# D5.2-Data Management Plan Document, 1st release

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LUCA BALDINI

Consiglio Nazionale delle Ricerche

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# LIST OF ACRONYMS AND ABBREVIATIONS

| Acronym / Abbreviation | Meaning / Full text |
| --- | --- |
| CA | Consortium Agreement |
| CC | Creative Commons |
| CCLL | Coastal City Living Labs |
| DMP | Data Management Plan |
| FAIR | Findable, Accessible, Interoperable, Reusable |
| GA | Grant Agreement |
| GDPR | General Data Protection Regulation |
| IPR | Intellectual Property Rights |
| SEP | Standard Ethics Protocol |
| WP | Work Package |
| WPn | Work Package number |
| Dn.m | Deliverable number |

# BACKGROUND: ABOUT THE SCORE PROJECT

SCORE is a four-year EU-funded project aiming to increase climate resilience in European coastal cities.

The intensification of extreme weather events, coastal erosion and sea-level rise are major challenges to be urgently addressed by European coastal cities. The science behind these disruptive phenomena is complex, and advancing climate resilience requires progress in relevant data at adequate time scales, forecasting techniques, and understanding of the potential risks and impacts for real-scenario interventions. The Ecosystem-Based Approach (EBA) supported by smart technologies has potential to increase climate resilience of European coastal cities. SCORE outlines a co-creation strategy, developed via a network of 10 coastal city 'living labs' (CCLLs), to rapidly, equitably and sustainably enhance coastal city climate resilience through EBAs and sophisticated digital technologies.

The 10 coastal city living labs involved in the project are: Sligo and Dublin, Ireland; Barcelona/Vilanova i la Geltrú, Benidorm and Oarsoaldea, Spain; Oeiras, Portugal; Massa, Italy; Piran, Slovenia; Gdansk, Poland; Samsun, Turkey.

SCORE will establish an integrated coastal zone management framework for strengthening EBA and smart coastal city policies, creating European leadership in coastal city climate change adaptation in line with The Paris Agreement. It will provide innovative platforms to empower stakeholders' deployment of EBAs and smart technologies to increase climate resilience, business opportunities and financial sustainability of coastal cities.

The SCORE interdisciplinary team consists of 28 world-leading organizations from academia, local authorities, RPOs, and SMEs encompassing a wide range of skills including environmental science and policy, climate, ocean, and hydrogeological modelling, citizen and social science, data management, coastal management and engineering, security and technological aspects of smart sensing research.

# EXECUTIVE SUMMARY

This document is a deliverable of the SCORE project, funded under the European Union's Horizon 2020 research and innovation programme under grant agreement No 101003534.

Objective of SCORE is to develop and evaluate solutions based on Ecosystem Based Approach, Citizen Science and cutting-edge digital solutions, such as digital twins that equitably and sustainably enhance coastal city climate resilience. A co-design approach will be pursued in the 10 European coastal city living labs (CCLL) set up in the project to devise and demonstrate the SCORE solutions. In implementing its workplan, SCORE will collect and generate data obtained from different sources and it is expected to provide datasets useful for research beyond the project itself. Most of research data will be managed and processed, within the project life, through the SCORE Information System (SIP), although permanent and certified public repositories will be preferred for long-term storage to facilitate the re-use of consolidated datasets.

In this context, the Data Management Plan (DMP), outlining the way that data are collected or generated within the project, how they will be organized, stored, and shared according to the FAIR (Findable, Accessible, Interoperable, Reusable) principles, is a critical element of the project. It specifies which data will be publicly available through public repositories and which will be available only to the consortium (confidential), as far as this is possible, from the project's initial stage. The present deliverable is the initial version of the DMP to be delivered at Month 6. The complex structure of the project, the heterogeneity of the living labs, and the complexity of the workplan will require frequent updates of the DMP that will be consolidated in the deliverables D5.5 and D5.6, at project's mid-term and at the end of the project, respectively.

This deliverable is structured following the H2020 DMP template. The *Data Summary* section provides general information about the data usage in the project an in its work packages, namely the purpose and sources of data collection/generation in relation to the achievement of project and work packages' goal. The Section on FAIR data describes the general methodologies that the project will follow to ensure that data will be managed according to the FAIR principles and recommended FAIR practices. Next sections explain other aspects, such as the *Allocation of resources* for the management of research data, *Data security* and *Ethical aspects*, the latter being crucial in SCORE because significant living lab activities involve dealing with citizens and stakeholders. The final section anticipates forms that will be used to document the datasets to be created in SCORE.

# LINKS WITH OTHER PROJECT ACTIVITIES

This document, namely the initial version of the Data Management Plan is the deliverable 5.2 of the SCORE project, funded under the European Union's Horizon 2020 research and innovation programme under grant agreement No 101003534 to be delivered at month 6. The Data Management Plan (DMP) is a key element of good data management, describing the life cycle for the data to be collected, processed and/or generated along the project life and made available to make SCORE research data findable, accessible, interoperable and re-usable (FAIR). The work programme of SCORE is structured along 11, interconnected work packages as sketched in Figure 1, where general interactions between WPs (Hexagonal tides refer to research work packages) are highlighted.
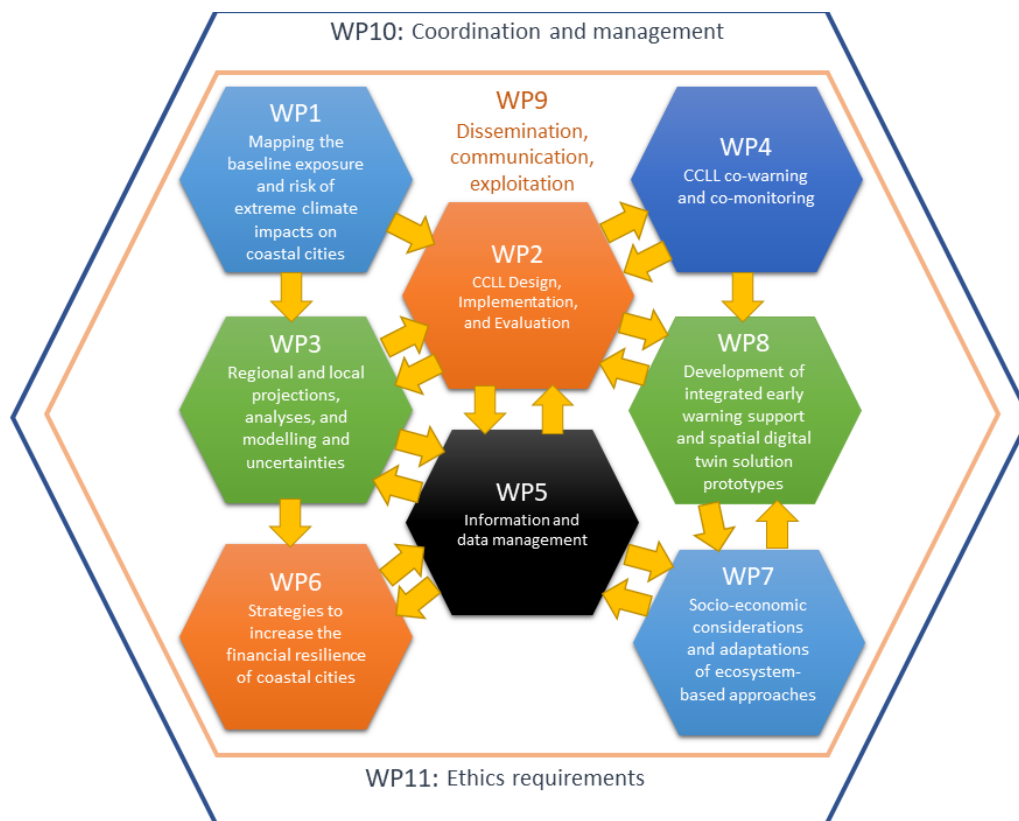


*Figure 1: SCORE WP structure*

The development and management of the DMP along the project duration, is part of Work Package 5 (*Pre/post EBA interventions evidence collection and knowledge marketplace*) that deals with the design, development, and management of a dedicated ICT platform (termed SIP, SCORE ICT platform), which supports all the data and models generated from all the WPs of SCORE, implementing relevant interfaces allowing to collect, store and share the heterogeneous data acquired and processed during the SCORE project. It is expected that SIP will ensure long-term data storage and will therefore represent an efficient tool for sharing knowledge on EBAs. For this reason, it is envisaged that SIP will implement FAIR-compliant solutions concerning heterogeneous data collected or generated by the project, although certified repositories, such as *Zenodo*, where all publications will be stored in a project community that will be created, could be preferred for long-term deposit. The Data Management Plan, although part of the of WP5, has connections with all the research WPs that all collect and/or generate data. Developing a DMP implies a structured way of thinking about project data (how data are collected, processed and/or generated) and

feedbacks from research WPs have properly been gathered to this initial version of DMP. Further information about specific datasets created/generated as a consequence of WPs and Living Labs activity, will be included in the next releases of the DMP.

In the first six months several tasks and associated deliverables have been completed and some of them are key for the DMP. An important aspect of the DMP is the description of measures that are taken to safeguard and protect sensitive data. To address this issue, among the deliverables already submitted, of particular relevance is *D11.1- Ethics requirement: Standard Ethical Protocol* that has established standards to deal with the management of data gathered by citizen and stakeholder involved in the Costal City Living Labs. The building of *D3.1 Package of procedures for baseline characterization and projections* and *D3.2 Data usage document for the Reference datasets for baseline characterization and projections* has provided a mean to precisely identify the source of climate data that will be re-used, once properly downscaled in the project. *D5.1 Analysis of the Technical Features of Existing Databases* has gathered relevant information from previous experiences that have created and managed multi-sensor datasets that are significant for EBAs. D10.1 *Management manual, D9.1 Plan for exploitation and dissemination of the project results have* clarified the role of research data within the management and exploitation/dissemination SCORE strategies.

TABLE OF CONTENT

# 1. INTRODUCTION

The intensification of adverse phenomena hitting coastal areas under climate change, such as coastal erosion, sea-level rise, storm surge and intense precipitation could make living near the coast high-risk. Adaptation actions are therefore necessary, but their design and implementation require progress in acquisition of relevant data and forecasting models with the level of detail and timing useful for real-scenario interventions. SCORE is a four-year H2020 project aiming to reduce and mitigate the impacts of sea level rise, coastal erosion and extreme weather events related to climate change on European coastal cities and settlements by means of co-designed, co-developed, deployed, tested, and demonstrated innovative Ecosystem Based Approaches, smart and digital technologies, while facilitating also financial sustainability, thus enhancing coastal city climate resilience. A co-design approach will be pursued in the 10 European coastal city living labs (CCLL) set up in the project to devise and demonstrate appropriate solutions. In implementing its workplan, SCORE will both collect and generate data making use of data from many different heterogeneous sources and is expected to provide, datasets useful for research beyond the project itself. Most of research data will be managed, within the project life and beyond, through the SCORE Information System (SIP), although permanent public repositories will be used for facilitating the re-used of consolidated datasets.

In this context, the Data Management Plan (DMP), outlining the way that data are collected or generated within the project, how they will be organized, stored, and shared, is a critical element of the project. It specifies which data will be publicly available through public repositories and which will be available only to the consortium (confidential), as far as this is possible, from the project's initial stage. The DMP also provides motivations when versions or parts of the project research data cannot be openly shared, that for SCORE, it is expected that this can occur in relation to third-party copyright issues, confidentiality or personal data protection requirements.

The first audience to which this report is addressed is the internal partnership. SCORE partnership is made of 28 partners. The DMP, since the early phases of the project, will support partners in considering all the relevant aspects of data management, by establishing consistent practices among partners to increase the efficiency and robustness of data handling along the project. The second audience of this and following DMP, is the community of researchers, engineers, practitioners, city planners, policy makers, interested in re-using datasets produced by SCORE.

This document is the initial version of the DMP to be delivered at Month 6. The complex structure of the project, the heterogeneity of the experimentation sites, and the workplan will require frequent updates of the DMP that will be consolidated in the deliverables D5.5 and D5.6, to be delivered at project's mid-term (24 months) and at the end of the project (48 months) respectively. New versions DMPs should reflect changes such as those due to modifications in consortium composition or implementation of new regulations, external factors such as the emergence of new data standards, new releases of external datasets reused by SCORE, and, finally, the inclusion and the documentation of new datasets produced by the project according to the workplan. For example, depending on WP, the 10 CCLL can act as "frontrunners" or "followers", where frontrunners are expected to be the first to experiment solutions (e.g., citizen science sensors to be co-deigned along the project) the and the followers are expected to adapt and implement solutions following outcomes of activities conducted in frontrunners CCLL. It is therefore expected that "followers" can provide data at later stage and, consequently, it is expected that the DMP will evolve in time accordingly.

This deliverable is structured according to the H2020 template[1]. Section 2 (*Data Summary*) provides general information about the data usage in the project, namely the purpose and sources of data collection/generation in relation to the achievement of projects goal. Technical information about data formatting and size will be provided. The Section 3 (*FAIR data*) will describe the general methodologies that the project will follow to ensure that data will be managed according to the FAIR principles[2] and recommended FAIR practices[3], with subsections specifically targeting the basic elements of FAIR principles. Subsequent sections will deal with the *Allocation of resources*, *Data security* and *Ethical aspects*, the latter following the ethical principles established for SCORE in the D11.1 deliverable[4].

Section 4 (*Allocation of resources*) details how project resources are allocated to the management of research data. Following sections deals with solution adopted for *Data security* also during the project and *Ethical aspects*, the latter crucial in SCORE because significant project activities involve dealing with citizens and stakeholders. Finally, Section 8 provides a Summary of SCORE Datasets. For each dataset that is released, relevant information will be provided highlighting specific methods adopted to be compliant with FAIR objectives. It is expected that this section will be enriched with the description of new datasets as the SCORE progresses in implementing its work plan. In this DMP version a template of the form adopted to describe the datasets used by the project is provided.

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[1] https://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/open-access-data-management/data-management_en.htm

[2] *Wilkinson, M., Dumontier, M., Aalbersberg, I. et al. The FAIR Guiding Principles for scientific data management and stewardship. Sci Data 3, 160018 (2016).* https://doi.org/10.1038/sdata.2016.18

[3] *Guidelines on FAIR Data Management in Horizon 2020 (Version 3.0, 26 July 2016),* http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-data- mgt_en.pdf

[4] *Gharbia and Hawke, Ethics requirement: Standard Ethical Protocol, SCORE Deliverable D11.1, 31 august 2021.*

# 2.   DATA SUMMARY

The aim of SCORE is to increase climate resilience in European coastal cities, targeting phenomena like the intensification of extreme weather events, coastal erosion, and sea-level rise. SCORE focuses on Ecosystem Based Approach (EBA) supported by smart technologies that has potential to increase climate resilience of European coastal cities. Moreover, SCORE will enable smart instant monitoring and control of the climate resilience in European Coastal Cities through spatial digital twin solution prototypes, to assist local and national governance in effective resilience management. SCORE uses a wide range of inter-disciplinary methods, that includes nature-based solutions, architectural and city planning, and participatory engagement of citizen scientists. The primary project methods are the Life-Cycle Approach and the Coastal City Living Labs formation and implantation. CCLLs are user-centered, open-innovation urban ecosystems, where both public and private actors partner and interact to address different issues. Specifically, CCLLs will be implemented to tackle specific challenges related to sea level rise, coastal erosion and extreme flood events, and the effectiveness of proposed solutions will be assessed by the different agents through innovative monitoring systems, citizen science and cutting-edge numerical modelling. SCORE will develop a CCLL network in 10 cities located in 8 different countries namely Sligo and Dublin, Ireland; Barcelona/Vilanova i la Geltrú, Benidorm and Oarsoaldea, Spain; Oeiras, Portugal; Massa, Italy; Piran, Slovenia; Gdansk, Poland; Samsun, Turkey. They will establish a network of cities learning from one another so that one city ("frontrunner") can mentor other cities ("follower") for specific actions. At the same time, a city that can play the role of frontrunner for a specific application, is mentored by other cities for other actions. The actors that participate in the CCLLs will have access to specific technologies in order to address the particular climate change issues relevant to their region, adapting solution to the specific ecosystem.

The SCORE work plan is developed through 11 Work Packages over a 48-month period built around an iterative approach, where the next steps are defined by and based on the feedback of involved (end-)users and stakeholders. The Life-Cycle method (Iterative Approach) maps and enacts the life-cycle of the overall SCORE project, from: a) Ideation and Exploration, b) Co-Creation and Co-Design, c) Real-Life Experiment and Testing, d) Evaluation and validation by end users and stakeholders. In the Living Lab approach, the next steps in a project are defined by and based on the feedback of involved (end-) users and stakeholders in each CCLL. In order to reach their objectives, all the research WPs use data that can be originated by external data sources. They can collect and generate data that, in turn, can be used by other WPs. The section 2.1 describes in detail the use of data across research WPs, facilitated by the SCORE ICT Platform (SIP).

## 2.1. Origin and purpose of data

This subsection describes the origin and purpose of the data collected/generated and used by each research WPs. The role of WP5 in facilitating the flux of data through the development and management of SIP will be finally described.

### WP1: Mapping the baseline exposure and risk of extreme climate impacts on coastal cities

Based on literature, climate data, models, and information obtained from each CCLL (encompassing all frontrunners and followers), WP1 will map the baseline exposure and risks of climate change impacts on Coastal Cities. Global,

European, national, and regional hazard datasets will be used along with local data concerning critical infrastructures, public residential commercial assets, and human exposure. This baseline risk will be defined as the integration of hazard, exposure, and vulnerability under existing climatic conditions. The final output will be the mapping of vulnerability, exposure, and hazard, which together can provide stakeholders with an initial understanding of the baseline. Such the maps will help identify risk hot spots across the various CCLLs, which will be further investigated using quantitative risk approaches in WP6.

## WP2: CCLL Design, Implementation, and Evaluation

WP2 acts as the focal point for all SCORE activities as it will manage and structure the CCLLs design, implementation, and evaluation activities. CCLLs, supported by SCORE partners, follow a user-centric paradigm, allow academia, public actors, private actors, and civil groups to play a relevant and appropriate role in the different phases of the project. In a co-creation process, these parties are stimulated to interact on equal footing, ensuring collaboration within all the CCLL life cycle including all the co-design activities related to EBA and Citizen science. The set-up of CCLLs will take place in the first 12 months of the project following a specific enrolment procedure that will start by signing a Consent Forms after receiving the Information Sheet and a briefing informative meeting/workshop about the project. Support and monitoring of the citizen scientist related activities will be ongoing throughout the project. Being WP2 results based on input from citizen volunteers, this information will be anonymised (or at least referred to by the name of the CCLL) before its upload on the SCORE information system (and later as collected dataset uploaded to a permanent repository) to be used by project partners, avoiding the disclosure of identity and insufficient protection of participants private information. Non-anonymized data will not be shared neither within SCORE partnership nor with the general public unless an explicit permission is given by CCLLs. In general uploading of such identifiable information to the portal is only possible with explicit consent of the participant and SCORE Ethical Committee approval[5].

CCLLs will be also the primary mean for identifying data that are locally relevant and available. Preliminary surveys have identified cartographic information available and sources for oceanic, meteorological and hydrological observations and models, that typically are weather and environmental protection agencies, and other sources of data that can be used at evaluation stage, such as aerial photographs. Such data will be used as input in and validation in WP3, WP4 and WP8. A detailed description of local data, including accessibility and licensing aspects to allow data to be re-usable within SCORE and to produce datasets to be publicly available, will be provided in the next releases of the SCORE DMP.

## WP3: Regional and Local Projections, Analyses, Modelling and Uncertainties

WP3 will build on previous initiatives to produce reliable dataset of climate and sea level projections downscaled to the high temporal and spatial resolution applicable to all CCLLs. Selection criteria and procedures to identify projection data are described in detail in deliverable D3.1 and D3.2 [6] delivered at month 6. In general, data for this task are time series, remote sensing data, short term forecast, climatic projections related to the impact of climate change on coastal cities in terms of i) sea levels, ii) coastal waves, iii) wind and precipitation extremes, iv) sea temperatures, v) river level extremes. Also, data and models available at each CCLLs will be used. From a practical

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[5] *Gharbia and Mcenzie, Ethics requirement: Standard Ethical Protocol, SCORE Deliverable D11.1, 31 august 2021*

[6] *Paranunzio, Anton, Ahmed, Package of procedures for baseline characterization SCORE Deliverable D3.1, 31 december 2021 ; Anton, Paranunzio, Ahmed, Data usage document for the Reference datasets for baseline characterization and projections , SCORE Deliverable D3.2, 31 december 2021*

point of view, the data gathered from different climate service (e.g., Copernicus Climate Service CCS, Copernicus Marine Service CMEMS, EURO and MED CORDEX) have been considered. In general, data gathered from different climate services in the framework of WP3 should be free of charge and open to any public or private organization so that, in general, any individual could access and re-use the data. Data, metadata and information delivered by the different climate services should be available online to guarantee easier accessibility with/without prior registration on services websites and platforms through direct download or sub-setting services. The identified climate services should guarantee a strong usability and user experience of the web portal/website. Repositories guaranteeing a single point access and providing a comprehensive overview on a variety of different datasets across Europe (like e.g., the C3S CDS or EMODnet initiative portal), have been preferred so far against national or local initiatives to ease accessibility and widen reproducibility of results in different coastal cities. The data retrieved from identified service will be analysed and downscaled by means of ready-to-use tools and models to be used for local-scale impact assessment (Task 3.2) and then will be analyzed and processed in Task 3.3 for the implementation of statistical analysis tools for local urban-scale hazards and long-term evolution of the coastline modelling (Task 3.5). Data from task 3.1 and subsequent will be finally exploited in the testing phase (Task 3.6) in which citizen science data, institutional network of sensors and data from satellites for Earth surface observation, such Copernicus sentinels or ASI COSMO-SkyMed will be used for validation under appropriate licenses.

## WP4: CCLL co-warning and co-monitoring

WP4 aims at leveraging citizen science and participatory GIS activities to collect data to complement institutional data and models for the SCORE early warning system and for the assessment of CCLLs' EBAs. WP4 aims at empowering citizens with low-cost sensors for citizen science activities, some of which will be developed along the project through dedicated events like DIY activities in schools or hackathons and raising their awareness on the topic of EBAs. Recruitment of volunteer citizen scientists will take place in the first 12 months of the project following the Ethics guidelines already summarized for WP2. Citizen science sensors are expected also to fill gaps of institutional sensors in terms of space and time resolution. The resulting citizen science sensor network will be complemented with institutional environmental monitoring networks or remote sensing retrievals available at CCLLs that will be also used to validate data coming from low-cost sensors. Citizens will be directly involved in design (e.g., through hackathon events), implementation and operation of sensor networks and will be able to monitor in real-time data collected by the network. Some aspects of citizen science will raise ethical issues that will be treated according to the requirements described in D11.1. For example, likely the citizen sensor network will provide in situ data that would require the location of the sensor with a certain degree of accuracy. Sensor data collected in form of images (e.g., webcam or photos of seashore collected by citizens for monitoring waves and sea level) will need to be anonymized. Once in place, sensor data will be managed through SIP, where they will be stored and used to monitor at each CCLLs geophysical parameter of interest, associated with metadata that have to include information on data processing and data quality.

## WP6: Strategies to increase the financial resilience of coastal cities

WP6 will build upon data and knowledge produced in other WPs to assess the efficiency of the EBA interventions and to develop risk assessment tools. Among the final result, along financial guidelines, will be an assessment of the residual risk, i.e., the risk the CCLLs still face after infrastructural improvements and EBAs, measured through a set of risk indicators assessing economic, environmental and human risk. This WP will be largely based on outcome from datasets generated from WP1, WP2, and WP3 and made available through the SCORE information system. A financial categorization will be conducted to identify the different situations each CCLL finds itself in terms of risk management (whether a CCLL is subject to a low-frequency high-loss risk and should therefore look for risk transfer schemes or if

the risk is mostly high-frequency low-loss and therefore it should preferentially be managed internally). Within this task's framework, data, including financial data, will be collected from the CCLLs through specific workshops managed by WP2 (Task 2.3). Relevant outputs will be in the form of georeferenced maps handled through the SIP.

## WP7: Socio-economic assessment of adaptation strategies and policy recommendations

WP7 will focus on the socio-economic assessment of EBA interventions in the CCLLs, and the formulation in documents of policy recommendations to assist decision making in climate change adaptation of coastal cities at local, national and EU levels. WP7 makes use of outcome of WP1, WP2, WP3, and of WP6 to evaluate the EBAs and other types of interventions, to evaluate CCLL climate resilience and formulate adaptation strategies and policy recommendations.

## WP8: Development of integrated early warning support and spatial digital twin solution prototypes

WP8 develops GIS-based digital twin solution prototypes that will be built with a dual objective: a) to provide a virtual environment in which different climate change scenarios and actions can be visualized and optimum solutions identified and b) to support early warning related to adverse conditions. Data needed for digital twin solutions will be available by means of SIP and include the baseline and climate projection models (WP1, WP3) properly downscaled, risk assessment tools (WP6) and information and models available from CCLLs. In fact, it is expected that digital twin can use resources available at each CCLLs, made available through SIP interfaces. Such resources include data (especially in terms of geographic information, risk and vulnerability maps where exist), models (weather, hydrological, hydraulic, wind and wave models), and sensor networks monitoring the geophysical parameters of interest. The networks of citizen science sensors developed in WP4 are used as input to identify the current situation. The evaluation (Task 8.5) will use both input from observational networks at CCLLs and relevant stakeholders to evaluate the effectiveness of the digital twin solutions. The WP8 platform will be developed using a GIS framework based on requirements of the INSPIRE Directive 2007/2/EC. It will follow standards and specifications relevant to spatial data, such as the Open Geospatial Consortium (OGC) for the interoperability of sensor data, the Sensor Observation Service (SOS), which defines a web service interface which allows querying observations, sensor metadata, as well as representations of observed features.

## WP5: Pre/post-EBA Interventions Evidence Collection and Knowledge Marketplace

While along the project duration, a SharePoint site will be used as the online working and collaboration platform, accessible to project participants, the overall management of research data flux through life of the project is carried out by dealing with the systematic collection and management of the data collected and processed in the different WPs during the SCORE project.

To this purpose, a SCORE ICT Platform (SIP) will be developed and will be complemented by an Application Programming Interface (API) middleware allowing interfacing between the SCORE database and existing databases, either available in the CCLLs or developed by other projects, containing data related to SCORE activities and objectives, featuring conversion of heterogeneous data in a common and unified format for the SCORE partners. The SCORE ICT platform shall:

i)      Provide a unified access to climate service data and products generated from them by the SCORE WPs.

ii)     Facilitate the access to data resources available at CCLLs

iii)    Collect, store and share with other WPs data acquired from both SCORE sensors and Citizen Science kits;

iv)     Store and share the models generated in SCORE WPs and the knowledge about EBA efficacy against extreme events, sea level rise and coastal erosion risks;

v) Ensuring data storage during the project funded life and, hopefully, beyond it, to make the SIP an efficient tool for sharing knowledge on EBAs (although the feature of assigning a DOI is not included so far)

The flux of data between external sources and SCORE, facilitated through the SIP is shown in *Figure 2* where the role of interface to heterogeneous input data (reused or collected) is highlighted. SCORE formatted data (in red and blue solid arrows) will be treated according to standards and methods highlighted in the Section 3 (Fair data).
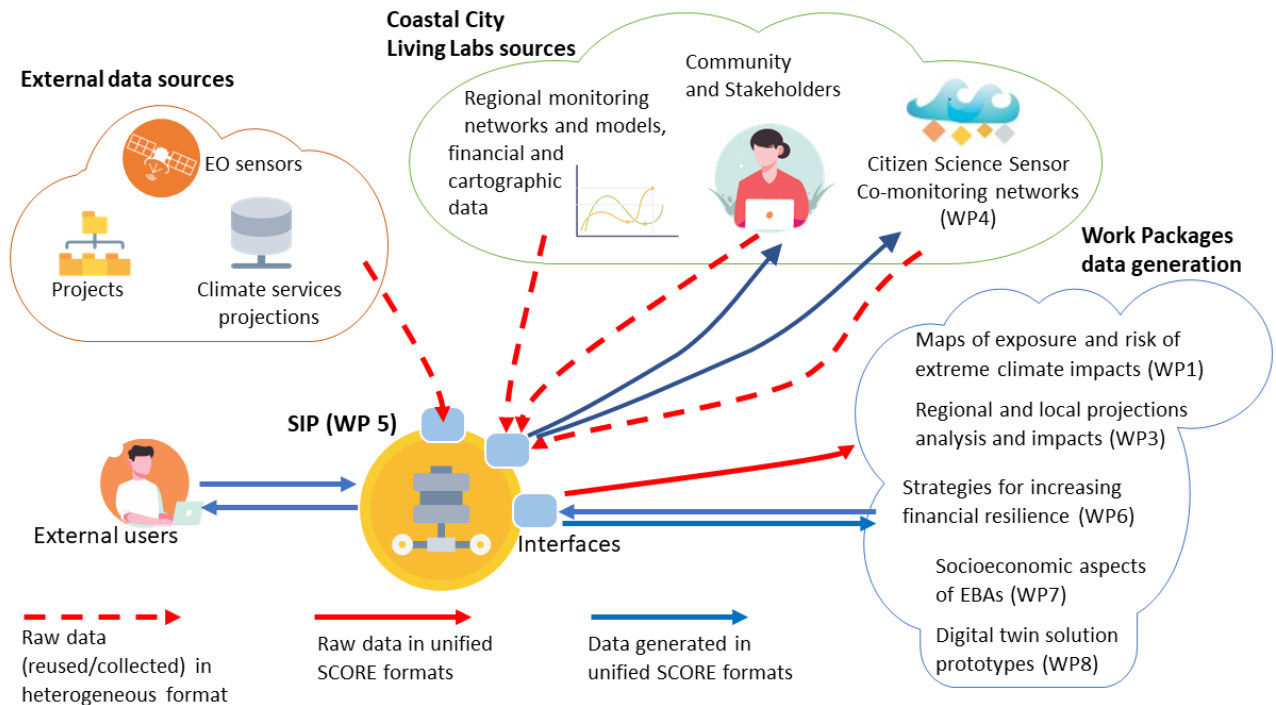


*Figure 2:* **Flow of data managed through the SCORE Information System (SIP).**

As highlighted by the previous description and by *Figure 2* as well, SCORE work packages will make use of different and heterogeneous external sources of data, in order to achieve their goals, which can be summarized as in the following:

a) **Climate service data:** Most of them will be collected through the Copernicus Climate Data store according to D3.1 and D3.2. SIP will facilitate the access although they can be downloaded by single partners to carry out their research. SIP, instead, will manage downscaled data and other data generated by SCORE WPs based on climate service data.

b) **Earth observation data and global observation systems:** Satellite data will be collected from different data providers (Eumetsat, Copernicus, NASA, Italian Space Agency). Typically, such data, that can be obtained with different level of processing applied by the data providers, are of property of data providers and will be stored and shared at SIP only when necessary and will not be provided outside of partnership. They will be used at least in WP3, WP8, and WP4.

c) **Citizen Science Data:** Sensors deployed at CCLLs within WP4 will be interfaced to SIP for further processing and use in other SCORE WP, such as the WP8, where they will represent current environmental condition in Digital Twin.

d) **Data available at CCLLs**

a. Observational data: at each CCLL, data from institutional observations network, typically managed by weather services or Environmental agencies are available to relevant authorities. Not necessarily these data are open and therefore will be used in SCORE after specific agreements with data provider and will not be shared outside the consortium. Data from regional or local ocean or weather service will be collected depending on the project need. Data can include sea and wave level, wind, precipitation, runoff. Typically, they are in situ measurements in the form of time series, with exception of weather radar products and HF radars, were available, that are usually made available in HDF5 or GRIP format. Such data will be used in the project according to the policy of the data providers that usually do not include the possibility of sharing outside the consortium. They will be used mainly in WP3, WP8, and WP4, the latter for assessing citizen science sensor network.

b. Output of weather, hydrological, hydraulic, and marine models are available at CCLLs at least to allow authorities to perform their planning and emergency management duties. Output of such models (if not the models themselves) will be necessary for the "early warning support" module of WP8. Models will be used in SCORE after specific agreements with data provider and will not be shared outside the consortium.

c. High resolution cartographic data: such data are necessary for vulnerability studies (WP1, WP6, WP7) and digital twin (WP8).

d. Financial data. Obtained from WP2 to be used in WP6.

Based on these sources and WP activities, SCORE will generate higher level datasets that will be considered SCORE products. The partners (or the partner) that have contributed to each product will be considered as shared owners of the products. The different formats used are summarized in Table 1 - Summary of data formats, where those used in internal data processing are separated from those adopted for facilitating re-use through deposit in permanent repositories.

*Table 1 - Summary of data formats*

| Type of data | Formats used during data processing and in SIP | Formats for sharing reuse and preservation |
|---|---|---|
| Numerical or \textual tabular data | Microsoft Excel (.xls/.xlsx) | Comma-separated values (.csv) |
| Qualitative textual data | Microsoft Word (.doc/.docx) | Rich Text Format (.rtf) or text (.txt) |
| Audio data | mp3 format (.mp3) | Typically, they are destroyed after transcription |
| Video data | mpg format (.mp4) | Video are destroyed unless they are used to detect environmental features. Mpg will be used in this case |
| Raster data | Hdf5, NetCDF 4, GeoTiff | Hdf5, NetCDF 4, GeoTiff |
| Vector data | ESRI shapefile, DBF, GeoJSON, KML | ESRI shapefile, DBF, GeoJSON, KML |
| Images | png, jpeg | png, jpeg |

## 2.2. Data utility

The aim of SCORE is to increase climate resilience in European coastal cities, targeting phenomena like the intensification of extreme weather events, coastal erosion, and sea-level rise. SCORE pursues scientific evidence for the application of EBAs, and best practice for their design, replication, and scalability in the context of smart coastal cities. Furthermore, SCORE promotes digital and smart technologies and innovation to increase climate resilience. Data collected/generated by the project will be important to evaluate the effectiveness of these tools for climate resilience. SCORE aims at establishing an integrated coastal zone management framework for implementing EBAs, smart coastal city policies, coastal resilience plans and management, and dynamic adaptation pathways according to local legislation, providing also tools for assessing the financial viability of EBAs. Sharing of relevant database will be an important mean to achieve this goal.

The data produced can be of interest to different categories of potential users.

Interested **research communities** are those focused on:

a)  Climate studies with specific reference to mitigation/adaptation strategies based on EBAs

b)  Citizen science: sensor co-creation, development, end evaluation.

c)  Environmental observational methods

**Public authorities and policy makers** operating in coastal cities are expected to use SCORE data to improve:

d)  Urban Planning, in order to take into account EBA mitigation/adaptation strategies

e)  Engaging citizen in co-design and environmental co-monitoring activities

f)  Co-design and set up of environmental monitoring systems, for the possible promotion of network citizen science sensors and smart technologies

g)  Early warning and management of emergency with the use of the innovative Digital Twin solutions

Finally, **industries and developers** can be interested in developing and testing products based on SCORE outcomes.

# 3. FAIR DATA

This DMP describes the data management procedures that are followed according to the FAIR principles[7] and the H2020 guidelines for their implementation[8]. The acronym FAIR identifies the main features that the project research data must have in order to be *findable*, *accessible*, *interoperable* and *re-useable*, allowing thus for maximum knowledge circulation and return of investment.

## 3.1. Making data *Findable*

Although during the project life data will be managed through the SIP, at the publication of project results each research teams will deposit and describe the relative underlying dataset(s) (see *Table 3 - Example of dataset description form*) in the identified public data repositories, but also their Institutional repositories, if existing, provided that they can attribute persistent unique identifiers to the deposited items. Valid and machine readable DOIs (Digital Object Identifiers) allow other repositories to find and identify the datasets deposited by SCORE. Moreover, all partners are strongly recommended to make use of DOI to make datasets produced by SCORE citable for publication. The chosen data repositories need to support standard descriptive metadata to ensure datasets indexing and discoverability also by machines. A repository like Zenodo[9] satisfies these important requirements. In fact, (meta)data are assigned a DOI issued to every published record. Metadata of Zenodo are compliant with DataCite Metadata Schema minimum and recommended terms. Metadata of each record is indexed and searchable directly in Zenodo search engine immediately after publishing and sent to DataCite servers during DOI registration and indexed there. However, other repositories, including SIP and institutional partners' repositories, need to support Dublin Core[10] and DataCite Metadata Schema[11]. The project datasets will be made visible through the OpenAIRE portal[12]

All relevant documentation explaining data collection procedures and analysis (such as codebooks, methodologies, etc.) will be made available along with the data, to guarantee intelligibility, reproducibility, and the validation of the project findings through specific information (textual information) or code.

SCORE research data will be organized in datasets, which are collections of data units with the same focus and scope. This DMP identifies the following common rules for **dataset naming** and versioning in order to improve data visibility, discoverability, citation and permanent online tracking. The recommended title for each dataset consists of:

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[7] *Wilkinson, M., Dumontier, M., Aalbersberg, I. et al. The FAIR Guiding Principles for scientific data management and stewardship. Sci Data 3, 160018 (2016).* https://doi.org/10.1038/sdata.2016.18

[8] *https://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/open-access-dissemination_en.htm*

[9] https://Zenodo.org/; Compliancy with FAIR principle is described at. https://about.Zenodo.org/principles/

[10] https://dublincore.org/

[11] https://schema.datacite.org/

[12] https://www.openaire.eu/

*PROJECT ACRONYM: WPn: WP title or short description of WP aims: Taskn.m: Task title or short description of specifying Task aims: additional information specifying coverage and nature of data (optional): version number (in case of revisions or updates)*

Example:

*SCORE: WP3: Regional and Local Projections Analyses Modelling and Uncertainties: Task1.1: Reference datasets for baseline characterization and projections: v.1*

The version number of the dataset will be added at the end of the title in case of data revisions to help identifying the dataset updates especially in repositories that do not track versioning automatically.

This DMP recommends also the following rules for **file naming** (WPn means "work package number" Tn.m is the "task number", and ver identifies the "version number" (in case of data revisions or updates):

- for dataset file(s)

  *DATASET_SCORE_WPn_Tn.m_coverage or other content specifications_date (YYYYMMDD)_vn.file extension*

- associated to datasets, relevant documentation explaining data collection procedures and analysis (such as codebooks, users' manuals, methodologies, etc.) are provided in the form of a human readable README file

  *README_SCORE_WPn_Tn-m_coverage or other content specifications_date (YYYYMMDD)_vn.file extension*

Specific keywords derived, when possible, from Thesauri and controlled vocabularies will be associated to each dataset to enhance semantic discoverability.

In case of geographical data, the SCORE DMP will:

- Use a GIS framework based on the requirements of the INSPIRE Directive 2007/2/EC;

- Comply with standards and specifications relevant to spatial data, such as the ones set by the Open Geospatial Consortium (OGC) aiming to make location information FAIR;

- Apply the OGC standards for the interoperability of sensor data: Sensor Observation Service (SOS) defines a web service interface which allows querying observations, sensor metadata, as well as representations of observed features;

- Standardize the spatial data produced by models (WP3, WP6, WP7, WP8) and sensors (WP4), which will also include the new knowledge generated in the CCLLs about the performance of the co-designed EBA interventions (WP6), following geospatial standards of ISO/TC211: ISO 19136:2007 Geographic information - Geography Markup Language (GML), ISO 19156:2011 Geographic information - Observations & Measurements (O&M);

- Ensure that metadata linked to the datasets enable standardized organization and discovery of geospatial data, in line with the INSPIRE directive: ISO 19115-1:2014 Geographic information - Metadata - Part 1: Fundamentals, ISO 19139:2007 Geographic information - Metadata - XML Implementation.

In all the other cases, «community » standards will be searched. Otherwise, metadata compliant to general purpose standards, such as Dublin Core will be adopted.

## *3.2.* Making data *Accessible*

As a guiding principle, SCORE seeks to make research data openly available, whenever possible, to allow for dissemination and validation, and to increase the re-use potential of research results. To this purpose, all the files will be converted to standard and well-documented open formats and the datasets that will be deposited will include all relevant documentation and explanation.

According to the principle expressed as "**as open as possible, as closed as necessary**" restrictions on data access or impossibility to share them will be considered only in the following cases:

- when collected data belongs to third party which have denied permission for sharing them on account of confidentiality and proprietary issues;

- protection of personal data of key informants involved in surveys, focus groups, interviews, and case studies as drafted in SCORE D11.1 deliverable;

- when availability of the data would mean that the project's main aim might not be achieved (reasons will be explained in the accessibility details relating to each dataset described in Section 8);

- other legitimate reasons (that will be explained in the accessibility details relating to each dataset described in Section 8).

All possible and legitimate actions and strategies will be adopted to allow data sharing including:

- obtaining explicit copyright permissions from third party data owners (this can happen at CCLLs level) to be allowed to re-use, reproduce and distribute the collected data when necessary; in this case specific agreement with data owner will be sought.

- privilege the used of standard open formats or self-descriptive formats for data intended for external users and also for internal purposes;

- providing all relevant documentation and explanation for the data and the datasets, including the procedures adopted to obtain them, versioning, and software for reading data in case of non-standardize formats;

- obtaining the consent of citizens and stakeholders involved in focus groups and anonymizing and aggregating the data of interviews or brainstorming or in evaluation activities, typically carried out within CCLLs;

- in case of copyright on raw data derived, collected, or elaborated from pre-existing databases or from other original sources (i.e., papers, journal articles, book chapters, reports, video and audio sources), collected data will be made available if the reproduction and sharing are allowed by expressed permission of the right holders or by applicable copyright exceptions and exemptions.

In case of data that fall under some of the restrictions described above and for which it is not possible to take any action to make them shareable, EU allows complete closure or restricted access to them. The SCORE DMP indicates the versions or parts of the datasets that cannot be freely shared providing the specific motivations as per *GA*.

During project life, data will be managed through SIP which will manage the access to project partners and their members. At the time of presentation of results in scientific peer-reviewed publications, researchers will deposit the project data that can be shared in a data repository, to guarantee their discoverability, access, and preservation beyond the project end. Such repositories support open licenses and different access levels. Finally, they adopt

descriptive metadata standards as required by the OpenAIRE Guidelines and allow cross-linking between publications and the relevant datasets. The specific teams responsible for a specific dataset is responsible for the management in the repository of their choice.

As a general rule, *Zenodo* can be recommended for open dissemination and preservation of research data by all research teams that do not have suitable institutional, national, or disciplinary data repositories or are not bound to use their institutional repositories.

*Table 2 - Summary of tools and software for enabling re-use of the datasets*

| Tools/software |
| --- |
| open spreadsheet and document editors, such as *OpenOffice*[13] or *LibreOffice* |
| free CSV file viewers, such as *CSV viewer*[14] |
| open or free image viewers[15] |
| VLC[16] for mp3 and mpg |
| Free hdf, netCDF, grib readers[17] |
| Qgis[18] for Vector and Raster GIS formats |

Considering formats listed in *Table 1*, there will be no need to use specifically tailored software to access project dataset, since prior the deposit researchers will convert the data into open formats. In case of particular software packages used in data processing, full explanation, instructions and code (preferably in Python or R) will be included in the deposited documentation (a summary of the tools and software necessary to reuse of datasets is described in *Table 2*) or in specialized repositories such as GitHub[19].

In case agreements with third parties will restrict the access to specific users, the access will be managed through the permission system allowed by the service upon which the SIP will be built.

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[13] www.Openoffice.com

[14] https://csviewer.com/

[15] https://www.xnview.com

[16] https://www.videolan.org

[17] https://opengribs.org; https://www.giss.nasa.gov/tools/panoply/

[18] https://www.qgis.org

[19] https://github.com/

## 3.3. Making data Interoperable

For geographic data, the INSPIRE directive and related standards are adopted as specified in Section 2. If not applicable, datasets will be described using other metadata standard or metadata based on general purpose descriptive metadata, such as Dublin Core and DataCite Metadata Schema in order to ensure metadata interoperability for indexing and discoverability or will follow the convention of the hosting research data repository. All relevant documentation explaining codebooks, users' manuals, data collection procedures, processing (including software when necessary), and data quality information will be made available along with the data in order to guarantee intelligibility, reproducibility and the validation of the project findings. An example of the set of information that will be used to describe data is shown in Table 4 - Example of dataset description form. In case of SCORE specific ontologies will be used, a mapping exercise to other ontologies will be undertaken.

## 3.4. Making data *Re-usable*

SCORE is committed to permit the widest use of collected/generated data that will be shareable by distributing them and by adopting licenses that allow their re-use by other researchers and stakeholders. It is envisaged that datasets will be made available mainly under Creative Commons license CC BY 4.0 and Open Data Commons ODC-BY[20]. The first gives permission to users to freely share, modify, and use the data, subject only to full credit to the author(s) of the dataset. Note that ODC-BY is a license specifically drafted for Open Data projects that works under condition of compatibility with Open Access requirements, interoperability, and re-use. The CC BY NC 4.0[21], requiring full credit but limiting the re-use for commercial purposes, can be instead chosen in case of data collected from sources that pose limits to re-use.

In general, data will be made openly available to validate the research results immediately at the time of the publication of the corresponding scientific peer-reviewed papers, although some datasets can be made publicly available without the need of publishing a related article, but providing a full description, including quality assurance processes. If datasets are underlying data of public deliverables, an embargo period will be applied to allow full exploitation of research results by the SCORE partners. Full citation of datasets will be given in SCORE dissemination means as they will be made available through institutional or public data repositories for long-term/permanent deposit will be given also in the SCORE.

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[20] Creative Commons Attribution (CC BY) 4.0 International, https://creativecommons.org/licenses/by/4.0/legalcode; Open Data Commons Attribution License (ODC-By) v1.0, https://opendatacommons.org/licenses/by/1-0/

[21] Creative Commons Attribution-NonCommercial (CC BY NC) 4.0 International, https://creativecommons.org/licenses/by-nc/4.0/legalcode

# 4. ALLOCATION OF RESOURCES

During SCORE, a specific storage (SIP) will be set up and adopted to share data among partners and, for specific data, to CCLLs and external users. The cost to activate and maintain it for the duration of the project will be covered by the WP5 project budget that also includes the FAIR cost. Making data FAIR requires a certain amount of researchers' time and investments in infrastructures although, there are no costs for long term deposit and preservation of public shareable data because the chosen repositories (e.g., *Zenodo*, whose expected life is at least 20 years) do not apply fees for archiving and data curation.

Costs related to data management and documentation, conversion of proprietary data files into open formats, are also covered in WP5 and by other WPs. Moreover, the cost of activities related to the DMP (such as providing guidance on data management and open access issues, coordinating the Partners, and preparing the different releases of DMP) is specified in the WP5.2 budget.

Responsible of SCORE ICT platform is the WP5 leader. However, responsible for management of individual datasets are the dataset creators who are generally the team leaders directly involved in research data organization and collection. In doing this, researchers, or in general, personnel involved in dataset creation will identify themselves with the unique persistent identifier ORCID[22]. Besides being free of charge for researchers, it links automatically researcher identity with their research activities and research products. A specific table summarizing contacts of the research team leaders responsible for each dataset will be added in the future release of DMP. In order to identify the different roles in the creation/management of datasets, and to give proper credit to all the personnel involved in data creation and management activities, a list of roles will be adopted in the project. A provisional list is the following: Data Collector (such as survey conductors, interviewers, or a person who run and manage sensor or a model), Producer (person responsible for the preparation of data to be shared in a specific format), Project Member (a researcher indicated in the GA), Researcher (person assisting co-authors with research, data collection, processing and analysis but is not part of team indicated in the GA), Research Group (the name of a research institution or a research group that contributed to the dataset).

# 5. DATA SECURITY

During the duration of the project, relevant research data will be managed through SIP. Specific solutions are adopted following the characteristics of the cloud service that will be used to implement the SIP.

At each partner institution, research data will be stored in computers, laptops, intranets or hard-drives accessible through institutional password periodically modified according to national law provisions for data security and protected by regularly updated antiviruses. None of the project data will be left inadvertently available.

All the research materials stored in computers are subject to regular backup to safeguard them from accidental losses and protected using password and systems are protected through firewalls.

Long term preservation of public data is ensured by the chosen data repositories that have specific preservation policies. For example, *Zenodo* policy ensures that the items will be retained for the lifetime of the repository and in case of closure, best efforts will be made to integrate all content into suitable alternative institutional and/or subject based repositories.

Handling of sensitive data is described Section 6.

# 6. ETHICAL ASPECTS

The SCORE project involves human participants through CCLLs particularly in WP2, WP4, WP7, WP8. As part of the recruitment process and when working with participants, the SCORE project will follow key principles regarding respect, participation, consent, and anonymity for the best interests of all voluntary participants drafted in D11.1.

Institutional ethics and governance policies and guidelines for the SCORE project will be under regular review by the SCORE ethics committee to maintain the standards imposed by current legislation and codes of conduct of relevant professional bodies. All personal data collected within the SCORE project from questionnaires, interviewers, surveys and focus groups are carefully protected in compliance with relevant national data protection legislation of the EU member states implementing the European directive 95/46/EC and with the procedures defined by the European Code of Conduct for Research Integrity.

CCLL volunteers will be recruited in the first 12 months of the project through different means, like by public events such as *hackatons*. The procedure to recruit them is defined by three elements: i) Recruitment protocol requirement and application; ii) The information sheet; iii) written consent/assent

International Codes of Ethics such as those developed by ESOMAR (International Code on Market, Opinion and Social Research Data Analytics) will be adhered to. A Consent Form for some activities will be requested to participants except in the instance that the research constitutes a minimal risk to participants (see AAPOR definition of minimal risk research).

All citizen scientists and participants recruited will receive an Information Sheet translated into their local language before being invited to sign on as participant citizen scientists. The sign-on document is called Written Consent/Assent[22]. This will ensure understanding of contributions, responsibilities, outputs and transfer of knowledge production and lessons learned once the initial framework and methodology have been designed and implemented.

These information sheets will include:

• a brief outline of the aims of the research and its intended purposes;

• the duration and extent of involvement;

• information on their rights and the nature of informed consent. In particular, the right to withdraw from the research at any time, even after they have been recruited as a participant;

• a guarantee for confidentiality and anonymity and an explanation of how data will be processed and stored;

• an explanation regarding incidental findings;

• contact details of CCLL leaders, where study participants could request further information;

• explanation on who is funding the research and for what purpose;

• explanation on who will have access to any data that participants provide;

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[22] D 11.1 Appendix 1: Information Sheet and Consent Forms in all languages involved

- brief explanation on where research findings will be published;

- clarification of possible uses to which data may be put in future;

Information sheets are adapted to different CCLLs background and language if necessary. Volunteers are requested to sign a Written Consent form which will include:

- an acknowledgement that they understand their rights;

- an explicit and unambiguous statement of informed consent for participation in the research;

- an understanding about their component of the research data being anonymised and kept confidential

Written Assent is signed by parents, guardians, or educators if willing minors become involved in the research. In the instance of engaging minors, Informed Assent should contain all the relevant information for a child to understand the meaning of assent/consent and that participation is voluntary can be withdrawn at any stage.

All information will include notes on anonymity, recording, data use, voluntary participation, the possibility of withdrawal, availability of research results and principal research contacts. For the different groups of participant citizen scientists' confidentiality and anonymity will be always guaranteed, unless the written agreement with the respondent is different.

# 7.  SUMMARY OF SCORE DATASETS

The next DMP releases will provide an overview of the datasets produced or being produced, by SCORE. During the process of creating dataset, curators are asked to provide or update a sample table following the example and guidance, developed following ARGOS[23] templates shown in *Table 3*. A summary through a table that will be filled and updated in (*Table 4*). Each entry corresponds to a dataset that will be described with specific information such as those requested in ARGO templates.

*Table 3 - Example of dataset description form*

| # Status: Available | SCORE: WPn: ….:: (title of the dataset following naming in sect.3.1) | | |
|---|---|---|---|
| ID [ID type] | Provide DOI or url | | |
| Filename(s) | Specify name(s) according to filename rules written in section 3.1 | | |
| Team in charge | Partner(s) name(s), orcid(s) | | |
| Description | This dataset contains data on […in case of geophysical data, please describe the geophysical parameters ]<br><br>The dataset is organized as follows […] | | |
| Purpose of the data collection/generation in relation to the project/WP/Task objectives | Add appropriate description, including collection/generation process | | |
| To whom might data be useful? | Add appropriate description | | |
| Accessibility | Please provide Licensing information (see section 3.1) | | |
| Creator/s | "Creator" is the team in charge of curating the dataset | | |
| Contributor/s | "Contributors" are people contributing in different ways to create the dataset | | |
| Contact Person/s | (name, organization, email, and ORCID of contact person) | | |
| Related publications | Specify Project deliverable(s) or OA publication(s) related to the dataset | | |
| Type of data | Primary/Secondary | Collected/Generated | Qualitative/Quantitative |
| Data format | Describe the data format; if in the format is not in Table 2, please describe it and provide a | | |

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[23] https://argos.openaire.eu/home

| | link a software to read such format. |
|---|---|
| Data reused for generating the dataset | Leave empty for primary data or specify the dataset(s) providing identifier or url or other sources and evidence of right to reuse (licensing) |
| Data Volume | Final volume of data is/ is expected to be [XXX] (in the appropriate unit). |
| How do you intend to ensure data reuse after your project finishes? | Data will be/are made available in YYY repository under a (CC BY 4.0) or (ODC-By)  license.<br><br>or: Data will not be available for reuse because of […please specify …]<br><br>or: Data are of limited use kept on secure, managed storage for the limited time of [specify] years<br><br>or: Accessible via SIP |
| Legal issues that can have an impact on sharing this dataset | Not applicable<br><br>or : Explain legal issues eventually referring to D11.1 if related to use of personal data |
| What are the methods used for processing sensitive/personal data? | If applicable, describe the specific method used for processing sensitive/personal data (see section 6) |
| Will you use metadata to describe the data ? | If yes, please specify them and if they (and at what extent):<br><br>- use standardized vocabularies<br><br>- be available free of charge<br><br>- be harvestable ? |
| Will you provide persistent identifiers for your data? | Provide DOI or not, in case data are not finalized for repositories |
| Are services used to provide searchable metadata? | SIP, Registry/Catalogue, OpenAIR |
| Will/Do your metadata describe the quality of the data? | Recommended for sensors data |
| Are there ethical or legal issues that can impact sharing the data? | See section 3.1 and section 6 |
| Will your data be openly accessible? | Please specify. If not, please explain why |
| How will the data be made available? | e.g. SIP, project website, repositories, etc … |
| Will/do you use a controlled vocabulary for your data? | Please specify |
| Do you have documented procedures for quality assurance of data? | These should be included also in metadata |
| Will/Do the team provide any support for data reuse? | Through readme and descriptive files and/or offering curator(s) contacts |

| How long the team will support data reuse? | Up to [please specify] years |
|---|---|

*Table 4 - list of datasets of SCORE project (acronyms and abbreviations: # = dataset progressive number ID, Project phase (starting month-ending month), "Creator team" is the team in charge of curating the dataset; Source: C=collected/ G=generated; Status: A=available, P=in progress, NYA=not yet available, CNYA=completed but not yet available.*

| # | WP | Lead Beneficiary | TASK | Project Phase | CT | DATASET Title | SOURCE | STATUS |
|---|---|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |