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**Agenda Item 6: IMAP Pilot Info System and Related Quality Assurance Issues; Data Standards and Data Dictionaries; MAP Data Management Policy**

**IMAP Pilot Info System: User Manual**

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UNEP/MAP  
Athens, 2019



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## **Summary**

The IMAP Pilot Info System (PIS) aims to collect, manage and share data from monitoring programs under the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria (IMAP) in the framework of Barcelona Convention.

## Site Map

### Home page

From the home page of the site it is possible to access to public sections:

- Log in to access private sections
- Info and contacts
- Geographical data
- Standards

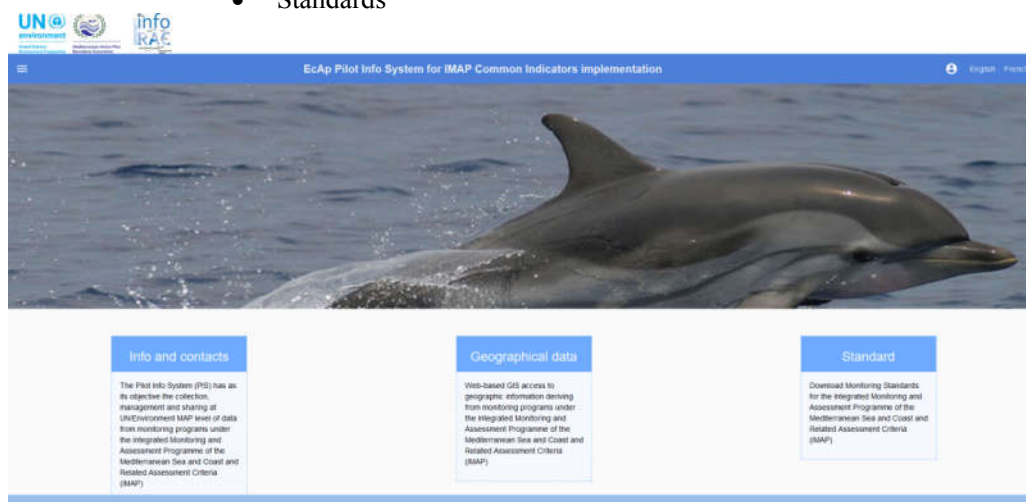



Figure 1: Site home page

To log in, click on the button at the top right (Account ) , enter username and password and press "LOGIN".

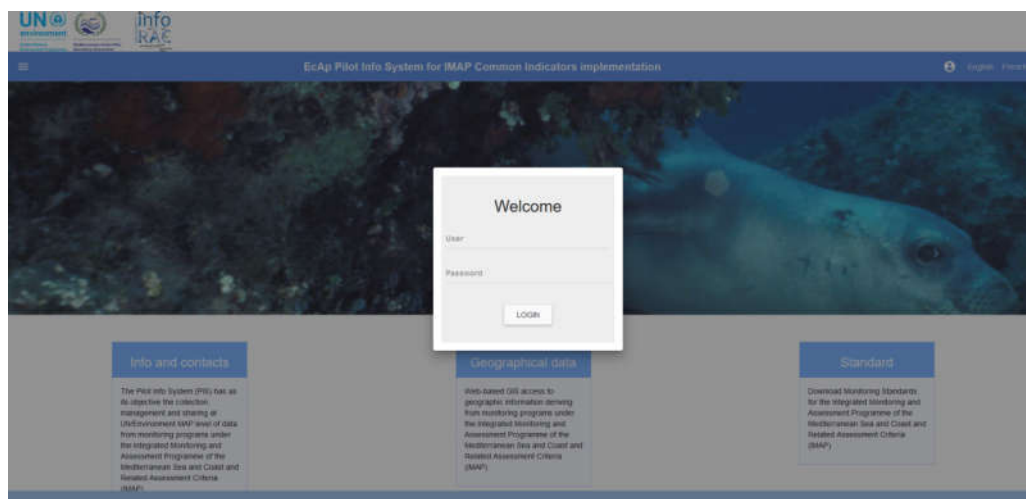


Figure 2: Login

After login, the home page will be updated with new sections depending on the logged user profile:

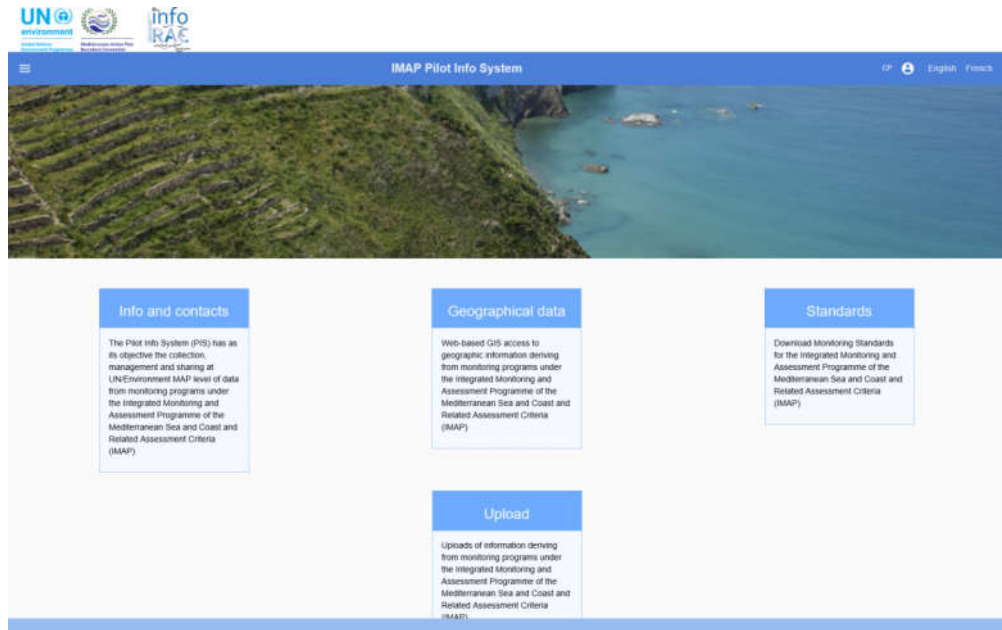


Figure 3: Homepage after Login

### Info and contacts

The "Info and contacts" section contains useful references to contact the site managers.



Figure 4: Info and contacts page

### Geographical data

This section contains the functionalities to access published data, by an anonymous user, through a WEBGIS interface.

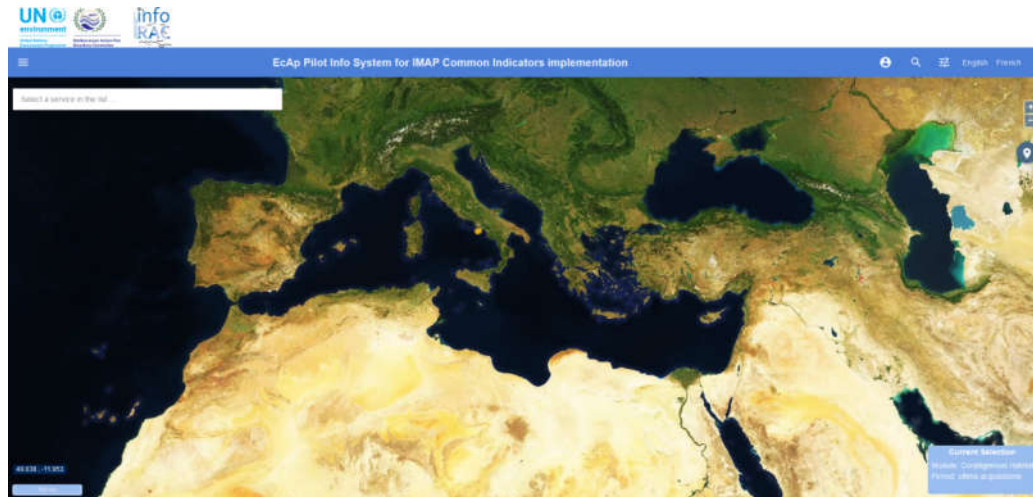








Figure 5: WEBGIS interface

GIS tools available are:

-  Zoom / Pan, allows to change the extent of the map;
- Location search, allows to zoom the map on a location;
- Active mode  allow you to:
  -  Draw the polygon and calculate the area
  -  Draw the line and calculate the length
  -  Query stations
  -  Keep stations previously queried
- Selection of a service in the list.

The “Filters” tool  allows to select:

- A background map;
- The monitored data layer (module type);
- The monitoring period (time interval);
- The last data acquisition;
- Transparency;
- Stations export;
- The possibility of creating a bookmark.



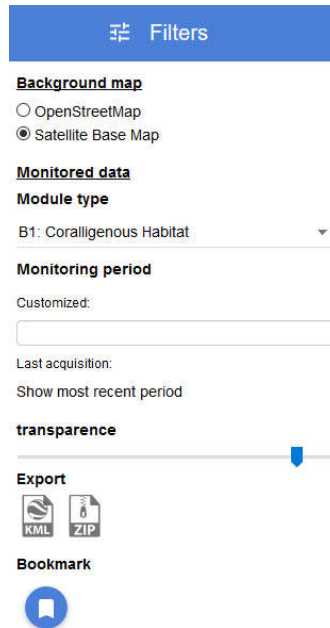


Figure 6: Filters tool

Monitored stations are displayed on the map as points.

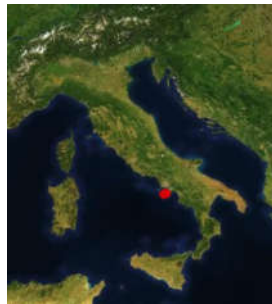


Figure 7: Station point

Selecting a station with the mouse, the consultation page of the relative measures is shown:

WTE	TRANSEPT	DEPTHVE	MEGABENTHOS	MEGABENTHOS_ID	RELIEFAREA	PLOT_SUB
IT	1	1A	48.665801968	14.325620118	PC1	
IT	1	1B	48.679171528	14.281573246	PC2	
IT	1	1C	48.672488282	14.323688215	PC3	
IT	2	2A	48.5381281483	14.222878121	CA1	
IT	2	2B	48.527626882	14.1987491196	CA2	
IT	2	2C	48.5428383757	14.285434244	CA3	

Figure 8: Measures detail page

## Standards

The “Standards” section allows to a simple user to:

- View the list of information standards;
- Download an information standard in Excel format;

Ecological objective	Standard name	Description	Common Indicator	Version	Active	Date	Actions
EO1 - Biodiversity	B1	Coralligenous Habitat	Common indicator 1. Habitat distribution range to also consider habitat extent as a relevant attribute. Common indicator 2. Condition of the habitat's typical species and communities.	1	YES	15-05-2019	Download
EO1 - Biodiversity	B2	MarekRhodolith Habitat	Common indicator 1. Habitat distribution range to also consider habitat extent as a relevant attribute. Common indicator 2. Condition of the habitat's typical species and communities.	1	YES	15-05-2019	Download
EO1 - Biodiversity	B3	Psuedonia Oceanica Meadows Habitat	Common indicator 1. Habitat distribution range to also consider habitat extent as a relevant attribute. Common indicator 2. Condition of the habitat's typical species and communities.	1	YES	15-05-2019	Download
EO8 - Coastal Ecosystems and Landscapes	C1	Cossetine	Common indicator 16. Length of coastline subject to physical disturbance due to the influence of man-made structures to also host the assessment of EO1 on habitat extent.	1	YES	15-05-2019	Download
EO5 - Eutrophication	E1	Nutrients & physical and chemical parameters	Common indicator 13. Concentration of key nutrients in water column. Common indicator 14. Chlorophyll-a concentration in water column.	1	YES	15-05-2019	Download
EO7 - Hydrography	H1	Hydrography	Common indicator 15. Location and extent of the habitats impacted directly by hydrographic alterations to also feed the assessment of EO1 on habitat extent.	1	YES	15-05-2019	Download
EO2 - Non Indigenous Species	I1	Non Indigenous Species	Common indicator 6. Trends in abundance, temporal occurrence, and spatial distribution of non-indigenous species, particularly invasive, non-indigenous species, notably in risk areas.	1	YES	15-05-2019	Download
EO10 - Marine Litter	M1	Beach litter	Common indicator 22. Trends in the amount of litter washed ashore and/or deposited on coastlines (including analysis of its composition, spatial distribution and, where possible, source).	1	YES	15-05-2019	Download
EO10 - Marine Litter	M2	Seafloor litter	Common indicator 23. Trends in the amount of litter in the water column including microplastics and on the seafloor.	1	YES	15-05-2019	Download
EO10 - Marine Litter	M3	Floating microplastics	Common indicator 23. Trends in the amount of litter in the water column including microplastics and on the seafloor.	1	YES	15-05-2019	Download
EO9 - Contaminants	P1	Contaminants in seawater	Common indicator 17. Concentration of key harmful contaminants measured in the relevant matrix (EO9, related to biota, sediment, seawater).	1	YES	15-05-2019	Download
EO9 - Contaminants	Q1	Bathing Water Quality	Common indicator 21. Percentage of intestinal enterococci concentration measurements within established standards.	1	YES	15-05-2019	Download

Figure 9: Standards section (simple user)

For example, the user can download “EO1 - Biodiversity B1 Coralligenous Habitat” standard by clicking on the arrow at the end of the row.

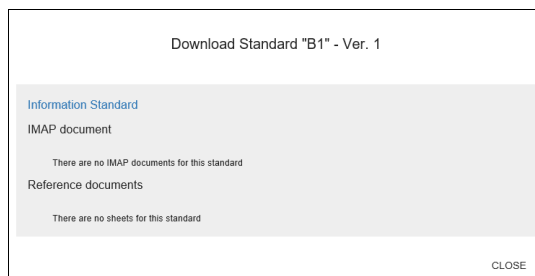


Figure 10: Download Standard

Clicking on “Information Standard” the user can Open, Save or Save as the Excel document.

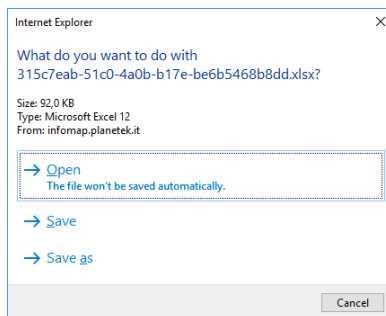


Figure 11: Save Standard

Save the document and then open it.

Every standard has sheets (named <DD\_sheetname>) explaining how to complete sheets (named <sheetname>) that have to contain the measure data.

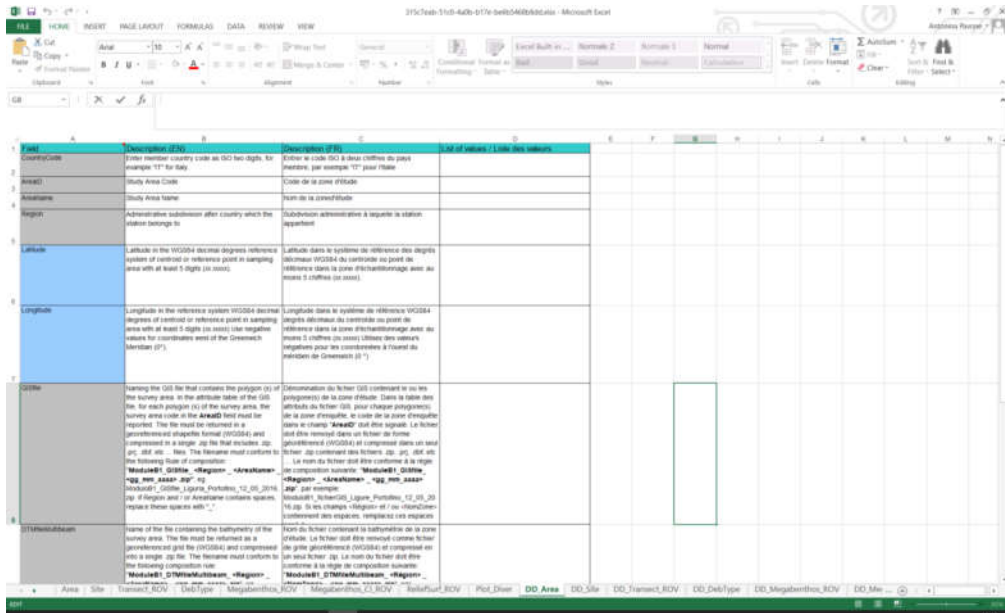


Figure 12: <DD\_sheetname>

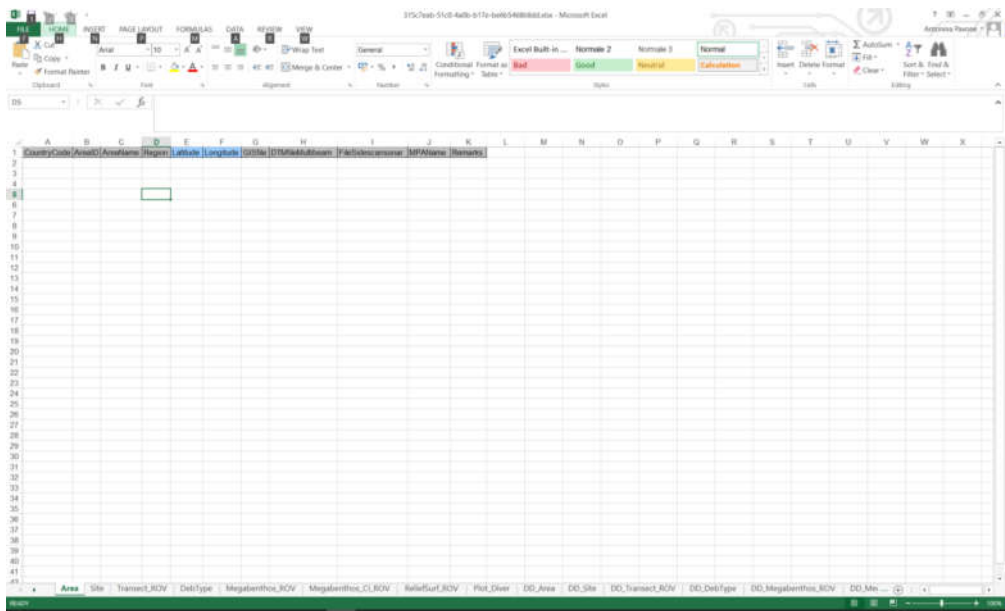


Figure 13: <sheetname>

For example, sheet “DD\_Area” is a data dictionary explaining how to insert data into “Area” sheet in the monitoring file to be uploaded.

### Upload

The upload section allows to upload, verify, validate and publish the monitoring files. The uploaded monitoring files follow a predetermined workflow. Each loaded file will be subject to:


- Conformity check, i.e. verification of compliance with the rules to which the data must be subjected (excel file)
- Validation, i.e. check of administrator or supervisor

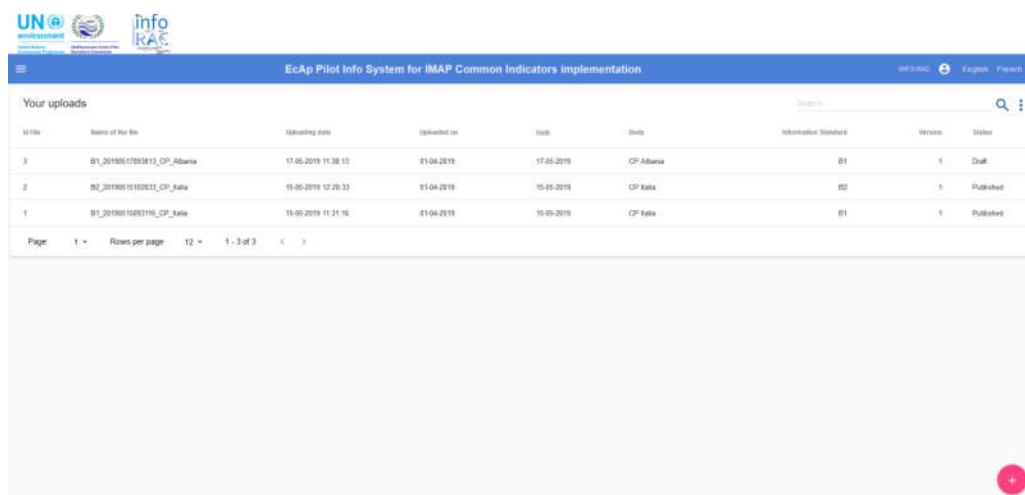
- Publication, i.e. the data are loaded into database, published and accessible via WEBGIS interface.

Workflow states are:

- **Draft:** when file is just loaded;
- **Compliant:** when file passes the conformity check;
- **Not compliant:** when the conformity check gives a negative result;
- **Validated:** when the user makes file valid;
- **Not Validated:** when the user considers the data invalid;
- **Published:** when the user decides to make data public;
- **Canceled:** when the user deletes file from the workflow;

### Upload monitoring file

To upload a monitoring file press the  button on the bottom right.



ID	Name of the file	Uploading date	Uploaded on	Date	Body	Information Standard	Version	Status
3	B1_20190517093113_CP_Albania	17-05-2019 11:38:13	01-04-2019	17-05-2019	CP Albania	B1	1	Draft
2	B2_20190516102631_CP_Italia	15-05-2019 12:20:33	01-04-2019	15-05-2019	CP Italia	B2	1	Published
1	B1_20190516093110_CP_Italia	15-05-2019 11:21:16	01-04-2019	15-05-2019	CP Italia	B1	1	Published

Figure 14: Uploaded files list

In the new upload window (1/3) enter the following information:

- Select sampling period: period in which the monitoring was carried out;

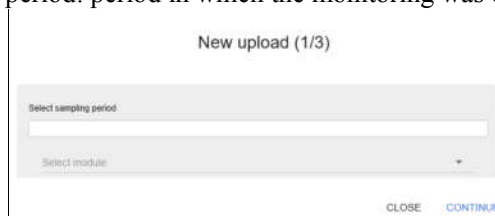


Figure 15: Select sampling period (1)

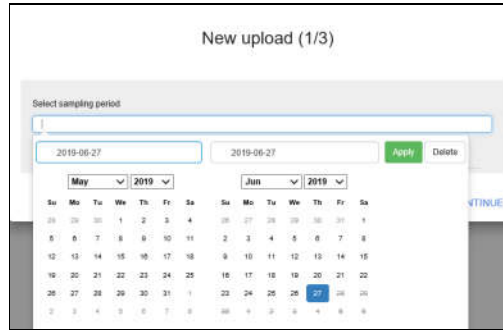


Figure 16: Select sampling period (2)

- Standard module: the name of the standard module filled in with data;

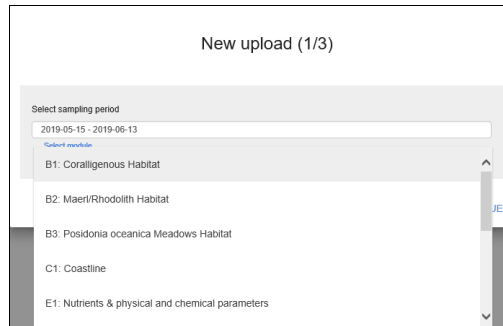


Figure 17: Select the standard module

Press the "CLOSE" button to cancel or "CONTINUE" to continue.

In the next upload window (2/3), the Excel file can be loaded in one of the following ways:

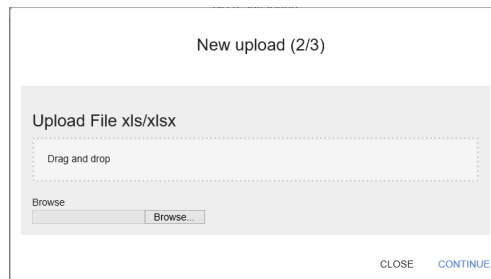


Figure 18: File upload (2/3)

- Drag & drop: upload the file by dragging it into the appropriate section
- Choose file: select the file from the explore window

Once the file has been chosen, press "Upload" to send the data to the server.

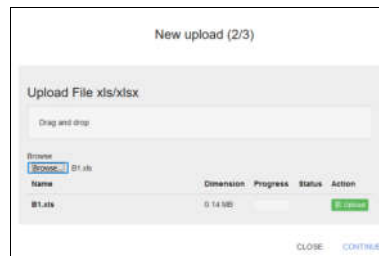


Figure 19: File upload (2/3)

Press the "CLOSE" button to cancel or "CONTINUE" to continue.

In the next upload window (3/3) it is possible to load attachments in one of the following ways:

- Drag & drop: load the file by dragging it into the appropriate section
- Choose file: select the file from the explore window

It is possible to upload one or more attachments. Once the files have been selected, press "UPLOAD" to send the data to the server.

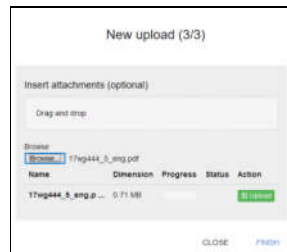


Figure 20: File upload (3/3)

Press the "FINISH" button to complete or "CLOSE" to interrupt all file loading activity.

The uploaded file will take in "Draft" status and will appear in the uploaded file list.

### Search

In the "Upload" section it is possible to carry out both a textual search and an advanced search within the set of uploaded files.

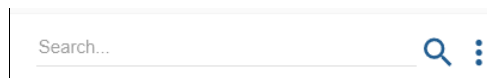


Figure 21: Search and Advanced search

The Text Search allows to search for a text within all uploaded files (not their content).

The advanced search allows to filter on:

- Acquisition time interval
- Loading time interval
- Standard
- File status (Canceled, Compliant, Draft, , ...)

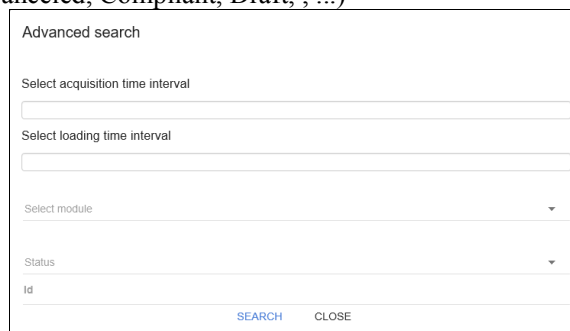
The screenshot shows a form titled "Advanced search". It contains several input fields and dropdown menus: "Select acquisition time interval", "Select loading time interval", "Select module", "Status", and "Id". At the bottom of the form, there are "SEARCH" and "CLOSE" buttons.

Figure 22: Advanced search

### Cancel monitoring file

If the loaded file is in the “Draft” status, it can be removed from workflow. To do this, press the “CANCEL UPLOAD” option on the details page of the loaded file.

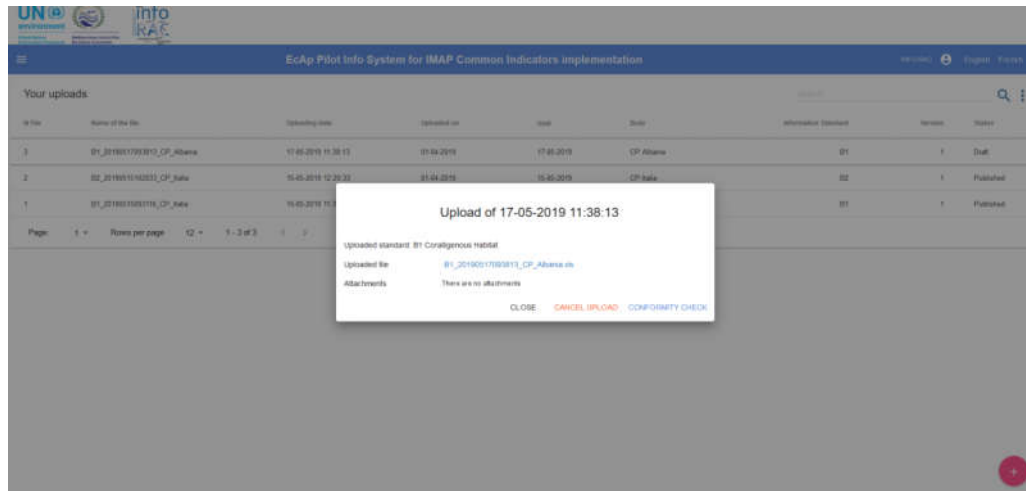


Figure 23: Cancel monitoring file

### Conformity check

To check the conformity of a file (i.e. it respects the rules defined in the information standard) it is necessary to click - from the list of uploads - on the name of the file being in “Draft” status and press the “CONFORMITY CHECK”.

Conformity check can give two results:

- 1) Conformity check failed (see next paragraph)
- 2) Conformity check is successful: loaded file changes from “Draft” to “Compliant” status

### Conformity check failed

If conformity check fails, the system shows an error message.

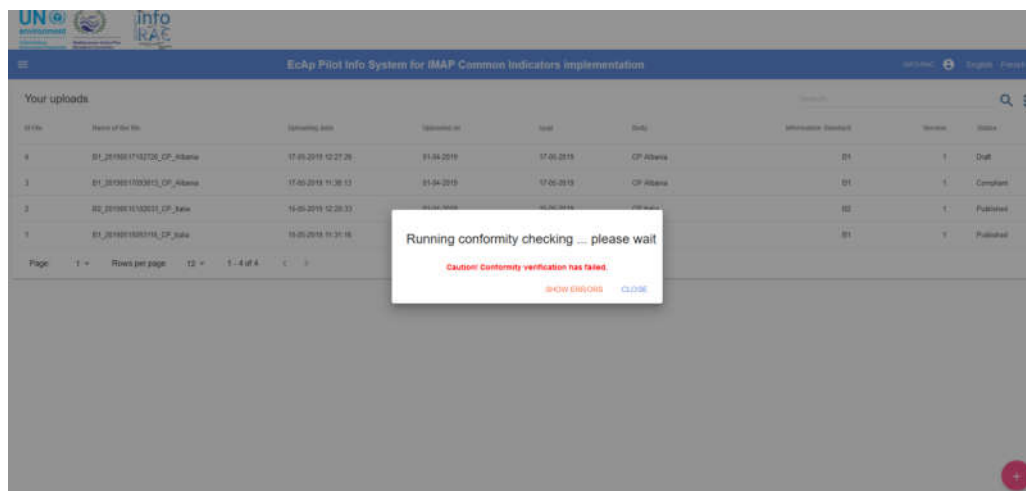


Figure 24: Conformity check error message

By pressing the "SHOW ERRORS" button, it is possible to download an Excel spreadsheet containing all the errors that have to be resolved to pass the conformity check.

sheet	line	column	message	description
Transept	0	,Transept,1A,SiteID	Value "1A" for property SiteID is not present in the related table.	Check the presence of the code SiteID in field SiteID of table Transept
Transept	0	,Transept,1A,SiteID	Value "1A" for property SiteID is not present in the related table.	Check the presence of the code SiteID in field SiteID of table Transept
Transept	0	,Transept,1A,SiteID	Value "1A" for property SiteID is not present in the related table.	Check the presence of the code SiteID in field SiteID of table Transept

Figure 25: Spreadsheet of conformity errors

The excel sheet contains indications on the errors to be managed: code and error message as well as line, column and sheet from which the error derives.

### Conformity check successful

In this case the status of the loaded file changes to “Compliant”.

### Validation and publication

Files in “Compliant” status can be validated and subsequently published.

To validate it is necessary to click on the file and press the "VALID" button.

In the same way it is possible to make it "INVALID".

ID	Name of the file	Uploading date	Uploaded on	Valid	Status	Information Document	Version	Status
4	B1_20190517102726_CP_Albania	17-05-2019 12:27:26	21-04-2019	17-05-2019	CP Albania	B1	1	Not Compliant
3	B1_20190517103011_CP_Albania	17-05-2019 11:30:11	21-04-2019	17-05-2019	CP Albania	B1	1	Compliant
2	B2_20190516103011_CP_Albania	16-05-2019 12:30:11				B2	1	Published
1	B2_20190516021116_CP_Albania	16-05-2019 11:02:11				B2	1	Published

Figure 26: Validation

The monitoring information contained in a previously validated file can be published using the “PUBLISH” button.



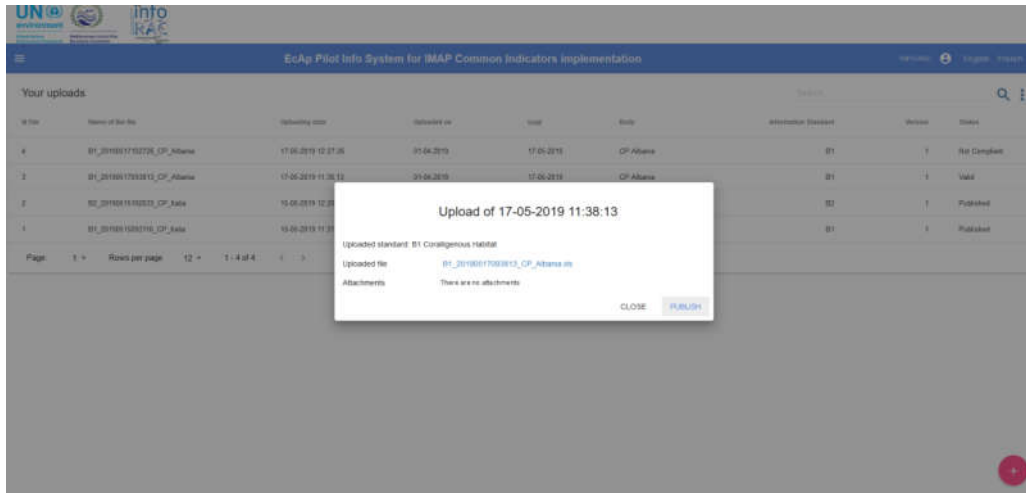


Figure 27: Publishing

This operation involves loading of the monitoring information into database.