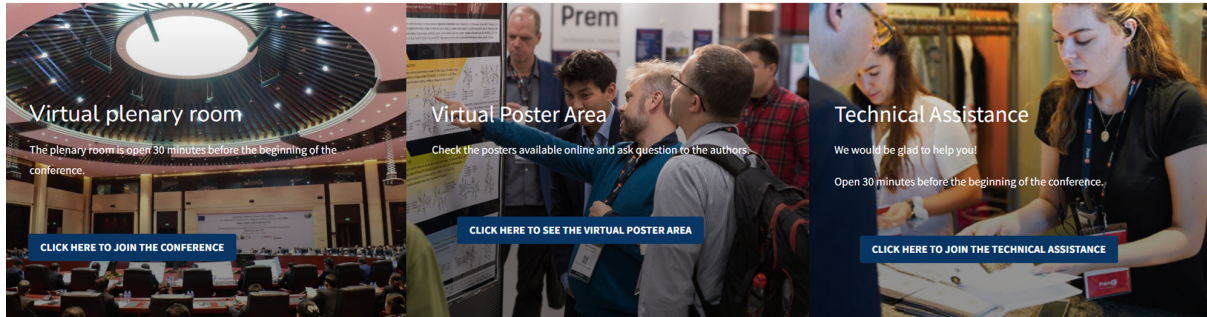


Figure 7: In Person plenary room.

VIRTUAL ROOMS

Session recordings will be available during the evening of the conference.



Everything You Need In One Place

Figure 8: Virtual plenary room. This area allowed to enter in the virtual conference room.

Virtual Poster Area

Welcome to the poster area.

The posters will be 100% virtual.

Posters are available during the whole conference, but the authors will be available for Q&A sessions only in the "Poster and area discussion" reachable through the [Discord server](#).

You will find below all the posters. The "See The Poster" button allows you to see the full version of the poster and the "See the flash presentation" button allows you to see the authors' presentation. A discussion tool is available for questions to the authors.

[Click here to chat with your colleagues](#)

You can follow the tutorial [how to use Discord](#) if this software is new to you.

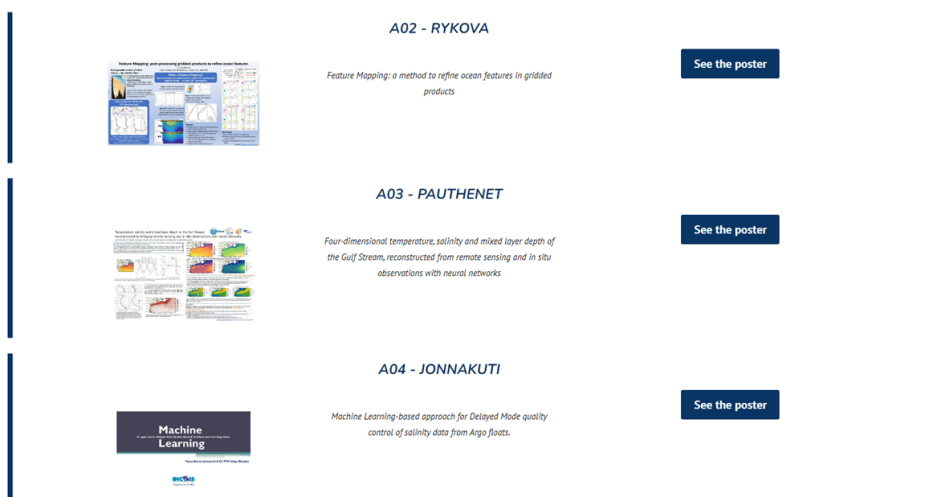


Figure 9: Virtual poster area. This area allowed the visualisation of each poster presented as well as the entrance to a chat to discuss further with the authors.



[Dashboard](#) [Main rooms](#) [Programme & presentations](#) [Recordings](#) [Instructions for participants](#) [7th ASW webpage](#)

Programme

[Download Detailed Programme](#)

[View Presentations](#)

CEST Time Zone

[Click here to calculate your time difference.](#)

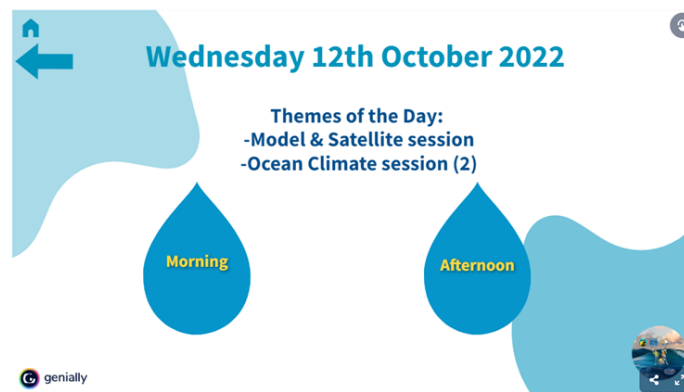


Figure 10: Programme and presentations. The programme was available either as a pdf file or as an interactive one as presented with the bottom screenshot. Presentations were made available at the end of each day to allow an asynchronous visualisation.