



Water Health Open knowLedge (WHOW)

Legal and quality assessment of datasets identified

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Abstract	This deliverable contains the legal and quality analyses conducted for each dataset identified
Keywords	Water, Health, Floods, Contaminants, Drought

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Executive Summary

The Use Cases have been developed in Deliverable 2.1 using a twofold approach: identifying legislative and policy requirements at the EU and Italian level in the water and health domains and gathering requirements through a co-creation programme involving interested stakeholders and users.

Three Use Cases have been identified:

1. **Contaminants in marine waters:** Linking data on bioaccumulation and human exposure to chemicals and biological contaminants in marine waters; ingestion of contaminated fish products; and airborne exposure (e.g. *Ostreopsis Ovata*).
2. **Water for human consumption:** Linking data on drinking water quality, measured by compliance with new EU microbiological, chemical and physical parameters, with data on water-related diseases and pathogens.
3. **Extreme events:** Linking data on floods, sea storms, storm surges, coastal floods and drought to human health, alteration of the hydrological cycle, agriculture and fisheries industries.

For each use case, the requirements have been indicated in terms of **desirable datasets** necessary for its implementation. Likewise, the deliverable has included the **datasets published at that time**, or in the process of being published, which potentially meet the requirements of each use case.

In the present deliverable 2.2 the list of datasets has been subject to an **assessment in terms of legal, privacy and data quality**, from which datasets that do not meet the minimum requirements have been excluded.

The document outlines the **final datasets list** for the implementation of the project's Use Cases and that will be used for modelling the knowledge graph.

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Definitions and Acronyms

Flood	The Floods Directive (2007/69/CE) defines “flood” as the temporary covering by water of land not normally covered by water. This shall include floods from rivers, mountain torrents, Mediterranean ephemeral water courses, and floods from the sea in coastal areas, and may exclude floods from sewerage systems.
Flood risk	The Floods Directive (2007/69/CE) defines ‘flood risk’ as the combination of the probability of a flood event and of its potential adverse consequences for human health, the environment, cultural heritage, and economic activity associated with a flood event.
Health	“A state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.” Source: Constitution of the World Health Organization, 1948. During the last decades, this definition was changed and integrated several times to consider even other aspects, essentially: <ul style="list-style-type: none">- the absence of any disease or impairment;- the state that allows the individual to adequately deal with all demands of everyday life;- the state of balance, an equilibrium that an individual has established within himself and between himself and his social and physical environment.
Knowledge graph	A knowledge base which, thanks to the graph data structure, is able to link both descriptions of real-world entities with their relations and facts about these entities and relations. A semantic knowledge graph is usually represented in RDF, thus allowing for the sharing of a fluent representation of various types of data and content.
Linked Data	A set of design principles for sharing machine-readable interlinked data on the Web. It is one of the core pillars of the Semantic Web, also known as the Web of Data, and is based on four design principles according to Tim Berners-Lee: (i) the use of Uniform Resource Identifiers (URIs) to refer to any resource, (ii) the use of HTTP URIs for effective retrieval of said resources, (iii) the use of RDF and SPARQL standards to respectively publish and retrieve data, (iv) the interconnection of URIs to interlink existing data in a shared network of machine-processable meaning.
Personal data	A personal data is any information that regards an identified or identifiable natural person (companies and public bodies are excluded). An identifiable natural person is a person that can be identified directly or indirectly via i) an identifier such as a name or a number; ii) data regarding his/her location; iii) an online identifier; iv) one or more identifying elements such as genetic, economic, social, cultural or physical characteristics.

Data Completeness A specific characteristic for defining data quality, according to ISO/IEC 25012:2008 standard.

Defined through three indicators:

- Schema completeness: Percentage of null values for concepts and properties with respect to the total number of expected values
- Record completeness: Number of essential data in a record associated to a non-null value, with respect to the number of essential data in a record which it is possible to measure completeness.
- Population completeness: Percentage of null values with respect to a reference population.

For detailed definition, refer to Deliverable 5.1 SDGs and KPIs, chapter 4.3 (ISO/IEC 25012 indicators).

Data Accuracy A specific characteristic for defining data quality, according to ISO/IEC 25012:2008 standard.

Defined through two indicators:

- Syntactic accuracy: Ratio between data attributes with syntactically accurate values on the number of data attributes for which syntactic accuracy is required
- Semantic accuracy: Ratio between data attributes with semantically accurate values on the number of data attributes for which semantic accuracy is required.

For detailed definition, refer to Deliverable 5.1 SDGs and KPIs, chapter 4.3 (ISO/IEC 25012 indicators).

CAS (identifier) A CAS Registry Number (also referred to as CAS RN or informally CAS Number) is a unique identification number assigned by the Chemical Abstracts Service (CAS), US to every chemical substance described in the open scientific literature.

WISE The Water Information System for Europe (WISE) is a partnership between the European Commission and the European Environment Agency (EEA).

DCAT AP The DCAT Application Profile for data portals in Europe (DCAT-AP) is a specification based on the Data Catalogue Vocabulary (DCAT) developed by W3C. This application profile is a specification for metadata records to meet the specific application needs of data portals in Europe while providing semantic interoperability with other applications.

1 Introduction

This is deliverable 2.2 “Legal and quality assessment of datasets identified”. It is the result of the activities conducted in the context of tasks 2.2 “Datasets identification” and 2.3 “Data privacy analysis” of Activity 2 related to “Requirements definition”.

1.1 Project Overview

The WHOW project aims to foster the creation of the first open and distributed European knowledge graph on water consumption and quality, health parameters and diffusion of diseases to be reused for advanced analysis and development of innovative services.

The project leverages the Linked Open Data paradigm. Water related datasets from Italy and other European countries and Copernicus (the European Union's Earth observation programme) will be used to support the construction of WHOW's knowledge graph, intended as a federation of knowledge graphs deployed at each data provider willing to join the WHOW community. The knowledge graph will be documented on data.europa.eu, the official portal for European data, thanks to the adoption of shared metadata models such as (Geo)DCAT-AP. Selected health related datasets from Italy will be linked to specific water datasets.

WHOW focuses on specific use cases for the development of the knowledge graph, identifying and integrating the relevant set of indicators for Sustainable Development Goals (SDGs), deploying a co-creation programme where interested stakeholders and users are engaged from the initial phases of the project.

The initiative supports the Public Open Data Digital Service Infrastructure by helping to boost the development of information products and services based on the re-use of *high value datasets*, as foreseen by the Directive on open data and the re-use of public sector information (EU) 2019/1024.

1.2 Methodology

The first part of the document reports the **initial list of datasets identified in Deliverable 2.1** that potentially meet the requirements of each use case.

These datasets have been **assessed in terms of legal, privacy and data quality criteria** based on the assessment framework outlined in the Deliverable 2.1.

Such a framework is comprehensive of a set of indicators based on the [FAIR](#) (Findable, Accessible, Interoperable, Reusable) principles. In addition to the subset of indicators of the FAIR model, the data quality framework will take into account the characteristics of quality as defined in the [ISO/IEC 25012 and 25024 standards](#).

The first criterion is about the **Relevance for the project**. Each dataset has been assessed in terms of relevance for the use case implementation, and ranked on the following grading system:

- 1. must have
- 2. relevant
- 3. nice to have
- 4. not relevant

The **final datasets list** for the implementation of the project's Use Cases and that will be used for modelling the knowledge graph is made of the datasets ranked as 1. or 2.

Datasets ranked as 3. or 4. have been excluded from use cases implementation.

The final datasets list has been assessed then for each criterion of the assessment framework. The results are documented in the present deliverable.

1.3 Document structure

Chapter 2 recalls the legal, privacy and data quality assessment criteria as already outlined in the Deliverable 2.1.

Chapter 3 recalls the starting datasets list from the Deliverable 2.1.

Chapter 4 reports the application of the legal assessment criteria, including relevance, on the starting datasets list from the Deliverable 2.1, and defines the final datasets list.

Chapter 5 reports the application of the quality assessment criteria on the final datasets list.

1.4 Relationship with other deliverables

The present deliverable D2.2 is an important milestone (#3) of the WHOW project. It represents the consolidation of the work done on the datasets during the project.

The present deliverable and its content depend on D2.1, D3.1 and D3.2.

Deliverable 2.1 has included the datasets currently published, or in the process of being published, which potentially meet the requirements of each use case.

Deliverable 3.1 has described the operations carried out at each data provider of the WHOW project regarding the data pre-processing as a preparatory step in the linked open data process, necessary to enable an effective successive machine elaboration of the data.

Deliverable 3.2 has described the whole WHOW Linked Open Data production process to be used for data providers.

During the production of D3.1 and D3.2 the datasets included in the first list have been analysed and updated.

Likewise, the final datasets list of the present deliverable D2.2 will be used to prepare the deliverable D5.2 "Impact assessment, including the identified SDGs and KPIs, is performed".

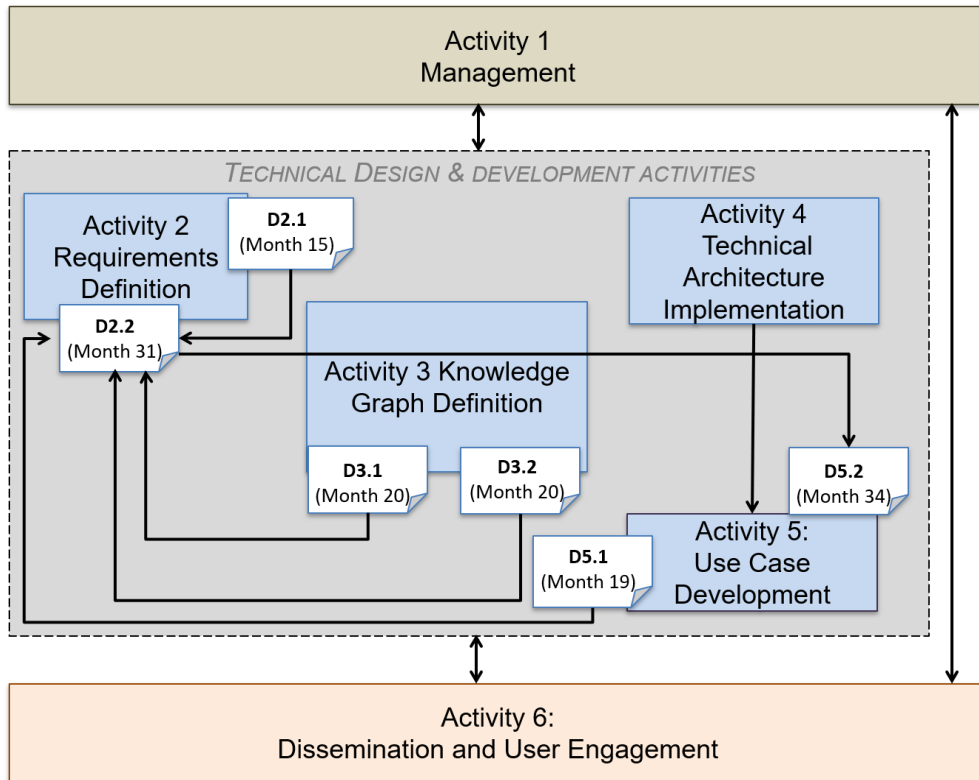


Figure 1 - Relationships between activities and deliverables

2 Legal, Privacy and Quality Assessment Criteria

In order to consolidate the list of candidate datasets for use cases implementation, a set of checklists have been prepared for a legal, privacy and data quality assessment.

The present chapter is aimed to recall the framework of legal, privacy and data quality criteria outlined in [Deliverable 2.1](#) and now applied on this deliverable to assess the first datasets list of the WHOW project.

2.1 Legal and privacy

The legal and privacy assessment it's organised on 5 main criteria that are reported and defined below, each one split into a set of questions.

Criterion	Definition
Relevance for the project	This criterion aims at detecting all those data sources that show a particular relevance for the objectives of WHOW

Social impact	This criterion aims at evaluating the datasets according to the social impact of their openness. The criterion takes then into account the demand of possible external users (e.g., citizens, enterprises, etc).. Also fall into this criterion all those datasets that are to be opened according to priority lists at the national and European level (i.e., Open Data Directive - High Value Datasets)
Availability	This criterion aims at assessing the sustainability of the openness of the datasets. It is intended for instance as the availability of the data providers of opening datasets, potentially still close, during the lifespan of the project
Technical - Interoperability with other data sources	This criterion is more technical; its scope is to evaluate whether specific datasets can be ready to be interoperable with other data sources (e.g., already available as linked open data, structured with a clear semantics, easily linkable with other datasets, etc.)
Privacy	This criterion aims at evaluating the datasets under the privacy aspects, taking into account the GDPR regulation.
Legal accessibility	This criterion evaluates the identified datasets in terms of legal constraints, coming from national regulations that can limit their openness.

Table 1 – List of adopted criteria

For each criterion above, a set of questions are proposed for the evaluation of every single dataset identified in WHOW. The following table lists these questions.

Criterion	Question	Answer
Relevance for the project	Is the dataset particularly relevant for sustaining specific use cases of WHOW?	Yes No Not applicable
	Is it necessary to open the dataset in order to support the achievements of the main results of the project?	Yes No Not applicable
Social Impact	Has the dataset been required by external users in order to support specific use cases coming from them?	Yes No Not applicable
	Is the dataset included in priority lists at the national level?	Yes No Not applicable
	Did you conduct a survey among stakeholders, also including enterprises that do not belong to the domain sectors of the project, in order to understand the interests in opening specific datasets?	Yes No Not applicable

	Is the dataset related to some high value datasets as defined in the context of the European Directive on Open Data (Directive (EU) 2019/1024)?	Yes No Not applicable
Availability	Were the internal stakeholders willing to open the dataset of their responsibility?	Yes No Not full convinced Not applicable
	Is the dataset, also possibly required by external users, already available for the open data process?	Yes No Not applicable
	In case of a negative answer to the previous question, did you foresee the collection and publication process within the project for the dataset?	Yes No Not applicable
	Does the process of the previous answer guarantee sustainability of it over time?	Yes No Not applicable
Technical interoperability with other data sources	Does the dataset include elements that may facilitate the interconnection with other datasets (e.g. shared classifications, common (geo) identifiers, same temporal coverage, etc.)?	Yes No Not applicable
	If yes to the previous question, specify which are the elements.	Free text
	Is the dataset already available under the Linked (Open) Data paradigm?	Yes No Not applicable
	If yes to the previous question, which are the elements that can facilitate the interconnection with other available linked open datasets (e.g., time, geo identifiers, etc.)?	Free text
	If the dataset is not in linked open data, does it specify and publish a clear semantics of its elements in the form of detailed description of its data schema?	Yes No Not applicable
Privacy	Does the dataset contain personal data that can directly or indirectly identify a natural person? A personal data is any information that regards an identified or identifiable natural person (companies and public bodies are excluded). An identifiable natural person is a person that can be identified directly or indirectly via i) an identifier such as a name or a number; ii) data regarding his/her location; iii) an online identifier; iv) one or more identifying elements such as genetic, economic, social, cultural or physical characteristics.	Yes No Not applicable

	If yes to the previous question, is the information authorized by law?	Yes No Not applicable
	Does the dataset contain indirect information that can be used to identify a person?	Yes No Not applicable
	If yes to the previous question, is the information authorized by law?	Yes No Not applicable
	Does the dataset contain specific categories of data (e.g., sensitive data) connected to a person?	Yes No Not applicable
	If yes to the previous question, is the sensitive data properly anonymized so that re-identification is not possible?	Yes No Not applicable
	In case personal data is included, is the data collected adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed ('data minimisation')?	Yes No Not applicable
Legal accessibility	The dataset that you wish to use is accompanied with a closed license (e.g., no commercial re-use, no derivatives)?	Yes No Not applicable
	Are you sure there are no law limitations in the open process for the dataset?	Yes No Not applicable
	Is the dataset subject to temporal restrictions for its publication?	Yes No Not applicable
	Is the data subject to specific legal or jurisprudential prohibitions that prevent its indexing by search engines?	Yes No Not applicable

2.2 Data Quality

In order to evaluate the quality of the datasets that will be part of WHOW's knowledge graph, WHOW will adhere to the FAIR Data Maturity Model. The Model is a comprehensive framework that aims at

evaluating the different FAIR (Findable, Accessible, Interoperable, Reusable) principles with a set of indicators that have been defined for this purpose.

In addition to the subset of indicators of the FAIR model, the data quality framework will take into account the characteristics of quality as defined in the ISO/IEC 25012 and 25024 standards.

In this section are reported from Deliverable 2.1 all the indicators that are used to evaluate both the original quality of the datasets being used in WHOW, and the quality to be guaranteed as a result of the project activities to be carried out.

ID Identifier	Description	Evaluation	Priority
RDA-F1-01M	Metadata is identified by a persistent identifier	Yes No	Essential
RDA-F1-01D	Data is identified by a persistent identifier	Yes No	Essential
RDA-F2-01M	Rich metadata is provided to allow discovery	Yes No	Essential
RDA-F4-01M	Metadata is offered in such a way that it can be harvested and indexed	Yes No	Essential
RDA-A1-01M	Metadata contains information to enable the user to get access to the data	Yes No	Important
RDA-A1-04M	Metadata is accessed through standardised protocol	Yes No	Essential
RDA-A1-04D	Data is accessible through standardised protocol	Yes No	Essential
RDA-A1-05D	Data can be accessed automatically (i.e. by a computer program)	Yes No	Important
RDA-A1.2-01D	Data is accessible through an access protocol that supports authentication and authorisation	Yes No	Useful
RDA-I1-01M	Metadata uses knowledge representation expressed in standardised format	Yes No	Important
RDA-I1-01D	Data uses knowledge representation expressed in standardised format	Yes No	Important
RDA-I2-01M	Metadata uses FAIR-compliant vocabularies	Yes No	Important
RDA-I2-01D	Data uses FAIR-compliant vocabularies	Yes No	Useful

RDA-I3-01D	Data includes references to other data	Yes No	Useful
RDA-I3-02M	Metadata includes references to other data	Yes No	Useful
RDA-R1.1-02M	Metadata includes information about the licence under which the data can be reuse	Yes No	Essential
RDA-R1.3-01M	Metadata complies with a community standard	Yes No	Essential
RDA-R1.3-01D	Data complies with a community standard	Yes No	Essential
RDA-R1.3-02D	Data is expressed in compliance with a machine-understandable community standard	Yes No	Important
WHOW-DQA-M	Metadata is accurate with respect to a shared standard	Yes No	Important
WHOW-DQA-D	Data is accurate	Yes No	Essential
WHOW-DQT-M	Metadata is up-to-date with respect to current time	Yes No (also if it is unclear)	Important
WHOW-DQT-D	Data is up-to-date with respect to its update frequency	Yes No (also if it is unclear)	Essential
WHOW-DQC-M	Metadata is complete	Yes No	Useful
WHOW-DQC-D	Data is complete	Yes No	Important

Table 3 - Checklist of quality evaluation

3 Starting Datasets list

This section recalls the datasets published, or being published, which potentially meet the requirements of each of the three WHOW Use Cases at the time of Deliverable 2.1.

The following table reports the initial datasets list. For a simple reading, the use cases are coded as follows:

1. Contaminants in marine waters
2. Water for human consumption
3. Extreme events

Theme	Dataset	Rights holder	Access URL	Use Case
Environment	Water for human consumption Sampling	Regione Lombardia	https://hub.dati.lombardia.it/Sanit-/Qualit-delle-acque-de-stinate-al-consumo-umano-c&9sn6-a9kr	2
Environment	PFAS data (perfluoroalkyl substances) surface waters - Year 2018	Arpa Lombardia	https://www.arpalombardia.it/sites/DocumentCenter/Documents/PFAS/Allegato_1_DATI_PFAS_2018_ACQUE_SUP.xlsx	2
Environment	PFAS data (perfluoroalkyl substances) groundwater - Year 2018	Arpa Lombardia	https://www.arpalombardia.it/sites/DocumentCenter/Documents/PFAS/Allegato_2_DATI_PFAS_2018_ACQUE_SOT.xlsx	2
Environment	Analytical data of river water bodies	Arpa Lombardia	https://www.arpalombardia.it/Pages/Dati/2019/Acque/Dati-analitici-corpi-idrici-fluviali-2019.aspx?tipodati=1&tema=Acque&sottotema=Sottotema%20Ambientale&ordine=1	2
Environment	Analytical data of lake water bodies	Arpa Lombardia	https://www.arpalombardia.it/Pages/Dati/2019/Acque/Dati-analitici-corpi-idrici-lacustri-2019.aspx?tipodati=1&tema=Acque&sottotema=Sottotema%20Ambientale&ordine=1	2
Environment	Analytical data of groundwater	Arpa Lombardia	https://www.arpalombardia.it/Pages/Dati/2019/Acque/Valori-analitici-Sotterranee-2019.aspx?tipodati=1&tema=Acque&sottotema=Sottotema%20Ambientale&ordine=1	2

Environment	Surface Waters (lakes) - LTLECO	Arpa Lombardia	https://www.arpalombardia.it/Pages/Dati/2019/Acque/LTLECO-AS-2019.aspx?tipodati=1&tema=Acque&sottotema=Sottotema%20Ambientale&ordine=1	2
Environment	Surface Waters (water courses) - LIMECO	Arpa Lombardia	https://www.arpalombardia.it/Pages/Dati/2019/Acque/LIMECO-AS-2019.aspx?tipodati=1&tema=Acque&sottotema=Sottotema%20Ambientale&ordine=1	2
Environment	Chemical status of groundwater	Arpa Lombardia	https://www.arpalombardia.it/Pages/Dati/2019/Acque/Stato-chimico-Sotterranee-2019.aspx?tipodati=1&tema=Acque&sottotema=Sottotema%20Ambientale&ordine=1	2
Environment	Environmental Radioactivity Monitoring Network	Arpa Lombardia	https://www.arpalombardia.it/Pages/Dati/2019/Radiazioni%20Ionizzanti/Rete-Monitoraggio-Radioattiva-Dati-2019.aspx?tipodati=0&tema=Radiazioni%20%20Ionizzanti%20%28IR%29&sottotema=Sottotema%20Ambientale&ordine=1	2
Environment	Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	https://www.dati.lombardia.it/Ambiente/Dato-di-portata-o-altezza-idrometrica-relativo-all/9zzw-tkky	3
Environment	Weekly inflows per basin	Arpa Lombardia	https://www.arpalombardia.it/Pages/Dati/2018/Idrometeorologia/Afflussi-settimanali-bacino-2018.aspx?tipodati=1&tema=Tema%20Ambientale&sottotema=Sottotema%20Ambientale&ordine=1	3
Environment	Weekly outflows per basin	Arpa Lombardia	https://www.arpalombardia.it/Pages/Dati/2018/Idrometeorologia/Deflussi-settimanali-bacino-2018.aspx?tipodati=1&tema=Tema%20Ambientale&sottotema=Sottotema%20Ambientale&ordine=1	3

Environment	Monthly inflows per basin	Arpa Lombardia	https://www.arpalombardia.it/Pages/Dati/2018/Idrometeorologia/Afflussi-mensili-bacino-2018.aspx?tipodati=1&tema=Idrometeorologia&sottotema=Sottotema%20Ambientale&ordine=1	3
Environment	Monthly outflows per basin	Arpa Lombardia	https://www.arpalombardia.it/Pages/Dati/2018/Idrometeorologia/Deflussi-mensili-bacino-2018.aspx?tipodati=1&tema=Idrometeorologia&sottotema=Sottotema%20Ambientale&ordine=1	3
Environment	Height of the lakes	Arpa Lombardia	https://www.arpalombardia.it/Pages/Dati/2018/Idrometeorologia/Altezza-laghi-2018.aspx?tipodati=1&tema=Idrometeorologia&sottotema=Sottotema%20Ambientale&ordine=1	3
Environment	Interpolation of hourly precipitation observations	Arpa Lombardia	https://www.dati.lombardia.it/browse?limitTo=blob&q=interpolazione+osservazioni+orarie+precipitazioni&sortBy=relevance	3
Environment	Soil defense works	Regione Lombardia	https://www.geoportale.regione.lombardia.it/metadati?p_p_id=detailSheetMetadata_WAR_gptmetadataportlet&p_p_lifecycle=0&p_p_state=normal&p_p_mode=view&detailSheetMetadata_WAR_gptmetadataportlet_identifier=r_lombar%3A2287928c-a31f-45bb-b821-d170811134e4	3
Environment	Large dams	Regione Lombardia	https://www.geoportale.regione.lombardia.it/metadati?p_p_id=detailSheetMetadata_WAR_gptmetadataportlet&p_p_lifecycle=0&p_p_state=normal&p_p_mode=view&detailSheetMetadata_WAR_gptmetadataportlet_identifier=r_lombar%3Abcc3fe11-912b-4788-b660-1c2e659003d4	3

Environment	List of reclaimed sites in Lombardy - Year 2020	Regione Lombardia	https://hub.dati.lombardia.it/Ambiente/Elenco-dei-siti-bonificati-sul-territorio-lombardo/cp5f-hfya	2
Environment	List of contaminated sites in Lombardy - Year 2020	Regione Lombardia	https://hub.dati.lombardia.it/Ambiente/Elenco-dei-siti-contaminati-sul-territorio-lombard/xw6a-pk6u	2
Environment	Homogeneous zones for hydro-weather risk - List of Municipalities	Regione Lombardia	https://www.dati.lombardia.it/Protezione-Civile/Zone-omogenee-per-rischio-Idro-Meteo-Elenco-Comuni/ebfb-p3bd	3
Environment	Homogeneous zones for hydro-weather risk - Centroids	Regione Lombardia	https://www.dati.lombardia.it/Protezione-Civile/Zone-omogenee-per-rischio-Idro-Meteo-Centroidi/n9f9-gc7k	3
Environment	Weather sensor data	Arpa Lombardia	https://www.dati.lombardia.it/Ambiente/Dati-sensori-meteo/647i-nhxx	3
Environment	Meteorological Stations	Arpa Lombardia	https://www.dati.lombardia.it/d/nf78-nj6b	3
Environment	Unified regional hydrographic network	Regione Lombardia	https://www.geoportale.regione.lombardia.it/metadati?p_p_id=detailSheetMetadata_WAR_gptmetadataportlet&p_p_lifecycle=0&p_p_state=normal&p_p_mode=view&detailSheetMetadata_WAR_gptmetadataportlet_identifier=r_lombar%3Ae8f83865-9405-48e3-ae4f-168d851f7208	3
Health	Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	https://www.dati.lombardia.it/d/2mr3-henm	2
Health	Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	https://www.dati.lombardia.it/d/3rtw-8p48	2
Health	Dataset Health conditions by municipality, age and gender	Regione Lombardia	https://www.dati.lombardia.it/d/3zx9-b2zj	2

Health	Health conditions dataset by province, gender and cause	Regione Lombardia	https://www.dati.lombardia.it/d/8adf-7566	2
Health	Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	https://www.dati.lombardia.it/d/bxvn-na8g	2
Health	Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	https://www.dati.lombardia.it/d/fvk5-jiuq	2
Health	Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	https://www.dati.lombardia.it/d/gigt-rjms	2
Health	Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	https://www.dati.lombardia.it/d/hdbq-kes5	2
Health	Hospital Assistance for DRG and ATS	Regione Lombardia	https://www.dati.lombardia.it/d/hgii-mdrs	2
Health	Regione Lombardia SDO dataset	Regione Lombardia	https://www.dati.lombardia.it/d/jv9t-c6q6	2
Health	Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	https://www.dati.lombardia.it/d/jxj6-c2bw	2
Health	Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	https://www.dati.lombardia.it/d/k92a-zk3k	2
Health	Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	https://www.dati.lombardia.it/d/p48x-gife	2
Health	Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	https://www.dati.lombardia.it/d/qnzb-fd54	2
Health	Dataset Average Hospitalization And Average Accesses By Discipline	Regione Lombardia	https://www.dati.lombardia.it/d/r24g-ddwh	2

	Discipline And Structure			
Health	Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	https://www.dati.lombardia.it/d/rzni-6n8h	2
Health	Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	https://www.dati.lombardia.it/d/t5s2-djkh	2
Health	Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	https://www.dati.lombardia.it/d/u7nv-vyvg	2
Health	Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	https://www.dati.lombardia.it/d/ygqr-wrxx	2
Health	Health conditions dataset by province, gender and age group	Regione Lombardia	https://www.dati.lombardia.it/d/xqri-c9pb	2
Health	Mortality, cause of death	ISTAT	https://www.dati.lombardia.it/Sanit-/Mortalit-per-causa-di-morte/fc77-8ssd	2
Sea State	Ostreopsis ovata	ISPRA	https://annuario.isprambiente.it/sys_ind/search	1
Sea State	Ostreopsis ovata (Story map)	ISPRA	https://sinacloud.isprambiente.it/portal/apps/Cascade/index.html?appid=9ba106bedb744828b810a53025112ac4	1
Sea State	Bathing waters class	ISPRA	https://sinacloud.isprambiente.it/portal/apps/Cascade/index.html?appid=9ba106bedb744828b810a53025112ac4	1
Sea State	Chemical pollutant - Sistema Informativo Centralizzato Strategia Marina (nazionale)	ISPRA	www.db-strategiamarina.isprambiente.it/app/#/	1
Sea State	Chemical pollutants	EMODnet	https://www.emodnet-chemistry.eu/data	1

Sea State	Chemical pollutants	EIONET/EEA	https://cdr.eionet.europa.eu	1
Sea State	Chemical pollutants - Waterbase EEA	EEA	https://www.eea.europa.eu/data-and-maps/data/waterbase-water-quality-icm-1	1
Sea State	Chemical pollutants -WISE	EEA/WISE	https://water.europa.eu/marine	1
Sea State	Bathing waters quality	EEA	https://www.eea.europa.eu/teams/water/europes-seas-and-coasts/assessments/state-of-bathing-water	1
Health	Food consumption data/OpenEFSAportal	EFSA	https://www.efsa.europa.eu/en/data-report/chemical-hazards-database-openfoodtox	1
Health	Chemical contaminants and biological Hazards EFSA portal	EFSA	https://www.efsa.europa.eu/en/aboutefsa	1
Sea State	Chemical pollutants and Nutrients	Copernicus (EC)	https://resources.marine.copernicus.eu/product-detail/MEDSEA_MULTICYEAR_BGC_006_008/INFORMATION	1
Health	Chemical substances ISS	ISS	https://www.reach.gov.it/banche-dati-delliss	1
Health	Chemical pollutants MiTE	MiTE	https://bancasostanze.minambiente.it/ricerca-sostanze	1
Health	Chemical pollutants-EEA	Agenzia europea per le sostanze chimiche; American Chemical Society; Verisk Europe APS	https://echa.europa.eu/it/advanced-search-for-chemicals?p_p_id=dissadvancedsearch_WAR_disssearchportlet&p_p_lifecycle=0&p_p_col_id=column-1&p_p_col_count=2	1
Health/State of sea	Chemical pollutants (Pesticides)	ISPRA	https://sinacloud.isprambiente.it/portal/apps/webappviewer/index.html?id=6f6a9faa4beb4c83b162d75605d820d6	1
Environment	RON - Italian Wave Network	ISPRA	http://dati.isprambiente.it/id/ro	3

			n	
Environment	RMN - Italian Tide Gauge Network	ISPRA	http://dati.isprambiente.it/id/rmn	3
Environment	Pesticides in waters	ISPRA	https://sinacloud.isprambiente.it/portal/apps/sites/#/portalepesticidi	3
Environment	RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	http://dati.isprambiente.it/id/rendis	3
Environment	Soil consumption indicators	ISPRA	http://dati.isprambiente.it/id/consumoSuolo	3
Health	Italian cultural heritage	MIBACT	https://dati.beniculturali.it/odvi/ew/resource/datasetLuoghiDellaCultura.html	3
Health	Mappa rischi (Hydrological risks and demographic indicators)	ISTAT	https://www.istat.it/it/mappa-rischi/indicatori	3
Environment	Urban Waste Water Treatment Directive - Waterbase	EEA	https://www.eea.europa.eu/data-and-maps/data/waterbase-uwtd-urban-waste-water-treatment-directive-7	3
Health	Incidenti da valanga	AINEVA	https://aineva.it/incidenti/	3
Health	European Avalanche Warning Services - Fatalities	EAWS	https://www.avalanches.org/fatalities/	3
Environment	Annali Nivologici	ARPAV	https://www.arpa.veneto.it/temi-ambientali/neve/dati/stazioni-automatiche	3
Environment	Dati meteorologici ultimi anni	ARPAV	https://www.arpa.veneto.it/bollettini/storico/	3
Environment	Dati meteorologici ultimi anni	ARPAV	https://www.arpa.veneto.it/bollettini/meteo60gg	3
Environment	Dati meteorologici ultimi 60gg	ARPAV	https://www.arpa.veneto.it/bollettini/meteo60gg	3

Environment	Dati meteorologici in tempo reale	ARPAV	https://www.arpa.veneto.it/bollettini/meteo/h24/	3
Environment	Portate, Livelli Idrometrici, livelli dei laghi	ARPAV	https://www.arpa.veneto.it/temi-ambientali/idrologia/file-e-alle-gati/rapporti-e-documenti/idrologia-regionale/idrologia-regionale-la-rete-idrometrica	3
Environment	Livelli idrometrici e precipitazioni in tempo reale	ARPAV	https://www.arpa.veneto.it/temi-ambientali/acqua/datiacqua/dati_idrometeo.php	3
Environment	Balneazione - Classificazione 2020	ARPAV	http://geomap.arpa.veneto.it/layers/geonode%3Abalneazione_classi2021_gbo	3
Environment	Balneazione - Classificazione 2019	ARPAV	http://geomap.arpa.veneto.it/layers/geonode%3Abalneazione_classi2020_gbo	3
Environment	Balneazione - Classificazione 2018	ARPAV	http://geomap.arpa.veneto.it/layers/geonode%3Abalneazione_classi2019_gbo	3
Environment	Balneazione - Classificazione 2017	ARPAV	http://geomap.arpa.veneto.it/layers/geonode%3Abalneazione_classi2018_gbo	3
Environment	Balneazione - Classificazione 2016	ARPAV	http://geomap.arpa.veneto.it/layers/geonode%3Abalneazione_classi2017_gbo	3
Environment	Balneazione - Classificazione 2015	ARPAV	http://geomap.arpa.veneto.it/layers/geonode%3Abalneazione_classi2016_gbo	3
Environment	Specchi d'acqua	ARPAV	http://geomap.arpa.veneto.it/layers/geonode%3Av_specchi_acqua	3
Environment	Stato chimico delle foci a delta (2014-2016)	ARPAV	http://geomap.arpa.veneto.it/layers/geonode%3Alagune_st_chirami_2014_2016#more	3
Environment	Depuratori pubblici	ARPAV	http://geomap.arpa.veneto.it/layers/geonode%3Av_depuratori	3
Environment	Bacini Idrografici Senza Ruscellamento Uscente	ARPAV	http://geomap.arpa.veneto.it/layers/geonode%3ABISRU	3

	(BISRU)			
Environment	Mare - Stato chimico 2014-2016	ARPAV	http://geomap.arpa.veneto.it/layers/geonode%3Amare_chimico_2014_2016	3
Environment	Significato Campi_Stato chimico fiumi 2014-2016	ARPAV	http://geomap.arpa.veneto.it/documents/234	3
Environment	Stato chimico fiumi 2014-2016 (DGR 861/2018)	ARPAV	http://geomap.arpa.veneto.it/layers/geonode%3Astato_chimico_fiumi_2014_2016	3
Environment	Mare - Stato chimico 2014-2016	ARPAV	http://geomap.arpa.veneto.it/layers/geonode%3Amare_chimico_2014_2016	3
Environment	Stato chimico laghi 2014-2016 (DGR 861/2018)	ARPAV	http://geomap.arpa.veneto.it/layers/geonode%3Astato_chimico_laghi_2014_2016	3
Environment	Livello di Inquinamento da Macrodescriptors, anno 2019 (LIM, D.Lgs. 152/1999)	ARPAV	http://geomap.arpa.veneto.it/layers/geonode%3Alim_2019	3
Environment	Stato chimico delle altre lagune (2014-2016)	ARPAV	http://geomap.arpa.veneto.it/layers/geonode%3Alagune_st_chi_altre_2014_2016	3
Environment	Siti Potenzialmente Contaminati (punti)	ARPAV	http://geomap.arpa.veneto.it/layers/geonode%3Asiticontaminati_pti	3
Environment	Aziende a rischio di incidente rilevante	ARPAV	http://geomap.arpa.veneto.it/layers/geonode%3AaziendeRIR2019	3
Environment	Pozzi e piezometri	ARPAV	http://geomap.arpa.veneto.it/layers/geonode%3Av_approv_idrico	3
Environment	Localizzazione discariche (punti)	ARPAV	http://geomap.arpa.veneto.it/layers/geonode%3Av_siti_discariche	3
Environment	Discariche	ARPAV	http://geomap.arpa.veneto.it/layers/geonode%3Av_discariche	3
Environment	Carta del consumo di suolo del Veneto 2019	ARPAV	http://geomap.arpa.veneto.it/layers/geonode%3ASC_R05_2019	3

Environment	Corpi idrici fluviali (Progetti di Piano, 2020)	ARPAV	http://geomap.arpa.veneto.it/layers/geonode%3Acorpi_idrici_fluviali	3
Environment	Qualità dell'acqua degli acquedotti dell'Alto Adige	Pr. Aut. Bolzano	https://ambiente.provincia.bz.it/acqua/qualita-acqua-nostri-acquedotti-dettaglio.asp	2
Environment	Precipitazione giornaliera per comune dal 1/1/2001	Osservatorio Clima	https://dati.arpae.it/dataset/dati-meteoclimatici-comunali/resouce/a727129e-1bae-4434-bbeb-59d0e51044dc	3
Sea State	Ostreopsis ovata Italia, Francia, Spagna, Monaco	RAMOGE	ramoge.org/it/ostreopsis-ovata/	1

Table 4 - Datasets starting list

4 Legal Analysis for relevant datasets

The first criterion is about the **Relevance for the project**. Each dataset has been assessed in terms of relevance for the use case implementation. **Datasets not ranked as relevant have been excluded from use cases implementation**. On the other hand, the relevant datasets have been assessed for each criterion of the assessment framework. The results are documented below.

4.1 Is the dataset particularly relevant for sustaining specific use cases of WHOW?

Each dataset from the starting list has been assessed in terms of relevance for the use case implementation, and ranked on the following grading system:

- 1. must have: mandatory for the implementation of a use case. A dataset is ranked as “must have” if clearly indicated or recommended by a directive or guideline, or if tightly linked with a use case. Without this dataset the use case is not meaningful.
- 2. relevant: useful for the implementation of a use case. It helps to completely clarify the use case. Without this dataset the use case, even if examined in its relevant aspects, appears incomplete.
- 3. nice to have: useful for the clarification of residual aspects of the use case. The use case appears well described even without this dataset.
- 4. not relevant: no added value for a use case implementation is brought by the dataset.

The final datasets list for the implementation of the project's Use Cases and that will be used for modelling the knowledge graph is made of the datasets ranked as 1. must have or 2. relevant. Those datasets are shown in the following table.

Table 5: Answer for Question 1 - Dataset ranked either 1. must have or 2. relevant

Dataset name	Rights holder	Answer
Water for human consumption Sampling	Regione Lombardia	yes (rank 1)
Analytical data of river water bodies	Arpa Lombardia	yes (rank 1)
Analytical data of lake water bodies	Arpa Lombardia	yes (rank 1)
Analytical data of groundwater	Arpa Lombardia	yes (rank 1)
Surface Waters (lakes) - LTLECO	Arpa Lombardia	yes (rank 2)
Surface Waters (water courses) - LIMECO	Arpa Lombardia	yes (rank 2)
Chemical status of groundwater	Arpa Lombardia	yes (rank 2)
Environmental Radioactivity Monitoring Network	Arpa Lombardia	yes (rank 2)
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes (rank 1)
Weekly inflows per basin	Arpa Lombardia	yes (rank 2)
Weekly outflows per basin	Arpa Lombardia	yes (rank 2)
Monthly inflows per basin	Arpa Lombardia	yes (rank 2)
Monthly outflows per basin	Arpa Lombardia	yes (rank 2)
Height of the lakes	Arpa Lombardia	yes (rank 1)
Soil defense works	Regione Lombardia	yes (rank 2)
Large dams	Regione Lombardia	yes (rank 1)
Weather sensor data	Arpa Lombardia	yes (rank 1)
Meteorological Stations	Arpa Lombardia	yes (rank 1)
Unified regional hydrographic network	Regione Lombardia	yes (rank 1)
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes (rank 2)
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes (rank 2)
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes (rank 2)
Health conditions dataset by province, gender and cause	Regione Lombardia	yes (rank 2)
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes (rank 2)
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes (rank 1)
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes (rank 2)
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes (rank 2)
Hospital Assistance for DRG and ATS	Regione Lombardia	yes (rank 2)
Regione Lombardia SDO dataset	Regione Lombardia	yes (rank 2)
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes (rank 2)
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes (rank 2)
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes (rank 2)

Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes (rank 2)
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes (rank 2)
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes (rank 2)
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes (rank 2)
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes (rank 2)
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes (rank 2)
Health conditions dataset by province, gender and age group	Regione Lombardia	yes (rank 2)
Mortality, cause of death	ISTAT	yes (rank 1)
Ostreopsis ovata	ISPRA	yes (rank 1)
Chemical pollutants in the Mediterranean Sea	EMODnet	yes (rank 2)
Chemical pollutants - Waterbase	EEA	yes (rank 1)
Bathing waters quality	EEA	yes (rank 1)
Chemical pollutants and Nutrients	Copernicus (EC)	yes (rank 2)
RON - Italian Wave Network	ISPRA	yes (rank 1)
RMN - Italian Tide Gauge Network	ISPRA	yes (rank 1)
Pesticides in waters	ISPRA	yes (rank 1)
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes (rank 1)
Soil consumption indicators	ISPRA	yes (rank 1)
Italian cultural heritage	MIBACT	yes (rank 2)
Urban Waste Water Treatment Directive - Waterbase	EEA	yes (rank 1)

Datasets ranked as 3. or 4. have been excluded from use cases implementation.

Those datasets are shown in the following table.

Table 6: Answer for Question 1 - Dataset ranked either 3. nice to have or 4. not relevant

Dataset name	Rights holder	Answer
PFAS data (perfluoroalkyl substances) surface waters - Year 2018	Arpa Lombardia	no (rank 3)
PFAS data (perfluoroalkyl substances) groundwater - Year 2018	Arpa Lombardia	no (rank 3)
Interpolation of hourly precipitation observations	Arpa Lombardia	no (rank 3)
List of reclaimed sites in Lombardy - Year 2020	Regione Lombardia	no (rank 3)

List of contaminated sites in Lombardy - Year 2020	Regione Lombardia	no (rank 3)
Homogeneous zones for hydro-weather risk - List of Municipalities	Regione Lombardia	no (rank 4)
Homogeneous zones for hydro-weather risk - Centroids	Regione Lombardia	no (rank 4)
Ostreopsis ovata (Story map)	ISPRA	no (rank 4)
Bathing waters class	ISPRA	no (rank 4)
Chemical pollutant - Sistema Informativo Centralizzato Strategia Marina (nazionale)	ISPRA	no (rank 4)
Chemical pollutants - CDR Eionet	EIONET/EEA	no (rank 3)
Chemical pollutants -WISE	EEA/WISE	no (rank 4)
Food consumption data/OpenEFSAportal	EFSA	no (rank 4)
Chemical contaminants and biological Hazards EFSA portal	EFSA	no (rank 4)
Chemical substances ISS	ISS	no (rank 4)
Chemical pollutants MiTE	MiTE	no (rank 4)
Chemical pollutants-EEA	Agenzia europea per le sostanze chimiche; American Chemical Society; Verisk Europe APS	no (rank 4)
Ostreopsis ovata Italia, Francia, Spagna, Monaco	Ramoge	no (rank 3)
Mappa rischi (Hydrological risks and demographic indicators)	ISTAT	no (rank 3)
Incidenti da valanga	AINEVA	no (rank 4)
European Avalanche Warning Services - Fatalities	EAWS	no (rank 3)
Annali Nivologici	ARPAV	no (rank 3)
Dati meteorologici ultimi anni	ARPAV	no (rank 3)
Dati meteorologici ultimi anni	ARPAV	no (rank 3)
Dati meteorologici ultimi 60gg	ARPAV	no (rank 3)
Dati meteorologici in tempo reale	ARPAV	no (rank 3)
Portate, Livelli Idrometrici, livelli dei laghi	ARPAV	no (rank 3)

Livelli idrometrici e precipitazioni in tempo reale	ARPAV	no (rank 3)
Balneazione - Classificazione 2020	ARPAV	no (rank 3)
Balneazione - Classificazione 2019	ARPAV	no (rank 3)
Balneazione - Classificazione 2018	ARPAV	no (rank 3)
Balneazione - Classificazione 2017	ARPAV	no (rank 3)
Balneazione - Classificazione 2016	ARPAV	no (rank 3)
Balneazione - Classificazione 2015	ARPAV	no (rank 3)
Specchi d'acqua	ARPAV	no (rank 3)
Stato chimico delle foci a delta (2014-2016)	ARPAV	no (rank 3)
Depuratori pubblici	ARPAV	no (rank 3)
Bacini Idrografici Senza Ruscellamento Uscente (BISRU)	ARPAV	no (rank 3)
Mare - Stato chimico 2014-2016	ARPAV	no (rank 3)
Significato Campi_Stato chimico fiumi 2014-2016	ARPAV	no (rank 3)
Stato chimico fiumi 2014-2016 (DGR 861/2018)	ARPAV	no (rank 3)
Mare - Stato chimico 2014-2016	ARPAV	no (rank 3)
Stato chimico laghi 2014-2016 (DGR 861/2018)	ARPAV	no (rank 3)
Livello di Inquinamento da Macrodescrittori, anno 2019 (LIM, D.Lgs. 152/1999)	ARPAV	no (rank 3)
Stato chimico delle altre lagune (2014-2016)	ARPAV	no (rank 3)
Siti Potenzialmente Contaminati (punti)	ARPAV	no (rank 3)
Aziende a rischio di incidente rilevante	ARPAV	no (rank 3)
Pozzi e piezometri	ARPAV	no (rank 3)
Localizzazione discariche (punti)	ARPAV	no (rank 3)
Discariche	ARPAV	no (rank 3)
Carta del consumo di suolo del Veneto 2019	ARPAV	no (rank 3)
Corpi idrici fluviali (Progetti di Piano, 2020)	ARPAV	no (rank 3)

Qualità dell'acqua degli acquedotti dell'Alto Adige	Pr. Aut. Bolzano	no (rank 3)
Precipitazione giornaliera per comune dal 1/1/2001	Osservatorio Clima	no (rank 3)

From now on, the assessment is conducted on the datasets included in the Table 1: “Answer for Question 1 - Dataset ranked either 1. must have or 2. relevant”

4.2 Is it necessary to open the dataset in order to support the achievements of the main results of the project?

Most of the datasets available on the ARPA Lombardia website are open but not published in a machine readable format. For this reason they have been republished according to data quality standards in Regione Lombardia Open Data Portal.

Table 7: Answer for question 2

Dataset name	Rights holder	Answer
Water for human consumption Sampling	Regione Lombardia	yes
Analytical data of river water bodies	Arpa Lombardia	no
Analytical data of lake water bodies	Arpa Lombardia	no
Analytical data of groundwater	Arpa Lombardia	no
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no
Chemical status of groundwater	Arpa Lombardia	no
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	no
Weekly inflows per basin	Arpa Lombardia	no
Weekly outflows per basin	Arpa Lombardia	no
Monthly inflows per basin	Arpa Lombardia	no
Monthly outflows per basin	Arpa Lombardia	no
Height of the lakes	Arpa Lombardia	no
Soil defense works	Regione Lombardia	no
Large dams	Regione Lombardia	no
Weather sensor data	Arpa Lombardia	no
Meteorological Stations	Arpa Lombardia	no
Unified regional hydrographic network	Regione Lombardia	no
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	no
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	no

Dataset Health conditions by municipality, age and gender	Regione Lombardia	no
Health conditions dataset by province, gender and cause	Regione Lombardia	no
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	no
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	no
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	no
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	no
Hospital Assistance for DRG and ATS	Regione Lombardia	no
Regione Lombardia SDO dataset	Regione Lombardia	no
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	no
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	no
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	no
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	no
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	no
Health conditions dataset by province, gender and age group	Regione Lombardia	no
Mortality, cause of death	ISTAT	no
Ostreopsis ovata	ISPRA	no
Chemical pollutants in the Mediterranean Sea	EMODnet	no
Chemical pollutants - Waterbase	EEA	no
Bathing waters quality	EEA	no
Chemical pollutants and Nutrients	Copernicus (EC)	no
RON - Italian Wave Network	ISPRA	no
RMN - Italian Tide Gauge Network	ISPRA	no
Pesticides in waters	ISPRA	no
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	no
Soil consumption indicators	ISPRA	no
Italian cultural heritage	MIBACT	no
Urban Waste Water Treatment Directive - Waterbase	EEA	no

4.3 Has the dataset been required by external users in order to support specific use cases coming from them?

Not all datasets have been asked specifically during the co-creation sessions for use cases implementation. Nevertheless, the datasets ranked as “1. must have” are fundamental for the realisation of use cases and explicitly indicated in use case definition. For this reason, the answer for those datasets is yes.

Table 8: Answer for question 3

Dataset name	Rights holder	Answer
Water for human consumption Sampling	Regione Lombardia	yes
Analytical data of river water bodies	Arpa Lombardia	yes
Analytical data of lake water bodies	Arpa Lombardia	yes
Analytical data of groundwater	Arpa Lombardia	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no
Chemical status of groundwater	Arpa Lombardia	no
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes
Weekly inflows per basin	Arpa Lombardia	no
Weekly outflows per basin	Arpa Lombardia	no
Monthly inflows per basin	Arpa Lombardia	no
Monthly outflows per basin	Arpa Lombardia	no
Height of the lakes	Arpa Lombardia	yes
Soil defense works	Regione Lombardia	no
Large dams	Regione Lombardia	yes
Weather sensor data	Arpa Lombardia	yes
Meteorological Stations	Arpa Lombardia	yes
Unified regional hydrographic network	Regione Lombardia	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	no
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	no
Dataset Health conditions by municipality, age and gender	Regione Lombardia	no
Health conditions dataset by province, gender and cause	Regione Lombardia	no
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	no
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	no
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	no

Hospital Assistance for DRG and ATS	Regione Lombardia	no
Regione Lombardia SDO dataset	Regione Lombardia	no
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	no
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	no
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	no
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	no
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	no
Health conditions dataset by province, gender and age group	Regione Lombardia	no
Mortality, cause of death	ISTAT	yes
Ostreopsis ovata	ISPRA	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	no
Chemical pollutants - Waterbase	EEA	yes
Bathing waters quality	EEA	yes
Chemical pollutants and Nutrients	Copernicus (EC)	no
RON - Italian Wave Network	ISPRA	yes
RMN - Italian Tide Gauge Network	ISPRA	yes
Pesticides in waters	ISPRA	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes
Soil consumption indicators	ISPRA	yes
Italian cultural heritage	MIBACT	no
Urban Waste Water Treatment Directive - Waterbase	EEA	yes

4.4 Is the dataset included in priority lists at the national level?

At national level, priority list is defined taking in account the European Directive 2019/1024 on *open data and the re-use of public sector information* and the following Regulation 2023/138: *laying down a list of specific high-value datasets and the arrangements for their publication and re-use*.

The WHOW datasets related to the theme *environment* are completely included in the following macro categories of high value datasets: *Geospatial, Earth observation and environment, Meteorological*. Likewise, the datasets related to the theme *health* can be considered as belonging to the *statistics* macro category.

Table 9: Answer for Question 4

Dataset name	Rights holder	Answer
Water for human consumption Sampling	Regione Lombardia	yes
Analytical data of river water bodies	Arpa Lombardia	yes
Analytical data of lake water bodies	Arpa Lombardia	yes
Analytical data of groundwater	Arpa Lombardia	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	yes
Chemical status of groundwater	Arpa Lombardia	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes
Weekly inflows per basin	Arpa Lombardia	yes
Weekly outflows per basin	Arpa Lombardia	yes
Monthly inflows per basin	Arpa Lombardia	yes
Monthly outflows per basin	Arpa Lombardia	yes
Height of the lakes	Arpa Lombardia	yes
Soil defense works	Regione Lombardia	yes
Large dams	Regione Lombardia	yes
Weather sensor data	Arpa Lombardia	yes
Meteorological Stations	Arpa Lombardia	yes
Unified regional hydrographic network	Regione Lombardia	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes

Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes
Mortality, cause of death	ISTAT	yes
Ostreopsis ovata	ISPRA	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	yes
Chemical pollutants - Waterbase	EEA	yes
Bathing waters quality	EEA	yes
Chemical pollutants and Nutrients	Copernicus (EC)	yes
RON - Italian Wave Network	ISPRA	yes
RMN - Italian Tide Gauge Network	ISPRA	yes
Pesticides in waters	ISPRA	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes
Soil consumption indicators	ISPRA	yes
Italian cultural heritage	MIBACT	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	yes

4.5 Did you conduct a survey among stakeholders, also including enterprises that do not belong to the domain sectors of the project, in order to understand the interests in opening specific datasets?

No surveys were submitted to the stakeholders. On the other hand, data provider and data consumer provided their interests in opening specific datasets during the co-creation meetings organised in the scope of the project.

Table 10: Answer for Question 5

Dataset name	Rights holder	Answer
Water for human consumption Sampling	Regione Lombardia	yes
Analytical data of river water bodies	Arpa Lombardia	no

Analytical data of lake water bodies	Arpa Lombardia	no
Analytical data of groundwater	Arpa Lombardia	no
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no
Chemical status of groundwater	Arpa Lombardia	no
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	no
Weekly inflows per basin	Arpa Lombardia	no
Weekly outflows per basin	Arpa Lombardia	no
Monthly inflows per basin	Arpa Lombardia	no
Monthly outflows per basin	Arpa Lombardia	no
Height of the lakes	Arpa Lombardia	no
Soil defense works	Regione Lombardia	no
Large dams	Regione Lombardia	no
Weather sensor data	Arpa Lombardia	no
Meteorological Stations	Arpa Lombardia	no
Unified regional hydrographic network	Regione Lombardia	no
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	no
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	no
Dataset Health conditions by municipality, age and gender	Regione Lombardia	no
Health conditions dataset by province, gender and cause	Regione Lombardia	no
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	no
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	no
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	no
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	no
Hospital Assistance for DRG and ATS	Regione Lombardia	no
Regione Lombardia SDO dataset	Regione Lombardia	no
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	no
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	no
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	no
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	no
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	no
Health conditions dataset by province, gender and age group	Regione Lombardia	no
Mortality, cause of death	ISTAT	no

Ostreopsis ovata	ISPRA	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	no
Chemical pollutants - Waterbase	EEA	no
Bathing waters quality	EEA	yes
Chemical pollutants and Nutrients	Copernicus (EC)	no
RON - Italian Wave Network	ISPRA	no
RMN - Italian Tide Gauge Network	ISPRA	no
Pesticides in waters	ISPRA	no
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	no
Soil consumption indicators	ISPRA	no
Italian cultural heritage	MIBACT	no
Urban Waste Water Treatment Directive - Waterbase	EEA	yes

4.6 Is the dataset related to some high value datasets as defined in the context of the European Directive on Open Data (Directive (EU) 2019/1024)?

High values dataset are defined by European Directive 2019/1024 *on open data and the re-use of public sector information* and the following Regulation 2023/138: *laying down a list of specific high-value datasets and the arrangements for their publication and re-use*.

As for criterion 4.4, the WHOW datasets related to the theme *environment* are completely included in the following macro categories of high value datasets: *Geospatial, Earth observation and environment, Meteorological*. Likewise, the datasets related to the theme *health* can be considered as belonging to the *statistics* macro category.

Table 11: Answer for Question 6

Dataset name	Rights holder	Answer
Water for human consumption Sampling	Regione Lombardia	yes
Analytical data of river water bodies	Arpa Lombardia	yes
Analytical data of lake water bodies	Arpa Lombardia	yes
Analytical data of groundwater	Arpa Lombardia	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	yes

Surface Waters (water courses) - LIMECO	Arpa Lombardia	yes
Chemical status of groundwater	Arpa Lombardia	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes
Weekly inflows per basin	Arpa Lombardia	yes
Weekly outflows per basin	Arpa Lombardia	yes
Monthly inflows per basin	Arpa Lombardia	yes
Monthly outflows per basin	Arpa Lombardia	yes
Height of the lakes	Arpa Lombardia	yes
Soil defense works	Regione Lombardia	yes
Large dams	Regione Lombardia	yes
Weather sensor data	Arpa Lombardia	yes
Meteorological Stations	Arpa Lombardia	yes
Unified regional hydrographic network	Regione Lombardia	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes
Mortality, cause of death	ISTAT	yes
Ostreopsis ovata	ISPRA	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	yes
Chemical pollutants - Waterbase	EEA	yes

Bathing waters quality	EEA	yes
Chemical pollutants and Nutrients	Copernicus (EC)	yes
RON - Italian Wave Network	ISPRA	yes
RMN - Italian Tide Gauge Network	ISPRA	yes
Pesticides in waters	ISPRA	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes
Soil consumption indicators	ISPRA	yes
Italian cultural heritage	MIBACT	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	yes

4.7 Were the internal stakeholders willing to open the dataset of their responsibility?

For datasets whose right holders are among WHOW project partners, the answer is yes. The same positive answer is provided for datasets already open at the beginning of the project, regardless of the right holder.

Table 12: Answer for Question 7

Dataset name	Rights holder	Answer
Water for human consumption Sampling	Regione Lombardia	yes
Analytical data of river water bodies	Arpa Lombardia	yes
Analytical data of lake water bodies	Arpa Lombardia	yes
Analytical data of groundwater	Arpa Lombardia	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	yes
Chemical status of groundwater	Arpa Lombardia	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes
Weekly inflows per basin	Arpa Lombardia	yes
Weekly outflows per basin	Arpa Lombardia	yes
Monthly inflows per basin	Arpa Lombardia	yes
Monthly outflows per basin	Arpa Lombardia	yes
Height of the lakes	Arpa Lombardia	yes
Soil defense works	Regione Lombardia	yes
Large dams	Regione Lombardia	yes
Weather sensor data	Arpa Lombardia	yes
Meteorological Stations	Arpa Lombardia	yes
Unified regional hydrographic network	Regione Lombardia	yes

Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes
Mortality, cause of death	ISTAT	yes
Ostreopsis ovata	ISPRA	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	yes*
Chemical pollutants - Waterbase	EEA	yes*
Bathing waters quality	EEA	yes*
Chemical pollutants and Nutrients	Copernicus (EC)	yes*
RON - Italian Wave Network	ISPRA	yes
RMN - Italian Tide Gauge Network	ISPRA	yes
Pesticides in waters	ISPRA	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes
Soil consumption indicators	ISPRA	yes
Italian cultural heritage	MIBACT	yes*
Urban Waste Water Treatment Directive - Waterbase	EEA	yes*

(*) dataset already published in an open data platform

4.8 Is the dataset, also possibly required by external users, already available for the open data process?

All datasets are published as open data.

Table 13: Answer for Question 8

Dataset name	Rights holder	Answer
Water for human consumption Sampling	Regione Lombardia	yes
Analytical data of river water bodies	Arpa Lombardia	yes
Analytical data of lake water bodies	Arpa Lombardia	yes
Analytical data of groundwater	Arpa Lombardia	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	yes
Chemical status of groundwater	Arpa Lombardia	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes
Weekly inflows per basin	Arpa Lombardia	yes
Weekly outflows per basin	Arpa Lombardia	yes
Monthly inflows per basin	Arpa Lombardia	yes
Monthly outflows per basin	Arpa Lombardia	yes
Height of the lakes	Arpa Lombardia	yes
Soil defense works	Regione Lombardia	yes
Large dams	Regione Lombardia	yes
Weather sensor data	Arpa Lombardia	yes
Meteorological Stations	Arpa Lombardia	yes
Unified regional hydrographic network	Regione Lombardia	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes

Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes
Mortality, cause of death	ISTAT	yes
Ostreopsis ovata	ISPRA	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	yes
Chemical pollutants - Waterbase	EEA	yes
Bathing waters quality	EEA	yes
Chemical pollutants and Nutrients	Copernicus (EC)	yes
RON - Italian Wave Network	ISPRA	yes
RMN - Italian Tide Gauge Network	ISPRA	yes
Pesticides in waters	ISPRA	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes
Soil consumption indicators	ISPRA	yes
Italian cultural heritage	MIBACT	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	yes

4.9 In case of a negative answer to the previous question, did you foresee the collection and publication process within the project for the dataset?

Not Applicable. Only positive answers were given to the previous questions.

4.10 Does the process of the previous answer guarantee sustainability of it over time?

For Regione Lombardia and ARPA datasets the sustainability is implicitly given as they are published on the regional Open Data portal and Geoportale, following standardised processes described on Deliverables 3.1 and 3.2. For ISPRA's datasets the sustainability is implicit since they are published on ISPRA portals.

Table 14: Answer for Question 10

Dataset name	Rights holder	Answer
Water for human consumption Sampling	Regione Lombardia	yes
Analytical data of river water bodies	Arpa Lombardia	yes
Analytical data of lake water bodies	Arpa Lombardia	yes
Analytical data of groundwater	Arpa Lombardia	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	yes
Chemical status of groundwater	Arpa Lombardia	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes
Weekly inflows per basin	Arpa Lombardia	yes
Weekly outflows per basin	Arpa Lombardia	yes
Monthly inflows per basin	Arpa Lombardia	yes
Monthly outflows per basin	Arpa Lombardia	yes
Height of the lakes	Arpa Lombardia	yes
Soil defense works	Regione Lombardia	yes
Large dams	Regione Lombardia	yes
Weather sensor data	Arpa Lombardia	yes
Meteorological Stations	Arpa Lombardia	yes
Unified regional hydrographic network	Regione Lombardia	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes

Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes
Mortality, cause of death	ISTAT	yes
Ostreopsis ovata	ISPRA	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	yes
Chemical pollutants - Waterbase	EEA	yes
Bathing waters quality	EEA	yes
Chemical pollutants and Nutrients	Copernicus (EC)	yes
RON - Italian Wave Network	ISPRA	yes
RMN - Italian Tide Gauge Network	ISPRA	yes
Pesticides in waters	ISPRA	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes
Soil consumption indicators	ISPRA	yes
Italian cultural heritage	MIBACT	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	yes

4.11 Does the dataset include elements that may facilitate the interconnection with other datasets (e.g. shared classifications, common (geo) identifiers, same temporal coverage, etc.)?

Almost all datasets contain at least territorial and temporal identifiers. Regarding the common time frame, the datasets are chosen to cover the timeframe 2018 - 2021.

The epidemiologic observatory of Regione Lombardia is under maintenance and the related datasets, now covering up to year 2017, are about to be updated accordingly.

Table 15: Answer for Question 11

Dataset name	Rights holder	Answer
Water for human consumption Sampling	Regione Lombardia	yes
Analytical data of river water bodies	Arpa Lombardia	yes
Analytical data of lake water bodies	Arpa Lombardia	yes
Analytical data of groundwater	Arpa Lombardia	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	yes

Chemical status of groundwater	Arpa Lombardia	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes
Weekly inflows per basin	Arpa Lombardia	yes
Weekly outflows per basin	Arpa Lombardia	yes
Monthly inflows per basin	Arpa Lombardia	yes
Monthly outflows per basin	Arpa Lombardia	yes
Height of the lakes	Arpa Lombardia	yes
Soil defense works	Regione Lombardia	yes
Large dams	Regione Lombardia	yes
Weather sensor data	Arpa Lombardia	yes
Meteorological Stations	Arpa Lombardia	yes
Unified regional hydrographic network	Regione Lombardia	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes
Mortality, cause of death	ISTAT	yes
Ostreopsis ovata	ISPRA	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	yes
Chemical pollutants - Waterbase	EEA	yes

Bathing waters quality	EEA	yes
Chemical pollutants and Nutrients	Copernicus (EC)	yes
RON - Italian Wave Network	ISPRA	yes
RMN - Italian Tide Gauge Network	ISPRA	yes
Pesticides in waters	ISPRA	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes
Soil consumption indicators	ISPRA	yes
Italian cultural heritage	MIBACT	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	yes

4.12 If yes to the previous question, specify which are the elements.

Table 16: Answer for Question 12

Dataset name	Rights holder	Answer
Water for human consumption Sampling	Regione Lombardia	territorial ID, temporal ID, sample point ID
Analytical data of river water bodies	Arpa Lombardia	territorial ID, temporal ID, CAS and WISE ID
Analytical data of lake water bodies	Arpa Lombardia	territorial ID, temporal ID, CAS and WISE ID
Analytical data of groundwater	Arpa Lombardia	territorial ID, temporal ID, CAS and WISE ID
Surface Waters (lakes) - LTLECO	Arpa Lombardia	territorial ID, temporal ID
Surface Waters (water courses) - LIMECO	Arpa Lombardia	territorial ID, temporal ID
Chemical status of groundwater	Arpa Lombardia	territorial ID, temporal ID
Environmental Radioactivity Monitoring Network	Arpa Lombardia	territorial ID, temporal ID
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	territorial ID, temporal ID
Weekly inflows per basin	Arpa Lombardia	territorial ID, temporal ID
Weekly outflows per basin	Arpa Lombardia	territorial ID, temporal ID
Monthly inflows per basin	Arpa Lombardia	territorial ID, temporal ID
Monthly outflows per basin	Arpa Lombardia	territorial ID, temporal ID
Height of the lakes	Arpa Lombardia	territorial ID, temporal ID
Soil defense works	Regione Lombardia	territorial ID, temporal ID
Large dams	Regione Lombardia	territorial ID
Weather sensor data	Arpa Lombardia	territorial ID, temporal ID
Meteorological Stations	Arpa Lombardia	territorial ID, temporal ID

Unified regional hydrographic network	Regione Lombardia	territorial ID
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	territorial ID, temporal ID
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	territorial ID, temporal ID
Dataset Health conditions by municipality, age and gender	Regione Lombardia	territorial ID, temporal ID
Health conditions dataset by province, gender and cause	Regione Lombardia	territorial ID, temporal ID
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	territorial ID, temporal ID
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	territorial ID, temporal ID
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	territorial ID, temporal ID
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	territorial ID, temporal ID
Hospital Assistance for DRG and ATS	Regione Lombardia	territorial ID, temporal ID
Regione Lombardia SDO dataset	Regione Lombardia	territorial ID, temporal ID
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	territorial ID, temporal ID
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	territorial ID, temporal ID
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	territorial ID, temporal ID
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	territorial ID, temporal ID
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	territorial ID, temporal ID
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	territorial ID, temporal ID
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	territorial ID, temporal ID
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	territorial ID, temporal ID
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	territorial ID, temporal ID
Health conditions dataset by province, gender and age group	Regione Lombardia	territorial ID, temporal ID
Mortality, cause of death	ISTAT	territorial ID, temporal ID
Ostreopsis ovata	ISPRA	territorial ID temporal ID
Chemical pollutants in the Mediterranean Sea	EMODnet	territorial ID, temporal ID, CAS
Chemical pollutants - Waterbase	EEA	territorial ID, temporal ID, CAS
Bathing waters quality	EEA	territorial ID, temporal ID
Chemical pollutants and Nutrients	Copernicus (EC)	territorial ID, temporal ID, CAS
RON - Italian Wave Network	ISPRA	territorial ID, temporal ID
RMN - Italian Tide Gauge Network	ISPRA	territorial ID, temporal ID
Pesticides in waters	ISPRA	territorial ID, temporal ID, CAS
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	territorial ID, temporal ID
Soil consumption indicators	ISPRA	territorial ID, temporal ID
Italian cultural heritage	MIBACT	territorial ID, temporal ID
Urban Waste Water Treatment Directive - Waterbase	EEA	territorial ID, temporal ID

4.13 Is the dataset already available under the Linked (Open) Data paradigm?

Table 17: Answer for Question 13

Dataset name	Rights holder	Answer
Water for human consumption Sampling	Regione Lombardia	no
Analytical data of river water bodies	Arpa Lombardia	no
Analytical data of lake water bodies	Arpa Lombardia	no
Analytical data of groundwater	Arpa Lombardia	no
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no
Chemical status of groundwater	Arpa Lombardia	no
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	no
Weekly inflows per basin	Arpa Lombardia	no
Weekly outflows per basin	Arpa Lombardia	no
Monthly inflows per basin	Arpa Lombardia	no
Monthly outflows per basin	Arpa Lombardia	no
Height of the lakes	Arpa Lombardia	no
Soil defense works	Regione Lombardia	no
Large dams	Regione Lombardia	no
Weather sensor data	Arpa Lombardia	no
Meteorological Stations	Arpa Lombardia	no
Unified regional hydrographic network	Regione Lombardia	no
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	no
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	no
Dataset Health conditions by municipality, age and gender	Regione Lombardia	no
Health conditions dataset by province, gender and cause	Regione Lombardia	no
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	no
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	no
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	no
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	no
Hospital Assistance for DRG and ATS	Regione Lombardia	no
Regione Lombardia SDO dataset	Regione Lombardia	no

Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	no
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	no
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	no
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	no
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	no
Health conditions dataset by province, gender and age group	Regione Lombardia	no
Mortality, cause of death	ISTAT	no
Ostreopsis ovata	ISPRA	no
Chemical pollutants in the Mediterranean Sea	EMODnet	no
Chemical pollutants - Waterbase	EEA	no
Bathing waters quality	EEA	no
Chemical pollutants and Nutrients	Copernicus (EC)	no
RON - Italian Wave Network	ISPRA	yes
RMN - Italian Tide Gauge Network	ISPRA	yes
Pesticides in waters	ISPRA	no*
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes
Soil consumption indicators	ISPRA	yes
Italian cultural heritage	MIBACT	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	no

(*) *Linked open data in progress*

4.14 If yes to the previous question, which are the elements that can facilitate the interconnection with other available linked open datasets (e.g., time, geo identifiers, etc.)?

The following table reports the assessment for the subset of datasets **linked** with other open datasets

Table 18: Answer for Question 14

Dataset name	Rights holder	Answer
RON - Italian Wave Network	ISPRA	territorial ID, temporal ID
RMN - Italian Tide Gauge Network	ISPRA	territorial ID, temporal ID
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	territorial ID, temporal ID
Soil consumption indicators	ISPRA	territorial ID, temporal ID
Italian cultural heritage	MIBACT	territorial ID, temporal ID

4.15 If the dataset is not in linked open data, does it specify and publish a clear semantics of its elements in the form of detailed description of its data schema?

The following table reports the assessment for the subset of datasets **not linked** with other open datasets

Table 19: Answer for Question 15

Dataset name	Rights holder	Answer
Water for human consumption Sampling	Regione Lombardia	no
Analytical data of river water bodies	Arpa Lombardia	no
Analytical data of lake water bodies	Arpa Lombardia	no
Analytical data of groundwater	Arpa Lombardia	no
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no
Chemical status of groundwater	Arpa Lombardia	no
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	no
Weekly inflows per basin	Arpa Lombardia	no
Weekly outflows per basin	Arpa Lombardia	no
Monthly inflows per basin	Arpa Lombardia	no
Monthly outflows per basin	Arpa Lombardia	no
Height of the lakes	Arpa Lombardia	no
Soil defense works	Regione Lombardia	no
Large dams	Regione Lombardia	no
Weather sensor data	Arpa Lombardia	no
Meteorological Stations	Arpa Lombardia	no
Unified regional hydrographic network	Regione Lombardia	no

Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	no
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	no
Dataset Health conditions by municipality, age and gender	Regione Lombardia	no
Health conditions dataset by province, gender and cause	Regione Lombardia	no
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	no
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	no
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	no
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	no
Hospital Assistance for DRG and ATS	Regione Lombardia	no
Regione Lombardia SDO dataset	Regione Lombardia	no
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	no
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	no
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	no
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	no
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	no
Health conditions dataset by province, gender and age group	Regione Lombardia	no
Mortality, cause of death	ISTAT	no
Ostreopsis ovata	ISPRA	no
Chemical pollutants in the Mediterranean Sea	EMODnet	no
Chemical pollutants - Waterbase	EEA	no
Bathing waters quality	EEA	no
Chemical pollutants and Nutrients	Copernicus (EC)	no
Pesticides in waters	ISPRA	no
Urban Waste Water Treatment Directive - Waterbase	EEA	no

4.16 Does the dataset contain personal data that can directly or indirectly identify a natural person?

No personal data are contained in the datasets.

Table 20: Answer for Question 16

Dataset name	Rights holder	Answer
Water for human consumption Sampling	Regione Lombardia	no
Analytical data of river water bodies	Arpa Lombardia	no
Analytical data of lake water bodies	Arpa Lombardia	no
Analytical data of groundwater	Arpa Lombardia	no
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no
Chemical status of groundwater	Arpa Lombardia	no
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	no
Weekly inflows per basin	Arpa Lombardia	no
Weekly outflows per basin	Arpa Lombardia	no
Monthly inflows per basin	Arpa Lombardia	no
Monthly outflows per basin	Arpa Lombardia	no
Height of the lakes	Arpa Lombardia	no
Soil defense works	Regione Lombardia	no
Large dams	Regione Lombardia	no
Weather sensor data	Arpa Lombardia	no
Meteorological Stations	Arpa Lombardia	no
Unified regional hydrographic network	Regione Lombardia	no
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	no
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	no
Dataset Health conditions by municipality, age and gender	Regione Lombardia	no
Health conditions dataset by province, gender and cause	Regione Lombardia	no
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	no
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	no
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	no
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	no
Hospital Assistance for DRG and ATS	Regione Lombardia	no
Regione Lombardia SDO dataset	Regione Lombardia	no
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	no
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	no
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	no
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	no
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	no

Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	no
Health conditions dataset by province, gender and age group	Regione Lombardia	no
Mortality, cause of death	ISTAT	no
Ostreopsis ovata	ISPRA	no
Chemical pollutants in the Mediterranean Sea	EMODnet	no
Chemical pollutants - Waterbase	EEA	no
Bathing waters quality	EEA	no
Chemical pollutants and Nutrients	Copernicus (EC)	no
RON - Italian Wave Network	ISPRA	no
RMN - Italian Tide Gauge Network	ISPRA	no
Pesticides in waters	ISPRA	no
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	no
Soil consumption indicators	ISPRA	no
Italian cultural heritage	MIBACT	no
Urban Waste Water Treatment Directive - Waterbase	EEA	no

4.17 If yes to the previous question, is the information authorised by law?

Not Applicable. Only negative answers were given to the previous questions.

4.18 Does the dataset contain indirect information that can be used to identify a person?

Neither personal data nor indirect information that can be used for identification purposes are contained in the datasets.

Table 21: Answer for Question 18

Dataset name	Rights holder	Answer
Water for human consumption Sampling	Regione Lombardia	no
Analytical data of river water bodies	Arpa Lombardia	no
Analytical data of lake water bodies	Arpa Lombardia	no
Analytical data of groundwater	Arpa Lombardia	no
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no

Chemical status of groundwater	Arpa Lombardia	no
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	no
Weekly inflows per basin	Arpa Lombardia	no
Weekly outflows per basin	Arpa Lombardia	no
Monthly inflows per basin	Arpa Lombardia	no
Monthly outflows per basin	Arpa Lombardia	no
Height of the lakes	Arpa Lombardia	no
Soil defense works	Regione Lombardia	no
Large dams	Regione Lombardia	no
Weather sensor data	Arpa Lombardia	no
Meteorological Stations	Arpa Lombardia	no
Unified regional hydrographic network	Regione Lombardia	no
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	no
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	no
Dataset Health conditions by municipality, age and gender	Regione Lombardia	no
Health conditions dataset by province, gender and cause	Regione Lombardia	no
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	no
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	no
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	no
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	no
Hospital Assistance for DRG and ATS	Regione Lombardia	no
Regione Lombardia SDO dataset	Regione Lombardia	no
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	no
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	no
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	no
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	no
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	no
Health conditions dataset by province, gender and age group	Regione Lombardia	no
Mortality, cause of death	ISTAT	no
Ostreopsis ovata	ISPRA	no
Chemical pollutants in the Mediterranean Sea	EMODnet	no
Chemical pollutants - Waterbase	EEA	no

Bathing waters quality	EEA	no
Chemical pollutants and Nutrients	Copernicus (EC)	no
RON - Italian Wave Network	ISPRA	no
RMN - Italian Tide Gauge Network	ISPRA	no
Pesticides in waters	ISPRA	no
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	no
Soil consumption indicators	ISPRA	no
Italian cultural heritage	MIBACT	no
Urban Waste Water Treatment Directive - Waterbase	EEA	no

4.19 If yes to the previous question, is the information authorized by law?

Not Applicable. Only negative answers were given to the previous questions.

4.20 Does the dataset contain specific categories of data (e.g., sensitive data) connected to a person?

No specific categories of data connected to a person are contained in the datasets.

Table 22: Answer for Question 20

Dataset name	Rights holder	Answer
Water for human consumption Sampling	Regione Lombardia	no
Analytical data of river water bodies	Arpa Lombardia	no
Analytical data of lake water bodies	Arpa Lombardia	no
Analytical data of groundwater	Arpa Lombardia	no
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no
Chemical status of groundwater	Arpa Lombardia	no
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	no
Weekly inflows per basin	Arpa Lombardia	no
Weekly outflows per basin	Arpa Lombardia	no

Monthly inflows per basin	Arpa Lombardia	no
Monthly outflows per basin	Arpa Lombardia	no
Height of the lakes	Arpa Lombardia	no
Soil defense works	Regione Lombardia	no
Large dams	Regione Lombardia	no
Weather sensor data	Arpa Lombardia	no
Meteorological Stations	Arpa Lombardia	no
Unified regional hydrographic network	Regione Lombardia	no
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	no
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	no
Dataset Health conditions by municipality, age and gender	Regione Lombardia	no
Health conditions dataset by province, gender and cause	Regione Lombardia	no
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	no
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	no
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	no
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	no
Hospital Assistance for DRG and ATS	Regione Lombardia	no
Regione Lombardia SDO dataset	Regione Lombardia	no
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	no
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	no
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	no
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	no
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	no
Health conditions dataset by province, gender and age group	Regione Lombardia	no
Mortality, cause of death	ISTAT	no
Ostreopsis ovata	ISPRA	no
Chemical pollutants in the Mediterranean Sea	EMODnet	no
Chemical pollutants - Waterbase	EEA	no
Bathing waters quality	EEA	no
Chemical pollutants and Nutrients	Copernicus (EC)	no
RON - Italian Wave Network	ISPRA	no
RMN - Italian Tide Gauge Network	ISPRA	no
Pesticides in waters	ISPRA	no

RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	no
Soil consumption indicators	ISPRA	no
Italian cultural heritage	MIBACT	no
Urban Waste Water Treatment Directive - Waterbase	EEA	no

4.21 If yes to the previous question, is the sensitive data properly anonymized so that re-identification is not possible?

Not Applicable. Only negative answers were given to the previous questions.

4.22 In case personal data is included, is the data collected adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed ('data minimisation')?

Not Applicable. Only negative answers were given to the previous questions.

4.23 The dataset that you wish to use is accompanied with a closed license (e.g., no commercial re-use, no derivatives)?

All datasets are open, and for each one is reported the actual licence. For a bunch of dataset the licence is undefined as they are published in ARPA Lombardia portal. The situation is temporary as they are going to be republished on Regione Lombardia Open Data Portal with CC 0 licence by the end of the project.

Table 23: Answer for Question 23

Dataset name	Rights holder	Answer
Water for human consumption Sampling	Regione Lombardia	CC 0
Analytical data of river water bodies	Arpa Lombardia	CC 0
Analytical data of lake water bodies	Arpa Lombardia	CC 0
Analytical data of groundwater	Arpa Lombardia	CC 0
Surface Waters (lakes) - LTLECO	Arpa Lombardia	undefined
Surface Waters (water courses) - LIMECO	Arpa Lombardia	undefined
Chemical status of groundwater	Arpa Lombardia	undefined
Environmental Radioactivity Monitoring Network	Arpa Lombardia	undefined

Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	no
Weekly inflows per basin	Arpa Lombardia	CC 0
Weekly outflows per basin	Arpa Lombardia	CC 0
Monthly inflows per basin	Arpa Lombardia	CC 0
Monthly outflows per basin	Arpa Lombardia	CC 0
Height of the lakes	Arpa Lombardia	CC 0
Soil defense works	Regione Lombardia	CC-BY-NC-ND 4.0
Large dams	Regione Lombardia	CC-BY-NC-ND 4.0
Weather sensor data	Arpa Lombardia	CC 0
Meteorological Stations	Arpa Lombardia	CC 0
Unified regional hydrographic network	Regione Lombardia	CC-BY-NC-ND 4.0
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	CC 0
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	CC 0
Dataset Health conditions by municipality, age and gender	Regione Lombardia	CC 0
Health conditions dataset by province, gender and cause	Regione Lombardia	CC 0
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	CC 0
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	CC 0
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	CC 0
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	CC 0
Hospital Assistance for DRG and ATS	Regione Lombardia	CC 0
Regione Lombardia SDO dataset	Regione Lombardia	CC 0
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	CC 0
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	CC 0
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	CC 0
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	CC 0
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	CC 0
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	CC 0
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	CC 0
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	CC 0
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	CC 0
Health conditions dataset by province, gender and age group	Regione Lombardia	CC 0
Mortality, cause of death	ISTAT	CC 0
Ostreopsis ovata	ISPRA	CC 0
Chemical pollutants in the Mediterranean Sea	EMODnet	CC-BY 4.0
Chemical pollutants - Waterbase	EEA	EEA own licence*
Bathing waters quality	EEA	EEA own licence*
Chemical pollutants and Nutrients	Copernicus (EC)	EC own licence*
RON - Italian Wave Network	ISPRA	CC-BY 4.0

RMN - Italian Tide Gauge Network	ISPRA	CC-BY 4.0
Pesticides in waters	ISPRA	CC-BY 4.0
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	CC-BY 4.0
Soil consumption indicators	ISPRA	CC-BY 4.0
Italian cultural heritage	MIBACT	CC-BY 4.0
Urban Waste Water Treatment Directive - Waterbase	EEA	EEA own licence*

*Data and documents are public and may be re-used without prior permission, free of charge, for commercial or non-commercial purposes, providing acknowledgement for the original source

4.24 Are you sure there are no legal limitations in the process to open the dataset?

Table 24: Answer for Question 24

Dataset name	Rights holder	Answer
Water for human consumption Sampling	Regione Lombardia	yes
Analytical data of river water bodies	Arpa Lombardia	yes
Analytical data of lake water bodies	Arpa Lombardia	yes
Analytical data of groundwater	Arpa Lombardia	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	yes
Chemical status of groundwater	Arpa Lombardia	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes
Weekly inflows per basin	Arpa Lombardia	yes
Weekly outflows per basin	Arpa Lombardia	yes
Monthly inflows per basin	Arpa Lombardia	yes
Monthly outflows per basin	Arpa Lombardia	yes
Height of the lakes	Arpa Lombardia	yes
Soil defense works	Regione Lombardia	yes
Large dams	Regione Lombardia	yes
Weather sensor data	Arpa Lombardia	yes
Meteorological Stations	Arpa Lombardia	yes
Unified regional hydrographic network	Regione Lombardia	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes

Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes
Mortality, cause of death	ISTAT	yes
Ostreopsis ovata	ISPRA	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	yes
Chemical pollutants - Waterbase	EEA	yes
Bathing waters quality	EEA	yes
Chemical pollutants and Nutrients	Copernicus (EC)	yes
RON - Italian Wave Network	ISPRA	yes
RMN - Italian Tide Gauge Network	ISPRA	yes
Pesticides in waters	ISPRA	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes
Soil consumption indicators	ISPRA	yes
Italian cultural heritage	MIBACT	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	yes

4.25 Is the dataset subject to temporal restrictions for its publication?

Table 25: Answer for Question 25

Dataset name	Rights holder	Answer
Water for human consumption Sampling	Regione Lombardia	no
Analytical data of river water bodies	Arpa Lombardia	no
Analytical data of lake water bodies	Arpa Lombardia	no
Analytical data of groundwater	Arpa Lombardia	no
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no
Chemical status of groundwater	Arpa Lombardia	no
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	no
Weekly inflows per basin	Arpa Lombardia	no
Weekly outflows per basin	Arpa Lombardia	no
Monthly inflows per basin	Arpa Lombardia	no
Monthly outflows per basin	Arpa Lombardia	no
Height of the lakes	Arpa Lombardia	no
Soil defense works	Regione Lombardia	no
Large dams	Regione Lombardia	no
Weather sensor data	Arpa Lombardia	no
Meteorological Stations	Arpa Lombardia	no
Unified regional hydrographic network	Regione Lombardia	no
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	no
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	no
Dataset Health conditions by municipality, age and gender	Regione Lombardia	no
Health conditions dataset by province, gender and cause	Regione Lombardia	no
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	no
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	no
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	no
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	no
Hospital Assistance for DRG and ATS	Regione Lombardia	no
Regione Lombardia SDO dataset	Regione Lombardia	no
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	no
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	no
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	no
Dataset Average Hospitalization And Average Accesses By Discipline	Regione Lombardia	no

Discipline And Structure		
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	no
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	no
Health conditions dataset by province, gender and age group	Regione Lombardia	no
Mortality, cause of death	ISTAT	no
Ostreopsis ovata	ISPRA	no
Chemical pollutants in the Mediterranean Sea	EMODnet	no
Chemical pollutants - Waterbase	EEA	no
Bathing waters quality	EEA	no
Chemical pollutants and Nutrients	Copernicus (EC)	no
RON - Italian Wave Network	ISPRA	no
RMN - Italian Tide Gauge Network	ISPRA	no
Pesticides in waters	ISPRA	no
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	no
Soil consumption indicators	ISPRA	no
Italian cultural heritage	MIBACT	no
Urban Waste Water Treatment Directive - Waterbase	EEA	no

4.26 Is the data subject to specific legal or jurisprudential prohibitions that prevent its indexing by search engines?

Table 26: Answer for Question 26

Dataset name	Rights holder	Answer
Water for human consumption Sampling	Regione Lombardia	no
Analytical data of river water bodies	Arpa Lombardia	no
Analytical data of lake water bodies	Arpa Lombardia	no
Analytical data of groundwater	Arpa Lombardia	no
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no
Chemical status of groundwater	Arpa Lombardia	no
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	no

Weekly inflows per basin	Arpa Lombardia	no
Weekly outflows per basin	Arpa Lombardia	no
Monthly inflows per basin	Arpa Lombardia	no
Monthly outflows per basin	Arpa Lombardia	no
Height of the lakes	Arpa Lombardia	no
Soil defense works	Regione Lombardia	no
Large dams	Regione Lombardia	no
Weather sensor data	Arpa Lombardia	no
Meteorological Stations	Arpa Lombardia	no
Unified regional hydrographic network	Regione Lombardia	no
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	no
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	no
Dataset Health conditions by municipality, age and gender	Regione Lombardia	no
Health conditions dataset by province, gender and cause	Regione Lombardia	no
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	no
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	no
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	no
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	no
Hospital Assistance for DRG and ATS	Regione Lombardia	no
Regione Lombardia SDO dataset	Regione Lombardia	no
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	no
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	no
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	no
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	no
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	no
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	no
Health conditions dataset by province, gender and age group	Regione Lombardia	no
Mortality, cause of death	ISTAT	no
Ostreopsis ovata	ISPRA	no
Chemical pollutants in the Mediterranean Sea	EMODnet	no
Chemical pollutants - Waterbase	EEA	no
Bathing waters quality	EEA	no
Chemical pollutants and Nutrients	Copernicus (EC)	no
RON - Italian Wave Network	ISPRA	no

RMN - Italian Tide Gauge Network	ISPRA	no
Pesticides in waters	ISPRA	no
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	no
Soil consumption indicators	ISPRA	no
Italian cultural heritage	MIBACT	no
Urban Waste Water Treatment Directive - Waterbase	EEA	no

5 Quality Analysis for relevant datasets

In the current chapter the indicators of the FAIR Data Maturity Model are used to evaluate both the original quality of the datasets being used in WHOW, and the quality to be guaranteed as a result of the project activities to be carried out .

For each dataset, the following indicators have been measured at the time of the use case definition in December 2021 (**market as time 0, t0**), when Deliverable 2.1 was submitted, and now, at the end of the project (**marked as time 1, t1**).

The answers for t1 are referred to the current situation (in march 2023), or to the situation planned to be in place for the end of the project (in august 2023).

Along with the application of the data quality indicators on the starting datasets list, it has been suddenly clear the need to improve the quality of a group of datasets candidates for the implementation of Linked Open Data services. Since December 2021 (t0) till now, these datasets have been republished in compliance with the open data and data quality requirements. The updated link to the datasets are available in the table below.

Table 1: New Access URL for improved datasets (ARPA Lombardia)

Theme	Dataset	Rights holder	NEW Access URL	Use Case
Environment	Water for human consumption Sampling	Regione Lombardia	https://hub.dati.lombardia.it/Sanit-/Qualit-delle-acque-destinate-al-cons-umo-umano-camp/9sn6-a9kr	2
	Water for human consumption Parameters(*)		https://hub.dati.lombardia.it/Sanit-/Qualit-delle-acque-destinate-al-cons-umo-umano-dett/beda-kb7b	

Environment	Analytical data of river water bodies	Arpa Lombardia	https://www.dati.lombardia.it/Ambiente/Dati-analitici-corpi-idrici-fluviali/kr6i-f553	2
Environment	Analytical data of lake water bodies	Arpa Lombardia	https://www.dati.lombardia.it/Ambiente/Dati-analitici-corpi-idrici-lacustri/d4ep-yvbw	2
Environment	Analytical data of groundwater	Arpa Lombardia	https://www.dati.lombardia.it/Ambiente/Dati-analitici-acque-sotterranee/46wy-4ydd	2
Environment	Surface Waters (lakes) - LTLECO (**)	Arpa Lombardia	N.A.	2
Environment	Surface Waters (water courses) - LIMECO (**)	Arpa Lombardia	N.A.	2
Environment	Chemical status of groundwater (**)	Arpa Lombardia	N.A.	2
Environment	Environmental Radioactivity Monitoring Network (**)	Arpa Lombardia	N.A.	2
Environment	Weekly inflows per basin	Arpa Lombardia	https://dati.lombardia.it/Ambiente/Afflussi-settimanali-per-bacino/xrwu-ycvn	3
Environment	Weekly outflows per basin	Arpa Lombardia	https://dati.lombardia.it/Ambiente/Deflussi-settimanali-per-bacino/y3gm-am85	3
Environment	Monthly inflows per basin	Arpa Lombardia	https://dati.lombardia.it/Ambiente/Afflussi-mensili-per-bacino/43ff-b9ix	3
Environment	Monthly outflows per basin	Arpa Lombardia	https://dati.lombardia.it/Ambiente/Deflussi-mensili-per-bacino/hr3t-vsus	3
Environment	Height of the lakes	Arpa Lombardia	https://dati.lombardia.it/Ambiente/Altezza-laghi/xiye-qjzy	3

In this section, the answer t1 of such datasets is based on their new published version.

(*) The dataset “Water for human consumption Sampling” is published together with “Water for human consumption Parameters”. The Sampling dataset is obtained by grouping the Parameters dataset by sampling point and date. Only the Sampling dataset is reported on the assessment.

Since those datasets have been recently opened, related values are set as N.A. for all the requirements on t0.

(**) those dataset haven’t been republished on the Open Data Portal of Regione Lombardia yet, but they are expected to be by the end of the project.

5.1 RDA-F1-01M Metadata is identified by a persistent identifier

Datasets and related metadata hosted by Regione Lombardia’s Open Data Portal are provided by default with a persistent identifier. Datasets and related metadata from EEA, ISPRA Linked Data, EMODnet and Copernicus have a persistent identifier.

Table 27: Answer for RDA-F1-01M

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	no	yes
Analytical data of lake water bodies	Arpa Lombardia	no	yes
Analytical data of groundwater	Arpa Lombardia	no	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no	yes
Chemical status of groundwater	Arpa Lombardia	no	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes	yes
Weekly inflows per basin	Arpa Lombardia	no	yes
Weekly outflows per basin	Arpa Lombardia	no	yes
Monthly inflows per basin	Arpa Lombardia	no	yes
Monthly outflows per basin	Arpa Lombardia	no	yes
Height of the lakes	Arpa Lombardia	no	yes
Soil defense works	Regione Lombardia	yes	yes
Large dams	Regione Lombardia	yes	yes
Weather sensor data	Arpa Lombardia	yes	yes
Meteorological Stations	Arpa Lombardia	yes	yes
Unified regional hydrographic network	Regione Lombardia	yes	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes	yes

Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes	yes
Mortality, cause of death	ISTAT	yes	yes
Ostreopsis ovata	ISPRA	no	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	yes	yes
Chemical pollutants - Waterbase	EEA	yes	yes
Bathing waters quality	EEA	yes	yes
Chemical pollutants and Nutrients	Copernicus (EC)	yes	yes
RON - Italian Wave Network	ISPRA	yes	yes
RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	no	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes
Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	yes	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	yes	yes

5.2 RDA-F1-01D Data is identified by a persistent identifier

Datasets and related metadata hosted by Regione Lombardia's Open Data Portal and ISPRA's Portals are provided by default with a persistent identifier. Datasets and related metadata from EEA, ISPRA Linked Data, EMODnet and Copernicus have a persistent identifier.

Table 28: Answer for RDA-F1-01D

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	no	yes
Analytical data of lake water bodies	Arpa Lombardia	no	yes
Analytical data of groundwater	Arpa Lombardia	no	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no	yes
Chemical status of groundwater	Arpa Lombardia	no	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes	yes
Weekly inflows per basin	Arpa Lombardia	no	yes
Weekly outflows per basin	Arpa Lombardia	no	yes
Monthly inflows per basin	Arpa Lombardia	no	yes
Monthly outflows per basin	Arpa Lombardia	no	yes
Height of the lakes	Arpa Lombardia	no	yes
Soil defence works	Regione Lombardia	yes	yes
Large dams	Regione Lombardia	yes	yes
Weather sensor data	Arpa Lombardia	yes	yes
Meteorological Stations	Arpa Lombardia	yes	yes
Unified regional hydrographic network	Regione Lombardia	yes	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes	yes

Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes	yes
Mortality, cause of death	ISTAT	yes	yes
Ostreopsis ovata	ISPRA	no	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	yes	yes
Chemical pollutants - Waterbase	EEA	yes	yes
Bathing waters quality	EEA	yes	yes
Chemical pollutants and Nutrients	Copernicus (EC)	yes	yes
RON - Italian Wave Network	ISPRA	yes	yes
RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	no	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes
Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	yes	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	yes	yes

5.3 RDA-F2-01M Rich metadata is provided to allow discovery

The datasets whose rights holders are ISPRA, Regione and ARPA Lombardia have been enriched in terms of metadata in order to fit FAIR principles and project requirements.

Table 29: Answer for RDA-F2-01M

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	no	yes
Analytical data of lake water bodies	Arpa Lombardia	no	yes

Analytical data of groundwater	Arpa Lombardia	no	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no	yes
Chemical status of groundwater	Arpa Lombardia	no	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes	yes
Weekly inflows per basin	Arpa Lombardia	no	yes
Weekly outflows per basin	Arpa Lombardia	no	yes
Monthly inflows per basin	Arpa Lombardia	no	yes
Monthly outflows per basin	Arpa Lombardia	no	yes
Height of the lakes	Arpa Lombardia	no	yes
Soil defense works	Regione Lombardia	yes	yes
Large dams	Regione Lombardia	yes	yes
Weather sensor data	Arpa Lombardia	yes	yes
Meteorological Stations	Arpa Lombardia	yes	yes
Unified regional hydrographic network	Regione Lombardia	yes	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes	yes

Mortality, cause of death	ISTAT	yes	yes
Ostreopsis ovata	ISPRA	no	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	yes	yes
Chemical pollutants - Waterbase	EEA	yes	yes
Bathing waters quality	EEA	yes	yes
Chemical pollutants and Nutrients	Copernicus (EC)	yes	yes
RON - Italian Wave Network	ISPRA	yes	yes
RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	no	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes
Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	yes	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	yes	yes

5.4 RDA-F4-01M Metadata is offered in such a way that it can be harvested and indexed

Metadata for datasets hosted by Regione Lombardia's Open Data Portal and GeoPortal are harvested and indexed respectively by dati.gov.it and by rndt.it. Same for datasets hosted by ISPRA's portal.

Table 30: Answer for RDA-F4-01M

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	no	yes
Analytical data of lake water bodies	Arpa Lombardia	no	yes
Analytical data of groundwater	Arpa Lombardia	no	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no	yes
Chemical status of groundwater	Arpa Lombardia	no	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no	yes

Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes	yes
Weekly inflows per basin	Arpa Lombardia	no	yes
Weekly outflows per basin	Arpa Lombardia	no	yes
Monthly inflows per basin	Arpa Lombardia	no	yes
Monthly outflows per basin	Arpa Lombardia	no	yes
Height of the lakes	Arpa Lombardia	no	yes
Soil defense works	Regione Lombardia	yes	yes
Large dams	Regione Lombardia	yes	yes
Weather sensor data	Arpa Lombardia	yes	yes
Meteorological Stations	Arpa Lombardia	yes	yes
Unified regional hydrographic network	Regione Lombardia	yes	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes	yes
Mortality, cause of death	ISTAT	yes	yes
Ostreopsis ovata	ISPRA	no	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	no	yes
Chemical pollutants - Waterbase	EEA	no	yes

Bathing waters quality	EEA	no	yes
Chemical pollutants and Nutrients	Copernicus (EC)	no	yes
RON - Italian Wave Network	ISPRA	yes	yes
RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	no	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes
Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	no	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	no	yes

5.5 RDA-A1-01M Metadata contains information to enable the user to get access to the data

Metadata for datasets hosted by Regione Lombardia's Open Data Portal, ISPRA, EEA, Copernicus contain the URL that allows direct access to the data.

Table 31: Answer for RDA-A1-01M

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	no	yes
Analytical data of lake water bodies	Arpa Lombardia	no	yes
Analytical data of groundwater	Arpa Lombardia	no	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no	yes
Chemical status of groundwater	Arpa Lombardia	no	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes	yes
Weekly inflows per basin	Arpa Lombardia	no	yes
Weekly outflows per basin	Arpa Lombardia	no	yes
Monthly inflows per basin	Arpa Lombardia	no	yes

Monthly outflows per basin	Arpa Lombardia	no	yes
Height of the lakes	Arpa Lombardia	no	yes
Soil defense works	Regione Lombardia	yes	yes
Large dams	Regione Lombardia	yes	yes
Weather sensor data	Arpa Lombardia	yes	yes
Meteorological Stations	Arpa Lombardia	yes	yes
Unified regional hydrographic network	Regione Lombardia	yes	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes	yes
Mortality, cause of death	ISTAT	yes	yes
Ostreopsis ovata	ISPRA	no	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	yes	yes
Chemical pollutants - Waterbase	EEA	yes	yes
Bathing waters quality	EEA	yes	yes
Chemical pollutants and Nutrients	Copernicus (EC)	yes	yes
RON - Italian Wave Network	ISPRA	yes	yes

RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	no	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes
Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	yes	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	yes	yes

5.6 RDA-A1-04M Metadata is accessed through standardised protocol

Metadata for datasets hosted by Regione Lombardia's Open Data Portal can be accessed through DCAT-AP vocabulary. Metadata for datasets hosted by Regione Lombardia's GeoPortal can be accessed through GEODCAT-AP vocabulary.

Table 32: Answer for RDA-A1-04M

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	no	yes
Analytical data of lake water bodies	Arpa Lombardia	no	yes
Analytical data of groundwater	Arpa Lombardia	no	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no	yes
Chemical status of groundwater	Arpa Lombardia	no	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes	yes
Weekly inflows per basin	Arpa Lombardia	no	yes
Weekly outflows per basin	Arpa Lombardia	no	yes
Monthly inflows per basin	Arpa Lombardia	no	yes
Monthly outflows per basin	Arpa Lombardia	no	yes
Height of the lakes	Arpa Lombardia	no	yes
Soil defense works	Regione Lombardia	yes	yes
Large dams	Regione Lombardia	yes	yes
Weather sensor data	Arpa Lombardia	yes	yes
Meteorological Stations	Arpa Lombardia	yes	yes
Unified regional hydrographic network	Regione Lombardia	yes	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes	yes

Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes	yes
Mortality, cause of death	ISTAT	yes	yes
Ostreopsis ovata	ISPRA	no	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	no	yes
Chemical pollutants - Waterbase	EEA	no	yes
Bathing waters quality	EEA	no	yes
Chemical pollutants and Nutrients	Copernicus (EC)	no	yes
RON - Italian Wave Network	ISPRA	yes	yes
RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	no	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes
Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	no	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	no	yes

5.7 RDA-A1-04D Data is accessible through standardised protocol

Datasets hosted by Regione Lombardia's Open Data Portal and geoPortal can be viewed or downloaded from the most used standard protocols, respectively CSV, API, Open Data Protocol and OGC WFS, OGC WMS for accessing data and maps.

Table 33: Answer for RDA-A1-04D

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	no	yes
Analytical data of lake water bodies	Arpa Lombardia	no	yes
Analytical data of groundwater	Arpa Lombardia	no	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no	yes
Chemical status of groundwater	Arpa Lombardia	no	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	no	yes
Weekly inflows per basin	Arpa Lombardia	no	yes
Weekly outflows per basin	Arpa Lombardia	no	yes
Monthly inflows per basin	Arpa Lombardia	no	yes
Monthly outflows per basin	Arpa Lombardia	no	yes
Height of the lakes	Arpa Lombardia	no	yes
Soil defense works	Regione Lombardia	yes	yes
Large dams	Regione Lombardia	yes	yes
Weather sensor data	Arpa Lombardia	yes	yes
Meteorological Stations	Arpa Lombardia	yes	yes
Unified regional hydrographic network	Regione Lombardia	yes	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes	yes

Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes	yes
Mortality, cause of death	ISTAT	yes	yes
Ostreopsis ovata	ISPRA	no	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	yes	yes
Chemical pollutants - Waterbase	EEA	yes	yes
Bathing waters quality	EEA	yes	yes
Chemical pollutants and Nutrients	Copernicus (EC)	yes	yes
RON - Italian Wave Network	ISPRA	yes	yes
RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	yes	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes
Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	yes	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	yes	yes

5.8 RDA-A1-05D Data can be accessed automatically (i.e. by a computer program)

Table 34: Answer for RDA-A1-05D

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	no	yes
Analytical data of lake water bodies	Arpa Lombardia	no	yes
Analytical data of groundwater	Arpa Lombardia	no	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no	yes
Chemical status of groundwater	Arpa Lombardia	no	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes	yes
Weekly inflows per basin	Arpa Lombardia	no	yes
Weekly outflows per basin	Arpa Lombardia	no	yes
Monthly inflows per basin	Arpa Lombardia	no	yes
Monthly outflows per basin	Arpa Lombardia	no	yes
Height of the lakes	Arpa Lombardia	no	yes
Soil defense works	Regione Lombardia	yes	yes
Large dams	Regione Lombardia	yes	yes
Weather sensor data	Arpa Lombardia	yes	yes
Meteorological Stations	Arpa Lombardia	yes	yes
Unified regional hydrographic network	Regione Lombardia	yes	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For ACC And	Regione Lombardia	yes	yes

Facility			
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes	yes
Mortality, cause of death	ISTAT		
Ostreopsis ovata	ISPRA	no	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	no	yes
Chemical pollutants - Waterbase	EEA	yes	yes
Bathing waters quality	EEA	yes	yes
Chemical pollutants and Nutrients	Copernicus (EC)	yes	yes
RON - Italian Wave Network	ISPRA	yes	yes
RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	no	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes
Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	yes	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	yes	yes

5.9 RDA-A1.2-01D Data is accessible through an access protocol that supports authentication and authorisation

All datasets are accessible through http and https protocols. Both protocols support authentication and authorisation, thus for all datasets positive answers are reported. Despite it, no authorisation is needed to access the datasets.

Table 35: Answer for RDA-A1.2-01D

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	yes	yes
Analytical data of lake water bodies	Arpa Lombardia	yes	yes
Analytical data of groundwater	Arpa Lombardia	yes	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	yes	yes

Surface Waters (water courses) - LIMECO	Arpa Lombardia	yes	yes
Chemical status of groundwater	Arpa Lombardia	yes	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	yes	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes	yes
Weekly inflows per basin	Arpa Lombardia	yes	yes
Weekly outflows per basin	Arpa Lombardia	yes	yes
Monthly inflows per basin	Arpa Lombardia	yes	yes
Monthly outflows per basin	Arpa Lombardia	yes	yes
Height of the lakes	Arpa Lombardia	yes	yes
Soil defense works	Regione Lombardia	yes	yes
Large dams	Regione Lombardia	yes	yes
Weather sensor data	Arpa Lombardia	yes	yes
Meteorological Stations	Arpa Lombardia	yes	yes
Unified regional hydrographic network	Regione Lombardia	yes	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes	yes
Mortality, cause of death	ISTAT	yes	yes

Ostreopsis ovata	ISPRA	yes	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	yes	yes
Chemical pollutants - Waterbase	EEA	yes	yes
Bathing waters quality	EEA	yes	yes
Chemical pollutants and Nutrients	Copernicus (EC)	yes	yes
RON - Italian Wave Network	ISPRA	yes	yes
RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	yes	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes
Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	yes	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	yes	yes

5.10 RDA-I1-01M Metadata uses knowledge representation expressed in standardised format

The adoption of DCAT AP IT in RDF ensures that metadata for datasets hosted by Regione Lombardia's Open Data Portal uses knowledge representation expressed in standardised format. Same for GeoPortal datasets and GEODCAT-AP vocabulary.

Table 36: Answer for RDA-I1-01M

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	no	yes
Analytical data of lake water bodies	Arpa Lombardia	no	yes
Analytical data of groundwater	Arpa Lombardia	no	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no	yes
Chemical status of groundwater	Arpa Lombardia	no	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes	yes
Weekly inflows per basin	Arpa Lombardia	no	yes
Weekly outflows per basin	Arpa Lombardia	no	yes

Monthly inflows per basin	Arpa Lombardia	no	yes
Monthly outflows per basin	Arpa Lombardia	no	yes
Height of the lakes	Arpa Lombardia	no	yes
Soil defense works	Regione Lombardia	yes	yes
Large dams	Regione Lombardia	yes	yes
Weather sensor data	Arpa Lombardia	yes	yes
Meteorological Stations	Arpa Lombardia	yes	yes
Unified regional hydrographic network	Regione Lombardia	yes	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes	yes
Mortality, cause of death	ISTAT	yes	yes
Ostreopsis ovata	ISPRA	no	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	no	yes
Chemical pollutants - Waterbase	EEA	no	yes
Bathing waters quality	EEA	no	yes
Chemical pollutants and Nutrients	Copernicus (EC)	no	yes
RON - Italian Wave Network	ISPRA	yes	yes

RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	no	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes
Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	yes	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	no	yes

5.11 RDA-I1-01D Data uses knowledge representation expressed in standardised format

All datasets are meant to implement one or more use cases (ref. Deliverable 2.1) and are going to use the knowledge graph ontologies for the production of Linked Open Data.

Table 37: Answer for RDA-I1-01D

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	no	yes
Analytical data of lake water bodies	Arpa Lombardia	no	yes
Analytical data of groundwater	Arpa Lombardia	no	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no	yes
Chemical status of groundwater	Arpa Lombardia	no	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	no	yes
Weekly inflows per basin	Arpa Lombardia	no	yes
Weekly outflows per basin	Arpa Lombardia	no	yes
Monthly inflows per basin	Arpa Lombardia	no	yes
Monthly outflows per basin	Arpa Lombardia	no	yes
Height of the lakes	Arpa Lombardia	no	yes
Soil defense works	Regione Lombardia	no	yes
Large dams	Regione Lombardia	no	yes
Weather sensor data	Arpa Lombardia	no	yes
Meteorological Stations	Arpa Lombardia	no	yes
Unified regional hydrographic network	Regione Lombardia	no	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	no	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	no	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	no	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	no	yes

Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	no	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	no	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	no	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	no	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	no	yes
Regione Lombardia SDO dataset	Regione Lombardia	no	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	no	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	no	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	no	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	no	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	no	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	no	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	no	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	no	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	no	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	no	yes
Mortality, cause of death	ISTAT	no	yes
Ostreopsis ovata	ISPRA	no	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	no	yes
Chemical pollutants - Waterbase	EEA	no	yes
Bathing waters quality	EEA	no	yes
Chemical pollutants and Nutrients	Copernicus (EC)	no	yes
RON - Italian Wave Network	ISPRA	yes	yes
RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	no	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes
Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	yes	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	no	yes

5.12 RDA-I2-01M Metadata uses FAIR-compliant vocabularies

Metadata for datasets hosted by Regione Lombardia's Open Data Portal can be accessed through DCAT-AP vocabulary. Metadata for datasets hosted by Regione Lombardia's GeoPortal can be accessed through GEODCAT-AP vocabulary.

Table 38: Answer for RDA-I2-01M

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	no	yes
Analytical data of lake water bodies	Arpa Lombardia	no	yes
Analytical data of groundwater	Arpa Lombardia	no	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no	yes
Chemical status of groundwater	Arpa Lombardia	no	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes	yes
Weekly inflows per basin	Arpa Lombardia	no	yes
Weekly outflows per basin	Arpa Lombardia	no	yes
Monthly inflows per basin	Arpa Lombardia	no	yes
Monthly outflows per basin	Arpa Lombardia	no	yes
Height of the lakes	Arpa Lombardia	no	yes
Soil defense works	Regione Lombardia	yes	yes
Large dams	Regione Lombardia	yes	yes
Weather sensor data	Arpa Lombardia	yes	yes
Meteorological Stations	Arpa Lombardia	yes	yes
Unified regional hydrographic network	Regione Lombardia	yes	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By	Regione Lombardia	yes	yes

Discipline Discipline And ATS			
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes	yes
Mortality, cause of death	ISTAT	yes	yes
Ostreopsis ovata	ISPRA	no	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	no	yes
Chemical pollutants - Waterbase	EEA	no	yes
Bathing waters quality	EEA	no	yes
Chemical pollutants and Nutrients	Copernicus (EC)	no	yes
RON - Italian Wave Network	ISPRA	yes	yes
RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	no	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes
Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	yes	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	no	yes

5.13 RDA-I2-01D Data uses FAIR-compliant vocabularies

All datasets are meant to implement Linked Open Data services using knowledge graph ontologies that are FAIR compliant.

Table 39: Answer for RDA-I2-01D

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	no	yes
Analytical data of lake water bodies	Arpa Lombardia	no	yes
Analytical data of groundwater	Arpa Lombardia	no	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no	yes
Chemical status of groundwater	Arpa Lombardia	no	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	no	yes
Weekly inflows per basin	Arpa Lombardia	no	yes
Weekly outflows per basin	Arpa Lombardia	no	yes
Monthly inflows per basin	Arpa Lombardia	no	yes
Monthly outflows per basin	Arpa Lombardia	no	yes
Height of the lakes	Arpa Lombardia	no	yes
Soil defense works	Regione Lombardia	no	yes
Large dams	Regione Lombardia	no	yes
Weather sensor data	Arpa Lombardia	no	yes
Meteorological Stations	Arpa Lombardia	no	yes
Unified regional hydrographic network	Regione Lombardia	no	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	no	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	no	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	no	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	no	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	no	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	no	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	no	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	no	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	no	yes
Regione Lombardia SDO dataset	Regione Lombardia	no	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	no	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	no	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	no	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	no	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	no	yes

Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	no	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	no	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	no	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	no	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	no	yes
Mortality, cause of death	ISTAT	no	yes
Ostreopsis ovata	ISPRA	no	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	no	yes
Chemical pollutants - Waterbase	EEA	no	yes
Bathing waters quality	EEA	no	yes
Chemical pollutants and Nutrients	Copernicus (EC)	no	yes
RON - Italian Wave Network	ISPRA	yes	yes
RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	no	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes
Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	yes	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	no	yes

5.14 RDA-I3-01D Data includes references to other data

All datasets are meant to implement Linked Open Data services using knowledge graph ontologies and containing at least temporal and territorial references. Where appropriate, datasets contain references to other data such CAS, WISE or sample point identifier.

Table 40: Answer for RDA-I3-01D

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	no	yes
Analytical data of lake water bodies	Arpa Lombardia	no	yes
Analytical data of groundwater	Arpa Lombardia	no	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no	yes

Chemical status of groundwater	Arpa Lombardia	no	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	no	yes
Weekly inflows per basin	Arpa Lombardia	no	yes
Weekly outflows per basin	Arpa Lombardia	no	yes
Monthly inflows per basin	Arpa Lombardia	no	yes
Monthly outflows per basin	Arpa Lombardia	no	yes
Height of the lakes	Arpa Lombardia	no	yes
Soil defense works	Regione Lombardia	no	yes
Large dams	Regione Lombardia	no	yes
Weather sensor data	Arpa Lombardia	no	yes
Meteorological Stations	Arpa Lombardia	no	yes
Unified regional hydrographic network	Regione Lombardia	no	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	no	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	no	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	no	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	no	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	no	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	no	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	no	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	no	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	no	yes
Regione Lombardia SDO dataset	Regione Lombardia	no	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	no	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	no	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	no	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	no	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	no	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	no	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	no	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	no	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	no	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	no	yes
Mortality, cause of death	ISTAT	no	yes
Ostreopsis ovata	ISPRA	no	yes

Chemical pollutants in the Mediterranean Sea	EMODnet	no	yes
Chemical pollutants - Waterbase	EEA	no	yes
Bathing waters quality	EEA	no	yes
Chemical pollutants and Nutrients	Copernicus (EC)	no	yes
RON - Italian Wave Network	ISPRA	yes	yes
RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	no	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes
Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	yes	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	no	yes

5.15 RDA-I3-02M Metadata includes references to other data

Some metadata, such as Publication frequency, refer to the EU publication office controlled vocabulary.

Table 41: Answer for RDA-I3-02M

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	yes	yes
Analytical data of lake water bodies	Arpa Lombardia	yes	yes
Analytical data of groundwater	Arpa Lombardia	yes	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	yes	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	yes	yes
Chemical status of groundwater	Arpa Lombardia	yes	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	yes	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes	yes
Weekly inflows per basin	Arpa Lombardia	yes	yes
Weekly outflows per basin	Arpa Lombardia	yes	yes
Monthly inflows per basin	Arpa Lombardia	yes	yes
Monthly outflows per basin	Arpa Lombardia	yes	yes
Height of the lakes	Arpa Lombardia	yes	yes
Soil defense works	Regione Lombardia	yes	yes
Large dams	Regione Lombardia	yes	yes

Weather sensor data	Arpa Lombardia	yes	yes
Meteorological Stations	Arpa Lombardia	yes	yes
Unified regional hydrographic network	Regione Lombardia	yes	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes	yes
Mortality, cause of death	ISTAT	yes	yes
Ostreopsis ovata	ISPRA	no	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	no	yes
Chemical pollutants - Waterbase	EEA	no	yes
Bathing waters quality	EEA	no	yes
Chemical pollutants and Nutrients	Copernicus (EC)	no	yes
RON - Italian Wave Network	ISPRA	yes	yes
RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	no	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes

Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	yes	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	no	yes

5.16 RDA-R1.1-02M Metadata includes information about the licence under which the data can be reuse

Table 42: Answer for RDA-R1.1-02M

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	no	yes
Analytical data of lake water bodies	Arpa Lombardia	no	yes
Analytical data of groundwater	Arpa Lombardia	no	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no	yes
Chemical status of groundwater	Arpa Lombardia	no	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes	yes
Weekly inflows per basin	Arpa Lombardia	no	yes
Weekly outflows per basin	Arpa Lombardia	no	yes
Monthly inflows per basin	Arpa Lombardia	no	yes
Monthly outflows per basin	Arpa Lombardia	no	yes
Height of the lakes	Arpa Lombardia	no	yes
Soil defense works	Regione Lombardia	yes	yes
Large dams	Regione Lombardia	yes	yes
Weather sensor data	Arpa Lombardia	yes	yes
Meteorological Stations	Arpa Lombardia	yes	yes
Unified regional hydrographic network	Regione Lombardia	yes	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes	yes

Hospital Assistance for DRG and ATS	Regione Lombardia	yes	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes	yes
Mortality, cause of death	ISTAT	yes	yes
Ostreopsis ovata	ISPRA	no	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	yes	yes
Chemical pollutants - Waterbase	EEA	no	yes
Bathing waters quality	EEA	no	yes
Chemical pollutants and Nutrients	Copernicus (EC)	no	yes
RON - Italian Wave Network	ISPRA	yes	yes
RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	no	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes
Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	yes	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	no	yes

5.17 RDA-R1.3-01M Metadata complies with a community standard

Metadata complies with DCAT AP e GEODCAT AP community standards.

Table 43: Answer for RDA-R1.3-01M

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	no	yes
Analytical data of lake water bodies	Arpa Lombardia	no	yes
Analytical data of groundwater	Arpa Lombardia	no	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no	yes
Chemical status of groundwater	Arpa Lombardia	no	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	no	yes
Weekly inflows per basin	Arpa Lombardia	no	yes
Weekly outflows per basin	Arpa Lombardia	no	yes
Monthly inflows per basin	Arpa Lombardia	no	yes
Monthly outflows per basin	Arpa Lombardia	no	yes
Height of the lakes	Arpa Lombardia	no	yes
Soil defense works	Regione Lombardia	yes	yes
Large dams	Regione Lombardia	yes	yes
Weather sensor data	Arpa Lombardia	yes	yes
Meteorological Stations	Arpa Lombardia	yes	yes
Unified regional hydrographic network	Regione Lombardia	yes	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For ACC And	Regione Lombardia	yes	yes

Facility			
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes	yes
Mortality, cause of death	ISTAT	yes	yes
Ostreopsis ovata	ISPRA	no	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	no	yes
Chemical pollutants - Waterbase	EEA	no	yes
Bathing waters quality	EEA	no	yes
Chemical pollutants and Nutrients	Copernicus (EC)	no	yes
RON - Italian Wave Network	ISPRA	yes	yes
RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	no	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes
Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	yes	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	no	yes

5.18 RDA-R1.3-01D Data complies with a community standard

In order to implement Linked Open Data services, the datasets have to be compliant with knowledge graph ontologies. Since the Knowledge graph is meant to ensure interoperability at European level, it is inspired by W3C standards. Between t0 and t1 some adjustment has been performed on the datasets in order to comply with it.

Table 44: Answer for RDA-R1.3-01D

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	no	yes
Analytical data of lake water bodies	Arpa Lombardia	no	yes
Analytical data of groundwater	Arpa Lombardia	no	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no	yes
Chemical status of groundwater	Arpa Lombardia	no	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no	yes

Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	no	yes
Weekly inflows per basin	Arpa Lombardia	no	yes
Weekly outflows per basin	Arpa Lombardia	no	yes
Monthly inflows per basin	Arpa Lombardia	no	yes
Monthly outflows per basin	Arpa Lombardia	no	yes
Height of the lakes	Arpa Lombardia	no	yes
Soil defense works	Regione Lombardia	yes	yes
Large dams	Regione Lombardia	yes	yes
Weather sensor data	Arpa Lombardia	yes	yes
Meteorological Stations	Arpa Lombardia	yes	yes
Unified regional hydrographic network	Regione Lombardia	yes	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes	yes
Mortality, cause of death	ISTAT	yes	yes
Ostreopsis ovata	ISPRA	no	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	no	yes
Chemical pollutants - Waterbase	EEA	no	yes

Bathing waters quality	EEA	no	yes
Chemical pollutants and Nutrients	Copernicus (EC)	no	yes
RON - Italian Wave Network	ISPRA	yes	yes
RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	no	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes
Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	yes	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	no	yes

5.19 RDA-R1.3-02D Data is expressed in compliance with a machine-understandable community standard

Table 45: Answer for RDA-R1.3-02D

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	no	yes
Analytical data of lake water bodies	Arpa Lombardia	no	yes
Analytical data of groundwater	Arpa Lombardia	no	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no	yes
Chemical status of groundwater	Arpa Lombardia	no	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	no	yes
Weekly inflows per basin	Arpa Lombardia	no	yes
Weekly outflows per basin	Arpa Lombardia	no	yes
Monthly inflows per basin	Arpa Lombardia	no	yes
Monthly outflows per basin	Arpa Lombardia	no	yes
Height of the lakes	Arpa Lombardia	no	yes
Soil defense works	Regione Lombardia	yes	yes
Large dams	Regione Lombardia	yes	yes
Weather sensor data	Arpa Lombardia	yes	yes
Meteorological Stations	Arpa Lombardia	yes	yes
Unified regional hydrographic network	Regione Lombardia	yes	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes	yes

Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes	yes
Mortality, cause of death	ISTAT	yes	yes
Ostreopsis ovata	ISPRA	no	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	no	yes
Chemical pollutants - Waterbase	EEA	no	yes
Bathing waters quality	EEA	no	yes
Chemical pollutants and Nutrients	Copernicus (EC)	no	yes
RON - Italian Wave Network	ISPRA	yes	yes
RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	no	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes
Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	yes	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	no	yes

5.20 WHOW-DQA-M Metadata is accurate with respect to a shared standard

Accuracy is measured according to the ISO/IEC 25012:2008 standard definition (see glossary).

Table 46: Answer for WHOW-DQA-M

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	no	yes
Analytical data of lake water bodies	Arpa Lombardia	no	yes
Analytical data of groundwater	Arpa Lombardia	no	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no	yes
Chemical status of groundwater	Arpa Lombardia	no	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes	yes
Weekly inflows per basin	Arpa Lombardia	no	yes
Weekly outflows per basin	Arpa Lombardia	no	yes
Monthly inflows per basin	Arpa Lombardia	no	yes
Monthly outflows per basin	Arpa Lombardia	no	yes
Height of the lakes	Arpa Lombardia	no	yes
Soil defense works	Regione Lombardia	yes	yes
Large dams	Regione Lombardia	yes	yes
Weather sensor data	Arpa Lombardia	yes	yes
Meteorological Stations	Arpa Lombardia	yes	yes
Unified regional hydrographic network	Regione Lombardia	yes	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes	yes

Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes	yes
Mortality, cause of death	ISTAT	yes	yes
Ostreopsis ovata	ISPRA	no	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	yes	yes
Chemical pollutants - Waterbase	EEA	no	yes
Bathing waters quality	EEA	no	yes
Chemical pollutants and Nutrients	Copernicus (EC)	no	yes
RON - Italian Wave Network	ISPRA	yes	yes
RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	no	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes
Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	yes	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	no	yes

5.21 WHOW-DQA-D Data is accurate

Accuracy is measured according to the ISO/IEC 25012:2008 standard definition (see glossary).

Table 47: Answer for WHOW-DQA-D

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	no	yes
Analytical data of lake water bodies	Arpa Lombardia	no	yes
Analytical data of groundwater	Arpa Lombardia	no	yes

Surface Waters (lakes) - LTLECO	Arpa Lombardia	no	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no	yes
Chemical status of groundwater	Arpa Lombardia	no	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes	yes
Weekly inflows per basin	Arpa Lombardia	no	yes
Weekly outflows per basin	Arpa Lombardia	no	yes
Monthly inflows per basin	Arpa Lombardia	no	yes
Monthly outflows per basin	Arpa Lombardia	no	yes
Height of the lakes	Arpa Lombardia	no	yes
Soil defense works	Regione Lombardia	yes	yes
Large dams	Regione Lombardia	yes	yes
Weather sensor data	Arpa Lombardia	yes	yes
Meteorological Stations	Arpa Lombardia	yes	yes
Unified regional hydrographic network	Regione Lombardia	yes	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes	yes
Mortality, cause of death	ISTAT	yes	yes

Ostreopsis ovata	ISPRA	yes	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	yes	yes
Chemical pollutants - Waterbase	EEA	yes	yes
Bathing waters quality	EEA	yes	yes
Chemical pollutants and Nutrients	Copernicus (EC)	yes	yes
RON - Italian Wave Network	ISPRA	yes	yes
RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	yes	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes
Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	yes	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	yes	yes

5.22 WHOW-DQT-M Metadata is up-to-date with respect to current time

Table 48: Answer for WHOW-DQT-M

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	no	yes
Analytical data of lake water bodies	Arpa Lombardia	no	yes
Analytical data of groundwater	Arpa Lombardia	no	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no	yes
Chemical status of groundwater	Arpa Lombardia	no	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes	yes
Weekly inflows per basin	Arpa Lombardia	no	yes
Weekly outflows per basin	Arpa Lombardia	no	yes
Monthly inflows per basin	Arpa Lombardia	no	yes
Monthly outflows per basin	Arpa Lombardia	no	yes
Height of the lakes	Arpa Lombardia	no	yes

Soil defense works	Regione Lombardia	yes	yes
Large dams	Regione Lombardia	yes	yes
Weather sensor data	Arpa Lombardia	yes	yes
Meteorological Stations	Arpa Lombardia	yes	yes
Unified regional hydrographic network	Regione Lombardia	yes	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes	yes
Mortality, cause of death	ISTAT	yes	yes
Ostreopsis ovata	ISPRA	yes	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	yes	yes
Chemical pollutants - Waterbase	EEA	yes	yes
Bathing waters quality	EEA	yes	yes
Chemical pollutants and Nutrients	Copernicus (EC)	yes	yes
RON - Italian Wave Network	ISPRA	yes	yes
RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	yes	yes

RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes
Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	yes	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	yes	yes

5.23 WHOW-DQT-D Data is up-to-date with respect to its update frequency

Table 49: Answer for WHOW-DQT-D

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	yes	yes
Analytical data of lake water bodies	Arpa Lombardia	yes	yes
Analytical data of groundwater	Arpa Lombardia	yes	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	yes	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	yes	yes
Chemical status of groundwater	Arpa Lombardia	yes	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	yes	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes	yes
Weekly inflows per basin	Arpa Lombardia	yes	yes
Weekly outflows per basin	Arpa Lombardia	yes	yes
Monthly inflows per basin	Arpa Lombardia	yes	yes
Monthly outflows per basin	Arpa Lombardia	yes	yes
Height of the lakes	Arpa Lombardia	yes	yes
Soil defense works	Regione Lombardia	yes	yes
Large dams	Regione Lombardia	yes	yes
Weather sensor data	Arpa Lombardia	yes	yes
Meteorological Stations	Arpa Lombardia	yes	yes
Unified regional hydrographic network	Regione Lombardia	yes	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	no	no
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	no	no
Dataset Health conditions by municipality, age and gender	Regione Lombardia	no	no
Health conditions dataset by province, gender and cause	Regione Lombardia	no	no
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	no	no
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	no	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	no	no

Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	no	no
Hospital Assistance for DRG and ATS	Regione Lombardia	no	no
Regione Lombardia SDO dataset	Regione Lombardia	no	no
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	no	no
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	no	no
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	no	no
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	no	no
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	no	no
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	no	no
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	no	no
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	no	no
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	no	no
Health conditions dataset by province, gender and age group	Regione Lombardia	no	no
Mortality, cause of death	ISTAT	no	no
Ostreopsis ovata	ISPRA	yes	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	yes	yes
Chemical pollutants - Waterbase	EEA	yes	yes
Bathing waters quality	EEA	yes	yes
Chemical pollutants and Nutrients	Copernicus (EC)	yes	yes
RON - Italian Wave Network	ISPRA	yes	yes
RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	yes	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes
Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	yes	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	yes	yes

5.24 WHOW-DQC-M Metadata is complete

Metadata completeness is measured according to the ISO/IEC 25012:2008 standard definition (see glossary).

Table 50: Answer for WHOW-DQC-M

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	no	yes
Analytical data of lake water bodies	Arpa Lombardia	no	yes
Analytical data of groundwater	Arpa Lombardia	no	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	no	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	no	yes
Chemical status of groundwater	Arpa Lombardia	no	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	no	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes	yes
Weekly inflows per basin	Arpa Lombardia	no	yes
Weekly outflows per basin	Arpa Lombardia	no	yes
Monthly inflows per basin	Arpa Lombardia	no	yes
Monthly outflows per basin	Arpa Lombardia	no	yes
Height of the lakes	Arpa Lombardia	no	yes
Soil defense works	Regione Lombardia	yes	yes
Large dams	Regione Lombardia	yes	yes
Weather sensor data	Arpa Lombardia	yes	yes
Meteorological Stations	Arpa Lombardia	yes	yes
Unified regional hydrographic network	Regione Lombardia	yes	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes	yes

Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes	yes
Mortality, cause of death	ISTAT	yes	yes
Ostreopsis ovata	ISPRA	no	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	yes	yes
Chemical pollutants - Waterbase	EEA	yes	yes
Bathing waters quality	EEA	yes	yes
Chemical pollutants and Nutrients	Copernicus (EC)	yes	yes
RON - Italian Wave Network	ISPRA	yes	yes
RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	no	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes
Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	yes	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	yes	yes

5.25 WHOW-DQC-D Data is complete

Data completeness is measured according to the ISO/IEC 25012:2008 standard definition (see glossary).

Table 51: Answer for WHOW-DQC-D

Dataset name	Rights holder	Answer t0	Answer t1
Water for human consumption Sampling	Regione Lombardia	N.A.	yes
Analytical data of river water bodies	Arpa Lombardia	yes	yes
Analytical data of lake water bodies	Arpa Lombardia	yes	yes
Analytical data of groundwater	Arpa Lombardia	yes	yes
Surface Waters (lakes) - LTLECO	Arpa Lombardia	yes	yes
Surface Waters (water courses) - LIMECO	Arpa Lombardia	yes	yes
Chemical status of groundwater	Arpa Lombardia	yes	yes
Environmental Radioactivity Monitoring Network	Arpa Lombardia	yes	yes
Flow rate (or hydrometric height) data relating to the watercourse monitoring network	Arpa Lombardia	yes	yes
Weekly inflows per basin	Arpa Lombardia	yes	yes
Weekly outflows per basin	Arpa Lombardia	yes	yes
Monthly inflows per basin	Arpa Lombardia	yes	yes

Monthly outflows per basin	Arpa Lombardia	yes	yes
Height of the lakes	Arpa Lombardia	yes	yes
Soil defense works	Regione Lombardia	yes	yes
Large dams	Regione Lombardia	yes	yes
Weather sensor data	Arpa Lombardia	yes	yes
Meteorological Stations	Arpa Lombardia	yes	yes
Unified regional hydrographic network	Regione Lombardia	yes	yes
Consumption of drugs in Regione Lombardia for level I ATC	Regione Lombardia	yes	yes
Dataset Hospital Assistance for ACC and ATS	Regione Lombardia	yes	yes
Dataset Health conditions by municipality, age and gender	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and cause	Regione Lombardia	yes	yes
Delivery of drugs in Regione Lombardia for the first 10 second-level ATCs	Regione Lombardia	yes	yes
Infectious diseases Regione Lombardia rates by sex and age	Regione Lombardia	yes	yes
Number of drugs dispensed in Regione Lombardia of the first 10 active ingredients	Regione Lombardia	yes	yes
Volumes Outpatient Specialist Services in Regione Lombardia	Regione Lombardia	yes	yes
Hospital Assistance for DRG and ATS	Regione Lombardia	yes	yes
Regione Lombardia SDO dataset	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for MDC and ATS	Regione Lombardia	yes	yes
Dataset Hospital Assistance for Discipline Discipline and ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And Facility	Regione Lombardia	yes	yes
Dataset Average Hospitalization And Average Accesses By Discipline Discipline And Structure	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For ACC And Facility	Regione Lombardia	yes	yes
Number of drug packs dispensed in Regione Lombardia	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For DRG AND ATS	Regione Lombardia	yes	yes
Dataset Medium Inpatient And Medium Access For MDC And ATS	Regione Lombardia	yes	yes
Health conditions dataset by province, gender and age group	Regione Lombardia	yes	yes
Mortality, cause of death	ISTAT	yes	yes
Ostreopsis ovata	ISPRA	yes	yes
Chemical pollutants in the Mediterranean Sea	EMODnet	yes	yes
Chemical pollutants - Waterbase	EEA	yes	yes
Bathing waters quality	EEA	yes	yes
Chemical pollutants and Nutrients	Copernicus (EC)	yes	yes
RON - Italian Wave Network	ISPRA	yes	yes

RMN - Italian Tide Gauge Network	ISPRA	yes	yes
Pesticides in waters	ISPRA	yes	yes
RENDIS - Repertory of mitigation measures for National Soil Protection	ISPRA	yes	yes
Soil consumption indicators	ISPRA	yes	yes
Italian cultural heritage	MIBACT	yes	yes
Urban Waste Water Treatment Directive - Waterbase	EEA	yes	yes

6 Conclusions

This deliverable outlines the work carried out over the data sources, from the definition of the three use cases till their implementation.

The first important result is that the co-creation meeting has inspired the community for the publication of new datasets in open data.

For example, the water for human consumption sampling and parameters datasets are currently under the final review before the publication on the Regione Lombardia open data portal.

The second result is that the project instilled on the data providers the awareness that data quality is crucial for data consumers and to foster the real use of the data once published.

The definition of the ontologies and the knowledge graph helped the data providers to define some adjustments on the data, that have been implemented providing a new fully interoperable version of their datasets.

The update of the data source is underlined by the different assessment results between the time of use cases definition (t0) and now (t1).

The work carried out on the data source has not to be considered as completed.

The implementation of the linked open data services will likely generate some more input to be caught by the data providers in order to improve the interoperability level of the data.

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