



**Mediterranean
Action Plan**
Barcelona
Convention



INFO/RAC
National Focal Points Meeting
Palermo, Italy 20-21 May 2025

MAP Knowledge Management Strategy for the Mediterranean Sea

Annalisa Minelli, Knowledge Management Officer



Mediterranean
Action Plan
Barcelona
Convention



● **INFO/RAC**
● **National Focal Points Meeting**
● Palermo, Italy 20-21 May 2025

Summary

Part #1

- The Strategy in brief
 - Context
 - Objectives
 - Principles
 - A vision
- Strategy implementation: the Data Policy
- Strategy implementation: the Knowledge Management Platform
- Networking activities

Part #2

- From principles and tools to practice: an exercise of Knowledge Management
 - A dataset from «outside»
 - Check after data policy prescription
 - Upload and metadatation into the KMaP
 - Example of use of uploaded data in the KMaP

Part #1

The Strategy in brief

(UNEP/MED WG.623/4)



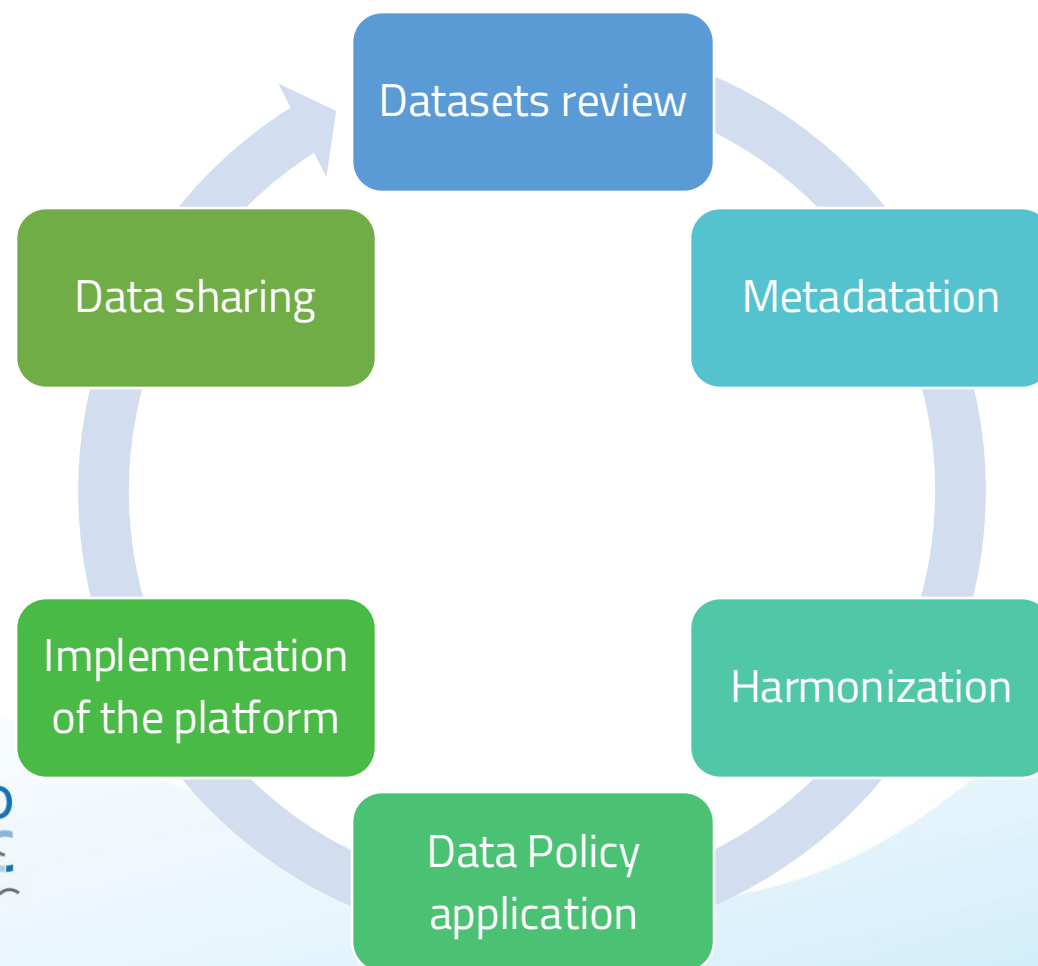
Why do we need a Knowledge Management Strategy?

At a global level, the Knowledge Management practices are subjected to rapid changes, within a context of fast technological evolution:

- Information overflow Vs critical approach to news
- Big data Vs computation capacity
- Need for canalization of potential of AI
- Need for capitalization of multi-source and interdisciplinary information for decision making
- Decentralized data management models
- Gaps among countries in accessing knowledge

Why do we need a Knowledge Management Strategy?

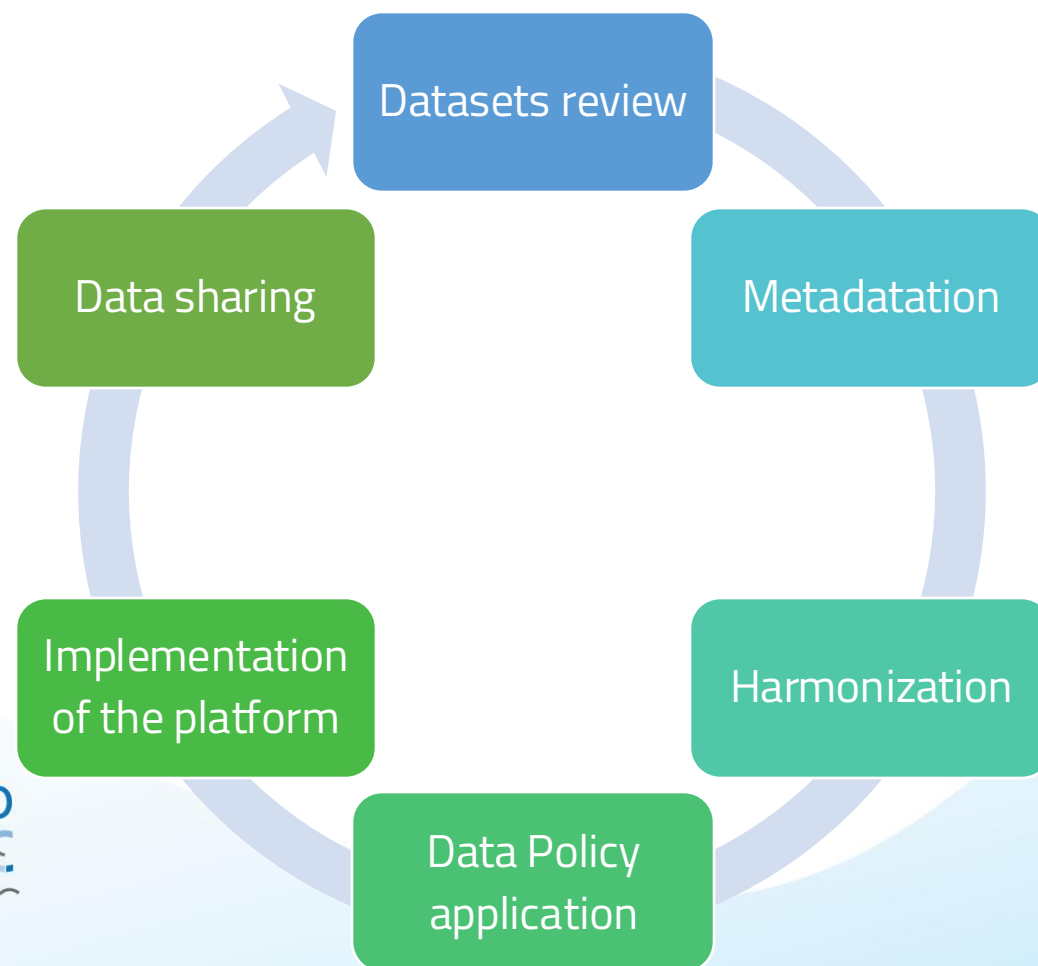
At a regional level, UNEP-MAP is pursuing its own work on data/information/knowledge since years.



Why do we need a Knowledge Management Strategy?

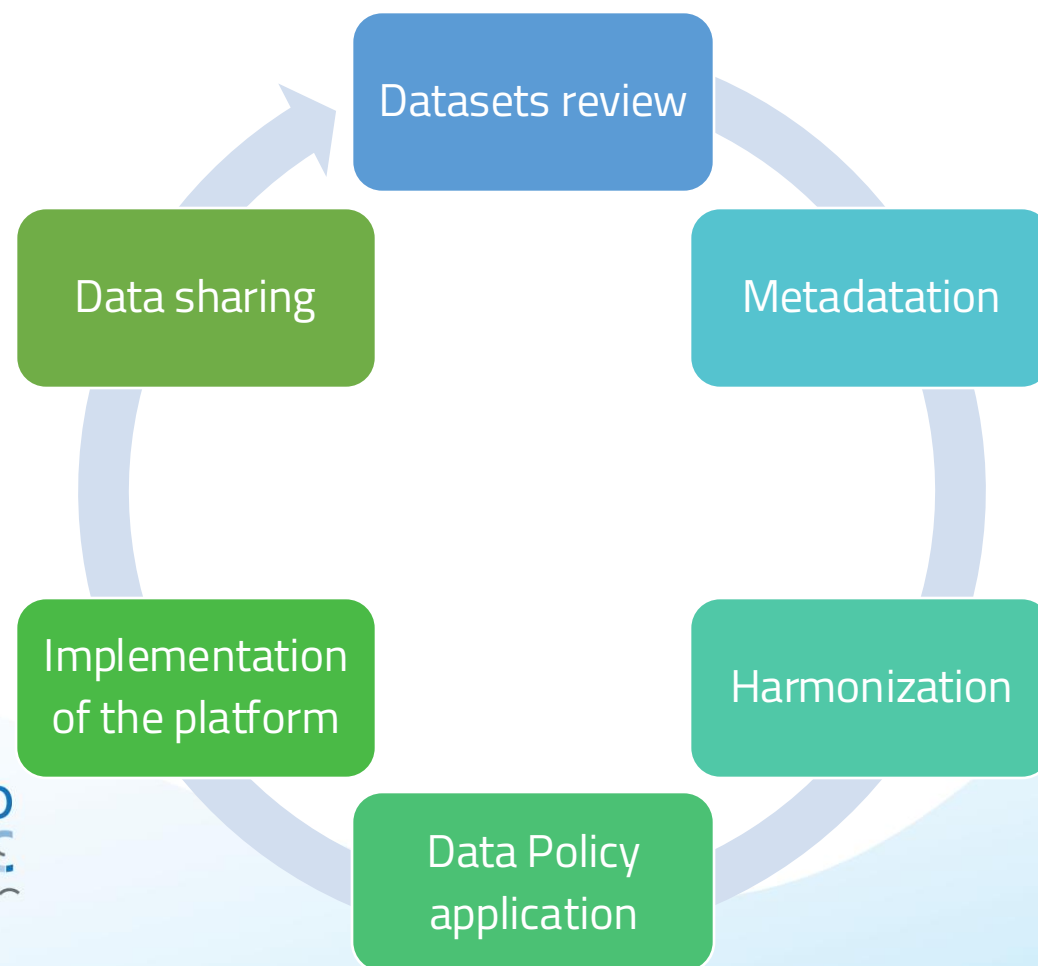
At a regional level, UNEP-MAP is pursuing its own work on data/information/knowledge since years.

Same **objectives** and **vision** from the beginning to the end.



Why do we need a Knowledge Management Strategy?

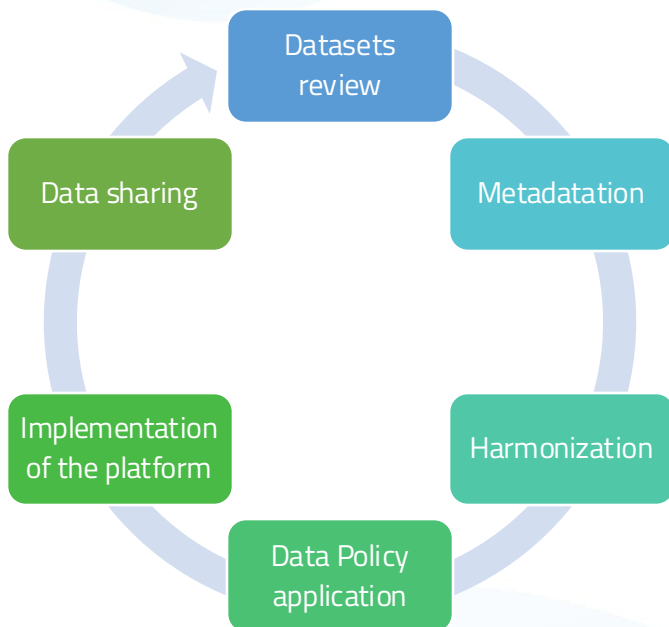
At a regional level, UNEP-MAP is pursuing its own work on data/information/knowledge since years.



Need for **monitoring**, while **guaranteeing** the safeguard of the knowledge heritage!

Why do we need a Knowledge Management Strategy?

At a regional level, UNEP-MAP is pursuing its own work on data/information/knowledge since years.



The strategy puts black on white **principles** we've always pursued, which are at the base of our Knowledge Management System, helping us **monitoring** advancements, and **preventing** risks

Objectives of KMS



Strengthen knowledge dissemination



Raise public awareness



Create a single access point to Med Knowledge heritage



Facilitate timely exchange of knowledge



Promote the adoption of efficient communication models



Provide a reference platform for stakeholders

The principles and their implementation

Findable

Accessible

Interoperable

Reusable

- give data an identifier (e.g. DOI)
- ensure data indexing
- evaluate presence of sensitive data
- eventual commercial interests or patents
- provide remote access, if needed
- individuate data owner
- individuate a data access manager
- ensure long term accessibility
- choice of shared file formats (standard)
- use of multiplatform means (services/instruments)
- eventual furniture of software with data
- wide metadatation and comments (software)
- presence of a README (parameters, methods, etc.)
- respect of files and folders naming conventions
- eventual presence of a data paper
- liberal license

The principles and their implementation

Findable

Accessible

Interoperable

Reusable

- give data an identifier (e.g. DOI)
- ensure data indexing
- evaluate presence of sensitive data
- eventual commercial interests or patents
- provide remote access, if needed
- individuate data owner
- individuate a data access manager
- ensure long term accessibility
- choice of shared file formats (standard)
- use of multiplatform means (services/instruments)
- eventual furniture of software with data
- wide metadatation and comments (software)
- presence of a README (parameters, methods, etc.)
- respect of files and folders naming conventions
- eventual presence of a data paper
- liberal license

The principles and their implementation

Findable

Accessible

Interoperable

Reusable

- give data an identifier (e.g. DOI)
- ensure data indexing
- evaluate presence of sensitive data
- eventual commercial interests or patents
- provide remote access, if needed
- individuate data owner
- individuate a data access manager
- ensure long term accessibility
- choice of shared file formats (standard)
- use of multiplatform means (services/instruments)
- eventual furniture of software with data
- wide metadatation and comments (software)
- presence of a README (parameters, methods, etc.)
- respect of files and folders naming conventions
- eventual presence of a data paper
- liberal license

The principles and their implementation

Findable

Accessible

Interoperable

Reusable

- give data an identifier (e.g. DOI)
- ensure data indexing
- evaluate presence of sensitive data
- eventual commercial interests or patents
- provide remote access, if needed
- individuate data owner
- individuate a data access manager
- ensure long term accessibility
- choice of shared file formats (standard)
- use of multiplatform means (services/instruments)
- eventual furniture of software with data
- wide metadatation and comments (software)
- presence of a README (parameters, methods, etc.)
- respect of files and folders naming conventions
- eventual presence of a data paper
- liberal license

A measurable vision for the Mediterranean

Mediterranean Sea can be considered as a unique environment because of its geographical configuration and a **sentinel** for upcoming environmental challenges and climate change.



A measurable vision for the Mediterranean

Mediterranean Sea can be considered as a unique environment because of its geographical configuration and a **sentinel** for upcoming environmental challenges and climate change.

At **political level** is also challenging putting together different background and practices on data management, this is the reason why UNEP-MAP experience is unique in this sense.

A measurable vision for the Mediterranean

- The strategy is a **living document**
- The strategy acts via its **two implementation tools**: the Data Policy and the Knowledge Management Platform (KMaP)
- The monitoring should happen through **indices** based on implementing tool's **outreach capacity** and their **compliance with the principles**

Decision IG.25/10 MAP Data Policy

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) and its Protocols at their 22nd Meeting,

Considering Decision IG.17/5 on the governance of the UNEP/MAP-Barcelona Convention system, adopted by the Contracting Parties at their 15th Meeting (COP 15) (Almeria, Spain, 15-18 January 2008), and Decision IG.19/6 on the Mediterranean Action Plan Civil Society Cooperation and Partnership, adopted by the Contracting Parties at their 16th Meeting (COP 16) (Marrakesh, Morocco, 3-5 November 2009),

Considering further Decisions IG.20/13, IG.21/13, IG.23/3 and IG.24/2 on governance, adopted by the Contracting Parties at their 17th Meeting (COP 17) (Paris, France, 8-10 February 2012), 18th Meeting (COP 18) (Istanbul, Turkey, 3-6 December 2013), 20th Meeting (COP 20) (Tirana, Albania, 17-20 December 2017), and 21st Meeting (COP 21) (Naples, Italy, 2-5 December 2019) Meetings respectively,

Recalling the mandate of INFO/RAC, as laid down in Decision IG.19/5 on the Mandates of the Components of MAP, adopted by the Contracting Parties at their 16th Meeting (COP16) (Marrakesh, Morocco, 3-5 November 2009), and its relevance to the implementation of this Decision,

Acknowledging the importance to apply the UNEP/MAP Data Policy in the data managed by the UNEP/MAP Barcelona Convention System in order to achieve a base level of legal interoperability,

UNEP/MED IG.25/27
Page 353

UNEP-MAP Knowledge Management Platform
A unique hub to Mediterranean knowledge

Search

MAPS DATA HUB

LIBRARY KNOWLEDGE HUB

NETWORK KNOWLEDGE EXCHANGE

KMaP is conceived as a unique access hub to e UNEP-MAP (Mediterranean Action Plan) knowledge heritage. It is composed by a Data Hub, accessible through the "Maps" button, collecting geographical data in broader sense. The Knowledge Hub, accessible through "Library" button, collecting all the UNEP-MAP documental heritage, and an Exchange Hub aimed to enforce the cooperation with UNEP-MAP contributors, stakeholders, citizens, and communities of interests. At present, two sections are completed: the Data Hub and the Knowledge Hub, while the Exchange Hub is in preparation. Users with major rights granted can not only view but also create contents and manage rights on their own material, creating a proper "personal use" space inside the platform. Come and discover with us the Knowledge MAP!

DATASET THEMES

A measurable vision for the Mediterranean

- The strategy is a **living document**
- The strategy acts via its **two implementation tools**: the Data Policy and the Knowledge Management Platform (KMaP)
- The monitoring should happen through **indices** based on implementing tool's **outreach capacity** and their **compliance with the principles**

Digital transformation represents a **mindset** characterized by proactivity, responsiveness to latest technologies, and efficiency in problem solving while identifying the best technical solution to complex problems.

Implementing KMS: the Data Policy

UNEP-MAP Data Policy (in force since 2021) aims to achieve a base level of cooperation with national and international legislation (legal interoperability) and states...

- **Qualities** of involved elements, such as:
 - Data should be available at no cost, at the most updated version and in the lesser time than the possible.
 - Long term data series should remain available in long term repositories.
 - Quality assessment and control procedures should be put in place.

Implementing KMS: the Data Policy

UNEP-MAP Data Policy (in force since 2021) aims to achieve a base level of cooperation with national and international legislation (legal interoperability) and states...

- **Qualities** of involved elements, such as:
 - Data should be available at no cost, at the most updated version and in the lesser time than the possible.
 - Long term data series should remain available in long term repositories.
 - Quality assessment and control procedures should be put in place.
- **Pillar actions:**
 - Avoid data duplication.
 - Avoid duplication of efforts.
 - Recognize data as a public good.
 - Ensure interoperability.

Implementing KMS: the Data Policy

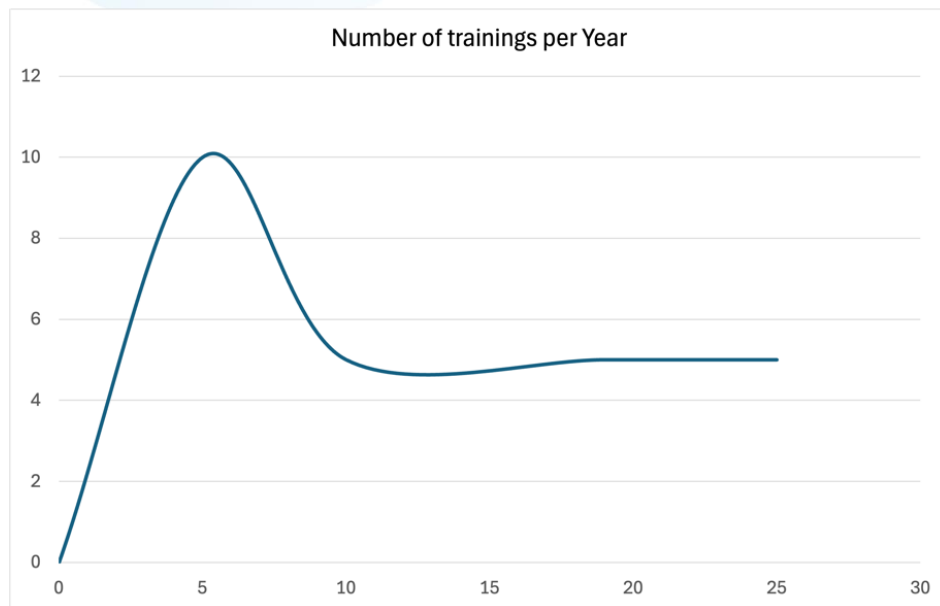
UNEP-MAP Data Policy (in force since 2021) aims to achieve a base level of cooperation with national and international legislation (legal interoperability) and states...

- **Qualities** of involved elements, such as:
 - Data should be available at no cost, at the most updated version and in the lesser time than the possible.
 - Long term data series should remain available in long term repositories.
 - Quality assessment and control procedures should be put in place.
- **Pillar actions:**
 - Avoid data duplication.
 - Avoid duplication of efforts.
 - Recognize data as a public good.
 - Ensure interoperability.

- Paying attention to:
- Open Access
 - Sensitive data (both environmental or personal)

Effectiveness of the Data Policy

- Strategy Effectiveness assessed through its **implementation tools**
- Data Policy evaluated using an **Outreach Index**
Defined as the number of dissemination activities over time (in years)



- Included **training delivered** to the CPs, interventions to conferences, scientific contributions
- Considering the size of the user base, the index should grow up to 10 in the first five years and then diminish, stabilizing around 5 from the 10th year.
- The index should be assessed each 2 years.

Implementing KMS: the KMaP

KMaP is the environment where data/information/knowledge sharing practically occurs.



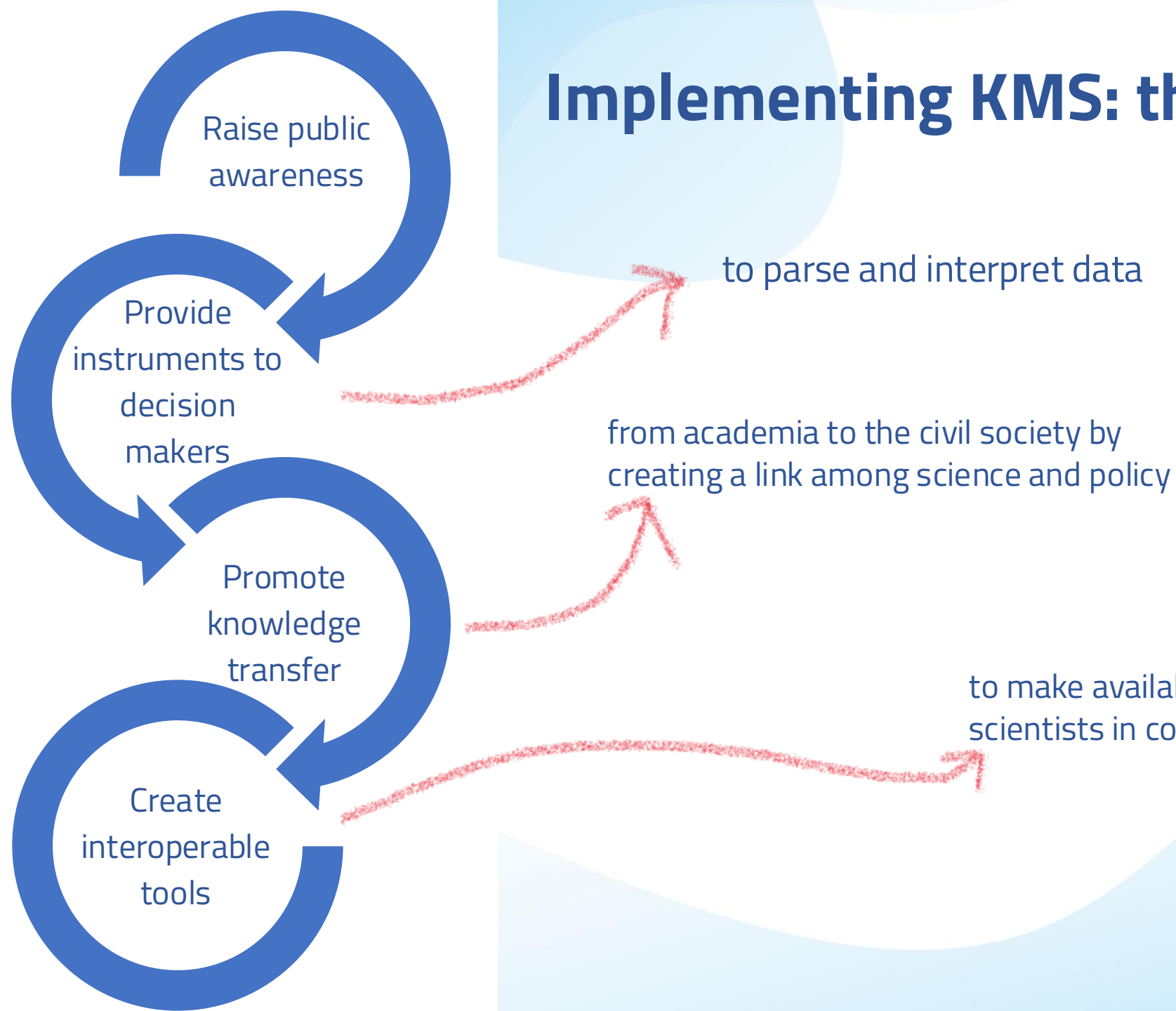
KMaP is conceived as a unique access hub to the UNEP-MAP (Mediterranean Action Plan) knowledge heritage. It is composed by a Data Hub, accessible through the "Maps" button, collecting geographical data in broader sense. The Knowledge Hub, accessible through "Library" button, collecting all the UNEP-MAP documental heritage, and an Exchange Hub aimed to enforce the cooperation with UNEP-MAP contributors, stakeholders, citizens, and communities of interests. At present, two sections are completed: the Data Hub and the Knowledge Hub, while the Exchange Hub is in preparation. Users with major rights granted can not only view but also create contents and manage rights on their own material, creating a proper "personal use" space inside the platform. Come and discover with us the Knowledge MAP!

Implementing KMS: the KMaP

KMaP is the environment where data/information/knowledge sharing practically occurs.

- Prototype is up and running since **1.5 years**.
- Contents grew **from about 12k** elements at the launch **to more than 16k** elements now.
- The number of dataset particularly increased due to the use of the platform as a reference for handling data connected to the last **MED-QSR**
- Activities on the KMaP are constantly growing due to its use for **many agreements** where UNEP-MAP is involved (e.g. Pelagos Agreement, NW Med PSSA).
- Its use is foreseen to increase due to the use of KMaP as geographical **data viewer for IMAP** data, and the publication of the **new «Network» page** (Knowledge Exchange Hub), whose first prototype has just been released.

Implementing KMS: the KMaP objectives

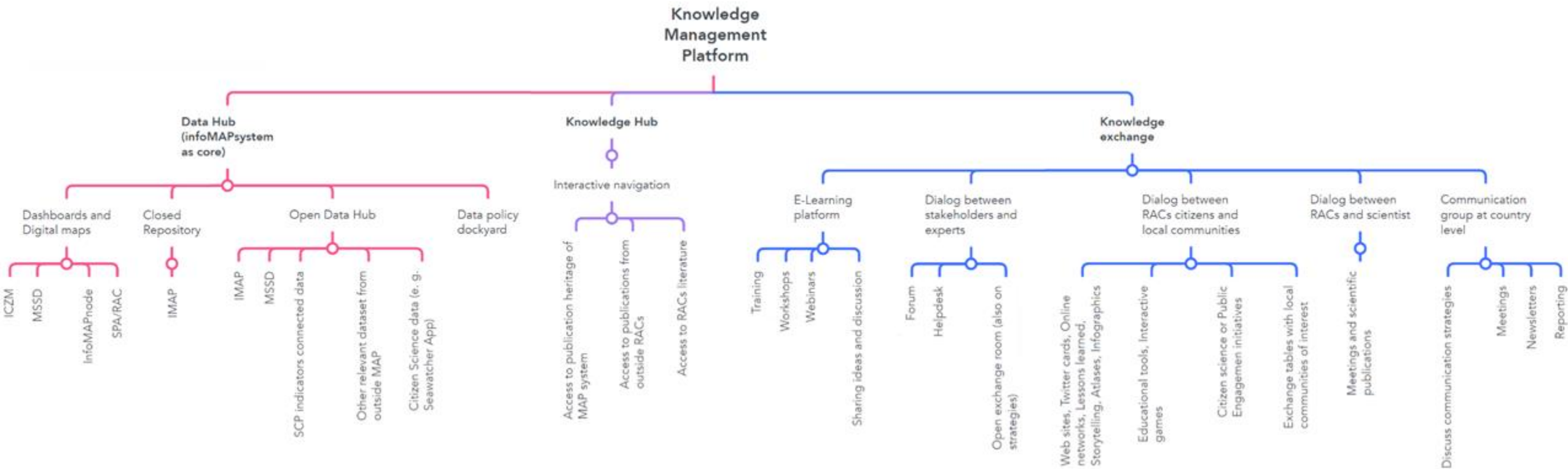


to make available institutional data to scientists in co-creation contexts

Implementing KMS: the KMaP structure

It is composed by three parts:

- **Data Hub**, collecting all the geographical or geo-related resources of UNEP-MAP.
- **Knowledge Hub**, that collects UNEP-MAP documental assets.
- **Knowledge Exchange Hub**, that houses some user-specific instruments to raise awareness on UNEP-MAP works.



Implementing KMS: the KMaP code

Entirely relying on Open Source software, and all the code [has been released](#) via INFO/RAC Github channel, so its' easy to learn from its structure:

The screenshot shows the GitHub repository for KMaP, owned by INFO-RAC. The repository is public and has 3 unwatchers, 0 forks, and 0 stars. The main branch is selected, showing 1 branch and 0 tags. The file list includes:

File/Folder	Commit Message	Time Ago
giohappy	Update README.md	f7dca47 · 2 years ago · 3 Commits
docker	published version	2 years ago
inforac_importer	published version	2 years ago
src	published version	2 years ago
.env.sample	published version	2 years ago
.gitignore	published version	2 years ago
.override_dev_env.sample	published version	2 years ago
Dockerfile	published version	2 years ago
LICENSE	Initial commit	2 years ago
README.md	Update README.md	2 years ago
Vagrantfile.stack	published version	2 years ago
create-envfile.py	published version	2 years ago
dev_config.yml	published version	2 years ago
docker-build.sh	published version	2 years ago

The right sidebar contains the following sections:

- About:** This is the source code of the <https://kmap.info-rac.org/> SDI
- Releases:** No releases published. [Create a new release](#)
- Packages:** No packages published. [Publish your first package](#)
- Contributors:** 2 contributors: giohappy (Giovanni Allegri) and INFO-RAC INFO-RAC

Implementing KMS: the KMaP features

Built from the effort of the **Data management task force** to recognise all the available data/information/knowledge to be put together in the KMaP.

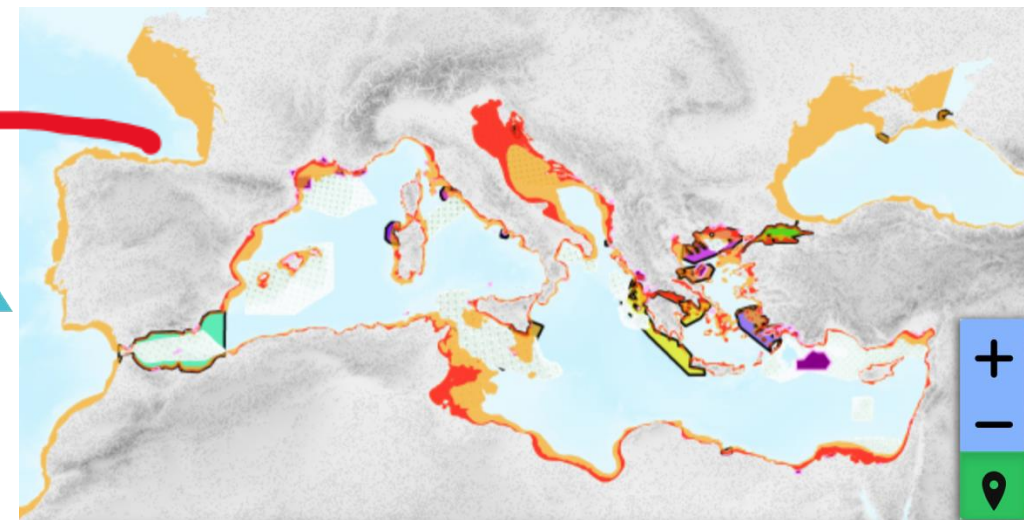
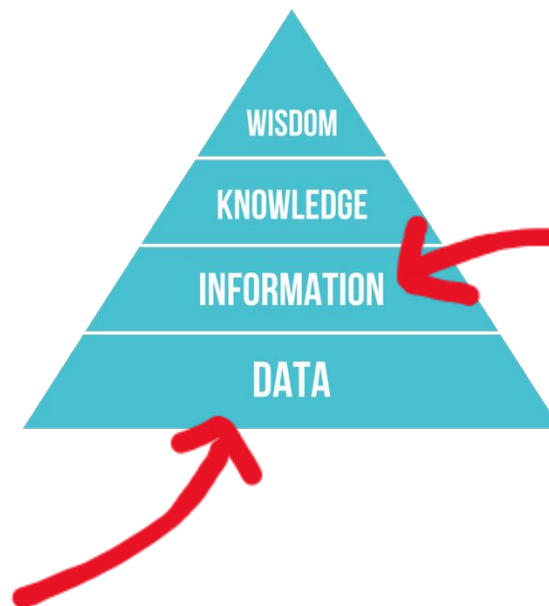
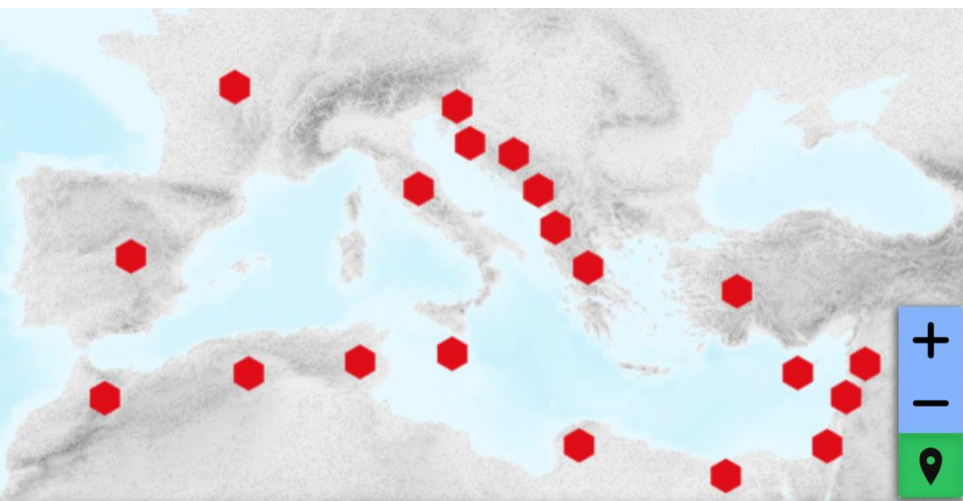
Deepen of **user requirements** individuation, definition of **different access levels** to the platform and drafting of a **logic behind the platform navigation**.

	User	Is registered?	Can Upload?	Can Edit/Delete?	Can View?	Can Download?	Can Set Privileges?
Contracting Parties	CP	Yes	Yes	Yes, their data	Yes. Public and restricted material (following sharing regulations)	Yes. Public and restricted material (following sharing regulations)	No
MAP components	MAP CU and RACs (except INFO/RAC)	Yes	Yes	Yes, their data	Yes. Public and restricted material (following sharing regulations)	Yes. Public and restricted material (following sharing regulations)	No
	INFO/RAC	Yes	Yes	Yes, all the material on platform	Yes, all the material on platform	Yes, all the material on platform	Yes
MAP partners	Stakeholders and researchers	Yes	No	No	Yes, Public and restricted material (following sharing regulations)	Yes, Public and restricted material (following sharing regulations)	No
Other users	Anonymous	No	No	No	Yes, only public material	Yes, only public material	No

Implementing KMS: the KMaP products

Available products type are:

1. **Layers and maps:** shared via the Data Hub, a layer is a single dataset while a map is a superimposition of layers resulting in a combination of datasets, with a specific communication aim.



Coastday - past events



View dataset

a dataset from PAPRAC - / May 12th 2023

This dataset refers to all the past [Coastday](#) events country by country. Coastday is an event of awareness rising organized yearly by PAP/RAC and involves Contracting Parties from the whole MAP.

Category: [MSP](#)

Species distribution analysis



View map

a map from [INFORAC Editor](#) / February 13th 2023

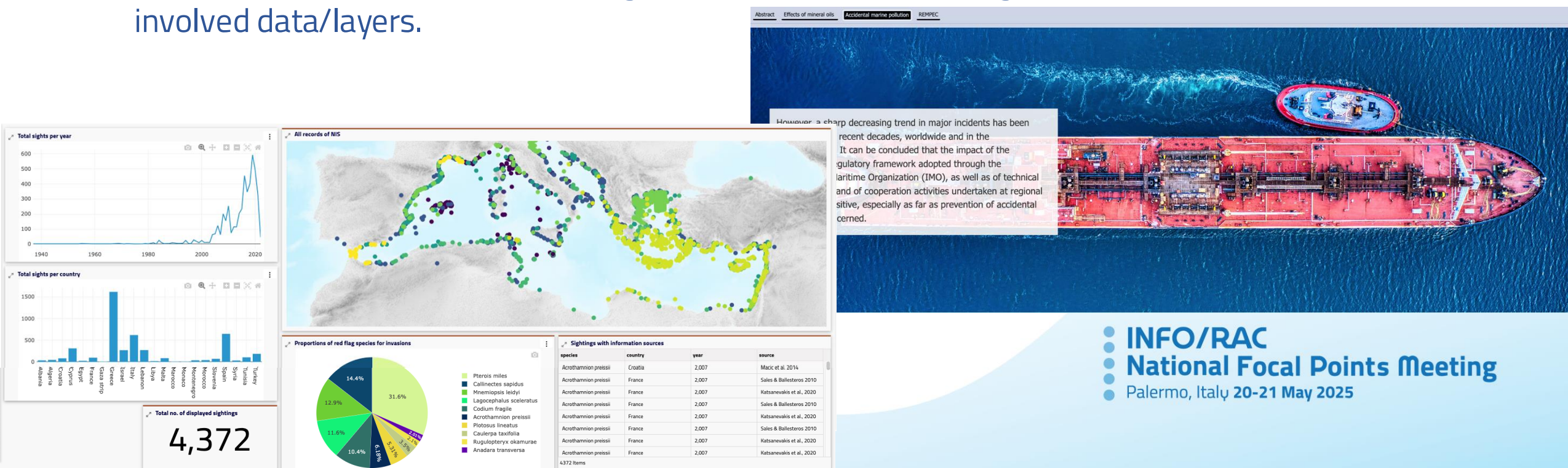
Spatial analysis of species distribution by crossing SPAMI areas, species distributions of horse mackerel and Mediterranean mussel.

Category: [Species](#)

Implementing KMS: the KMaP products

Available products type are:

- 2. Geostories and Dashboards:** shared via the Data Hub, geostories are powerful divulgation instruments that combine text, interactive maps, and other multimedia content like images and video or other third-party contents; dashboards provide charts, maps, tables, texts and counters attached to datasets with the aim to visualize specific data in context, interact spatially and analytically with the data by creating connections between widgets, perform a first analysis on involved data/layers.



Available products type are:

- f2742620-81a0-42c3-ad62-59b3f95cca9a**

**ADAPTER LES VILLES ET
LES TERRITOIRES CÔTIERS
À L'ÉLEVATION DU NIVEAU
DE LA MER EN MÉDITERRANÉE**

Défis et bo

Sea'ties Regional Report – Adapting Me...

a document from [Plan Bleu](#) / November 10th 2023

On April 26, 2022 **the regional workshop on adapting Mediterranean coastal cities and territories to rising sea levels**, was organized by the Sea'ties initiative, with the support of the City of Marseille and the Blue Plan. As the second event in a series of five (including Northern Europe, the West Coast of

Info	Location	<u>Linked Resources</u>
Linked To		
	Mediterranean forests:Towards a better recognition of the economic and social value of goods and services	EN
	Mediterranean forests:Towards a better recognition of the economic and social value of goods and services	AR
Linked By		
	Mediterranean forests:Towards a better recognition of the economic and social value of goods and services	EN
	Mediterranean forests:Towards a better recognition of the economic and social value of goods and services	AR

Implementing KMS: the KMaP products

Available products type are:

4. **Remote services:** via the Data Hub, KMaP links numerous remote layers from other portals and, conversely, KMaP public geographic data is available to be shared by means of remote services working with OGC standards WMS and WFS. In this way other portals/platforms, but also desktop GIS, can exploit UNEP-MAP data

Here is where
interoperability
practically occurs!



The screenshot shows the GeoServer web interface at the URL `kmap.info-rac.org/geoserver/web/?0`. The page is titled 'Welcome' and displays the following information:

- About & Status:** Server Status, GeoServer Logs, Contact Information, Informazioni su GeoServer, Process status.
- Data:** Layer Preview, Import Data, Workspaces, Stores, Layer, Layer Groups, Still, Backup & Restore.
- Services:** WCS, WFS, WMS, WMTS, WFS.
- Settings:** Global, Image Processing, Raster Access, Importer.
- Tile Caching:** Tile Layers, Caching Defaults, Gridsets, Disk Quota, BlobStores.
- Sicurezza:** Settings, Authentication, Passwords, Users, Groups, Roles, Data.

The main content area shows the 'Welcome' message and a list of services with their versions:

Service	Version	Action
229 Layer		Add new layer
0 Layer groups		Add new layer group
29 Stores		Add new store
4 Workspaces		Add new workspace

Below the table, there are sections for 'GeoNode Local GeoServer' and 'GeoServer Web Map Tile Service' with their respective versions:

Service	Version
WMS	1.3.0
WMS	1.1.1

GeoServer Web Map Tile Service

Service	Version
TMS	1.0.0
WMS-C	1.1.1
WMTS	1.1.1

My GeoServer WFS

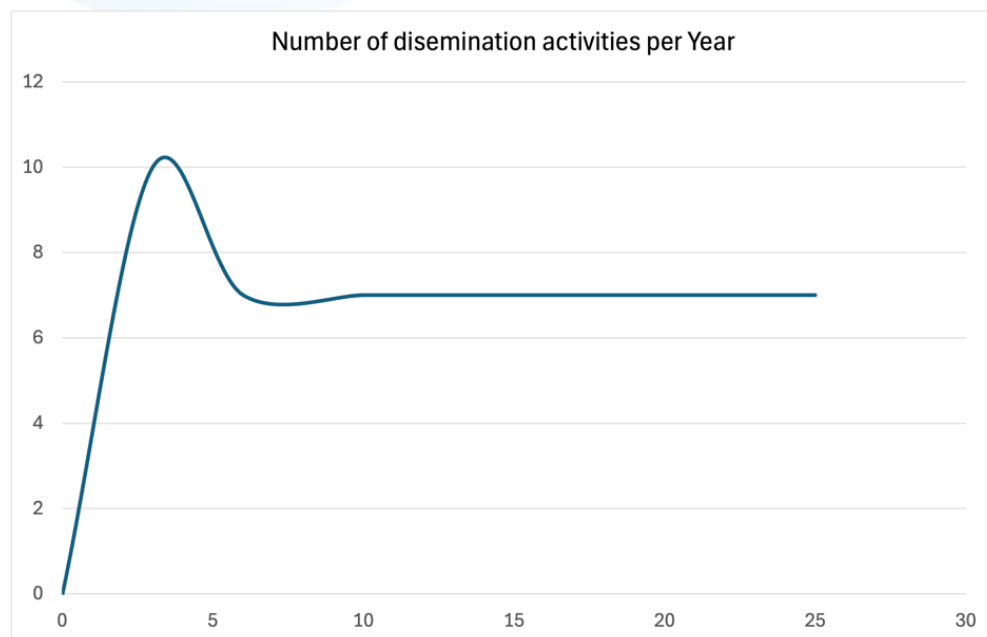
Service	Version
WFS	2.0.0
WFS	1.1.0
WFS	1.0.0

My GeoServer WCS

Service	Version
WCS	2.0.1
WCS	1.1.1
WCS	1.1.0
WCS	1.1
WCS	1.0.0

Effectiveness of KMaP

To measure the effectiveness of the Strategy we should measure the effectiveness of its implementing tools. For KMaP an **outreach index** has been identified, defined as the number of dissemination activities pursued in time (measured in years).



- Included training delivered to the CPs, interventions to conferences, scientific contributions
- Considering the size of the user base, the index should grow up to 10 in the first three years and then diminish, stabilizing around 7 from the 5th year.
- The index should be assessed each 2 years.

Effectiveness of KMaP

Moreover a set of numerical indices are put in place to evaluate outreach and compliance with principles of the Strategy:

- Number of new items (all products are counted) – outreach measure
- Number of remote services made available – compliance measure
- Completeness of metadata – compliance measure

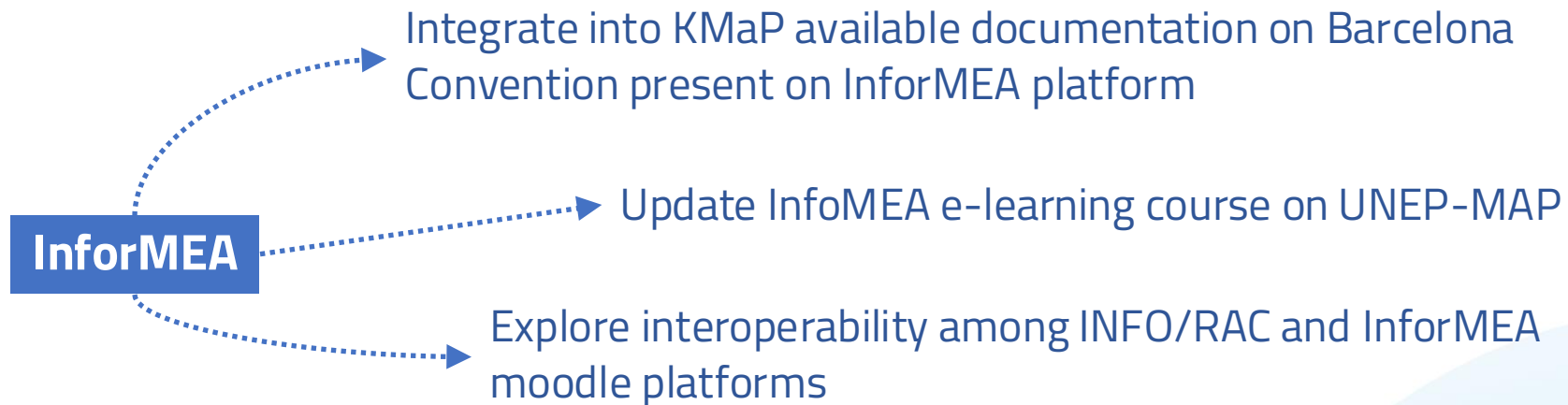
All of them are meant to be assessed each 2 years.

A complete risk assessment on both the Data Policy and the KMaP is supposed to be delivered each two years, together with the assessment of individuated indices, to prevent the misuse of the tools, enhance their operability and identify eventual risks and countermeasures

Sharing Knowledge IS cooperate

Sharing Knowledge in an open access frame MEANS cooperate with others and create a network of knowledge sharing with other relevant bodies and stakeholders.

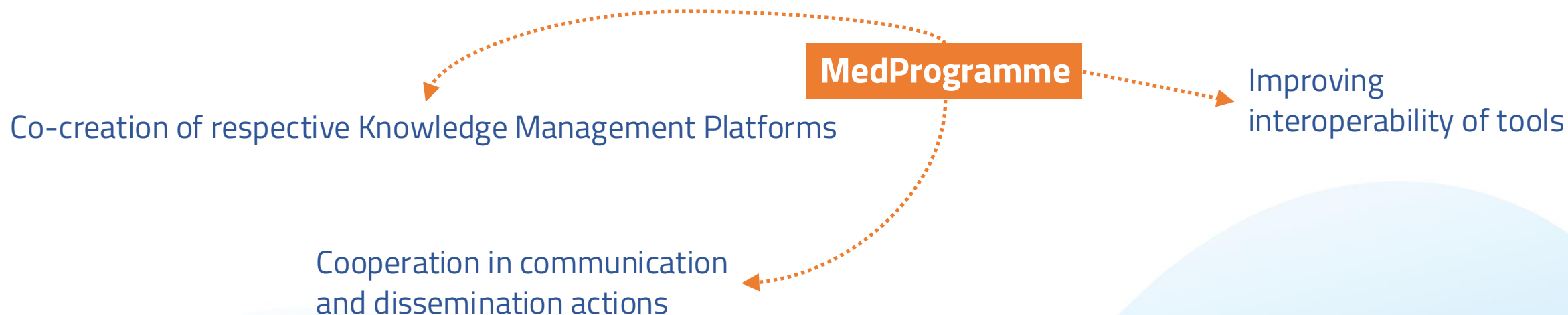
UNEP-MAP built its own network in the years and now we are working in synergy with:



Sharing Knowledge IS cooperate

Sharing Knowledge in an open access frame MEANS cooperate with others and create a network of knowledge sharing with other relevant bodies and stakeholders.

UNEP-MAP built its own network in the years and now we are working in synergy with:



Sharing Knowledge IS cooperate

Sharing Knowledge in an open access frame MEANS cooperate with others and create a network of knowledge sharing with other relevant bodies and stakeholders.

UNEP-MAP built its own network in the years and now we are working in synergy with:

Mention of UNEP-MAP experience in the GEDS as an example of best practice for interoperability and standards application

Participation in regional consultation for Global Environmental Data Strategy

Inclusion of INFO/RAC in the expert group for GEDS design

UNEP



Barcelona
Convention



● INFO/RAC
● National Focal Points Meeting
● Palermo, Italy 20-21 May 2025

Part #2

From theory
To practice!



Individuation of a dataset

Many repositories hold interesting data, Pangea is one of them.

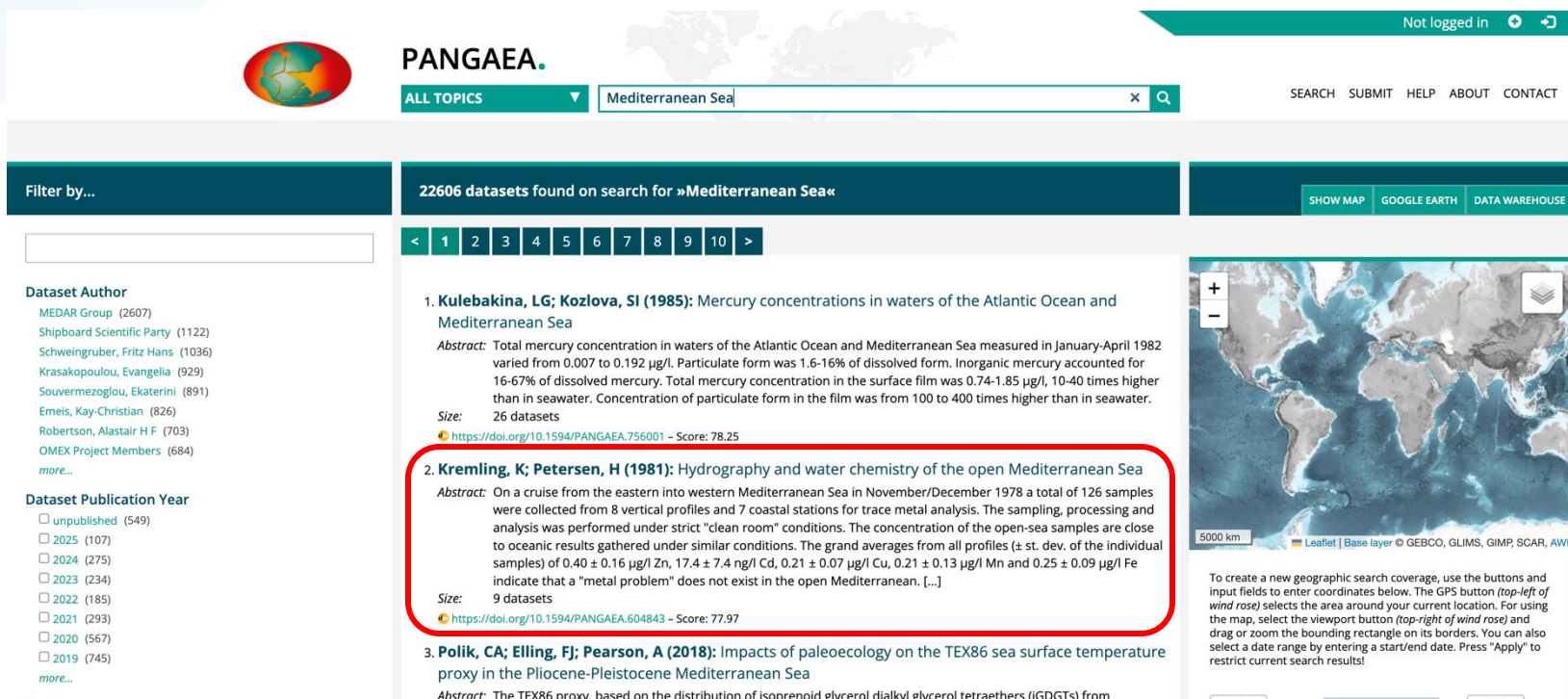
Let's go to www.pangea.de and type «Mediterranean Sea» on the Search bar

The screenshot shows the PANGAEA website homepage. At the top, there is a navigation bar with the PANGAEA logo (a globe with a red and green pattern) and the text "PANGAEA. Data Publisher for Earth & Environmental Science". To the right of the logo, there is a "Not logged in" status and a search icon. Below the navigation bar, there is a "Submit Data" button with a globe icon. The main content area is divided into several sections. On the left, there is a "TOPICS" sidebar with a "MAP" button. The "TOPICS" section lists various scientific fields with their respective counts: CHEMISTRY (74606), LITHOSPHERE (51356), ATMOSPHERE (33564), BIOLOGICAL CLASSIFICATION (32289), and PALEONTOLOGY (24049). The main content area features a "Welcome to PANGAEA® Data Publisher" message, a search bar with the placeholder text "Search for measurement type, author name, project, taxa,...", and a "Latest News" section. The "Latest News" section contains two articles: one dated 2025-04-17 titled "PANGAEA IS ACTIVELY WORKING TO RESCUE DATA FROM THE UNITED STATES" and another dated 2025-04-04 titled "PANGAEA COMMUNITY WORKSHOP: FINDING AND RETRIEVING DATA".

Individuation of a dataset

Some results will pop-up.

Let's choose the **Kremling and Petersen** datasets (<https://doi.org/10.1594/PANGAEA.604843>)



The screenshot shows the PANGAEA website interface. At the top, there's a header with the PANGAEA logo, a search bar containing 'Mediterranean Sea', and navigation links like 'SEARCH', 'SUBMIT', 'HELP', 'ABOUT', and 'CONTACT'. Below the header, a green bar indicates '22606 datasets found on search for »Mediterranean Sea«'. On the left, there's a 'Filter by...' section with 'Dataset Author' and 'Dataset Publication Year' filters. The main content area displays a list of search results. The second result, by Kremling, K. and Petersen, H. (1981), is highlighted with a red box. To the right of the results, there's a map of the Mediterranean Sea with a 5000 km scale bar and a legend for 'Base layer' (GEOBCO, GLIMS, GIMP, SCAR, AWI).

PANGAEA.

ALL TOPICS Mediterranean Sea

Not logged in

SEARCH SUBMIT HELP ABOUT CONTACT

Filter by...

22606 datasets found on search for »Mediterranean Sea«

SHOW MAP GOOGLE EARTH DATA WAREHOUSE

1. Kulebakina, LG; Kozlova, SI (1985): Mercury concentrations in waters of the Atlantic Ocean and Mediterranean Sea

Abstract: Total mercury concentration in waters of the Atlantic Ocean and Mediterranean Sea measured in January-April 1982 varied from 0.007 to 0.192 µg/l. Particulate form was 1.6-16% of dissolved form. Inorganic mercury accounted for 16-67% of dissolved mercury. Total mercury concentration in the surface film was 0.74-1.85 µg/l, 10-40 times higher than in seawater. Concentration of particulate form in the film was from 100 to 400 times higher than in seawater.

Size: 26 datasets

<https://doi.org/10.1594/PANGAEA.756001> - Score: 78.25

2. **Kremling, K; Petersen, H (1981): Hydrography and water chemistry of the open Mediterranean Sea**

Abstract: On a cruise from the eastern into western Mediterranean Sea in November/December 1978 a total of 126 samples were collected from 8 vertical profiles and 7 coastal stations for trace metal analysis. The sampling, processing and analysis was performed under strict "clean room" conditions. The concentration of the open-sea samples are close to oceanic results gathered under similar conditions. The grand averages from all profiles (± st. dev. of the individual samples) of 0.40 ± 0.16 µg/l Zn, 17.4 ± 7.4 ng/l Cd, 0.21 ± 0.07 µg/l Cu, 0.21 ± 0.13 µg/l Mn and 0.25 ± 0.09 µg/l Fe indicate that a "metal problem" does not exist in the open Mediterranean. [...]

Size: 9 datasets

<https://doi.org/10.1594/PANGAEA.604843> - Score: 77.97

3. Polik, CA; Elling, FJ; Pearson, A (2018): Impacts of paleoecology on the TEX86 sea surface temperature proxy in the Pliocene-Pleistocene Mediterranean Sea

Abstract: The TEX86 proxy, based on the distribution of isoprenoid glycerol dialkyl glycerol tetraethers (IGDGTs) from


5000 km

Leaflet | Base layer © GEOBCO, GLIMS, GIMP, SCAR, AWI

To create a new geographic search coverage, use the buttons and input fields to enter coordinates below. The GPS button (top-left of wind rose) selects the area around your current location. For using the map, select the viewport button (top-right of wind rose) and drag or zoom the bounding rectangle on its borders. You can also select a date range by entering a start/end date. Press "Apply" to restrict current search results!

Individuation of a dataset

As we can see, there's data distributed almost all across Med Sea

**PANGAEA.**
Data Publisher for Earth & Environmental Science



Not logged in


SEARCH SUBMIT HELP ABOUT CONTACT

Citation: **Kremling, Klaus; Petersen, Hauke (1981):** Hydrography and water chemistry of the open Mediterranean Sea [dataset publication series]. PANGAEA, <https://doi.org/10.1594/PANGAEA.604843>,
Supplement to: Kremling, K; Petersen, H (1981): The distribution of zinc, cadmium, copper, manganese and iron in waters of the open Mediterranean Sea. *Meteor Forschungsergebnisse, Deutsche Forschungsgemeinschaft, Reihe A/B Allgemeines, Physik und Chemie des Meeres, Gebrüder Bornträger, Berlin, Stuttgart, A/B23*, 5-14

Always quote citation above when using data! You can download the citation in several formats below.

Published: 1981 (exact date unknown) • DOI registered: 2007-04-13

[RIS Citation](#) [BibTeX Citation](#) [Copy Citation](#) [Share](#) [Show Map](#) [Google Earth](#)  46  4



1000 km
Leaflet | Base layer © GEBCO, GLIMS, GIMP, SCAR, AWI

Abstract: On a cruise from the eastern into western Mediterranean Sea in November/December 1978 a total of 126 samples were collected from 8 vertical profiles and 7 coastal stations for trace metal analysis. The sampling, processing and analysis was performed under strict "clean room" conditions. The concentration of the open-sea samples are close to oceanic results gathered under similar conditions. The grand averages from all profiles (\pm st. dev. of the individual samples) of $0.40 \pm 0.16 \mu\text{g/l}$ Zn, $17.4 \pm 7.4 \text{ ng/l}$ Cd, $0.21 \pm 0.07 \mu\text{g/l}$ Cu, $0.21 \pm 0.13 \mu\text{g/l}$ Mn and $0.25 \pm 0.09 \mu\text{g/l}$ Fe indicate that a "metal problem" does not exist in the open Mediterranean.


A biologically mediated depletion in surface waters or correlation with nutrients have not been observed under the conditions established on this cruise. This is probably due to low primary production and seasonal advection processes prevailing in this sea.

The data for manganese show generally higher values in the surface layer (0-75 m) than in deep waters. This could evidently be proved in the nearshore profile indicating a terrigenous source for manganese.

Project(s): [Institute for Geosciences, Christian Albrechts University, Kiel \(GIK/IfG\)](#)

Coverage: *Median Latitude:* 36.250291 * *Median Longitude:* 18.271624 * *South-bound Latitude:* 31.025000 * *West-bound Longitude:* 4.576667 * *North-bound Latitude:* 41.395000 * *East-bound Longitude:* 32.163333
Date/Time Start: 1978-11-13T00:00:00 * *Date/Time End:* 1978-11-13T00:00:00


Individuation of a dataset


**PANGAEA.**
Data Publisher for Earth & Environmental Science


Not logged in



SEARCH SUBMIT HELP ABOUT CONTACT

Citation:

Kremling, Klaus; Petersen, Hauke (1981): Hydrography and water chemistry of the open Mediterranean Sea [dataset publication series]. PANGAEA,
 <https://doi.org/10.1594/PANGAEA.604843>,
Supplement to: Kremling, K; Petersen, H (1981): The distribution of zinc, cadmium, copper, manganese and iron in waters of the open Mediterranean Sea. *Meteor Forschungsergebnisse, Deutsche Forschungsgemeinschaft, Reihe A/B Allgemeines, Physik und Chemie des Meeres, Gebrüder Bornträger, Berlin, Stuttgart, A/B23*, 5-14

 Always quote citation above when using data! You can download the citation in several formats below.

 Published: 1981 (exact date unknown) • DOI registered: 2007-04-13


[RIS Citation](#) [BisTeX Citation](#) [Copy Citation](#) [Share](#) [Show Map](#) [Google Earth](#)  46  4

Abstract:


On a cruise from the eastern into western Mediterranean Sea in November/December 1978 a total of 126 samples were collected from 8 vertical profiles and 7 coastal stations for trace metal analysis. The sampling, processing and analysis was performed under strict "clean room" conditions. The concentration of the open-sea samples are close to oceanic results gathered under similar conditions. The grand averages from all profiles (\pm st. dev. of the individual samples) of $0.40 \pm 0.16 \mu\text{g/l Zn}$, $17.4 \pm 7.4 \text{ ng/l Cd}$, $0.21 \pm 0.07 \mu\text{g/l Cu}$, $0.21 \pm 0.13 \mu\text{g/l Mn}$ and $0.25 \pm 0.09 \mu\text{g/l Fe}$ indicate that a "metal problem" does not exist in the open Mediterranean.

A biologically mediated depletion in surface waters or correlation with nutrients have not been observed under the conditions established on this cruise. This is probably due to low primary production and seasonal advection processes prevailing in this sea.

The data for manganese show generally higher values in the surface layer (0-75 m) than in deep waters. This could evidently be proved in the nearshore profile indicating a terrigenous source for manganese.

Project(s): [Institute for Geosciences, Christian Albrechts University, Kiel \(GIK/IfG\)](#) 

Coverage: *Median Latitude: 36.250291 * Median Longitude: 18.271624 * South-bound Latitude: 31.025000 * West-bound Longitude: 4.576667 * North-bound Latitude: 41.395000 * East-bound Longitude: 32.163333*
*Date/Time Start: 1978-11-13T00:00:00 * Date/Time End: 1978-11-13T00:00:00*



Pangea, specifically, is a really good portal to search data since data shared here is made available after FAIR data management and Open Science principles.

E.g. we have:

- The **citation**: including Author, Title, reference publication(s), and the DOI
- An **abstract** of data
- Eventual connected **projects**
- Spatial **coverage**
- Information on **license**
- The **data download** section

Check after UNEP-MAP Data Policy

Our interest in this case is in the «reuse» of data, which is stated in the license.

Let's go verify if it's possible to reuse them and if license is compatible with UNEP-MAP data policy...

License:




Creative Commons Attribution 3.0 Unported (CC-BY-3.0)



OK!

- It's the same license identified as the preferred from our data policy
- It allows us to take the dataset and reuse it as we want (resample, add, remove parts, share in different contexts) **upon citation** of the original source - > using the same citation we found at the top of the page:

Citation:

Kremling, Klaus; Petersen, Hauke (1981): Hydrography and water chemistry of the open Mediterranean Sea [dataset publication series]. *PANGAEA*,
 <https://doi.org/10.1594/PANGAEA.604843>,

Supplement to: Kremling, K; Petersen, H (1981): The distribution of zinc, cadmium, copper, manganese and iron in waters of the open Mediterranean Sea. *Meteor Forschungsergebnisse, Deutsche Forschungsgemeinschaft, Reihe A/B Allgemeines, Physik und Chemie des Meeres, Gebrüder Bornträger, Berlin, Stuttgart, A/B23*, 5-14

Check formal compatibility

Downloading the dataset, we have to make sure we can integrate it into our systems

< > Kremling_hydrography



datasets



summary.txt



There's a folder «dataset» and a file summary – let's open this first!



There's a quite complete and machine-actionable summary describing in detail all the characteristics of the datasets both for formal and thematic part, also URIs* of instruments used are given!

*URI: Uniform Resource Identifier



Mediterranean
Action Plan
Barcelona
Convention



```
summary.txt
/* DATA DESCRIPTION:
Citation: Kremling, Klaus; Petersen, Hauke (1981): Hydrography and water chemistry of the open Mediterranean Sea [dataset publication series]. PANGAEA, https://doi.org/10.1594/PANGAEA.604843,
Supplement to: Kremling, K; Petersen, H (1981): The distribution of zinc, cadmium, copper, manganese and iron in waters of the open Mediterranean Sea. Meteor Forschungsergebnisse, Deutsche Forschungsgemeinschaft,
Reihe A/B Allgemeines, Physik und Chemie des Meeres, Gebrüder Bornträger, Berlin, Stuttgart, A/B23, 5-14
Abstract: On a cruise from the eastern into western Mediterranean Sea in November/December 1978 a total of 126 samples were collected from 8 vertical profiles and 7 coastal stations for trace metal analysis. The
sampling, processing and analysis was performed under strict "clean room" conditions. The concentration of the open-sea samples are close to oceanic results gathered under similar conditions. The grand averages from all
profiles (± st. dev. of the individual samples) of 0.40 ± 0.16 µg/l Zn, 17.4 ± 7.4 ng/l Cd, 0.21 ± 0.07 µg/l Cu, 0.21 ± 0.13 µg/l Mn and 0.25 ± 0.09 µg/l Fe indicate that a "metal problem" does not exist in the open
Mediterranean.
A biologically mediated depletion in surface waters or correlation with nutrients have not been observed under the conditions established on this cruise. This is probably due top low primary production and
seasonal advection processes prevailing in this sea.
The data for manganese show generally higher values in the surface layer (0-75 m) than in deep waters. This could evidently proved in the nearshore profile indicating a terrigenous source for manganese.
Project(s): Institute for Geosciences, Christian Albrechts University, Kiel (GK/IFG) (URI: https://www.ifg.uni-kiel.de/)
Coverage: MEDIAN LATITUDE: 36.250291 * MEDIAN LONGITUDE: 18.271624 * SOUTH-BOUND LATITUDE: 31.025000 * WEST-BOUND LONGITUDE: 41.395000 * EAST-BOUND LONGITUDE: 32.163333
DATE/TIME START: 1978-11-13T00:00:00 * DATE/TIME END: 1978-11-13T00:00:00
Event(s): M50_390 * LATITUDE: 31.905000 * LONGITUDE: 31.325000 * DATE/TIME: 1978-11-13T00:00:00 * LOCATION: Mediterranean Sea * CAMPAIGN: M50 (URI: hdl:10013/epic.28122.d001) * BASIS: Meteor (1964) (URI: https://
de.wikipedia.org/wiki/Meteor_(Schiff,_1964)) * METHOD/DEVICE: Water sample (WS)
M50_395 * LATITUDE: 31.913333 * LONGITUDE: 32.163333 * DATE/TIME: 1978-11-13T00:00:00 * LOCATION: Mediterranean Sea * CAMPAIGN: M50 (URI: hdl:10013/epic.28122.d001) * BASIS: Meteor (1964) (URI: https://
de.wikipedia.org/wiki/Meteor_(Schiff,_1964)) * METHOD/DEVICE: Water sample (WS)
M50_407 * LATITUDE: 31.746667 * LONGITUDE: 30.150000 * DATE/TIME: 1978-11-13T00:00:00 * LOCATION: Mediterranean Sea * CAMPAIGN: M50 (URI: hdl:10013/epic.28122.d001) * BASIS: Meteor (1964) (URI: https://
de.wikipedia.org/wiki/Meteor_(Schiff,_1964)) * METHOD/DEVICE: Water sample (WS)
M50_409 * LATITUDE: 31.333333 * LONGITUDE: 29.845000 * DATE/TIME: 1978-11-13T00:00:00 * LOCATION: Mediterranean Sea * CAMPAIGN: M50 (URI: hdl:10013/epic.28122.d001) * BASIS: Meteor (1964) (URI: https://
de.wikipedia.org/wiki/Meteor_(Schiff,_1964)) * METHOD/DEVICE: Water sample (WS)
M50_415 * LATITUDE: 31.025000 * LONGITUDE: 28.926667 * DATE/TIME: 1978-11-13T00:00:00 * LOCATION: Mediterranean Sea * CAMPAIGN: M50 (URI: hdl:10013/epic.28122.d001) * BASIS: Meteor (1964) (URI: https://
de.wikipedia.org/wiki/Meteor_(Schiff,_1964)) * METHOD/DEVICE: Water sample (WS)
M50_421 * LATITUDE: 31.295000 * LONGITUDE: 28.075000 * DATE/TIME: 1978-11-13T00:00:00 * LOCATION: Mediterranean Sea * CAMPAIGN: M50 (URI: hdl:10013/epic.28122.d001) * BASIS: Meteor (1964) (URI: https://
de.wikipedia.org/wiki/Meteor_(Schiff,_1964)) * METHOD/DEVICE: Water sample (WS)
M50_424 * LATITUDE: 31.373333 * LONGITUDE: 27.740000 * DATE/TIME: 1978-11-13T00:00:00 * LOCATION: Mediterranean Sea * CAMPAIGN: M50 (URI: hdl:10013/epic.28122.d001) * BASIS: Meteor (1964) (URI: https://
de.wikipedia.org/wiki/Meteor_(Schiff,_1964)) * METHOD/DEVICE: Water sample (WS)
M50_428 * LATITUDE: 32.245000 * LONGITUDE: 26.616667 * DATE/TIME: 1978-11-13T00:00:00 * ELEVATION: -3125.0 m * LOCATION: Mediterranean Sea * CAMPAIGN: M50 (URI: hdl:10013/epic.28122.d001) * BASIS: Meteor (1964)
(URI: https://de.wikipedia.org/wiki/Meteor_(Schiff,_1964)) * METHOD/DEVICE: Water sample (WS)
M50_430 * LATITUDE: 34.161667 * LONGITUDE: 25.000000 * DATE/TIME: 1978-11-13T00:00:00 * ELEVATION: -3035.0 m * LOCATION: Mediterranean Sea * CAMPAIGN: M50 (URI: hdl:10013/epic.28122.d001) * BASIS: Meteor (1964)
(URI: https://de.wikipedia.org/wiki/Meteor_(Schiff,_1964)) * METHOD/DEVICE: Water sample (WS)
M50_432 * LATITUDE: 36.986667 * LONGITUDE: 19.611667 * DATE/TIME: 1978-11-13T00:00:00 * ELEVATION: -3480.0 m * LOCATION: Mediterranean Sea * CAMPAIGN: M50 (URI: hdl:10013/epic.28122.d001) * BASIS: Meteor (1964)
(URI: https://de.wikipedia.org/wiki/Meteor_(Schiff,_1964)) * METHOD/DEVICE: Water sample (WS)
M50_436 * LATITUDE: 41.395000 * LONGITUDE: 18.001667 * DATE/TIME: 1978-11-13T00:00:00 * ELEVATION: -1137.0 m * LOCATION: Mediterranean Sea * CAMPAIGN: M50 (URI: hdl:10013/epic.28122.d001) * BASIS: Meteor (1964)
(URI: https://de.wikipedia.org/wiki/Meteor_(Schiff,_1964)) * METHOD/DEVICE: Water sample (WS)
M50_437 * LATITUDE: 36.000000 * LONGITUDE: 16.553333 * DATE/TIME: 1978-11-13T00:00:00 * ELEVATION: -3473.0 m * LOCATION: Mediterranean Sea * CAMPAIGN: M50 (URI: hdl:10013/epic.28122.d001) * BASIS: Meteor (1964)
(URI: https://de.wikipedia.org/wiki/Meteor_(Schiff,_1964)) * METHOD/DEVICE: Water sample (WS)
M50_440 * LATITUDE: 36.653333 * LONGITUDE: 12.311667 * DATE/TIME: 1978-11-13T00:00:00 * ELEVATION: -1296.0 m * LOCATION: Mediterranean Sea * CAMPAIGN: M50 (URI: hdl:10013/epic.28122.d001) * BASIS: Meteor (1964)
(URI: https://de.wikipedia.org/wiki/Meteor_(Schiff,_1964)) * METHOD/DEVICE: Water sample (WS)
M50_450 * LATITUDE: 39.346667 * LONGITUDE: 11.625000 * DATE/TIME: 1978-11-13T00:00:00 * ELEVATION: -3220.0 m * LOCATION: Mediterranean Sea * CAMPAIGN: M50 (URI: hdl:10013/epic.28122.d001) * BASIS: Meteor (1964)
(URI: https://de.wikipedia.org/wiki/Meteor_(Schiff,_1964)) * METHOD/DEVICE: Water sample (WS)
M50_453 * LATITUDE: 37.916667 * LONGITUDE: 4.576667 * DATE/TIME: 1978-11-13T00:00:00 * ELEVATION: -2790.0 m * LOCATION: Mediterranean Sea * CAMPAIGN: M50 (URI: hdl:10013/epic.28122.d001) * BASIS: Meteor (1964)
(URI: https://de.wikipedia.org/wiki/Meteor_(Schiff,_1964)) * METHOD/DEVICE: Water sample (WS)
License: Creative Commons Attribution 3.0 Unported (CC-BY-3.0) (URI: https://creativecommons.org/licenses/by/3.0/)
Size: 9 datasets
*/
/* TABULAR SUMMARY OF DATASETS LISTED IN THIS COLLECTION: */
Filename Citation of child dataset
M50_424_trace_metal.tab Kremling, Klaus; Petersen, Hauke (1981): Trace metal concentrations of Egyptian coastal waters (Table 2). https://doi.org/10.1594/PANGAEA.602516
M50_428_hydrography.tab Kremling, Klaus; Petersen, Hauke (1981): Physical and chemical hydrography measured on Mediterranean water samples at station M50_428 (Table 1). https://doi.org/10.1594/PANGAEA.602508
M50_430_hydrography.tab Kremling, Klaus; Petersen, Hauke (1981): Physical and chemical hydrography measured on Mediterranean water samples at station M50_430 (Table 1). https://doi.org/10.1594/PANGAEA.602509
M50_432_hydrography.tab Kremling, Klaus; Petersen, Hauke (1981): Physical and chemical hydrography measured on Mediterranean water samples at station M50_432 (Table 1). https://doi.org/10.1594/PANGAEA.602510
M50_435_hydrography.tab Kremling, Klaus; Petersen, Hauke (1981): Physical and chemical hydrography measured on Mediterranean water samples at station M50_435 (Table 1). https://doi.org/10.1594/PANGAEA.602511
M50_437_hydrography.tab Kremling, Klaus; Petersen, Hauke (1981): Physical and chemical hydrography measured on Mediterranean water samples at station M50_437 (Table 1). https://doi.org/10.1594/PANGAEA.602512
M50_440_hydrography.tab Kremling, Klaus; Petersen, Hauke (1981): Physical and chemical hydrography measured on Mediterranean water samples at station M50_440 (Table 1). https://doi.org/10.1594/PANGAEA.602515
M50_450_hydrography.tab Kremling, Klaus; Petersen, Hauke (1981): Physical and chemical hydrography measured on Mediterranean water samples at station M50_450 (Table 1). https://doi.org/10.1594/PANGAEA.602513
M50_453_hydrography.tab Kremling, Klaus; Petersen, Hauke (1981): Physical and chemical hydrography measured on Mediterranean water samples at station M50_453 (Table 1). https://doi.org/10.1594/PANGAEA.602514
```


Check formal compatibility

Opening the datasets we find that the dataset is composed by a set of .tab files, which is not among the file formats accepted by the KMaP.

+ Select files...

Supported file extensions: ESRI Shapefile,
CSV, GeoPackage, GeoJSON, KML/KMZ,
GeoTIFF, Zip Archive, XML Metadata File,
Styled Layer Descriptor (SLD)

Upload

The .tab format is essentially a tabular file delimited by <tab>, so it could be reduced to a .csv file by simply substituting the <tab> character with a comma (and saving it accordingly).

Opening the trace metal file with a text editor we will notice a long header.

```
M50_424_trace_metal.tab X
1 /* DATA DESCRIPTION:
2 Citation: Kremling, Klaus; Petersen, Hauke (1981): Trace metal concentrations of Egyptian coastal waters (Table 2) [dataset]. PANGAEA, https://doi.org/10.1594/PANGAEA.602516,
3 In supplement to: Kremling, K; Petersen, H (1981): The distribution of zinc, cadmium, copper, manganese and iron in waters of the open Mediterranean Sea. Meteor Forschungsergebnisse, Deutsche Forschungsgemeinschaft
4 Project(s): Institute for Geosciences, Christian Albrechts University, Kiel (GK/IG) (URI: https://www.ifg.uni-kiel.de/)
5 Coverage: MEDIAN LATITUDE: 31.513095 * MEDIAN LONGITUDE: 29.746429 * SOUTH-BOUND LATITUDE: 31.025000 * WEST-BOUND LONGITUDE: 27.740000 * NORTH-BOUND LATITUDE: 31.913333 * EAST-BOUND LONGITUDE: 32.163333
6 DATE/TIME START: 1978-11-13T00:00:00 * DATE/TIME END: 1978-11-13T00:00:00
7 MINIMUM DEPTH, water: 20 m * MAXIMUM DEPTH, water: 20 m
8 Event(s): M50_390 * LATITUDE: 31.905000 * LONGITUDE: 31.325000 * DATE/TIME: 1978-11-13T00:00:00 * LOCATION: Mediterranean Sea * CAMPAIGN: M50 (URI: hdl:10013/epic.28122.d001) * BASIS: Meteor (1964) (URI: https://de.wikipedia.org/wiki/Meteor_(Schiff))
9 M50_395 * LATITUDE: 31.913333 * LONGITUDE: 32.163333 * DATE/TIME: 1978-11-13T00:00:00 * LOCATION: Mediterranean Sea * CAMPAIGN: M50 (URI: hdl:10013/epic.28122.d001) * BASIS: Meteor (1964) (URI: https://de.wikipedia.org/wiki/Meteor_(Schiff))
10 M50_407 * LATITUDE: 31.746667 * LONGITUDE: 30.150000 * DATE/TIME: 1978-11-13T00:00:00 * LOCATION: Mediterranean Sea * CAMPAIGN: M50 (URI: hdl:10013/epic.28122.d001) * BASIS: Meteor (1964) (URI: https://de.wikipedia.org/wiki/Meteor_(Schiff))
11 M50_409 * LATITUDE: 31.333333 * LONGITUDE: 29.845000 * DATE/TIME: 1978-11-13T00:00:00 * LOCATION: Mediterranean Sea * CAMPAIGN: M50 (URI: hdl:10013/epic.28122.d001) * BASIS: Meteor (1964) (URI: https://de.wikipedia.org/wiki/Meteor_(Schiff))
12 M50_415 * LATITUDE: 31.025000 * LONGITUDE: 28.926667 * DATE/TIME: 1978-11-13T00:00:00 * LOCATION: Mediterranean Sea * CAMPAIGN: M50 (URI: hdl:10013/epic.28122.d001) * BASIS: Meteor (1964) (URI: https://de.wikipedia.org/wiki/Meteor_(Schiff))
13 M50_421 * LATITUDE: 31.295000 * LONGITUDE: 28.075000 * DATE/TIME: 1978-11-13T00:00:00 * LOCATION: Mediterranean Sea * CAMPAIGN: M50 (URI: hdl:10013/epic.28122.d001) * BASIS: Meteor (1964) (URI: https://de.wikipedia.org/wiki/Meteor_(Schiff))
14 M50_424 * LATITUDE: 31.373333 * LONGITUDE: 27.740000 * DATE/TIME: 1978-11-13T00:00:00 * LOCATION: Mediterranean Sea * CAMPAIGN: M50 (URI: hdl:10013/epic.28122.d001) * BASIS: Meteor (1964) (URI: https://de.wikipedia.org/wiki/Meteor_(Schiff))
15 Parameter(s): Event label (Event)
16 Latitude of event (Latitude)
17 Longitude of event (Longitude)
18 DEPTH, water [m] (Depth water) * GEOCODE
19 Cadmium [nmol/l] (Cd) * PI: Kremling, Klaus
20 Zinc [nmol/l] (Zn) * PI: Kremling, Klaus
21 Copper [nmol/l] (Cu) * PI: Kremling, Klaus
22 Iron [nmol/l] (Fe) * PI: Kremling, Klaus
23 Manganese [nmol/l] (Mn) * PI: Kremling, Klaus
24 License: Creative Commons Attribution 3.0 Unported (CC-BY-3.0) (URI: https://creativecommons.org/licenses/by/3.0/)
25 Size: 34 data points
26
27 Event Latitude Longitude Depth water [m] Cd [nmol/l] Zn [nmol/l] Cu [nmol/l] Fe [nmol/l] Mn [nmol/l]
28 M50_390 31.9050 31.3250 20 0.191 3.365 3.462 5.989 22.207
29 M50_395 31.9133 32.1633 20 0.239 5.659 3.305 3.223 14.198
30 M50_407 31.7467 30.1500 20 0.200 3.671 5.193 6.267 15.836
31 M50_409 31.3333 29.8450 20 0.127 3.671 5.665 7.879 8.737
32 M50_415 31.0250 28.9267 20 0.294 15.448 3.462 6.088 12.014
33 M50_421 31.2950 28.0750 20 0.112 3.212 4.406 14.862 12.560
34 M50_424 31.3733 27.7400 20 6.118 5.665 7.879 13.652
35
```

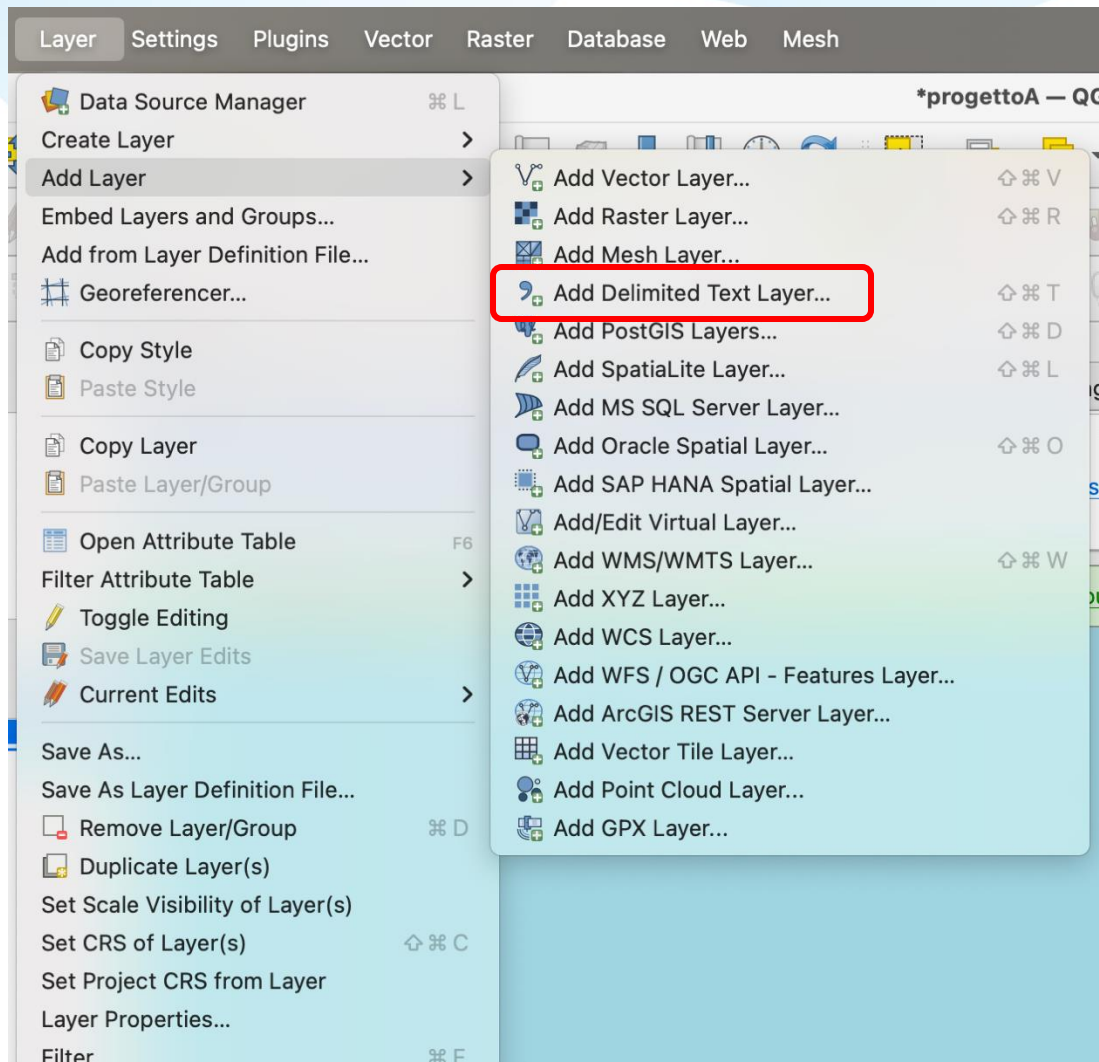
Check formal compatibility

Given that data is contained in the tabular lines at the end of the header (delimited by characters /* and */), we remove the header, then substitute all the tabs with a comma. Also name of the fields could generate problems, so we leave only names, without spaces or other characters (such as [] or /) and save the file as .csv.

M50_424_trace_metal_3.csv ✕									
1	Event, Latitude, Longitude, Depth, Cd, Zn, Cu, Fe, Mn								
2	M50_390, 31.9050, 31.3250, 20, 0.191, 3.365, 3.462, 5.909, 22.207								
3	M50_395, 31.9133, 32.1633, 20, 0.239, 5.659, 3.305, 3.223, 14.198								
4	M50_407, 31.7467, 30.1500, 20, 0.200, 3.671, 5.193, 6.267, 15.836								
5	M50_409, 31.3333, 29.8450, 20, 0.127, 3.671, 5.665, 7.879, 8.737								
6	M50_415, 31.0250, 28.9267, 20, 0.294, 15.448, 3.462, 6.088, 12.014								
7	M50_421, 31.2950, 28.0750, 20, 0.112, 3.212, 4.406, 14.862, 12.560								
8	M50_424, 31.3733, 27.7400, 20, 6.118, 5.665, 7.879, 13.652								

Check formal compatibility

Since the exercise will involve stylization, we have to make sure each field is recognised for its format (numbers or strings). We shortly open the file in QGIS to impose the format of each field.



Check formal compatibility

Data Source Manager | Delimited Text

File name: /Library/CloudStorage/OneDrive-ISPRA/Documenti/KMP/NFP_2025/Kremling_hydrography/M50_424_trace_metal_3.csv

Layer name: M50_424_trace_metal_3 Encoding: UTF-8

File Format

☐ CSV (comma separated values) ☒ Tab ☐ Colon ☐ Space

☐ Regular expression delimiter ☒ Semicolon ☒ Comma Others: |

☒ Custom delimiters Quote: " Escape: "

Record and Fields Options

Number of header lines to discard: 0 ☐ Decimal separator is comma

☒ First record has field names ☐ Trim fields

☐ Detect field types ☐ Discard empty fields

Custom boolean literals

True: False:

Geometry Definition

☒ Point coordinates X field: Longitude Z field: Y field: Latitude M field: ☐ DMS coordinates

☐ Well known text (WKT) Geometry CRS: Project CRS: EPSG:4326 - WGS 84

☐ No geometry (attribute only table)

Layer Settings

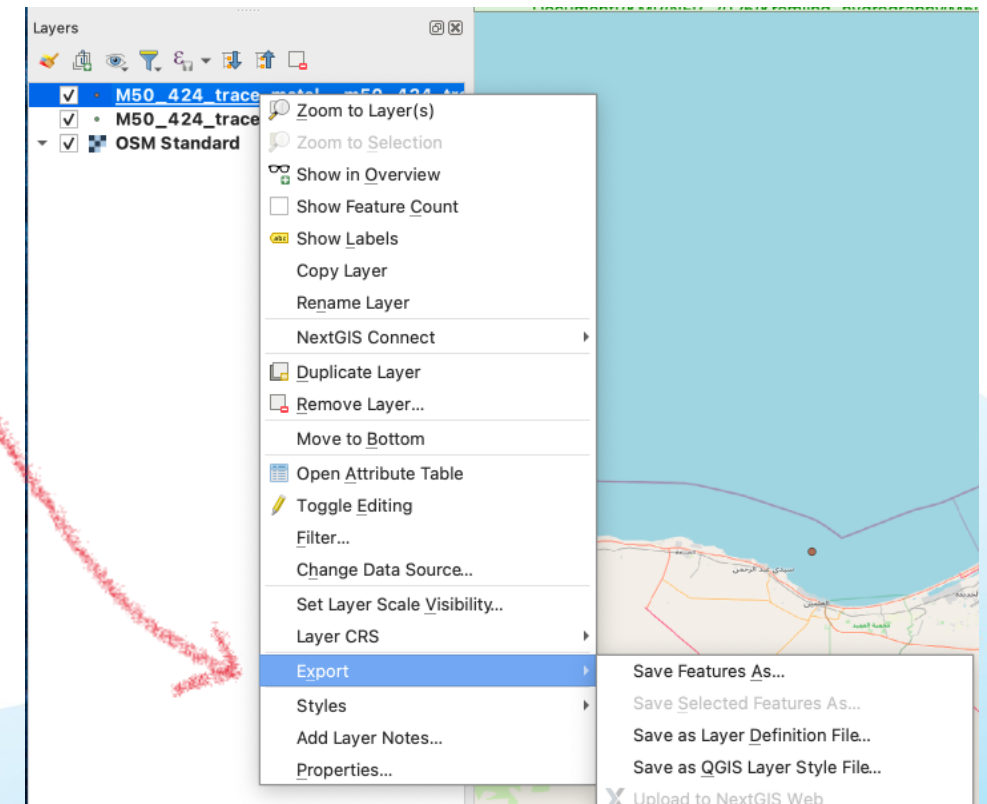
Sample Data

Event	Latitude	Longitude	Depth	Cd	
abc Text (string)	abc Text (string)	abc Text (string)	abc Text (string)	abc Text (string)	abc Te
1 M50_390	Integer (32 bit)	31.3250	20	0.191	3.365
2 M50_395	Integer (64 bit)	32.1633	20	0.239	5.659
3 M50_407	1.2 Decimal (double)	30.1500	20	0.200	3.671
4 M50_409	t/f Boolean	29.8450	20	0.127	3.671
5 M50_415	Date	28.9267	20	0.294	15.44
6 M50_421	Time	28.0750	20	0.112	3.212
7 M50_424	Date & Time	27.7400	20		6.118

Help Add Close

We search the file, make sure the coordinate reference system is fine, turn each numerical parameter in decimal format, and we press «Add».

The layer will appear on the Table of Contents of QGIS, we can export it as a Geopackage.



Check formal compatibility

Data Source Manager | Delimited Text

File name: /Library/CloudStorage/OneDrive-ISPRA/Documenti/KMP/NFP_2025/Kremling_hydrography/M50_424_trace_metal_3.csv

Layer name: M50_424_trace_metal_3 Encoding: UTF-8

File Format

☐ CSV (comma separated values) ☒ Tab ☐ Colon ☐ Space

☐ Regular expression delimiter ☒ Semicolon ☒ Comma Others: |

☒ Custom delimiters Quote: " Escape: "

Record and Fields Options

Number of header lines to discard: 0 ☐ Decimal separator is comma

☒ First record has field names ☐ Trim fields

☐ Detect field types ☐ Discard empty fields

Custom boolean literals

True: False:

Geometry Definition

☒ Point coordinates X field: Longitude Y field: Latitude ☐ DMS

☐ Well known text (WKT)

☐ No geometry (attribute only table) Geometry CRS:

Layer Settings

Sample Data

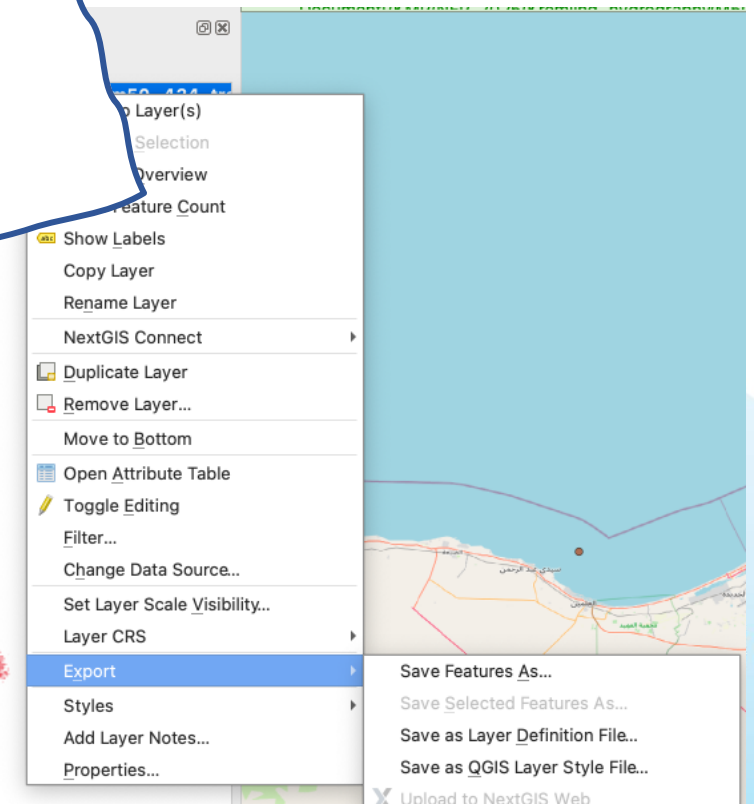
	Event	Latitude	Longitude	Depth	Cd	
	abc Text (string)	abc Text (string)	abc Text (string)	Text (string)	abc Text (string)	abc Text (string)
1	M50_390	Integer (32 bit)	31.3250	20	0.191	3.365
2	M50_395	Integer (32 bit)	32.1633	20	0.239	5.659
3	M50_407	Integer (64 bit)	30.1500	20	0.200	3.671
4	M50_409	1.2 Decimal (double)	29.8450	20	0.127	3.671
5	M50_415	t/f Boolean	28.9267	20	0.294	15.444
6	M50_421	Date	28.0750	20	0.112	3.212
7	M50_424	Date & Time	27.7400	20		6.118

Help Add Close

We search the file, make sure the coordinate reference system is fine, turn each numerical parameter in decimal format, and we press «Add».

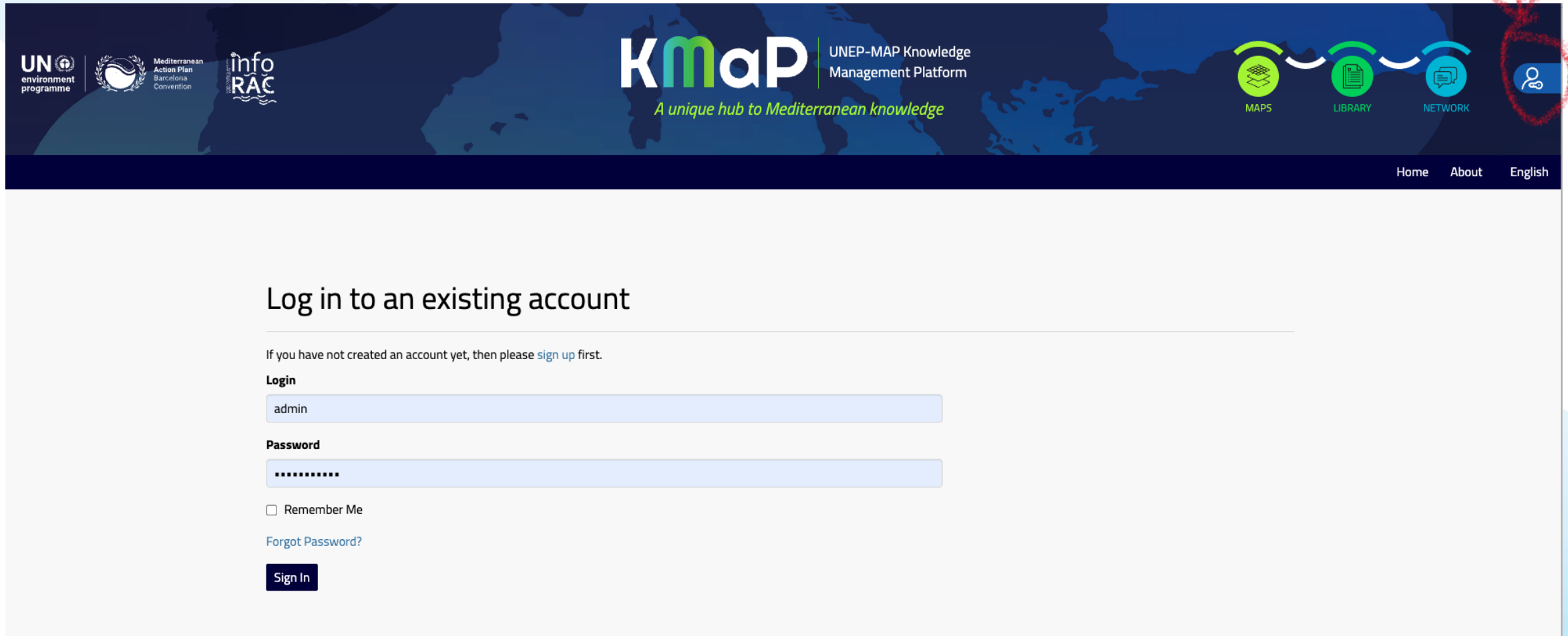
The layer will appear on the Table of Contents of QGIS, we can export it as a Geopackage.

Now the file is ready to be imported in KMaP!



Data import in KMaP and customization

By clicking on the sign-in button, in the homepage, you will be redirected to login form. Enter your credentials as sent by mail



The screenshot shows the KMaP (UNEP-MAP Knowledge Management Platform) homepage. The header features logos for the UN Environment Programme, the Mediterranean Action Plan Barcelona Convention, and infoRAC. The KMaP logo is prominently displayed with the tagline "A unique hub to Mediterranean knowledge". Navigation icons for MAPS, LIBRARY, and NETWORK are visible, along with a user profile icon circled in red. The main content area is titled "Log in to an existing account" and includes a link to "sign up" for new users. The login form contains fields for "Login" (username) and "Password", a "Remember Me" checkbox, a "Forgot Password?" link, and a "Sign In" button.

Log in to an existing account

If you have not created an account yet, then please [sign up](#) first.

Login

admin

Password

☐ Remember Me

[Forgot Password?](#)

Sign In

Data import in KMaP and customization

Once logged in the button changes shape, let's click on it and choose «Catalogue».
This is the section reserved for **editing**.



KMAP is conceived as a unique access hub to the UNEP-MAP (Mediterranean Action Plan) knowledge heritage. It is composed by a Data Hub, accessible through the "Maps" button, collecting geographical data in broader sense. The Knowledge Hub, accessible through "Library" button, collecting all the UNEP-MAP documental heritage, and an Exchange Hub aimed to enforce the cooperation with UNEP-MAP contributors, stakeholders, citizens, and communities of interests. At present, two sections are completed: the Data Hub and the Knowledge Hub, while the Exchange Hub is in preparation. Users with major rights granted can not only view but also create contents and manage rights on their own material, creating a proper "personal use" space inside the platform. Come and discover with us the Knowledge MAP!



DATASET THEMES



Data import in KMaP and customization

In the catalogue, let's click on «Add Resource» and choose «Upload dataset» to enter the upload interface

The screenshot displays the KMaP (UNEP-MAP Knowledge Management Platform) interface. The header features logos for the UN environment programme, Mediterranean Action Plan Barcelona Convention, and infoRAC, alongside the KMaP logo and the text 'UNEP-MAP Knowledge Management Platform' and 'A unique hub to Mediterranean knowledge'. Navigation icons for MAPS, LIBRARY, and NETWORK are visible, along with a power icon. The main content area shows a list of resources with a 'Filter' button and '16,718 Resources found'. The 'Add Resource' button is highlighted, and its dropdown menu is open, showing options: 'Upload dataset' (highlighted in red), 'Upload document', 'Create dataset', 'Create map', 'Create geostory', 'Create dashboard', and 'Remote services'. The resource list includes 'MEDQSR - Mediterranean Quality Status Assessments Report' by admin, 'Marine Litter Dashboard' by INFORAC Editor, and 'Beaches and Seafloor marine litter from last MED-QSR (2023)' by INFORAC Editor. Each resource entry has a 'View' button.

UN environment programme | Mediterranean Action Plan Barcelona Convention | infoRAC | KMaP | UNEP-MAP Knowledge Management Platform | A unique hub to Mediterranean knowledge | MAPS | LIBRARY | NETWORK | Home | About | English

Filter 16,718 Resources found

Add Resource

- Upload dataset
- Upload document
- Create dataset
- Create map
- Create geostory
- Create dashboard
- Remote services

MEDQSR - Mediterranean Quality Status Assessments Report

admin

Marine Litter Dashboard

The last Mediterranean Quality Status Report (2023) has a section regarding the Marine litter and ancillary data, used to achieve results explained in the report, are stored in the KMaP. A sample of this precious data, fruit of the cooperation of all the Countries and the harmonization and collation work performed from the UNEP-MAP Regional Activity Centers is reported here. Also, connection exists with the GPML.

INFORAC Editor

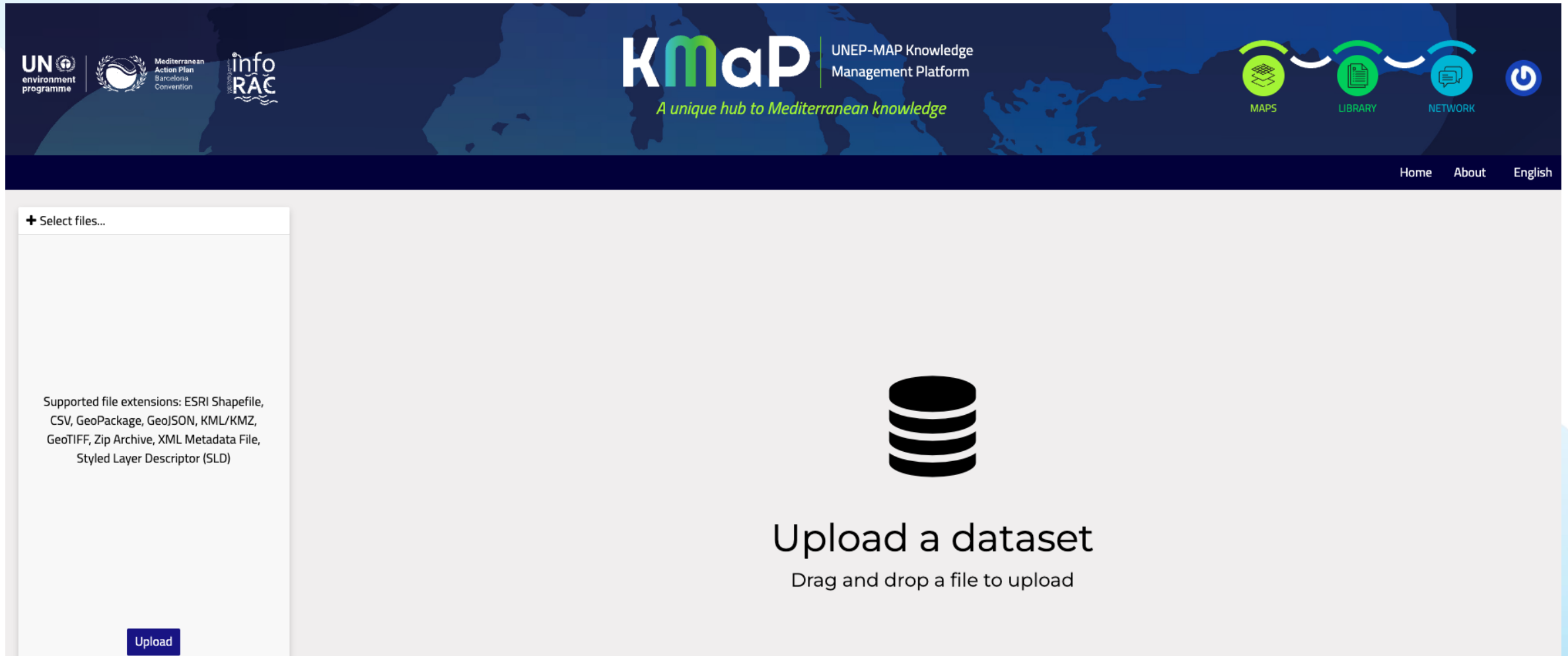
Beaches and Seafloor marine litter from last MED-QSR (2023)

Collation of beaches and seafloor marine litter ancillary data, for the purposes of 2023 edition of the Mediterranean Quality Status Report

INFORAC Editor

Data import in KMaP and customization


In the catalogue, let's click on «Add Resource» and choose «Upload dataset» to enter the upload interface



The screenshot shows the KMaP (UNEP-MAP Knowledge Management Platform) interface. The header features logos for the UN Environment Programme, the Mediterranean Action Plan Barcelona Convention, and info RAC. The KMaP logo is prominently displayed with the tagline "A unique hub to Mediterranean knowledge". Navigation links for MAPS, LIBRARY, and NETWORK are visible, along with a power button icon. The main content area is titled "Upload a dataset" and includes a database icon and the instruction "Drag and drop a file to upload". On the left, a sidebar contains a "Select files..." button and a list of supported file extensions: ESRI Shapefile, CSV, GeoPackage, GeoJSON, KML/KMZ, GeoTIFF, Zip Archive, XML Metadata File, and Styled Layer Descriptor (SLD). An "Upload" button is located at the bottom of this sidebar.

UN environment programme | Mediterranean Action Plan Barcelona Convention | info RAC

KMaP | UNEP-MAP Knowledge Management Platform
A unique hub to Mediterranean knowledge


MAPS | LIBRARY | NETWORK | 

Home | About | English

+ Select files...

Supported file extensions: ESRI Shapefile, CSV, GeoPackage, GeoJSON, KML/KMZ, GeoTIFF, Zip Archive, XML Metadata File, Styled Layer Descriptor (SLD)

Upload

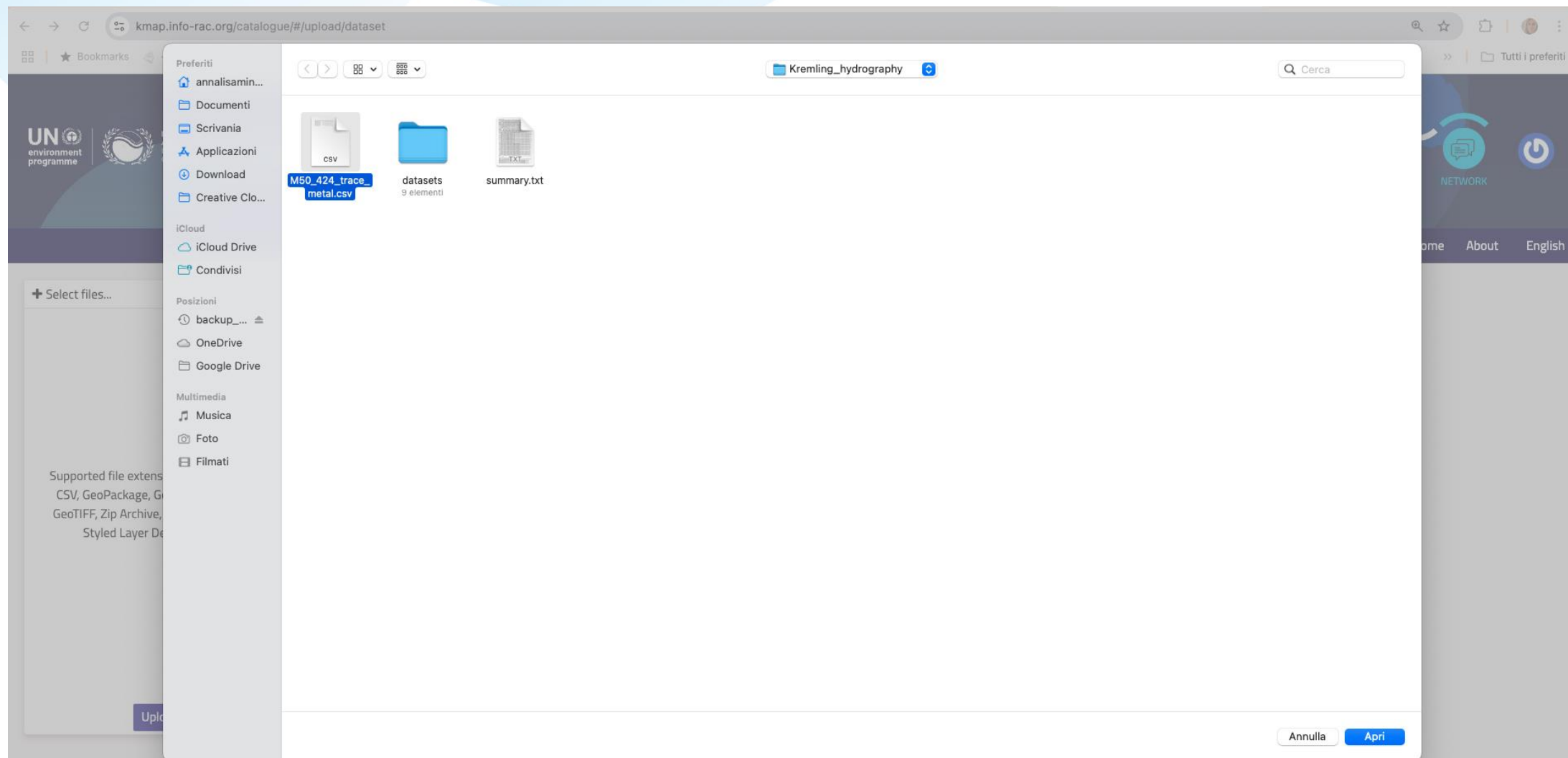


Upload a dataset

Drag and drop a file to upload

Data import in KMaP and customization

Through the «+ Select files» button let's select the .gpkg file

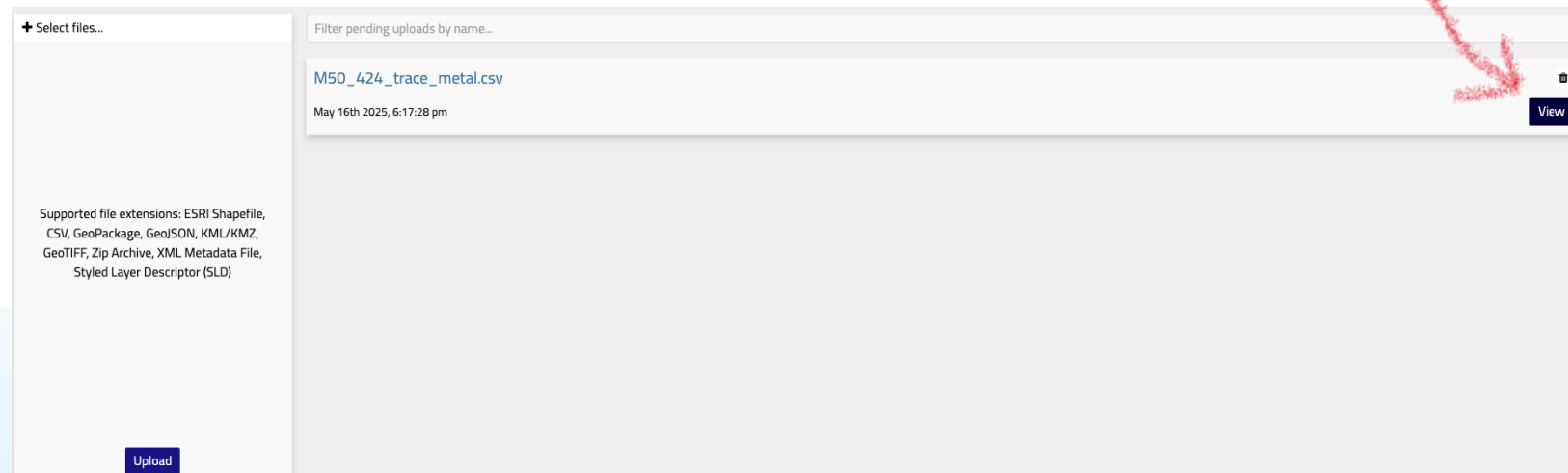
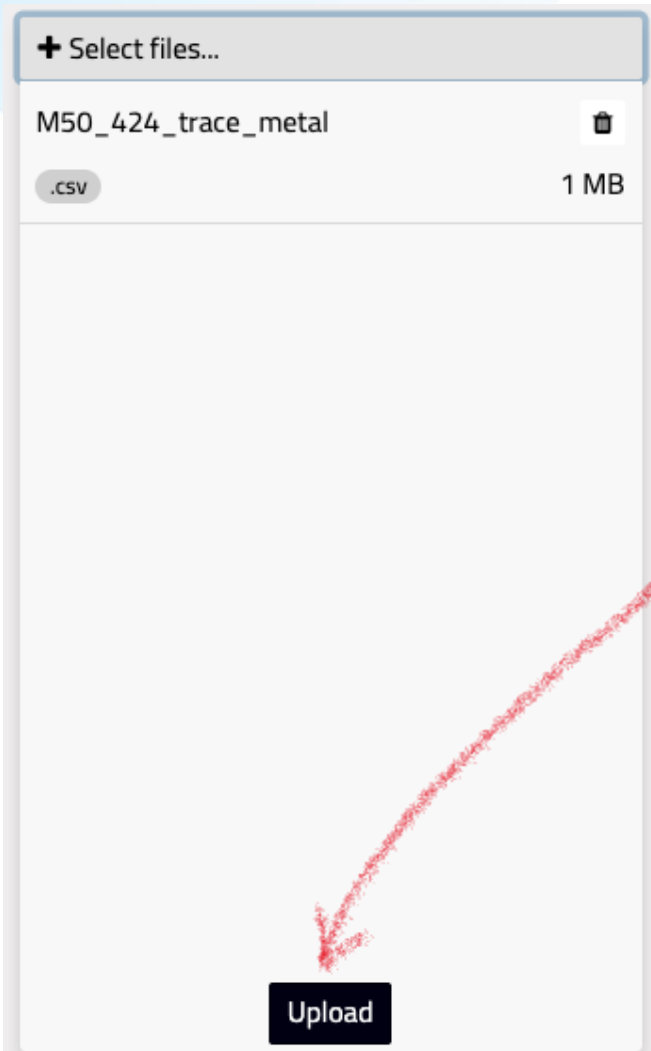


Meeting

Data import in KMaP and customization

The file is selected. By clicking on upload the uploading process starts...

...and it ends when the file name is evidenced in blue (while uploading is black). Now we can view the result:



Data import in KMaP and customization

The map is visualized with a very basic symbology. We can query the points and see that all the fields have been automatically recognised.

The screenshot displays the KMaP web application interface. The header includes logos for UN environment programme, Mediterranean Action Plan Barcelona Convention, and info RAC, along with the KMaP logo and the text 'A unique hub to Mediterranean knowledge'. Navigation icons for MAPS, LIBRARY, and NETWORK are visible. A toolbar at the top offers actions like Save, View, Edit, Share, Print, Filter, Download, Measure, Create Map, and Delete. The main map area shows a coastal region with several red square data points. A legend is on the left, and a detailed metadata panel is on the right. The metadata panel shows the selected layer 'm50_424_trace_metal' with coordinates 'Lat: 31.301 - Long: 28.058' and a table of attributes.


Attribute	Value
ogc_fid:	6
event:	M50_421
depth water [m]:	20
cd [nmol/l]:	0.112
zn [nmol/l]:	3.212
cu [nmol/l]:	4.406
fe [nmol/l]:	14.862
mn [nmol/l]:	12.560

Scale: 1:591658711

Meeting

Data import in KMaP and customization

Now we can stylise the map by clicking on Edit > Style



The screenshot displays the KMaP (Knowledge Management Platform) interface. The top header features logos for the UN Environment Programme, the Mediterranean Action Plan Barcelona Convention, and infoRAC, alongside the KMaP logo and the text "UNEP-MAP Knowledge Management Platform" and "A unique hub to Mediterranean knowledge". Navigation icons for MAPS, LIBRARY, NETWORK, and a power button are visible on the right. Below the header, a link "< Go back to m50_424_trace_metal" is present. The main map area shows a light blue background with a red square and a red line. A style editor panel is open on the left, titled "Red Square". It includes a "Copy from" button, an "Apply" button, and a "Code editor" tab. The panel lists various style properties: Shape (a black square icon), Fill color (a red color bar), Stroke color (a black color bar), Stroke width (a slider set to 1 px), Radius (a slider set to 3 px), and Rotation (a slider set to 0°). A red arrow points from the red square on the map to the "Red Square" style editor panel. A text box in the bottom right corner explains that style editing can be done visually from the screen or by code.

The Style editing could be done visually from screen (as in this case) or by code (useful when we create a style e.g. in a desktop GIS, and we can export it as a .sld – Styled Layer Descriptor – standard file)

Data import in KMaP and customization

Now we can stylise the map by clicking on Edit > Style

The screenshot displays the KMaP interface. The top header includes logos for the UN Environment Programme, the Mediterranean Action Plan Barcelona Convention, and infoRAC, alongside the KMaP logo and the text 'UNEP-MAP Knowledge Management Platform' and 'A unique hub to Mediterranean knowledge'. Navigation icons for MAPS, LIBRARY, NETWORK, and a power button are on the right. A breadcrumb trail shows '< Go back to m50_424_trace_metal'. The left sidebar contains a 'Copy from' button, an 'Apply' button, and a 'Code editor' button. Below these are icons for map navigation and a 'Red Square' layer. The main map area shows a topographic map of a mountainous region with several red square markers. A right sidebar contains icons for map navigation and a filter icon. A text box on the right lists functionalities: 'Here we can: change the marker, style the map using icons, filter data...among other functionalities.'

UN environment programme | Mediterranean Action Plan Barcelona Convention | infoRAC | KMaP | UNEP-MAP Knowledge Management Platform | A unique hub to Mediterranean knowledge | MAPS | LIBRARY | NETWORK | Power button

< Go back to m50_424_trace_metal

Copy from | Apply | Code editor

Red Square

Shape: Red Square

Fill color: Red

Stroke color: Black

Stroke width: 1 px

Radius: 3 px

Rotation: 0°

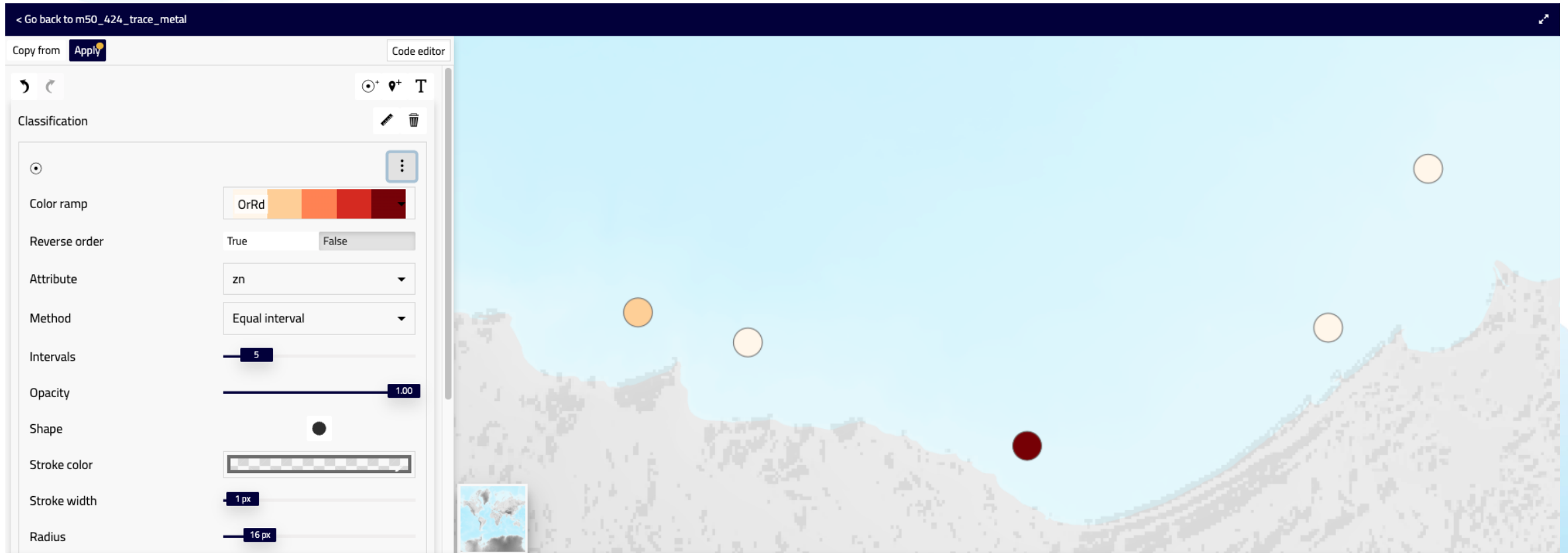
Here we can:

- change the **marker**
- style the map using **icons**
- filter** data

...among other functionalities.

Data import in KMaP and customization

For this map we stylise the points growing the symbol and colouring it in reason of «zn» values. So we choose «Classification style», select the attribute «zn» and we observe the result. If the style is satisfying we press «Apply».



Metadata filling

Once we stylised our dataset we should complete the Metadata. So let's go to «Edit > Metadata». Mandatory metadata are highlighted in red. Let's fill them together.

The screenshot shows the 'Advanced Metadata' editing interface. At the top, there are tabs for 'Edit', 'Preview', and 'Settings'. Below these are five numbered tabs: 1. Basic Metadata, 2. Location and Licenses, 3. Optional Metadata, 4. Dataset Attributes, and 5. Additional info. The 'Basic Metadata' tab is selected. It contains several fields: 'Thumbnail' (with a map image and an 'Edit' button), 'Title' (with the text 'Trace metal'), 'Abstract' (with a text area containing a paragraph about trace metal data), 'Date type' (set to 'Publication'), 'Date' (set to '2025-05-17 10:06 am'), 'Category' (set to 'Bathing waters'), 'Group' (set to '---'), 'Free-text Keywords' (empty), and 'UNEP-MAP themes' (set to 'Pollution'). Mandatory fields are highlighted in red. At the bottom right, there are buttons for 'Return to Dataset', 'Update', and 'Next >>'.

Some hints:

- Choose a meaningful title
- Write a brief description (including topic, type of data and origin of the dataset)
- Choose an INSPIRE category
- Choose a UNEP-MAP theme

Metadata filling

Once we stylised our dataset we should complete the Metadata. So let's go to «Edit > Metadata». Mandatory metadata are highlighted in red. Let's fill them together.

The screenshot shows a metadata editing interface with five numbered steps: 1. Basic Metadata, 2. Location and Licenses, 3. Optional Metadata, 4. Dataset Attributes, and 5. Additional info. Steps 1 and 2 are highlighted in red, indicating they are mandatory. The interface includes tabs for Edit, Preview, Settings, and Advanced Metadata. The Basic Metadata section contains fields for Language (English), License (CC-BY 4.0), and Attribution (Kremling, Klaus; Petersen, Hauke (1981): Hydrography ...). The Location and Licenses section contains a Regions dropdown menu (Egypt [North Africa]) and a Data quality statement text area. Both the Regions dropdown and the Data quality statement text area are marked as mandatory fields.

Some hints:

- Choose the right license
- Fill the Attribution field with the correct citation
- Select the geographical region

Metadata filling

Once we stylised our dataset we should complete the Metadata. So let's go to «Edit > Metadata». Mandatory metadata are highlighted in red. Let's fill them together.

The screenshot shows a web interface for filling metadata, divided into five numbered steps: 1. Basic Metadata, 2. Location and Licenses, 3. Optional Metadata, 4. Dataset Attributes, and 5. Additional info. A progress bar at the top indicates the current step. The interface includes various input fields and dropdown menus for different metadata categories.

Basic Metadata (Step 1):

- Other, Optional, Metadata
- Edition** ⓘ: version of the cited resource
- DOI** ⓘ: <https://doi.org/10.1594/PANGAEA.604843>
- Purpose**: Rich text editor with bold, italic, underline, paragraph, and list options.
- Supplemental information**: Rich text editor with bold, italic, underline, paragraph, and list options.

Optional Metadata (Step 3):

- temporal extent start**: Date picker
- temporal extent end**: Date picker
- Maintenance frequency** ⓘ: Dropdown menu
- Spatial representation type** ⓘ: Dropdown menu
- Extra metadata** ⓘ: Text area with instructions: "Additional metadata, must be in format [{"metadata_key": "metadata_value"}, {"metadata_key": "metadata_value"}]"
- Related resources**: Text area

Additional info (Step 5):

- Responsible Parties**
- Point of Contact**: x Kremling and Petersen
- Responsible and Permissions**
- Owner**: admin
- [toggle more Contact Roles](#)

Some hints:

- We fill up the DOI of the publication
- We add the authors as Point of Contact
- We leave our user as responsible for the publication inside the KMaP (in my case «admin»)
- We press «Update»

Now metadata are complete.

Setting permissions on the dataset

Once the dataset is ready to be shared, we can set permissions on it. Going into Share folder we can set specific rules on what Anyone or registered members or a specific User or Group of users can or cannot do with the new dataset.



Share with people and groups

This Page
<https://kmap.info-rac.org/catalogue/#/dataset/20126>

Embed This Dataset
https://kmap.info-rac.org/datasets/geonode:m50_424_trace_metal/embed

Anyone

Registered members

+ Add Users / Groups

Filter by name or permissions

Name ^

Permissions

Download

None

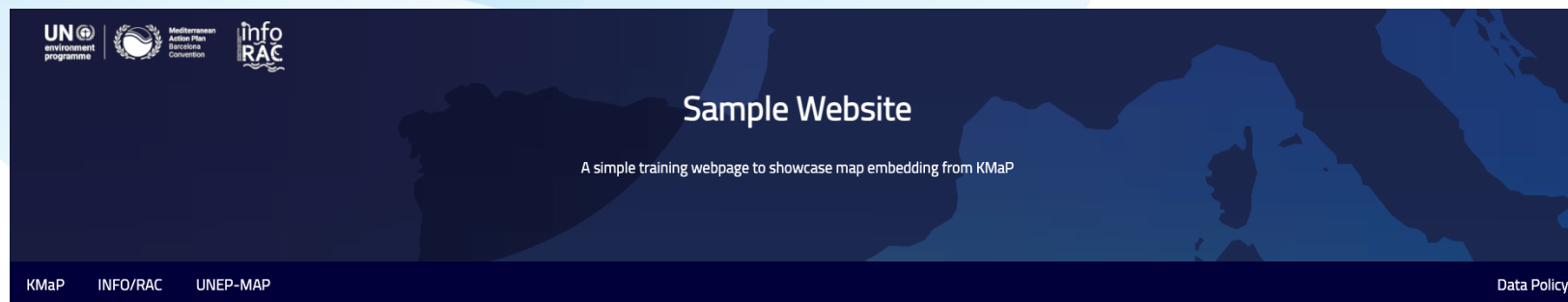
View

Download

The default is «Anyone can Download», and it's fine since also the original dataset is freely available upon attribution. The registered members have slightly more possibilities (Edit and Manage).

From here we can also decide how to use our data. By copying and pasting the link pointing to «Embed this dataset» we can embed the map into a website!

Use the dataset



About KMaP

The first prototype is out! Come and discover the platform and its functionalities



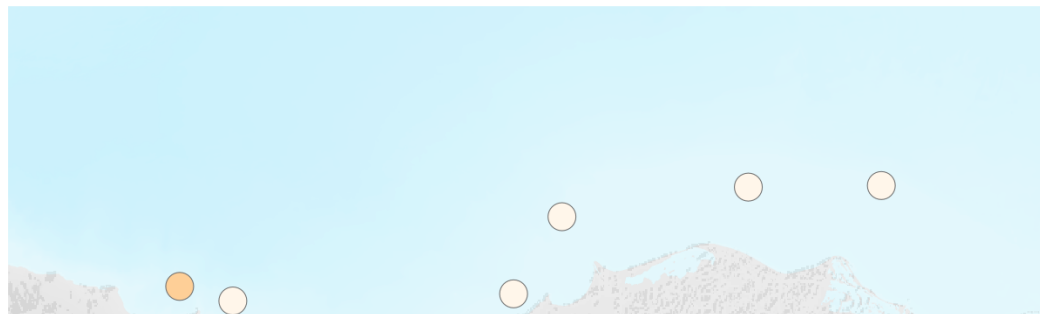
Some text about the platform in culpa qui officia deserunt mollit anim.

More Text

Lorem ipsum dolor sit ame.

How to embed a map

- From "Share" functionality in the desired map, copy the "Embed this map" link and put it into the iframe structure
- The map will be displayed (queryable) on your site, whilst it will be managed from the KMaP
- The sample dataset displayed in this embedded map is the [Trace metal from Kremling and Petersen \(Pangea.de\)](#), available on the KMaP

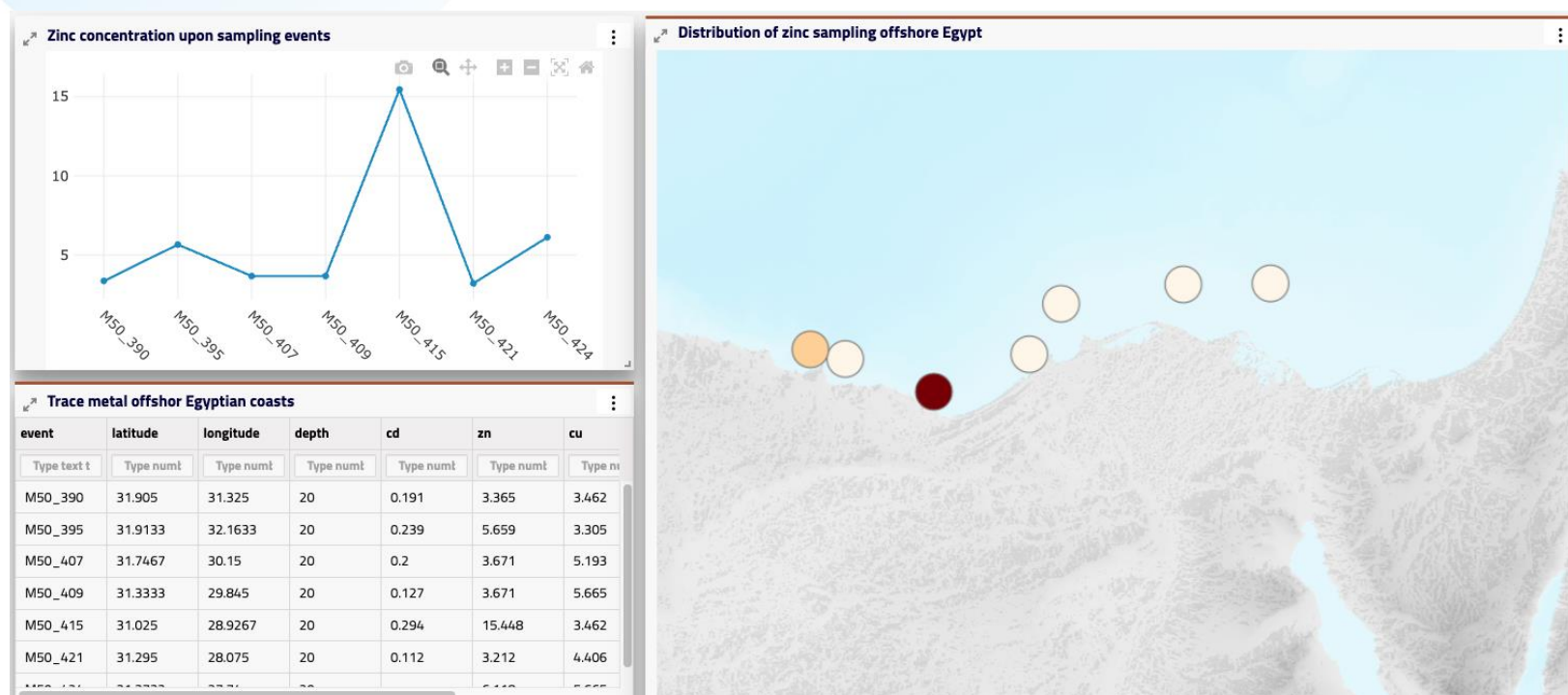


An example of use is reported here:
https://info-rac.github.io/test_website/

The dataset is queryable on the website, but it's still managed by KMaP.

Use the dataset

Another use of the dataset could be to create a dashboard starting from the dataset. We can add a **line graph** of Zinc concentration upon events, we can add a **table** with all the dataset's information , we can add a **map** of the dataset we've just imported.



Data in the widgets could be configured to be **responsive** with respect to the zoom level of the map. Also the Dashboard could be **embedded** in a website, using the same «Share» functionalities.

Thank you for the attention!

annalisa.minelli@info-rac.org



Mediterranean
Action Plan
Barcelona
Convention



• **INFO/RAC**
• **National Focal Points Meeting**
• Palermo, Italy 20-21 May 2025