



LINKS

Strengthening links between technologies and society
for European disaster resilience

D9.4 FIRST STATUS REPORT ON THE DEVELOPMENT AND DISTRIBUTION OF DISSEMINATION MATERIAL

STATUS REPORT

ANTONIO OPROMOLLA – LINK CAMPUS UNIVERSITY

AMREESHA JAGARNATHSINGH – VRIJE UNIVERSITEIT AMSTERDAM

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AUTHORS& CONTRIBUTORS

Author	Institution	Authored Sections
Antonio Opromolla	LCU	Entire Document
Amreesha Jagarnathsingh	VU	Entire Document
Contributor	Institution	Contributed Sections
Nathan Clark, Chiara Fonio	VU	Section 2 (Table 1 and 2), 3 (Table 3, 5, 6, 7), 4 (Table 8, 12), 5 (Table 15), 6 (Table 16) contributions
Sara Bonati	UNIFI	Section 2 (Table 1 and 2), 3 (Table 3, 5, 7), 4 (Table 8, 13), 5 (Table 15), 6 (Table 16) contributions
Emmanuel Raju, Anne Bach Nielsen	UCPH	Section 2 (Table 1 and 2), 3 (Table 3, 7), 4 (Table 8, 11, 12, 13), 5 (Table 15), 6 (Table 16) contributions
Therese Habig, Maximilian Kiehl, Richard Lücke	SIC	Section 2 (Table 1 and 2), 3 (Table 3, 7), 4 (Table 8, 9), 4.1.2, 5 (Table 15), 6 (Table 16) contributions
Giacomo Bianchi, Filippo Giacinti	EOS	Section 2 (Table 1 and 2), 3 (Table 3), 4 (Table 8), 4 (Table 10), 5 (Table 15), 6 (Table 16) contributions
Lene Stolpe Meyer	FRB	Section 3 (Table 4), 4 (Table 13)
Francesco Graziani	SCIT	Section 4 (Table 13)
Dieter Nuessler	FEU	Section 3 (Table 4)
Vlatko Jovanovski	DPPI SEE	Section 3 (Table 4)

REVIEWS

Reviewer	Institution	Reviewed Sections
Giacomo Bianchi	EOS	Entire Document
Francesco Graziani	SCIT	Entire Document
Nathan Clark	VU	Entire Document
Amreesha Jagarnathsingh	VU	Entire Document

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EXECUTIVE SUMMARY

About the project

LINKS “Strengthening links between technologies and society for European disaster resilience” is a comprehensive study on disaster governance in Europe. In recent years, social media and crowdsourcing (SMCS) have been integrated into crisis management for improved information gathering and collaboration across European communities. The effectiveness of SMCS on European disaster resilience, however, remains unclear, the use of SMCS in disasters in different ways and under diverse conditions. In this context, the overall objective of LINKS is to strengthen links between technologies and society for improved European disaster resilience, by producing sustainable advanced learning on the use of SMCS in disasters. This is done across three complementary knowledge domains:

- Disaster Risk Perception and Vulnerability (DRPV)
- Disaster Management Processes (DMP)
- Disaster Community Technologies (DCT)

Bringing together 15 partners and 2 associated partners across Europe (Belgium, Denmark, Germany, Italy, Luxembourg, the Netherlands) and beyond (Bosnia & Herzegovina, Japan), the project will develop a framework to understand, measure and govern SMCS for disasters. The LINKS Framework consists of learning materials, such as scientific methods, practical tools, and guidelines, addressing different groups of stakeholders (e.g. researchers, practitioners, and policy makers). It will be developed and evaluated through five practitioner-driven European cases, representing different disaster scenarios (earthquakes, flooding, industrial hazards, terrorism, drought), cutting across disaster management phases and diverse socioeconomic and cultural settings in four countries (Denmark, Germany, Italy, the Netherlands). Furthermore, LINKS sets out to create the LINKS Community, which brings together a wide variety of stakeholders, including first-responders, public authorities, civil society organisations, business communities, citizens, and researchers across Europe, dedicated to improving European disaster resilience through the use of SMCS.

About this deliverable

This deliverable seeks to provide an overview of the dissemination and exploitation carried out during the first 18 months of the project. It ties LINKS’ results and key messages to the target groups, organised by channels, materials, and events. Importantly, LINKS adopted a results-based approach and a target group-based dissemination approach. Furthermore, it highlights how these activities contributed to LINKS’ outcomes and impact. This report is crucial to monitor the efficacy of the implemented dissemination activities, and to identify elements for improvement. As will be argued in this report, LINKS obtained good results for implementing dissemination activities, establishing meaningful interactions with a large number of stakeholders.

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LIST OF ACRONYMS

Acronym / Abbreviation	Description
DEC	Dissemination, Exploitation, Communication
DCT	Disaster Community Technologies
DMP	Disaster Management Processes
DRPV	Disaster Risk Perception and Vulnerability
EI	Expected Impacts
LCC	LINKS Community Center
LCW	LINKS Community Workshop
SMCS	Social Media and Crowdsourcing
TG	Target Group

DEFINITION OF KEY TERMS

Term	Definition ¹
Communication	Taking strategic and targeted measures for promoting the project and its results to a multitude of audiences, including the media and the public, and possibly engaging in a two-way exchange. ²
Disaster Community Technology	A software(-function) for interaction with, within or among groups of people who have similar interests or have common attributes (communities) in case of a disaster.
Disaster Risk Perception and Vulnerability	Disaster Risk Perception is the way individuals and groups appropriate, subjectivise and perceive risks that might or might not be calculated in an objective manner during risk assessments. It directly influences people's ability and level of preparedness and also includes 'risk awareness'. Vulnerability refers to the conditions determined by physical, social, economic and environmental factors or processes which increase the

¹ Unless stated otherwise, all definitions are derived from the LINKS Glossary.

² Ala Mutka K. (2020). Dissemination and Exploitation in Horizon 2020. Retrieved December 16, 2020 from: https://ec.europa.eu/research/participants/data/ref/h2020/other/events/2017-03-01/8_result-dissemination-exploitation.pdf

	susceptibility of an individual, a community, assets or systems to the impacts of hazards.
Disaster Management Process	A collective term encompassing a systematic series of actions (or steps) taken to reduce and manage disaster risk. Disaster management processes are often associated directly with the four phases of the Disaster Management Cycle (preparedness, response, recovery, mitigation).
Dissemination	The public disclosure of results by any appropriate means, including by scientific publications in any medium. ²
Exploitation	The utilisation of results in further research activities other than those covered by the project, or in developing, creating and marketing a product or process, or in creating and providing a service, or in standardisation activities. ²
Impact	Scientific, social, and economic changes over a longer period. ³
LINKS Community	A sustainable stakeholder community consisting of multidisciplinary stakeholders from several countries, professions and schools of thought. The main stakeholders involved in the LINKS Community are: practitioners, industry, decision makers, researchers and networks (the scientific community), citizens and civil society.
LINKS Community Center	The LCC brings together different stakeholders (LINKS Community) in one user-friendly and flexible web-based platform and enables them to exchange knowledge and experiences and to access, discuss and assess learning materials on the usage of SMCS in disasters.
LINKS Framework	A set of best-practices consisting of methods, tools and guidelines for enhancing the governance of diversity among the understandings and applications of SMCS in disasters for relevant stakeholders.
Outcome	Changes in behaviour, relationships and activities, resulting from results. This includes the uptake or use of the project's results by different target groups. ³
Result	What is produced within the project, usually in the form of results within deliverables. ³

³ Elaborated on the basis of: European Commission (2021). Horizon Europe Programme Guide. Retrieved December 16, 2021, from https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/programme-guide_horizon_en.pdf.

1. INTRODUCTION

This deliverable provides an overview of the development and distribution of dissemination material produced within the LINKS project from month (M)1 to M18. Dissemination refers to 'the public disclosure of the results by any appropriate means, including scientific publications in any medium'.⁴ Dissemination activities within LINKS seek to transfer the results to those who can best make use of them, contributing to maximising the impact of the project. In LINKS, the dissemination activities are directly connected to the communication activities (which aim at informing society about the overall project) and to the exploitation activities (which target the actual uptake of results for scientific, societal and economic purposes). In this context, this deliverable seeks to provide information about the dissemination of LINKS results (section 3), but also about making results available to the target groups (section 4).

Deliverable (D)9.1 (LINKS Dissemination, Exploitation and Communication Strategy), published in October 2020, established the overall dissemination, exploitation, and communication (DEC) strategy of the project, by laying out objectives, target groups, modes of implementation and expected impacts. This deliverable (D9.4) is connected to D9.1; it is the first report of the dissemination activities planned in D9.1.

Compared to the initial plan defined in D9.1, several important aspects have been adjusted, namely the categorisation of target groups and the methods to evaluate LINKS' implemented activities. As will be illustrated in later sections, the employed channels, materials, and events have also been nuanced.

First, the target groups have been slightly redefined during the project, by splitting Citizens and Media into two target groups (Feedbackers and Disseminators), and by adding the target group Businesses. The updated categorisation of target groups for the DEC activities is now:

- Users:
 - Practitioners (organisations specialised in giving assistance in emergency situations, e.g.: fire and rescue services, medical emergency services, police, civil protection forces),
 - Policy and Decision makers (legislative and executive bodies operating at different administrative levels),
 - Local Communities (groups linked by social and organisational relationships at the local level deriving from common interests, values and needs),
 - Businesses (small, medium and big enterprises in the field of social media and technologies);

⁴ Ala Mutka K. (2020). Dissemination and Exploitation in Horizon 2020. Retrieved December 16, 2020 from: https://ec.europa.eu/research/participants/data/ref/h2020/other/events/2017-03-01/8_result-dissemination-exploitation.pdf.

- Developers: individual researchers, universities and academic groups working on different aspects in the field of disasters;
- Feedbackers: different groups of citizens who need to be informed regarding a disaster and that can provide related data and information;
- Disseminators: media informing about disasters.

Second, the evaluation method defined in D9.1⁵ entailed only quantitative indicators (e.g. number of visitors, page views, number of citations, etc.) which only partially demonstrate the impact of the project's dissemination activities. For this reason, this deliverable uses both quantitative and qualitative indicators to demonstrate the outcomes for the identified target groups. An overview of quantitative and qualitative indicators is provided in Annex II of this deliverable.

In section 2, we define the (in progress and already available) LINKS results – and link the key messages to each target group. Section 3 describes and evaluates the activities (carried out until M18) on disseminating the LINKS results to the target groups, through the dissemination channels, materials and events. Following the same outline on channels, materials and events, section 4, focuses on making the LINKS results directly available to the target groups. Section 5 illustrates how the activities contribute to the LINKS expected outcomes and impacts, with special attention to the central role of the LINKS Impact Task Force. Lastly, the Conclusion, notes the work for future dissemination activities.

⁵ Whereas the Dissemination, Exploitation and Communication Strategy (D9.1) put together a list of quantitative indicators to measure the project's impact, the Periodic Technical and Financial Report (D1.2) evaluates the results of activities implemented until M12. Based on this quantitative assessment, LINKS has obtained excellent (or satisfactory) results, and strives to increase these even more in the updated Dissemination, Exploitation and Communication Strategy (D9.2, to be published in February 2022).

2. DEVELOPMENT OF LINKS RESULTS: TARGET GROUPS AND KEY MESSAGES

As argued in the Introduction, dissemination activities focus on the distribution of project results to the target groups (TGs). Within LINKS, the Consortium succeeded in generating a set of interesting results in M18 (out of 42) and continues to develop even more results. Table 1 displays the LINKS results to date (available results, as well as results in progress), combined with a short description.

Table 1: Description of LINKS Results

RESULTS	DESCRIPTION OF THE RESULTS
Disaster Risk Perception and Vulnerability Tool (WP2) - <i>in progress</i>	Model for the analysis, evaluation and identification of vulnerability based on three levels: accessibility, connectivity, and mobility to social media and crowdsourcing (SMCs). It will be translated in grids of (or a guide to) evaluation/analysis, according to different areas of application.
Multimedia product for education (WP2-WP6) - <i>in progress</i>	The toolkit will consist of two parts: all materials that will be used for educational purposes on raising children's awareness of the importance of being prepared for disasters – as well as a multimedia product for child-friendly communication.
Literature Review on Disaster Risk Perception and Vulnerability (WP2) - <i>in progress</i>	A state of the art on how the risk perception and vulnerability have been addressed in academic literature.
Pocket Guidelines for Ethics (WP1-WP2-WP6) - <i>in progress</i>	A concise checklist and guide on how to ensure ethics in research - and especially with vulnerable groups.
'Resilience Wheel': Drivers for Institutional Resilience (WP3) - <i>available</i>	Key drivers for understanding successful institutions in guiding behaviour and enhancing disaster management processes for greater resilience. It consists of decision-making procedures; access to credible information; vulnerability; learning and the application of new knowledge.
Disasters Management Process Landscape (WP3) - <i>available</i>	Mapping of the use of social media and crowdsourcing (SMCs) in disaster risk management policies.
Disasters Management Process Methods for case assessment (WP3) - <i>available</i>	The methodology to guide and support the development of the LINKS Framework and the five case-based assessments of the LINKS Framework.
Disaster Community Technology Landscape (WP4) - <i>in progress</i>	All relevant information of the Disaster Community Technology (DCT) landscape connected. Consists of different elements, e.g.: list of existing DCT; categorisation of DCT (DCT-schema); guidelines about the usage of SMCS (and DCTs); practice examples for a DCT-usage; knowledge created and gathered; literature bibliography - overview about relevant conferences and events; overview about relevant projects, networks, and contacts.
LINKS Framework (WP5) - <i>in progress</i>	A set of scientific methods, practical tools, and guidelines addressing researchers, practitioners, and policy makers to understand, measure and govern SMCS for disasters. Each

RESULTS	DESCRIPTION OF THE RESULTS
	component can be considered as a result, and as such can be exploited by different stakeholders - e.g. methodological component: researchers.
LINKS Community Center (WP7) - <i>available (draft)</i>	An interactive platform providing easy and interactive online access to results generated by the LINKS project.
LINKS Community (WP8) - <i>in progress</i>	A community of multidisciplinary stakeholders from several countries, professions, and schools of thoughts, learning and benefiting from the project development and results – and in turn providing their knowledge and expertise for the improvement of LINKS research.

Table 2 specifies the target groups⁶ and key messages for each LINKS result. Importantly, and in line with the project's bottom-up approach, the key messages have been tested and validated by practitioners in the LINKS Consortium during a meeting on 15 December 2021. Moreover, the key messages are tied to the LINKS Expected Impacts (EI) (as identified in the Grant Agreement). For more information, Annex I entails a coherent overview of each LINKS result and activity per Expected Impact.

Table 2: LINKS Results: Target Groups and Key Messages

RESULTS	TARGET GROUPS	KEY MESSAGES (LINKS EXPECTED IMPACTS)
Disaster Risk Perception and Vulnerability (DRPV) Tool	Practitioners	The Disaster Risk Perception and Vulnerability (DRPV) tool can guide practitioners in promoting accessible/inclusive information and communication campaigns (EI-4; EI-5; EI-6; EI-7).
	Policy Makers	The Disaster Risk Perception and Vulnerability (DRPV) tool can guide decision makers in defining priorities and more effective and inclusive information and communication campaigns (EI-4; EI-5; EI-7).
	Local Communities Feedbackers	The Disaster Risk Perception and Vulnerability (DRPV) tool provides information on the accessibility of the social platforms and their usefulness to communicate with authorities and practitioners (EI-4; EI-7).
	Businesses	The Disaster Risk Perception and Vulnerability (DRPV) tool provides indications on how to produce more inclusive technological products/solutions (EI-4; EI-7).
	Developers	The Disaster Risk Perception and Vulnerability (DRPV) tool opens new paths to discuss DRPV in a dynamic and integrated perspective, especially in European contexts (EI-1; EI-2; EI-3; EI-6; EI-7; EI-8).
Multimedia product for education	Practitioners	The multimedia product for education illustrates the advantages of child participation in disaster management processes and provides an approach that can be scaled up (EI-5).
	Local Communities Feedbackers	

⁶ Local Communities and Feedbackers are regarded as one category, due to the low impact of the project activities on the individual citizens (Feedbackers) at this stage. Therefore, for the time being, the latter is considered as part of the broader category of Local Communities.

RESULTS	TARGET GROUPS	KEY MESSAGES (LINKS EXPECTED IMPACTS)
	Developers	The multimedia product for education reinforces mechanisms for child participation in disaster management processes (EI-4).
	Policy Makers	
Literature review on Disaster Risk Perception and Vulnerability (DRPV)	Developers	The literature review provides knowledge about vulnerability and DRP (Disaster Risk Perception) and social media and crowdsourcing (SMCS) in disasters, suggesting future paths of research that need to be implemented (EI-4; EI-7).
Pocket Guidelines for Ethics	Practitioners	The pocket guide stimulates in depth analysis of ethics in research, especially with vulnerable groups (EI-1; EI-7).
	Developers	
'Resilience Wheel': Drivers for institutional resilience	Practitioners	The different drivers/categories that can be used to understand resilience from a governance perspective (EI-3; EI-8).
	Policy Makers	With increasing use of social media in disasters, the link and the interaction between people and institutions (a people-centred approach) is important, as well as a holistic approach when addressing technology use in disaster governance (EI-3; EI-8).
	Businesses	The drivers provide a basic guiding tool to assess, reflect and analyse specific areas to be improved within Institutions in using social media and crowdsourcing (SMCS) in disaster risk management (EI-3).
	Developers	The drivers provide a novel way of conceptualising governance and resilience in an SMCS context in disaster research. This can be applied to other settings (EI-3).
Disaster Management Process (DMP) Landscape	Practitioners	An overview of good guidelines and official procedures on how to use social media and crowdsourcing (SMCS) in disaster risk management. At the European level, policies and legal frameworks that guide this space exist. This includes frameworks related to data privacy (EI-5; EI-8).
	Policy makers	
	Businesses	
	Developers	
Disaster Management (DRM) Process Method for case assessment	Developers	The design and methods can be used by any researcher who want to do similar explorative and in-depth research on social media and crowdsourcing (SMCS) in the context of disaster risk governance. Further, it highlights the need for contextualisation of research questions and the importance of developing questions together with relevant stakeholders (EI-2; EI-3; EI-5; EI-6).
Disaster Community Technologies (DCT) Landscape	Practitioners	The Disaster Community Technologies (DCT) Landscape provides a highly needed overview about existing SMCS technologies on the market. In addition to the DCT schema as a selection guide for suitable solutions, it contains practical reports, specific guidelines, and contact options (EI-3; EI-4; EI-5; EI-6; EI-7; EI-8).
	Policy Makers	

RESULTS	TARGET GROUPS	KEY MESSAGES (LINKS EXPECTED IMPACTS)
	Local Communities Feedbackers	The Disaster Community Technologies (DCT) Landscape provides technologies, solutions and examples on different crowdsourcing platforms and thus creates the opportunity for a local community to inform itself according to its needs (EI-4; EI-5; EI-6; EI-7).
	Businesses	The Disaster Community Technologies (DCT) Landscape provides a market overview regarding DCT and the opportunity to integrate own products and training material into the landscape (EI-5; EI-6).
	Developers	The Disaster Community Technologies (DCT) Landscape provides the ability to supplement or combine real disaster reports and DCT used therein with appropriate scientific research and projects. It is also possible to present research results and DCT developed in projects (EI-1; EI-2; EI-6; EI-7).
	Disseminators	The Disaster Community Technologies (DCT) Landscape provides an overview of suitable technologies to be informed about the latest information from social media (monitoring) and to also publish information on different channels (EI-5; EI-6).
LINKS Framework	Practitioners	The LINKS Framework structures relevant knowledge around the uses of social media and crowdsourcing (SMCS) around: type of hazard, hazard phase and thematics. This bulk of knowledge can be useful during different phases: e.g. in the preparation phase to come up with good practices on the uses on SMCS (EI-4).
	Policy Makers	The LINKS Framework provides the opportunity to explore guidelines and policies to understand if and how they are put into practice (EI-8).
	Local Communities Feedbackers	The LINKS Framework provides access to experiences, best practices and more in general to knowledge that local communities (as well as specific groups) may be interested in to be more actively engaged with e.g. the communication strategies of the authorities (EI-4; EI7).
	Businesses	The LINKS Framework provides access to a portfolio of tools structured along the lines of existing guidelines and/or gaps (EI-5).
	Developers	The LINKS Framework provides access to a knowledge base on the most updated literature on the uses of social media and crowdsourcing (SMCS) in the three LINKS knowledge domains, a set of methods can be by used well beyond LINKS by researchers who are interested in exploring similar issues, the findings from the cases that can inspire future research (EI-4).
	Disseminators	There is no key message for the media in general, given that it depends on various types of media (EI-4).
LINKS Community Center (LCC)	Practitioners	The LINKS Community Center (LCC) makes the relevant outputs of LINKS accessible in a target group-specific fashion, showing only the relevant and actionable information. It provides connections to useful stakeholders and networks working with social media and crowdsourcing (SMCS) for disaster risk management (EI-1; EI-3; EI-4; EI-5; EI-6; EI-7).

RESULTS	TARGET GROUPS	KEY MESSAGES (LINKS EXPECTED IMPACTS)
	Policy Makers	The LINKS Community Center (LCC) makes the outputs of LINKS easily accessible and provides the key takeaways in a structured and compact fashion (EI-1; EI-2; EI-4; EI-5; EI-8).
	Developers	The LINKS Community Center (LCC) provides insights into the research methodology used in LINKS. It provides raw research data where possible for further usage (e.g. the DCT - Disaster Community Technologies list). It also provides a structured and easily accessible 'treasure trove' on research information related to social media and crowdsourcing (SMCS) (EI-1; EI-2; EI-3; EI-4; EI-5; EI-6; EI-7; EI-8).
	Local Communities Feedbackers	The LINKS Community Center (LCC) provides examples how other local communities used social media and crowdsourcing (SMCS), leading both to a motivation for using SMCS in disasters on a local scale and inspiration on how it could be used (EI-1; EI-2; EI-4; EI-5; EI-6; EI-7).
	Businesses	The LINKS Community Center (LCC) provides a market overview on Disaster Community Technologies (DCT), to promote own products, and training materials for own products (EI-3; EI-4; EI-5; EI-6; EI-8).
	Disseminators	The LINKS Community Center (LCC) provides guidance on how to report on local emergencies on social media and how to react to comments of users (EI-5; EI-7).
LINKS Community	Practitioners	The LINKS Community involves practitioners in a discussion forum to explain their needs and gaps to other stakeholders, which will be useful to develop new methods, products, and services to assist them in using social media and crowdsourcing (SMCS) in disasters (EI-3; EI-4).
	Policy Makers	The LINKS Community provides a better understanding of the challenges existing when using SMCS in disasters, which will help shape future policies in that regard (EI-3; EI-4).
	Local Communities Feedbackers	The LINKS Community provides local communities with the opportunity to present the real challenges when using social media and crowdsourcing (SMCS) in disasters based on their own local experiences (EI-3; EI-4).
	Businesses	The LINKS Community provides businesses with the opportunity to introduce the applications to a wide variety of stakeholders. Then, by discussing with practitioners, businesses will be able to provide the products that tackle the needs of end-users. This is beneficial for them as it implies that their investments will lead to procurement (EI-3; EI-4).
	Developers	The LINKS Community provides researchers with the opportunity to introduce their findings, concepts and methodologies on the use of social media and crowdsourcing (SMCS) for disasters (EI-2; EI-3; EI-4; EI-5; EI-6; EI-7).
	Disseminators	The LINKS Community provides guidance and best practices on how to report on local emergencies on social media and how to react to comments of users (EI-5; EI-7).

Key Takeaways from this Section

- The Key Results of the project (until M18) have been defined (Table 1).
- The Key Messages for each target group have been developed.

3. DISSEMINATION OF LINKS RESULTS

Dissemination activities can be distinguished in 2 steps:⁷

- Informing about Results (section 3);
- Making the Results Available for Use (section 4).

This section focuses on the dissemination activities implemented through channels, materials and events carried out by the Consortium and the individual partners, to *inform* different target groups about the project's results. As such, it seeks to make target groups aware that the Consortium has achieved a result.

In this section, channels are defined as digital platforms through which materials and contents associated to the results are disseminated. Materials are intended as digital/physical tangible outputs seeking to distribute the LINKS results to the target groups. Events refer to formal and informal meetings with the target groups to inform them about results.

Table 3 shows the dissemination activities realised through channels, materials, and events. These will be specified in more detail in the sections below.

Table 3: LINKS Results: Channels, Materials, and Events

RESULTS	CHANNELS	MATERIALS	EVENTS
Disaster Risk Perception and Vulnerability Tool	LINKS and WP2 partners websites and social media	Infographic (Practitioners), Articles (e.g. in: Emergenza 2.0, GeoSmartMagazine, UmbriaCronaca, etc.), 1 st and 2 nd Newsletter	IDDRR 2020, TIEMS 2020, Accessibility Days 2021, CERIS Events, EGU General Assembly 2021, 1 st LINKS Conference, ISCRAM 2021, FEU Events, DPPI SEE Events, Euraxess Events
Multimedia product for education	WP2 partners websites and social media	Articles (Emergenza 2.0)	IDDRR 2021
Literature Review on Disaster Risk Perception and Vulnerability	LINKS and WP2 partners websites and social media	1 st and 2 nd LINKS Newsletter, Articles (e.g. in: Emergenza 2.0, VivereUmbria, UmbriaCronaca, etc.)	Accessibility Days 2021, CERIS events, ISCRAM 2021, EGU General Assembly 2021, 1 st LINKS Conference
Pocket Guidelines for Ethics	WP2 partners websites and social media	Articles (Emergenza 2.0)	

⁷ Ala Mutka K. (2020). Dissemination and Exploitation in Horizon 2020. Retrieved December 16, 2020 from: https://ec.europa.eu/research/participants/data/ref/h2020/other/events/2017-03-01/8_result-dissemination-exploitation.pdf.

RESULTS	CHANNELS	MATERIALS	EVENTS
Drivers for Institutional Resilience - Resilience Wheel	LINKS and WP3 partners websites and social media	1 st and 2 nd LINKS Newsletter, Articles in PreventionWeb,	IDDRR 2020 and 2021, CERIS events, DRS-01 Mini Conference, 1 st LINKS Conference, ISCRAM 2021, ESA 2021, EFDRR 2021, DPPI SEE Events, Euraxess Events
Disaster Management Process Landscape	LINKS and WP3 partners websites and social media	1 st and 2 nd LINKS Newsletter	IDDRR 2020 and 2021, CERIS events, DRS-01 Mini Conference, 1 st LINKS Conference, ISCRAM 2021, ESA 2021, EFDRR 2021, Link Campus for LINKS
DMP Method for case assessment	LINKS and WP3 partners websites and social media	1 st and 2 nd LINKS Newsletter	IDDRR 2020 and 2021, CERIS events, DRS-01 Mini Conference, 1 st LINKS Conference, ISCRAM 2021, ESA 2021, EFDRR 2021, FEU Events
Disaster Community Technologies Landscape	LINKS and WP4 partners websites and social media,	Articles (e.g. PreventionWeb), 1 st and 2 nd LINKS Newsletter	First LINKS Conference, DRS-01 Cluster Mini Conference, ISCRAM 2021, IDDRR 2020, FEU Events, Link Campus for LINKS, Euraxess Events
LINKS Framework	LINKS and WP 5 and 6 partners websites and social media	1 st and 2 nd LINKS Newsletter, Articles (e.g. in: Emergenza 2.0)	1 st LINKS Conference, DRS-01 Cluster Mini Conference, Io non rischio 2021, ISCRAM 2021, NEEDS 2021, FEU Events, Link Campus for LINKS
LINKS Community Center	LINKS and WP7 partners websites and social media	1 st and 2 nd LINKS Newsletter	IDDRR 2021, ISCRAM 2021, CERIS events, ESRI Digital Week 2021, FEU Events
LINKS Community	LINKS and WP 8 partners websites and social media	1 st and 2 nd LINKS Newsletter	FEU Events, Link Campus for LINKS

As argued before, this deliverable relies on quantitative indicators to evaluate the dissemination activities, as well as qualitative ones (as outlined in Table 13 of D9.1⁸ and in Annex II). They will be used to provide more insight in the project's progress in the next sections.

⁸ It should, however, be noted that the Key Performance Indicators (KPIs) in Table 13 of D9.1 were developed until month 12 of the project, whereas this deliverable is developed in month 18. Therefore, it can be expected that expectations are greatly exceeded. As will become evident from the updated KPI table (to be published in month 20) the results are nonetheless promising.

3.1 Channels: How LINKS Results have been disseminated

In this sub-section we describe the dissemination channels used by the LINKS Consortium, as well as by individual partners, to distribute the LINKS results, both through websites and social media channels.

3.1.1 LINKS Website

The LINKS website⁹ plays a central role in the dissemination of LINKS' results; until the LINKS Community Center (LCC) is fully operational (scheduled in June 2022) it is the only 'one-stop-shop' to distribute the project's main findings. In this vein, the website actively seeks to make results accessible in a variety of formats through a lean and well-structured design, for example by:

- Publishing deliverables that are realised during the project,¹⁰
- Making published papers on the results available,¹¹
- Sharing news articles related to specific results,
- Informing about events during which the results are disseminated,¹²
- Integrating the LINKS Twitter account within LINKS website (social wall on the home page).

To adopt a more result-oriented approach, a separate subsection on the LINKS website called 'LINKS Results' is being created. In this section, steering away from a project-focused approach, LINKS Results will be made accessible, and grouped if relevant. However, we will also provide the opportunity to disaggregate the results per LINKS Objective, by adding apposite tags in line with the LINKS Objectives. By clicking on a tag, all LINKS Results will be displayed within that objective. This approach makes evident how the LINKS results contribute to the defined LINKS objectives, making the results even more accessible and readable. This approach is of particular importance considering that the LINKS website disseminates results to all the different target groups.

The centrality of the LINKS website as the main tool to reach the different target groups, is confirmed through the online contact forms,¹³ which have been used by external stakeholders (e.g.: the Italian local community AGE Associazione Genitori Umbria, as well as PublicSonar, a business concerned with incidents and disruptive events using artificial intelligence platforms) to get in contact with the project partners. In turn, this allowed us to involve them in other activities of the project (e.g.: the interactive workshops).

Moreover, as Figure 1 illustrates, the LINKS website shows good results in terms of number of visitors and page views: at the moment of writing (December 2021) in the last 30 days, the page had 833 page views. If we link this data to the average duration per page (more than 2 minutes, which

⁹ LINKS website: <http://links-project.eu/>

¹⁰ LINKS Deliverables: <http://links-project.eu/deliverables/>

¹¹ LINKS papers: <http://links-project.eu/papers/>

¹² LINKS news: <http://links-project.eu/category/news/>

¹³ LINKS Contacts: <http://links-project.eu/contact/>

is regarded relatively long, considering that the average for this type of platform is 1 minute), we can affirm that the visitors are well engaged. Importantly, these results far exceed the expectations outlined in Table 13 of D9.1, in which an average of 2-3 page views per months were envisaged.

Figure 1: Quantitative Indicators for the LINKS Website

Last 30 Days Insights for:	Sessions	Pageviews	Avg. Duration	Bounce Rate
Your Website	388	833	2m 19s	51.55%

3.1.2 LINKS Social Media Channels

Directly linked to the LINKS website, the LINKS social media channels are also used to disseminate the LINKS results. General social media channels (Facebook¹⁴) especially address the target groups Feedbackers and Disseminators, while professionally orientated channels (Twitter¹⁵, LinkedIn¹⁶ and ResearchGate¹⁷) are more geared toward Users and Developers.¹⁸ Each project result had a separate social media post, summarising its main characteristics, with a direct link to the related deliverable(s) on the LINKS website, through which target groups can find out more about that specific result (Figure 2).

¹⁴ LINKS Facebook page: <https://www.facebook.com/LINKSEUProject>.

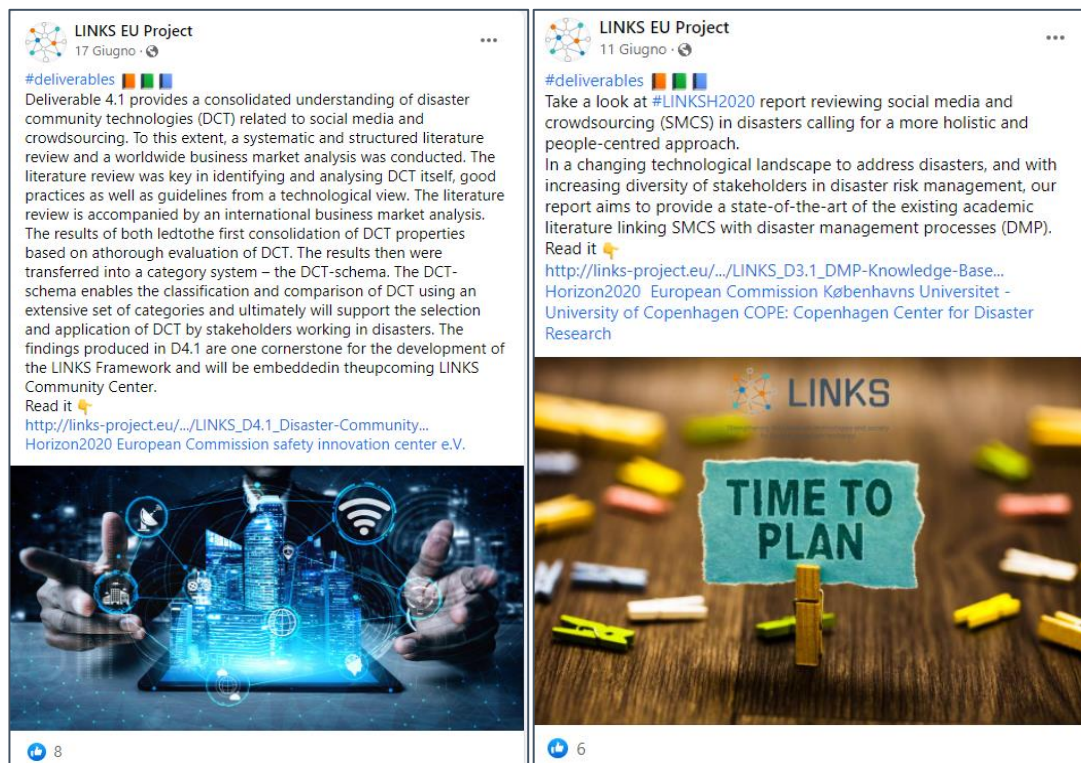
¹⁵ LINKS Twitter page: https://twitter.com/LINKS_EUProject.

¹⁶ LINKS LinkedIn page: <https://www.linkedin.com/company/links-eu-project/>.

¹⁷ LINKS ResearchGate page: <https://www.researchgate.net/project/LINKS-Strengthening-links-between-technologies-and-society-for-European-disaster-resilience>.

¹⁸ The LINKS YouTube page is available at: <https://www.youtube.com/channel/UC8oZwZJu22WpPqV-lj5TTXw>. It has been launched in M18 – for this reason, interesting data is yet to be obtained.

Figure 2: Disseminating LINKS Results through LINKS Social Media Channels



A structured social media plan, making use of all the beforementioned LINKS channels has been developed, and is monthly updated with the contents to be shared (categorised in: deliverables, news, events, LINKS definitions, workshops, publications, partners, networks, etc.). An average of 2-3 posts per week are shared through the social channels, in line with our plan in D9.1.

Moreover, the posts have been differentiated for channels (and, therefore, for target groups – as argued above), making the contents more accessible in the general social media channels, and more specific and targeted for the professional ones. For example, for Facebook the use of visuals and sharing general knowledge about the disaster resilience domain are crucial (considering the need to disseminate the results to a broad audience), while for LinkedIn and ResearchGate, the shared results have a more scientific character, for example by using jargon, and focusing more in-depth on the results of publications of the project.

The LINKS presence in these different social media channels is important as a tool to inform target groups about the project and the realised results, and as a connection point to involve stakeholders in LINKS' activities. This has been possible by implementing the basic features and logic of social media (e.g.: use of hashtags, use of tags for important stakeholders and networks, etc.). Some of the participants to the events during which LINKS has been presented learned about these events/initiatives thanks to the social media channels, as conveyed to us by some of the participants to the LINKS Conference. Furthermore, direct contacts with several stakeholders (such as the Resilience Research Group Global Network and 30 Days 30 Ways UK) started via the LINKS social

channels. More importantly, they lead to some collaborations on specific research topics, such as creating an affiliation between the Resilience Research Group and the partners working on the Disaster Risk Perception and Vulnerability field, for example in discussing and validating some assumptions during future meetings. Additionally, they lead to joint activities (e.g., the engagement of minors in some activities - thereby increasing their awareness of disasters). A positive element is that LINKS posts (the ones related to some key definitions of the project), have been shared also by the social channels of REA (Research European Agency), contributing to an even larger outreach – and impact – of the project.

The numbers of the followers are good (Facebook: 199, Twitter: 494, LinkedIn: 203, ResearchGate: 14), though LINKS actively seeks to increase these numbers. In general, as can be expected in line with the project's progress (and publishing of content-related findings), the interaction of the followers with the posts is increasing (Facebook and Twitter). This is also visible through the profile visits and mentions (Twitter, see Figure 3), the posts visualisation (LinkedIn) and total reads (ResearchGate). In general, our data shows that this is done by people working as practitioners, researchers, and media. However, with the 1st LINKS Community Workshop (which was more case-oriented) in November 2021, a greater number of local communities have started to follow us.

Figure 3: Profile Visits, Mentions and Followers on Twitter



Although the quantitative indicators for social media were satisfactory in M12 of the project, we have adopted a more rigorous strategy to bring it to an excellent level. This included: giving the LINKS partners an active role in the posts (e.g. tagging them, focusing on their specific works, asking their contributions, contents, and repost, etc.), continuing following the most relevant stakeholders, sharing more visual contents. In the future, we will continue with this approach, and we foresee to increase the numbers and the engagement of the followers, both by focusing on more results-based posts and by working on more interactive posts (e.g. the LINKS Q&A, short surveys aiming at creating an interactive dialogue with the stakeholders on LINKS topics). A more integrated connection with other platforms (e.g. Zenodo, LINKS Community Centre, etc.) will be important too; this will increase the traffic among all platforms. What is more, is that all the channels, in turn, contribute to higher engagement of the LINKS website. For example, the 50% of the readers of D3.1/D3.2 on the LINKS website come from the LINKS Facebook page.

3.1.3 Partners' Websites and Social Media Channels

LINKS partners websites and social media channels are also being used to reach to increase the dissemination to, and interaction with relevant stakeholders in their networks. Common rules (e.g. making available a description of the project on their websites) have been followed, but the

activities also have been adapted to the partners' strategies, to their tasks in the project and to the stakeholders they are related to. Good examples are: disseminating the results in languages different from English, integrating the post in their specific social media plans, and using their own style and mode of representing the results. Figure 4 displays an example of a publication on LINKS results on the partners' website (in this case, the UCPH website), including a short description of the main findings on a specific topic and giving the possibility to download the related deliverable.

Figure 4: An Example of LINKS Partner UCPH Website for Result Dissemination



A coherent use of these channels for the LINKS dissemination objectives was made possible thanks to the definition of clear guidelines and instructions for partners (DEC Activity manual for LINKS partners) and identifying a Dissemination, Exploitation and Communication Referent in each institution as contact point between WP9 and the individual partner. To monitor the activities carried out by the individual partners, we elaborated a scheme (the DEC Activity Report) through which they can easily report them; the monitoring of the individual activities by partners is carried out once every six months. In general, although the interaction in general is more than satisfactory, we currently observe a high variability in the use of the LINKS partners websites and social media channels: some partners (e.g. WP leaders) are strongly committed in sharing LINKS posts, inviting peers and colleagues, retweet, repost, etc. - whereas others are less. One reason is that some partners have not yet specific results to disseminate, although this will change in the upcoming 12 months, where 14 (key) deliverables are scheduled to be published. We are organising bilateral meetings with these individual partners to give them support in finding the best strategy to conduct dissemination, exploitation and communication activities related to LINKS. Moreover, Dissemination, Exploitation and Communication partner LCU along with the LINKS Impact Task Force, responsible to increase the impact of LINKS' activities, will evaluate every 6 months whether the targets are being reached, and will inform partners on how to adapt to reach more ambitious goals for impact.

3.2 Materials: Different Formats of Disseminating LINKS Results

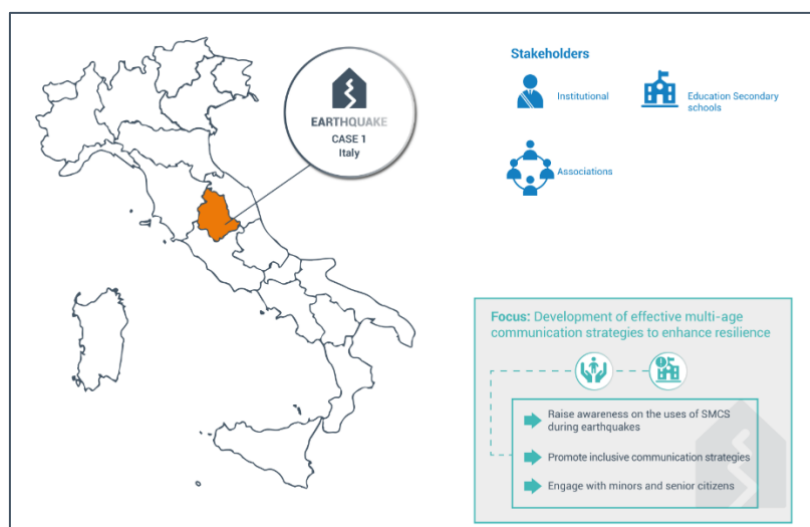
In this sub-section we describe dissemination materials used to distribute the LINKS results.

3.2.1 Visuals, Infographics, and Videos

With the aim of making the results more appealing and easier to understand, WP9 activities increasingly focused on the use of visual communication. This activity realised three main outputs, the LINKS Toolkit, the infographics and the videos.¹⁹

The LINKS Toolkit is a kit containing visual basic materials (icons, lines, arrows, container elements, etc.) useful for LINKS partners to create personalised visuals (e.g.: schemes, figures, infographics) for their deliverables, presentations, leaflets, papers, etc. which aim at summarising the key elements of their work (and to better conceptualise and disseminate their results). An example of visuals realised using the the LINKS Toolkit is in Figure 5, which shows information about one of the LINKS cases: earthquake.

Figure 5: Visual created with the LINKS Toolkit



Going beyond the LINKS Toolkit, the LINKS infographics are intended as more elaborated visuals, summarising the key findings of the project in a comprehensive and accessible manner. The objective is to narrate how the project results can solve needs and problems of the target groups in different types of hazard scenarios, and to show the work carried out in LINKS. The contents of the infographics are elaborated based on the LINKS Exploitation Plan, a strategy defined with all Work Package Leaders to guarantee that the results realised within the project are and will be used by the target groups. In fact, the main objective of the infographics is to operationalise the results for the

¹⁹ Here, we did not consider the realisation of the first leaflet of the project (<http://links-project.eu/presentations/>), since it targeted the overall project, rather than specific results. Result-oriented leaflets will be realised, as shown in Table 16.

different LINKS target groups. Figure 6 shows the template that will be used. For the sake of readability, it is filled out with a hypothetical example of how the DRPV (Disaster Risk Perception and Vulnerability) Tool, obtained in WP2 can be useful for the Practitioners.

As shown, infographics are intended as illustrations using few words and sentences, colours, and icons. When interest is spurred, readers can access more in-depth information through the linked channels (e.g.: publications, deliverables, etc.). We planned to realise a minimum of 20 infographics and to distribute them via the LINKS official channels, articles, presentations, etc.

Figure 6: Making Results More Accessible: LINKS Infographic Template



Finally, three different typologies of videos are being realised:

- Animated videos on the same topics of the infographics, with same structure as the infographics;
- LINKS Stories, short speeches explaining key results of the project, involving more than one LINKS partner, to demonstrate the specific applications of specific project results. Clear formats of these videos have been created for optimal coherence. This tool has a particular

result-based and target group approach, therefore different videos customised for the different target groups will be realised (e.g. both more practice-oriented videos and more research-oriented ones), also in different languages (e.g. using the languages of LINKS cases). Figure 7 shows an example of this typology of videos. These videos are shared via the main social media channels, and they also represent a support for presentation and trainings;

Figure 7: Example of LINKS Stories



- Videos focused on the key terms of the project, based on the LINKS glossary (Figure 8).

Figure 8: Example of video on LINKS' Key Terms



3.2.2 Articles in Magazines and Blogs

LINKS is present in many scientific and non-scientific articles in magazines, especially online, focused on disasters, security, digital technologies, digital and social transformation, smart territories, etc. About 50 articles (significantly more than originally planned in Table 13 of D9.1, where the demarcation for excellent was 20) are currently being posted online, which is an excellent result, considering that the LINKS results have been published relatively recently. Three main activities have been implemented to create a result-based approach, that include:

- Realising articles focused on specific results rather than on the overall project, such as on the LINKS Framework in Emergenza 2.0, or WP2 results in the local media in Umbria, etc.;

- Choosing different typologies of magazines and blogs, oriented to single and specific target groups, for example:
 - Professional magazines and blogs, addressed to the target group Users, such as: PreventionWeb.net, Reliefweb.int, SmartWaterMagazine.com, SistemaProtezioneCivile.it, SecurityMagazine.com, FloodList.com (addressed to practitioners), GeoSmartMagazine.it and Energy-Up.it (for policy makers, local communities and businesses), Cordis.Europa.eu (for policy makers);
 - Scientific blogs, addressed to the Developers, such as ResilienceInstitute.nl, Cope.ku.dk;
 - Informative magazines and blogs, addressed to Feedbackers, such as the Italian magazines on local communities: TerniLife.com, VivereUmbria.it, TerniToday.it, UmbriaJournal.com, TerniInRete.it, VivereTerni.it, NewTuscia.it, LeMuseNews.it, TuttoOggi.info, UmbriaCronaca, etc.
- Using different styles and contents in emphasising how a specific result can be of interest for one target group. For example: in the professional magazines some concepts are less elaborated (e.g. resilience, disasters, etc.) and the focus is on the practical and operational side of the discussed result, while in the informative magazines more accessible terms and definitions are used, by focusing on how the results can improve people's lives in a specific area, such as in the magazines in the Province of Terni, which contextualised the results on the advantages for the local communities. In this sense, we produced 2 press releases²⁰ sent to a variety of magazines, based on which journalists realised articles tailored to the style and target groups of their magazine/blog. These press releases allowed to produce at the least 30 articles (excellent result considering the state of the project, greatly exceeding the D9.1 planning). For example, for the Italian blog Emergenza 2.0²¹ journalist Chiara Bianchini has created new articles for her blog starting from the inputs she received from the LINKS partners, adapting them to the target groups she has in mind, in particular Disseminators (Media), Users (notably Local Communities), and Feedbackers (citizens);
- Using the LINKS website as a blog for publishing specific articles on realised results. In this case, the articles have been sent to the newsletter subscribers, belonging to the different target groups (Figure 9 represents the second LINKS newsletter).

²⁰ LINKS Press Releases: <http://links-project.eu/newsletter/>.



²¹ Bianchini C. (2021). Conosciamo LINKS, il progetto europeo che studia i social media per rafforzare la resilienza nei disastri. Retrieved December 16, 2020 from: <https://www.emergenzaduepuntozero.it/2021/11/05/links-social-media/>.

Figure 9: Second LINKS Newsletter



For the newsletter, we reached 85 subscribers, who demonstrate interest in the LINKS results. For example, figure 10 demonstrates how the LINKS Newsletter N°1 has been open by the 90% of the subscribers). Although the number of subscribers is more than satisfactory (over 30 planned in M12), LINKS aims for excellent results (increasing the 100 mark). Therefore, upcoming activities seek to increase this number by inviting all the LINKS followers on the social media to subscribe to the newsletter and encouraging the LINKS partners to invite their contacts.

Figure 10: LINKS Newsletter Engagement

May, 2021 (1)			
	LINKS Newsletter N°2 Regular - LINKS Audience Sent ven, maggio 28th 3:41 AM to 58 recipients by you	Sent	60.7% Opens 32.1% Clicks
January, 2021 (4)			
	LINKS Newsletter N°1 Regular - LINKS Audience Sent lun, gennaio 18th 8:44 AM to 22 recipients by you	Sent	90.5% Opens 42.9% Clicks

In line with the overall result-oriented and target group-oriented approach, the newsletter displays the newest and most relevant results and connects the results to a target group. For example, the section Meet our practitioners!²² is addressed to the practitioner target group (Users), while the section LINKS Project findings²³ is addressed to Developers.

3.3 Events and Conferences: Reaching Broad and Professional Audiences

The LINKS partners presented the project and its findings in several informative and scientific events and conferences.²⁴ These have constituted important moments to inform target groups about the project results and the main objectives of the project, and offered venues to get in touch with a variety of stakeholders. Four types of events can be distinguished: those organised (section 3.3.1) and attended (section 3.3.2) by LINKS partners, those organised by the European Commission and United Nation for Disaster Risk Reduction (section 3.3.3), and the scientific conferences (section 3.3.3).

3.3.1 Events organised by LINKS Partners

Events organised by the individual partners allowed for sharing LINKS results with stakeholders with whom they usually collaborate, as illustrated in Table 4.

Table 4: Events organised by LINKS partners

PARTNER	EVENT - DATE	TGS INVOLVED	N° PART.	ACTIVITIES
FEU	FEU General Council – Nov. 2021	Practitioners	35	Updating on the results
FEU	FEU General Council – Sept. 2021	Practitioners	45	Presenting LINKS key objectives
FEU	FEU General Council – May 2021	Practitioners	35	Presenting the first results
DPPI SEE	41st DPPI SEE Regional Meeting ²⁵ - April 2021	Policy Makers, Developers	70	Presenting the first results
DPPI SEE	Practice to Policy Workshop - April 2021	Practitioners, Policy Makers	16	Identifying gaps and needs in usage of SMCS for civil protection operations

²² Hamachers, A., Claessens, M., Veld-Op-Het, J., Starmans, J. (2021). Meet our practitioners!. Retrieved December 16, 2021, from: <http://links-project.eu/meet-our-practitioners/>.

²³ Bonati, S., Raju, E., Bach Nielsen, A., Fonio, C. (2021). LINKS Project Findings. Retrieved December 16, 2021, from: <http://links-project.eu/links-project-findings/>.

²⁴ For the sake of synthesis, only events with an ad-hoc LINKS presentations are considered in this section (only networking-oriented events are excluded).

²⁵ 41st DPPI SEE Regional Meeting: <http://www.dppi.info/41.regional-meeting14-04-21>.

PARTNER	EVENT - DATE	TGS INVOLVED	N° PART.	ACTIVITIES
LCU	Link Campus for LINKS – April 2021	Developers, Local Communities, Feedbackers	15	Presenting the results of LCU students' involvement on LINKS topics
LCU	La Digital Transformation delle Città – Jan. 2021	Developers, Local Communities, Feedbackers	33	Presenting LCU activities in LINKS
FRB	LINKS Presentation – Dec. 2020	Local Communities, Feedbackers, Businesses	50	Presenting LINKS impacts at the local level
DPPI SEE	40th DPPI SEE Regional Meeting- Nov. 2020	Practitioners, Policy Makers	51	Presenting LINKS key objectives

Generally, considering the number of participants involved (and to involve in future) project activities, the events had notable impact. In the next months we will work on increasing the number of events organised by the LINKS partners, by encouraging both locally based events, as well as results-based.

The objective of the first LINKS conference²⁶ in July 2021 was discussing the results of the main year of the project. The conference (not planned in D9.1) took place online and was open to all, and was of particular interest for researchers, practitioners, policy makers, industry, and citizens, that are actively working with, directly impacted by and/or interested in areas related to social media and crowdsourcing and crisis and disaster management (Figure 11). It was attended by almost 40 participants. Second and third conferences will be organised at M24 and M36. We foresee that in these events the number of relevant stakeholders will increase considerably. To do this, the individual partners will play a central role in informing and involving their contacts; a targeted communication campaign will be carried out too, addressed to related project partners, stakeholders involved in local-cases, and scholars and universities in our partner's networks.

²⁶ First LINKS Conference: <http://links-project.eu/the-first-links-h2020-project-conference/>.

Figure 11: Screenshots from LINKS Conference



3.3.2 External Events attended by LINKS Partners

Apart from organising events, LINKS partners attended professional events organised by third parties, as Table 5 displays.

Table 5: LINKS Participation in external events

PARTNER	EVENT DATE (SESSION) -	TGS INVOLVED	N° PART.	ACTIVITIES
VU	Io non rischio, organised by Italian Civil Protection Agency (<i>What is the aim of risk communication?</i>) ²⁷ - Oct. 2021	Practitioners, Policy Makers, Local Communities, Disseminators	50	Discussing (e.g. with INGV-Italian Institute of Geophysics and Volcanology and ANPAS – Italian Association of Public Assistance) on how social media and crowdsourcing contribute to better understand disaster risks and implications on citizens' lives
LCU	ESRI Italia Digital Week 2021 (<i>Solutions for management of the risks and emergencies</i>) ²⁸ – May 2021	Developers, Businesses	20	Disseminating WP4 results on disaster community technologies and attracting them in future activities (e.g.: ARIA SpA, Università di Milano, Agenzia Laore Sardegna)
UNIFI - LCU	Accessibility Days 2021 (<i>Vulnerability and Risk Perception in disaster situations</i>) ²⁹ – May 2021	Developers, Businesses	15	Disseminating WP2 results on accessibility and attracting designers, creators, and publishers of contents (e.g.: Let Technology take care of you, Codemotion group, Tangible)

²⁷ Io non rischio: <https://iononrischio.protezionecivile.it/en/homepage/>.

²⁸ ESRI Italia Digital Week: <https://www.esriitalia.it/component/eventiesri/calendario/610/soluzioni-per-la-gestione-del-rischio-e-delle-emergenze>.

²⁹ Accessibility Days 2021: <https://accessibilitydays.it/2021/lectures/links-project/>.

Generally, these events (related to the main activities on WP2, 3, 4 and 5) had positive impacts in terms of participants and contacts to involve in the future project activities (examples of stakeholders affected by the LINKS participation are reported in Table 5). In the next months we will work on increasing the participation in these events, by strengthening the activity of scouting, also considering that the LINKS results will be more specific.

3.3.3 EU and UN Events

At the European level, the LINKS results have been presented in many conferences, in particular organised by CERIS - Community of European Research and Innovation for Security (previously know how CoU – Community of Users) and Euraxess Japan, attended by VU and LCU. In Table 6 a short overview.

Table 6: LINKS Participation in EU Events

ORGANISATION	EVENT - DATE	TGS INVOLVED	N° PART.	ACTIVITIES
Euraxess Japan	Horizon Europe Calls ³⁰ - Jul. 2021	Developers, Policy makers	40	Presenting results to extra-Europe audience (e.g. Kobe Univ., Okayama Univ.), EC bodies (e.g. DG for R&I, DG for Migration and Home Affairs, etc.) and European universities (e.g.: Univ. of Glasgow) and creating connections
CERIS	Cross-Sectorial networking with practitioners and policy-makers – Apr. 2021	Practitioners, Policy Makers	40	Presenting WP2, 3, 4 and 5 results and creating connections
CERIS	Project to Policy KOM – Apr. 2021	Practitioners, Policy Makers	15	Presenting WP2, 3, 4 and 5 results and creating connections
CERIS	Science-Policy interactions related to SendaiFWA – Mar. 2021	Practitioners, Policy Makers	40	Presenting WP2, 3, 4 and 5 results and creating connections
CERIS	Societal resilience to disasters ³¹ – Feb. 2021	Practitioners, Policy Makers	40	Presenting WP2, 3, 4 and 5 results and creating connections

³⁰ Horizon Europe Calls Info Day Japan: <https://euraxess.ec.europa.eu/worldwide/japan/horizon-europe-calls-info-day-japan>.

³¹ Societal resilience to disasters: https://ec.europa.eu/home-affairs/secure-safe-resilient-societies/events/societal-resilience-disasters_en.

ORGANISATION	EVENT - DATE	TGS INVOLVED	N° PART.	ACTIVITIES
Euraxess Japan	Showcasing EU-Japan Mobility ³² - Oct. 2020	Developers, Policy makers	50	Presenting results to extra-Europe audience (e.g. Kobe Univ.) and European universities (e.g.: Vilnius Technical Univ., etc.) and creating connections

LINKS has also been presented, along with the projects belonging to the DRS-01 Cluster (a collaboration that will be elaborated on in section 4.3.1) during the European Forum for Disaster Risk Reduction 2021³³, organised by the United Nations for Disaster Risk Reduction in November 2021. The cluster hosted a hybrid session titled *Strengthening disaster risk governance at local level: enhancing information exchanges through new technologies and assessment models*, during which they explained their approaches to accelerating the implementation of Sendai Framework for disaster risk reduction in Europe. The event was attended by more than 60 participants (decision makers, representatives from civil society organizations, researchers, etc.), and engages participants in an interactive session (the results of which are presented in the section 4.3.3).

The United Nations for Disaster Risk Reduction's initiatives, in particular the International Day for Disaster Risk Reduction³⁴ 2020 and 2021 (October 13th 2020 and 2021) allowed us to disseminate how LINKS results contribute to the United Nations for Disaster Risk Reduction's objectives, and to and raise awareness about particular topics of interest, tapping into their large network for dissemination and outreach. Figure 12 provides an example of the Twitter campaign LINKS carried out during the International Day for Disaster Risk Reduction days. This campaign gained high attention from experts and projects (for example, it obtained more than 20 sharing and retweets, and considerably increasing followers) in the disaster risk reduction field and allowed us to communicate concretely how LINKS results contribute to the DRR field.

³² Horizon Europe Calls Info Day Japan: <https://euraxess.ec.europa.eu/worldwide/japan/horizon-europe-calls-info-day-japan>.

³³ EFDRR 2021: <https://efdr.undrr.org/strengthening-disaster-risk-governance-local-level-enhancing-information-exchanges-through-new>.

³⁴ IDDRR: <https://iddrr.undrr.org/>.

Figure 12: Social Media Campaign for IDDRR 2021



3.3.4 Scientific Conferences

The participation in 5 scientific conferences allowed LINKS to disseminate the results to the researchers working in the field of disasters. This number far exceeds our expectations in D9.1 (3) in M12. Table 7 presents an overview of them.

Table 7: LINKS Participation to Scientific Conferences

PARTNER	CONFERENCE - DATE	PRESENTATION TITLE	N° PART.	ACTIVITIES
UCPH	ESA – European Sociological Association Conference ³⁵ 2021 (Sept. 2021)	<i>Social media and crowdsourcing use in disaster governance: Examining interactions between public authorities and citizens for improved disaster risk management</i>	20	Disseminating results related to using social media and crowdsourcing in disaster governance (interactions between public authorities and citizens)
VU	NEEDS - Northern European Conference on Emergency and Disaster Studies 2021 ³⁶ (Sept. 2021)	<i>Sustainable advanced learning in managing and communicating disaster risk by social media and crowd sourcing</i>	15	Disseminating the LINKS Framework and establishing connections

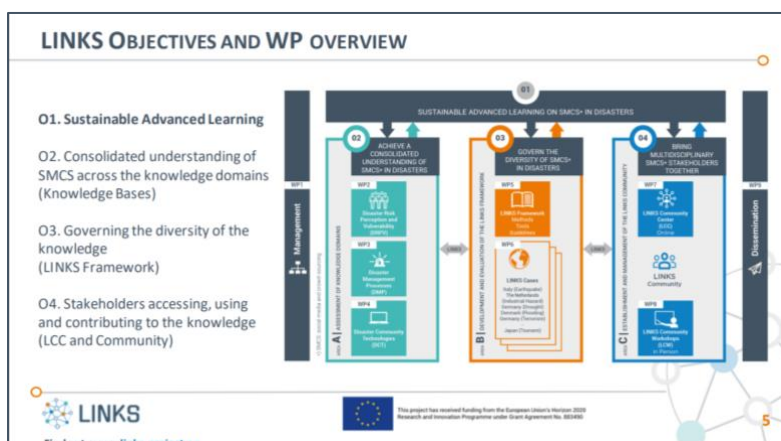
³⁵ ESA 2021: <https://www.europeansociology.org/esa-conference-2021-in-barcelona>.

³⁶ NEEDS 2021: <https://www.needs2021.com/globalassets/institutioner/hsv/needs-2021/knowledge-management.pdf>.

PARTNER	CONFERENCE - DATE	PRESENTATION TITLE	N° PART.	ACTIVITIES
VU, SIC	ISCRAM – Information Systems for Crisis Response and Management ³⁷ (May 2021)	<ul style="list-style-type: none"> • <i>Strengthening Disaster Resilience through Social Media and Crowdsourcing</i> • <i>A Consolidated Understanding of Disaster Community Technologies</i> 	35	<ul style="list-style-type: none"> • Disseminating the results on Disaster Risk Perception and Vulnerability, Disaster Management Processes and Disaster Community Technologies • Disseminating Disaster Community Technologies Schema
UNIFI	EGU – European Geosciences Union General Assembly 2021 ³⁸ (April 2021)	<i>Social media, diversity and vulnerability: their role in a disaster</i>	25	Organising a special session on the results on social media, diversity, and vulnerability in disasters
VU	TIEMS – The International Emergency Society 2020 ³⁹	<i>Opening Talk: Strengthening international cooperation with EU</i>	20	Presenting LINKS as an example of project that deals with hazards in city environment

During all these events *ad hoc* presentations and posters were presented. For example, in Figure 13 displays a poster used to disseminate results during the ISCRAM2021.

Figure 13: Poster realised for ISCRAM 2021



³⁷ ISCRAM 2021: <https://www.drrm.fralinlifesci.vt.edu/isgram2021/index.php>.

³⁸ EGU General Assembly 2021: <https://meetingorganizer.copernicus.org/EGU21/EGU21-12717.html>.

³⁹ TIEMS 2020: <https://www.tiems.info/index.php/tiems-2020-virtual-annual-conference-videos/tiems-2020-virtual-annual-conference>.

ISCRAM 2021 STRENGTHENING DISASTER RESILIENCE THROUGH SOCIAL MEDIA AND CROWDSOURCING
Nathan Clark, Kees Boersma, Sara Bonati, Chiara Fonio, Simon Gehlhar, Therese Habig, Richard Lüke, Stefano Morelli, Anne Bach Nielsen, Antonio Opromolla, Veronica Pazzi and Emmanuel Raju

1. INTRODUCTION

Social media and crowdsourcing (SMCS) are increasingly proving useful for addressing the effects of natural and human-made hazards. SMCS allows different stakeholders to share crucial information during disaster management processes and to strengthen community resilience through engagement and collaboration. The LINKS (Strengthening links between technologies and society for European disaster resilience) Horizon 2020 project intends to strengthen societal resilience by contributing to a better understanding of and learning on the uses of SMCS in disasters. The actors whom the project is addressing include: practitioners, policy and decision makers, research networks, industrial bodies, and citizens.

2. METHODS

The methods applied in different phases of the project include:

- Desk studies on the state of the art of specific knowledge domains related to the use of SMCS in disasters, including disaster risk perception and vulnerability (DRPV), disaster management processes (DMP), and disaster community technologies (DCT).
- Live and digital ethnography including surveys, questionnaires, interviews across 5 different scenarios (the LINKS cases): earthquake in Italy, industrial hazard in The Netherlands, drought in Germany, flooding in Denmark, terrorism in Germany.
- Participatory Action Research including focus groups and stakeholder engagement workshops evaluate learning potentials of the project outputs.

3. RESULTS

LINKS is presently in the first leg of Step 1 in the project workflow. Preliminary results are related to the development of three key knowledge bases in the project.

- **Assessing changes in the citizens' perception of disaster risks induced by SMCS and assessing changes in vulnerability of practitioners and citizens**
An overview of the use of social media and crowdsourcing in disaster management and the role of SMCS in disaster management processes is provided. The role of SMCS in disaster management is assessed in terms of its potential to reduce vulnerability and increase resilience in disaster management.
- **Assessing how SMCS changes the procedures and processes within the crisis and disaster management**
An overview of the use of social media and crowdsourcing in disaster management and the role of SMCS in disaster management processes is provided. The role of SMCS in disaster management is assessed in terms of its potential to reduce vulnerability and increase resilience in disaster management.
- **Assessing SMCS technologies used by different stakeholders in disasters**
An overview of the use of social media and crowdsourcing in disaster management and the role of SMCS in disaster management processes is provided. The role of SMCS in disaster management is assessed in terms of its potential to reduce vulnerability and increase resilience in disaster management.

4. FUTURE WORK

The key gaps, needs, and best practices identified across the 3 knowledge domains are set to be tested in a series of upcoming case assessments across Europe. These findings will be the foundation for developing and evaluating an interactive LINKS Framework (Area 'B' – Development and evaluation of the LINKS Framework). The Framework consists of different learning materials for different stakeholders to provide a better understanding and improve the application of SMCS in disasters. What needs to be learned by whom as well as how to enable dynamic learning processes, will become clearer in the course of the project. The Framework will follow a three-step iterative process and will be co-created through engagement with a multidisciplinary and community of stakeholders (Area 'C' – Establishment and management of the links community and links community center). They will collaborate with the LINKS Consortium to learn and benefit from the project development and results, and carry on the project outcomes into the future through an online platform (LINKS Community Center – LCC) and in presence events (LINKS Community Workshops – LCW).

5. CONCLUSIONS

Our preliminary results from the knowledge bases have shown that SMCS provide good potentials for sharing information/experiences of different actors in times of crises. Yet, the diversity surrounding the implementation and use of SMCS creates uncertainty among institutions and individuals as to the efficacy and best practices for these solutions. Data and technology overload, false and misinformation, ethics and privacy, and the lack of accessibility by some vulnerable groups create additional barriers.

Key Takeaways from this Section

- LINKS established excellent results in disseminating LINKS results, considering the number of stakeholders, as well as their active engagement. This is particularly visible through analysing indicators for: the LINKS website, the press release, number of realised articles in magazines and blogs, and the LINKS newsletter.
- In the upcoming period, LINKS will focus on increasing the engagement via social media and reinforcing the cross-platform relations, to make the results even more available and accessible to the relevant stakeholders.
- The support to partners in conducting LINKS dissemination activities will be increased; partners will be encouraged to crystallise findings relevant to their networks and to strengthen the use of their (institutional) channels.
- In the next period, visual communication will be one of the main focus points for LINKS.
- LINKS established good results in establishing meaningful connections with a large number working in similar fields during events and conferences. Now that LINKS results have become more available, the number of events organised by LINKS partners and attended by them will increase in parallel (and will undergo a thorough scouting and a local-based events approach).

4. MAKING LINKS RESULTS AVAILABLE TO THE TARGET GROUPS

The focus of this section is on the activities implemented to *make the results available* to the target groups, rather than *informing* about the results (see section 3). For this, LINKS has relied on different channels, materials and events (carried out by the Consortium, as well as the individual partners). At the same time, making results available to larger audiences provide a basis for our exploitation activities in the upcoming period (exploitation steps would focus on *facilitating* the use of results, and *making use of results*).

The channels described in this section are digital platforms to make available LINKS's documents/materials associated to the results. Materials are defined as digital/physical tangible outputs directly containing the LINKS results. Finally, the events refer to formal and informal meetings with the target groups to make the results available.

Table 8 shows the channels, materials, and events (employed or that will be employed in the near future) to make available the LINKS results. In the next sections, a more elaborate description will be provided.

Table 8: Channels, Materials, and Events to Make the Results Available

RESULTS	CHANNELS	MATERIALS	EVENTS
Disaster Risk Perception and Vulnerability (DRPV) Tool	Zenodo, CORDIS	Open Research Europe publication	1 st LINKS Community Workshop, Networks (e.g.: DRS-01 Cluster)
Multimedia product for education			1 st LINKS Community Workshop, Workshops with the schools
Literature review on Disaster Risk Perception and Vulnerability (DRVP)	Zenodo, CORDIS, CMINE	Open Research Europe publication	1 st LINKS Community Workshop, Networks (e.g.: DRS-01 Cluster)
Pocket Guidelines for Ethics			1 st LINKS Community Workshop, Networks (e.g.: DRS-01 Cluster)
'Resilience Wheel': Drivers for institutional resilience	Zenodo, CORDIS	Open Research Europe publication	Networks (e.g.: DRS-01 Cluster), COPE networks, Trainings (School of Global Health - University of Copenhagen, Lund University, internships)
Disaster Management Process (DMP) Landscape	Zenodo, CORDIS, DRMKC	Open Research Europe publication	Networks (e.g.: DRS-01 Cluster), Trainings (School of Global Health - University of Copenhagen, Lund University, internships)
Disaster Management (DRM) Process Method for case assessment	Zenodo, CORDIS	Open Research Europe publication	Networks (e.g.: DRS-01 Cluster), Trainings (School of Global Health - University of

RESULTS	CHANNELS	MATERIALS	EVENTS
			Copenhagen, Lund University, internships)
Disaster Community Technologies (DCT) Landscape	Zenodo, CORDIS	Open Research Europe and ISCRAM publications	Networks (e.g.: DRS-01 Cluster, CMINE, etc.)
LINKS Framework	Zenodo, CORDIS, DRMKC	Open Research Europe publication	Networks (e.g.: DRS-01 Cluster, CMINE, etc.), Training (e.g.: VU students, Univ. of Twentee)
LINKS Community Center (LCC)	Zenodo, CORDIS	Open Research Europe and ISCRAM publications	Networks (e.g.: DRS-01 Cluster, CMINE, etc.)
LINKS Community			Networks (e.g.: DRS-01 Cluster, PREPARE Cluster, etc.), 1 st LINKS Community Workshop

4.1 Channels: Where LINKS' Results Can be Accessed

In 3.1.1 we argued that the LINKS website is used as a tool not only aimed at *informing* the target groups about the results, but also for *making them available*. Additional platforms and repositories have even greater focus on making our results available.

4.1.1 Online Platforms and Repositories

Online platforms and repositories contain some materials presenting the results available to different communities. Table 9 lists the repositories used within LINKS, chosen as the most important channels to consider in the field of disaster resilience at the European level.

Table 9: Online Platforms and Repositories

PLATFORM/REPOSITORY	DESCRIPTION	ACTIVITIES
CMINE - Crisis Management Innovation Network ⁴⁰	Community including experts working on crisis management innovation, allowing networking and mutual support (users, researchers, local communities, etc.)	<ul style="list-style-type: none"> • Main channel of interaction with Disaster Resilient Societies-01 Cluster • Opportunity to present LINKS results to an interested community • Creation of a specific LINKS group, where discussions about LINKS updates and results take place
CORDIS - Community Research and Development Information Service ⁴¹	European Commission database depositing all the funded project results. Possible to get in contact with similar projects	<ul style="list-style-type: none"> • Presenting fact sheet (description, objectives, participants, etc.)

⁴⁰ CMINE: <https://www.cmine.eu/topics/21875/feed>.

⁴¹ CORDIS: <https://cordis.europa.eu/project/id/883490>.

PLATFORM/REPOSITORY	DESCRIPTION	ACTIVITIES
		<ul style="list-style-type: none"> Publishing materials (deliverables, publications, etc.) and LINKS updates
DRMKC - Disaster Risk Management Knowledge Centre ⁴²	European platform supporting in the translation of scientific results into usable information for Disaster Risk Management policies	<ul style="list-style-type: none"> Publishing the realised deliverables, news and events Future tool for policy recommendations implementation
Zenodo ⁴³	Open-access repository for research results. Important gate to access to the results realised under Horizon2020 program	<ul style="list-style-type: none"> The main storage place for scientific publications and LINKS updates

The platforms are particularly addressed to practitioners and policy makers (except for Zenodo, which is addressed mainly to researchers), since they aggregate stakeholders active in crisis management and seek to link scientific findings to policies. Generally, we are satisfied of the use of these platforms. Two examples: the attention gained by LINKS in CORDIS allowed the platform to appoint it Project of the Month in August 2021⁴⁴ (also published on Research.eu magazine number of August/September 2021). Furthermore, data on the publications stored in Zenodo demonstrate these have been downloaded by almost the 100% of the viewers – which is considered exceptionally high engagement. In the upcoming period, we will implement the activities through these platforms (also inviting people to join), though LINKS always keeps an eye out for publishing our results in new platforms.

4.1.2 LINKS Community Center

Once launched (expected in August 2022), the LCC – LINKS Community Center⁴⁵ will play the most central role in making the results available to stakeholders. The outstanding aspect of the LCC is that results will be made available in different formats, such as learning materials, cases results, examples of good practices, etc., based on the objectives of the different users. The main difference between the LCC and the LINKS website is that the LCC is more oriented to the establishment of a one-stop-shop, and creation of a real community of stakeholders, heavily relying on results. For this purpose, special attention will be paid to the format of presenting results: the information is presented in a short and concise way, focusing on the visual aspects, and making it more interactive (when possible). The first demonstrator of the LCC is not live, yet. It will increasingly be used to engage

⁴² DRMKC: <https://drmkc.jrc.ec.europa.eu/>.

⁴³ Zenodo: <https://zenodo.org/>.

⁴⁴ CORDIS (2021). Project of the Month: Exploring how social media and crowdsourcing can contribute to more disaster-resilient societies. Retrieved December 16, 2021, from: <https://cordis.europa.eu/article/id/430469-exploring-how-social-media-and-crowdsourcing-contribute-to-more-disaster-resilient-societies>.

⁴⁵ LCC: <https://links.communitycenter.eu/>.

with different target groups alongside the integration of the LINKS Framework in the coming periods. Therefore, in the second status report on the development and distribution of dissemination material, there will be more focus on the quantitative and qualitative indicators the evaluate its progress.

4.2 Materials: Making Results more Tangible

In this sub-section, we describe the materials used to make the LINKS results available, focusing on the scientific publications and policy recommendations.

4.2.1 Scientific Publications

Scientific publications are addressed to the Developers. Two main scientific publications have been realised within the 18 months of the LINKS project (Table 10).

Table 10: Scientific Publications on LINKS

PUBLICATION	DESCRIPTION	DATA
Clark N. et al., <i>Exploring the impacts of social media and crowdsourcing on disaster resilience</i> . Open Research Europe 2021, 1:60 ⁴⁶ <i>PAPER IN SCIENTIFIC JOURNAL</i>	Overview of the LINKS research. Key gaps, needs, best practices and themes cross the knowledge domains of Disaster Risk Perception and Vulnerability, Disaster Management Processes and Disaster Community Technologies are identified	<ul style="list-style-type: none"> Helping researchers in expanding knowledge, developing new research activities and keeping in touch with the integration of the findings within the LINKS Framework 1 in 3 viewers of Open Research Europe and 90% of the viewers on Zenodo downloaded the paper
Habig T. et al., <i>A Consolidated Understanding of Disaster Community Technologies</i> , 18th ISCRAM 2021 Conference Proceedings <i>PAPER IN CONFERENCE PROCEEDINGS</i>	Overview of technologies for SMCS within disasters to improve community resilience (Disaster Community Technologies)	<ul style="list-style-type: none"> Helping different TGs (especially Users) to identify the right technologies for their specific needs 100% of the viewers on Zenodo downloaded the paper

These publications are realised following the requirement of the European Commission, respecting the rules of open access ('gold' open access, considering that the databases through which they are made available are freely accessible). The scientific publications are made available also through the LINKS website, the online repositories (e.g. Zenodo, SemanticScholar, ResearchGate, etc.) and are diffused through the LINKS social media and all the channels of the individual partners.

⁴⁶ Open Research Europe publication: <https://doi.org/10.12688/openreseurope.13721.1>.

Two publications in the first 18 months of the project are considered a good result. We foresee that in the upcoming months, now that LINKS results have become more developed, the number of publications will increase too, along with the citations and use of the results.

4.2.2 Policy Briefs and Recommendations

Policy briefs and recommendations are targeting policy makers. The objective is to make clear why and how the project results may be translated into policies useful for decision making. At this stage, the LINKS results are not mature enough to be translated into concrete policy briefs. Nonetheless, we took the first steps in this process: defining the approach for the policy recommendations implementation. In this regard we participated in the P2PKOS (Practice to Policy Kick Off Symposium) event hosted by the European Commission. We also attended to a specific workshop organised by the Crisis Management Innovation Network in July 2021, 'Translating project findings into policy recommendations', led by international expert Adam Knelman Ostry. This event was particularly insightful in identifying the general approach for creating policy briefs.

Policy briefs will be realised as a joint activity of the Disaster Resilient Societies-01 Cluster (due to the impact they can have and the need to join forces) with the aim to increase the impact of resilience-focused initiatives in European projects. The projects agreed on the basic approach, which consists of:

- Engaging all the stakeholders in co-creating initiatives to define clear outputs;
- Clearly defining the problem to face and the stakeholders impacted;
- Collecting data, to give evidence to the need of the recommendation;
- Creating outputs bridging local, national, and global policies;
- Suggesting how the solutions realised within the projects can be improve specific processes;
- Analysing positive and negative impacts of the policy recommendation implementation;
- Clearly identifying human and financial resources for the implementation;
- Adopting an iterative approach to test the recommendations;

Other activities planned with the Disaster Resilient Societies-01 Cluster also included the joint European Forum for Disaster Risk Reduction 2021 event, the outputs of which will be used for a Community of European Research and Innovation for Security event on strengthening societal resilience, as well as a policy round with relevant policy representatives (tentatively scheduled for March 2022).

4.3 Events and Meetings: Reaching LINKS' Stakeholders

In this sub-section we describe the events and crucial meetings used make the LINKS results available to our target groups, focusing on meetings and events organised with related projects, trainings, and interactive workshops.

4.3.1 Related Projects and Networks: Events and Meetings

Within the first 18 months of projects, LINKS has established a strong collaboration with European projects working on topics similar to LINKS and with research networks. Table 11 provides an overview of the main projects/networks and the implemented collaboration.

Table 11: Activities within Related Networks

NETWORKS	MISSION	CARRIED OUT ACTIVITIES	PLANNED ACTIVITIES
DRS (Disaster Resilience Societies) - 01 Cluster ⁴⁷	Bringing together European projects funded within the same Horizon2020 call (DRS-01) to implement high impact actions	<ul style="list-style-type: none"> Regular meetings to learn about results of other projects, to discuss joint actions and activities DRS-01 Cluster Mini Conference (Febr. 2021) 48 persons engaged in an open dialogue on collaboration Creation of working groups on different cross-cutting topics (e.g.: vulnerability and exploitation activities) Joint participation in the EFDRR2021 event 	<ul style="list-style-type: none"> Definition of common policy recommendations Organising new conferences Realising scientific contributions
PREPARE (Preparedness Response for Emergency Situations in Europe) Cluster ⁴⁹	Bringing together European projects working in emergency situations and crisis management	<ul style="list-style-type: none"> Regular meetings to explore synergies, research opportunities and joint activities to maximise impact Endorsement of the whitepaper 'Inclusive Communication in times of crisis' realised by COVINFORM and PROACTIVE projects 	<ul style="list-style-type: none"> Joint activities on inclusive communication in times of crisis Organising conferences Realising scientific contributions
COPE (Copenhagen Center for Disaster Research) ⁵⁰	Disseminating WP 3 results	<ul style="list-style-type: none"> Meetings with related researchers Using the website to disseminate results 	<ul style="list-style-type: none"> Meetings with related researchers Using the website to disseminate results

⁴⁷ DRS-01 Cluster (including BuildERS, CORE, ENGAGE, LINKS, RESILOC, and RiskPACC projects):

<https://www.cmine.eu/topics/20936/feed>.

⁴⁸ DRS-01 Cluster Mini-Conference:

https://d1c2gz5q23tkk0.cloudfront.net/assets/uploads/3034020/asset/DRS01_Mini-Conference_Agenda.pdf?1610706137.

⁴⁹ PREPARE Cluster (including CO- VERSATILE, COVID-X, COVINFORM, EUR3KA, LINKS, NO FEAR, PANDEM-2, PERISCOPE, PHIRI, RiskPACC STAMINA and STRATEGY projects): <https://pandem-2.eu/prepare-cluster/>

⁵⁰ COPE: <https://cope.ku.dk/>.

NETWORKS	MISSION	CARRIED OUT ACTIVITIES	PLANNED ACTIVITIES
RRG (Resilience Research Group) ⁵¹	Collaborating in developing high quality resilience research and running resilience projects	<ul style="list-style-type: none"> Providing feedback on resilience-related topics 	<ul style="list-style-type: none"> Validation of the work on vulnerability and accessibility

The networks named here are not the only ones we involved. In the previous sections we already mentioned additional ones, including: Community of European Research and Innovation for Security (section 3.3.3), Information Systems for Crisis Response and Management and European Geosciences Union (section 3.3.4), Crisis Management Innovation Network and Disaster Risk Management Knowledge Center (section 4.1.1). Very positive results can be identified from the activities with projects and networks, both qualitative (considering the high level of synergies, collaboration and integration) and quantitative (10 networks and 15 projects involved in 18 months of the projects, with hundreds of posts shared in social media and related websites). In the upcoming months we foresee that, considering the networking mapping of LINKS partner FEU, the number of the involved networks and projects will increase even more.

4.3.2 Training Activities

LINKS has been presented in many courses by the academic partners of LINKS, conveying specific messages to researchers and students. Their aim is to spread the main results to the future experts in the fields of secure societies and digital communication. Table 12 summarises them.

Table 12: Trainings on LINKS

PARTNER	TARGET (Date)	TOPIC	N° OF STUDENTS
VU	VU Bachelor students (Apr. 2021)	Resilient societies	25
	IT4Developments (Apr. 2021)	SMCS in crisis situations	45
	Demonstrator Lab (Apr. 2021)	LINKS objectives, valorisation, and dissemination	8
	Saxion – Univ. of Applied Sciences (March 2021)	Safety and security studies	60
	Innovation Center Amsterdam – IXA (March 2021)	LINKS objectives, valorisation, and dissemination	15
	Univ. of Twente (Febr. 2021)	LINKS objectives and aims	30

⁵¹ RRG: <https://www.linkedin.com/groups/13881107/>.

PARTNER	TARGET (Date)	TOPIC	N° OF STUDENTS
UCPH	Lund Univ. (Sept. 2021)	Disaster Management Processes Landscape	N.A.
	School of Global Health – Univ. of Copenhagen (Nov. 2020)	Initial findings from DMP work	25
LCU	LCU master's degree students (Oct- Nov 2021)	Application of LINKS topic in the Italian context	5
	LCU master's degree students (Oct- Nov 2020)	Application of LINKS topic in the Italian context	8

The trainings had strong impact, not only from the quantitative point of view but also from the qualitative one. Two examples:

- One of the students who graduated with a master's degree in Global Health at UCPH decided to do an internship at COPE (Copenhagen Centre for Disaster Research), working on LINKS. In her Internship Story⁵², she emphasised how through LINKS, she learned to critically evaluate research methodologies for new technologies in disaster management practices, in making research more grounded into practices, and by including practitioners' experiences and perspectives;
- One of the students from LCU, following the lectures, decided to better explore the Italian scenario on earthquake in her thesis, by conducting surveys and interviews with Italian citizens and experts. She later even decided to work in the field of crisis communication.

4.3.3 Interactive Workshops

Workshops represent one of the most important opportunities to make project results available, due to the possibility of enabling a constructive dialogue with the target groups, and receiving first-hand feedback to test and validate the results. Table 13 shows the main characteristics and results of the interactive workshops carried out by the end of M18, including LCW – LINKS Community Workshops (Figure 14), schools' workshops, European Forum for Disaster Risk Reduction 2021 workshop, Smart City Challenge Hackathon (Figure 15), LCU workshop (Figure 16).

Table 13: Interactive Workshops in LINKS

NAME PARTNERS	(Date)	AIM	STAKEHOLDERS INVOLVED	RESULTS
1 st LCW – LINKS Community		Engaging local stakeholders in the	Policy Makers, Civil protection	Positive feedback on usefulness of LINKS results for: improving

⁵² COPE (2021). New Learnings for New Horizons: Internship Stories from COPE. Retrieved December 16, 2021, from: <https://cope.ku.dk/news/2021/new-learnings-for-new-horizons/>.

NAME PARTNERS	(Date)	AIM	STAKEHOLDERS INVOLVED	RESULTS
Workshops PDT, UNIFI, SCIT, EOS	(Nov. 2021) ⁵³	Italian LINKS cases and collecting needs (good opportunity to introduce results locally)	representatives from Umbria Region (e.g. ANCI – Association of Italian Municipalities)	communication with citizens (ANPAS Psicosociale Umbria, Gruppo Cinofilo di Soccorso), knowing how use SMCS in disasters (ANCI Umbria, Emergenza 2.0 blog), strengthen a community of stakeholders (118, 1 st aid service)
EFDRR 2021 workshop 'Strengthening disaster risk governance at local level: enhancing information exchanges through new technologies and assessment models'	(Nov. 2021) UCPH, VU, LCU	Discussing how SMCS can help during disasters (organizational challenges in different disaster management phases, needed organizational capacities to engage with citizens)	Students and Policy Makers	One of the participants contacted LINKS and asked to be included in the next activities of the project
6 schools' workshops (Oct-Nov. 2021) UNIFI, SCIT		Engaging minors in disaster prevention and sensitize them about the uses and potentials of digital technologies in emergency management	50-60 students from secondary schools of Arrone and Ferentillo	Good understanding and brainstorming of key terms (prevention, resilience, disasters, SMCS) and of risks in their territories; positive experience with a Google Earth application which helps to identify potential risks related to earthquakes
Smart City Challenge Hackathon (Oct. 2021) ⁵⁴ UCC, FRB		Involving participants in a design process, starting with: <i>How can SM help communication between public authorities, first responders and citizens to improve warnings, public awareness, engagement and preparedness before,</i>	Students from different universities, entrepreneurs, and citizens	Participants have prototyped a mobile app and contacted LINKS partners for further collaboration on developing it; one student asked to develop a thesis connected to the Municipality of FRB

⁵³ Further details about the Italian LCW, and upcoming LCWs, available in deliverable D8.4 (First LINKS Community Workshops and LINKS Advisory Committee report).

⁵⁴ Smart City Challenge Hackathon: <https://www.station.dk/activities/smart-city-challenge>.

NAME PARTNERS	(Date)	AIM	STAKEHOLDERS INVOLVED	RESULTS
		<i>during and after a cloudburst flooding?</i>		
LCU workshop (Oct 2020-Jan.2021) LCU	students'	Working on a project work on how digital transformation related processes can improve specific conditions of the LINKS disaster case scenarios	8 students of the master's degrees in Interaction Design and Digital Economy of LCU	Understanding and applying a human-centered approach to disasters (e.g. importance of stakeholder's engagement, role of information, integration of different technologies (social media, IoT, AI, Big Data, etc.)

Figure 14: First LINKS Community Workshop in Italy



Figure 15: 'Smart City Challenge' Hackathon

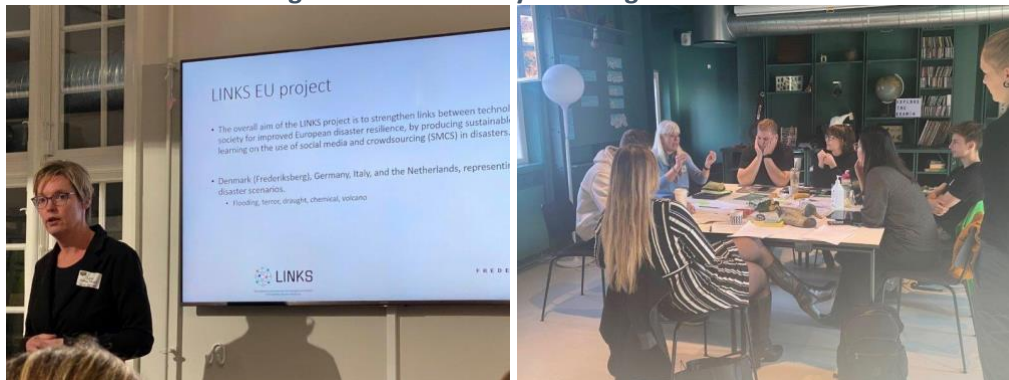
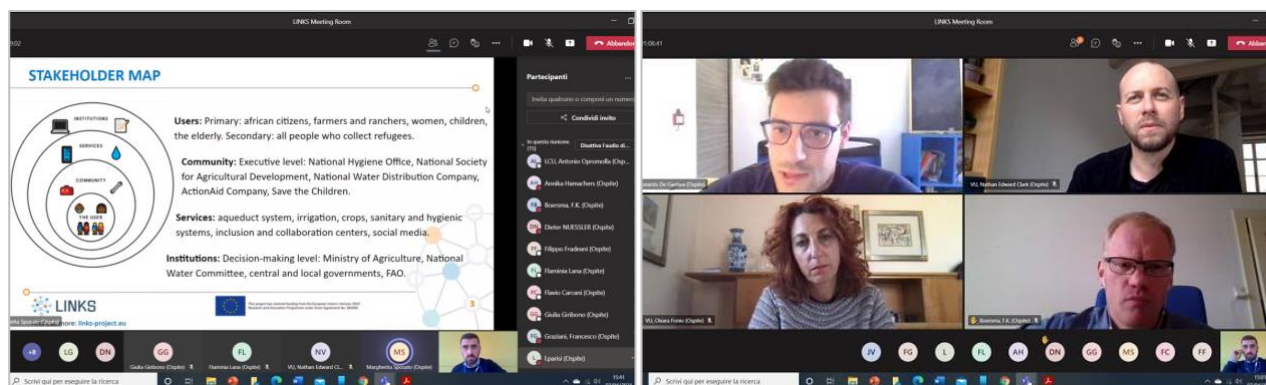


Figure 16: LCU Student Projects Inspired by LINKS



We are more than satisfied with the number and variety of the conducted interactive workshops, and we expect that in the next months they will be increasingly orientated to the LINKS results. The same typologies of interactive workshops have also been carried out within the project, in particular in WP3 (through many discussions with Danish stakeholders that confirmed the usefulness of the WP findings, and that served as a basis to identify questions for further investigation) and in WP5 and 6 (through discussions with practitioners and policy makers, which allowed us to disseminate results and to identify challenges, needs and expectations with regards to the case scenarios which have been extremely useful for the implementation of the LINKS Framework).

Key Takeaways from this Section

- Online platforms and repositories constitute excellent channels to make the results directly available to the target groups. Now that research results are taking more shape, LINKS' dissemination activities will increase. Once launched, the LINKS Community Center will play a crucial role in making results available for target groups and in exploiting them.
- The impacts of publications in specialised journals in terms of number of reads and downloads is very good. The number of publications will increase in the next months. A thorough scouting of Calls for Papers and publication in scientific journals will increase the visibility of LINKS results.
- Policy recommendations will be published as a joint activity with the Disaster Resilient Societies-01 Cluster. A convincing approach to draft them had been developed.
- LINKS obtained excellent results in terms of networks and projects involved and related impacts (activities already carried out and to implement in the next future).
- Training activities were carried out by all the LINKS research partners. They are planned to continue and expand in the next phases of the project.
- Interactive workshops are the most valuable opportunity to make the results available to the key stakeholders – and to preliminary test them.

5. CONTRIBUTION OF DISSEMINATION ACTIVITIES TO LINKS OUTCOMES AND IMPACTS

The activities described in the previous sections contribute towards achieving the outcomes and the impacts of the project. According to the Horizon Europe Programme Guide⁵⁵, outcomes are the expected effects (generally changes in behaviour of the target groups), based on the results; they refer to effects occurring during (or shortly after the end of) the project. Impacts refer to wider scientific, societal, and economic field effects in the long term, namely after the end of the project.

The focus on outcomes and impacts demonstrates the qualitative approach that LINKS adopted. In this vein, this section emphasises how the described activities are contributing to disseminating and exploiting the results to the different target groups, also (potentially) changing their behaviour.

Based on the work described in the sections 3 and 4 (summarised in Table 3 and 8), we have achieved the outcomes indicated in Table 14.

Table 14: LINKS Outcomes (M18)

Target Groups	Outcomes
Practitioners	<ul style="list-style-type: none"> Practitioners know more about Disaster Risk Perception and Vulnerability in different cases and start considering how to make information more accessible to vulnerable groups Practitioners are aware of policies and frameworks in using social media and crowdsourcing in Disaster Risk Management Practitioners recognise the potential of Disaster Community Technologies
Policy and Decision makers	<ul style="list-style-type: none"> Policy and decision makers start considering the uptake of Disaster Risk Perception and Vulnerability recommendations into their campaigns and policies Policy and decision makers are more aware of policies and framework in using social media and crowdsourcing in Disaster Risk Management Policy and decision makers start creating a common language and policies in using social media and crowdsourcing in Disaster Risk Management Policy and decision makers are more aware of the presence of Disaster Community Technologies and their impact in decision-making processes
Local Communities	<ul style="list-style-type: none"> Local communities are more aware of the possibility to use social media and crowdsourcing in disasters Local communities learn about using crowdsourcing solutions in disasters

⁵⁵ European Commission (2021). Horizon Europe Programme Guide. Retrieved December, 2021, from https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/programme-guide_horizon_en.pdf.

Target Groups	Outcomes
	<ul style="list-style-type: none"> Local communities are aware of Disaster Community Technologies solutions
Developers	<ul style="list-style-type: none"> Developers are more aware of impacts of Disaster Risk Perception and Vulnerability in using social media and crowdsourcing Developers give more attention on ethics in research Developers are more aware of drivers for institutional resilience Developers are aware of Disaster Community Technologies
Disseminators	<ul style="list-style-type: none"> Disseminators are more conscious handling and responsibility with the wide reach and influence of the media Disseminators improve local communication regarding emergencies on social media
Businesses	<ul style="list-style-type: none"> Businesses start considering accessibility in their solutions Businesses start using specific categories to integrate resilience in their solutions Businesses access to policies and frameworks that consider using social media and crowdsourcing in Disaster Risk Management

Table 15 focuses on the impacts we are working on and we will reach in the long period (to which the outcomes identified in Table 14 are contributing). They have been elaborated by the Consortium.

Table 15: Scientific, Societal, and Economic Impacts of LINKS

Type	Impacts
Scientific	Multidisciplinary understanding on Disaster Risk Perception and Vulnerability, Disaster Management Processes, and Disaster Community Technologies; new research opportunities on social media and crowdsourcing in disasters; use of the research methods to engage stakeholders; implementing research activities by identifying technological opportunities; bridging between practitioners and researchers.
Societal	More inclusive and resilient communities (for example in terms of consideration of vulnerable groups into Disaster Management Processes); human-centred approach in using social media and crowdsourcing in Disaster Management Processes; application of social media and crowdsourcing in Disaster Management Processes to better inform the population; increased collaboration among stakeholders; increased public safety and security; improved disaster response and resilience on a local level; more shared information and knowledge of action; general population more aware and informed faster and more effectively through social media and crowdsourcing.
Economic	Increasing of the attractiveness of the market for solution providers and developers; better understanding of the market opportunities; economic saving due to prevention of disasters.

5.1 Impact Task Force: Increasing Impact & the Uptake of Results

As stated in the Introduction of this Deliverable, the LINKS dissemination activities are closely connected to the communication and exploitation activities. The overall objective of these activities is to contribute to different types of impacts of the project (see Table 15). For this purpose, the LINKS Impact Task Force was set up, consisting of EOS, FEU, LCU, UNIFI and VU, working in close coordination with all the other project's partners. The objective of the LINKS Impact Task Force is to adopt a result-based approach, which consists of implementing an action strategy so that the results produced during the project are adequately disseminated and exploited. For this purpose, the involved partners have defined their roles. LCU and VU drive and monitor (once each 6 months) the overall process; EOS manages the Innovation Management aspects; FEU works to identify the relevant stakeholder networks, and UNIFI is specifically responsible for the social impacts of the project. WP/task leaders and partners as owners of each unique result work together with the Impact Task Force to identify and implement an appropriate strategy to exploit their results.

To guide these processes, the Impact Task Force has created an Exploitation Canvas and accompanying Exploitation Guide. The first provides a visual overview, and coherent mapping of the elements to consider to exploit the results. The Exploitation Guide provides instructions and guidance on how to use the Exploitation Canvas.

The evaluation of the work of the LINKS Impact Task Force will be provided within D9.2 Updated LINKS Dissemination, Exploitation and Communication Strategy to be published in February 2022. What is important to emphasise here, is that the next activities on the development and distribution of dissemination material are integrated within the work of the LINKS Impact Task Force, by carrying out the following activities:

- Definition of the overall impact strategy for the dissemination, exploitation and communication of the main LINKS results (with the indication of clear activities and measures to implement);
- Implementation of the overall defined plan;
- Evaluation of the outcomes and impacts defined in the strategy, with special focus on the implemented dissemination, communication and exploitation activities – and the development of a contingency plan (if needed);
- Definition of dissemination, exploitation, and communication activities revolving around new key results.

To inform the target groups about the results and making them available for use, the activities presented in Table 16 will be developed for each result. Given that some results are still being elaborated, this table entails general indications: a more extended version, with indicated timing and channels, will be provided in D9.2 (to be published in February 2022).

In general, this table is coherent with the GANTT chart for the DEC activities defined in the D9.1 (see Table 12: GANTT CHART: LINKS DEC Activities). The main changes concern the timing for using specific channels. For example, in this table, the use of the LCC has been updated with the implementation plan defined by SIC (partner responsible for LCC). Moreover, the press release and newsletter will be realised at M20 instead of M18, to create a greater consistency with the results of the project that will be published shortly before, and the consideration of additional channels or reorganisation, as already emphasised in the Introduction of this document.

Table 16: Preliminary Roadmap for Dissemination and Exploitation Activities

Channel/Material/Event	Activities	Timing
LINKS and Partners Websites and Social Media	Publication of deliverables, news and information on events regarding the LINKS results	When results are produced, according to the project implementation
Infographics	Infographics showing how all the results are useful for the identified LINKS TGs (Policy and Decision Makers, Local Communities, Businesses, Developers, Feedbackers, Disseminators)	One every two months, starting from M20
	Infographic on LINKS Framework	March 2023
Video	'LINKS Stories' Videos	One every two months, starting from M20
	Videos showing how all the results are useful for the identified LINKS TGs (Policy and Decision Makers, Local Communities, Businesses, Developers, Feedbackers, Disseminators)	One every two months, starting from M21
Articles in Magazines and blogs	Publication of LINKS results in professional and informative magazines (e.g. 'PreventionWeb', 'La Protezione Civile Italiana', 'Emergenza 2.0', 'Firefighter Magazine', etc.)	During the entire duration of the project
Informative and Scientific Events and Conferences	Presentation of the LINKS results (e.g. WP2 results in 'EGU General Assembly 2022', 'RGS-IBG Annual International Conference', 'NEEDS Conference 2022', 'Accessibility Days 2022', 'EENA Conference', 'CERIS Workshops', 'Settimana Nazionale della Protezione Civile', 'AIIG Conference 2022', 'EFDRR2022'; WP3 results in: 'The Earth System Governance Conference', 'Hungarian Red Cross conference', 'COPE Socials', 'UNDRR Global Platform 2022'; WP4 results in: 'EENA Conference', 'ISCRAM2022', 'DPPI Conference', 'ITDRR'; WP5-6 results in 'Science for policy'- JRC Conference; WP7 results in 'vfdb-Jahresfachtagung', 'Virtual Fires Congress', 'Digitale Modellregion OWL', 'Safety Days'; etc.)	During the entire duration of the project
Networks/Online platforms	Roundtables at DRS01 Cluster, CMINE and RRG-Resilience Research Group, etc. Publications in: Disaster Risk Management Knowledge Center,	During the entire duration of the project

Channel/Material/Event	Activities	Timing
	Zenodo, CORDIS, etc. WP4/WP7 results in additional networks: GDPC, EFA, vfdb, VdF, AGBF, BBK, DKKV, DSTGB, CEDIM, Institute of Rescue Engineering and Hazard Prevention TH Köln, DGSMTech, VOST, German Media Association. Contact with businesses/applications: Essen packt an, NINA, KATWARN, BIWAPP	
LINKS conferences	Updating about the project advancement	M25, M42
Newsletter	Updating on the LINKS results	M20, 24, 29, 35, 42
Press releases	Updating on the LINKS results	M20, 24, 29, 35, 42
Leaflet	Presentation of the LINKS results	M36
Scientific Publications	Presentation of individual LINKS key results (e.g.: WP2 results in 'Geotema', 'Sustainability', 'J-readings', 'Ambiente, Società e Territorio'; WP3 results in 'New Media and Society', 'International Journal of Disaster Risk Science', 'Nature Communications', 'International Journal of Disaster Risk Science', 'Disaster prevention and management', 'Disasters'; WP4-7 results in 'ISCRAM', 'EENA', 'ITDRR')	During the entire duration of the project
Policy briefs	Providing policy recommendations on the application of SMCS to policy makers	From M36
Training	Trainings for teachers; lessons in different bachelor courses (Univ. of Copenhagen, Univ. of Padova, Univ. of Madeira, University of Florence, Lund University, SIMA, LCU, etc.)	During the entire duration of the project
Interactive workshops	LINKS Community Workshops + additional workshops with students of LCU	During the entire duration of the project
LINKS Community Center	Publication of the results	From M20

Key Takeaways from this Section

- Through dissemination activities on the LINKS results, target groups (in particular the Users) are increasingly aware of the importance of applying social media and crowdsourcing technologies to improve risk perception and vulnerability, and the disaster management processes.
- Through a multi-disciplinary approach, LINKS contributes in a coherent manner to scientific, societal, and economic impact of the projects, focused on increasing disaster resilience for a wide variety of stakeholders.
- The LINKS Impact Task Force is working in a targeted manner to contribute to achieving the the defined impacts and the uptake of the results.

6. CONCLUSION

This document is the first status report on the implemented dissemination activities in LINKS until M18. A qualitative and quantitative assessment is provided (indicators are specified in Annex 2).

In Section 2, we summarised the key messages addressed to each target group, and provided information about the (already available and in progress) LINKS results.

Section 3 focused on the activities implemented to *inform* the target groups about the key results, whereas section 4 revolved around *making the results directly available* to the target groups for their future uptake. In doing so, we established the basis for activities concerned with exploitation. In general, we can assume to have reached great results. Section 3, for example, argues that channels (the LINKS website, the social media channels), materials (publication of articles in magazines and professional blogs), and the participation to different typologies of events allowed to reach excellent results - both in terms of numbers of stakeholders involved, but also in their engagement in (future) activities of the project. Similarly, Section 4 demonstrated that online platforms and repositories are excellent channels to make the results directly available to the target groups. In terms of materials, the impact of publications on specialised journals in terms of read and downloads is good, given that LINKS has established strong relationships with relevant networks and projects. However, a valuable insight is that interactive workshops are representing a rich opportunity to make the results available to the key stakeholders.

In general, the dissemination of LINKS' results are making the target groups (in particular the Users) aware of the importance of applying social media and crowdsourcing technologies to improve risk perception and vulnerability, and the disaster management processes.

In the upcoming period, now that results are taking more and more shape, we intend to reinforce the engagement via the LINKS social media channels, strengthen the visual communication of the project (through infographics and videos), increase the participation and organisation of events, and solidify the relation among all the different channels. When it comes to disseminating the results, the role of the partners will be more and more crucial, guided by the LINKS Impact Task Force. Similarly, the LINKS Community Center will play a more central role in sharing our results in an accessible manner, whereas joint policy recommendations with similar projects allow to inform fair policy-making from a bottom-up perspective.

ANNEX I: LINKS EXPECTED IMPACTS (RESULTS & ACTIVITIES, M18)

Table 17 shows the LINKS Expected Impacts (EIs) planned in the project, as defined in the Grant Agreement (p. 30). It directly connects expected impact to the LINKS results and related dissemination and exploitation activities.

Table 17: LINKS Expected Impacts (Results and Activities)

LINKS EXPECTED IMPACTS	LINKS RESULTS AND RELATED ACTIVITIES
<p>EI-1: Comparative analysis of the European diversity in terms of risk-perception amongst citizens, and of vulnerabilities</p>	<p>Literature review on Disaster Risk Perception and Vulnerability; definition of a clear methodology to capture insights on the Disaster Risk Perception and Vulnerability; consideration of ethics in the Disaster Risk Perception and Vulnerability domain; definition of guides to make the information more accessible during disaster; literature review in Disaster Community Technologies; design of LINKS Community Center to access to the results related to Disaster Risk Perception and Vulnerability; identification of key drivers for improving institutional resilience</p>
<p>EI-2: Comparative analysis of different approaches to adapt to, and be prepared for risks in different countries (both within and outside the European Union), and among communities in precarious socio-economic conditions</p>	<p>Definition of a model of analysis of vulnerability; literature review on Disaster Risk Perception and Vulnerability, Disaster Management Processes, Disaster Community Technologies, demonstrating the diversity of approaches in using social media and crowdsourcing in disasters; state of the art of policies and frameworks on social media and crowdsourcing in disasters; definition of a clear methodology to analyse these aspects at the local level in the LINKS cases; design of LINKS Community Center to access to the diverse results related to Disaster Risk Perception and Vulnerability; definition of the basis of the LINKS community to share diversity of the approaches; consideration of ethics in research</p>
<p>EI-3: Advances through the cross-fertilisation of concepts resulting from the collision of different ways of thinking and of different approaches developed by various partners in the proposals</p>	<p>Consideration of the point of view of diverse stakeholders, belonging to different fields (i.e.: researchers, practitioners, municipalities, etc.) in the elaboration of specific results (e.g. Disaster Risk Perception and Vulnerability Tool, Drivers for Institutional Resilience, Disaster Management Processes Case Assessment, Disaster Community Technologies Landscape) and tools (LINKS Community Center, LINKS Community)</p>
<p>EI-4: Improved information exchanges among different actors involved, including first responders, local authorities, schools, and citizen representatives</p>	<p>Conducting interactive workshops involving different stakeholders, conducting to the definition of the basis of the LINKS community; contacts with stakeholders belonging to different fields in the local cases; collaboration with relevant networks in the field of disaster risk management; integrating citizens perspective in Disaster Risk Perception and Vulnerability, Disaster Management Processes and Disaster Community Technologies; definition of educational tools for minors; integrating ethics in research; focusing on accessibility and vulnerable groups; identification of key drivers for improving</p>

LINKS EXPECTED IMPACTS	LINKS RESULTS AND RELATED ACTIVITIES
	institutional resilience; definition of a methodology (Disaster Management Processes Method for case assessment) to implement the LINKS Framework and the related cases; definition of LINKS Community Center and LINKS Community as tools and opportunity to improve information exchange; use of dissemination and exploitation tools for information exchanges (e.g. events and conferences, online platforms, trainings)
EI-5: Identification of existing tools and guidelines for an improved prevention (including risk understanding and communication), preparedness (including training involving citizens), alert systems and their recognition by citizens, responses using citizen's competencies and local knowledge, and recovery	Definition of a list of the existing technological tools and guidelines to improve prevention, preparedness, etc. which is continuously updated (Disaster Community Technologies Landscape); design of LINKS Community Center to access to the LINKS results; identification of policies and guidelines on how to use SMCS in disaster risk management and in conducting related research; literature review on Disaster Risk Perception and Vulnerability, Disaster Management Processes, Disaster Community Technologies; identification of key drivers for improving institutional resilience
EI-6: Field-validation of different approaches related to different disaster risks involving the above actors, in representing urban and non-urban environments, including in areas where precarious socio-economic conditions prevail	First LINKS Community Workshop implemented in Italy; workshops focusing on minors implemented in Italy on Disaster Risk Perception and Vulnerability; workshops with students and citizens; definition of methods to conduct research in disaster risk governance; definition of a methodology (Disaster Management Processes Method for case assessment) to implement the LINKS Framework and the related cases
EI-7: Intensive sharing, among communities, of good practices and of learnings resulting from citizen-scientist interaction	First LINKS Community Workshop implemented in Italy; participation in relevant networks aimed at creating connections among research and citizens; definition of policy recommendation; definition of a methodology (Disaster Management Processes Method for case assessment) to implement the LINKS Framework and the related cases; definition of LINKS Community Center and LINKS Community as tools and opportunity to share knowledge; participation in events and conferences to share knowledge; making available results in online platforms
EI-8: A consolidated, common European understanding of disaster resilience	Literature review on Disaster Risk Perception and Vulnerability, Disaster Management Processes and Disaster Community Technologies, useful for researchers and at the basis of the work of policy makers; definition of LINKS Community Center and LINKS Community as tools and opportunity to consolidate that knowledge; participation in events and conferences to share knowledge; making LINKS results freely accessible (online platforms, trainings, etc.)

ANNEX II: QUANTITATIVE & QUALITATIVE INDICATORS

Table 18 shows the quantitative and qualitative indicators used to evaluate the progress for each dissemination channel, material, and event defined in this document. However, it should be noted that a coherent overview of qualitative and quantitative indicators (similar to the first Dissemination Exploitation, and Communication Strategy, D9.1) will be provided in the updated Dissemination, Exploitation and Communication Strategy (D9.2, to be published in February 2022).

Table 18: Indicators for Dissemination Activities

Channel/Material/Event	Quantitative Indicators	Qualitative Indicators
LINKS and Partners Websites and Social Media	Visitors per month, Page views per month (website) Followers, reactions (social media)	Engagement of new contacts
Infographics	Number of realised infographics	Expression of interest from target groups
Video	Number of realised videos; Views per videos	Expression of interest from target groups
Articles in Magazines and blogs	Number of articles realised	Strengthening of knowledge
Informative and Scientific Events and Conferences	Participation in external events	Contacts realised for future project activities
Networks/Online platforms	Number of networks/projects involved; Number of online platforms and repositories	Networking activities implemented
LINKS conferences	Organisation of events (at Consortium and partners level)	Strengthening of knowledge; Contacts realised for future project activities
Newsletter	Number of newsletters realised; Number of subscribers	Strengthening of knowledge
Press releases	Number of press release realised	Strengthening of knowledge
Leaflet	Distribution/Download of leaflet	Strengthening of knowledge
Scientific Publications	Number of publications; number of citations	Scientific contacts realised for future project activities
Policy briefs	Number of policy briefs realised	Change in the policy makers approach
Training	Number of trainings realised	Interest from students and researchers
Interactive workshops	Number of workshops realised	Interest from civil society and change in behaviour
LINKS Community Center	Members	Relations implemented