

# ICOS

## API and SDK Documentation

Version: 0.1.0

Access to data and metadata from the european Integrated Carbon Observation System, ICOS. The Carbon Portal is a one stop shop for european high quality greenhouse gas measurements.

This API is for users who like to have an easy access to the most common data objects and information about the research stations. Please note, that not all of the data objects and information is available through the API. For example we server only Level 2 data objects. If in doubt, please visit <https://www.icos-cp.eu/about-icos-data> to learn more.

## Default

### icoscp.getCollections

A list of data collections

No parameters returns a list of collection id's with a short description for each collection (what kind of data is included, size, data object id's.)

GET

```
/collections
```

#### Usage and SDK Samples

Curl   Java   Android   Obj-C   JavaScript   C#   PHP   Perl   Python   Rust

```
curl -X GET "http://127.0.0.1:9090/api/collections?id=&limit="
```

### Scopes

#### Parameters

Query parameters

Name	Description
id	Object <i>Collection id returns a list of data object descriptors, included in a specific collection.</i>
limit	Integer (int32) <i>limit the amount of entries returned. Very useful to test your query before you possibly get a list of thousands fo entries.</i>

### Responses

### icoscp.getData

A list of data objects

Download a list of data objects or if you provide a valid data object ID, you get the information about that specific digital object. If you don't set the paramater "limit", by default we set a limit of 25. If you want "all" you need to set limit to -1. But be very careful, we have thousands of data objects.

## GET

/search

### Usage and SDK Samples

Curl   Java   Android   Obj-C   JavaScript   C#   PHP   Perl   Python   Rust

```
curl -X GET "http://127.0.0.1:9090/api/search?bb=&country=&id=&theme=&startDate=&endDate=&variable=&limit=&stationId=&format="
```

### Scopes

### Parameters

Query parameters

Name	Description
bb	array[BigDecimal] <i>BoundingBox. If you provide latitude and longitude of the top left corner and bottom right corner of a box, you will get a list of icos stations within that box. Example: <code>api/stations?bb=[50,-10, 30, 15]</code></i>
country	String <i>Returns a list of stations for a specific country. <a href="https://en.wikipedia.org/wiki/ISO_3166-1_alpha-2#WO">https://en.wikipedia.org/wiki/ISO_3166-1_alpha-2#WO</a> (<a href="https://en.wikipedia.org/wiki/ISO_3166-1_alpha-2#WO">https://en.wikipedia.org/wiki/ISO_3166-1_alpha-2#WO</a>)</i>
id	String <i>Provide a valid digital object id. In return you will get the meta data information about the dataset. If you want to download the data itself including the meta data, you need to call <code>/api/download?id=1234</code></i>
theme	String <i>This is a filter for data belonging to:</i> <ul style="list-style-type: none"><li>• ATC (atmosphere)</li><li>• ETC (ecosystem)</li><li>• OTC (ocean)</li></ul>
startDate	Integer (int32) <i>The measurement/observation data first time stamp is...yyyymmdd</i>
endDate	Integer (int32) <i>The measurement/observation data last time stamp is...yyyymmdd</i>
variable	String <i>This is a full list of variables collected from the ICOS stations. Depending on the THEME and CLASS of the station, not all the variables are available.</i>
limit	Integer (int32) <i>You can limit the returned list to N entries.</i>
stationId	String <i>You can search for data measured at a specific station.</i>
format	String <i>By default you will get a list with meta data about the data objects. If you choose the output to be <code>format=list</code> you will get an array back, which can be used in the downlad part. You may feed this output directly into <code>/api/download?id=list</code></i>

### Responses

## icoscp.getDownload

Download data

Download specific data objects.

GET

/download

Usage and SDK Samples

Curl    Java    Android    Obj-C    JavaScript    C#    PHP    Perl    Python    Rust

```
curl -X GET "http://127.0.0.1:9090/api/download?id="
```

Scopes

Parameters

Query parameters

Name	Description
id*	Object <i>Please provide an array of digital object identifiers (PID) as single argument for one file, or an array for multiple files Example single file: /api/downlad?id=123456 Example multi file: /api/downlad?id=[123456, 4362346, 32452345+, 1325415432lk3]</i>  Required

Responses

icoscp.getProvisionalStations

Povisional ICOS stations

get a list of icos stations in the labeling process

GET

/stations/provisional

Usage and SDK Samples

Curl    Java    Android    Obj-C    JavaScript    C#    PHP    Perl    Python    Rust

```
curl -X GET "http://127.0.0.1:9090/api/stations/provisional?country=&theme="
```

Scopes

Parameters

Query parameters

Name	Description
country	String <i>Returns a list of stations for a specific country. <a href="https://en.wikipedia.org/wiki/ISO_3166-1_alpha-2#WO">https://en.wikipedia.org/wiki/ISO_3166-1_alpha-2#WO</a> (<a href="https://en.wikipedia.org/wiki/ISO_3166-1_alpha-2#WO">https://en.wikipedia.org/wiki/ISO_3166-1_alpha-2#WO</a>)</i>
theme	String <i>ICOS has three main distinction of themes, where green hous gas measurments are collected: OTC (Ocean), ETC (Ecosystem), ATC (Atmosphere).</i>

Responses

# icoscp.getStations

A list of ICOS stations

without any parameters returns a list of all labeled and certified ICOS stations.

GET

/stations

## Usage and SDK Samples

Curl   Java   Android   Obj-C   JavaScript   C#   PHP   Perl   Python   Rust

```
curl -X GET "http://127.0.0.1:9090/api/stations?country=&id=&theme=&bb="
```

## Scopes

### Parameters

Query parameters

Name	Description
country	String <i>Returns a list of stations for a specific country. <a href="https://en.wikipedia.org/wiki/ISO_3166-1_alpha-2#WO">https://en.wikipedia.org/wiki/ISO_3166-1_alpha-2#WO</a> (<a href="https://en.wikipedia.org/wiki/ISO_3166-1_alpha-2#WO">https://en.wikipedia.org/wiki/ISO_3166-1_alpha-2#WO</a>)</i>
id	String <i>Return the metadata about an ICOS station. The same information as seen online at the "landing page". The landing page URL is returned with the parameter "url"</i>
theme	String <i>ICOS has three main distinction of themes, where green hous gas measurments are collected: OTC (Ocean), ETC (Ecosystem), ATC (Atmosphere).</i>
bb	array[BigDecimal] <i>BoundingBox. If you provide latitude and longitude of the top left corner and bottom right corner of a box, you will get a list of icos stations within that box. Example: <code>api/stations?bb=[50,-10, 30, 15]</code></i>

## Responses

Suggestions, contact, support and error reporting;

Information URL: <https://www.icos-cp.eu> (<https://www.icos-cp.eu>)

Contact Info: [info@icos-cp.eu](mailto:info@icos-cp.eu) ([info@icos-cp.eu](mailto:info@icos-cp.eu))

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