Ref. Ares(2026)5514266 - 30/05/2026

VALIDATED LOCAL RISK ACTIONABLE DATA FOR ADAPTATION



D6.5
VALORADA Results Inventory

HEREON

The project has received funding from the Horizon Europe Framework Programme under grant agreement No 101112837

DELIVERABLE REPORT

Deliverable ID	**D6.5**
Deliverable name	**VALORADA Results Inventory**

WP	6	Project Management
Task	T6.4	IPR Management

Dissemination level[1]	PU
Nature[2]	R

Due delivery date (Annex 1)	31/05/2026
Actual delivery date	22/05/2026

Lead beneficiary	HEREON
Contributing beneficiaries	All beneficiaries

[1] Dissemination level: **PU** = Public, **PP** = Restricted to other programme participants (including the Commission Services), **RE** = Restricted to a group specified by the consortium (including the Commission Services), **CO** = Confidential, only for members of the consortium (including the Commission Services).

[2] Nature of the deliverable: **R** = Report, **P** = Prototype, **D** = Demonstrator, **O** = Other.

The project has received funding from the Horizon Europe Framework Programme under grant agreement No 101112837

Version Management			
Filename	VALORADA_D6.5_final.pdf		
Author(s)	Lola Kotova		
Approved by WP leader	Dr.Cristóbal Reveco	Date	22/05/2026
Approved by coordinator	Dr.Cristóbal Reveco Dr.Jörg Cortekar	Date	22/05/2026
Authorized by coordinator	Dr.Cristóbal Reveco Dr.Jörg Cortekar	Date	22/05/2026

Version	Date	Author(s)	Modification[3]
v0	11/05/2026	Lola Kotova	Creation
v1	05/05/2026	Lola Kotova	Modification
v2	20/05/2026	Lola Kotova, all beneficiaries	Modification
final	28/05/2026	Lola Kotova	Submitted

EC-Grant Agreement	101112837
Project acronym	VALORADA
Project title	Validated Local Risk Actionable Data for Adaptation
Instrument	HORIZON Research and Innovation Actions
Programme	HORIZON-MISS-2022-CLIMA-01
Start date of project	01/06/2023
Duration	36 months

Coordinator – Administrative information	
Project coordinator name	Dr. Jörg Cortekar
Project coordinator organization name	Helmholtz-Zentrum Hereon GmbH
Address	Max-Planck-Straße 1, 21502 Geesthacht
Phone Numbers	+49 (0)40-226 338-445
Email	joerg.cortekar@hereon.de
Project web-site	https://valorada-project.eu

[3] Creation, Modifications, Final version for evaluation, Revised version following evaluation, Final.

The project has received funding from the Horizon Europe Framework Programme under grant agreement No 101112837

TABLE OF CONTENT

1. EXECUTIVE SUMMARY 4
2. INTRODUCTION 4
3. EXPLOITATION FRAMEWORK AND INTELLECTUAL PROPERTY RIGHTS (IPR) 4
4. FAIR DATA MANAGEMENT PLAN 5
5. RESULTS INVENTORY 6
6. CONCLUSIONS 11

The project has received funding from the Horizon Europe Framework Programme under grant agreement No 101112837

1. Executive summary

The VALORADA's Results Inventory (VRI) lists the results of the project including their detailed description, the ownership (single partner or joint ownership), the target stakeholder sector(s) including detailed target organisation(s), and the planned use of the result, including potential protection and exploitation measures.

2. Introduction

The VALORADA project generates a wide range of results and outputs, including reports, tools/software, and catalogues. In this context, the VALORADA Results Inventory (VRI) was established and maintained within WP6 to ensure that appropriate access to IPRs is secured for the exploitation of developed products, under fair and suitable terms, and without creating barriers to market uptake.

More information about the exploitation of project results can be found in D5.4. The management of Intellectual Property Rights (IPRs) is addressed in D6.4 and are defined in Article 16 of the VALORADA Grant Agreement.

3. Exploitation Framework and Intellectual Property Rights (IPR)

The VALORADA project has produced a set of exploitable results with differentiated outcomes and impacts. These results reflect the project's interdisciplinary nature and its ambition to maximise both scientific excellence and societal relevance, while recognising that the execution of intellectual property rights (IPR) varies according to sector-specific exploitation pathways.

Throughout the project lifetime, VALORADA established an appropriate balance between open science principles and the need to protect confidential, commercially sensitive, or strategically relevant results. To support this process, the VALORADA IPR Management Plan was established and maintained under Work Package 6, see D6.4 for more information.

Within VALORADA a structured flexible approach to the exploitation of its results has been applied (see D5.4 for more details). This approach acknowledges both the opportunities and constraints associated with the development of climate services, particularly in relation to market maturity, user readiness, and the evolving policy landscape. It was designed to progressively identify, assess, and refine project results with the highest potential for uptake. At the same time, it allows for continuous adaptation as results evolve in terms of maturity, usability, and relevance to stakeholders.

As the first step, the exploitation workshops were carried out from December 2024 to January 2026. This timeframe reflected a progressive and iterative process aligned with the evolution of the project results.

Particular attention was given to the identification and further development of Key Exploitable Results (KERs), which represent the main drivers of the project's long-term impact and sustainability.

It is important to mention, that the project outputs remain open, modular and context-specific, combining methodologies, indicator workflows, demonstrator experience and, where relevant, partner-owned tools or background components.

The project has received funding from the Horizon Europe Framework Programme under grant agreement No 101112837

4. FAIR Data Management Plan

All tools developed in VALORADA complied with findability, accessibility, interoperability and reusability as described within the FAIR data principles.

Data Management Plan (DMP) was prepared in WP4 (see more details in D4.7- D4.9) aiming at appropriate data storage, preservation, sharing and privacy of the data generated during the project lifetime. The DMP is based on the FAIR principles guidelines, the European Data Strategy, and the Horizon Europe Open Research Data Pilot (ORD) and outlines:

- how the generated and collected data will be handled during and after the end of the project;
- the standards and formats used;
- how data will be shared and how it will be curated and or preserved.

The DMP positions FAIRness as a key framework orienting the articulation of goals and tasks across WPs. Thus, WP4 built a combination of FAIR indicators and quality KPIs as part of the GAP analysis and to assess internal processes, as well as the implementations through the partners, and marked this joint evaluation a routine checkpoint of VALORADA's data management plan.

The project has received funding from the Horizon Europe Framework Programme under grant agreement No 101112837

5. Results Inventory

The Key Exploitable Results developed in VALORADA have been already identified the proposal and are structured as follow, see Table 1:

Table 1. Results of VALORADA and Dissemination, Communication and Exploitation Measures (***initial***)

Specific user needs	*Expected results*	*Dissemination, Communication and Exploitation Measures*
New technologies need to account for a set of usability needs factors of local stakeholders since their early stages of development, i.e. technology acceptance and trust, ecological aspects, social values, etc.	**Successful large-scale demonstrator:** Implementation in 5 regions of data-manipulation tools to connect climate change with local knowledge systems to reduce climate risks. **New products**: Data catalogues, and data-manipulation tools for ingestion, normalisation and processing of data.	**Dissemination measures** to engage stakeholders: 2 promotional events; 6 scalability and replicability online workshops; a series of awareness- raising, capacity building and training webinars; 10 co-creation sessions; 6 videos, 5 press releases. **Exploitation roadmap** to ensure replication of VALORADA results and outcomes towards long-term sustainability and reinforced positioning as EU forum of reference for new emerging and enabling technologies. **Communication tools** to support dissemination efforts towards all stakeholders incl. the society at large: VALORADA-Hub website; social media presence; e-newsletter, press release; videos, communication material; storytelling. **Progress and performance monitoring framework** to ensure practical feedback on the methodological approach.
A co-design process leading to the development of VALORADA tools must convey a top-down technology development with a bottom-up approach reflecting usability needs of end users. This approach must be capable of anticipating changes and identifying societal pathways to maximise the uptake of novel tools with a view to increased adaptation and resilience to climate change.	**Valorised climate-datasets** that orient climate-policy making in 5 regions. **Products** conducive towards this result include: data-gap analysis, climate-impact chains, climate-data value chains, climate profiles, climate-adaptation narratives, data- management protocols and guidelines.	
Practical experience-based guidance gained through the application of tools in real-life settings, for ensuring scalability of tools to additional regions for the benefit of the society and environment.	**Catalogue of webinars and training materials supporting capacity building. Publications** of 3-sets of toolboxes to orient the uptake and use of data-manipulation tools for local administrations. Publication of scientific papers addressing the usability and uptake of new climate services.	
A human-centred approach is requested in the development of tools that take into consideration the role of individuals and groups in organisations, society and environment.	**Climate-data services** designed to deliver a social function, including increasing awareness, generating local narratives, voicing concerns, supporting communities of practice.	

The key ***final*** results of the VALORADA project are presented in Table 2.

The project has received funding from the Horizon Europe Framework Programme under grant agreement No 101112837

Table 3. VALORADA Results Inventory : Resources for Demonstrators

NN	Result	Description	Developed by	Target Sector and Stakeholders	Planned use of the results	Open Access
Open access databases for Demonstrators						
	Repository of VALORADA products in GitHub: Climate Impact Chains; Data catalogue; data valorisation framework; Indicator calculation workflow; static visualisation (EO and Climate data)	GitHub is a platform for storing and managing project files with version control, enabling transparent collaboration during and after the project. It ensures that all results, workflows, and documentation remain accessible beyond the project's end, so teams and stakeholders can continue using or building upon the outcomes.	HEREON	All Sectors Tier 1,2,3	The output of VALORADA remains accessible beyond the project's end	Yes
	Mapping of existing European climate data platforms	Listing of European climate and non-climate data platforms. More information in D1.2.	FMI	All Sectors Local authorities, municipalities, regions Tier 1 & 2	To inform regions and respondents in the analysis in task 1.4 about the available data platforms	Yes
Valorised Datasets for Demonstrators						
	Framework to reveal the climate value of socio-economic, demographic, and Earth Observation datasets	The framework is primarily designed to support decision makers in local administrations to tap on the climate value of the extensive datasets they already use, to generate knowledge for climate-risk reduction from existing data, and to apply it in practice. The framework provides key conceptual perspectives regarding value, it presents metrics to assess value, and it outlines a method to orient the process of valorisation of data and information in the context of climate adaptation. More information in D2.1.	Hereon	All Sectors All Demonstrators Tier 1	To inform regions and municipalities about the added value of specific datasets	Yes
	Climate risk indicators with detailed computing metrics	Climate risk indicators relate to different aspects of risk, climate impacts or adaptation to climate change that are essential for managing risks.. They are developed for each demonstrators. The	FMI	All sectors All demonstrators Tier 2 & 3	Indicators and the example computational metrics or workflows are transferred to	Yes

The project has received funding from the Horizon Europe Framework Programme under grant agreement No 101112837

		aim is not only to provide an exhaustive list of indicators but a starting point for finding and defining relevant and SMART (Specific, Measurable, Available and Relevant) indicators of climate risks and climate change adaptation. More information in D1.3			WP2 and WP4 to assist in the implementation of the data catalogs and tools (under development)	
Tools for Demonstrators						
	Climate Impact Chains	Through participatory contextualisation workshops in each demonstrator location, specific climate impact chains have been formulated. The climate impact chains are needed to assess the regional impacts of climate change on key community systems, including multiple hazards through, e.g., complex, and cascading effects. More information in D1.1.	HEREON	All sectors All demonstrators Tier 2 & 3	Climate impact chains contextualize the municipality's or region's situation regarding already experienced climate events, allowing for the preliminary identification of local impacts and effects resulting from climate change, both negative and positive. They graphically represent the cause-effect relationships of impacts, vulnerabilities, and exposures in the context of climatic risk on specific sectors or areas, along with the consequences this may have for the demonstrator	Yes
	Resilience information catalogue : Generic single catalogue of all indicators and examples required of their respective data sources	The catalogue structure achieves the described objectives by acting as a nexus connecting the indicators used to measure risk (WP1) and the data sources available and needed by the tools (WP2, WP4) in order to calculate and visualize these risks. Thus, users can navigate possible indicators, recognize and identify data requirements, and improve understanding of the role of specific datasets in measuring climate risk. The catalogue includes guidelines for self-implementation, thereby supporting upscaling of this solution. In this respect, the interim catalogues focus on the features needed to guide	HEREON HCU	All sectors All demonstrators Tier 1 The catalogue will include guidelines for implementation in Tier 2 regions	Each demonstrator has access via the catalogues to the list of indicators pre-selected for the local case on the basis of the Climate Impact Chains and contextualization workshop results. It displays the basic information about the indicator and its calculation methods, linking each	Yes

The project has received funding from the Horizon Europe Framework Programme under grant agreement No 101112837

		choices to address specific climate risks. More information in D2.3.			indicator with its generic data requirements	
	GEONetWORK Metadata Catalogue	The GeoNetWork metadata catalogue centralizes records describing the calculated indicators (definitions, calculation methods, and data used) as well as the associated datasets, including their descriptions and sources. The GeoNetWork metadata catalogue is available for all demonstrators.	TerraNIS	All sectors Regions, Municipalities Tier 1 & 2	In demonstrators for stakeholders and further interested parties to illustrate the connection of indicators with use of data	Yes
Tutorial Jupyter Notebooks						
	Drought	The tutorial demonstrate end-to-end analysis approaches for droughts, including data access, processing, indicator computation, and interpretation of results. They follow a user-oriented, step-by-step structure, combining narrative explanations with practical exercises. Particular emphasis is placed on the use of standardised datasets, reproducible methods, and scalable workflows aligned with FAIR and open-science principles	ECMWF	Climate change adaptation practitioner / intermediary Climate service providers and data scientists National meteorological and hydrological services (NMHS) Policy and decision-makers in climate adaptation and risk management Researchers and academic institutions Sectoral users(e.g. agriculture, water management, infrastructure planning, disaster risk reduction)	The notebooks are intended for training, capacity building, and knowledge transfer. They can be used in workshops, self-learning contexts, and technical trainings to support uptake of C3S data and tools. In addition, they serve as reference implementations that can be adapted and extended for operational workflows and sector-specific applications	Openly available as Jupyter notebooks via public repositories, ensuring free access, transparency, and reusability. They are designed to be easily deployable in standard computing environments and support collaborative improvement through open-source practices https://ecmwf-training.github.io/drought-exposure/ Forked into the VALORADA repository
	Extreme precipitation	The tutorials demonstrate end-to-end analysis approaches for extreme precipitation, including data access, processing, computation of return times, and interpretation of results. They follow a user-oriented, step-by-step structure, combining	ECMWF	Climate change adaptation practitioner / intermediary	The notebooks are intended for training, capacity building, and knowledge transfer. They can be used in	Openly available as Jupyter notebooks via public repositories, ensuring free access, transparency, and

The project has received funding from the Horizon Europe Framework Programme under grant agreement No 101112837

		narrative explanations with practical exercises. Particular emphasis is placed on the use of standardised datasets, reproducible methods, and scalable workflows aligned with FAIR and open-science principles		Climate service providers and data scientists National meteorological and hydrological services (NMHS) Policy and decision-makers in climate adaptation and risk management Researchers and academic institutions Sectoral users(e.g. agriculture, water management, infrastructure planning, disaster risk reduction)	workshops, self-learning contexts, and technical trainings to support uptake of C3S data and tools. In addition, they serve as reference implementations that can be adapted and extended for operational workflows and sector-specific applications	reusability. They are designed to be easily deployable in standard computing environments and support collaborative improvement through open-source practices https://ecmwf-training.github.io/drought-exposure/ Forked into the VALORADA repository
Visualization and analysis tools for Demonstrators						
	AUTH Land Degradation	Land Degradation is a monitoring system for specific (climate risk indicators) soil spatial explicit indicators. The tool could offer various geospatial outputs of soil erosion, SOC and soil texture, thus providing valuable information for decision-making and planning supporting the actual actors involved	Aristotle University of Thessaloniki	Land use Local authorities	Ready to use in Greece	The indicators (Sand, Silt,Clay, Initial SOC) and the erosion assessment post wildfire are open to be used as baselines for future studies or future needs of the regional authorities, municipalities
	Flooding tool	This tool provides spatial indicators related to flood exposure and vulnerability within a given territory, supporting risk assessment and resilience planning	TerraNIS for Bulgaria, Italy and Czech Republic TerraSpatium for Greece	Flood risk management Local authorities	Ready to use in Burgas, Molise, Mlada Boleslav, Prerov and Central Greece	Yes

The project has received funding from the Horizon Europe Framework Programme under grant agreement No 101112837

	Forest tool	This tool delivers indicators on forest cover and composition within a territory, supporting land monitoring	TerraNIS for Bulgaria, Italy and Czech Republic TerraSpatium for Greece	Land use Local authorities	Ready to use in Gabrovo, Molise, Mlada Boleslav, Prerov and Central Greece	Yes
	Protected area tool	This tool assesses the extent and structure of protected areas within a territory, supporting environmental governance	TerraNIS	Land use Local authorities	Ready to use in Molise	Yes
	Agriculture tool	This tool provides indicators related to agricultural land use and land condition, supporting sustainable land management		Land use Local authorities	Ready to use in Mlada Boleslav, Prerov, Montpellier, Sicoval and Molise	Yes
Training Materials for Demonstrators						
	Capacity Building programme	Series of webinars taking place in 2024-2025. These aim to raise awareness and allow the exchange of best practices on topics relevant for VALORADA	CKIC and VALORADA Consortium	All sectors Local authorities as well as service providers and the broader community Tier 1 & 2	Available on the website	Yes
Publications						
	Scientific Articles	Several scientific articles have been published in the open access journals		Research communities, wide range od stakeholders	Available on the website	Yes
	Newsletters	Project newsletters are used to communicate information about all aspects of a project. This could be information related to research results of VALORADA, upcoming events or opportunities for engagement	G.A.C and VALORADA Consortium	All sectors, Tier 1,2 & 3	Available on the website	
	Case studies and success stories	Case studies and success stories document and communicate the impact of VALORADA solutions in a clear and accessible way. Each case study presents a narrative that describes the challenge faced by a specific user, the solution provided by	EARSC	All sectors, Tier 1,2 & 3	Available on the website	Yes

The project has received funding from the Horizon Europe Framework Programme under grant agreement No 101112837

		VALORADA, and the resulting benefits and broader impacts. It aims to demonstrate the value of climate services and support their wider uptake across different contexts and sectors.				
	Policy Briefs	The policy briefs are short, concise papers, seeking to convince policy- and decision-makers of advancing certain policies in their area of activity. Two policy briefs are available at the Homepage	EARSC	All sectors Local authorities Tier 1 & 2	PDFs to be disseminated via different project channels such as website, social media, but more importantly between local EO partners and local authorities	Yes
Visualization and analysis tools under licensing adapted in VALORADA						
	GreenCity/Landia	GreenCity / Landia is an urban vegetation and urban climate observatory dedicated to land use planning. The tool enables the visualization of vegetation cover in cities through a wide range of indicators related to green infrastructure and urban comfort provided by vegetation. It also integrates urban climatology indicators, such as the vulnerability of populations to heat waves. The tool therefore supports urban planners and decision-makers to manage and make informed decisions on their territory	TerraNIS	Urban areas Local Authorities, Especially in metropolitan areas Tier 1	Ready to use in Burgas, Gabrovo, Mlada Boleslav, Prerov, Sicoval and Montpellier	No The intellectual property rights are currently held by TerraNIS
	Pixagri Territories	Pixagri Territoires is an agricultural decision-support tool dedicated to land use planning and territorial management. It enables the visualization of crop water demand at the territorial scale under several climate scenarios, providing a clear understanding of potential agricultural water needs	TerraNIS	Local authorities, water agencies, chambers of agriculture, farmer cooperatives Tier 1 & 2	Ready for the demonstrators that selected the indicators and sent the data needed for indicators calculation: Occitanie, Czech Republic and Molise	No The intellectual property rights are currently held by TerraNIS
	TerraCoast	Microtidal coastline monitoring tool that combines different indicators	TerraSpatium	Regions, Municipalities, Natura2000 managers, Coastal Observatories, and Insurance companies	Ready to use in Greece	The TerraCoast platform follows a hybrid approach to intellectual property. While certain algorithms and technical components remain protected, the user

The project has received funding from the Horizon Europe Framework Programme under grant agreement No 101112837

				Tier 1 & 2 & 3		interface and overall platform are designed to be open source, facilitating wider access and adoption

The project has received funding from the Horizon Europe Framework Programme under grant agreement No 101112837

6. Conclusions

Deliverable D6.5 provides a summary of VALORADA's key achievements, helping to promote the outcomes of VALORADA to stakeholders, policymakers, and wider audiences.

The project has received funding from the Horizon Europe Framework Programme under grant agreement No 101112837