

# CLINT

CLIMATE INTELLIGENCE

## COMMUNICATION AND DISSEMINATION PLAN – FIRST UPDATE

December, 2022



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## LIST OF ACRONYMS

### Abbreviations

CS:	Climate Service
DRR:	Disaster Risk Reduction
GA:	Grant Agreement
KPIs:	Key Performance Indicators
Mx:	Month number (where x is the month number)
NGO:	Non-Governmental Organisation
TBD:	To Be Determined
WMO:	World Meteorological Organization
WP:	Work Package

## EXECUTIVE SUMMARY

The first update of the CLINT Communication and Dissemination Plan (Deliverable D9.4) describes the specific implementation of the communication and dissemination activities and their updated timeline to ensure the effective dissemination of results and knowledge generated in the project tailored for the different interested target groups. Building on what was defined in the first draft of the Communication and Dissemination Plan (D9.1), this first update outlines what has been achieved so far for all activities foreseen in the initial plan. In particular, we provide an update of the state of the art and of the activities development in all areas of communication and dissemination.

In this report, we describe the concrete applications that followed the realisation of the project's visual identity, which are the website updates, directly linked to the dynamism of CLINT's two social media accounts on Twitter and on LinkedIn, as well as the list of project events and presentations and the research it has produced.

During the past year, a promising interaction with the XAIDA project (European-funded project in the same call as CLINT) was initiated, creating new ideas and fruitful initiatives such as the workshop on droughts and tropical cyclones planned for January 2023.

The events organised by CLINT are opportunities for researchers to physically meet and are also an opportunity to produce multimedia material for the project outreach. This is the case, for example, of the production of video clips detailing the research and its application in the CLINT hotspots, filmed during the General Assembly in October 2022 in Como. On that occasion, we also organised a webinar on the past European Summer, gathering over two hundred people.

The future steps include activities concerning the realisation of the CLINT Summer School and the activation of the Newsletter, which will give further impetus to the project's outreach.

## 1 INTRODUCTION

The uptake of the communication and dissemination plan describes the activities for the outreach and the dissemination of the results and knowledge generated within the CLINT project for its target groups (as in GA, Table 2.4). The report is a reference document defining the uptake of the strategy and approach to be implemented in the project for effective communication and outreach activities. Since the communication and dissemination plan is designed to be flexible and adaptive, this uptake is shaped by the information and results as they unfold during the project lifetime, now at M18 in its first reporting period and in future updates at M36 and M48 (within the upcoming Deliverables D9.6 and D9.10, respectively).

## 2 COMMUNICATION AND DISSEMINATION UPDATES

### 2.1 Communication and Dissemination Actions

This first update of the communication and dissemination actions is undertaken to check and monitor the following actions, as mentioned in the communication and dissemination plan (D9.2):

- Implement an effective communication and dissemination strategy for the project;
- Implement effective communication channels to the project's stakeholders, the scientific community, and broader audiences;
- Create communication and dissemination materials, including a project website and selected social media channels;
- Communicate the project activities and disseminate the project outputs to the various stakeholders and local end-users in the Climate Change Hotspots and related audiences, and support know-how transfer at the local level;
- Communicate the project activities, disseminate the project outputs, and support know-how transfer at the international level, exploiting the various scientific and business networks of the project partners;
- Organise the CLINT Summer School as a major dissemination event as well as webinars for outreach and widespread know-how transfer.

The update on the elements of the CLINT's communication and dissemination strategy and preliminary definition of Key Performance Indicators (KPIs) at M18 are presented in Table 1.

*Table 1* Update of elements of CLINT's communication and dissemination strategy and preliminary definition of Key Performance Indicators (KPIs) at M18.

Target groups	Goal	Communication & dissemination channels and activities	KPIs	M18 update
Climate Services experts and practitioners	Maximise the uptake of project results by experts and practitioners, particularly from the Copernicus programme.	Face-to-face and online meetings	Number of meetings $\geq 4$ (e.g., annual meetings with Copernicus staff)	1
		Conference and workshops	Number of events $\geq 12$	3
		Demonstrator of AI-enhanced CS	TBD	Planned for years 3rd and 4th
		Open-source software	TBD	Planned for years 3rd and 4th
		Open datasets	TBD	Planned for year 4th
CLINT end-users, including both decision- and policy-makers at the European level and in the local Climate Change Hotspots	Generate a bi-directional dialogue for the co-development of the AI-enhanced Climate Services	Periodic Face-to-face and online meetings	Number of meetings $\geq 4$ (e.g., annual meetings with CLINT end-users)	Planned for year 4th
		Policy briefs	Number of policy briefs $\geq 2$ (one in WP6 targeting EU policy makers and one in WP7 targeting local decision makers)	Planned for year 4th
		CLINT webinars	Number of webinars $\geq 6$	1 done (7 Oct. 2022) 3 planned (March/June/October 2023) 2 TBD 2024
Scientific community	Create formal and informal networks for	Open access peer-reviewed publications in scientific journals	TBD	Planned for year 4th



Target groups	Goal	Communication & dissemination channels and activities	KPIs	M18 update
	sharing the project results	Conferences and workshops	Number of events $\geq 12$	3
		Open datasets	TBD	Planned for year 4th
		Open-source software	TBD	Planned for year 4th
		CLINT website	Number of visitors $\geq 3,000$	500
Climate change adaptation practitioners in NGOs, humanitarian organisations, & global initiatives for adaptation, early warning/early action and DRR	Generate a dialogue for sharing the project results and extends the potential uptake of AI-enhanced Climate Services beyond the CLINT case studies	Face-to-face and online meetings	Number of meetings $\geq 2$ for each involved organisation	TBD
		CLINT website	Number of visitors $\geq 3,000$	500
		CLINT webinars	Number of webinars $\geq 6$	1 done (7 Oct.2022) 3 planned (March/June/October 2023) 2 TBD 2024
		Demonstrator of AI- enhanced CS	TBD	January 2023
		Open datasets	TBD	TBD
		Open-source software	TBD	TBD
General Public and civil society	Establish an effective communication for promoting the project findings to a vast virtual community	CLINT website	Number of visitors $\geq 3,000$	500
		Social media	Number of total contacts $\geq 1,000$	323
		Press releases and news	Number of news $\geq 6$	2 planned in 2023, 4 in 2024
		CLINT webinars	Number of webinars $\geq 6$	1 done (7/10/2022) 3 planned (March/June/October

Target groups	Goal	Communication & dissemination channels and activities	KPIs	M18 update
				2023) 2 TBD 2024

## 2.2 Refining the Communication and Dissemination Plan

The tweak to the communication and dissemination plan aims to make the difference in the communication activities over project lifetime. The list of the dissemination events for the CLINT project lifetime is updated in Table 1 (under M18 updates). Some dissemination activities are organised in the occurrence of specific events, both at the local/national and the international level, prepared as back-to-back or side events during conferences (and relevant workshops) such as the annual European Geosciences Union (EGU) General Assembly.

Communication and dissemination activities at the international level are focused on the scientific community, policy-makers, practitioners, and students. Both print and e-versions of the project flyer suitable for all target groups have been created and uploaded on the website<sup>1</sup>. At this stage of the project, not enough results showcase the best outcomes, and all the relevant news and project activities are planned and disseminated throughout social media and not with a dedicated newsletter.

The exchange of information and experiences with other EU-funded projects with similar scopes as CLINT are supported through the involvement of the project in H2020 consultation meetings and networking events. E.g., CLINT is in close interaction with XAIDA, an EU-funded project with structure and aims similar to those of CLINT. Details of the communication and dissemination plan and associated activities for individual communication channels are presented in the following sections

## 2.3 Next Deliverables & Milestones

Table 2 illustrates the next/upcoming communication- and dissemination- related deliverables and milestones as defined in the Grant Agreement. These events will be documented and accompanied by adequate communication activities in addition to the continuous communication and dissemination activities described in this document.

*Table 2* Next communication- and dissemination-related deliverables & milestones

<sup>1</sup> <https://climateintelligence.eu/project/>

Project month	Communication & dissemination deliverables	Communication & dissemination milestones (MS), important stakeholder meetings
M18	D9.4 Communication and Dissemination plan – first update	
(M24)		(MS43 Basic version of the Forecast demonstrator - Technical milestone which is preparatory to achieve MS29)
(M31)		(MS44 Methods and software to be implemented in the AI-Enhanced demonstrators - Technical Milestone which is preparatory to achieve MS29 )
M36	D9.6 Communication and Dissemination plan – second update	MS29 First version of the AI-enhanced S2S forecast demonstrator
M48	D7.4 Policy brief – Local Climate Services D1.6 Project networking report D9.8 AI-enhanced operational prototypes D9.9 AI-enhanced S2S forecast demonstrator D9.10 Final Communication and Dissemination report	

### 3 VISUAL IDENTITY AND COMMUNICATION TOUCHPOINTS

This section describes the touchpoints produced for the communication and dissemination activities. It reflects a common visual identity associated with the project logos and presentation templates. Some screenshots of the produced material are reported in the Annex.

#### 3.1.1 CLINT Roll up

The template format for all project deliverables is defined in D9.2. As part of the communication work, a roll up was ideated and printed, which will also be used for all external communication. The final layout is available in Annex (Figure 1).

*Figure 1* The rollup layout, ideated and printed, to be used for all external communication.



### 3.1.2 CLINT video

The template format for all project deliverables is defined in D9.2. As part of the communication work, a video format template was created to match the visual identity of the project. The final layout is available in Figure 2 (cover page) and Figure 3 (closing page).

*Figure 2* The cover video layout, ideated and produced, to be used for all external communication.



*Figure 3* The closing video layout, ideated and produced, to be used for all external communication.



## 4 COMMUNICATION AND DISSEMINATION CHANNELS AND ACTIVITIES

In order to check the communication and dissemination activities, CLINT employs various communication channels and activities using different platforms and instruments to reach diverse target audiences in different contexts, as described below.

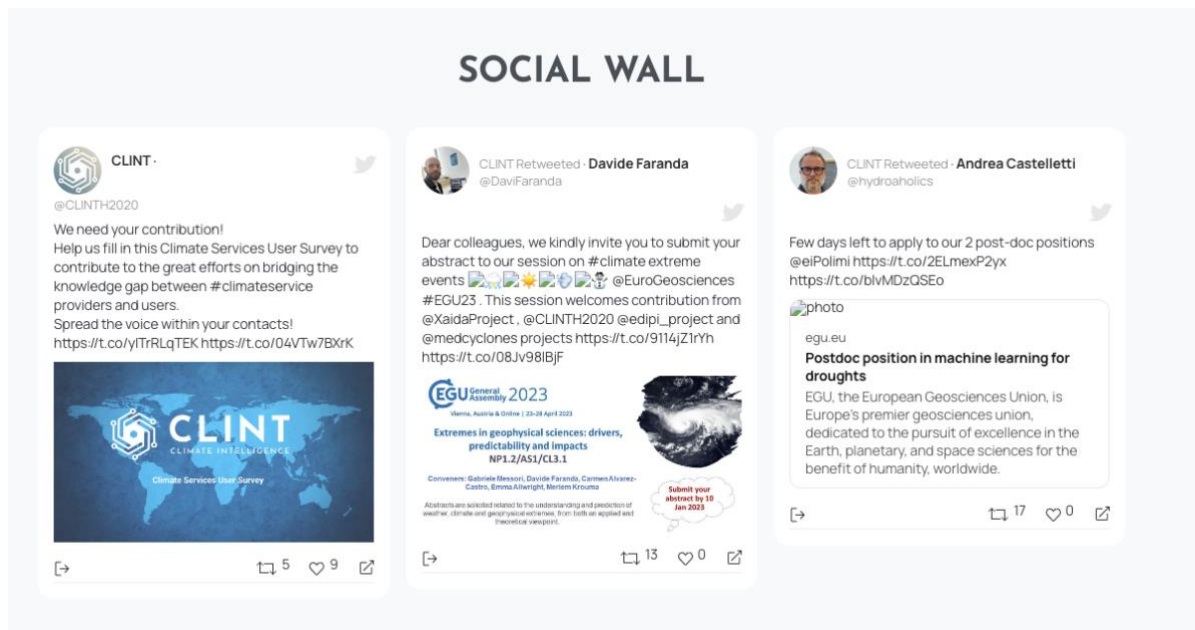
### 4.1 Online Channels

#### 4.1.1 Website

The CLINT project website (<https://climateintelligence.eu>) provides information and updates about the topics, activities, and results of the project to a wide range of users, including the CLINT consortium members, end-users, potential users, the scientific community, climate change disaster risk managers and adaptation practitioners, policy-makers, the general public, and the civil society. Online since 30 September 2021, the website reached 300 unique visits and 351 visits in the last two months (3 October -1 December).

The *Home Page* is regularly updated to highlight the latest information and content and the contents are enriched with updated and new material as the project advances and completes its activities. Three news and two events were published. The social wall actively sheds light on the more relevant activities and outcomes related to CLINT and within the CLINT network (see Figure 4).

Figure 4 Social wall on the homepage of the CLINT project



#### 4.1.2 Newsletter

A first release of the newsletter will be produced and disseminated in January 2023 with detailed updates on the progress of activities, new initiatives, publications, etc. From the third year, the newsletter will be produced and circulated twice per year. The newsletter will provide continuity to the communication and will keep regular contact with the target readership in its entirety. The newsletter will be posted on the project website for consultation and download. In addition, the link to each new issue will be circulated using the consortium partner networks and stakeholders mailing lists.

#### 4.1.3 Social Media

CLINT has identified two social media platforms suitable for its communication and dissemination activities: Twitter and LinkedIn. The Twitter channel (<https://twitter.com/CLINTH2020>) was activated on 30 September 2021, and it reached 135 followers with 19 thousand impressions. The LinkedIn group (<https://www.linkedin.com/in/clint-climate-intelligence-53901a222/>) reached 188 followers with about 10 thousand impressions. More info is available in Figure 5, 6.

Figure 5 A synthesis of the latest LinkedIn activities with reaction, comments, connections, interactions, impressions and engagements.














DATA ▼	MESSAGGIO	REA...	COM...	CON...	CLIC	IMPR...	% ENG...
CLINT - Climate Intelligence Aug 30, 09:00	 #Climateservices are responsible for providing customized tools, products and services to assess and monitor the range of climate change impacts and their long-range evolution. They should deliver...	4	0	0	1	118	4,24%
CLINT - Climate Intelligence Aug 26, 08:01	 ! Climate Intelligence 🌟 designing new #MachineLearning #algorithms to process big climatological data sets to strengthen EU climate-related policies. #AI Discover more: <a href="https://lnkd.in/eWWA2Kqg">https://lnkd.in/eWWA2Kqg</a>	28	2	1	40	1.794	3,96%
CLINT - Climate Intelligence Aug 23, 14:02	 Climate observations are of fundamental importance for reconstructing, monitoring, understanding, attributing, predicting, projecting, mitigating, and adapting to climate change. We will prese...	3	0	0	8	188	5,85%
CLINT - Climate Intelligence Aug 19, 12:00	 #Climate #service centres combine future climate projections from modelling centres, remotely sensed data from satellite instruments, and ground measurements from observation networks to create...	19	0	3	6	361	7,76%
CLINT - Climate Intelligence Aug 05, 08:00	 Clint & #drought #management CLINT project will enhance the detection of extreme drought events by defining impact-based drought indices with ML #algorithms that link the observed impacts ...	9	0	0	5	224	6,25%
CLINT - Climate Intelligence Jul 29, 09:00	 CLINT will provide #AI #forecasts of extreme #droughts indices for informing the operation of the #Como #lake that will contribute to improve the reliability of the #irrigation supply, particularly in facing...	7	0	0	6	227	5,29%
CLINT - Climate Intelligence Jul 26, 14:03	 #Drought affected the agricultural production of different #crops in Spain, including #tomatoes and #winegrapes, and #hydroelectric power production reached a historical minimum. CLINT will provide...	10	0	1	2	300	4,33%
CLINT - Climate Intelligence Jul 22, 09:00	 CLINT will assess the emergent European #risks from #extreme #wind and #precipitation and associated #flooding from changes in extra-tropical transition of tropical #cyclones induced by climate warming...	8	0	0	6	121	11,57%

Figure 6 A synthesis of the latest Twitter activities with reaction, comments, likes, interactions, impressions and engagements.

DATA ▼	MESSAGGIO	RET...	TWE...	LIKE	RISP...	IMPR...	ENG...	% ENG...
@CLINTH2020 Oct 07, 13:03	 Live now! Our #CLINT experts discuss the Summer 2022 extreme events in a public webinar. Join us now (141 attendees + 6 panelist + 50 scientists in Como) to hear about the recent #Climate #Extremes, a 2-millenia perspective,...	7	0	14	0	2.231	80	3,59%
@CLINTH2020 Oct 07, 08:44	 Beautiful minds in a beautiful place! #CLINT #hotspot session at #Comolake in #VillaGrumello <a href="https://twitter.com/CLINTH2020/status/1578305230185238528/photo/1">https://twitter.com/CLINTH2020/status/1578305230185238528/p</a>	4	1	26	0	1.020	123	12,06%
@CLINTH2020 Oct 07, 08:32	 @andrea_ficchi @eiPolimi @polimi presents the #Zambezi River basin #hotspot #CLINT Understanding users' needs in the basin, benchmarking #forecast skill and improving forecast of #Tropical cyclones' heavy #Rainfall #MachineLearn...	3	0	10	0	130	24	18,46%
@CLINTH2020 Oct 07, 07:42	 Leone Cavicchia from @CmccClimate and Guido Ascenso from @eiPolimi @polimi present their #CLINT work to advance Tropical Cyclone detection by improving #CycloneGenesis indices in high-resolution #ClimateModels via...	7	0	19	0	438	61	13,93%
@CLINTH2020 Oct 06, 16:38	 Schalk Jan from @ihedelft talks about the #CLINT work on AI-enhanced #ClimateServices to foster adaptation at the local scale considering user needs & focusing on different #extremes across global #ClimateChange hotspots incl...	2	0	13	0	643	42	6,53%

#### 4.1.4 Video Interviews

During the General Assembly on the 6-7 Oct. 2022 in Como (Italy), we have planned different interviews on the CLINT project and in particular on the hotspots, to take advantage of the beautiful location of the Villa del Grumello and of the physical gathering of the project members. We have



filmed 6 interviews to showcase the CLINT hotspots. The video interviews delve into some aspects of the project as listed below, with interviewers specified:

- CLINT project objectives: Andrea Castelletti (POLIMI)
- Douro Hotspot : Lucia De Stefano (UCM, CS leader)
- Zambezi Hotspot: Andrea Ficchi (POLIMI)
- Como Lake Hotspot: Matteo Giuliani (POLIMI)
- The Netherlands Hotspot: Claudia Bertini (IHE Delft) and Dorien Lugt (HKV)

The videos will be disseminated through the social media channels in the forthcoming months (expected release date in January 2023).

## 4.2 Press Releases

*Press Releases* will be issued for activities and results of high public relevance (meetings, outcomes, publications, etc.). Press releases will be published on the website and delivered to the media contact list of the different partners to reach out to local/national/EU media and get appropriate coverage, thus contributing to raising awareness among the communities interested in the outcomes of the project. A press release will be available as soon as relevant outcomes are available.

## 4.3 Networking Activities

CLINT will make use of linkages to other projects through its partners to further promote the project activities. In addition, informal liaisons and information sharing through the existing contacts and related projects of the consortium partners will support the wider diffusion of CLINT project activities. Specifically, in January 2023 is planned the connection with XAIDA project to share challenges from two different angles, more methodological from XAIDA and more application and service-oriented for CLINT. During the planned January meeting, a comparative analysis of developed AI-enhanced tools on the same hotspots will be investigated.

## 4.4 Scientific Publications

Scientific publications based on project methodologies, processes, and results will be published on partner websites and research collaboration platforms (when the length of the embargo period is acceptable). Journal papers will present the most significant project results at the highest scientific standards and disseminate them to a scientific audience. To date, 4 peer-reviewed papers were submitted, as listed in table 3.

*Table 3* List of scientific publications submitted, with authors and titles.

Authors	Title	Journal submitted
D. Fister, J. Perez-Aracil, C. Pelaez-Rodriguez, J. Del Ser, S. Salcedo-Sanz	Accurate Long-term Air Temperature Prediction with a Fusion of Artificial Intelligence and Data	Journal of Advances in Modelling Earth Systems

Authors	Title	Journal submitted
	Reduction Techniques	
L. Cavicchia, G. Ascenso, E. Scoccimarro, A. Castelletti, M. Giuliani, S. Gualdi	Tropical Cyclone Genesis Potential Indices in the era of high-resolution climate models	Geophysical Research Letters
C. Pelaez-Rodriguez, J. Perez-Aracil, L. Prieto-Godino, S. Ghimire, R. C. Deo, S. Salcedo-Sanza	A Fuzzy-based Cascade Ensemble Model for Improving Extreme Wind Speeds Prediction	Journal of Wind Engineering and Industrial Aerodynamics
C. Pelaez-Rodriguez, J. Perez-Aracil, D. Fister, L. Prieto-Godino, R. C. Deo, S. Salcedo-Sanz	A hierarchical classification/regression algorithm for improving extreme wind speed events prediction	Renewable Energy

Conference papers present fresh interim project results of appropriate scientific quality in a timely manner, and a piece of news was produced<sup>2</sup> to disseminate them as quickly as possible in the scientific community collecting all EGU contributions. To maximise the uptake of project results by experts and practitioners, the CLINT project was presented at the following international workshops and conferences (Table 4).

Table 4 List of conference participation, with location and date.

Conference participation	Location, date
<a href="#">European Geosciences Union (EGU) General Assembly</a>	Vienna (23/27 May 2022)
<a href="#">3rd WMO Workshop on Operational Climate Prediction</a>	Portugal (20/23 September 2022)
<a href="#">Copernicus Emergency Management Service</a>	Online (13/14 October 2022)
<a href="#">Geowee2022 of GEOS</a>	Ghana (31 October/4 November 2022)
<a href="#">Climate Observation Conference</a>	Germany (17/19 October 2022)

#### 4.5 Dissemination to Policy Makers

CLINT dissemination also aims to present project results to a selected public, to private and academic institutions through dedicated workshops and policy briefs to support bottom-up EU policies and discuss the potential uptake of the project's results and the remaining research gaps.

<sup>2</sup> <https://climateintelligence.eu/2022/05/clint-at-egu-2022-vienna/>

Policy briefs are intended to translate scientific findings into bite-sized pieces, allowing us to reach public administrators and have a potential impact on public policy. They are planned for 2023 and 2024.

## 5 KNOWLEDGE TRANSFER AND TRAINING

### 5.1 CLINT Summer School

As part of the process of knowledge transfer towards all levels and target groups, an online summer school is planned to be organised by CMCC (responsible partner) during the last year of the project (by M48). The summer school is open to university students, young researchers, and practitioners, including those from the local Climate Change Hotspot areas. The purpose will be to share knowledge gained in the project, as well as guidance on the key technologies and tools developed and employed in the CLINT framework. The curriculum developed for the summer school will be drawn from the project and its case study areas, as well as from other relevant sources as appropriate (e.g. literature, educational and training material complementary to the covered themes). Instructions will be provided by partners in the project who are themselves teaching in higher education institutions. The date of the school as well as the detailed scope and structure will be decided at a later stage of the project.

### 5.2 CLINT Webinars

A series of *CLINT Webinars* and dissemination meetings are planned for know-how transfer and direct outreach to policy-makers and practitioners. An e-invitation was developed (Figure 5) taking into account the brand identity rules, as stated in D9.2 and disseminated throughout CLINT social media accounts, CMCC social media accounts, as well as CMCC Newsletter and CMCC Website<sup>3</sup>. The first webinar was streamed (via zoom) on 7th October 2022, and the title was "The European 2022 summer: context and predictability".

The speakers of the first webinar were: David Barriopedro (CSIC), Carmen A. Castro (CMCC), Arthur Hraet Essenfelder (JRC), Linus Magnusson (ECMWF), Enrico Scoccimarro (CMCC), Andrea Toreti (JRC), Veronica Torralba (CMCC), Elena Xoplaki (JLU), and Eduardo Zorita (Hereon). The moderator was Andrea Francesco Castelletti, Politecnico di Milano.

The abstract is the following: "This past summer, Europe experienced an extreme and long-lasting heatwave, with record-breaking temperatures in most regions. Not only scientists but also civil society is now realising how climate extremes are increasingly frequent and hard to predict and the severity of their impacts on different socio-economic sectors, as well as on population health and safety. The CLINT project (<https://climateintelligence.eu/>) is developing an Artificial Intelligence (AI) framework composed of Machine Learning techniques and algorithms to process big climate datasets for improving Climate Science in the detection, causation, and attribution of Extreme Events (EEs), namely tropical cyclones, heatwaves and warm nights, droughts, and floods. The CLINT AI framework is also aimed at covering the quantification of the extreme events impacts under

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<sup>3</sup> [https://www.cmcc.it/lectures\\_conferences/the-european-2022-summer-context-and-predictability](https://www.cmcc.it/lectures_conferences/the-european-2022-summer-context-and-predictability)

historical, forecasted, and projected climate conditions and across different spatial scales (from European to local), developing innovative and sectorial AI-enhanced Climate Services and, finally, operationalizing them into Web Processing Services. In this webinar, the CLINT partners – experts coming from climate-leading institutions in Europe – will contribute an overview of the summer 2022 extreme event, first providing a climate reconstruction of the last 2 millennia, to then show the predictability and forecasts of this past summer at the seasonal and sub-seasonal scale, and, finally, discuss drought risk monitoring in Europe.”

This webinar reached 353 enrolled people with 220 active participants. The video recording of the webinars is available on the CLINT homepage. Three additional webinars are planned for March 2023, June 2023 and October 2023, while two more are for the last year of the project. All the webinars are hosted on the CMCC servers.

*Figure 5* The e-invitation of the first CLINT Webinar planned for know-how transfer and direct outreach to policy-makers and practitioners.



**CMCC Webinar**

**The European 2022 summer: context and predictability**

7 October 2022, 14.30 pm CET

**Speakers:**  
 David Barriopedro (Spanish National Research Council); Carmen A. Castro (CMCC); Arthur Hraest Essenfelder (Joint Research Centre); Linus Magnusson (European Centre for Medium-Range Weather Forecasts); Enrico Scoccimarro (CMCC); Andrea Toreti (Joint Research Centre); Veronica Torralba (CMCC); Elena Xoplaki (Justus Liebig University Giessen); Eduardo Zorita (Hereon)

**Moderator:**  
 Andrea Castelletti (Polytechnic University of Milan)

To join the webinar, register here: <https://bit.ly/Web0710>

[www.cmcc.it](http://www.cmcc.it)

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