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CE0100059

Clim4Cast

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A - Project identification

A.1 Project identification

Project ID (automatically created)	CE0100059
Name of the lead partner organisation	Ústav výzkumu globální změny AV ČR, v. v. i.
Name of the lead partner organisation (in English language)	Global Change Research Institute, CAS
Project title	Central European Alliance for Increasing Climate Change Resilience to Combined Consequences of Drought, Heatwave, and Fire Weather through Regionally-Tuned Forecasting
Project acronym	Clim4Cast
Programme priority	Cooperating for a greener central Europe
Programme priority specific objective	S02.2: Increasing the resilience to climate change risks in central Europe
Project duration (nr. of months)	36

A.2 Project summary

Please give a short overview of the project and describe:

- the common challenge of the programme area your project is tackling;
- the overall project objective and the expected change your project will make to the current situation;
- what is innovative about your project;
- the main outputs and results your project will develop and who will benefit from them;
- the implementation approach you plan to take and why transnational cooperation is needed.

The frequency, duration, and severity of drought, heatwaves, and fire weather (DHF) in the Central European (CE) region is expected to increase as a result of ongoing climate change. Water scarcity and drought represent challenges that are often incorporated in legal frameworks of CE countries especially after recent series of droughts. However, heatwaves and fire weather have not yet been properly addressed in legislation documents and together with drought have often not been implemented into strategies and efforts aiming to increase resilience. The direct threat posed by DHF events to human wellbeing and environment urgently requires attention. That has been prevented partially due to an absence of tools that monitor, predict, and spread awareness of DHF on an operational basis. This leads to an unpreparedness to DHF events on regional, national, and cross-border levels. The Clim4Cast project will create a STEP-CHANGE (change much bigger than usual) as the project partners will jointly develop and establish a multi-temporal DHF forecast which will be integrated into existing national drought monitoring platforms of the 7 participating countries. The project will also estimate the effect of climate change on the occurrence and characteristics of DHF events. The results will be a base for a strategy to increase climate change and DHF awareness. A special action plan that sets up proper response mechanisms will be developed as well. The uniqueness of Clim4Cast lies firstly in sharing and jointly utilising existing partner knowledge of (1) extreme weather and climate events, (2) diverse strategies of communication, and (3) established networks of stakeholders and users of the newly-developed tool. Secondly, the project will develop and implement multi-temporal forecast that is currently missing in existing tools. The project output will serve as an early warning system that can be utilised by diverse stakeholders and implemented into national legislative frameworks.

A.3 Project partner overview

Associated partner number	Status	Name of the organisation in English	Partner role in the project	Country (NUTS 0)	Partner total eligible budget
1	Active	Global Change Research Institute, CAS	LP	Česko (CZ)	373,010.00
2	Active	Masaryk University	PP	Česko (CZ)	202,754.00
3	Active	TU Wien	PP	Österreich (AT)	294,379.20
4	Active	Institute of Soil Science and Plant Cultivation - State Research Institute	PP	Polska (PL)	169,550.00
5	Active	Leibniz Centre for Agricultural Landscape Research (ZALF)	PP	Deutschland (DE)	251,102.60
6	Active	Slovenian Environment Agency	PP	Slovenija (SI)	198,699.00
7	Active	Croatian Meteorological and Hydrological Service	PP	Hrvatska (HR)	153,179.20
8	Active	Slovak Hydrometeorological Institute	PP	Slovensko (SK)	271,280.00

A.4 Project budget overview

Programme funding			Contribution					Total eligible budget
Funding source	Funding amount	Co-financing rate (%)	Automatic public contribution	Public contribution	Total public contribution	Private contribution	Total partner contribution	
ERDF	1,531,163.20	80.00 %	54,256.00	328,534.80	382,790.80	0.00	382,790.80	1,913,954.00
Total EU funds	1,531,163.20	80.00 %	54,256.00	328,534.80	382,790.80	0.00	382,790.80	1,913,954.00
Total eligible budget	1,531,163.20	80.00 %	54,256.00	328,534.80	382,790.80	0.00	382,790.80	1,913,954.00

A.5 Project outputs and result overview

Programme output indicator	Aggregated value per Programme output indicator	Measurement unit	Output number	Output title	Output target value	Programme result indicator	Baseline	Result indicator target value	Measurement unit
Strategies and action plans jointly developed	8.00	strategy /action plan	Output 1.2	A transnational strategy on improved climate change awareness in the area of DHF events and their compound effects for the Clim4Cast region	1.00	Joint strategies and action plans taken up by organisations	0.00	8.00	joint strategy /action plan
			Output 3.1	Communication and engagement national action plans on proactive DHF response	7.00				
Organisations cooperating across borders	34.00	organisations	Output 1.1	Network of partners and associated partners jointly evaluating DHF events with cross border effect and jointly developing lesson learned from those events	34.00	Organisations cooperating across borders after project completion	0.00	20.00	organisations
Jointly	4.00	solutions	Output	Solution for integrated	1.00	Solutions taken	0.00	4.00	solutions

Programme output indicator	Aggregated value per Programme output indicator	Measurement unit	Output number	Output title	Output target value	Programme result indicator	Baseline	Result indicator target value	Measurement unit
developed solutions			2.4	multi-temporal forecasting of drought in Central European countries		up or up-scaled by organisations			
			Output 2.5	Solution for integrated multi-temporal forecasting of heat wave in Central European countries	1.00				
			Output 2.6	Solution for integrated multi-temporal forecasting of wildfire in Central European countries	1.00				
			Output 2.7	Cross-border collaboration on development and implementation of regional multi-temporal DHF monitoring and forecasting mapping tool into established national platforms	1.00				
Pilot actions	3.00	pilot actions	Output	Pilot action testing and	1.00				

Programme output indicator	Aggregated value per Programme output indicator	Measurement unit	Output number	Output title	Output target value	Programme result indicator	Baseline	Result indicator target value	Measurement unit
developed jointly and implemented in projects			2.1	evaluating the proposed drought monitoring and forecasting tools					
			Output 2.2	Pilot action testing and evaluating the proposed heat wave monitoring and forecasting tools	1.00				
			Output 2.3	Pilot action testing and evaluating the proposed wildfire risk monitoring and forecasting tools	1.00				

B - Project partners




B.0 Partners overview

Associated partner number	Status	Name of the organisation in English	Country (NUTS 0)	Abbreviated name of organisation	Partner role in the project	B.2 Associated partners	Partner total eligible budget
1	Active	Global Change Research Institute, CAS	Česko (CZ)	CzechGlobe	LP	Český hydrometeorologický ústav Agrární komora České republiky Státní pozemkový úřad České republiky Ministerstvo životního prostředí České republiky, odbor bezpečnosti a krizového řízení Ministerstvo zemědělství České republiky, sekce vodního hospodářství	373,010.00
2	Active	Masaryk University	Česko (CZ)	MUNI	PP	Ministerstvo vnitra ČR - Generální ředitelství HZS ČR, Institut ochrany obyvatelstva Statutární město Brno	202,754.00
3	Active	TU Wien	Österreich (AT)	TUW	PP	Zentralanstalt für Meteorologie und Geodynamik Österreichische Hagelversicherung Stadt Graz, Abteilung Katastrophenschutz und Feuerwehr, Referat Branddirektion Umweltbundesamt	294,379.20

Associated partner number	Status	Name of the organisation in English	Country (NUTS 0)	Abbreviated name of organisation	Partner role in the project	B.2 Associated partners	Partner total eligible budget
4	Active	Institute of Soil Science and Plant Cultivation - State Research Institute	Polska (PL)	IUNG-PIB	PP	Centrum Doradztwa Rolniczego w Brwinowie Zachodniopomorska Izba Rolnicza Ministerstwo Rolnictwa i Rozwoju Wsi	169,550.00
5	Active	Leibniz Centre for Agricultural Landscape Research (ZALF)	Deutschland (DE)	ZALF	PP	Ministerium für Landwirtschaft, Umwelt und Klimaschutz des Landes Brandenburg Fachverband Bewässerungslandbau Mitteldeutschland e.V. adelphi	251,102.60
6	Active	Slovenian Environment Agency	Slovenija (SI)	ARSO	PP	Gozdarski inštitut Slovenije Ministrstvo za kmetijstvo, gozdarstvo in prehrano - direktorat za kmetijstvo	198,699.00
7	Active	Croatian Meteorological and Hydrological Service	Hrvatska (HR)	DHMZ	PP	Ministarstvo poljoprivrede Ministarstvo unutarnjih poslova - Ravnateljstvo civilne zaštite	153,179.20
8	Active	Slovak Hydrometeorological Institute	Slovensko (SK)	SHMI	PP	Lesnícka ochrannárska služba Ministerstvo životného prostredia Slovenskej republiky Ministerstvo pôdohospodárstva a rozvoja vidieka Slovenskej republiky Slovenská poľnohospodárska a potravinárska komora Lesy Slovenskej republiky, štátny podnik	271,280.00

B.1 Project partner 1

B.1.1 Partner Identity	
Partner number	1
Partner role	LP
Name of the organisation in original language	Ústav výzkumu globální změny AV ČR, v. v. i.
Name of the organisation in English	Global Change Research Institute, CAS
Abbreviated name of organisation	CzechGlobe
Department / unit / division	Domain of Climate Analysis and Modelling
B.1.2 Partner main address	
Country (NUTS 0)	Česko (CZ)
Region (NUTS 2)	Jihovýchod (CZ06)
NUTS 3	Jihomoravský kraj (CZ064)
Street, House number, Postal code, City	Bělidla 986/4a 60300 Brno
Homepage	https://www.czechglobe.cz
Address of department / unit / division (if applicable)	
Country (NUTS 0)	Česko (CZ)
Region (NUTS 2)	Jihovýchod (CZ06)
NUTS 3	Jihomoravský kraj (CZ064)
Street, House number, Postal code, City	Bělidla 986/4a 60300 Brno
B.1.3 Legal and financial information	
Type of partner	Higher education and research organisations
Subtype of partner	
Legal status	Public
Sector of activity at NACE group level	M.72.19
Co-financing rate (%)	80
VAT number (if applicable)	CZ86652079

B.1.3 Legal and financial information	
Other identifier number (if VAT number is not available, some other organisation identifier should be used)	
Other identifier description (specification of the type of identifier)	
PIC (from EC Participant Register), if available	921149249
B.1.4 Legal Representative	
Legal representative (not applicable - not to be filled in)	Prof. Michal V. Marek
B.1.5 Contact person	
Contact person	
Email	
Telephone	
B.1.6 Partner motivation, expertise and contribution	
<p>Please describe the organisation's thematic competences and experiences relevant for the project. Please also describe what is the main business of the organisation and if the organisation is normally performing economic activities on the market.</p>	
<p>CzechGlobe conducts research in three main systems that are affected by climate change - atmosphere, biosphere, and socio-economic systems. The expertise of the multidisciplinary group participating in the proposed project lies primarily in monitoring and mid- to long-term forecasting of drought, heatwaves, and fire weather. The group has an extensive knowledge and expertise in global monitoring and forecast of soil moisture content using an in-house-developed water balance model that can be adapted for use in the CE region. CzechGlobe operates a national drought monitoring and wildfire forecasting system with an established wide base of users who not only use the information provided in the tool but also provide information about the ground-observed impacts that are then incorporated back to the monitoring system. The groups' scientists regularly interact with a wide variety of stakeholders ranging from local level farmers to ministers. CzechGlobe has an array of established national connections with other research, academic, and public institutions. As the regional centre of excellence, CzechGlobe aspires to be the leader of research activities in the CE region which makes it a great fit to be the lead partner of the Clim4Cast project. CzechGlobe has demonstrated the ability to develop and execute state-of-the-art projects in the field of climate change research, drought and fire-weather monitoring and forecasting. The projects such as www.interdrought.cz and www.firerisk.cz have become a place-to-go for agricultural drought and fire weather forecasts in Czech Republic over the past 10 years. Since 2022 CzechGlobe provides a global drought forecast through www.windy.com platform, demonstrating the ability of the CzechGlobe team to execute even complex projects all the way to the operational stage. Since 2012, the forecast of electricity production from photovoltaic, wind and hydroelectric power plants has been operated for energy companies.</p>	
<p>What is the role and involvement (contribution and main activities) of your organisation in the project?</p>	

B.1.6 Partner motivation, expertise and contribution

CzechGlobe serves as the lead partner of the project. It will coordinate the joint efforts of the project partners. The main role of CzechGlobe together with the “core” team i.e. leaders of the WPs (SHMI and ARSO) and the communication manager (ZALF) will be to maintain internal time plan, set and enforce deliverable and output quality standards, and reporting toward the JSE and project stakeholders. Since 202 CzechGlobe has been the holder of ISO certification of quality of management (ISO9001:2015) and environmental management (ISO:14001:2015) acknowledging high standards in administration and management. CzechGlobe will lead the WP2 and will also oversee proper integration of all WP1 and WP3 activities to support development of DHF forecasting tools for mid-range (~10-days), extended (~50 days), and seasonal forecasts (~6 months). Additionally, within the WP2 CzechGlobe leads the Activity 2.4. aimed at “roll-out” of the DHF forecasting tools for individual countries, which will capitalise on experience from successful roll-outs of Czech and Slovak drought forecasting and Czech fire-weather forecasting tools in the past. Between 2016-2021 CzechGlobe, in collaboration with ARSO, SHMU, TUW (representing PPs), and SpaceSI, has overseen development of the www.droughtwatch.eu portal. Clim4Cast will build upon this experience and utilise part of the datasets developed and maintained within the project. CzechGlobe will naturally be responsible for joint activity reporting required within the project and will also oversee all the national meeting and PR activities across PPs in assistance to the Communication manager team (ZALF).

If you are the project lead partner, please describe here your organisation’s capacity and experience in managing and coordinating EU co-financed projects or other international projects. If you are the project partner that will coordinate communication (i.e. taking over the role of project communication manager), please describe here what are your organisation’s relevant communication competences and experiences.

Previous project involvement through various types of projects with all PPs during the past 10 years has developed good understanding of scientific, financial and administrative procedures of all partners involved in Clim4Cast. Through these projects CzechGlobe has established many contacts on personal level with both the main and associated partners, which will greatly enhance the LP’s capability to successfully lead the partnership. The CzechGlobe team has an excellent track record in collaborating with project stakeholders (ministries, public bodies, NGOs, business) in Czechia and also in neighbouring countries (especially Slovakia and Austria) in the area of climate change awareness and developing proper climate change strategies. It has successfully organised meetings at the level of prime minister, ministers and/or vice minister and members of parliament but also conferences with leading European scientists in the given field. This experience and expertise will be capitalised on within the project. CzechGlobe has also maintained a very active profile in communicating science to wide audiences and various target groups (policy makers, law-makers, research community, undergraduate and PhD students, farmers, foresters, rescue services, nature protection, NGOs, journalists, and general public). The Czech national product for monitoring and forecasting agricultural drought has been used by over 600,000 users since its launch. CzechGlobe was leading a WP within the DriDanube Interreg Danube basin project initiative that resulted in development of a joint www.droughtwatch.eu application. Since 2020 CzechGlobe has been also co-leading (as lead Czech partner) a previous Interreg project (DriDanube) and has gained experience on the perspective of the lead project partner.

B.1.7 Budget





Partner budget options	Percentage
Other costs Flat Rate	40%

B.1.7 Budget			
Partner budget options			Percentage
The partner budgets overview table can be separately exported as an Excel file			
B.1.8 Cofinancing			
Source		Amount	Percentage
ERDF		298,408.00	80.00 %
Partner contribution		74,602.00	20.00 %
Partner total eligible budget		373,010.00	100.00 %
Origin of partner contribution			
Source of contribution	Legal status	Amount	% of total partner budget
CzechGlobe	Public	37,301.00	10.00 %
Ministry of Regional Development CZ	Public	37,301.00	10.00 %
Contribution			
Sub-total public contribution		74,602.00	20.00 %
Sub-total automatic public contribution		0.00	0.00 %
Total		0.00	0.00 %
Total eligible budget		74,602.00	20.00 %
State Aid			
B.1.9 State Aid information (Partner self-check)			
A. Is the partner involved in economic activities within the project?			
1. Will the partner implement activities and/or offer goods/services for which a market exists?		No	
2. Are there activities/goods/services that could have been undertaken by an operator with the view of making profit (even if this is not the partner's intention)?		No	
B. Does the partner and/or any third party receive a selective advantage within the project?			
1. Does the partner gain any benefits (or is relieved of any costs) from the economic		No	

B. Does the partner and/or any third party receive a selective advantage within the project?	
activities mentioned under section A, which it would not have received in the normal course of business, i.e. in the absence of funding granted through the project?	
2. Does any economic operator (e.g. SMEs) that is outside the partnership (i.e. not listed as partner in the application form) receive an advantage through activities carried out by the partner within the project?	No
C. State aid relevant activities (select from drop-down menu based on C.4 entries)	
D. Direct State aid regime as in Subsidy Contract (to be filled in ONLY after project selection)	

B.1 Project partner 2

B.1.1 Partner Identity	
Partner number	2
Partner role	PP
Name of the organisation in original language	Masarykova univerzita
Name of the organisation in English	Masaryk University
Abbreviated name of organisation	MUNI
Department / unit / division	Department of Geography, Faculty of Science
B.1.2 Partner main address	
Country (NUTS 0)	Česko (CZ)
Region (NUTS 2)	Jihovýchod (CZ06)
NUTS 3	Jihomoravský kraj (CZ064)
Street, House number, Postal code, City	Zerotinovo namesti 617/9 60177 Brno
Homepage	https://www.muni.cz/en
Address of department / unit / division (if applicable)	
Country (NUTS 0)	Česko (CZ)
Region (NUTS 2)	Jihovýchod (CZ06)
NUTS 3	Jihomoravský kraj (CZ064)
Street, House number, Postal code, City	Kotlarska 267/2 61137 Brno
B.1.3 Legal and financial information	
Type of partner	Higher education and research organisations
Subtype of partner	
Legal status	Public
Sector of activity at NACE group level	P.85.42
Co-financing rate (%)	80
VAT number (if applicable)	CZ00216224

B.1.3 Legal and financial information	
Other identifier number (if VAT number is not available, some other organisation identifier should be used)	
Other identifier description (specification of the type of identifier)	
PIC (from EC Participant Register), if available	999880657
B.1.4 Legal Representative	
Legal representative (not applicable - not to be filled in)	
B.1.5 Contact person	
Contact person	
Email	
Telephone	
B.1.6 Partner motivation, expertise and contribution	
<p>Please describe the organisation's thematic competences and experiences relevant for the project. Please also describe what is the main business of the organisation and if the organisation is normally performing economic activities on the market.</p>	
<p>Masaryk University (MUNI) is the second-largest public university in the Czech Republic. Department of Geography that represents MUNI in the project is a multidisciplinary institute dealing with environmental, socio-economic, and cartographic studies. Within the environmental specialization, MUNI has rich experience in the analysis of past and recent climate changes and variability of extreme events and their impacts on the environment and human society in Central Europe in the last 500 years. The department can use its experience in the analysis of potentially vulnerable regions by extreme events, the possible negative influence of extreme events on the population from the social-geographic point of view, or provide a database of extreme events. MUNI has an excellent GIS background represented by specialists in the analyses, modeling, and (cartographic) visualizations of geospatial data as well as architecture definitions and development respecting ISO, OGC, INSPIRE, GMES, GEOSS, and W3C semantic principles. Moreover, GIS specialists have large experience with spatial analysis for precision farming, crisis management, or mobile and sensor mapping. GIS team also has certification for Copernicus' training (Copernicus Academy Network). As the most important competencies that MUNI is characterized by, extensive knowledge in environmental, social, and GIS disciplines, research skills, long-term experience, credibility, effective collaboration, innovative approaches, most recent GIS technology or IT sources can be quoted. The aforementioned experience and skills presented by MUNI can be applied in all of the WPs and significantly strengthen the competencies and experience of other partners. Public education, research activities, and application of new research outputs are the main business of MUNI as a public university. Department of Geography, in particular, carries out minimum economic activities such as occasional contracts and consulting services.</p>	
<p>What is the role and involvement (contribution and main activities) of your organisation in the project?</p>	

B.1.6 Partner motivation, expertise and contribution

MUNI will attend all WPs. Within WP1, MUNI will participate in collecting data on cross-border past extreme DHF events and their impacts since at least 2000. The next essential MUNI activity will be the methodology for collecting impacts. Collected data will subsequently serve as a background for a compilation of database that will be used for all subsequent evaluations, analyses, and development of regionally specific tools for forecasts. Moreover, MUNI will deal with the evaluation of past DHF events from the point of view of their spatial and temporal variability, frequency, seasonality, and intensity, including their long-term trends. MUNI will also participate in the evaluation of extreme event impacts on the environment, human society, and human health, as well as the analysis of the potential vulnerability of involved countries and their inhabitants from the social and economic points of view. The evaluation will be carried out based on the previously compiled database and jointly developed methodology for estimation of the effect of climate change on past extreme event occurrence. Production of joint maps for all involved countries within the WP2 is expected. In the last WP, MUNI will cooperate with other partners on developing a final strategy on improved climate change awareness from social and economic points of view. Department will also assist other partners with the development and introduction of a joint communication strategy by means of a collection of feedback from end-users and implementation of historical memory concept.

If you are the project lead partner, please describe here your organisation's capacity and experience in managing and coordinating EU co-financed projects or other international projects. If you are the project partner that will coordinate communication (i.e. taking over the role of project communication manager), please describe here what are your organisation's relevant communication competences and experiences.

B.1.7 Budget

Partner budget options	Percentage
Other costs Flat Rate	40%

The partner budgets overview table can be separately exported as an Excel file

B.1.8 Cofinancing

Source	Amount	Percentage
ERDF	162,203.20	80.00 %
Partner contribution	40,550.80	20.00 %
Partner total eligible budget	202,754.00	100.00 %


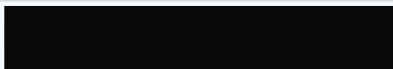


Origin of partner contribution

Source of contribution	Legal status	Amount	% of total partner budget
MUNI	Public	20,275.40	10.00 %
Ministry of Regional Development CZ	Public	20,275.40	10.00 %

Contribution		
Sub-total public contribution	40,550.80	20.00 %
Sub-total automatic public contribution	0.00	0.00 %
Total	0.00	0.00 %
Total eligible budget	40,550.80	20.00 %
State Aid		
B.1.9 State Aid information (Partner self-check)		
A. Is the partner involved in economic activities within the project?		
1. Will the partner implement activities and/or offer goods/services for which a market exists?	No	
2. Are there activities/goods/services that could have been undertaken by an operator with the view of making profit (even if this is not the partner's intention)?	No	
B. Does the partner and/or any third party receive a selective advantage within the project?		
1. Does the partner gain any benefits (or is relieved of any costs) from the economic activities mentioned under section A, which it would not have received in the normal course of business, i.e. in the absence of funding granted through the project?	No	
2. Does any economic operator (e.g. SMEs) that is outside the partnership (i.e. not listed as partner in the application form) receive an advantage through activities carried out by the partner within the project?	No	
C. State aid relevant activities (select from drop-down menu based on C.4 entries)		
D. Direct State aid regime as in Subsidy Contract (to be filled in ONLY after project selection)		

B.1 Project partner 3

B.1.1 Partner Identity	
Partner number	3
Partner role	PP
Name of the organisation in original language	Technische Universitaet Wien
Name of the organisation in English	TU Wien
Abbreviated name of organisation	TUW
Department / unit / division	Department of Geodesy and Geoinformation
B.1.2 Partner main address	
Country (NUTS 0)	Österreich (AT)
Region (NUTS 2)	Wien (AT13)
NUTS 3	Wien (AT130)
Street, House number, Postal code, City	Karlsplatz 13 1040 Vienna
Homepage	www.tuwien.at
Address of department / unit / division (if applicable)	
Country (NUTS 0)	Österreich (AT)
Region (NUTS 2)	Wien (AT13)
NUTS 3	Wien (AT130)
Street, House number, Postal code, City	Wiedner Hauptstrasse 8-10 1040 Vienna
B.1.3 Legal and financial information	
Type of partner	Higher education and research organisations
Subtype of partner	
Legal status	Public
Sector of activity at NACE group level	P.85.42
Co-financing rate (%)	80
VAT number (if applicable)	ATU37675002

B.1.3 Legal and financial information	
Other identifier number (if VAT number is not available, some other organisation identifier should be used)	
Other identifier description (specification of the type of identifier)	
PIC (from EC Participant Register), if available	999979888
B.1.4 Legal Representative	
Legal representative (not applicable - not to be filled in)	
B.1.5 Contact person	
Contact person	
Email	
Telephone	
B.1.6 Partner motivation, expertise and contribution	
<p>Please describe the organisation's thematic competences and experiences relevant for the project. Please also describe what is the main business of the organisation and if the organisation is normally performing economic activities on the market.</p>	
<p>The contribution of TU Wien (TUW) to the project relies on the joint expertise of two research groups within the Department for Geodesy and Geoinformation of the Faculty for Mathematics and Geoinformation: CLIMERS (Climate and Environmental Remote Sensing, led by Prof. Dr. Wouter Dorigo) focuses on the development and use of long-term Earth observation datasets for climate and environmental studies; MRS (Microwave Remote Sensing Group, led by Prof. Dr. Wolfgang Wagner) focuses on the physical modelling of radar backscatter and the retrieval of soil moisture and vegetation properties from microwave satellites.</p> <p>TUW's MRS and CLIMERS groups have developed several operational soil moisture data services for ASCAT, Sentinel-1, and various passive microwave sensors in cooperation with national (e.g. ZAMG, EODC) and international (e.g. EUMETSAT, ECMWF, ESA) partners. These data services have been developed and operated within the framework of EUMETSAT's Satellite Application Facility in Support to Operational Hydrology and Water Management (H-SAF), the Copernicus Global Land and Climate Services, and ESA's Climate Change Initiative and are all freely accessible. Among many other projects, both groups have been participating in several projects focusing on drought monitoring and impact forecasting (e.g., Interreg DriDanube project, ESA's DryPan project, and SMART-DRI funded by the Worldbank), as well as projects focusing on the modelling and prediction of wildfires (CONFIRM, funded by the Austrian Research Promotion (FFG) and FURNACES, funded by the Austrian and German Science foundations). TU Wien has also been involved in projects related to the efficient use, scaling, and sharing of earth observation data among large user communities, developing the required software and establishing infrastructure (H2020/HEurope projects C-Scale and interTwin; FFG project FAIR2Earth). More information is available at http://climers.geo.tuwien.ac.at and http://mrs.geo.tuwien.ac.at.</p>	

B.1.6 Partner motivation, expertise and contribution

What is the role and involvement (contribution and main activities) of your organisation in the project?

TUW will mainly contribute to the work packages 1 and 2. More specifically, long-term soil moisture and vegetation data produced by TUW will be a key component for the evaluation of past extreme events and their impacts (A1.2). In addition, novel, high-resolution surface and root-zone soil moisture data will be provided. Based on these datasets, TUW will establish a thorough analysis of how soil moisture and vegetation evolve before, during, and after past extreme events, potentially distinguishing the impacts of droughts, heat-waves, wildfires, and their combined effects. In doing so, not only the impacts of DHF will be analysed but as well a potential driver of droughts (e.g., surface soil moisture as indicator of water availability). This will help to explore the potential of these datasets in early warning systems. In task A1.4 a detailed validation strategy will be developed and applied to the results obtained from A1.3.

As mentioned above, TUW has contributed to various projects in recent years to develop monitoring and forecasting systems for drought and wildfires. The results of these projects will be shared and compared to other partners' best practices on monitoring and prediction of drought, heat, and fire events (DHF; A2.1). An essential part of this project will be to test how the previous tools can be combined to a multi-hazard monitoring and forecasting tool and be rescaled to larger areas like Central Europe. TUW will work on both parts and elaborate methods to combine drought and wildfire tools, and analyse their performance on a larger scale.

If you are the project lead partner, please describe here your organisation's capacity and experience in managing and coordinating EU co-financed projects or other international projects. If you are the project partner that will coordinate communication (i.e. taking over the role of project communication manager), please describe here what are your organisation's relevant communication competences and experiences.

B.1.7 Budget

Partner budget options	Percentage
Other costs Flat Rate	40%

The partner budgets overview table can be separately exported as an Excel file

B.1.8 Cofinancing

Source	Amount	Percentage
ERDF	235,503.36	80.00 %
Partner contribution	58,875.84	20.00 %
Partner total eligible budget	294,379.20	100.00 %


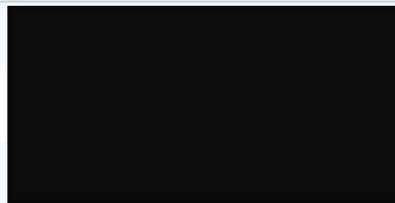
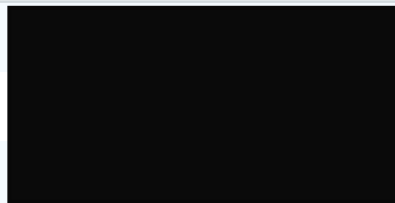
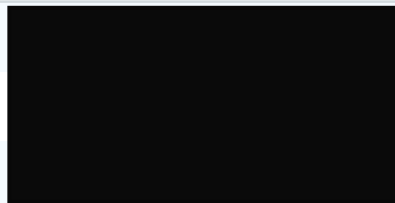
Origin of partner contribution

Source of contribution	Legal status	Amount	% of total partner budget
TUW	Public	58,875.84	20.00 %

Contribution		
Sub-total public contribution	58,875.84	20.00 %
Sub-total automatic public contribution	0.00	0.00 %
Total	0.00	0.00 %
Total eligible budget	58,875.84	20.00 %
State Aid		
B.1.9 State Aid information (Partner self-check)		
A. Is the partner involved in economic activities within the project?		
1. Will the partner implement activities and/or offer goods/services for which a market exists?	No	
2. Are there activities/goods/services that could have been undertaken by an operator with the view of making profit (even if this is not the partner's intention)?	No	
B. Does the partner and/or any third party receive a selective advantage within the project?		
1. Does the partner gain any benefits (or is relieved of any costs) from the economic activities mentioned under section A, which it would not have received in the normal course of business, i.e. in the absence of funding granted through the project?	No	
2. Does any economic operator (e.g. SMEs) that is outside the partnership (i.e. not listed as partner in the application form) receive an advantage through activities carried out by the partner within the project?	No	
C. State aid relevant activities (select from drop-down menu based on C.4 entries)		
D. Direct State aid regime as in Subsidy Contract (to be filled in ONLY after project selection)		

B.1 Project partner 4

B.1.1 Partner Identity	
Partner number	4
Partner role	PP
Name of the organisation in original language	Instytut Uprawy, Nawżenia i Gleboznawstwa - Państwowy Instytut Badawczy
Name of the organisation in English	Institute of Soil Science and Plant Cultivation - State Research Institute
Abbreviated name of organisation	IUNG-PIB
Department / unit / division	Department of Bioeconomy and Systems Analysis
B.1.2 Partner main address	
Country (NUTS 0)	Polska (PL)
Region (NUTS 2)	Lubelskie (PL81)
NUTS 3	Puławski (PL815)
Street, House number, Postal code, City	Czartoryskich 8 24-100 Puławy
Homepage	www.iung.pl
Address of department / unit / division (if applicable)	
Country (NUTS 0)	Polska (PL)
Region (NUTS 2)	Lubelskie (PL81)
NUTS 3	Puławski (PL815)
Street, House number, Postal code, City	Czartoryskich 8 24-100 Puławy
B.1.3 Legal and financial information	
Type of partner	Higher education and research organisations
Subtype of partner	
Legal status	Public
Sector of activity at NACE group level	M.72.19
Co-financing rate (%)	80

B.1.3 Legal and financial information	
VAT number (if applicable)	PL7160004281
Other identifier number (if VAT number is not available, some other organisation identifier should be used)	
Other identifier description (specification of the type of identifier)	
PIC (from EC Participant Register), if available	998139604
B.1.4 Legal Representative	
Legal representative (not applicable - not to be filled in)	
B.1.5 Contact person	
Contact person	
Email	
Telephone	
B.1.6 Partner motivation, expertise and contribution	
<p>Please describe the organisation's thematic competences and experiences relevant for the project. Please also describe what is the main business of the organisation and if the organisation is normally performing economic activities on the market.</p>	
<p>The scope of The Institute of Soil Science and Plant Cultivation (IUNG-PIB) activities is directed both to scientific research and to the elaboration of integrated information systems and decision support systems for farmers and policymakers. IUNG-PIB provides policy support to the Ministry of Agriculture and Rural Development on CAP, climate change, and soil policy. Our mission is to act effectively, respond to needs and create development. From 2007, IUNG-PIB provide the Agricultural Drought Monitoring System (ADMS) that is designed to identify areas where there are crop losses caused by drought conditions, which are listed in the "Act on subsidies to insurance of agricultural crops and farm animals" (https://susza.iung.pulawy.pl/). The Department of Bioeconomy and Systems Analysis is co-creating regional bioeconomy development strategies linked to different initiatives at local, national and Central and Eastern Europe level (BIOEAST initiative).</p>	
<p>What is the role and involvement (contribution and main activities) of your organisation in the project?</p>	
<p>IUNG-PIB will lead the activity A1.5 "Developing and delivering strategies on improved climate change awareness" in which we will use our experience in strategic planning, channels to policy makers and relevant stakeholders, providing to stakeholders easy-to-access relevant information obtained in frame of WP1 for increasing awareness related drought, heatwaves and fire weather monitoring. IUNG-PIB will integrated the services (weather forecast) provided by project to ADMS in frame of WP2, which will increase the analytical capacity of the system and will allow to speed up the reaction to the observed</p>	

B.1.6 Partner motivation, expertise and contribution

drought losses. IUNG-PIB will contribute by sharing the best practices obtained during experience providing ADMS in Poland in frame of WP3 and to WP1 to support created inputs to databases and analyses.

If you are the project lead partner, please describe here your organisation's capacity and experience in managing and coordinating EU co-financed projects or other international projects. If you are the project partner that will coordinate communication (i.e. taking over the role of project communication manager), please describe here what are your organisation's relevant communication competences and experiences.

B.1.7 Budget

Partner budget options	Percentage
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Other costs Flat Rate	40%
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The partner budgets overview table can be separately exported as an Excel file

B.1.8 Cofinancing

Source	Amount	Percentage
ERDF	135,640.00	80.00 %
Partner contribution	33,910.00	20.00 %
Partner total eligible budget	169,550.00	100.00 %

Origin of partner contribution

Source of contribution	Legal status	Amount	% of total partner budget
IUNG-PIB	Public	8,477.50	5.00 %
Ministry of Development and Regional Policy PL	Public	25,432.50	15.00 %

Contribution

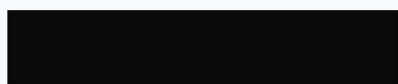
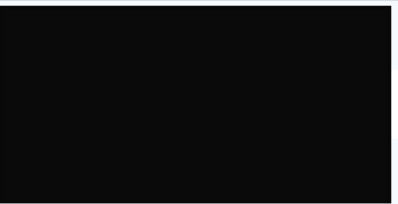


Sub-total public contribution	33,910.00	20.00 %
Sub-total automatic public contribution	0.00	0.00 %
Total	0.00	0.00 %
Total eligible budget	33,910.00	20.00 %

State Aid

B.1.9 State Aid information (Partner self-check)	
A. Is the partner involved in economic activities within the project?	
1. Will the partner implement activities and/or offer goods/services for which a market exists?	No
2. Are there activities/goods/services that could have been undertaken by an operator with the view of making profit (even if this is not the partner's intention)?	No
B. Does the partner and/or any third party receive a selective advantage within the project?	
1. Does the partner gain any benefits (or is relieved of any costs) from the economic activities mentioned under section A, which it would not have received in the normal course of business, i.e. in the absence of funding granted through the project?	No
2. Does any economic operator (e.g. SMEs) that is outside the partnership (i.e. not listed as partner in the application form) receive an advantage through activities carried out by the partner within the project?	No
C. State aid relevant activities (select from drop-down menu based on C.4 entries)	
D. Direct State aid regime as in Subsidy Contract (to be filled in ONLY after project selection)	

B.1 Project partner 5

B.1.1 Partner Identity	
Partner number	5
Partner role	PP
Name of the organisation in original language	Leibniz-Zentrum für Agrarlandschaftsforschung (ZALF) e. V.
Name of the organisation in English	Leibniz Centre for Agricultural Landscape Research (ZALF)
Abbreviated name of organisation	ZALF
Department / unit / division	Research Platform "Data Analysis & Simulation"
B.1.2 Partner main address	
Country (NUTS 0)	Deutschland (DE)
Region (NUTS 2)	Brandenburg (DE40)
NUTS 3	Märkisch-Oderland (DE409)
Street, House number, Postal code, City	Eberswalder Str. 84 15374 Muencheberg
Homepage	https://www.zalf.de/en/Pages/ZALF.aspx
Address of department / unit / division (if applicable)	
Country (NUTS 0)	Deutschland (DE)
Region (NUTS 2)	Brandenburg (DE40)
NUTS 3	Märkisch-Oderland (DE409)
Street, House number, Postal code, City	Eberswalder Str. 84 15374 Muencheberg
B.1.3 Legal and financial information	
Type of partner	Higher education and research organisations
Subtype of partner	
Legal status	Public
Sector of activity at NACE group level	M.72.1
Co-financing rate (%)	80

B.1.3 Legal and financial information	
VAT number (if applicable)	DE811417184
Other identifier number (if VAT number is not available, some other organisation identifier should be used)	
Other identifier description (specification of the type of identifier)	
PIC (from EC Participant Register), if available	999465885
B.1.4 Legal Representative	
Legal representative (not applicable - not to be filled in)	
B.1.5 Contact person	
Contact person	
Email	
Telephone	
B.1.6 Partner motivation, expertise and contribution	
<p>Please describe the organisation's thematic competences and experiences relevant for the project. Please also describe what is the main business of the organisation and if the organisation is normally performing economic activities on the market.</p>	
<p>ZALF focusses is on the research and development of interactive easy-to-use models and data analysis methods in landscape research. The ZALF research platform "Data Analysis and Simulation" develops coherent concepts for integration of data, models and simulation methods for landscape research, from technical solutions to a landscape theory. In this area, ZALF looks back on many years of research on the modeling of agro-ecosystems under dynamic meteorological and local conditions. ZALF agro-ecosystem models YIELDSTAT (Mirschel et al., 2014), HERMES (Kersebaum & Richter, 1991) and MONICA (Nendel et al., 2011) calculate yields plus related ecosystem services such as deep water seepage, nitrate leaching, CO₂ and N₂O outgassing, and the long-term dynamics of soil carbon. A decision support system for agriculture includes models for calculating the need for irrigation and the need for additional water (Wenkel et al., 2013). An operative control of the irrigation is in use as an online version for forecasting "web-BEREST" (Mirschel et al., 2014) at ZALF. ZALF contributes and leads activities in many EU agriculture and drought projects. The Modelling European Agriculture with Climate Change for Food Security (MACSUR) SciPol (2021-2023) project specifically addresses policy questions on climate protection and climate change in agriculture and provides the relevant scientific answers. The international Landscape conferences (2018, 2021, 2025) organized by ZALF provide a continuous platform for science-policy interfacing, and so does the Climate Change Platform of the German Agricultural Research Alliance (DAFA), for which Prof. Nendel currently acts as speaker. SpreeWasser:N (2022-2025) will work with water users and decision-makers to develop long-term options for action in order to develop a perspective and interdisciplinary water management concept specifically to cope with intensifying droughts.</p>	

B.1.6 Partner motivation, expertise and contribution

What is the role and involvement (contribution and main activities) of your organisation in the project?

ZALF is partner in this InterReg project and leads the tasks 1.3 and 2.2, while contributing to several other tasks. One main contribution is the contribution of ZALF in terms of a model for drought forecasting. ZALF will couple drought, heat and fire weather forecasting models at its high performance computing infrastructure in task 2.2. The task builds upon existing experience at ZALF in developing easy-to-use simulation software for drought forecasting and identifying mitigation options using agro-ecosystem models. Alongside, ZALF will bring in its expertise as stakeholder hub for regional, national and EU level stakeholder involvement from its various projects (MACSUR, SpreeWasser:N, DAKIS). Here, ZALF will also lead the task as communication manager. The ZALF-led conference series "Landscape" will be used to promote InterReg project achievements.

If you are the project lead partner, please describe here your organisation's capacity and experience in managing and coordinating EU co-financed projects or other international projects. If you are the project partner that will coordinate communication (i.e. taking over the role of project communication manager), please describe here what are your organisation's relevant communication competences and experiences.

ZALF will take over the role of the project communication manager. ZALF has a strong public relations office for branding and communication. The public relations office is supported by extramural expertise for graphical works. ZALF brings in experience in management of communication relations with relevant internal and external stakeholders, strategic communications consulting, press and media relations, scientific political consulting, media relations and platforms such as twitter, research magazine FELD, research blog querFELDein and podcasts. ZALF's communication strategy is fed from its brought set of research projects, ranging from science-policy interfacing projects (e.g. MACSUR SciPol project) relevant for achieving stakeholder impact, to start-up communities in digital smart agriculture (DAKIS) and compelling scientific conferences such as Landscape conferences. The Clim4Cast InterReg project partners will benefit from these competences and function as multiplier of the partner's individual strengths.

B.1.7 Budget

Partner budget options	Percentage
Other costs Flat Rate	40%

The partner budgets overview table can be separately exported as an Excel file





B.1.8 Cofinancing

Source	Amount	Percentage
ERDF	200,882.08	80.00 %
Partner contribution	50,220.52	20.00 %
Partner total eligible budget	251,102.60	100.00 %

Origin of partner contribution			
Source of contribution	Legal status	Amount	% of total partner budget
ZALF	Public	50,220.52	20.00 %
Contribution			
Sub-total public contribution		50,220.52	20.00 %
Sub-total automatic public contribution		0.00	0.00 %
Total		0.00	0.00 %
Total eligible budget		50,220.52	20.00 %
State Aid			
B.1.9 State Aid information (Partner self-check)			
A. Is the partner involved in economic activities within the project?			
1. Will the partner implement activities and/or offer goods/services for which a market exists?	No		
2. Are there activities/goods/services that could have been undertaken by an operator with the view of making profit (even if this is not the partner's intention)?	No		
B. Does the partner and/or any third party receive a selective advantage within the project?			
1. Does the partner gain any benefits (or is relieved of any costs) from the economic activities mentioned under section A, which it would not have received in the normal course of business, i.e. in the absence of funding granted through the project?	No		
2. Does any economic operator (e.g. SMEs) that is outside the partnership (i.e. not listed as partner in the application form) receive an advantage through activities carried out by the partner within the project?	No		
C. State aid relevant activities (select from drop-down menu based on C.4 entries)			
D. Direct State aid regime as in Subsidy Contract (to be filled in ONLY after project selection)			

B.1 Project partner 6

B.1.1 Partner Identity	
Partner number	6
Partner role	PP
Name of the organisation in original language	Agencija Republike Slovenije za okolje
Name of the organisation in English	Slovenian Environment Agency
Abbreviated name of organisation	ARSO
Department / unit / division	Meteorology and hydrology office
B.1.2 Partner main address	
Country (NUTS 0)	Slovenija (SI)
Region (NUTS 2)	Zahodna Slovenija (SI04)
NUTS 3	Osrednjeslovenska (SI041)
Street, House number, Postal code, City	Vojkova cesta 1b 1000 Ljubljana
Homepage	https://www.arso.gov.si
Address of department / unit / division (if applicable)	
Country (NUTS 0)	Slovenija (SI)
Region (NUTS 2)	Zahodna Slovenija (SI04)
NUTS 3	Osrednjeslovenska (SI041)
Street, House number, Postal code, City	Vojkova cesta 1b 1000 Ljubljana
B.1.3 Legal and financial information	
Type of partner	National public authority
Subtype of partner	
Legal status	Public
Sector of activity at NACE group level	M.72.19
Co-financing rate (%)	80
VAT number (if applicable)	SI18945082

B.1.3 Legal and financial information	
Other identifier number (if VAT number is not available, some other organisation identifier should be used)	
Other identifier description (specification of the type of identifier)	
PIC (from EC Participant Register), if available	920448812
B.1.4 Legal Representative	
Legal representative (not applicable - not to be filled in)	
B.1.5 Contact person	
Contact person	
Email	
Telephone	
B.1.6 Partner motivation, expertise and contribution	
<p>Please describe the organisation's thematic competences and experiences relevant for the project. Please also describe what is the main business of the organisation and if the organisation is normally performing economic activities on the market.</p>	
<p>Slovenian environment agency (ARSO) performs tasks of national hydrological, meteorological and seismological service. By providing vital weather, climate and seismic information and environmental data for target groups ARSO helps to reduce impacts of natural disasters to people and property. Early warnings of hazardous natural phenomena, severe weather, fluctuations in air quality and climate variability and change issued by ARSO allow citizens to be better prepared. ARSO collaborates closely with the Administration for Civil Protection and Disaster Relief and other institutions in field of environmental risks and disaster management.</p> <p>In order to improve its services, ARSO also performs scientific research (apart from being public authority, it is also registered as research institution).</p> <p>ARSO was involved in project "South-East European Multi-Hazard Early Warning Advisory System" (SEE-MHEWS), financed by the World meteorological organization. It is currently part of the EUMETSAT LSA-SAF consortium, where it is cooperating in development of new products based on Meteosat measurements. Among Interreg projects, ARSO has led the DriDanube - Drought Risk in the Danube Region project (Danube Transnational Programme; 2017-20) and collaborated in many other interreg projects.</p> <p>ARSO also carry out tasks of the Drought management Centre for South-Eastern Europe (DMCSEE), established jointly by World Meteorological Organization (WMO) and United Nations Convention to Combat Desertification (UNCCD). DMCSEE mission is to coordinate and facilitate the development, assessment, and application of drought risk management tools and policies in South-Eastern Europe with the goal of improving drought preparedness and reducing drought impacts.</p>	

B.1.6 Partner motivation, expertise and contribution

Main tasks of ARSO are connected to its role of public authority and to scientific research; however, sectoral legislation allows it to perform economic activities such as preparation of tailored forecasts and analyses of monitoring systems.

What is the role and involvement (contribution and main activities) of your organisation in the project?

ARSO will be active in all work packages and will lead activities connected to joint development of drought, heatwave, and fire weather response strategy. We will coordinate collection of on partner's best practices in the field of response strategies and use of early warning information. We will collaborate in collecting impact data of past droughts and heat waves and will study its connection to monitoring and early warning system which will be developed in the frame of WP1.

ARSO is particularly interested in outcomes of WP2 (Joint development and implementation of forecasting tool for DHF and their compound effects) due to its role as DMCSEE coordinator. We consider Clim4Cast project as opportunity to improve and widen set of tools we are providing to DMCSEE community to monitor and forecast drought development.

As WP3 leader ARSO will found collaborative work on outcomes of the DriDanube project, mainly the Strategy to improve drought response. New partnership in CE region and new information collected by WP1 and WP2 will enable us to improve recommendations for DHF response.

ARSO will also be in charge for communication of project outputs to stakeholders in Slovenia.

If you are the project lead partner, please describe here your organisation's capacity and experience in managing and coordinating EU co-financed projects or other international projects. If you are the project partner that will coordinate communication (i.e. taking over the role of project communication manager), please describe here what are your organisation's relevant communication competences and experiences.

B.1.7 Budget

Partner budget options	Percentage
Other costs Flat Rate	40%

The partner budgets overview table can be separately exported as an Excel file

B.1.8 Cofinancing

Source	Amount	Percentage
ERDF	158,959.20	80.00 %
Partner contribution	39,739.80	20.00 %
Partner total eligible budget	198,699.00	100.00 %





Origin of partner contribution

Source of contribution	Legal status	Amount	% of total partner budget
ARSO	Public	39,739.80	20.00 %

Contribution		
Sub-total public contribution	39,739.80	20.00 %
Sub-total automatic public contribution	0.00	0.00 %
Total	0.00	0.00 %
Total eligible budget	39,739.80	20.00 %
State Aid		
B.1.9 State Aid information (Partner self-check)		
A. Is the partner involved in economic activities within the project?		
1. Will the partner implement activities and/or offer goods/services for which a market exists?	No	
2. Are there activities/goods/services that could have been undertaken by an operator with the view of making profit (even if this is not the partner's intention)?	No	
B. Does the partner and/or any third party receive a selective advantage within the project?		
1. Does the partner gain any benefits (or is relieved of any costs) from the economic activities mentioned under section A, which it would not have received in the normal course of business, i.e. in the absence of funding granted through the project?	No	
2. Does any economic operator (e.g. SMEs) that is outside the partnership (i.e. not listed as partner in the application form) receive an advantage through activities carried out by the partner within the project?	No	
C. State aid relevant activities (select from drop-down menu based on C.4 entries)		
D. Direct State aid regime as in Subsidy Contract (to be filled in ONLY after project selection)		

B.1 Project partner 7

B.1.1 Partner Identity	
Partner number	7
Partner role	PP
Name of the organisation in original language	Državni hidrometeorološki zavod
Name of the organisation in English	Croatian Meteorological and Hydrological Service
Abbreviated name of organisation	DHMZ
Department / unit / division	Meteorological Research and Development Division
B.1.2 Partner main address	
Country (NUTS 0)	Hrvatska (HR)
Region (NUTS 2)	Grad Zagreb (HR05)
NUTS 3	Grad Zagreb (HR050)
Street, House number, Postal code, City	Ravnice 48 10000 Zagreb
Homepage	www.meteo.hr
Address of department / unit / division (if applicable)	
Country (NUTS 0)	Hrvatska (HR)
Region (NUTS 2)	Grad Zagreb (HR05)
NUTS 3	Grad Zagreb (HR050)
Street, House number, Postal code, City	Ravnice 48 10000 Zagreb
B.1.3 Legal and financial information	
Type of partner	National public authority
Subtype of partner	
Legal status	Public
Sector of activity at NACE group level	M.72.19
Co-financing rate (%)	80
VAT number (if applicable)	HR74660437164

B.1.3 Legal and financial information	
Other identifier number (if VAT number is not available, some other organisation identifier should be used)	
Other identifier description (specification of the type of identifier)	
PIC (from EC Participant Register), if available	
B.1.4 Legal Representative	
Legal representative (not applicable - not to be filled in)	
B.1.5 Contact person	
Contact person	
Email	
Telephone	
B.1.6 Partner motivation, expertise and contribution	
<p>Please describe the organisation's thematic competences and experiences relevant for the project. Please also describe what is the main business of the organisation and if the organisation is normally performing economic activities on the market.</p>	
<p>Meteorological and Hydrological Service of Croatia (DHMZ) is a governmental scientific and technical central state organization in the fields of meteorology, climatology and hydrology. DHMZ is responsible for: measurements and monitoring of meteorological and hydrological parameters and phenomena (including meteorological droughts), data management, archiving and dissemination of data, products and information; analysis and forecast of atmospheric conditions and phenomena; climate change detection and modelling; severe weather forecasts and early warnings, and emergency response activities; analysis, research and development of meteorological products and services for the public, governmental bodies and specific users; national and international exchange of data and information; and collaboration within national and international projects. DHMZ has a long experience of interactions with stakeholders, through the production of research results, directly usable for the implementation of public policies. The monitoring of drought and fire weather is provided in a regular manner by DHMZ through different indices associated with the phenomena. The early warnings for heatwaves are issued through the Meteoalarm warning system. DHMZ has a long-standing scientific and technical expertise in numerical weather prediction in terms of interpretation, modelling and forecast of severe weather events.</p>	
<p>What is the role and involvement (contribution and main activities) of your organisation in the project?</p>	
<p>Due to its long expertise and competence, DHMZ will be actively involved in all project's working packages. The role of DHMZ in the project will be to systematize the data and impacts (based on economical losses due to natural hazards or casualties and impacts collected and analysed from the newspaper reports) of extreme events in Croatia and to contribute to the development of a</p>	

B.1.6 Partner motivation, expertise and contribution

methodology for the evaluation of past extreme events and climate change impacts. We will share with project partners the activities and practises regarding drought and fire weather monitoring based on meteorological data and contribute to the development of regional specific tools for drought and fire weather forecasting, and testing it in the frame of pilot action. With the experience in severe weather warnings we will contribute to the systematization of the best practices in early warnings and provide communication with stakeholders.

If you are the project lead partner, please describe here your organisation's capacity and experience in managing and coordinating EU co-financed projects or other international projects. If you are the project partner that will coordinate communication (i.e. taking over the role of project communication manager), please describe here what are your organisation's relevant communication competences and experiences.

B.1.7 Budget

Partner budget options	Percentage
Other costs Flat Rate	40%

The partner budgets overview table can be separately exported as an Excel file

B.1.8 Cofinancing

Source	Amount	Percentage
ERDF	122,543.36	80.00 %
Partner contribution	30,635.84	20.00 %
Partner total eligible budget	153,179.20	100.00 %

Origin of partner contribution

Source of contribution	Legal status	Amount	% of total partner budget
DHMZ	Public	30,635.84	20.00 %

Contribution





Sub-total public contribution	30,635.84	20.00 %
Sub-total automatic public contribution	0.00	0.00 %
Total	0.00	0.00 %
Total eligible budget	30,635.84	20.00 %

State Aid

B.1.9 State Aid information (Partner self-check)	
A. Is the partner involved in economic activities within the project?	
1. Will the partner implement activities and/or offer goods/services for which a market exists?	No
2. Are there activities/goods/services that could have been undertaken by an operator with the view of making profit (even if this is not the partner's intention)?	No
B. Does the partner and/or any third party receive a selective advantage within the project?	
1. Does the partner gain any benefits (or is relieved of any costs) from the economic activities mentioned under section A, which it would not have received in the normal course of business, i.e. in the absence of funding granted through the project?	No
2. Does any economic operator (e.g. SMEs) that is outside the partnership (i.e. not listed as partner in the application form) receive an advantage through activities carried out by the partner within the project?	No
C. State aid relevant activities (select from drop-down menu based on C.4 entries)	
D. Direct State aid regime as in Subsidy Contract (to be filled in ONLY after project selection)	

B.1 Project partner 8

B.1.1 Partner Identity	
Partner number	8
Partner role	PP
Name of the organisation in original language	Slovenský hydrometeorologický ústav
Name of the organisation in English	Slovak Hydrometeorological Institute
Abbreviated name of organisation	SHMI
Department / unit / division	Division Meteorological Service/Dpt. of Climatological Service
B.1.2 Partner main address	
Country (NUTS 0)	Slovensko (SK)
Region (NUTS 2)	Bratislavský kraj (SK01)
NUTS 3	Bratislavský kraj (SK010)
Street, House number, Postal code, City	Jeséniova 17 83315 Bratislava
Homepage	www.shmu.sk
Address of department / unit / division (if applicable)	
Country (NUTS 0)	Slovensko (SK)
Region (NUTS 2)	Bratislavský kraj (SK01)
NUTS 3	Bratislavský kraj (SK010)
Street, House number, Postal code, City	Jeséniova 17 83315 Bratislava
B.1.3 Legal and financial information	
Type of partner	National public authority
Subtype of partner	
Legal status	Public
Sector of activity at NACE group level	M.72.19
Co-financing rate (%)	80
VAT number (if applicable)	SK2020749852

B.1.3 Legal and financial information	
Other identifier number (if VAT number is not available, some other organisation identifier should be used)	
Other identifier description (specification of the type of identifier)	
PIC (from EC Participant Register), if available	
B.1.4 Legal Representative	
Legal representative (not applicable - not to be filled in)	
B.1.5 Contact person	
Contact person	
Email	
Telephone	
B.1.6 Partner motivation, expertise and contribution	
<p>Please describe the organisation's thematic competences and experiences relevant for the project. Please also describe what is the main business of the organisation and if the organisation is normally performing economic activities on the market.</p>	
<p>The Slovak Hydrometeorological Institute (SHMU) is a specialized organization providing hydrological and meteorological services at the national and international level. It is state-subsidized organization operating under the Slovak Ministry of Environment. The SHMU's activities include the following:</p> <ol style="list-style-type: none"> 1. Monitoring of quantitative and qualitative parameters of the air and water in Slovak territory. The SHMU's networks are mostly automated. All data with a short time response are available for immediate use involving the combined data from remote sensing network. 2. Collecting, verifying, interpreting and archiving data and information on the condition and regime of air and water. The QC system produces data of high time and area density, for long-term data the homogenization procedures are applied. 3. Describing developments in the atmosphere and hydrosphere. A long time observation and application of climate change projections allow SHMI to assess the current and future behavior of the climate system and hydrological cycle in our region. 4. Issuing forecasts, warnings and other information regarding the atmosphere and hydrosphere. The monitoring and forecasting of forest fire risk and drought are based on a daily or weekly base. The cooperation with stakeholders and official authorities is a routine part of spreading the information and warnings. <p>SHMU co-operates within the projects LIFE-IP SK Air Quality Improvement (LIFE 18 IPE/SK/000010), eGAFOR (https://project.egafor.eu/) and URANOS (co-financed by ERDF). SHMU was a project partner within several international and national projects, e.g. DriDanube or DAREFFORT (both financed by Interreg DTP). All projects can be found at https://www.shmu.sk/sk/?page=569.</p> <p>The data and experience, availability and flexibility of SHMU team is promising for adapting a new methodology of drought, heat wave and wildfires monitoring, the establishment of an early warning</p>	

B.1.6 Partner motivation, expertise and contribution

system and results dissemination.

What is the role and involvement (contribution and main activities) of your organisation in the project?

The Slovak Hydrometeorological Institute, as the only authorized institution, measures meteorological and hydrological data, provides weather forecasting (SHMU is the member of ALADIN consortium) as well as provides monitoring of meteorological, soil and hydrological drought in Slovakia. We have good experience in meteorological and hydrological drought monitoring and in international co-operation on soil drought monitoring, which can be shared with other partner countries within knowledge exchange. We are successful in stakeholder involvement thanks to intense communication with sectoral chambers and key organizations such as Slovak Agricultural and Food Chamber, The Slovak Forests, state enterprise, Forest Protection Service Center etc. The co-operation with these institutions led to the successful establishment of a national reporting network on drought impacts during the DriDanube project. It is very promising for preparing the monitoring, early warning tools and strategy, which will be tailored just for the Central European region thanks to the possible discussion with potential end users through associated partners at national, but also local level. The existence of the reporting network and the past co-operation with the governmental bodies and sectoral institutions will much help us to reach the aim of WP1s activities and to disseminate the project outputs. We are also able to reach the general public regarding project outputs dissemination activities, as our drought monitoring is well followed by most of the media.

We will build on this basis and notably improve fire weather monitoring. Further, we will help to establish an early warning system, which would improve the awareness of the stakeholders and general public about drought, heat waves and wildfires. Such system will notably increase the preparedness on these extreme events and it will mitigate its impacts on the economic sectors and human health.

If you are the project lead partner, please describe here your organisation's capacity and experience in managing and coordinating EU co-financed projects or other international projects. If you are the project partner that will coordinate communication (i.e. taking over the role of project communication manager), please describe here what are your organisation's relevant communication competences and experiences.

B.1.7 Budget

Partner budget options	Percentage
Other costs Flat Rate	40%

The partner budgets overview table can be separately exported as an Excel file

B.1.8 Cofinancing

Source	Amount	Percentage
ERDF	217,024.00	80.00 %
Partner contribution	54,256.00	20.00 %
Partner total eligible budget	271,280.00	100.00 %

Origin of partner contribution			
Source of contribution	Legal status	Amount	% of total partner budget
SHMI	Public	0.00	0.00 %
Ministry of Investments, Regional Development and Information SK	Automatic Public	54,256.00	20.00 %
Contribution			
Sub-total public contribution		0.00	0.00 %
Sub-total automatic public contribution		54,256.00	20.00 %
Total		0.00	0.00 %
Total eligible budget		54,256.00	20.00 %
State Aid			
B.1.9 State Aid information (Partner self-check)			
A. Is the partner involved in economic activities within the project?			
1. Will the partner implement activities and/or offer goods/services for which a market exists?	No		
2. Are there activities/goods/services that could have been undertaken by an operator with the view of making profit (even if this is not the partner's intention)?	No		
B. Does the partner and/or any third party receive a selective advantage within the project?			
1. Does the partner gain any benefits (or is relieved of any costs) from the economic activities mentioned under section A, which it would not have received in the normal course of business, i.e. in the absence of funding granted through the project?	No		
2. Does any economic operator (e.g. SMEs) that is outside the partnership (i.e. not listed as partner in the application form) receive an advantage through activities carried out by the partner within the project?	No		
C. State aid relevant activities (select from			

drop-down menu based on C.4 entries)	
D. Direct State aid regime as in Subsidy Contract (to be filled in ONLY after project selection)	

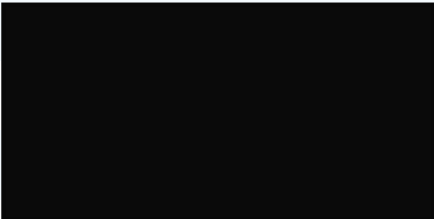
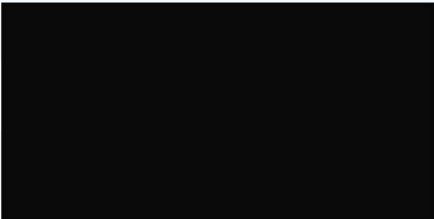
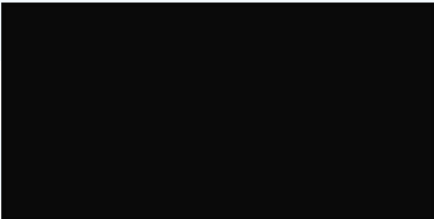
B.2 Associated partners




Associated partner number	Status	Name of the organisation in original language	Associated to project partner
1	Active	Ministerstvo vnitra ČR - Generální ředitelství HZS ČR, Institut ochrany obyvatelstva	MUNI
2	Active	Zentralanstalt für Meteorologie und Geodynamik	TUW
3	Active	Österreichische Hagelversicherung	TUW
4	Active	Lesnícka ochrannárska služba	SHMI
5	Active	Ministerstvo životného prostredia Slovenskej republiky	SHMI
6	Active	Ministerstvo pôdohospodárstva a rozvoja vidieka Slovenskej republiky	SHMI
7	Active	Slovenská poľnohospodárska a potravinárska komora	SHMI
8	Active	Ministarstvo poljoprivrede	DHMZ
9	Active	Ministarstvo unutarnjih poslova - Ravnateljstvo civilne zaštite	DHMZ
10	Active	Ministerium für Landwirtschaft, Umwelt und Klimaschutz des Landes Brandenburg	ZALF
11	Active	Fachverband Bewässerungslandbau Mitteldeutschland e.V.	ZALF
12	Active	adelphi	ZALF
13	Active	Gozdarski inštitut Slovenije	ARSO
14	Active	Stadt Graz, Abteilung Katastrophenschutz und Feuerwehr, Referat Branddirektion	TUW
15	Active	Statutární město Brno	MUNI
16	Active	Lesy Slovenskej republiky, štátny podnik	SHMI
17	Active	Umweltbundesamt	TUW
18	Active	Český hydrometeorologický ústav	CzechGlobe
19	Active	Agrární komora České republiky	CzechGlobe
20	Active	Státní pozemkový úřad České republiky	CzechGlobe
21	Active	Ministerstvo životního prostředí České republiky,	CzechGlobe





Associated partner number	Status	Name of the organisation in original language	Associated to project partner
		odbor bezpečnosti a krizového řízení	
22	Active	Ministerstvo zemědělství České republiky, sekce vodního hospodářství	CzechGlobe
23	Active	Ministrstvo za kmetijstvo, gozdarstvo in prehrano - direktorat za kmetijstvo	ARSO
24	Active	Centrum Doradztwa Rolniczego w Brwinowie	IUNG-PIB
25	Active	Zachodniopomorska Izba Rolnicza	IUNG-PIB
26	Active	Ministerstwo Rolnictwa i Rozwoju Wsi	IUNG-PIB





Ministerstvo vnitra ČR - Generální ředitelství HZS ČR, Institut ochrany obyvatelstva A01	
Partner number	PP2
Name of the organisation in original language	Ministerstvo vnitra ČR - Generální ředitelství HZS ČR, Institut ochrany obyvatelstva
Name of the organisation in English	Ministry of Interior - General Directorate of Fire Rescue Service, Population Protection Institute
Country (NUTS 0)	Česko (CZ)
Region (NUTS 2)	Severovýchod (CZ05)
NUTS 3	Pardubický kraj (CZ053)
Street, House number, Postal code, City	Na Luzci 204 530 41 Lazne Bohdanec
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	The Population Protection Institute (PPI) is a special-purpose facility of the Ministry of Interior - the General Directorate of the Fire Rescue Service of the Czech Republic (MI - DG FRS CR). It carries out emergency response and specialized activities as well as research and education. The Institute provides direct and indirect support to agendas





Ministerstvo vnitra ČR - Generální ředitelství	HZS ČR, Institut ochrany obyvatelstva A01
	<p>performed within the Fire Rescue Service of the Czech Republic concerning civil protection, integrated rescue system (IRS), fire protection, civil emergency planning, and crisis management. The PPI also fulfills all the criteria for the classification of a research organization under the Commission Regulation (EU) No 651/2014 as well as the criteria set out in the Communication from the Commission - Framework for State aid for research and development and innovation. The Population Protection Institute manages both stationary and mobile CBRN laboratories and investigates causes of fire.</p>

Zentralanstalt für Meteorologie und Geodynamik A02	
Partner number	PP3
Name of the organisation in original language	Zentralanstalt für Meteorologie und Geodynamik
Name of the organisation in English	Central Institution for Meteorology and Geodynamics
Country (NUTS 0)	Österreich (AT)
Region (NUTS 2)	Wien (AT13)
NUTS 3	Wien (AT130)
Street, House number, Postal code, City	Hohe Warte 38 1190 Wien
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	The Austrian Weather Service (Zentralanstalt für Meteorologie und Geodynamik, ZAMG) is a research institute responsible for national meteorological and geophysical services. This includes expert advisory and consulting in the context of environmental protection as well as information, advice and warning in cases of natural and environmental disasters. TUW and ZAMG have worked together before in several projects, including the joint development of an optimal soil moisture dataset for Austria or data exchange for environmental monitoring applications. In the Clim4Cast project, ZAMG will contribute their excellent expertise regarding the assessment and forecasting of drought, heat and fire events by providing feedback and suggestions for improvements to the project partners.





Österreichische Hagelversicherung A03	
Partner number	PP3
Name of the organisation in original language	Österreichische Hagelversicherung
Name of the organisation in English	Austrian Hail Insurance
Country (NUTS 0)	Österreich (AT)
Region (NUTS 2)	Wien (AT13)
NUTS 3	Wien (AT130)
Street, House number, Postal code, City	Lerchengasse 3-5 1080 Vienna
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	The Austrian Hagelversicherung VVaG is specialised on the insurance of agrarian risks and losses, including insurance against crop damages due to hail, frost, flooding, and droughts. They are users of TUW's soil moisture products and have been providing valuable feedback and suggestions for improvements in recent years. Within Clim4Cast, Hagelversicherung will support the consortium by providing feedback to the developed drought, heat and fire-related monitoring and forecasting products from a user perspective.

Lesnícka ochranárska služba A04	
Partner number	PP8
Name of the organisation in original language	Lesnícka ochranárska služba
Name of the organisation in English	Forest Protection Service Centre
Country (NUTS 0)	Slovensko (SK)
Region (NUTS 2)	Stredné Slovensko (SK03)
NUTS 3	Banskobystrický kraj (SK032)
Street, House number, Postal code, City	Lesnícka 11 969 01 Banská Štiavnica
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	<p>Forest Protection Service Centre (LOS) provides advisory services in forest protection for forest managers. On the annual basis, it publishes reports about the incidence of harmful agents (including abiotic factors such as drought, wind, snow etc.) in the forests of Slovakia. The annual report is based on reports by 3 000 subjects covering the area 1.7 mil. ha, which is approximately 85 % of forest land. LOS also provides control, prognostic and expertise activities in the field of forest protection, proposes the adoption and implementation of measures to improve the health of forests and calamity situations, controls the health of forests and proposes measures to remedy it. Regarding all activities, LOS is one of the key stakeholders, which will profit from the Clim4cast project outputs. Therefore, Forest Protection Service Centre should be involved as the associated partner, who could notably contribute to the quality of the DHF events monitoring, forecasting and early warning system in the Central Europe.</p>

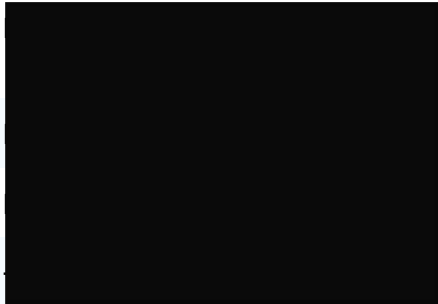
Ministerstvo životného prostredia Slovenskej republiky AO5	
Partner number	PP8
Name of the organisation in original language	Ministerstvo životného prostredia Slovenskej republiky
Name of the organisation in English	Ministry of Environment of the Slovak Republic
Country (NUTS 0)	Slovensko (SK)
Region (NUTS 2)	Bratislavský kraj (SK01)
NUTS 3	Bratislavský kraj (SK010)
Street, House number, Postal code, City	Námestie Ľ. Štúra 1 812 35 Bratislava
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	The Ministry of Environment of the Slovak Republic is the central state administrative authority and supreme inspection authority in environmental affairs, including nature and landscape protection, protection of water resources and the quality of groundwater and surface water, forestry in national parks, environmental impact assessment of activities and their consequences, air protection, national environmental policy and unified information system on environment and area monitoring. According to these scope activities, the Ministry of Environment of Slovak Republic is one of the key national and governmental bodies, which can contribute to high quality of the Clim4cast project outputs through the involvement into discussions about methodologies and strategies under preparation. Further, the Ministry is substantial institution for the implementation of the foreseen developed monitoring and forecasting tools and strategies into the legislation and environmental policy at national level.





Ministerstvo pôdohospodárstva a rozvoja vidieka Slovenskej republiky AO6	
Partner number	PP8
Name of the organisation in original language	Ministerstvo pôdohospodárstva a rozvoja vidieka Slovenskej republiky
Name of the organisation in English	The Ministry of Agriculture and Rural Development
Country (NUTS 0)	Slovensko (SK)
Region (NUTS 2)	Bratislavský kraj (SK01)
NUTS 3	Bratislavský kraj (SK010)
Street, House number, Postal code, City	Dobrovičova 12 81266 Bratislava
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	<p>The Ministry of Agriculture and Rural Development performs state administration within the scope of its remit, including specialised state supervision in the areas of agriculture and rural development and it directs, guides and inspects the performance of state supervision in the following areas in particular:</p> <ul style="list-style-type: none"> • protection and use of agricultural land and forest land, • the functions of state administration in forestry and hunting, • the functions of state administration of irrigation systems, drainage systems, monitoring the quality of irrigation water, issuing the Agricultural Code of Conduct, providing for the drafting and checking of fulfilment of the Agricultural Activity Programme in areas declared vulnerable, • plant varieties, animal breeds, plant health care and veterinary care including veterinary protection of state territory and control of the import and export of animals, animal and plant products, veterinary medicines, feed and plant protection products, • provision of support in agriculture and rural development, • other matters pursuant to applicable legislation. <p>According to these scope activities, the Ministry of Agriculture and Rural Development of the Slovak Republic is one of the</p>

Ministerstvo pôdohospodárstva a rozvoja vidieka Slovenskej republiky AO6	
	<p>key national and governmental bodies, which can contribute to high quality of the Clim4cast project outputs through the involvement into discussions about methodologies and strategies under preparation. Further, the Ministry is substantial institution for the implementation of the foreseen developed monitoring and forecasting tools and strategies into the legislation and agricultural policy at national level.</p>


Slovenská poľnohospodárska a potravinárska komora A07	
Partner number	PP8
Name of the organisation in original language	Slovenská poľnohospodárska a potravinárska komora
Name of the organisation in English	Slovak Agriculture and Food Chamber
Country (NUTS 0)	Slovensko (SK)
Region (NUTS 2)	Bratislavský kraj (SK01)
NUTS 3	Bratislavský kraj (SK010)
Street, House number, Postal code, City	Záhradnícka 21 81107 Bratislava
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	<p>Slovak Agriculture and Food Chamber (SPPK) is non-governmental, statutory and self-governing institution, which represents the common interests of its members in the process of the state socio-economical policy creation. The Chamber comments the legislative drafts and co-operates on preparation of the standpoints, also on the EU level. It supports and protects the members enterprise activities to improve the agriculture and the food industry in Slovakia. The SPPK collects and evaluates various statistical data and has a direct contact with the primary producers in the regions. Its territorial scope is wide through the net of the regional chambers. SPPK organizes the educational activities, seminars and trainings (e.g. about the implementation of the new legislation measures) as well as the meetings of the experts to share their views and information. It guides the continual monitoring of the progress of the seasonal agricultural works and provides the statistics of it. Regarding all activities, the SPPK is one of the key stakeholders for reaching the aim of the Clim4Cast project. The contribution of the Chamber will bring the overview of real needs of the local farmers in</p>

Slovenská poľnohospodárska a potravinárska komora A07	
	<p>Slovakia. Its involvement will be crucial in pilot actions focused on the testing of developed products, but also in dissemination phase. With the contribution of the SPPK, the outputs of the project will be effectively introduced to wide number of potential end users among farmers in whole Slovakia. Such co-operation was also very beneficial during the DriDanube project, when the national reporting network of drought impacts in Slovakia was established.</p>

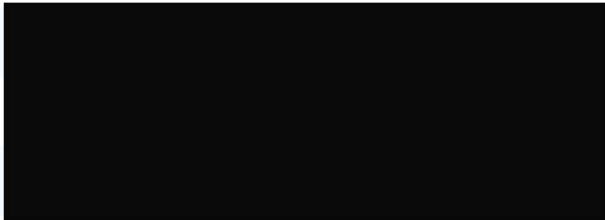
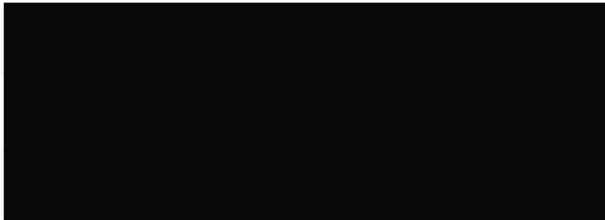
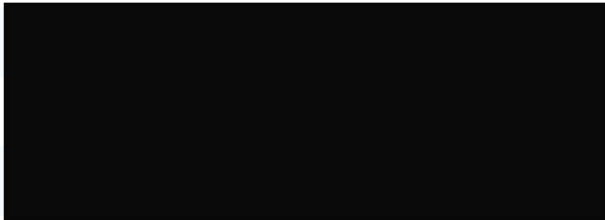
Ministarstvo poljoprivrede A08	
Partner number	PP7
Name of the organisation in original language	Ministarstvo poljoprivrede
Name of the organisation in English	Ministry of agriculture
Country (NUTS 0)	Hrvatska (HR)
Region (NUTS 2)	Grad Zagreb (HR05)
NUTS 3	Grad Zagreb (HR050)
Street, House number, Postal code, City	Ulica grada Vukovara 78 10000 Zagreb
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	

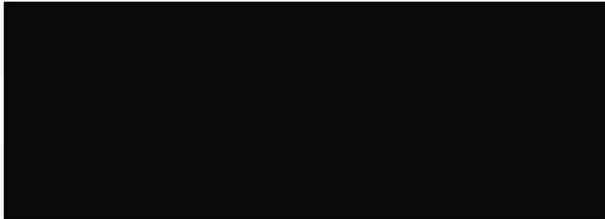
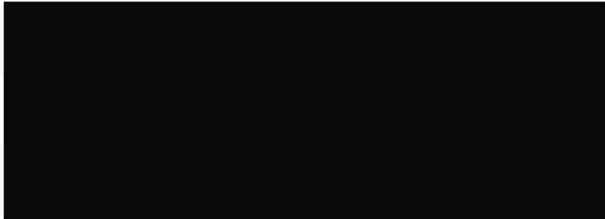
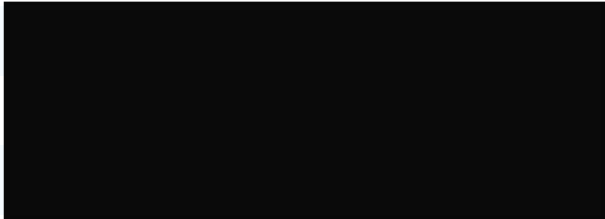
Ministarstvo unutarnjih poslova - Ravnateljstvo civilne zaštite AO9	
Partner number	PP7
Name of the organisation in original language	Ministarstvo unutarnjih poslova - Ravnateljstvo civilne zaštite
Name of the organisation in English	Ministry of the Interior - Civil Protection Directorate
Country (NUTS 0)	Hrvatska (HR)
Region (NUTS 2)	Grad Zagreb (HR05)
NUTS 3	Grad Zagreb (HR050)
Street, House number, Postal code, City	Nehajska 5 10000 Zagreb
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	<p>The Ministry of the Interior is a governmental body responsible for a wide range of internal affairs tasks: from police, criminal police, border police and special police activities, administrative affairs related to citizens' residence and documents, citizenship, to the administrative and other affairs in the area of fire and technological explosion protection, production and trade in explosive substances, humanitarian demining, security and detective affairs. The core activities of its Civil Protection Directorate (RCZ) is related to the administrative and expert affairs related to civil protection and rescue services as well as inspection affairs in the area of civil protection, firefighting, and fire protection. They are responsible for the Risk assessment in the Republic of Croatia and for the national Disaster risk management strategy. Thus, their involvement in the Clim4Cast project is important for implementing the project's results, particularly the heatwave, drought and fire weather forecast tool in the operational protocols as well as in the action planning documents. The RCZ is also responsible for the collection and reporting of disaster impact data for different sectors so the</p>


Ministarstvo unutarnjih poslova - Ravnateljstvo civilne zaštite A09	
	<p>benefit of its partnership associated to DHMZ in the project will also be a valuable contribution in collecting the needed data within the project framework. Both DHMZ and RCZ will benefit from the transfer of knowledge which will improve the decision-making processes with the application of state-of-the-art tools and services, developed within the project. RCZ will promote and disseminate the project outputs and results through its network of stakeholders and other interested parties.</p>


Ministerium für Landwirtschaft, Umwelt und Klimaschutz des Landes Brandenburg AO10	
Partner number	PP5
Name of the organisation in original language	Ministerium für Landwirtschaft, Umwelt und Klimaschutz des Landes Brandenburg
Name of the organisation in English	Ministry for Agriculture, Environment and Climate Protection of the State of Brandenburg
Country (NUTS 0)	Deutschland (DE)
Region (NUTS 2)	Brandenburg (DE40)
NUTS 3	Potsdam, Kreisfreie Stadt (DE404)
Street, House number, Postal code, City	Henning-von-Tresckow-Straße 2 14467 Potsdam
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	


Fachverband Bewässerungslandbau Mitteldeutschland e.V. AO11	
Partner number	PP5
Name of the organisation in original language	Fachverband Bewässerungslandbau Mitteldeutschland e.V.
Name of the organisation in English	Association for Irrigation Farming Germany e.V.
Country (NUTS 0)	Deutschland (DE)
Region (NUTS 2)	Brandenburg (DE40)
NUTS 3	Teltow-Fläming (DE40H)
Street, House number, Postal code, City	Dorftstr. 1 14513 Teltow
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	<p>The Association for Irrigation Farming Germany e.V. (FBM) provides agricultural, horticultural and fruit-growing companies with help and support in the development of irrigated agriculture. FBM therefore represents the interests of this special but important part of agriculture. Drought, heat and fire forecasting is inherently important for the association. The association will tightly link the forecasts produced in Clim4Cast to its distributed member network. For Clim4Cast, FBM represents the link to a vast user community of the forecasting tools. We expect valuable feedback to the project development and design requirements of the products from Clim4Cast.</p>

adelphi A012	
Partner number	PP5
Name of the organisation in original language	adelphi
Name of the organisation in English	Adelphi
Country (NUTS 0)	Deutschland (DE)
Region (NUTS 2)	Berlin (DE30)
NUTS 3	Berlin (DE300)
Street, House number, Postal code, City	Alt-Moabit 91 10559 Berlin
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	adelphi is Europe's leading independent think-and-do tank for climate, environment and development. 280 employees work locally and globally on the environment and sustainability and the challenges of political, economic and social changes. Through transdisciplinary research, evidence-based advice and in dialogue with political and social actors and companies, adelphi shapes political agendas, conveys topics in the political sphere and supports decision-makers. adelphi acts as link to political actors and decision-makers to multiply the outcomes of the Clim4Cast project to the regional and global scale.

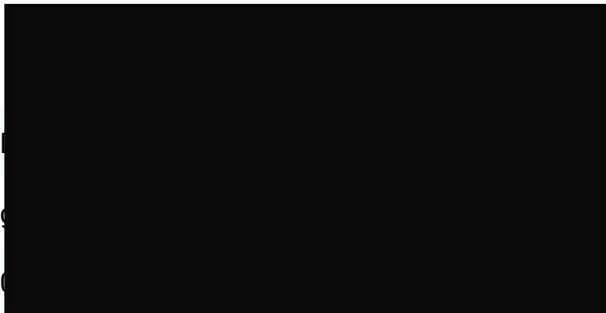



Gozdarski inštitut Slovenije A013	
Partner number	PP6
Name of the organisation in original language	Gozdarski inštitut Slovenije
Name of the organisation in English	Slovenian forestry institute
Country (NUTS 0)	Slovenija (SI)
Region (NUTS 2)	Zahodna Slovenija (SI04)
NUTS 3	Osrednjeslovenska (SI041)
Street, House number, Postal code, City	Večna pot 2 1000 Ljubljana
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	Slovenian forestry institute closely collaborates with ARSO in field of climate change impacts on forests; the impacts are already visible specially in spruce forest which causes great concern since it is major economic tree species. It is very sensitive on heat waves and drought episodes, so forestry institute is interested in outputs of Clim4Cast project (specially WP1 and WP2). The institute will also follow work of these two WPs and extend its recommendations.


Stadt Graz, Abteilung Katastrophenschutz und Feuerwehr, Referat Branddirektion A014	
Partner number	PP3
Name of the organisation in original language	Stadt Graz, Abteilung Katastrophenschutz und Feuerwehr, Referat Branddirektion
Name of the organisation in English	City of Graz, Department of Civil Protection and Fire Brigade, Fire Directorate Division
Country (NUTS 0)	Österreich (AT)
Region (NUTS 2)	Steiermark (AT22)
NUTS 3	Graz (AT221)
Street, House number, Postal code, City	Lendplatz 15 8020 Graz
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	<p>The Fire Brigade of Graz (BFG) is one of six professional fire brigades in Austria and is involved in civil protection and emergency management in urban and mountain environments. BFG uses several emergency and operation management systems and operates a traffic light-style warning system (http://www.katastrophenschutz.graz.at/) which allows warning the public of hazards and actual threats. This system relies on weather forecasts and can provide instructions to the population in case of acute threats. BFG has been involved in several EU projects on emergency prediction. In Clim4Cast, BFG will represent an expert link between science and public authorities dealing with emergency management at national and international level. BFG will provide expert feedback in particular to fire-related monitoring and forecasting products.</p>

Statutární město Brno AO15	
Partner number	PP2
Name of the organisation in original language	Statutární město Brno
Name of the organisation in English	City of Brno
Country (NUTS 0)	Česko (CZ)
Region (NUTS 2)	Jihovýchod (CZ06)
NUTS 3	Jihomoravský kraj (CZ064)
Street, House number, Postal code, City	Dominikánské náměstí 196/1 602 00 Brno
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	


Lesy Slovenskej republiky, štátny podnik AO16	
Partner number	PP8
Name of the organisation in original language	Lesy Slovenskej republiky, štátny podnik
Name of the organisation in English	Forests of the Slovak Republic, state enterprise
Country (NUTS 0)	Slovensko (SK)
Region (NUTS 2)	Stredné Slovensko (SK03)
NUTS 3	Banskobystrický kraj (SK032)
Street, House number, Postal code, City	Námestie SNP 8 975 66 Banská Bystrica
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	

Lesy Slovenskej republiky, štátny podnik AO16	
	forecasting tool for planning of forest management on daily basis, especially during vegetation season.


Umweltbundesamt A017	
Partner number	PP3
Name of the organisation in original language	Umweltbundesamt
Name of the organisation in English	Environment Agency Austria
Country (NUTS 0)	Österreich (AT)
Region (NUTS 2)	Wien (AT13)
NUTS 3	Wien (AT130)
Street, House number, Postal code, City	Spittelauer Lände 5 1090 Vienna
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	The Umweltbundesamt - Environment Agency Austria represents an interface between scientific achievements and policy relevant operational monitoring programmes in the field of water management and flood risk management as well as climate change mitigation and adaption strategies. In this light, they have a high interest in the forecasting of nature based climatic risks. Within Clim4cast, Umweltbundesamt will support the consortium by providing expert feedback to the developed drought, heat and fire-related monitoring and forecasting products.

Český hydrometeorologický ústav A018	
Partner number	LP1
Name of the organisation in original language	Český hydrometeorologický ústav
Name of the organisation in English	Czech Hydrometeorological Institute
Country (NUTS 0)	Česko (CZ)
Region (NUTS 2)	Praha (CZ01)
NUTS 3	Hlavní město Praha (CZ010)
Street, House number, Postal code, City	Na Šabatce 2050/17 14306 Praha 4 Komořany
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	

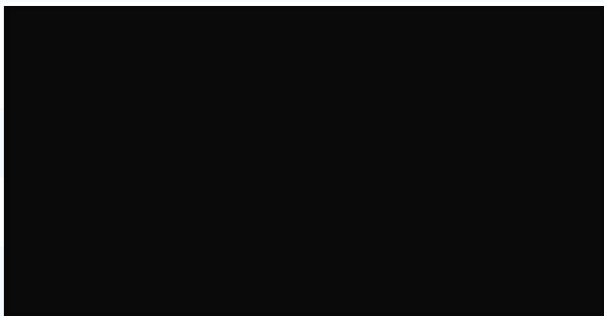
Český hydrometeorologický ústav A018	
	<p>capabilities are of great importance to the CHMI team. The South Moravia branch office's speciality is in the area of hydrological droughts and managing heat waves. Therefore, they will serve as data providers and also a partner that will be able to efficiently use the action plan developed in WP3 and tested in the set-up of regional weather forecast office. It is envisaged that the CHMI will closely collaborate with weather services already included in the project (ZAMG, SHMI, DHZ and ARSO) and will be also instrumental in providing contacts to their collaborating offices in Poland and Germany.</p>

Agrární komora České republiky AO19	
Partner number	LP1
Name of the organisation in original language	Agrární komora České republiky
Name of the organisation in English	Agrarian Chamber of the Czech Republic
Country (NUTS 0)	Česko (CZ)
Region (NUTS 2)	Praha (CZ01)
NUTS 3	Hlavní město Praha (CZ010)
Street, House number, Postal code, City	Počernická 272/96 10800 Praha 10
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	

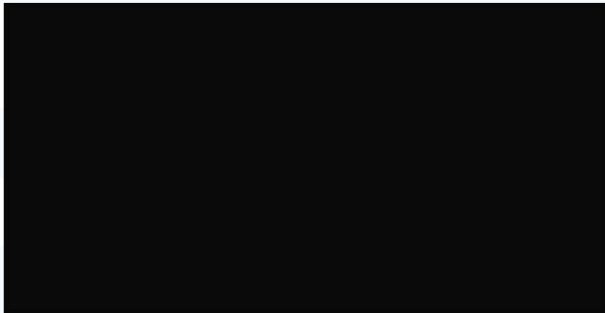
Agrární komora České republiky A019	
	<p>assemblies or having the AgCh endorsement is a very powerful for communication with stakeholders. AgCh will closely partner with CzechGlobe and MUNI in preparation of WP1 datasets, will provide feedback on the WP1 strategy, and WP3 action plan. It will also be involved in forming the proper format of WP2 forecasting outputs. It is envisaged that through international partnerships AgCh will communicate Clim4Cast results across the CE region and Clim4Cast outputs will be published in AgCh journal and web with widest possible readership including almost all segments of rural economy.</p>

Státní pozemkový úřad České republiky A020	
Partner number	LP1
Name of the organisation in original language	Státní pozemkový úřad České republiky
Name of the organisation in English	State Land Office of the Czech Republic
Country (NUTS 0)	Česko (CZ)
Region (NUTS 2)	Praha (CZ01)
NUTS 3	Hlavní město Praha (CZ010)
Street, House number, Postal code, City	Husinecká 1024/11a 13000 Praha 3
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	

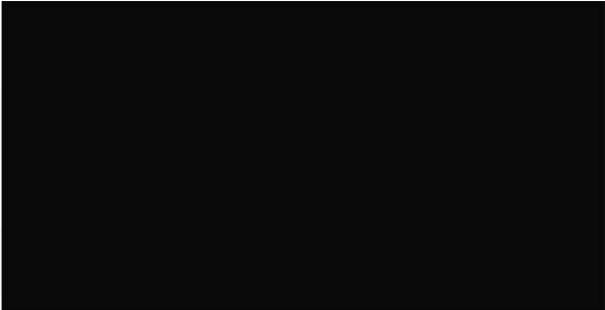
Státní pozemkový úřad České republiky A020	
	<p>events. SLO experts have agreed to provide contacts and recommendations to their partner offices within other countries involved in the Clim4Cast project. It is envisaged that SLO will make their partners and colleagues at ministries and similar offices aware of the project and will encourage their participation on project discussions and meetings. The active presence of SLO is ensured by its active staff that are also involved in university lecturing. Participation of SLO is foreseen at the Clim4Cast meetings and they will be particularly closely involved in internal review of the Strategy developed within WP1 and the action plan developed in WP3 similarly to WMS_Agri.</p>

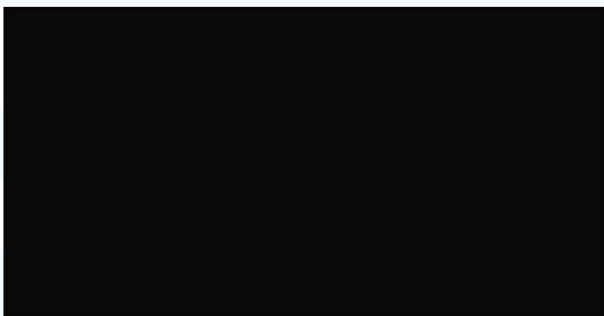
Ministerstvo životního prostředí České republiky, odbor bezpečnosti a krizového řízení AO21	
Partner number	LP1
Name of the organisation in original language	Ministerstvo životního prostředí České republiky, odbor bezpečnosti a krizového řízení
Name of the organisation in English	Ministry of the Environment of the Czech Republic, Department of Security and Crisis Management
Country (NUTS 0)	Česko (CZ)
Region (NUTS 2)	Praha (CZ01)
NUTS 3	Hlavní město Praha (CZ010)
Street, House number, Postal code, City	Vršovická 65 10010 Praha 10
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	CzechGlobe has been collaborating with the Department of Security and Crisis Management (DSCM_Envi) since 2016 especially in the area of wildfire monitoring and forecasting within the Czech Republic. DSCM_Envi is the leading entity in development of preparedness of the Czech Republic to all types of the environmental hazards and in general very open and interested in new data, analyses, and especially operation tools that could be utilised for the improvement of awareness and environmental security in general. Therefore, the outputs of Clim4Cast will be directly usable by the DSCM_Envi and as this will happen at the level of key ministerial department directly led by the minister of environment. DSCM_Envi is through existing crisis management and environmental security arrangements within EU very well connected to the corresponding agencies across EU and in the CE region in particular. The DSCM_Envi will provide feedback on the usability of WP1 climate change and DHF awareness building strategy, will “test” the forecasting tools provided by

Ministerstvo životního prostředí České republiky, odbor bezpečnosti a krizového řízení AO21	
	<p>WP2, and participate through suggestions, feedback and recommendation in development of the action plan for implementing the DHF forecasting tools (WP3). DSCM_Envni agreed to provide contacts and recommendations to their peers within other countries involved within Clim4Cast project. It is envisaged that the DSCM_Envni will make their partners and colleagues at the Clim4Cast ministries aware of the project and will encourage their participation at the project discussion and meeting. Participation of DSCM_Envni is foreseen at the Clim4Cast meetings and they will be particularly closely involved in internal review of the Strategy developed within WP1 and the action plan developed in WP3.</p>

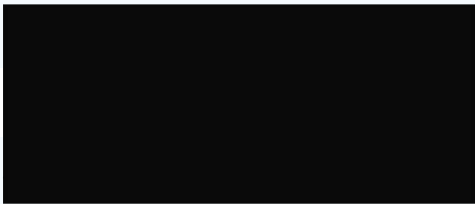


Ministerstvo zemědělství České republiky, sekce vodního hospodářství AO22	
Partner number	LP1
Name of the organisation in original language	Ministerstvo zemědělství České republiky, sekce vodního hospodářství
Name of the organisation in English	Ministry of the Agriculture of the Czech Republic, Water Management Section
Country (NUTS 0)	Česko (CZ)
Region (NUTS 2)	Praha (CZ01)
NUTS 3	Hlavní město Praha (CZ010)
Street, House number, Postal code, City	Těšnov 65/17 11000 Praha 1
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	

Ministerstvo zemědělství České republiky, sekce vodního hospodářství A022	
	<p>responsible for the strategic planning in water resources for the entire country it will provide critical feedback to proposed solutions and their applicability within the Czech Republic. DWM_Agri has agreed to provide contacts and recommendations to their peers within other countries involved in Clim4Cast project. It is envisaged that the DWM_Agri will make their partners and colleagues at the Clim4Cast ministries aware of the project and will encourage their participation at the project discussion and meeting. The active presence of the Section is ensured by its active staff. Participation of DWM_Agri is foreseen at the Clim4Cast meetings and they will be particularly closely involved in internal review of the Strategy developed within WP1 and the action plan developed in WP3.</p>

Ministrstvo za kmetijstvo, gozdarstvo in prehrano - direktorat za kmetijstvo AO23	
Partner number	PP6
Name of the organisation in original language	Ministrstvo za kmetijstvo, gozdarstvo in prehrano - direktorat za kmetijstvo
Name of the organisation in English	Ministry of agriculture, forestry and food - agriculture directorate
Country (NUTS 0)	Slovenija (SI)
Region (NUTS 2)	Zahodna Slovenija (SI04)
NUTS 3	Osrednjeslovenska (SI041)
Street, House number, Postal code, City	Dunajska 22 1000 Ljubljana
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	

Centrum Doradztwa Rolniczego w Brwinowie AO24	
Partner number	PP4
Name of the organisation in original language	Centrum Doradztwa Rolniczego w Brwinowie
Name of the organisation in English	Agricultural Advisory Centre in Brwinów
Country (NUTS 0)	Polska (PL)
Region (NUTS 2)	Mazowiecki regionalny (PL92)
NUTS 3	Żyrardowski (PL926)
Street, House number, Postal code, City	Pszczelińska 99 05-840 Brwinów
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	

Zachodniopomorska Izba Rolnicza A025	
Partner number	PP4
Name of the organisation in original language	Zachodniopomorska Izba Rolnicza
Name of the organisation in English	West Pomeranian Chamber of Agriculture
Country (NUTS 0)	Polska (PL)
Region (NUTS 2)	Zachodniopomorskie (PL42)
NUTS 3	Szczeciński (PL428)
Street, House number, Postal code, City	Chmielewskiego 22a/9 70-028 Szczecin
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	Agricultural Chambers in Poland are voivodeship organizational units of agricultural self-government. The tasks of ZIR are: preparing various types of analyses, opinions, evaluations for agricultural policy implementation, raising the qualifications of farmers, action to improve the quality of products, developing cooperation with foreign agricultural producer organizations. Associated partner by Clim4Cast project will have an opportunity to learn from international experience about decision support systems and practices for drought, heat stress monitoring and support to evaluate drought mitigation strategy

Ministerstwo Rolnictwa i Rozwoju Wsi AO26	
Partner number	PP4
Name of the organisation in original language	Ministerstwo Rolnictwa i Rozwoju Wsi
Name of the organisation in English	Ministry of Agriculture and Rural Development
Country (NUTS 0)	Polska (PL)
Region (NUTS 2)	Warszawski stołeczny (PL91)
NUTS 3	Miasto Warszawa (PL911)
Street, House number, Postal code, City	Wspólna 30 00-930 Warszawa
Legal representative (not applicable - not to be filled in)	
Contact person	
Email	
Telephone	
Partner role	The tasks of the Ministry of Agriculture and Rural Development include agricultural policy and international cooperation, as well as supervision over research and development units in the agricultural sector. Ministry of Agriculture is the supervising unit for the Agricultural Drought Monitoring System (ADMS) provided by Institute of Soil Science and Plant Cultivation – State Research Institute in Puławy. The Ministry will serve as science-policy link to the Clim4Cast project. The Ministry will make use of the project's outcomes to increase resilience of the Polish agriculture to impacts of drought, heatwaves and their compound effects.

C - Project description

C.1 Project overall objective

Programme priority specific objective (as selected in section A.1.).

S02.2: Increasing the resilience to climate change risks in central Europe

Project overall objective

Please define the overall objective of the project.

- Make sure that it clearly contributes to the selected programme specific objective.
- The overall objective should provide the general context for what your project aims to achieve.
- It should describe the broader goal of the project for the benefit of its target group(s) and should point to the results (change) to be achieved by the project.

The aim is to increase resilience of the CE region to impacts of drought, heatwaves, fire weather (DHF), and their combined effects, by upgrading existing national tools that mostly ONLY monitor DHF status. The tools will be upgraded by jointly developed DHF forecasts connected to specific action plans on the forecast use and strategy for building DHF-climate change awareness. The project will improve regions' best practises across 7 involved countries but can be scaled up to the entire CE.

C.2 Project relevance and context

C.2.1 What are the territorial challenge(s) that will be tackled by your project?

Please describe which specific challenges and needs are addressed by your project and why they are relevant for the overall programme area, (please refer to chapter 1 and 2 of the Interreg CENTRAL EUROPE Programme document).

Droughts, heat waves and an occurrence of fire-weather (DHF) emerge from climate change impact projections as extreme events that are likely to occur more frequently in the Central European (CE) region in the upcoming decades. While an already observed increase in the number, duration, and severity of droughts has been noticed at the national level, accompanying events i.e. heat waves and fire-weather have been understudied. As a result, responsible institutions and/or the public are not accounting for their combined impacts. Existing legal frameworks address the challenge of water scarcity and droughts (Water Framework Directive, EU 2007 Communication, Civil Protection Mechanism, etc.) but increase of wildfires and heat waves is usually not seen as part of those events. Majority of countries in the CE region have not yet fully included the triad of DHF events into legislation and if they have done so, the proper support tools especially the forecasting ones are not available. This project will improve resilience to DHF and their compound effects through actions developed specifically for individual regions. At the moment CE countries partnered in the project operate mostly incomplete systems that ONLY monitor CURRENT status of separate climate extremes and not the entire DHF triad. Existing systems mostly lack a forecasting component and no country is using an extended or seasonal forecast to enhance resilience to DHF impacts through preparedness. The Clim4Cast project will change that by introducing state-of-the-art DHF event forecasts for medium/extended and seasonal range. Not only that, Clim4Cast will also develop an action plan on how these new forecasting abilities could and should be utilised on national and regional levels both by public and private stakeholders. Combining expertise of all partners and associated partners, the challenge can be met in much shorter time and more efficiently than if each country would do so on a national level. Implicitly the cross-border collaboration in DHF response will be strengthened through such collaboration that can be easily extended to the remaining CE region.

C.2.2 How does the project tackle identified challenges and needs and what is new about the approach of your project?

Please describe the project approach chosen to address the challenges and needs described above. Please also explain how the approach goes beyond existing practice in the sector/programme area /participating countries demonstrating the innovativeness of the approach.

To increase the resilience of the CE region and its stakeholders to drought, heat waves, fire-weather (DHF), and their compound impacts, the project will focus on development of forecasting tools and strategies for implementation of these tools into project partner national hazard mitigation frameworks. The tools and the strategy (developed by the Clim4Cast project) will be a game-changer in providing all seven involved partner countries with state-of-the-art forecasting tools for all three events and in particular their compound (i.e. combined) effects. It will also identify gaps in decision-making processes and provide guidance for overcoming these gaps through an encouragement of cross-border collaboration in response to those three threats. The implementation of proper proactive action plans and legal mechanisms is possible only when forecasts of DHF are available. The Clim4Cast project will provide timely information and channel it through already existing but much improved national services and platforms to appropriate authorities and especially to a wide array of stakeholders. As some information and tools are already available, the Clim4Cast project will build upon DMCSEE and DriDanube projects and take advantage of data sources available within Copernicus Earth observation programme. The project partners are already to some degree responsible for operating drought monitoring systems in individual countries or they engage in analysis of impacts and possible future trends of extreme events. Therefore, the newly developed forecasting component and estimated compound effects of DHF occurrence will be implemented in a two-tier approach. Firstly, the project will build upon already existing national monitoring and prediction systems that already have a widely established user base. Then the partners will jointly improve these systems implementing enhanced monitoring and forecast of drought, heatwave, fire-weather, and their compound effects in a unified output with a CE regional extent. Lastly, the improved regional system will be re-implemented into the partner national systems.

C.2.3 Why is transnational cooperation needed to achieve the project objectives and results?

Please explain why the project objectives cannot be efficiently reached acting only on a national/regional /local level and describe what is the added value for the partnership and the project area in taking a transnational cooperation approach.

Climatic phenomena, such as droughts, heat waves, and fire weather (DHF) occur independently of political borders and their impacts are usually transboundary. Transnational cooperation in monitoring, prediction, and mitigation of these extreme events will multiply knowledge base compared to country-based approaches. Combining the strengths of all partners improves the efficiency and speed with which these actions are taken, potentially benefiting millions of stakeholders from the Central European (CE) region much sooner, which is critical. Moreover, mutual cooperation will result in joint development and implementation of state-of-the-art DHF early warning systems across 7 countries in the region with a possibility of including remaining CE regions. Such a system is not currently available. Interreg CE support is ideal to create transnational cross-border mitigation and response strategies and support actions that are currently underdeveloped. Sharing best practices which is currently very limited, will mean great and fast improvement in services provided to several dozens millions of inhabitants. The project partners together with their associated partners represent the most relevant institutions which are involved in extreme event monitoring, forecasting, and their communication to stakeholders and policy makers in the involved CE countries (Czechia, Poland, Germany, Austria, Slovakia, Slovenia, and Croatia). The Clim4Cast project capitalises on the location-specific high-quality expertise of the involved CE partners, bringing together a unique set of knowledge and experience. The experience of the team assures that combining the efforts within the Interreg CE programme will result in more than the sum of national experience of each partner. Firstly, the project partners will share their best practices in extreme event mitigation strategies, optimization of communication practices and involvement of target audiences and stakeholders. They will also jointly develop the DHF forecast scheme. These best practices will be implemented into the final regional tool. At the same time, these practices will be used for a joint development of partner-tailored strategies implemented into their respective platforms. Secondly, the jointly identified method for monitoring and forecasting will be carried out by the lead partner and then the results will be distributed between other partners. This will streamline the workflow which will be more efficient and in the end require less computational and personal resources. Finally, the size of the project area is many times larger than it would be for any single country- or bilateral-projects. This enables us to study multiple times more cases of extreme events from the past and provides an opportunity for more rigorous validation of our approach than any nationally-based approach could. The results of the Clim4Cast project will therefore benefit millions of people across various sectors (e.g., agriculture, tourism and recreation, first responders) represented over the entire area of the 7 involved countries but with a prospect of extension to the entire CE region.

C.2.4 Who will benefit from your project outputs and results?

Please select the target groups from the drop-down list, which are relevant for your project. For each of them please provide a more detailed specification and explain how they will benefit from your project outputs and results. Please ensure consistency with the target groups defined in the work plan (section C4).

Target group	Specification
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Target group	Specification
Local public authority	<p>The project aims to improve tools available to local municipalities in handling the DHF events by providing a new forecasting tool together with a strategy and action plan on how to apply them. Local authorities in the Clim4Cast area decide on the limitation of the forest/land access in case of high fire danger and/or limit the use of local water resources in case of drought. Therefore, having the ability to foresee the DHF status for coming days and weeks is highly valuable to them. The project has one local associated partner (City of Brno). It is envisaged that local authorities will be invited to round tables and webinars and will be consulted on the project deliverables on the country level. At the same time, local voluntary fire brigades in the Clim4Cast region are organised and funded by municipalities. Recent surveys among Austrian fire brigades showed that the current performance of the forest fire danger systems is no longer sufficient for their resources and raise preparedness which has direct consequences on the level of municipalities.</p>
Regional public authority	<p>The Clim4Cast includes both relatively smaller countries but also Germany where the Brandenburg region is considered “regional” public authority for which Ministerium für Landwirtschaft, Umwelt und Klimaschutz des Landes Brandenburg will represent the target audience. Similarly to the local public authority target group it is planned that the regional public authorities will be invited to the meetings, webinars and the final conference representatives of regions (NUTS2 or NUTS3 level). The departments of the regional government responsible for environmental safety, agriculture, forestry and water resources are envisaged to directly use the project outputs. It should be noted that the regional authorities are to some degree already involved in the existing DHF monitoring platforms.</p>
National public authority	<p>Clim4Cast focuses on the DHF events over the entire area of 6 countries and on part of Germany. Therefore, national authorities are the natural target audience and also associated partners across most involved states as the national authorities are entities where Clim4Cast data will be particularly relevant. Therefore, in total there are Ministries of Agriculture and rural development from 5 countries, Ministries of Environment from 2 countries, Ministry of Interior, and Ministry of Economy in Croatia considered as associated partners of the project. As these are at various capacities the coordinating bodies in charge of drought/heat and wildfire response and DHF preparedness for farming, forestry and water resources it is obvious that the response strategy and in particularly early warning system would be of paramount interest for these organisations.</p>

Target group	Specification
Sectoral agency	<p>Weather services are a critical target group of the project. At the same time they form a bulk of project partners (3) and/or associated partners (2). However other agencies beyond the realm of weather and climate are essential in providing expert feedback to the project partners in all three WPs. These include (i) State Land Office in Czechia responsible for the development of strategies for agriculture to cope with impacts of drought; (ii) Population Protection Institute as part of the Fire Rescue Service in Czechia focusing on issue concerning civil protection, integrated rescue system, fire protection, civil emergency planning and crisis management; (iii) Agriculture Advisory Centre in Poland responsible for timely assistance to the farmers; and (iv) Forest Protection Service Centre in Slovakia. These agencies deal with climate change induced shifts in the drought risk, wildfire risk and heat events and will be able to directly utilise WP1 results. They will also take advantage of DHF forecasts as well as strategy of their use as blueprints for the national strategy for coping with agricultural droughts, increased fire weather and heat events. They will provide essential feedback to the WP1-3 outputs but also will help to engage partner agencies in the Clim4Cast countries not yet connected to the project to take-up proposed solutions.</p>
Interest groups including NGOs	<p>Among interest groups in particular the Agricultural Chambers e.g. Czech Agricultural Chamber, Slovak Agriculture and Food Chamber (SPPK) as well as the Registered association for development of irrigation in Brandenburg are representing associated partners of the project. However, the target audience includes also their partner organisations in the Clim4Cast countries and these will be approached if the project is funded. Timely and accurate forecasting of DHF events will bring benefits to the tool users (e.g. costs to farmers/foresters as they can opt for extensification of production, water saving methods, postponing some critical/expensive measures such as tree planting) and will also provide time to prepare organised assistance in case of major DHF event. In the recent past the collaboration with these institutions through the DriDanube project has shown very high potential in spreading the DHF risk awareness.</p>
SME	<p>The DHF forecasting tool will be beneficial for farmers (mostly falling under the SME category), but also tourist operators, horticulture and forestry companies. The timely drought forecast can at least partly limit the damage caused by DHF (e.g. by withholding fertilizations or postponing sowing) or prevent unsuccessful planting (in case of forest renewal), improve irrigation scheduling and water management practices etc.</p>

Target group	Specification
Enterprise, except SME	The DHF events have significant impacts on various enterprises. While farming enterprises are represented by the SMEs, forestry is either part of the farming or as in case of Czechia or Slovakia under control of large (state owned) enterprises. Therefore, forestry enterprises are among the target groups as well and are represented by the State Forests of Slovakia (the largest forest land holder in Slovakia). However the strategies and solutions developed by the Clim4Cast is of interest also to consultation companies (e.g. Adelphi in Germany – as project AP) and the Austrian Hagelversicherung (hail insurance) i.e. enterprise that specialised in insurances for the agricultural sector across several Clim4Cast countries. The Clim4cast WP2 can help to improve the quality of their decision making (e.g. better quantify its impacts on crop yield losses or optimise forestry operations with regards to the fire weather or drought etc.).
General public	General public will largely benefit from the Clim4cast project results, particularly if the early warning strategy will be implemented in national action plans. Existing monitoring systems, which are currently run by project partners, are mostly lacking any forecasting ability. However, they still draw a high level of attention from large general public audiences. The value of the monitoring systems greatly increases by including an extension for forecasts. The citizens and also tourists, will benefit from the heatwave forecasts during summer seasons in terms of their well-being and health protection. In addition, the analysis of past DHF events across the Clim4Cast region will be also presented to the general public in an attempt to enhance historical memory of those events in order to raise awareness of both existing and upcoming risks due to the ongoing climate change.

C.2.5 How does the project contribute to wider strategies and policies?

Please indicate to which strategies and policies your project will contribute and briefly describe in what way.

Strategy	Contribution
EU Strategy for the Baltic Sea Region Strategy	Clim4Cast will benefit in particular the EUSBSR objective of increased prosperity through climate change adaptation, risk prevention and management. This is achieved through bringing experience, know-how, and tools of DHF forecasting into the Baltic Sea Region (BSR) from this CE consortium. In particular, the presented pilots will ingest knowledge from regions where extreme event records are more available while being recent albeit intensifying phenomena in the BSR.
European Green Deal Strategy	Clim4Cast directly contributes to one of the Green Deal aims i.e. to protect, conserve and enhance the EU's natural capital, and protect the health and well-being of citizens from environment-related risks through monitoring and early warning in case of DHF events. It also provides support to the goal 2.1.1. Increasing the EU's climate ambition for 2030 and 2050 by supporting the "efforts on climate proofing, resilience building, prevention and preparedness" but will also contribute to 2.1.6. (reducing the extent and frequency of wildfires and forest fires).

Strategy	Contribution
Territorial Agenda 2030 Strategy	The project directly targets priority action on climate in the area of DHF preparedness as required by the TA2030 and does that for the entire territory of 6 countries and one region including cross border issues. The project also benefits the “healthy environment” priority by bringing new crisis management tools to increase places’ safety and resilience through introduction of DHF forecasts on various temporal scales.
EU Strategy for the Danube Region Strategy	The Clim4Cast project will contribute to the EUSDR Priority Area 5 (Environmental risks). Following the EUSDR action plan, PA5 foresees 5 actions. Action 1 provides support for development and execution of risk management plans for different hazards, including drought and forest fires and its target is to realise at least 5 supporting projects in period 2021-2027. Clim4Cast can be considered as one of them since it covers all supporting PA5 actions, including assessment of climate change impacts.
EU Strategy for the Adriatic and Ionian Region Strategy	The Clim4Cast project will contribute to the EUSAIR 3rd pillar Environmental quality. Since expected climate change will impact ecosystems also (or particularly) in the Mediterranean region, one of the actions within this pillar is development of joint management plans for cross-border habitats and ecosystems in order to make them more resilient. Improved knowledge of DHF provided by the Clim4Cast project can help in preparation of this output. In addition, since tourism is highly affected by more frequent extreme heatwaves, the project will also contribute to the EUSAIR 4rd pillar Sustainable tourism in achieving its objectives both in offering new services and improving the sustainable and responsible tourism management.
EU Strategy for the Alpine Region Strategy	DHF events are increasingly impacting Europe’s alpine region. Some strategies to handle these risks exist on a national scale, but these are mostly still in their infancy and a common solution on a macro-regional scale is still missing. Within Clim4Cast, new approaches will be tested to forecast such events and deal with them consistently across sectors to ensure the environmental and economic attractiveness and resilience of this region in the future. This is of particular interest as the consequences of DHF are cross-sectorial, hence, so should be their solutions.

C.2.6 How will your project make use of synergies with EU and other projects or initiatives?

Project or initiative (including funding instrument, if applicable)	Synergies foreseen

Project or initiative (including funding instrument, if applicable)	Synergies foreseen
C3Surf2 (funded by EU Copernicus Services)	The C3Surf2 project is developing general access to high-resolution gridded datasets over Europe based on in situ observations. CzechGlobe as one of the partners of this initiative will have prime access to all datasets created prior to their release. It is envisaged that these state-of-the-art databases developed by C3Surf2 will be utilised by Clim4Cast in analysis of the climate change signal (WP1) but also in development and testing the DHF forecasting skills (WP2). The Clim4Cast will in turn provide the C3Surf2 with feedback on the gridded dataset performance and their acceptance by the Clim4Cast target audience.
EDORA (EU JRC)	The project EDORA led by the University of Freiburg is focused on collecting and updating drought impact databases across Central Europe to serve as calibration material for the JRC. This service will become active during 2022 and 2023. The key synergy for the Clim4Cast will be the ability to utilise the data collected during EDORA through collaboration with JRC and combining these datasets with those collected through the Clim4Cast WP1 project. Given the number of PPs and APs in the Clim4Cast project that is greater than in case of EDORA it is evident that both projects would benefit from the synergies with final goal being that both Clim4Cast and EDORA would use complementary datasets albeit for different purposes.
EFFIS (EU JRC)	European Forest Fire Information System (EFFIS) is a tool developed by the Joint Research Centre in Ispra for the European Commission (EC) to provide timely fire risk information to the EC. However, this tool is primarily used on the EU level. Therefore, the level of regional detail is much lower compared to national monitoring systems. The Clim4Cast will utilise the EFFIS database in order to develop WP1-3 outputs. EFFIS will be able to capitalise on the forecasts produced by the project as it doesn't currently provide such data especially for extended and seasonal forecast.
SHELTER - funded by EU's Horizon 2020 research and innovation programme	The SHELTER project aims at developing a framework that will increase resilience, reduce vulnerability, and promote better protection for selected European areas and their cultural heritage endangered by climate change. MUNI developed a concept of the new multi-hazard early warning system which addressed disadvantages of current threat specific early warning systems. The project results will contribute to an action in WP3 - to summarise best practises in early warning and building public awareness.
Copernicus Global Land, EUMETSAT H SAF, C3S	These projects developed several operational surface and root-zone soil moisture products based on microwave remote sensing data. Since the Clim4Cast deals with agriculture drought these datasets will be exploited within Clim4cast.

Project or initiative (including funding instrument, if applicable)	Synergies foreseen
ROSSIHNI - Remote Sensing and Social Interest for Humanitarian Insights (submitted - Austrian Research Promotion Agency FFG, planned: 2022-2023)	In case of a successful application, the TUW-led ROSSIHNI project will be the first research-driven attempt to link a new drought index product based on radar backscatter observations to a suite of algorithms that predict drought impacts and measure social awareness from news and social media coverage. Within ROSSIHNI, all analyses will be conducted for East Africa. Experience gained within ROSSIHNI related to the use of ASCAT and Sentinel-1 for drought monitoring will directly benefit Clim4cast, and vice versa.
CONFIRM	A novel, high-resolution and satellite-supported integrated forest fire danger system (IFDS) for Austria and neighbouring regions was developed. It is based on satellite retrievals (from Sentinel 1 and 2 and LiDAR) for soil moisture and vegetation data and the application of machine-learning methods to develop daily reanalyses and forecasts of forest fire ignition and spread risks according to the requirements of meteorological agencies, fire fighters, foresters and infrastructure providers. Clim4Cast will directly benefit from the tool as an input for WP2 A 2.1 whereas CONFIRM will profit from an independent evaluation of its tool.
URANOS - Data and knowledge support for decision-making systems and strategic planning for adaptation of agricultural land to climate change and minimization of agricultural land degradation (2020-2023) Operational Programme Research and Innovation (OPVal) - Operational Program Integrated Infrastructure (OPII) - the Research Agency	The aim of the project is to create a data and knowledge base to support decision-making and strategic planning for adaptation on climate change and minimising the degradation of agricultural land in Slovakia. The project has 3 main research topics: i) development of new approaches and databases for early assessment, monitoring and forecasting of droughts, ii) climate change prediction and the assessment of climate change impacts on agricultural land, iii) the assessment of soil degradation rates and proposals for optimal land use. The data and knowledge base built in URANOS will be used in drought monitoring in Slovakia and will be available for the Clim4Cast purposes. The improved drought monitoring will be later expanded by the results of Clim4Cast.

C.2.7 How does your project build on available knowledge?

Please describe the experiences/lessons learned that your project draws on, and other available knowledge your project capitalises on. If relevant, please specify the projects to be capitalised and which project partner(s) have been involved.

Clim4Cast team will use synergies with ongoing and future projects (C 2.6.) and will capitalise significantly on joining and combining the available knowledge to demonstrate that the whole team is more than just a simple sum of the parts. The biggest contribution of the Clim4Cast project to the current state of knowledge will be combining years of experience from monitoring DHF in different parts of CE by eight independent teams, combining it with the best possible numerical weather forecast model acquired from the top world centre ECMWF, and linking it and iterating it with the range of end users at the local, regional, national levels but also across various industries. Clim4Cast will make CE one of the first if not the first region in the World that will have an available bottom-up-build operational system for a short, extended, and seasonal forecast of DHF events that will be cross border and at the same time communicated through already available channels. The project will (i) capitalise on the knowledge of research centres (CzechGlobe, MUNI, ZALF, TUW) acquired during their previous studies of past extreme events and future climate projections that have been published in top ranking journals (Nature Climate Change, Nature Geosciences or Science Advances); combining it with (ii) years of experience of institutions focused on monitoring aspects of the DHF triad (CzechGlobe, SHMI, ARSO, DHMZ, TUW, ZALF, IPGN); (iii) utilise past H2020 and LIFE projects, capitalising on the large infrastructure projects (ICOS, DANUBIUS, EU structural funds), activities supported by Interreg programme through) bilateral Interregs (e.g. CZ-AT, SK-CZ, CZ-DE) that laid base of some of the partnerships, and also Danube basin Interreg calls that put together the core of the team (DriDanube), as well as joint work on projects funded by ESA, EU-JRC, or Copernicus services. Through meetings and associated partnership Clim4Cast will also bring together various facets and stakeholders of the CE civil society from municipal administrations through the local to national levels, NGOs, Fire rescue services, as well as environmental protection experts, meteorological services, university and academia researchers. The project will utilise years of practising open science aimed at sharing the existing and transforming experience of scientific research with the public through media communication. These various facets of knowledge and expertise will be capitalised through the Clim4Cast project.

C.3 Project partnership

What is the rationale of the partnership composition and how are partners complementary to each other? Please describe the structure of your partnership and why the involved partners are needed to implement the project and to achieve the project objectives.

The Clim4Cast PPs represent 7 countries participating in the project (Czechia, Poland, Germany, Austria, Slovakia, Slovenia, and Croatia) coordinated by experienced LP. These partners bring various backgrounds, experience, skills, resources, and types of their national collaborative networks. Their national-level peers directly participate in the project as APs which significantly increases the level of interaction and will speed up the process of learning with regards to monitoring and forecasting DHF. The project has been developed using bottom-up approach through mediated discussion moderated by LP and current WP leaders. Each country's main partner represents an organisation in charge of drought and/or wildfire and/or heat stress monitoring while associated partners in CZ, HR, AT, SLO and GE are monitoring at least two aspects of DHF triad. Key PPs complement each other including (i) 2 universities (TUW and MUNI) - covering the research areas in which they excel (geospatial analysis, climatology, use of remote sensing, education, and knowledge transfer); (ii) three academic (non-profit) public research institutions (CzechGlobe, ZALF, and IUNG) that bring considerable research, data and IT infrastructure, vigorous scientific background, and successful history of building and maintaining monitoring/forecasting tools; (iii) 2 weather services (DHMZ and SHMI), that bring in critical meteorological and climatological expertise and in-depth understanding of operational challenges and data limitations while in other countries PPs are closely collaborating with respective meteorological services (3 of them being APs); (iv) 1 government/weather service (ARSO) with an expertise in executive government branch operations. The APs offer an even more diverse mix of 26 stakeholder organisations who will be "first-line" beneficiaries of the Clim4Cast output and in the past have shown a capacity and willingness to engage in the iterative processes associated with the development of deliverables and outputs of individual WPs. Therefore, Clim4Cast represents a unique opportunity for co-creative approach in development of the individual deliverables and puts together a level of expertise and involvement that would not be possible through national or other EU mechanisms. APs will provide extra experience and expertise, increase the chance of a fast result uptake, its visible impact, and long-term sustainability. The burden of activity coordination is evenly split between the PPs. Research organisations (MUNI, TUW, CzechGlobe, IPGN, and ZALF) are primarily in charge of the development, SHMI, DHMZ and ARSO as "service&research" organisations are responsible for rolling out and practically applying the project. Clim4Cast will attempt to roll out the DHF forecast and strategies of its use for the whole project region. Given the required expertise, the national weather forecast provider (SHMI) is responsible for WP1, while WP3 is led by an agency closely advising to the national government (ARSO).

C.4 Project work plan

WP number	Work package name
WP1	Integrated strategy to increase DHF and climate change effects awareness within CE region
WP2	Joint development and implementation of forecasting tool for DHF and their compound effects
WP3	Joint development of DHF response action plan through efficient use of early warning system

C.4.1 Work package 1

Workpackage number

WP1

Work package title

Integrated strategy to increase DHF and climate change effects awareness within CE region

Objectives

Please define one project specific objective that will be achieved by your project through the implementation of the work package. The specific objective should be:

- realistically achievable during the project lifetime;
- specific;
- be verifiable and measurable.

Project specific objective

Collect data on and cross border DHF events and their impacts, evaluate them, develop a method for estimation of climate change effect on DHF event occurrence, analyse cross border effects, and develop a strategy for improved DHF events awareness.

In addition, please define one or more communication objective(s) that will contribute to the achievement of the specific objective and include reference to the relevant target group(s). Communication objectives aim at changes in a target audience's awareness and behaviour.

Communication objective(s) and target audience

WP1 aims to raise awareness on calls among relevant applicants and increase the level of knowledge of all PPs to better support stakeholders. This will be fulfilled by the DHF communication toolkit serving for increasing DHF awareness of target groups. The target groups include e.g. regional and national authorities, research institutions/universities, meteorological, hydrological and forest services (sectoral agencies), enterprises and SMEs, associations, rescue services, general public.

Activities

Please describe the activities foreseen in order to achieve the above project specific objective and related communication objective(s) considering also the involvement of the relevant target groups as identified in section C2.4.

Activity 1.1	
Title	Compiling relevant datasets and collecting data on impacts and cross border extreme events

Activity 1.1	
Start period	Period 1, 1 - 6
End period	Period 2, 7 - 12
Description	It is necessary to gather and harmonise relevant datasets, specific historic data on DHF events and their impacts from involved countries in the last 20 years. This activity includes joint definition of DHF events and development of a unified methodology for collection of impacts. Such data will serve for a compilation of a database that will be used for all subsequent evaluations, analyses, and development of forecasting tools across all WPs. Main data sources will include freely available meteorological data, outcomes of peer-reviewed articles, newspapers or online media. The historic data will also include collections within other recent or ongoing projects (e.g. DriDanube). To capitalise on existing knowledge the project team will actively outreach and utilise past and ongoing projects that could provide further datasets. Special attention will be paid to cross-border DHF events including differences in real impacts as well as societal responses. This activity will be led by MUNI.

Deliverables 1.1			
Deliverable Number	Deliverable title	Deliverable description	Delivery period
D.1.1.1	Database of DHF events	The resulting database will include meteo/climate data, reported data on past droughts, heatwaves, and fire weather in the 7 involved countries in the last 20 years. These events will be categorised by location of occurrence, cross border effects, and societal responses.	Period 2 , 7 - 12

Activity 1.2	
Title	Critical evaluation of past extreme events and their impacts and trends using advanced statistical analysis
Start period	Period 2, 7 - 12
End period	Period 4, 19 - 24
Description	Using A 1.1, ground and remote sensing data, and

Activity 1.2	
	<p>collaboration of PPs and APs, the activity will deliver state-of-the-art evaluation of the spatial and temporal variability, frequency, seasonality, and intensity (including long-term trends) of the past droughts, heatwaves, and fire weather (DHF) across the involved countries. Health and socio-economic impacts of those past extremes will be included in the evaluation and iteratively discussed within PP-AP team. The evaluation will be carried out using advanced statistical methods to determine trends (CzechGlobe, TUW, and MUNI). Clear and understandable presentation of the results, particularly of recent events, will be critical for the outreach activities in all parts of the project and will also enhance the historical memory related to DHF events that are disappearing from public consciousness. Consciousness strengthening is one of the innovative tools in increasing resilience through awareness. This activity will be led by MUNI.</p>

Deliverables 1.2			
Deliverable Number	Deliverable title	Deliverable description	Delivery period
D.1.2.1	Improved database of DHF impacts associated with the occurrence and severity of DHF events	The database of impacts will be merged with information about the severity (characterised by drought, heat stress, and fire weather indices), duration, and spatial extent of the specific DHF situations.	Period 4 , 19 - 24

Activity 1.3	
Title	Development of a methodology for attribution of the occurrence of extreme events to climate change
Start period	Period 2, 7 - 12
End period	Period 5, 25 - 30
Description	To better assess the future occurrence of extreme events, we first need to understand climate change in past DHF events we have recently observed. The objective of this activity is to jointly adjust an attribution methodology developed by CzechGlobe and MUNI within the SustES project and with ZALF collaboration to apply it across the Clim4Cast

Activity 1.3	<p>region. In addition, the project will capitalise on methods being currently developed within EU-Copernicus Program and World Weather Attribution project. This will allow us to evaluate past DHF events and estimate the share by which climate change has contributed to those recent events (e.g. 2015-2019 drought, 2019 and 2021 heat-waves). Quantitative linkage between events and climate change is essential for raising awareness, development of proper response and communication strategies, and improvement of resilience through better estimates of future DHF trends under particular climate change scenarios. This activity will be led by ZALF.</p>
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Deliverables 1.3			
Deliverable Number	Deliverable title	Deliverable description	Delivery period
D.1.3.1	Report on attribution of compound events to climate change	Data on impact and frequency of compound events is used to identify the effect of climate change on the risk of these extreme events. The report will provide an outlook on the risk of compound events in the future.	Period 5, 25 - 30

Activity 1.4	
Title	Analysis of DHF events cross border effects in all involved countries
Start period	Period 2, 7 - 12
End period	Period 5, 25 - 30
Description	None of the existing national systems in the Clim4Cast area fully accounts for and takes advantage of the fact that DHF events are naturally spilling across the national border(s). Action A 1.4 will map the occurrence of all cross-border events and i) analyse the differences in institutional and societal response; ii) determine differences in impact between countries/regions; iii) study these events to understand how each country policies /strategies lead to eventual differences in responses; iv) summarise lessons learned and their implementation on the national and cross-border

Activity 1.4	
	level from individual events, and v) utilise the existing knowledge for development of an early warning collaboration of impending DHF events with potential to spill over cross border through close and constant communication of partners. The lessons learned from PP-AP and stakeholder discussions will be used in development of regional mapping products in A 2.4. This activity will be led by SHMI.

Deliverables 1.4			
Deliverable Number	Deliverable title	Deliverable description	Delivery period
D.1.4.1	Lessons learned from the past DHF events (strategy document)	The strategy document will summarise the results of discussions with APs and stakeholders about the past DHF events with cross-border effect focused on differences in institutional and societal response between countries resulting in DHF impact differences.	Period 5 , 25 - 30

Activity 1.5	
Title	Developing and delivering strategies on improved climate change awareness
Start period	Period 3, 13 - 18
End period	Period 6, 31 - 36
Description	The aim of WP1 goes beyond analysing the DHF trends, past events, attribution to climate change, and reviving public consciousness by formulating strategies to increase DHF risk awareness. Each country specific strategy will include a summary of the best practises used by project partners in communicating DHF risks, their association with climate change, and recommendations for improvement of DHF awareness. The A 1.5 will define vision, set of objectives, and outline an approach for raising awareness of DHF socio-economic impacts and compound effects (learning from activities beyond this region and linking to other projects, e.g. EDO, EFFIS), and is therefore an important part of the communication and outreach part of the Clim4Cast project. The increase of the

Activity 1.5	
	<p>DHF resilience must be started by rising awareness of all DHF components. A 1.5 will build on WP2 and WP3 activities and will focus on finding the best strategies on how to penetrate the societies in each country using past events as learning examples. This activity will be led by IUNG-PIB with participation of the entire team. The target groups include e.g. regional and national authorities, research institutions/universities, meteorological, hydrological and forest services (sectoral agencies), enterprises and SMEs, associations, rescue services, and general public with their respective national characteristics.</p>

Deliverables 1.5			
Deliverable Number	Deliverable title	Deliverable description	Delivery period
D.1.5.1	DHF communication toolkit	The PPs will develop a communication toolkit (educational videos, pamphlets, and F&As) based on the identified national strategies for increasing DHF risk awareness. The communication materials will be translated into national languages and will include country-specific examples.	Period 6, 31 - 36

Outputs

Please define the outputs which will be realised through the activities foreseen in this work package and link them to the related programme output indicators.

Output number 1.1	
Output title	Network of partners and associated partners jointly evaluating DHF events with cross border effect and jointly developing lesson learned from those events
Programme output indicator	RC087_2.2: Organisations cooperating across borders
Measurement unit	organisations
Output target value	34.00
Delivery period	Period 1, 1 - 6
Output description	8 PPs with help of 26 APs will jointly work on A 1.1 and A 1.4 that will provide an analysis of cross-border DHF events exchanging information on the

Output number 1.1	
	severity of these events, the dynamics of the cross-border spill-over, and differences/similarities in DHF impact perception and response by the countries /societies/stakeholders. Findings will be essential for learning from each others' responses /experiences and will help to develop a strategy for future DHF event response (part of WP3 outputs).
Output number 1.2	
Output title	A transnational strategy on improved climate change awareness in the area of DHF events and their compound effects for the Clim4Cast region
Programme output indicator	RCO83_2.2: Strategies and action plans jointly developed
Measurement unit	strategy/action plan
Output target value	1.00
Delivery period	Period 6, 31 - 36
Output description	The transnational strategy will be jointly developed by 8 PPs and consulted with APs (26) and other stakeholders during WP1 actions, webinars, and meetings. It will be built on the collective experience of the entire team and received feedback. The jointly established strategy and recommended actions will be jointly rolled-out into national-specific strategic recommendations and actions. These will be communicated by the PPs and APs on a national level and in national language and context.

Investments

C.4.1 Work package 2

Workpackage number

WP2

Work package title

Joint development and implementation of forecasting tool for DHF and their compound effects

Objectives

Please define one project specific objective that will be achieved by your project through the implementation of the work package. The specific objective should be:

- realistically achievable during the project lifetime;
- specific;
- be verifiable and measurable.

Project specific objective

Collect, evaluate, and use partner best practices in monitoring and forecasting DHF for development of a multi-temporal application. Forecasts and early warning will be produced, shared across the region, and added into existing partner platforms.

In addition, please define one or more communication objective(s) that will contribute to the achievement of the specific objective and include reference to the relevant target group(s). Communication objectives aim at changes in a target audience's awareness and behaviour.

Communication objective(s) and target audience

WP2 (proposed): The objective is to inform users of the national platforms about new additions (regional map and DHF forecast) and make these easy to use via a set of new video tutorials. Target groups include current users of the national platforms (rescue and health services, sectoral agencies, environmental monitoring bodies, local-regional-national public authorities, forestry-agriculture-horticulture enterprises-SMEs-NGOs, nature protection and tourism agencies) and new audiences (e. g. general public).

Activities

Please describe the activities foreseen in order to achieve the above project specific objective and related communication objective(s) considering also the involvement of the relevant target groups as identified in section C2.4.

Activity 2.1	
Title	Collection of partner best practises on monitoring

Activity 2.1	
	and prediction of DHF and compound events and identification of specific needs
Start period	Period 1, 1 - 6
End period	Period 3, 13 - 18
Description	Six out of the eight PPs and two of the APs are in charge of existing DHF monitoring tools covering all seven countries. The aim of this activity is to collect the existing knowledge and best practices to develop an action plan for improvement of each country monitoring system capitalising on partner experiences but also other state-of-the art systems (e.g. EDO, NDMC, EFFIS). During this activity we will describe the ongoing partner monitoring efforts and identify their strengths, limitations, and specific needs using explicit examples, in particular a series of recent drought events i.e. 2015-2020. The focus will be both on individual DHF events and their compound effects. The best practice catalogue will contain technical details (e.g frequency and type of input data, software and hardware used, communication strategy). Based on the catalogue we will develop and execute the action plan for improvement of the national DHF monitoring and communication of the results to stakeholders.

Deliverables 2.1			
Deliverable Number	Deliverable title	Deliverable description	Delivery period
D.2.1.1	Catalogue of best practises in DHF monitoring - analysis report	The analysis report will contain a critical and structured overview of existing national DHF systems. The catalogue will also examine other existing systems (U.S. Drought Monitor, NIDIS, EDO or EFFIS) as well as monitoring systems of other European meteorological services.	Period 2 , 7 - 12
D.2.1.2	Action plan for improve ment of DHF services	The D.2.1.1 will be essential for drafting the action plan composed of recommendations based on analyses of data flows, used methods, parameter set-up, and involvement of wide public. Partners that are responsible for national monitoring systems will implement the action plan and identified changes.	Period 3 , 13 - 18

Activity 2.2	
Title	Development of regionally-specific multi-temporal forecast functionalities to the national DHF systems
Start period	Period 1, 1 - 6
End period	Period 4, 19 - 24
Description	<p>This key activity will provide a digital toolbox allowing all involved countries to run DHF forecasts. The toolbox will consist of open source data and numerical models to produce spatially explicit DHF conditions. All partners will collaboratively develop a software link which will be run by national monitoring systems to obtain multi-temporal DHF forecast. A common set of models will be set up to represent agroecological drought using the SoilClim (CzechGlobe) and MONICA (ZALF) models. Fire weather and heat stress will be simulated using fire index models developed by CzechGlobe, DHMZ and CHMI (AP) and the AgriClim model (CzechGlobe), respectively. These open source models are bundled with the ECMWF forecasts (currently processed by CzechGlobe, SHMI and DHMZ) to provide information on DHF and their compound impacts. Joint maps of DHF and compound event forecasts will be tested for the entire region and implemented into national systems and cross-border effects will be evaluated.</p>

Deliverables 2.2			
Deliverable Number	Deliverable title	Deliverable description	Delivery period
D.2.2.1	Software code link and training documentation on its use for multi-temporal seasonal forecasts	A software code will allow operational processing of the forecast while linking it to the national products. The cross-border DHF system will be developed and implemented to the national monitoring/forecasting systems. Training documentation will allow for quick and seamless uptake of the product.	Period 4 , 19 - 24

Activity 2.3	
Title	Testing the forecasting tools in all 7 Clim4Cast countries
Start period	Period 2, 7 - 12
End period	Period 6, 31 - 36
Description	Existing drought monitoring systems in each partner country will be provided with the country specific DHF forecast with the parameters and technical limits developed in A 2.1. The forecasts will be then tested in two modes. Firstly using "hind-cast" data for 2020-2022 in which continuous estimates for the typical drought, heat and fire seasons will be developed and compared with the "true data". Secondly the "real-time" forecast will be run for the entire season 2024 for evaluation purposes. The mid-range (~10-days), extended (~50 days), and seasonal forecasts (~6 months) will be evaluated on the national level based on success rates and the usability of the forecasts. The evaluations will be performed by the project full and associated partners and a group of "testers" or users defined by each partner. The outputs of both analyses will be jointly evaluated and feed-back to forecasting scheme. Several iterations are expected.

Deliverables 2.3			
Deliverable Number	Deliverable title	Deliverable description	Delivery period
D.2.3.1	Analysis report of the drought forecast reliability and lead time	The reliability and accuracy of the drought forecast will be separately evaluated for all countries for mid /extended/seasonal forecasts and compared with each other. The report will cover both the "hind-casting" and near-operational product (2024) validation.	Period 5 , 25 - 30
D.2.3.2	Analysis report of the heat wave forecast reliability and lead time	The reliability and accuracy of the heat wave forecast will be separately evaluated for all Clim4Cast countries and results will be compared between different countries to assess regional accuracy. The report will cover both the "hind-casting" and near-operational product (2024) validation.	Period 5 , 25 - 30
D.2.3.3	Analysis report of the wildfire	The reliability and accuracy of the wildfire risk forecast will be separately evaluated for all Clim4Cast countries	Period 5 , 25 - 30

Deliverables 2.3			
Deliverable Number	Deliverable title	Deliverable description	Delivery period
	forecast reliability and lead time	and results will be compared between different countries to assess regional accuracy. The report will cover both the "hind-casting" and near-operational product (2024) validation.	
D.2.3.4	Final analysis report of the forecast reliability and lead time across the region (7 PP countries)	The reliability and accuracy of the DHF forecast will be evaluated and compared individually for the 7 countries and regionally for mid/extended/seasonal forecasts. The report will cover both the "hind-casting" and near-operational product (2024) validation and will focus on regional differences.	Period 6 , 31 - 36

Activity 2.4	
Title	Roll out the integrated service with all functionalities to professional users and general public
Start period	Period 4, 19 - 24
End period	Period 6, 31 - 36
Description	<p>After training and development of the forecasting tools the integrated service is planned to be rolled out in early 2025. The forecasts will be produced and implemented into respective national monitoring systems in regular time intervals following established national practises. The DHF and compound event forecasts will be visibly marked in the national products and announced through established national communication networks to speed up the product acceptance. From 2025 the integrated map containing the DHF forecasts for the entire region will be provided through the web-sites of individual partners.</p> <p>Through these national platforms we also plan to provide a set of video tutorials in respective national languages that will help users to understand the process of development and the usage of new features (e.g. forecasts, different DHF products, regional map). The CE regional product will be particularly useful incase of cross-border events. The entire period will be used to raise awareness of the DHF-related risk including collaboration and</p>

Activity 2.4	
	outputs of analyses carried out in WP1 and also WP3.

Deliverables 2.4			
Deliverable Number	Deliverable title	Deliverable description	Delivery period
D.2.4.1	A set of nationally-specific video tutorials	The deliverable is a set of video tutorials that will help users of national platforms navigate the new features (forecasts, triad of DHF). The content and design will be jointly developed by PPs. Each partner will adapt the tutorial to their platform and needs (e.g. national language translation).	Period 6 , 31 - 36
D.2.4.2	An operational regional mapping tool for visualization of DHF monitoring and forecast for CE	The deliverable is a final operational mapping tool that visualizes DHF events for the entire Central European region. As part of this deliverable the tool will be implemented into national platforms of the PPs.	Period 6 , 31 - 36

Outputs

Please define the outputs which will be realised through the activities foreseen in this work package and link them to the related programme output indicators.

Output number 2.1	
Output title	Pilot action testing and evaluating the proposed drought monitoring and forecasting tools
Programme output indicator	RCO84_2.2: Pilot actions developed jointly and implemented in projects
Measurement unit	pilot actions
Output target value	1.00
Delivery period	Period 5, 25 - 30
Output description	Clim4Cast PPs have a different capacity of drought monitoring and forecasting. In this PA the PPs will jointly develop a drought monitoring and forecasting capacity for the 7 countries through an exchange of knowledge between more (e.g. CzechGlobe) and less experienced (e.g. ZALF) PPs. Individual PP needs and specific steps for implementation into national platforms will be determined from A2.1, D.

Output number 2.1	
	2.1.1 - 2. Drought forecast reliability and accuracy testing will be performed on a national level.
Output number 2.2	
Output title	Pilot action testing and evaluating the proposed heat wave monitoring and forecasting tools
Programme output indicator	RCO84_2.2: Pilot actions developed jointly and implemented in projects
Measurement unit	pilot actions
Output target value	1.00
Delivery period	Period 5, 25 - 30
Output description	Despite heat waves are becoming an increasing issue for human health, their monitoring and forecast is currently not available through any national platform in the region. In this PA the PPs will jointly develop a heat wave monitoring and forecasting capacity for the 7 countries. Individual PP needs and specific steps for implementation into national platforms will be determined from A2.1, D. 2.1.1 - 2. Heat wave forecast reliability and accuracy testing will be performed on a national level.
Output number 2.3	
Output title	Pilot action testing and evaluating the proposed wildfire risk monitoring and forecasting tools
Programme output indicator	RCO84_2.2: Pilot actions developed jointly and implemented in projects
Measurement unit	pilot actions
Output target value	1.00
Delivery period	Period 5, 25 - 30
Output description	Clim4Cast PPs have a different capacity of wildfire risk monitoring and forecasting. The PPs will jointly develop a wildfire risk monitoring and forecasting capacity for the 7 countries through an exchange of knowledge between more (e.g. DHMZ) and less experienced (e.g. TUW) PPs. Individual PP needs and specific steps for implementation into national

Output number 2.3	
	platforms will be determined from A2.1, D.2.1.1 - 2. The forecast reliability and accuracy testing will be performed on a national level.
Output number 2.4	
Output title	Solution for integrated multi-temporal forecasting of drought in Central European countries
Programme output indicator	RCO116_2.2: Jointly developed solutions
Measurement unit	solutions
Output target value	1.00
Delivery period	Period 6, 31 - 36
Output description	WP2 PA (O 2.1) will lead to the optimal solution of the drought monitoring and forecasting system and its evaluation for Clim4Cast countries. It will include the best performing combination of medium /extended/seasonal range drought forecasts for the region and evaluation of their reliability in individual months using 2020-2022 for hind-cast testing. The solution will result from joint work of all PPs over the Clim4Cast domain (7 countries) and will therefore be applicable for all of them
Output number 2.5	
Output title	Solution for integrated multi-temporal forecasting of heat wave in Central European countries
Programme output indicator	RCO116_2.2: Jointly developed solutions
Measurement unit	solutions
Output target value	1.00
Delivery period	Period 6, 31 - 36
Output description	WP2 pilot action (O 2.2) will lead to the optimal solution of the heat wave monitoring and forecasting system and its evaluation for all 7 Clim4Cast countries. The solution will include the best performing method for heatwave forecast in the Clim4Cast region and evaluation of its reliability in individual months using 2020-2022 for hind-cast testing. The solution will result from joint work of all PPs over the Clim4Cast domain (7 countries) and will therefore be applicable for all of them.

Output number 2.6	
Output title	Solution for integrated multi-temporal forecasting of wildfire in Central European countries
Programme output indicator	RCO116_2.2: Jointly developed solutions
Measurement unit	solutions
Output target value	1.00
Delivery period	Period 6, 31 - 36
Output description	WP2 pilot action (O 2.3) will lead to the optimal solution of the wildfire risk monitoring and forecasting system and its evaluation for Clim4Cast countries. The solution will include the best performing method for forecasting the wildfire risk in the region and evaluation of its reliability in individual months using 2020-2022 for hind-cast testing. The solution will result from joint work of all PPs over the Clim4Cast domain (7 countries) and will therefore be applicable for all of them
Output number 2.7	
Output title	Cross-border collaboration on development and implementation of regional multi-temporal DHF monitoring and forecasting mapping tool into established national platforms
Programme output indicator	RCO116_2.2: Jointly developed solutions
Measurement unit	solutions
Output target value	1.00
Delivery period	Period 6, 31 - 36
Output description	Based on outputs and deliverables of pilot actions and actions A2.1, A2.2 and A2.3, all PPs will jointly develop a solution for an operational regional (central Europe) mapping of DHF events. This mapping will include monitoring and forecasting of DHF events for the entire region represented by respective PP countries and will be implemented in respective partner national platforms. This solution will help especially with mapping and forecasting the status of DHF events in cross-border regions.

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C.4.1 Work package 3

Workpackage number

WP3

Work package title

Joint development of DHF response action plan through efficient use of early warning system

Objectives

Please define one project specific objective that will be achieved by your project through the implementation of the work package. The specific objective should be:

- realistically achievable during the project lifetime;
- specific;
- be verifiable and measurable.

Project specific objective

The WP3 objective is to jointly develop an action plan for proactive institutional cooperation in early warning and extreme event preparedness, and to pave the way for its implementation into existing legal frameworks.

In addition, please define one or more communication objective(s) that will contribute to the achievement of the specific objective and include reference to the relevant target group(s). Communication objectives aim at changes in a target audience's awareness and behaviour.

Communication objective(s) and target audience

The objective is to engage policy makers (local/regional/national public authorities) and first responders to develop an action plan that would be integrated into existing legal frameworks. Partial objectives are to i) engage with stakeholders on specific needs, best practises, user feedback; ii) develop strategy for proactive institutional response based on forecast data and early warning systems; iii) build institutional capacity for cooperation and joint proactive response.

Activities

Please describe the activities foreseen in order to achieve the above project specific objective and related communication objective(s) considering also the involvement of the relevant target groups as identified in section C2.4.

Activity 3.1	
Title	Existing status of response in the face of DHF event and the best practice evaluation

Activity 3.1	
Start period	Period 1, 1 - 6
End period	Period 6, 31 - 36
Description	<p>The project partnership will comprehensively review the existing ground on proactive DHF response in partner countries, as well as regional and global initiatives, recommendations, and project results in that field. It will summarise partners' best practises on development and communication of early warning information and enhancement of wide public awareness on DHF impacts and required proactive response. Feedback from stakeholders will be sought intensively. A 3.1 will be linked to "best-practice" standards at the EU level (e.g. referring to JRC-EDO and Copernicus programs) and globally (e.g. WMO action group recommendations). Additionally, A 3.1 will seek to influence wider audience (national and targeted regional public) by communicating the Plan and integrated Clim4Cast outputs through series of short spots, infographics, online and live presentations to different stakeholders at dedicated seminars/webinars, project conferences, interviews, and through existing national websites.</p>

Deliverables 3.1			
Deliverable Number	Deliverable title	Deliverable description	Delivery period
D.3.1.1	National profiles report	This deliverable will summarise countries' existing legislation and institutional setting of DHF response, and SWOT analysis of countries' needs, bottom-up suggestions, and useful practises on building institutional and public awareness on the requirement of multi-faceted response to DHF events.	Period 2 , 7 - 12
D.3.1.2	Report on transnational scheme	This deliverable will review regional and global top-down recommendations and existing tools and documents, promoting implementation of DHF proactivity and preparedness into national operational and legislative level.	Period 2 , 7 - 12

Activity 3.2	
Title	Developing a joint communication and engagement action plan within existing legal frameworks

Activity 3.2	
Start period	Period 3, 13 - 18
End period	Period 6, 31 - 36
Description	<p>This activity will formulate an operational action plan that will promote national multi-faceted proactive DHF response. It will build upon A3.1 and capitalise on the results of regional work, increasing its capacity for further integration into national frameworks. Within this activity, feedback from specific stakeholders will be collected based on updated and optimised surveys. The involvement of PR experts and stakeholder consultants is envisaged together with local/national and international bodies (e.g. EU Commission, WMO action teams, river border commissions) leading to an upgrade of existing national and regional work done so far, and integrate WP1-2 and Activities 3.1 and 3.3 outcomes into an operative document to best address national level needs for improved DHF response. In collaboration with WP1 the concept of historical memory will be implemented within the joint strategy in the form of indices, texts, and images of past DHF events to remind the threat of extreme events.</p>

Deliverables 3.2			
Deliverable Number	Deliverable title	Deliverable description	Delivery period
D.3.2.1	Proposed proactive response concept	This deliverable will provide a conceptual scheme of proactive response to DHF based on early warning, and propose a manner of institutional cooperation in case of progressive severity of DHF event.	Period 4 , 19 - 24

Activity 3.3	
Title	Communication of the action plan with stakeholders
Start period	Period 3, 13 - 18
End period	Period 6, 31 - 36
Description	The action plan development will be carried out in constant involvement of stakeholders in the field of DHF early warning, response and decision-making.

Activity 3.3	
	<p>Intermediate consultations with stakeholders will play a key role in co-shaping the action plan to best serve the operational and joint response in case of DHF events. Cross-breeding of the bottom-up best practises, approaches used in the individual countries, and project-developed results will be processed in A.3.3. Through national and regional collaboration with stakeholders via dedicated workshops, it will aim at integrating early warning information on DHF event probability and/or expected duration, project results, and required institutional setting into the decision-making process and the existing legislative framework. The action plan will capitalise on collaboration across 7 countries providing an assessment of cross-border events analysed in WP1. The entire activity would be implementable also over entire CE region.</p>

Deliverables 3.3			
Deliverable Number	Deliverable title	Deliverable description	Delivery period
D.3.3.1	Proposed national DHF action plans	Through dedicated meetings with DHF response institutions, the D3.2.1 will be incorporated into D3.3.1 by providing countries' practical steps and examples of operational implementation of the proposed action plan, including legislative framework, institutional setting and coordinated approach.	Period 6 , 31 - 36

Outputs

Please define the outputs which will be realised through the activities foreseen in this work package and link them to the related programme output indicators.

Output number 3.1	
Output title	Communication and engagement national action plans on proactive DHF response
Programme output indicator	RC083_2.2: Strategies and action plans jointly developed
Measurement unit	strategy/action plan
Output target value	7.00
Delivery period	Period 6, 31 - 36
Output description	The action plans on proactive response to DHF

Output number 3.1	
	<p>events will be jointly developed by PPs and iteratively consulted with APs and other stakeholders during WP3 actions, webinars, and meetings. Received feedback and the collective experience from implementing the DHF forecast in WP2 pilot actions will be used. The overall strategy and recommended actions will be implemented into 7 national action plans communicated by PPs and APs on a national level and in national language and context.</p>

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C.5 Project results

Please select and quantify the relevant programme result indicators to which your project will contribute. For each selected result indicator, please briefly describe the contribution of the project and the relevant project results (change) you expect to achieve through the implementation of the foreseen activities and outputs as defined in the work plan. Please also specify the output(s) which are directly related to this result.

Result 1	
Programme result indicator	RCR84_2.2: Organisations cooperating across borders after project completion
Measurement unit	organisations
Baseline	0.00
Target value	20.00
Result description	At the moment in case of DHF events, all processes concentrate on the country level and are mostly done independently even in case of cross-border events. While the agencies (e.g. weather or fire services, river commissions) are collaborating on particular issues (sharing data, setting emergency flow adjustments) these fall short of comprehensive DHF event knowledge sharing on the status, policies /measures and their cross-border impacts. At the same time there is no existing forecast for the DHF that would cover the entire region for all aspects of the DHF triad. The Clim4Cast will systematically address these major shortcoming and will improve the regions resilience by jointly evaluating the i) forecast of cross-border events (WP2), ii) response to past DHF event impacts (WP1). This will enable to formulate regional best-practice for DHF situations. To ensure the continuous collaboration the partners will sign a collaboration agreement covering the post-project period by June 2025.
Result 2	
Programme result indicator	RCR79_2.2: Joint strategies and action plans taken up by organisations
Measurement unit	joint strategy/action plan
Baseline	0.00
Target value	8.00

Result 2	
Result description	<p>The PPs will jointly develop a transnational strategy (O1.2) focused on communicating and building up DHF awareness, and action plans (O3.1) that will propose steps to capitalise on DHF forecasts to increase preparedness and resilience to these extremes. These outputs will be based on a much wider pool of DHF events than any country alone can access on its own. Currently no such coordinated strategy or action plan exists although the risk of DHF is mentioned in national strategic documents of all 7 countries. These outputs will lead to an increased awareness and resilience once implemented. While many key stakeholders are represented by PPs or APs (e.g. M. of Environment – CZ, SK; M. of Agriculture – CZ, SK, HR; DHMZ; Center for Agricultural Advisory in Brwinów) and the adoption of joint strategies is likely, the outputs will also be offered for implementation by other entities (e.g. M. of Environment – HR, German Weather Service, State Forests – PL, State Water Holding Polish Waters).</p>
Result 3	
Programme result indicator	RCR104_2.2: Solutions taken up or up-scaled by organisations
Measurement unit	solutions
Baseline	0.00
Target value	4.00
Result description	<p>The project will result in 4 solutions that stem from the PAs in WP2 (O2.4-7). These outputs will provide the Clim4Cast domain, i.e. all 7 countries, with jointly developed but country-specific solutions for providing national and regional DHF monitoring and forecast on different temporal levels - mid-range (~10-days), extended (~50 days), and seasonal forecasts (~6 months). It will also provide detailed evaluation of reliability and usability of such forecasts across all 7 Clim4Cast countries. All the proposed solutions (O2.4-7) will result from joint work of all PPs over the Clim4Cast domain and will therefore be applicable for all of them. The solutions O2.4-6 will address the forecast of specific natural hazards on national level while the solution O2.7 is regional and addresses regional and cross</p>

Result 3	
	<p>border impacts. These solutions represent the core goal of the project. In each PP country the jointly developed DHF forecast will be implemented by collaborative teams of PPs and APs.</p>

C.6 Time plan

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	After End
WP1 Integrated strategy to increase DHF and ...							
A1.1 Compiling relevant datasets and col...	D1.1.1						
A1.2 Critical evaluation of past extreme...					D1.2.1		
A1.3 Development of a methodology for at...					D1.3.1		
A1.4 Analysis of DHF events cross border...					D1.4.1		
A1.5 Developing and delivering strategi...						D1.5.1	
RCO83_2.2						O1.2	
RCO87_2.2	O1.1						
WP2 Joint development and implementation of ...							
A2.1 Collection of partner best practise...		D2.1.1	D2.1.2				
A2.2 Development of regionally-specific ...				D2.2.1			
A2.3 Testing the forecasting tools in al...					D2.3.2	D2.3.4	
					D2.3.3		
					D2.3.1		
A2.4 Roll out the integrated service wit...						D2.4.1	
						D2.4.2	
RCO116_2.2						O2.4	
						O2.5	
						O2.6	
						O2.7	
RCO84_2.2					O2.1		
					O2.2		

					O2.3	
WP3 Joint development of DHF response action...						
A3.1 Existing status of response in the ...			D3.1.2			
			D3.1.1			
A3.2 Developing a joint communication an...				D3.2.1		
A3.3 Communication of the action plan wi...					D3.3.1	
RCO83_2.2					O3.1	

C.7 Project management and communication

In addition to the thematic activities as described in the work plan, you need to foresee adequate provisions for project management, coordination and internal communication.

C.7.1 How will you coordinate and manage your project?

Please describe how the project management on the strategic and operational level will be carried out, including the set-up of management structures, responsibilities and procedures, as well as risk management. Please also explain how the internal communication within the partnership will be organised.

The LP will be responsible for establishing a sound project management, management team, and preparation of a management plan necessary for a successful project implementation. High standards in administration and management are demonstrated by CzechGlobe being a holder of ISO certification of quality of management (ISO9001:2015) and environmental management (ISO:14001:2015). At the beginning of the project implementation LP will establish the project management and decision-making structure. In the centre of this structure will be a Project Steering Committee (SC) that will monitor the project progress, adjust implementation, and find adequate mitigation measures in case of unexpected situations or risks. The SC will meet monthly (virtually) and in person (at least once a year) extending the invitation to Interreg JS staff. Project management will be split into thematic (content-related activities) and administrative project management (financial and administrative activities). A detailed work plan defining responsibilities, roles, and day-to-day time schedule will be prepared at the beginning of the project implementation. There will be two main project structures - the SC and the Quality Management Structure (Quality Assurance Manager) which will ensure proper decision-making and quality of outputs. Transparency of their work will be assured through SC meetings in presence of project partners. SC meetings will occur together with regular in-person project meetings to ensure proper management of time and financial resources. Each partner will appoint three positions (Project, Financial and Communication Manager) which will report and communicate with the same positions at the LP level. All rules and instructions for partners will be defined in the Project Management Plan (including management structure, , contractual relations, project changes, responsibilities, reporting protocols) ensuring effective coordination of activities and quality of outputs and results.

C.7.2 Which measures will you take to ensure quality in your project?

Describe the planned approach and processes for quality management, i.e. how the quality of deliverables and outputs will be monitored and ensured, and indicate the responsible partner(s). If you plan to conduct any type of project evaluation, please describe its purpose and scope.

Quality of the outputs and results will be monitored throughout the project by exchanging comments between LP, WP and Activity leaders and assured through project internal (Quality Assurance Manager, QAM) and external evaluation. All activities will be horizontal and will last throughout the project to provide proper support for implementation of the content-related activities. The aim is to ensure smooth implementation of project activities that will result in achieving planned results with the required quality. Quality management will be led by the LP who will outline the evaluation methodology at the beginning of the project. In general, the evaluation will be threefold: (i) Regular monitoring of implementation of activities and achievement of outputs and results will be done by LP (day-to-day) and project leaders representing various partners regularly via virtual (monthly) and in-person meetings (at least 4 plenary meetings). Additionally, WP leaders will regularly (at least monthly) communicate with the respective activity leaders. (ii) Internal evaluation will be done by the QAM based on the inputs received from partners. The QAM will be in charge of proofreading, analysing and peer-reviewing project outputs from the qualitative point of view. QAM will deliver a quality mid-term report as part of the Project Review and final quality report at the end of the project. QAM will prepare a quality assessment of the project outputs. (iii) External evaluation will be prepared at the end of the project by an external expert. It will be focused on the overall quality of outputs and results, their transferability and sustainability with a special emphasis on the project impact. This evaluation will be used in discussions about potential follow-up activities since it will show what was the impact of the project on the target groups and what are their additional needs. Part of the External evaluation will also be feedback and recommendations from the associated partners.

C.7.3 What will be the general approach you will follow to communicate about your project?

Please describe how your project's communication objectives, as outlined in the work plan, will help with achieving your project's main result(s). Why is communication important? Which common tactics, channels and tools will help the partnership to reach out to and involve its target audiences? How will the project communication coordinator ensure that all project partners are involved and contribute to communication?

Communication will be managed by the communication manager (ZALF). At project start-up and during the project lifetime, the communication manager ensures that communication channels and activities are implemented. Communication channels in the project will be five in-person meetings /conferences (Brno, Vienna, Berlin, Zagreb, Prague) that will serve both for project organisation and for communication of the project outcomes to relevant stakeholders, monthly brief virtual meetings for project updates delivered through the SC, a project website for hosting key outcomes of the project and as entry point for external stakeholders, a project Twitter account to inform on relevant partner related news, a joined mailing list for briefing of project updates. Stakeholders and associate partners will be addressed through these channels and directly. In addition, all PPs and Aps have an extensive presence on "social" networks (Twitter, Instagram, Facebook, YouTube channels) that will be utilised in order to communicate the project outcomes to wide audiences. The communication manager will initiate invitations of stakeholders to these channels by the project partners. Policy briefs on risks will be circulated to policy makers for raising awareness about the Clim4Cast project, the risk assessment outcomes, and to evaluate current policies in future climatic conditions. Multiple stakeholder associations are addressed to forward project outputs to their partners and inform about risks and mitigation strategies of the DHF forecasting system. Achieving goals of WP1 (increasing DHF and climate change awareness), WP2 (development of drought forecast) and WP3 (its implementation via proper action plan) requires and depends on sharing, exchanging, collecting and actively seeking feedback on how the DHF tools have been/are being/would be used. Development and implementation of project deliverables and results will occur through several iterations based on results of validation and feedback from involved stakeholders. Therefore, communication is a critical enabler of project success.

C.7.4 How do you foresee the reporting procedures for activities and budget (within the partnership)?

Please describe the reporting processes at the level of partners towards the lead partner.

Activity and financial project management and monitoring will be the responsibility of the LP with a high involvement of the PPs. A Project monitoring plan will be set up during the start up phase and consulted with PPs and APs at the project kick-off meeting, defining the activity and finance reporting, monitoring schedule, indicative timing for Project Review and set of monitoring milestones. LP Project Manager will be the main contact person for partners and JS. An interactive dialogue and continuous flow of information between LP and PPs will be secured via monthly virtual and 5 plenary in-person project meetings. WP leaders will organise activities within respective WPs. Together with the LP they will be responsible for overall coordination and implementation of activities whereas the role of activity leaders will be to assign the roles to partners involved in related activities. All other partners will be responsible to contribute to day-to-day project management and to inform the LP about the progress and any problems that might occur during project implementation. They will actively participate at all Project meetings where they will present their activities and discuss further steps in implementation together with LP and WP leaders. Regular reporting will be carried out through the Partner Report system prepared by PPs for each project period, informing about activities performed, deliverables achieved and costs incurred. Therefore, each PP has planned staff costs for administrative and financial management in its budget. All project partners will use 40% flat rate of CC1 for eligible direct costs, which will be used to cover data collection, development of forecasting tools, data payments, travel and services related to organisation of events and meetings, training and study stays. The size of the team will reflect the life cycle of the project and realised project deliverables and outputs. LP will collect and consolidate information from all partners to prepare Joint finance and activity reports. LP is responsible for establishing a sound project management, therefore LP has planned staff costs for administrative and financial management in its budget.

C.7.5 Cooperation criteria

Please select the cooperation criteria that apply to your project and include a brief explanation. Please note that the joint development, joint implementation and joint financing criteria are mandatory.

Cooperation criteria		Description
Joint development	Yes	The project proposal was jointly developed by all partners who contributed to objectives and activities under respective WPs. The selection of the lead partner and the leaders of WPs and individual activities was based on mutual agreement of all partners. Project partners jointly conceived and developed details of the project idea, which has been then discussed with a wide network of Associated partners. Therefore, the process can be described as a "bottom-up" approach involving all partners.
Joint implementation	Yes	The project outputs will be jointly implemented into existing partner platforms. To provide cross border DHF forecast and visualisation joint CE DHF maps will be produced in collaboration with all partners. Analyses of DHF impacts, climate change-induced changes in DHF characteristics, and strategies to mitigate DHF impacts will be jointly implemented across involved countries. Each activity and WP will be led by one partner but the work and results will affect all partners and regions.
Joint staffing	Yes	Each project partner will be responsible for allocation of staff to fulfil their assigned roles and tasks, while also having a team coordinator who will be responsible for cross-partner communication and management. Therefore joint staffing is not expected.
Joint financing	Yes	The overall project budget was jointly developed by all partners reflecting activities carried out by each project partner and the degree of involvement in each of them. Staff costs were calculated on a real costs basis respecting eligibility requirements of the Programme. Budget takes into account also project partner's leadership: PP8 SHMI leader of WP1 leader, LP CzechGlobe leader of WP2, PP6 leader of WP3 and PP5 ZALF is responsible for communication. In addition the budget accounts for partners organising significant Clim4Cast meetings/conferences. The LP will collect and consolidate information from all partners to prepare joint reporting towards the programme bodies. The LP is responsible for administration and reporting, as well as for the distribution of the funds to the partners.

C.7.6 Horizontal principles

Please indicate how your project contributes to horizontal principles and provide a short explanation. With regard to environment protection, please also include an explanation how the "environmental sustainability by design" approach has been integrated and provide a brief assessment of possible environmental effects to your project.

Horizontal principles	Type of contribution	Description of the contribution
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Horizontal principles	Type of contribution	Description of the contribution
Sustainable development and environment protection	positive effects	<p>The project will enhance environmental sustainability through an improvement of management connected to three major environmental risks - drought, heat waves, and fire weather. The overall project objective aims to increase the resilience of the CE region to these risks which are expected to increase in frequency, severity, duration, and extent as the result of ongoing climate change. Therefore, sustainable development and environment protection and also environmental safety and security is at heart of the project idea. In several partner countries (e.g. Czech Republic, Slovenia, or Slovakia) the ministries of Environment will be directly involved in the project as associated partners. The project team is seeing the DHF forecasting capability as well as strategy on its use as one (and critically important) component of adaptation of the region to climate change. The best tool currently available to all CE countries in the face of an increased DHF occurrence is development of early warning systems that will enable the local decision makers to make correct decisions and thus enhance sustainability and environmental protection. The project itself will be aiming to prevent unnecessary greenhouse gases (GHG) emissions by efficiently combining physical, virtual and hybrid meetings, seminars and conferences. While personal contact and exchange is essential the partners are well aware of carbon and water footprints of unnecessary travel. It should be remembered that preventing large wildfire events will have a great GHG saving effect and thus research meetings benefit considerably outweigh the GHG emissions caused by travelling. Special care will therefore be taken for realising the planned state-of-the-art DHF forecast implementing product and joint development of the appropriate strategies as this will ensure keeping the sustainability principles by the project actions themselves.</p>

Horizontal principles	Type of contribution	Description of the contribution
Equal opportunities and non-discrimination	positive effects	<p>The project will take affirmative action measures to ensure against discrimination. All actions taken under this project will be evaluated based on their ability to provide equal opportunities. The nature of climate-related risks that are the subject of this proposal is to impact all people and communities regardless of their gender identity or expression, religion or beliefs, racial, national, or ethnic origin, disabilities, age, and sexual orientation. We will encourage all interested individuals to participate in the project proposed activities under these principles as well. CzechGlobe as the European Centre of Excellence and the project partner of many EU projects fulfils and supports principles of the European Charter for Researchers and a Code of Conduct for the Recruitment of Researchers. CzechGlobe was also awarded a prestigious HR Excellence in Research Award for exceptional management of human resources (10/2019). CzechGlobe, serving as the LP, together with the WP leaders and the communication manager will ensure enforcement of all equal opportunity and non-discrimination principles at all project meetings but also during project staffing. This is not only the matter of CzechGlobe team core principles but also rules any ISO and HR Award certified organisation must follow. CzechGlobe, serving as the LP, together with the WP leaders and the communication manager will ensure enforcement of all equal opportunity and non-discrimination principles at all project meetings but also during project staffing. This is not only the matter of CzechGlobe team core principles but also rules any ISO and HR Award certified organisation must follow.</p>
Equality between men and women	positive effects	<p>All gender aspects will be thoroughly thought through and considered with regards to the composition of the partners and their staff working on the project. CzechGlobe as the lead partner has an existing Gender Equality Plan and has the equality policy strongly built within the core values of the project. The core project team is almost equally divided with the team members responsible for the individual Activities being almost equally represented by men and women. In the project management it is expected that while the project Leader and project communication managers will be men, all WP leaders and project managers will be women. The equality in pay and remuneration is contained within code of conduct or similar documents in case of all partners. Project team members in case of staffing are prepared to involve part-time positions including opportunities for researchers with parental duties. These will be enhanced also by combination of physical and virtual meetings to enable flexibility and optimising work-family balance.</p>

C.8 Long-term effects and durability

Projects should have a long-lasting effect in the territories and for the relevant target groups. Please describe below how this will be ensured.

C.8.1 Ownership/durability

Please describe who will ensure the financial and institutional support including maintenance for outputs and, if applicable, for most important deliverables developed by your project.

CzechGlobe, the lead partner of this project, will maintain and continue providing the programming code for regional monitoring and forecasting system infrastructure that will be used by the partner institutions of the project. The partners will continue supporting the project by (1) implementing the up-to-date results into their DHF tools that will be upgraded during the project, and (2) by providing necessary feed-back data flows and collaboration. The monitoring and forecasting platforms will be sustained after the project lifetime using the existing resources of the respective partner institutions and will be planned for in the development of the entire protocol.

The analyses carried out in the WP1 will be done using a robust methodology and will be valid and usable for a number of years after the project ends until they will be surpassed by the new state-of-the-art results. The strategies created in WP3 will be closely linked to the WP2 products and it is assumed that they will be applicable for many years and will be updated by the individual project partners. As in many cases they will form the initial DHF response strategy and it is likely that they will be used in some upgraded form in the foreseeable future.

The WP2 service will be fully maintained even after the end date of the project. Based on the already existing expertise this scenario is sustainable, as nearly all the data flows can be automated (as verified in the intersucho.cz or firerisk.cz operations) and the already available staff at CzechGlobe with existing institutional support is capable of maintaining the service. In addition, two partners (DHZ and SHMI) as well as two associated partners (CHMI, ZAMG) represent national weather services with considerable expertise in the area of product maintenance. The post-project phase agreement among the project partners is foreseen and will be signed by the end of 2024 to ensure smooth continuation of output maintenance.

C.8.2 Lasting effects

Outputs and deliverables should be made available and used by relevant target groups (project partners or other stakeholders) after the project's lifetime, in order to have a lasting effect on the territory. Please describe how the outputs and deliverables will stay available and will be taken up or upscaled by the project partners.

Each of the three WPs will provide interim and highly relevant deliverables and outputs for the target groups relatively early during the project and these will be continuously discussed with the target groups and Associated partners and improved accordingly. The final project outputs will therefore be well understood by the target groups and their final form will be thoroughly discussed. In each country there is currently one partner responsible for some aspect of drought and/or fire-weather and /or heat event monitoring who will act as liaisons for national stakeholders. These partners will make the product available continuously during and after the project through their existing portals/services. The infrastructure and methods developed for DHF forecasting and early warning outputs (WP2) will be especially valuable for these services. It is planned that these outputs will be maintained after the project end date. The WP1 results will be in the form of a report, maps, and datasets which will be available through the responsible national partners but also through the respective WP leaders. Additionally, the entire dataset will be provided through the project sub-page at the intersucho.eu portal maintained by the Lead Partner. In the same the datasets and reports will be available through the standard means of the Interreg Central Europe Webpage and through links at www.keep.eu portal. The project will focus on the training and awareness building through seminars, webinars, short online videos as well as development of lectures for university courses (both for undergraduate students and for life-long education activities). These activities together with maintaining the DHF forecasting and early warning service and maintaining an overview map of actual DHF status and forecast for entire Central Europe will constitute a major legacy of the project and lasting improvement of the current status.

C.8.3 Transferability

Please describe how outputs and deliverables could be adapted or further developed to be used by additional target groups or rolled out in other territories beyond the partnership. How will communication activities ensure that relevant groups are aware of the available outputs and deliverables to be used?

The methodology developed for the DHF medium and extended range forecast and seasonal forecast together with the results of its testing will be part of the project report and also will be published in a renown peer reviewed journal as an open access publication (e.g. Agricultural and Forest Meteorology or Natural Hazards). This will be one avenue to maintain and spread the legacy of the project. The project will result also in the introduction of the DHF forecasts into existing systems of 7 different countries running independent DHF monitoring tools and this diversity will be an excellent test-base for evaluating different strategies and approaches. These outputs will also be summarised in the form of a research paper in peer reviewed journal (e.g. Environmental Management and Policy) and again made available to a broad audience through open access. The national systems will be developed to make the DHF forecast available to stakeholders and additional target groups besides those approached during the project life-time. It is envisaged that the DHF products (forecasts, maps, joint maps) will be also made available to the media. New target groups will be approached through efforts coordinated by the communication manager (ZALF). An efficient strategy is to engage Twitter social network accounts of existing monitoring systems to comment on an ongoing situation from an unusual angle - this, among others, can include cross border issues of DHF events, damages caused by DHFs events in neighbouring countries, examples of good practises of mitigating DHF effect, and /or illustrating the climate change impacts through the changed frequency of DHF events etc. The attention of potential users will be drawn to the existing national DHF monitoring/forecasting platform where all the information will be provided both in the national language and in English. The project know-how and methods will be developed and properly documented using FAIR approach in order to make the transfer to other regions (e.g. Hungary, northern Italy) but also beyond CE region possible.