
View Server - User Guide

EOX IT Services GmbH

Nov 11, 2020

CONTENTS

1	Introduction	1
2	Web Client	3
2.1	Interactive Tutorial	3
2.2	Map	4
2.3	Timeslider	7
2.4	Search Results	9
2.5	Filters	16
2.6	Map Layers	16
2.7	Details Display	18
2.8	Download	19
2.9	Saving the session	19
3	Viewing	23
3.1	Performance optimized service	23
3.2	Flexible service	25
3.3	Loading in QGIS	25
3.4	Loading in ArcMap 10	28
4	Searching	35
4.1	Responses	35
4.2	Filters	36
5	Downloading	37
5.1	Downloading in QGIS	37
6	Sample Service Requests	41
6.1	Web Client	41
6.2	Performance optimized viewing	41
6.3	Flexible viewing	46
6.4	Searching	56
6.5	Downloading	64
6.5.1	WCS	64
6.5.2	DSEO	72

INTRODUCTION

This is the User Guide of the View Server (VS). The intended readers are users of the web client shown below and external services provided by the View Server.

These provided external services are services for searching, viewing, and downloading of Earth Observation (EO) data. Service endpoints optimized for performance as well as for flexibility are provided alongside each other.



Figure 1.1: *Web Client*

Continue reading to understand the details of the provided *Web Client*.

WEB CLIENT

The most comfortable way to exploit the functionalities of the View Server (VS) is via the built-in [web client](#). This client is based on the open source [eoxc](#) library and provides an intuitively to use interactive graphical user interface running in the user's web browser.

2.1 Interactive Tutorial

When the web client is opened for the first time a short interactive tutorial starts as shown in [Figure 2.1.1](#) below. It guides the user through the main features and elements.

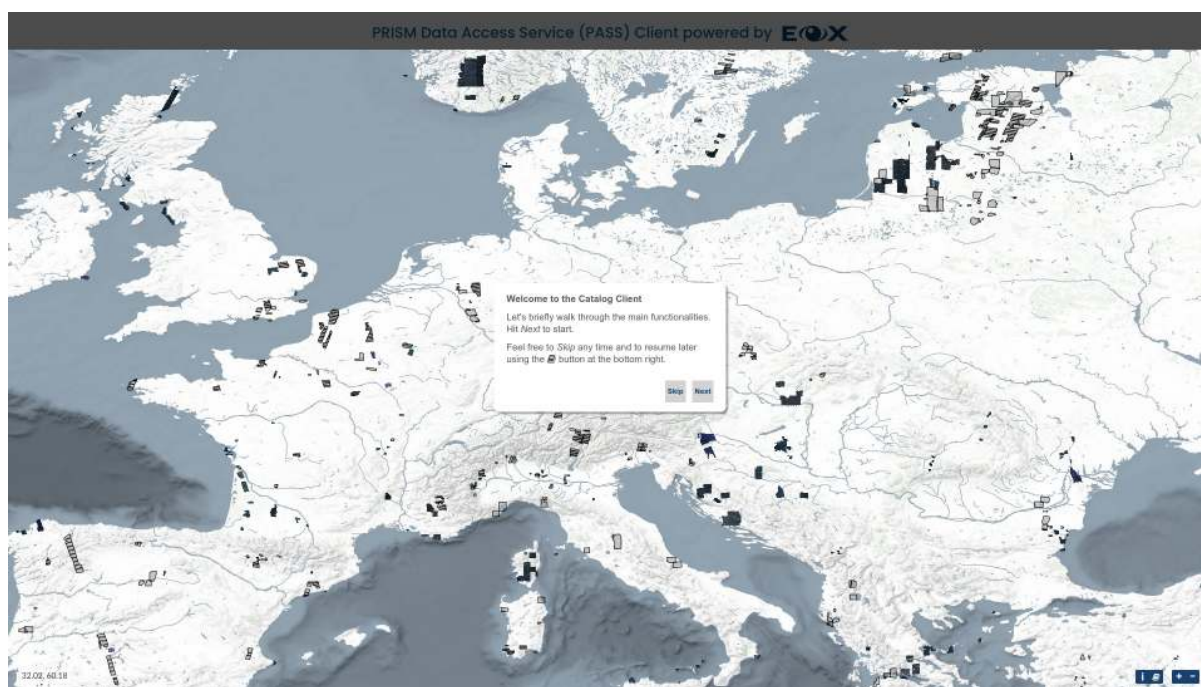


Figure 2.1.1: *Web Client Tutorial - Start*

The tutorial can be started again anytime by clicking the *book* icon in the bottom right of the window.

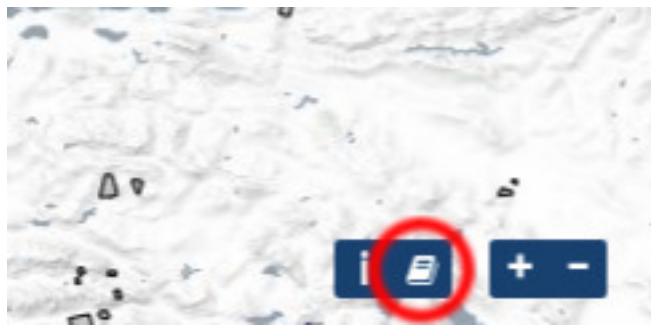


Figure 2.1.2: Web Client Tutorial Button

2.2 Map

The main map view is for visualization and interactively browsing through available satellite data. Navigating to the area of interest is done by:

- *panning*: left click + drag or one finger drag and
- *zooming*: mouse wheel scroll, double click, two finger pinch, or the plus and minus icons in the bottom right corner of the map.

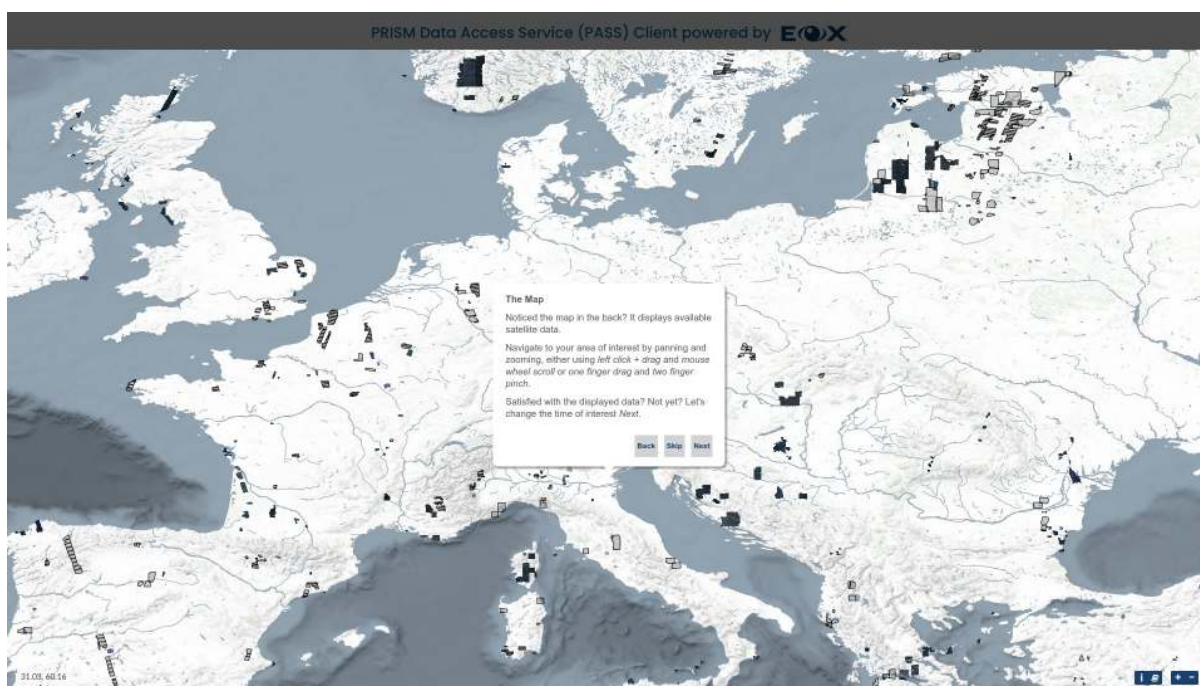


Figure 2.2.1: Web Client Tutorial - Map

While hovering over footprints on the map, the respective product(s) are highlighted in the *map*, *timeslider*, and the *Search Results* menu. The same behavior is applied vice versa while hovering over dot groups in the *timeslider* and individual items in the *Search Results*.

Clicking on a footprint in the map followed by clicking on the *plus* or *minus* button can be used to add or remove a product to or from the *basket*, holding the list of products selected for download (see [Download](#) below).

In the top most part of the map, there is a colored bar spanning the full width of the web client acting as loading indicator. It makes it easier to see if the loading of all requested map tiles is already finished or still in progress.

The geographic coordinates of the current cursor location can be seen as longitude, latitude pair in the bottom left corner of the map.



Figure 2.2.2: Web Client - 3-way highlighting



Figure 2.2.3: Web Client - Select on map

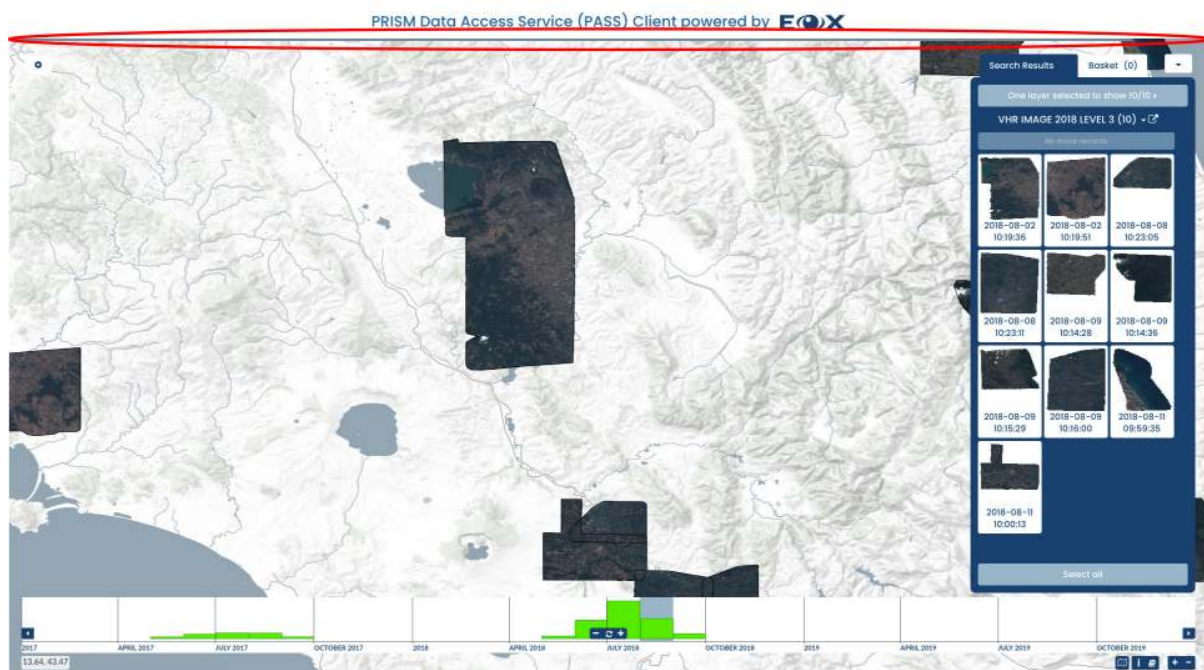


Figure 2.2.4: Web Client - Loading indicator

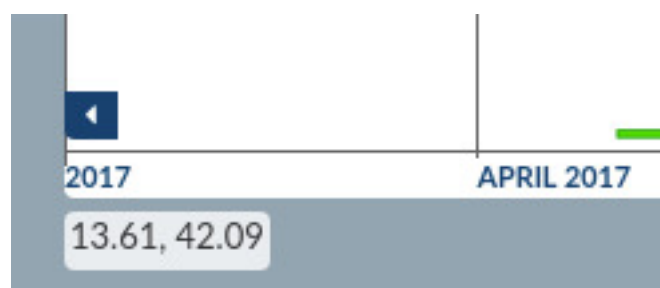


Figure 2.2.5: Web Client - Coordinates

Clicking on the *landscape map* icon in the bottom right of the map window shows a list of available layers. Clicking on one of the layers opens a new browser tab showing this layer as currently visible on the map by generating a WMS request copying the current map parameters (zoom, bounding box, selected time, styling, etc.).

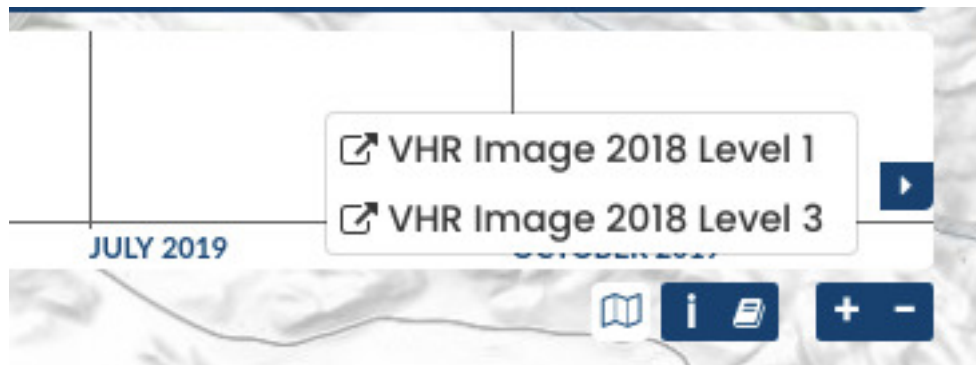


Figure 2.2.6: Web Client - Current view

2.3 Timeslider

The *timeslider* presents the distribution of products in time via a *bar* (see Figure 2.3.1) or an *aggregated dots* (see Figure 2.3.2) graph. The visualization mode used (*bars* or *dots*) is based on the total number of products available for the shown time interval.

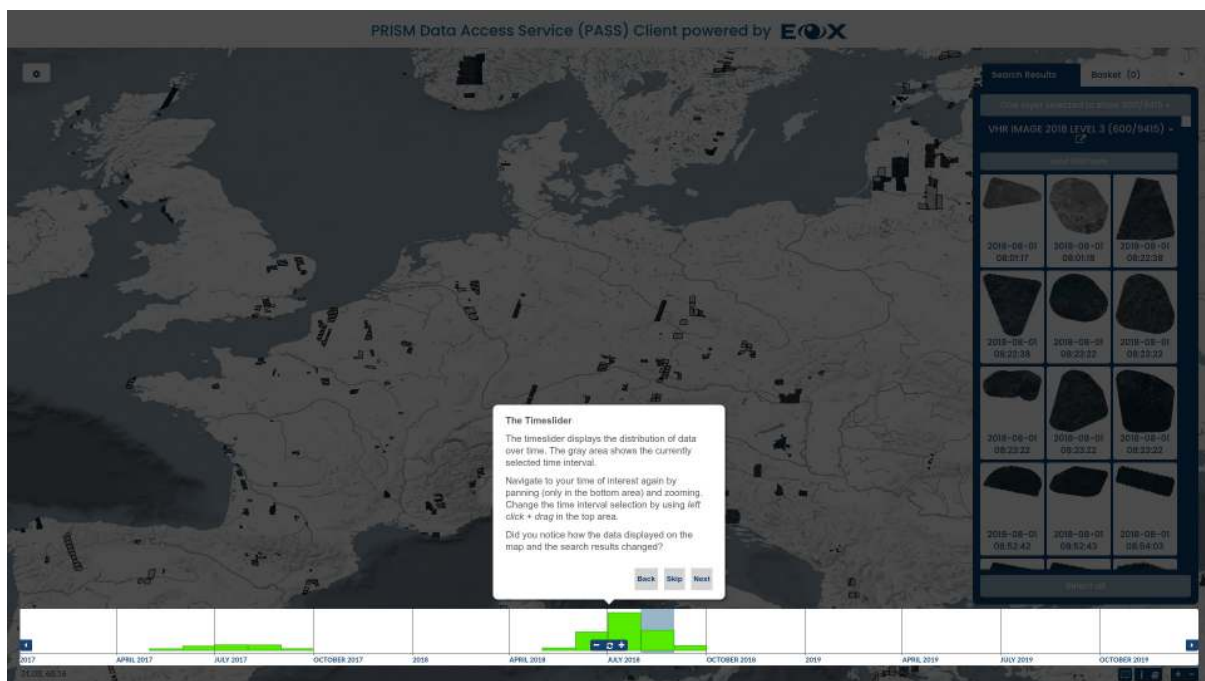


Figure 2.3.1: Web Client Tutorial - Timeslider

The interactive *timeslider* can be used in the following ways:

- *panning*: left click + drag or one finger drag on the bottom area (below the horizontal line) or left and right arrow icons on the sides
- *zooming*: mouse wheel scroll, two finger pinch, or plus and minus icons in the middle
- *reloading*: spinner icon in the middle



Figure 2.3.2: Web Client - Timeslider dots

- *selecting a time interval:* left click + drag or one finger drag in the upper area (above the horizontal line) or click on a histogram bucket
- *showing the total number of available products in a histogram bucket:* hover over the histogram bucket
- *showing the footprints of all products, the first product id, and the total number of additional products in a dot group:* hover over the dot group
- *showing start and end of the current selection:* left click + hold on selection rectangle
- *zooming the map to a combined minimum bounding box of all products in a dot group:* click on the dot group

There are currently two ways how timeslider works connected to spatial filters:

- *Spatially un-aware:* Always shows time distribution of all available products.
- *Spatially aware:* Takes currently set spatial filter (or current map view) in account when displaying histograms. That way, time distribution of products over a specific area can be evaluated.

In order to change between the modes, use the location switch in top right edge of the timeslider panel.

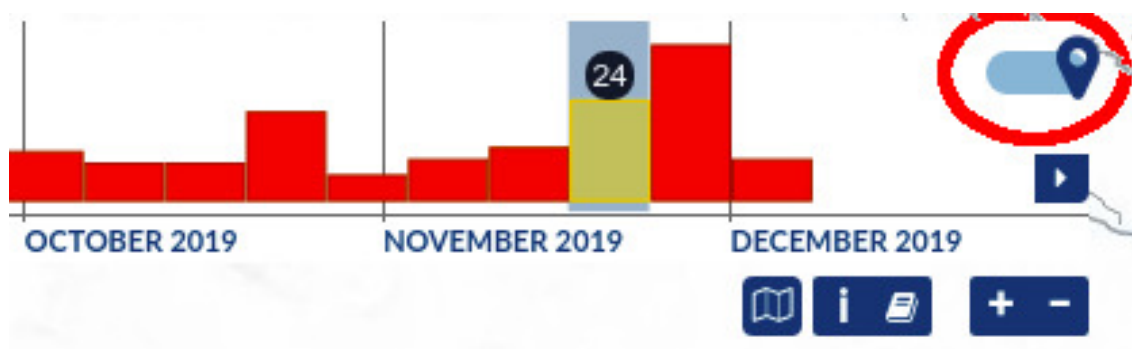


Figure 2.3.3: Web Client - Timeslider spatial toggle

2.4 Search Results

The panel in the right part of the map window has a tab showing the *Search Results* grouped by enabled layer(s). The search is defined by the currently visible geographic area or spatial filter, selected time interval, and additional filters if set. Items in the list are sorted as the catalog returns them which typically is from the oldest to the newest.

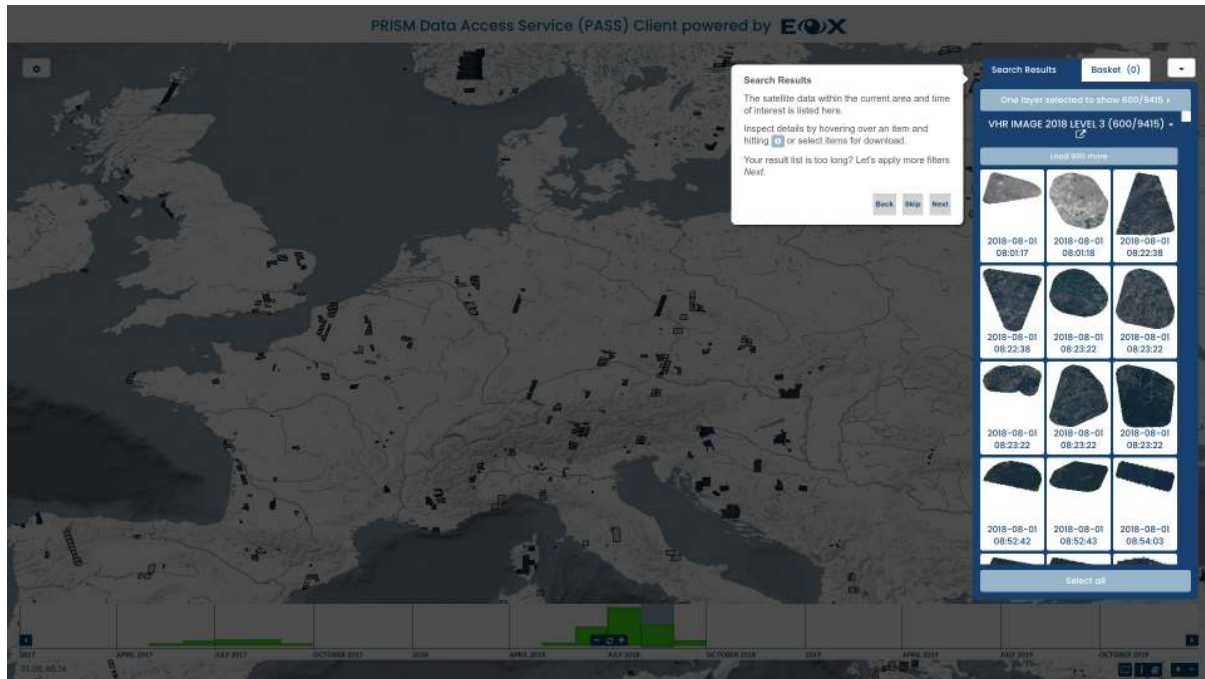


Figure 2.4.1: Web Client Tutorial - Search Results

Searching can be disabled and enabled again for each displayed layer individually by clicking on the large button labeled *N layer(s) selected to show n/n* and clicking on the corresponding layer entry (see Figure 2.4.2) or by clicking on the *Search* toggle (see Figure 2.4.3) if only a single layer is configured.

Metadata and alternative visualizations of individual products can be inspected by hovering over an item and hitting the *info* icon either in the search results (see Figure 2.4.4) or on the map (see Figure 2.4.5). That opens a new overlay panel showing *details display* (see *Details Display* below).

By clicking on individual items, they can be inserted to or removed from the *basket* holding the list of items selected for download.

Searching from the web client is throttled for performance and only a limited number of items is shown from the first search. Additional items, if available, are shown by clicking the button labeled *Load n more*.

The *Select all* button adds all currently listed items to the *basket*.

The *link* button next to the layer name shows the current search query. To download the results XML file click with the right mouse button on the link and use the *Save Link As...* menu entry.

Items selected for download can be viewed in the *Basket* tab (see Figure 2.4.8) or *Selected* button (see Figure 2.4.9, single layer mode) on the right panel. To remove an item from the selection use the *minus* icon visible while hovering over it.

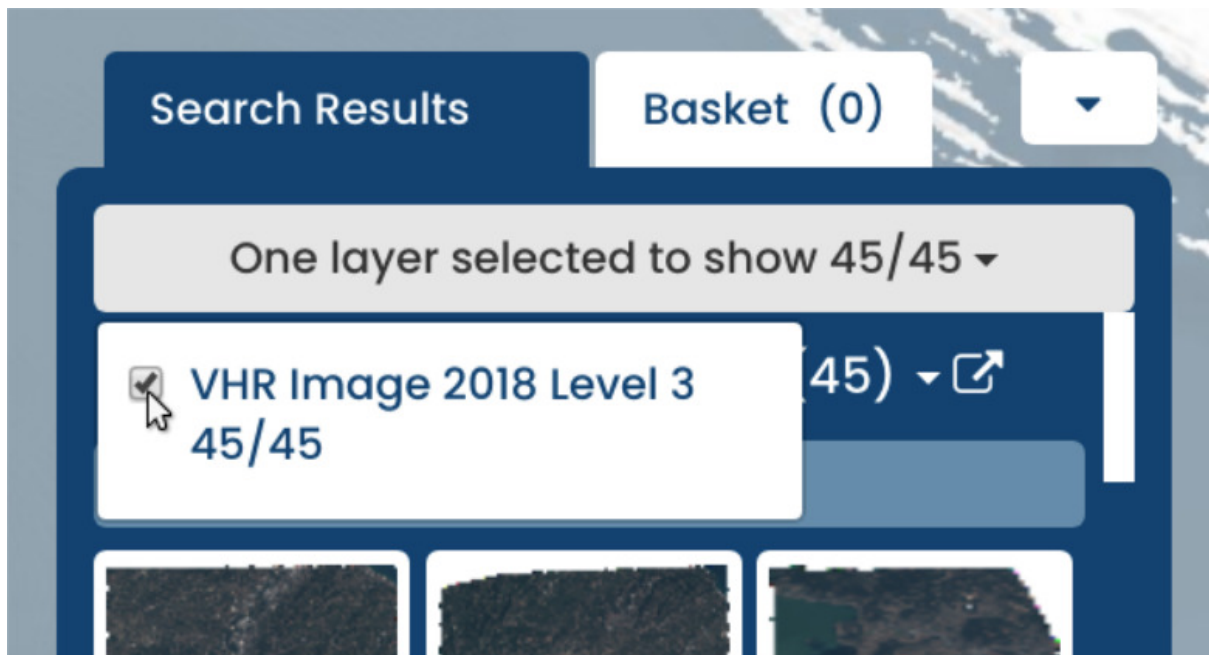


Figure 2.4.2: Web Client - Toggle search

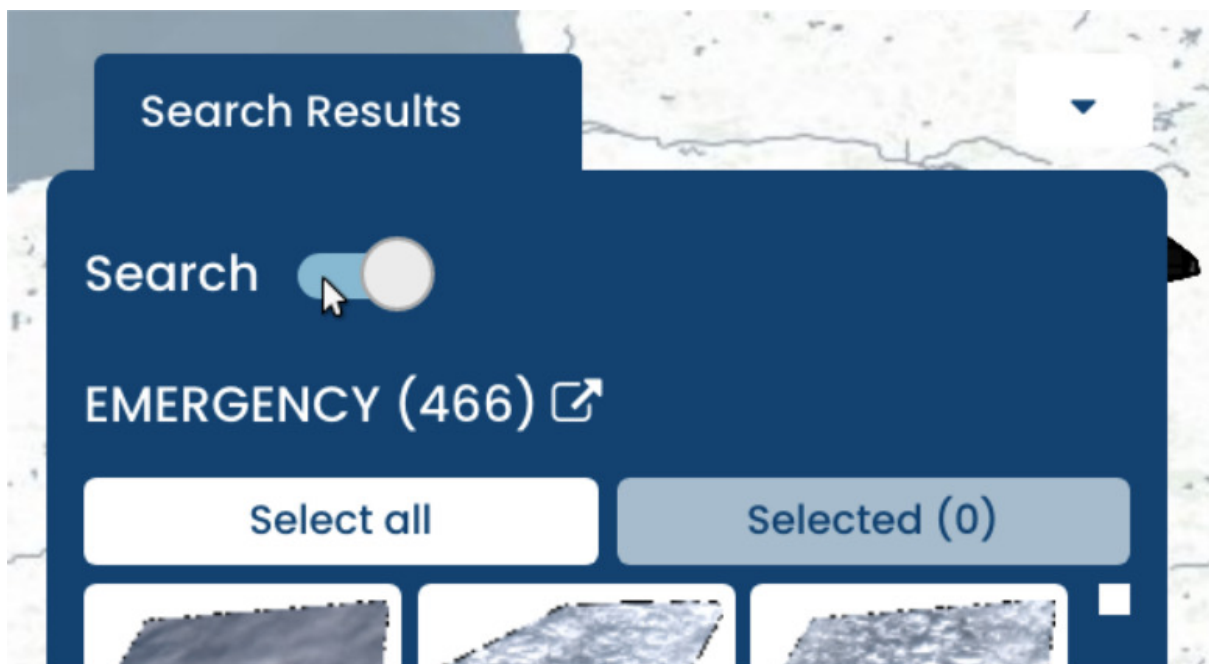


Figure 2.4.3: Web Client - Toggle search single layer

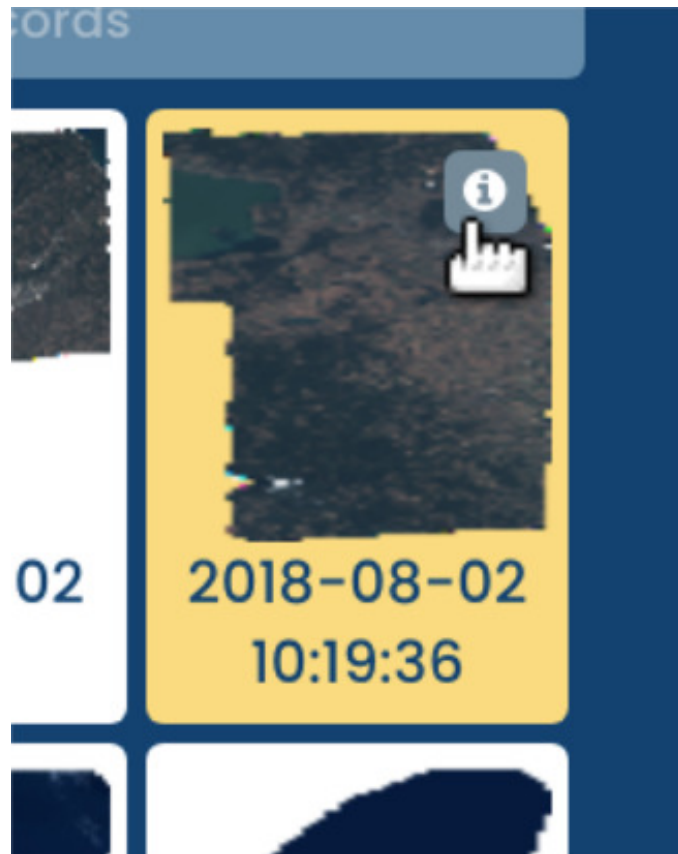


Figure 2.4.4: Web Client - Details button 1



Figure 2.4.5: Web Client - Details button 2

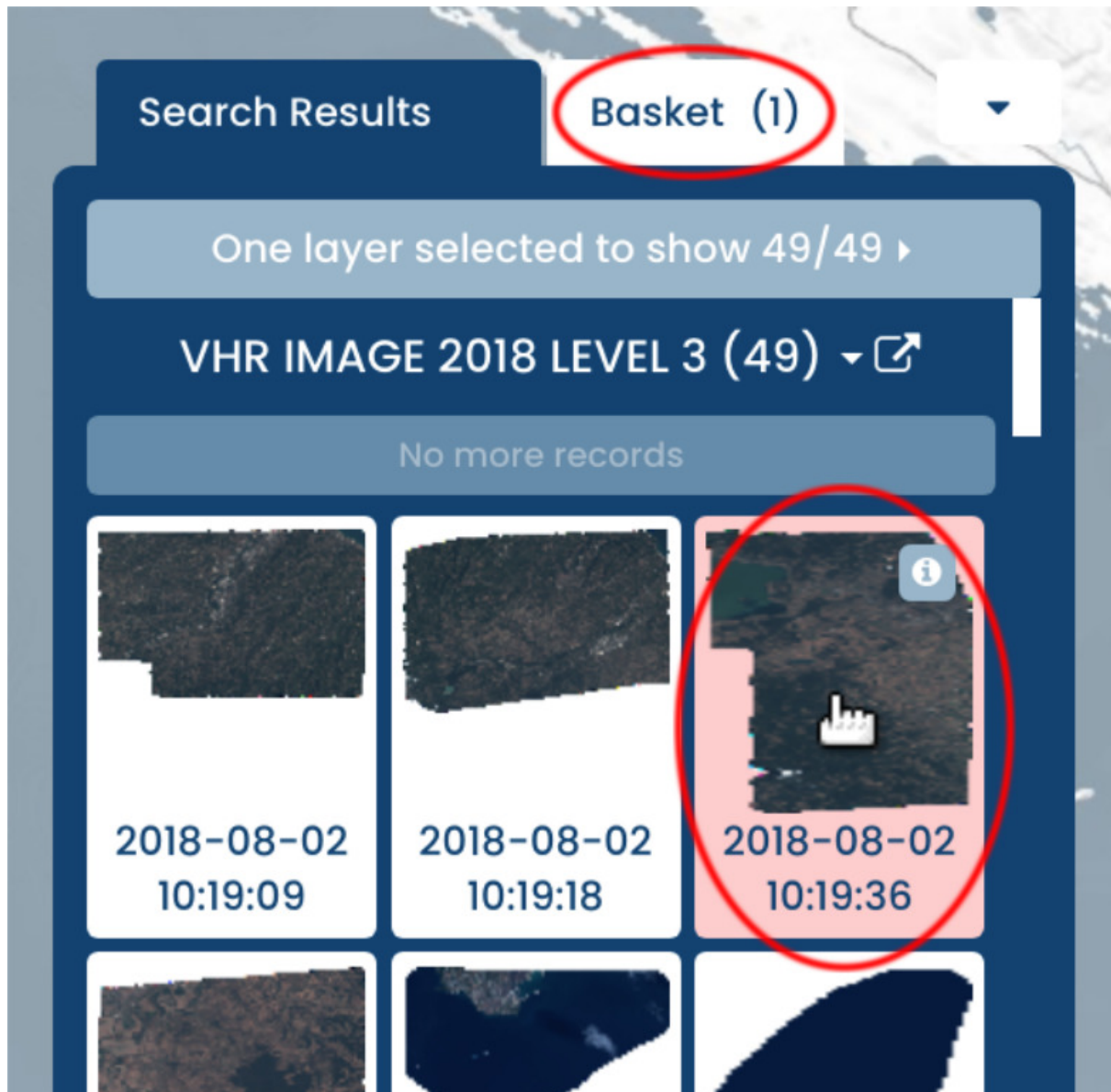


Figure 2.4.6: Web Client - Add item to basket



Figure 2.4.7: Web Client - Buttons in search panel

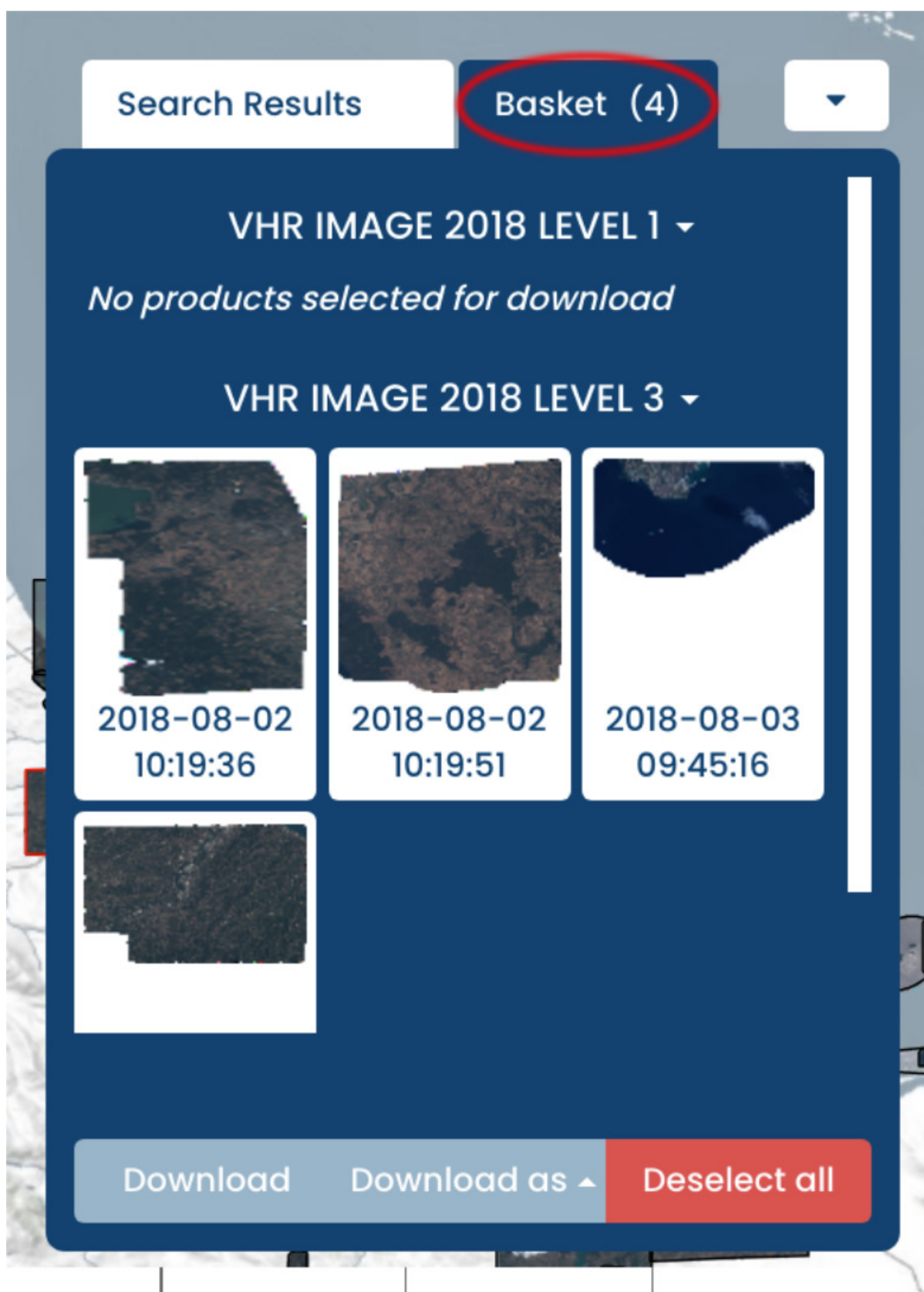


Figure 2.4.8: Web Client - Basket



Figure 2.4.9: Web Client - Selected

2.5 Filters

There are several options to add explicit filters to product queries in the *Filters* tab in the left panel:

- *Spatial filter*: allows drawing a Point, Rectangle, or Polygon directly on the map. By default when no explicit spatial filter is set, the current map window extent is used as a spatial filter.
- *Time filter*: by default the time filter, a simple time interval, is configured via the *Timeslider*. If enabled, the time filter tool allows a fine grained configuration of the time interval to use for searching.
- *Additional filters*: based on the configuration provided by the operator additional filters for each layer based on available metadata like “Cloud Coverage” might be available.

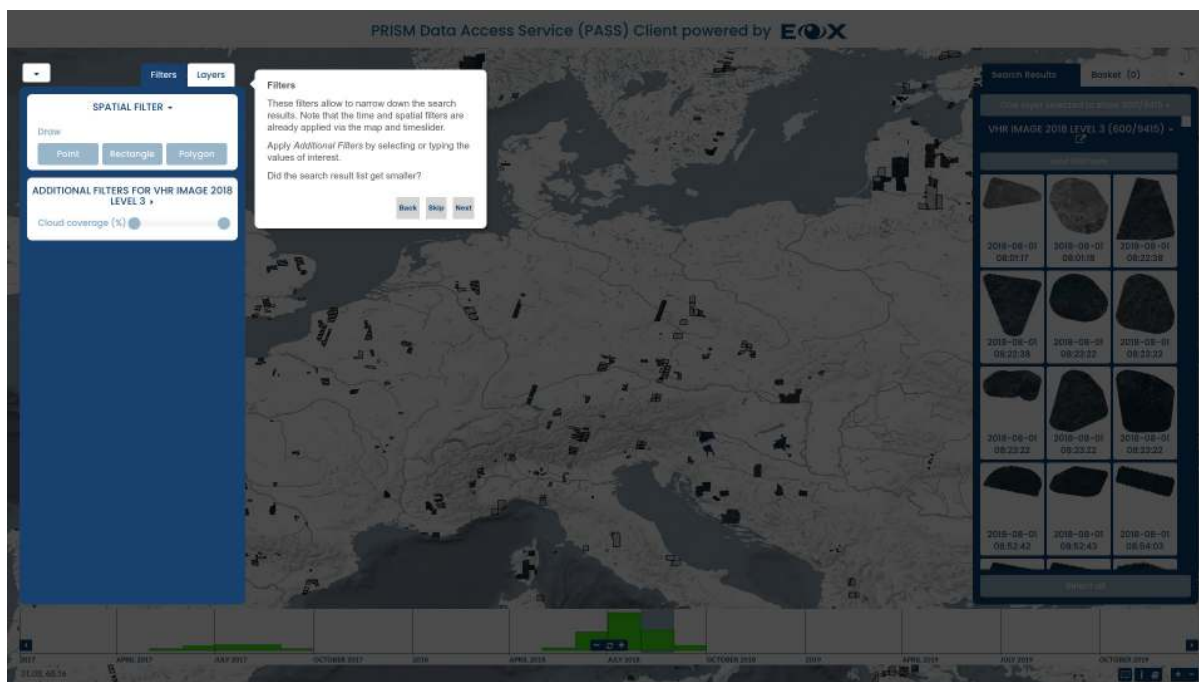


Figure 2.5.1: Web Client Tutorial - Filters

2.6 Map Layers

The *Layers* tab in the left panel enables configuring *Overlays*, *Layers*, and *Base Layers* to be shown.

Base Layers provide various backgrounds whereas *Overlays* are text labels or other information like footprints to view on top of products for easier orientation on the *map*. They can be enabled and disabled individually as needed via the *eye* icon next to their name.

Layers correspond to product collections or datasets. Searching is performed on enabled layers.

The order of *layers* can be changed by dragging the arrows next to each layer up and down. This influences the order of the rendering on the *map* as well as in the *timeslider*.

The visualization (styling) of *layers* can be changed by clicking on the *paint brush* icon next to the layer name. The displayed overlay enables setting the layer's opacity and selecting one of the predefined styles for the layer.

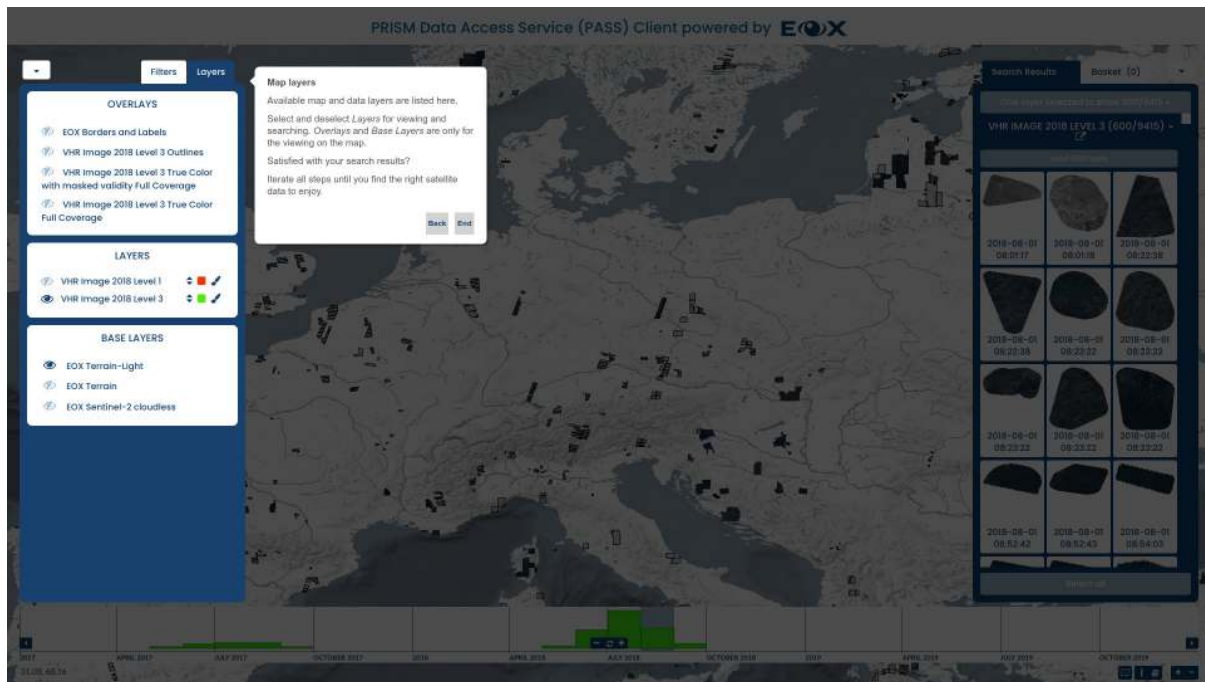


Figure 2.6.1: Web Client Tutorial - Map Layers

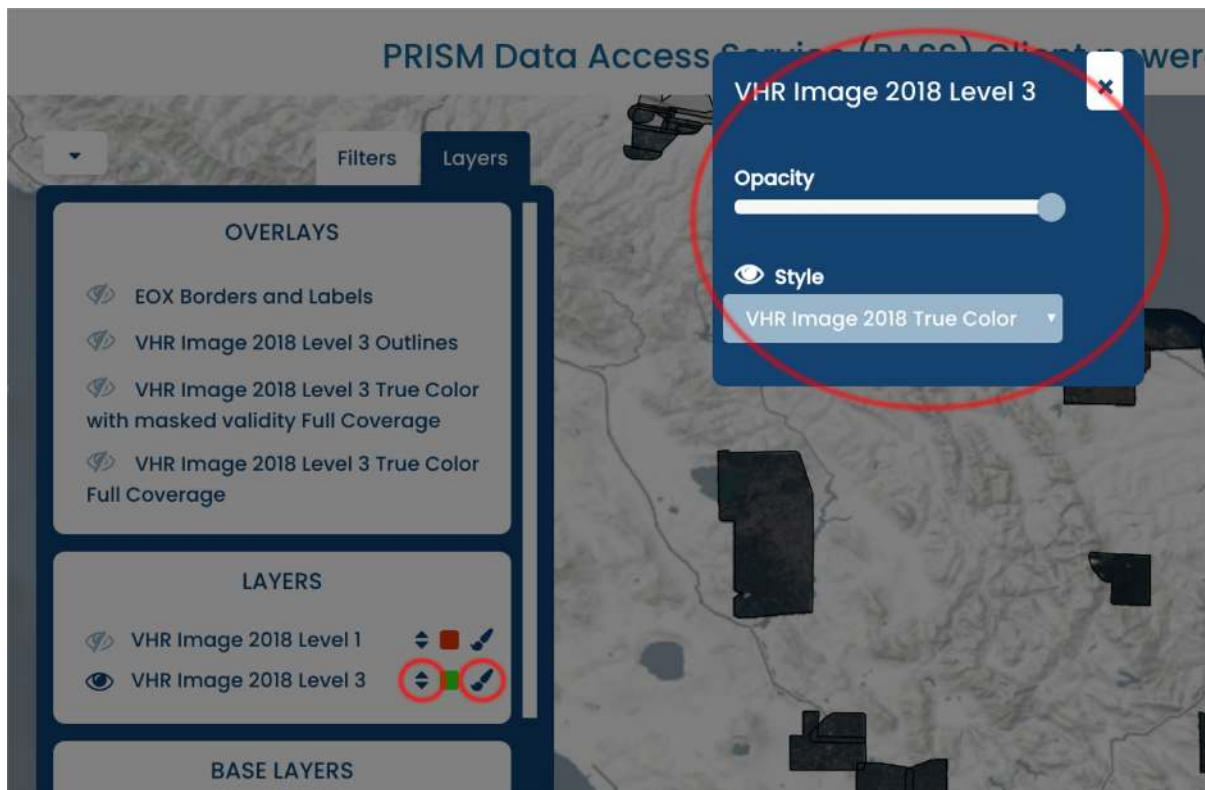


Figure 2.6.2: Web Client - Layer configuration

2.7 Details Display

In order to view details of individual products, either click on the *info* (i) icon after clicking on the product footprint on the map or the product entry in the *Search Results* panel.

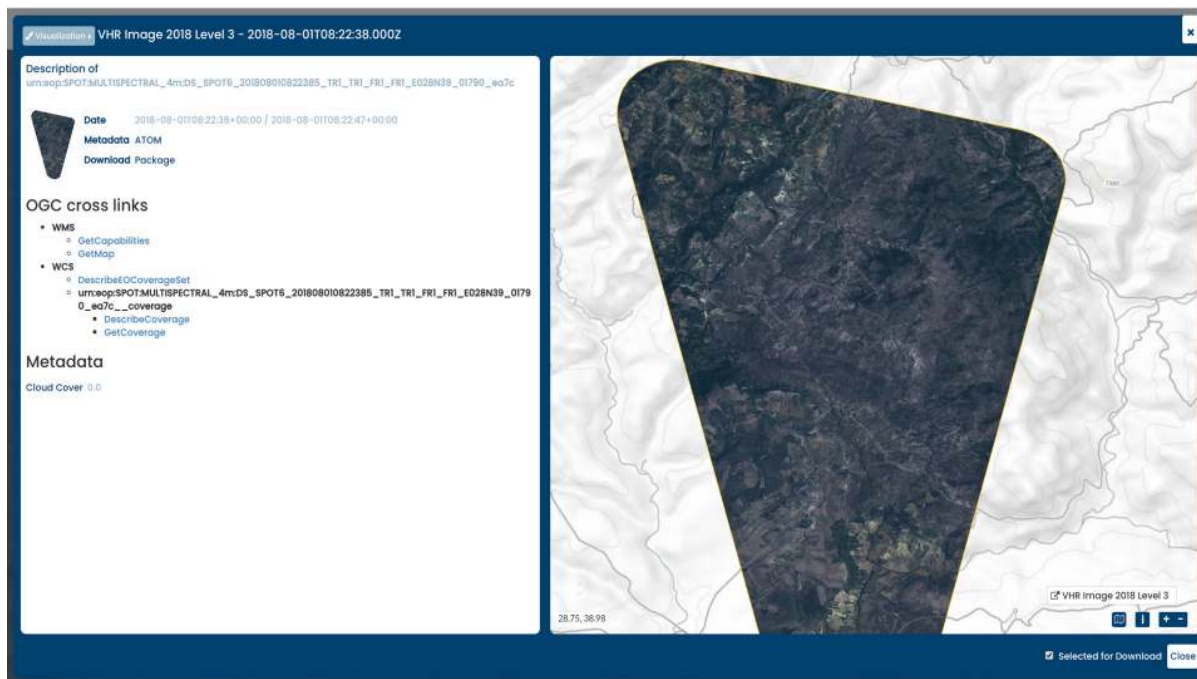


Figure 2.7.1: Web Client Details Display

An overlay display will open showing the product metadata as well as the product itself on a map. The product metadata contains links to visualize and download the metadata and product. Those links are OGC standards compliant service requests for OpenSearch (see chapter [Searching](#)), WMS (see chapter [Viewing](#)), WCS, and DSEO (both see chapter [Downloading](#)). The chapter [Sample Service Requests](#) provides sample requests for all those services.

The following links are provided:

- *Metadata ATOM*: download the product's metadata in ATOM format
- *Download Package*: download the entire product as stored on object storage
- *WMS: GetCapabilities*: get the description of the WMS for the individual product for example for inclusion in QGIS
- *WMS: GetMap*: visualize the individual product using WMS
- *WCS: DescribeEOCoverageSet* or *WCS: DescribeCoverage*: get the description of the product's coverage in WCS
- *WCS: GetCoverage*: download the product as coverage potentially after adjusting the URL parameters

The visualization (opacity and style) of the product layer for this map window can be changed via the *Visualization* button in the top left corner.

The product itself can be added to the *basket* by ticking the check box in the bottom right of the panel.

2.8 Download

Several methods for downloading products or only parts of them are exploited by the web client.

After putting one or more products in the *basket* or selecting them for download, they are listed in the right panel, either on the *Search Results* tab via the *Selected* button or on the *Basket* tab (see section [Search Results](#) particularly [Figure 2.4.8](#) and [Figure 2.4.9](#) above).

To download a full product (image and linked metadata) or a full coverage (just the image), the *Details Display* of the respective product can be used (see chapter [Details Display](#) above).

To download all selected products in parallel the *Download* or *Download as* buttons on the right panel of the web client can be used.

- *Download as*: offers a *Download as URL-List* option which downloads a *.txt* file with a list of download links (*Get Coverage* requests) and a *Download as Metalink* option allowing for possibly increased speed via segment downloading by metalink-aware software.
- *Download*: opens an overlay panel allowing to specify download parameters for subsetting, projection, format, interpolation, and resolution or scaling as shown in [Figure 2.8.2](#) below. When multiple products are to be downloaded, the configured options are applied to all of them. Clicking the *Download* button confirms the selected options and initiates the downloads. Note, the browser might open multiple confirmation dialogs or issue a warning. Besides, modern browsers have a limit of 6 concurrent connections. Popups might need to be explicitly allowed for this site.

2.9 Saving the session

The web client allows to save some parts of its current state by setting the URL search parameters. That enables users to revisit the same view in time and space later on or share the direct link with someone, overruling the default client setup. Please note that certain characters are automatically URL encoded, as URLs sent over the Internet only use the ASCII character set. This means that if user manually enters for example `:` sign, while entering the website, it will automatically transform into `%3A`, making the URL less readable.

- Pre-set the map position by setting *x*, *y* as coordinates of the center of the map and the zoom with the *z* parameter. [Map position example](#).
- The time selection is set by *timestart* and *timeend*, and should be entered as ISO 8601 UTC time format without milliseconds. [Time selection example](#).
- In case only one main layer is configured (like in the Emergency collection), additionally custom filters can be saved via their name. In order to investigate this option, the fastest way is to use the filter manually within the client and copy/modify the URL parameters. [Filter example](#).

The following chapters describe the services offered for [Viewing](#), [Searching](#), as well as [Downloading](#).

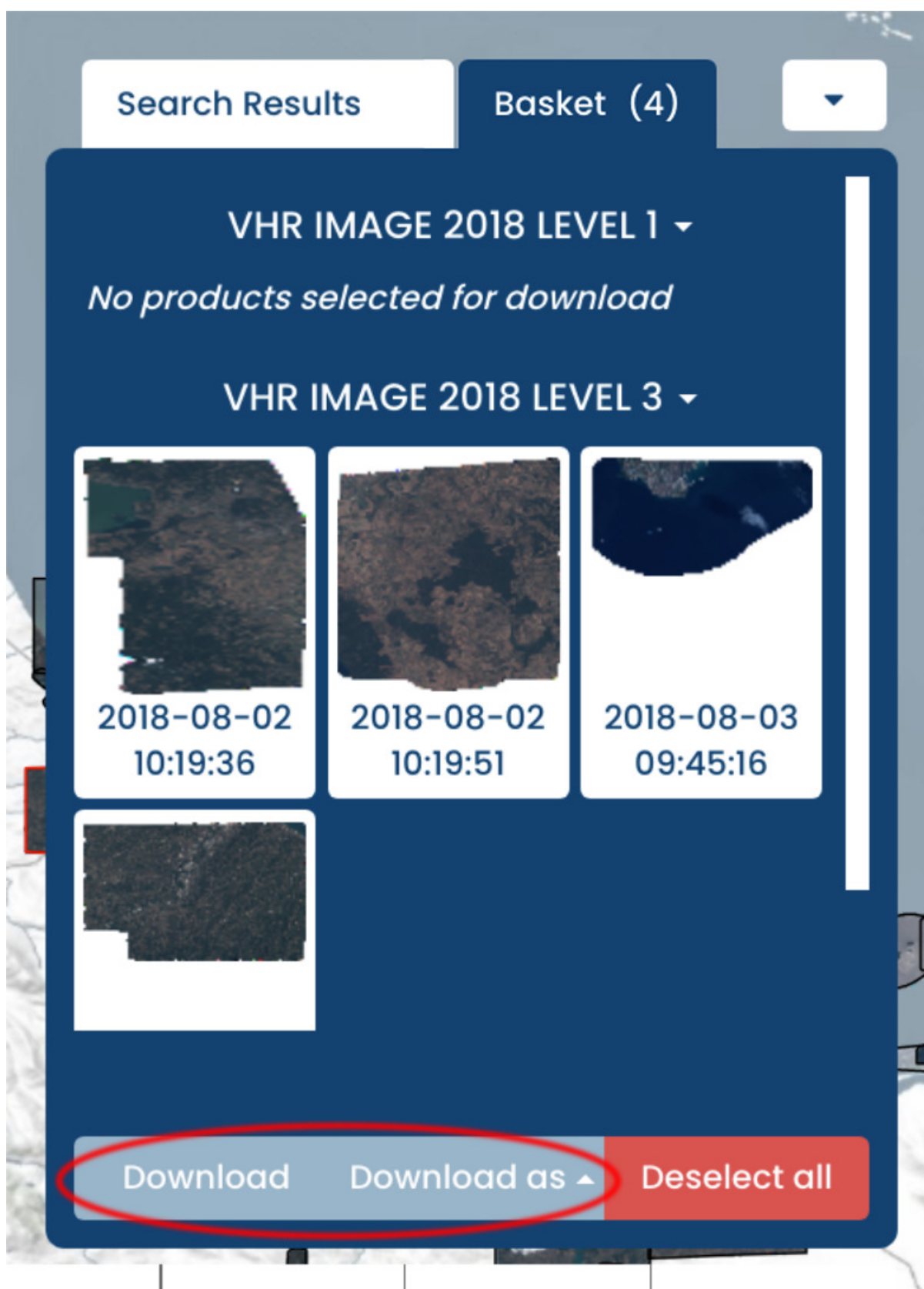


Figure 2.8.1: Web Client - Download multiple products

Start download of 2 products

Bounding Box

☒ Use bounding box of current spatial filter to crop

10.3343

57.4654

10.7108

57.8433

Draw Bounding Box

Projection

Web Mercator

Format

Interpolation

Bilinear

Scaling

☐ Full size

☐ Resolution (In decimal degrees)

Resolution X

Resolution Y

☒ Scale (Of total size)

25

%

'Download' starts the download of 2 products

Note, the browser might open multiple confirmation dialogs or issue a warning. Besides, typically browsers have a limit of 6 concurrent connections. If popups are blocked by your browser, please enable them for this site.

Close

Download

Figure 2.8.2: Web Client - Download multiple products via WCS

VIEWING

The viewing interface is implemented following the [Web Map Tile Service \(WMTS\)](#) as well as the [Web Map Service \(WMS\)](#) standards. Both services are implemented by a wide range of client software which makes it as simple as possible to integrate the viewing service as needed.

Service endpoints optimized for performance as well as for flexibility are provided alongside each other. Concrete example URLs demonstrating the capabilities of the various endpoints are provided in the chapter [Sample Service Requests](#).

3.1 Performance optimized service

The performance optimized service variant is provided under the path `/cache/ows?`.

This endpoint offers access to predefined visualizations via WMTS and WMS. The GetTile as well as GetMap requests are answered from image tiles cached on object storage when possible. [Figure 3.1.1](#) below shows the three predefined visualizations, true color, false color, and NDVI of the same image tile and [Figure 3.1.2](#) the unmasked and masked versions using the validity mask of one tile.

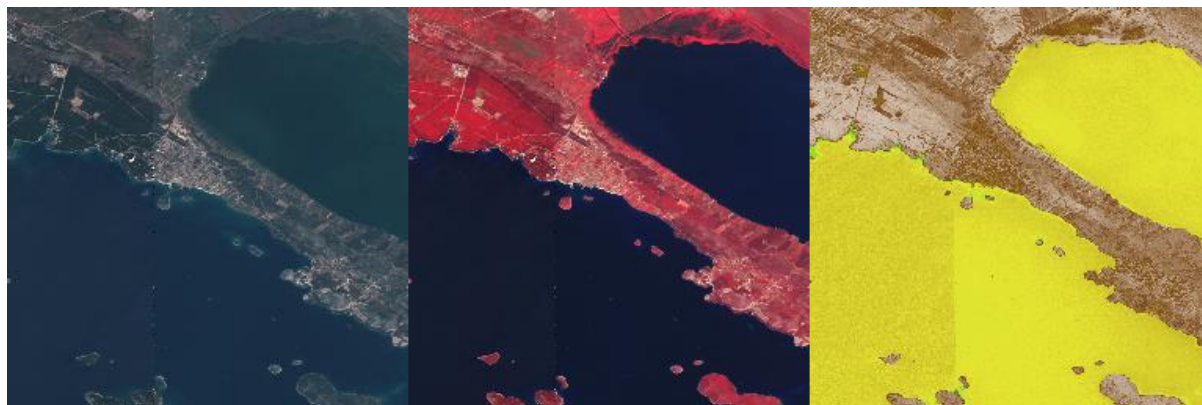


Figure 3.1.1: *WMTS Tiles - True color, false color, and NDVI*

The operator might configure additional layers besides the default ones. These layers can offer a specific customization described below as performance optimized variant.

For example for the VHR Image 2018 dataset not only the three default layers for True Color, False Color, and NDVI are configured but also the Masked Validity one as shown in the figures above.

In addition the VHR Image 2018 dataset contains level 1 and 3 products. Thus individual layers aggregating each level individually are added making the total of offered layers twelve.

Finally two layers are configured offering a quick true color visualization of the entire level 3 datasets without support of the time dimension both unmasked as well as masked. The masked layer is shown in [Figure 3.1.3](#) below.



Figure 3.1.2: *WMTS Tiles - Unmasked and masked*

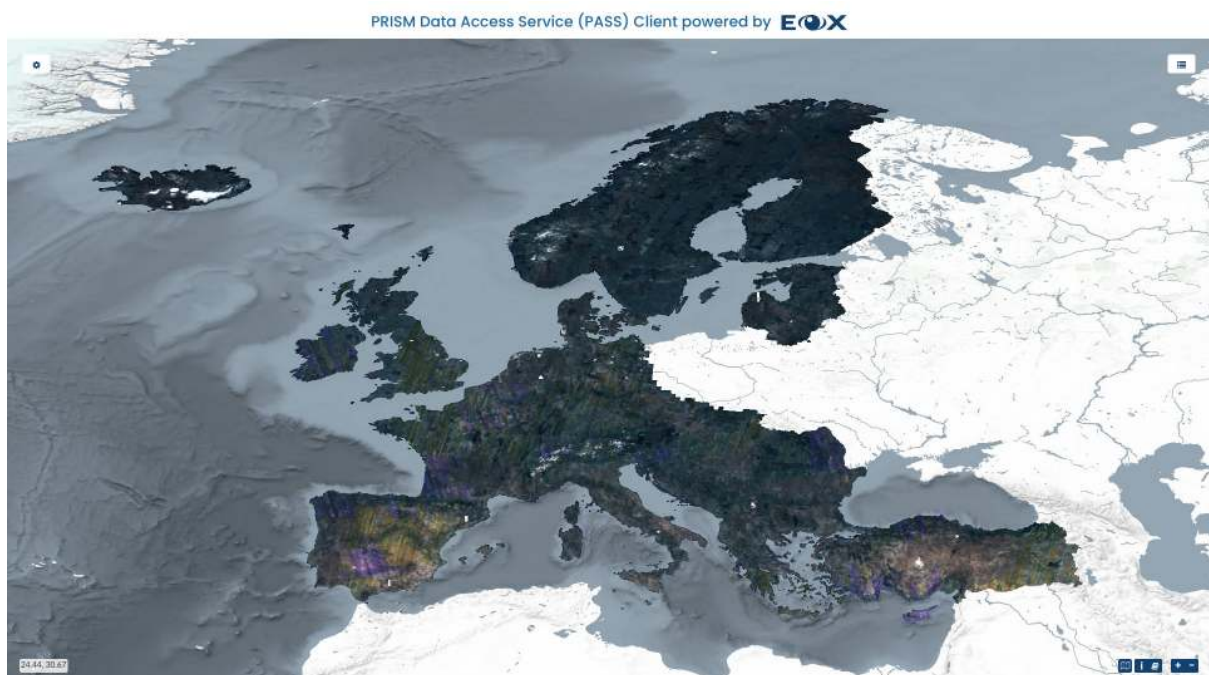


Figure 3.1.3: *Web Client - Full coverage layer*

Image tiles not yet present in the cache are stored upon first hit for consecutive requests. This is the so-called on-demand caching. The operator might decide for optimal performance, even for the first request, to pre-seed the cache. Also a mixed variant with a partly pre-seeded cache for example up to a certain zoom level is possible.

However, this is done fully transparent to the users and the only impact is that they might need to wait slightly longer when they are the first to visualize a certain product.

This service offers access on collection level only. Individual products can be addressed using the `time` parameter given that they do not cover one another on the time axis.

The best performance is offered at the WMTS interface which serves images tiles as they are cached without the need of any reprocessing. WMS responses are generated on-the-fly from image tiles and might thus need some reprocessing to stitch together and scale image tiles.

More sophisticated reprocessing like reprojection or custom color adjustments are not offered at this endpoint.

3.2 Flexible service

The other service variant offered is optimized for the best possible flexibility and can be accessed at the path `/ows?`.

This endpoint offers the following customizations via WMS:

- Access to individual products via ID (`cql=identifier='ID'`)
- Access to entire collections/datasets supporting `time` parameter
- Various layers as defined by the [Earth Observation Application Profile of WMS \(EO-WMS\)](#) like one showing outlines of products (`__outlines`)
- Additional useful layers like one showing both, products and outlines, correctly rendering topology of outlines (`__outlined`) or one showing a validity mask (`__validity`) or applied validity mask (`__masked_validity`)
- Numerous styles for layer where feasible like outlines or NDVI (`layers=ID__NDVI&STYLES=coolwarm`)
- Reprojection to operator configured coordinate reference systems
- Color adjustment via custom linear stretch `dim_range=<low-red-or-grey> <high-red-or-grey>[, <low-green> <high-green>,<low-blue> <high-blue>]`
- Filtering of products to render into collection/dataset visualizations via Common Query Language (CQL) for example `&cql=cloudCover<1`
- All other standard WMS parameters like `transparent`, `format`, etc.

All these customization parameters can of course be combined as needed.

Please see the chapter [Sample Service Requests](#) for detailed examples of all supported parameters.

3.3 Loading in QGIS

Any of the above described layers can be loaded in client software supporting either the WMTS or WMS standard like for example [QGIS](#).

Open the Data Source Manager as shown in [Figure 3.3.1](#) and create a new WMS/WMTS Connection using the URL to the layer of interest.

When using parameters like for example `cql=identifier='ID'` to view one individual product make sure to tick the “Ignore GetMap/GetTile URI reported in capabilities” as these parameters are overwritten otherwise.

The next step is to retrieve the capabilities of the created WMS/WMTS Connection using the Connect button. Selected layers from the list are added using the Add button as shown in [Figure 3.3.2](#).

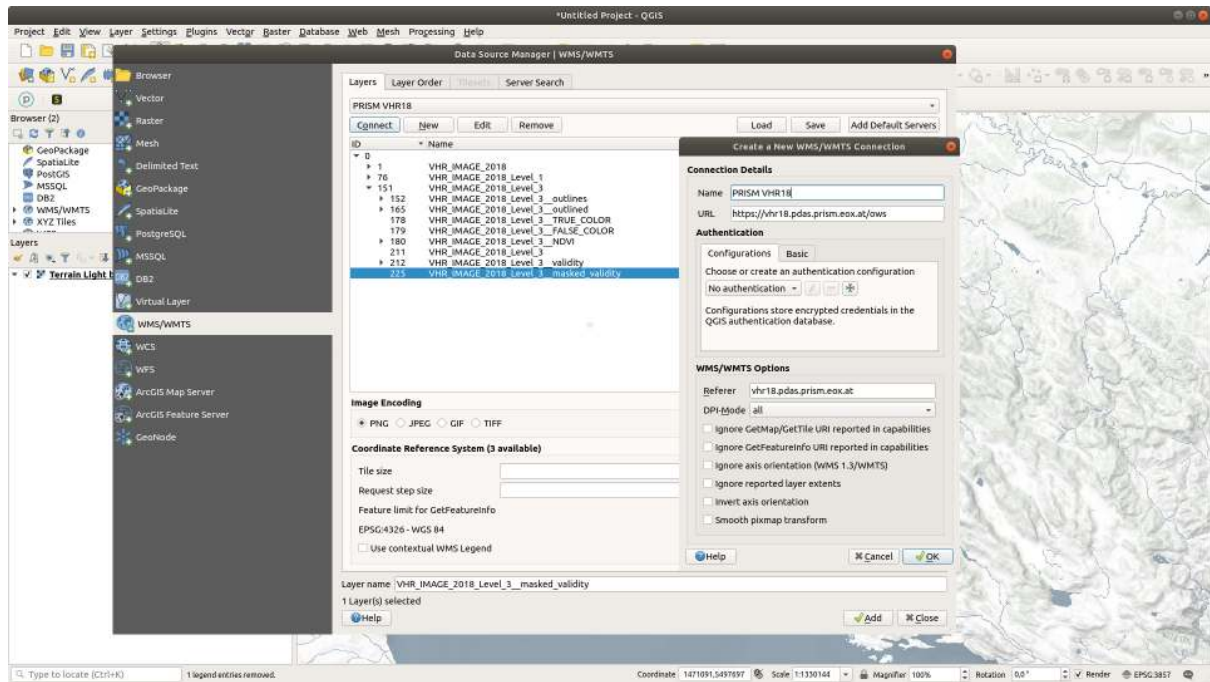


Figure 3.3.1: QGIS - Create WMS/WMTS Connection

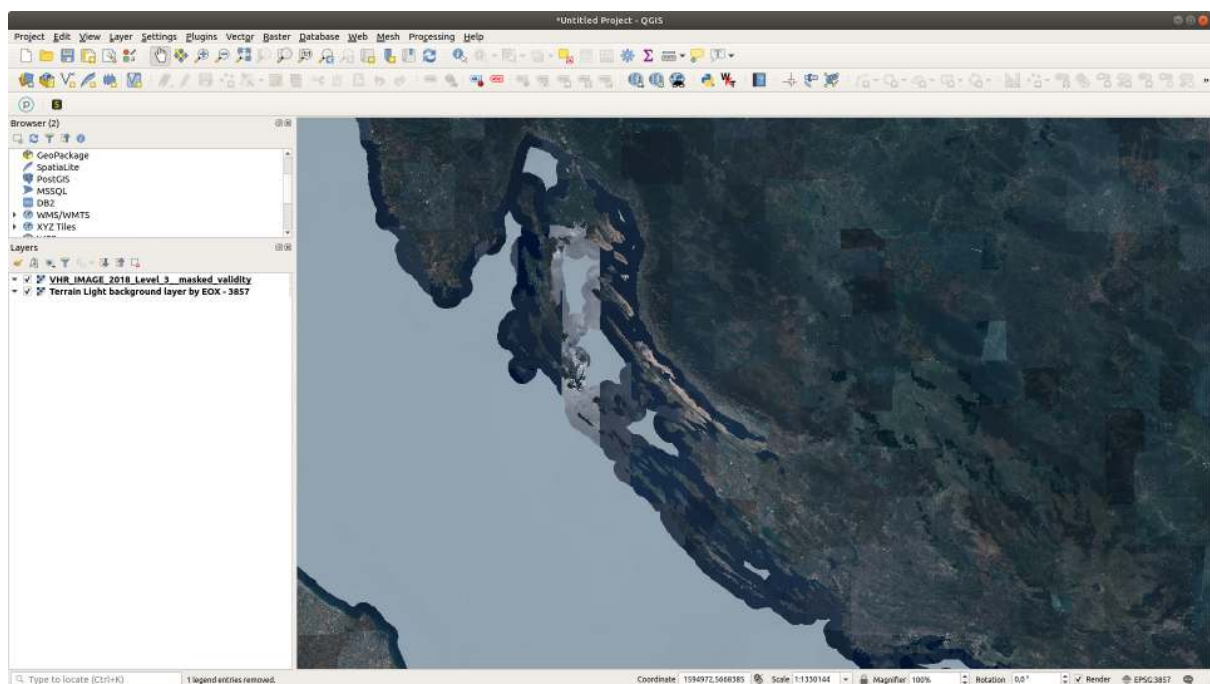


Figure 3.3.2: WMS loading in QGIS

An important parameter to consider while viewing the layers is the requested time interval, allowing for example to observe changes over years. One option is to manually add a custom **time=** parameter to the URL after checking the *Ignore GetMap URI* checkbox.

For QGIS versions lower than 3.14, the only way how to use WMS layers with time support (WMS-T) is through a maintained plugin called [TimeManager](#). It offers a convenient way to navigate through the time for raster and vector layers with custom defined steps as shown in [Figure 3.3.3](#).

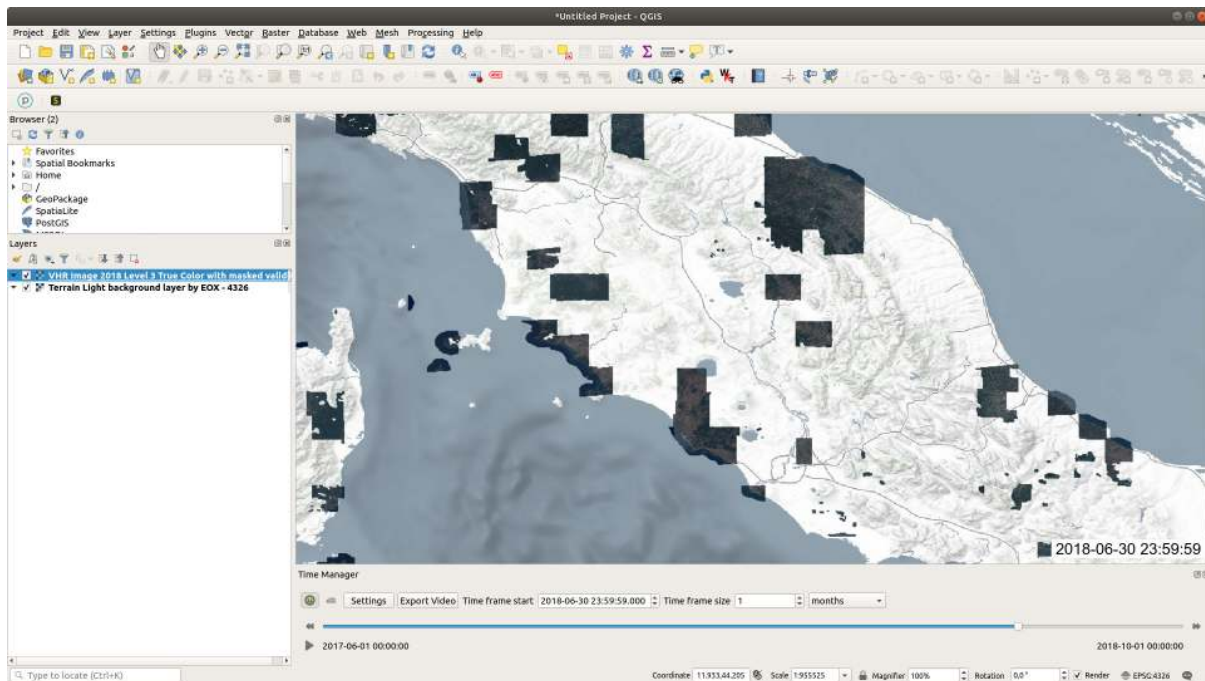


Figure 3.3.3: WMS loading in QGIS with TimeManager

The plugin needs to be installed first and then set up with the desired layer. The raster layer to be added to the TimeManager must be first added to the workspace as shown in [Loading in QGIS](#). By clicking the *Settings* button and following up with the *Add raster* button as can be seen in [Figure 3.3.4](#) it can be then chosen from the list of layers. It is also suggested to add Start and End time constraints to narrow down the interval which TimeManager will consider.

After setting the layer up, it is possible to change the time interval length (for example one month) and view all products in that interval. After clicking the *play* button, it displays the layer iteratively from the defined Start time to the defined End time, always displaying each frame for a set number of milliseconds.

New support for time aware layers was added in QGIS Version 3.14 called **Temporal Controller**. [This video](#) directly from the author of the feature shows the usage. However, due to the way that Capabilities of layers are provided by both View Server components Cache and Renderer, the QGIS Temporal Controller can not parse the time dimension metadata correctly.

For performance reasons the View Server lists only start and end of the time interval, in which the collection contains some products. It would not be suitable to list all individual time entries, as there can be easily hundreds of thousands of them. Both QGIS 3.14 and ArcMap 10.4 expect individual time entries listing and then determine its own time related behavior while handling these layers. QGIS 3.14 does not recognize capabilities time interval as time aware layer and does not add the *TIME=* parameter to the WMS/WMTS query, so the TimeManager plugin still stays an ideal choice for QGIS users to view the layers provided by the View Server.

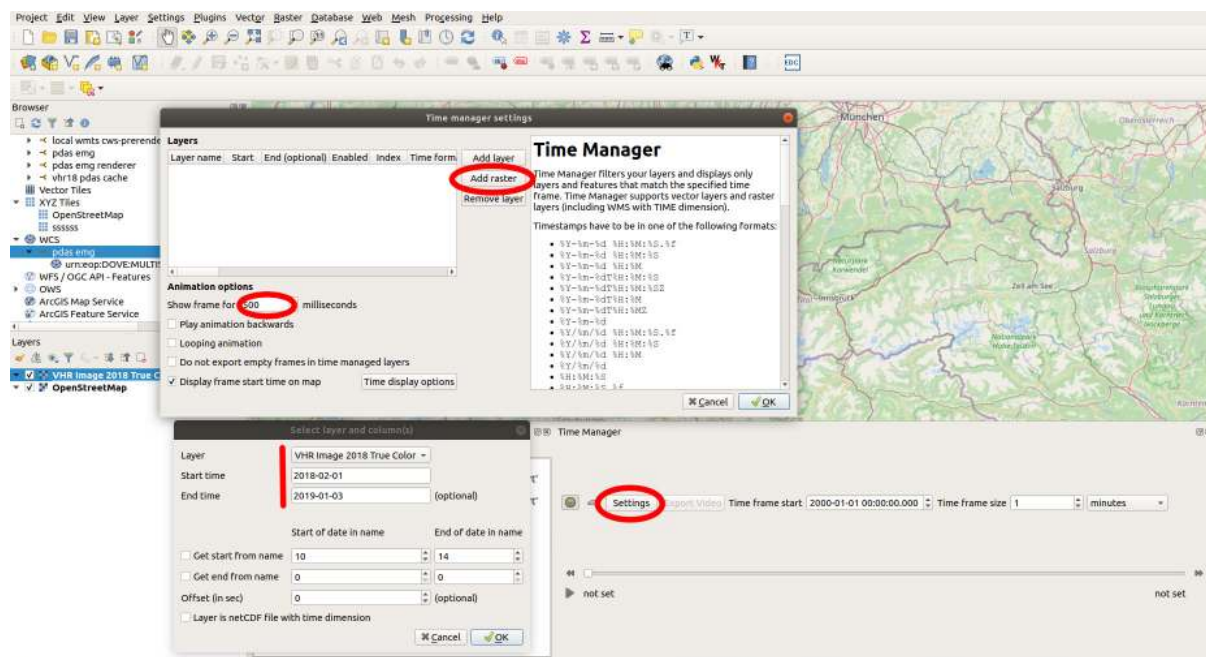


Figure 3.3.4: Setup of TimeManager

3.4 Loading in ArcMap 10

Any of the above described layers can be loaded in ArcMap 10, but the inbuilt time support does have the same issues as in the case of QGIS 3.14 Time Controller. Therefore a custom *TIME* parameter has to be added manually in the Layer settings.

To add a WMS/WMTS layer, click on the *Add Layer* symbol. Select the *Add GIS Server* option and follow up with either *Add WMS Server* or *Add WMTS Server*, as can be seen on [Figure 3.4.1](#), [Figure 3.4.2](#), and [Figure 3.4.3](#).



Figure 3.4.1: ArcMap Add Data Button

Then user is required to insert the service *URL* and click *Get Layers*. If the service is secured with some sort of authentication, the user must provide a valid *username* and *password* on the login attempt. After they are supplied, the list of available layers appears, as seen on [Figure 3.4.4](#), and [Figure 3.4.5](#).

This layer then gets added into the list of layers to choose from for adding into the workspace, as seen on [Figure 3.4.6](#). A user then follows into the nested structure of sublayers to select the one to explore, as seen on [Figure 3.4.7](#), [Figure 3.4.8](#), and [Figure 3.4.9](#).

In order to limit the displayed time interval, a user needs to add the *TIME* parameter to the requests by accessing *Layer Properties*, expand the Tab **Parameters** and enter the time interval as can be seen on [Figure 3.4.10](#). If the *TIME* parameter was already added in the previous step of adding a WMS Server, it can not be added for the request twice and needs to be changed for the whole Data Source.

Continue reading to learn about the provided [Searching](#) services.

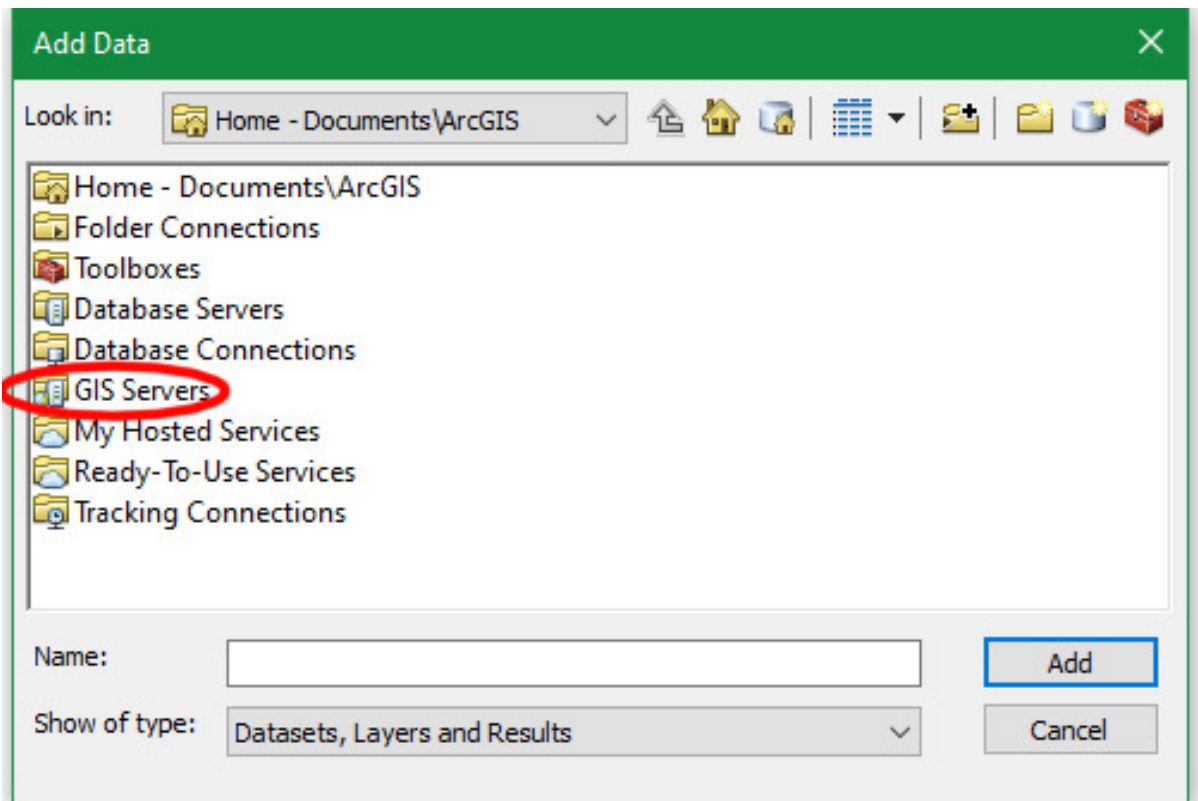


Figure 3.4.2: Choose GIS Servers

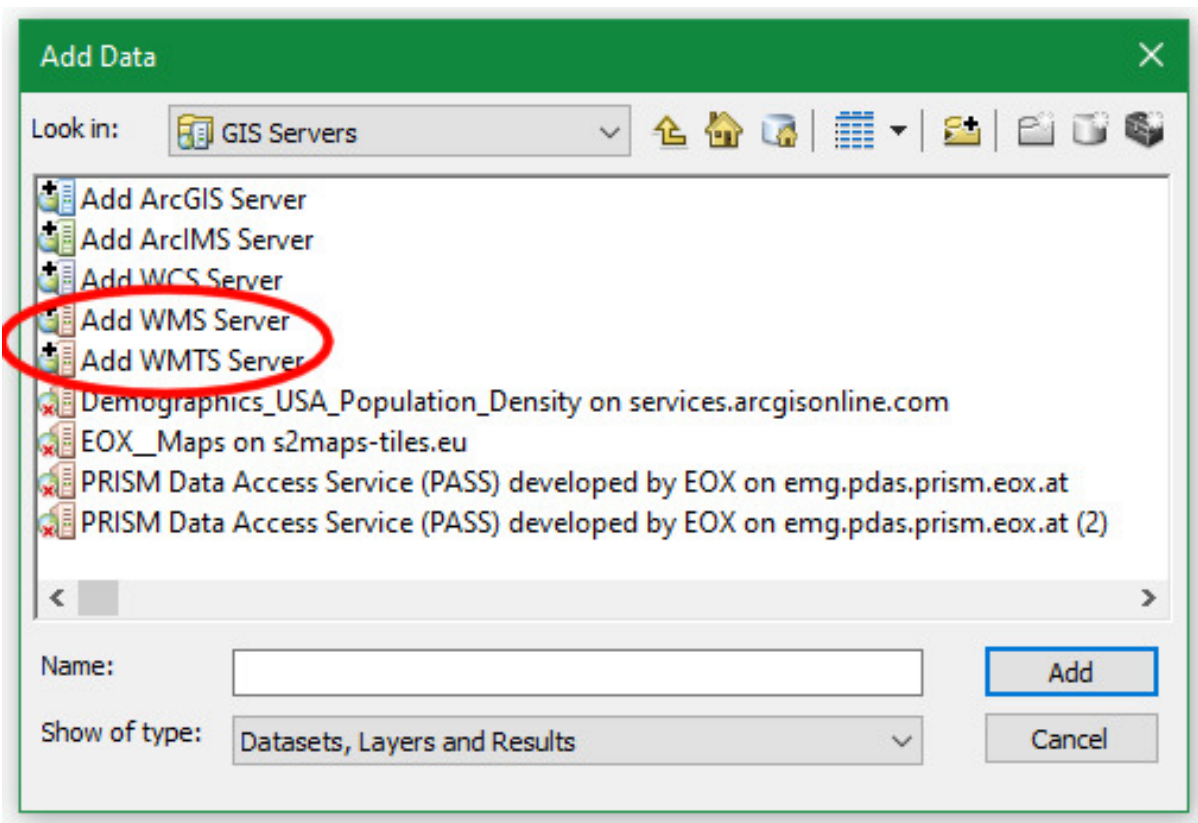


Figure 3.4.3: WMS/WMTS loading in ArcMap

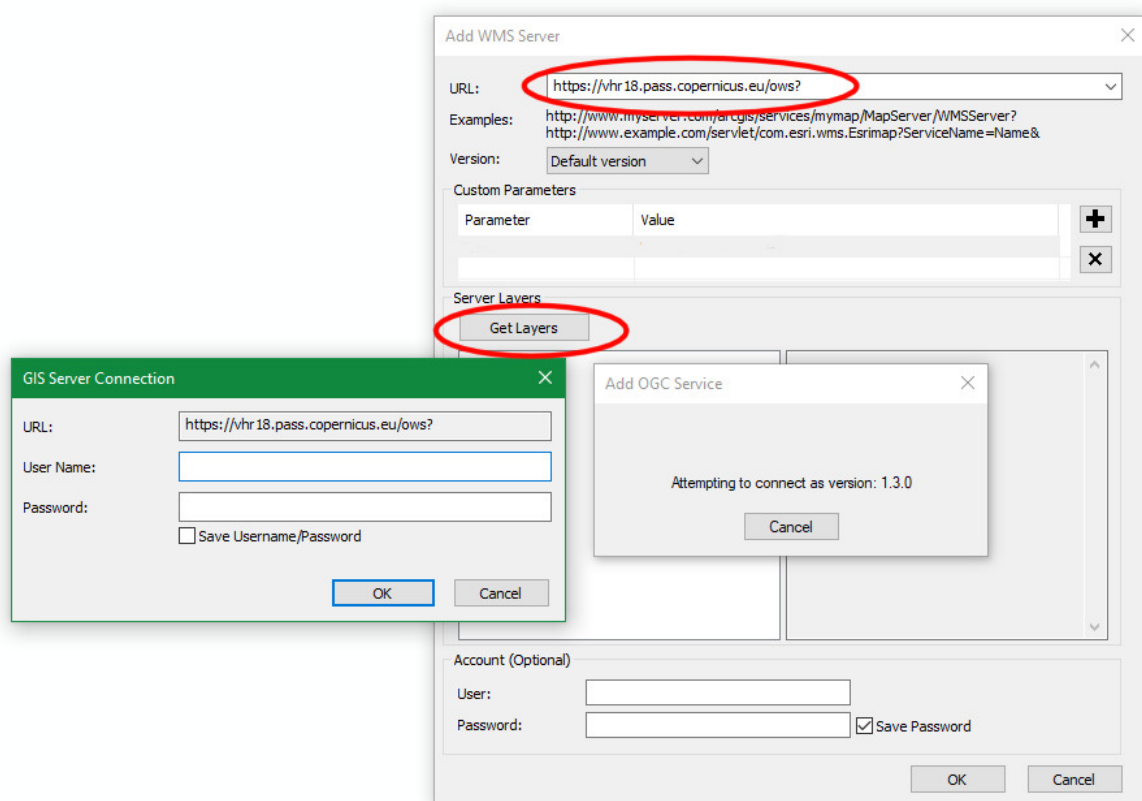


Figure 3.4.4: ArcMap add WMS Server panel

Add WMS Server

URL:

Examples:

Version:

Custom Parameters

Parameter	Value

Server Layers

Layers List:

- VHR_IMAGE_2018_Level_1_r
- VHR_IMAGE_2018_Level_1_v
- VHR_IMAGE_2018_Level_1
- VHR_IMAGE_2018_Level_1_f
- VHR_IMAGE_2018_Level_1_T
- VHR_IMAGE_2018_Level_1_c
- VHR_IMAGE_2018_Level_1_c
- VHR_IMAGE_2018
- VHR_IMAGE_2018_masked_v
- VHR_IMAGE_2018_validity
- VHR_IMAGE_2018**
- VHR_IMAGE_2018_NDVI

Layer Details:

Name: VHR_IMAGE_2018

Abstract: Not available

LatLongBoundingBox: -61,856303, -21,436666, 55,883873, 71,230642

Scale range: Minimum:0,000000 Maximum:0,000000

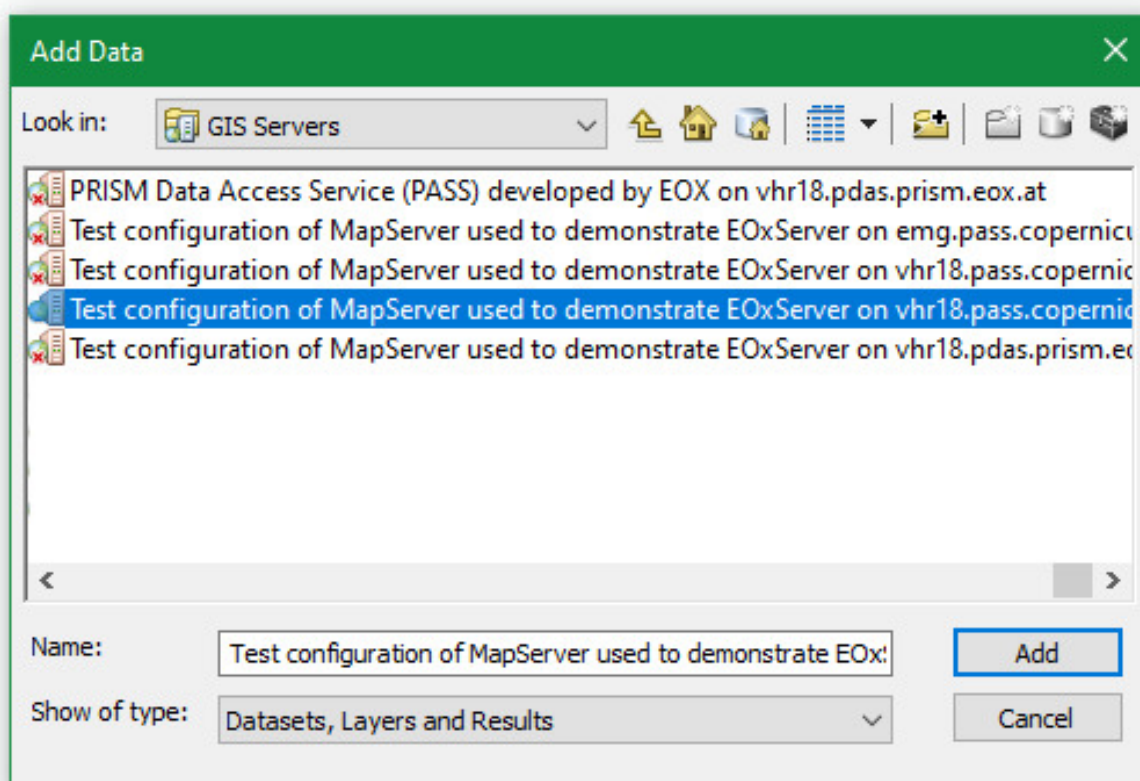
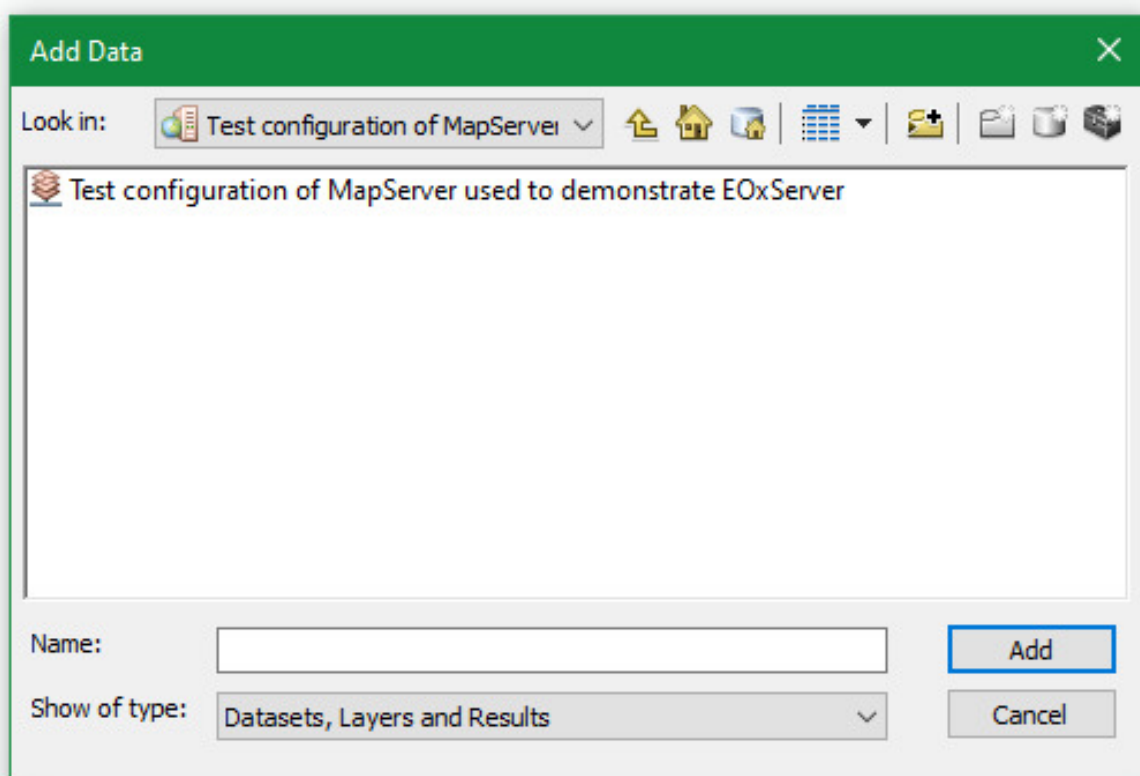
Supported SRS: EPSG:4326, EPSG:3857, EPSG:3035

Account (Optional)

User:

Password: ☒ Save Password

Figure 3.4.5: ArcMap add WMS Server panel

Figure 3.4.6: *Select layers*Figure 3.4.7: *Select layers*

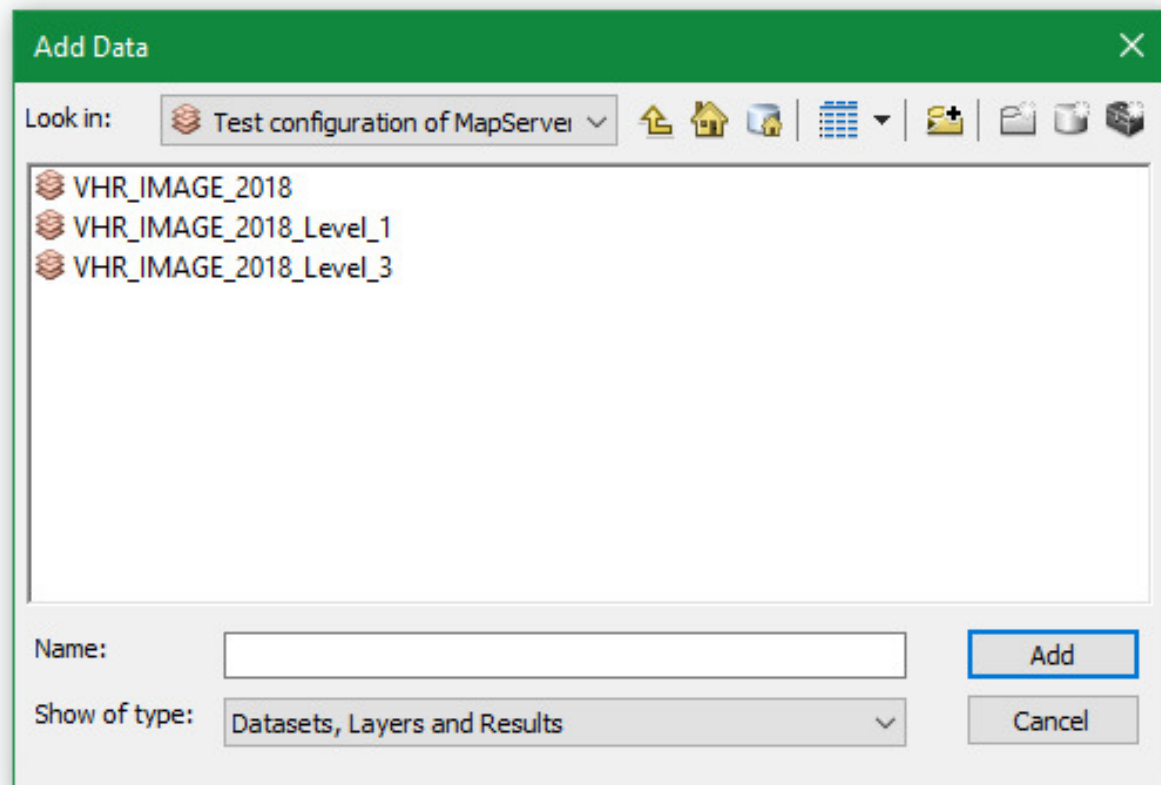


Figure 3.4.8: Select layers

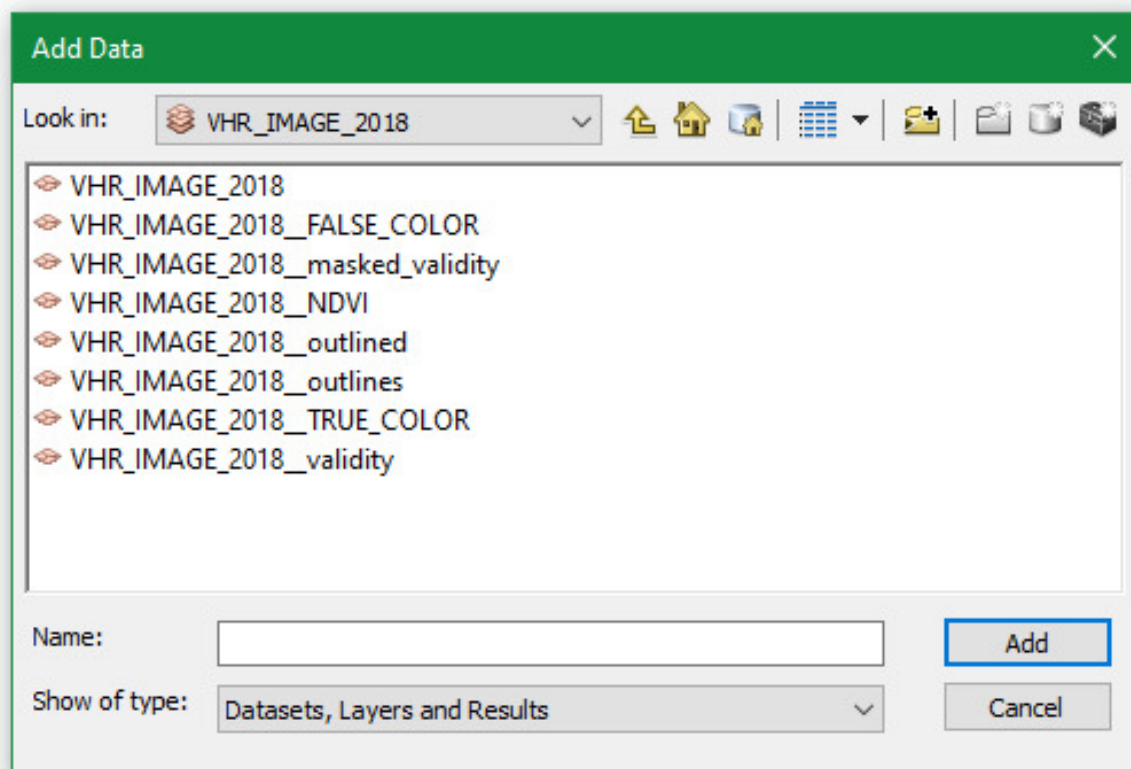
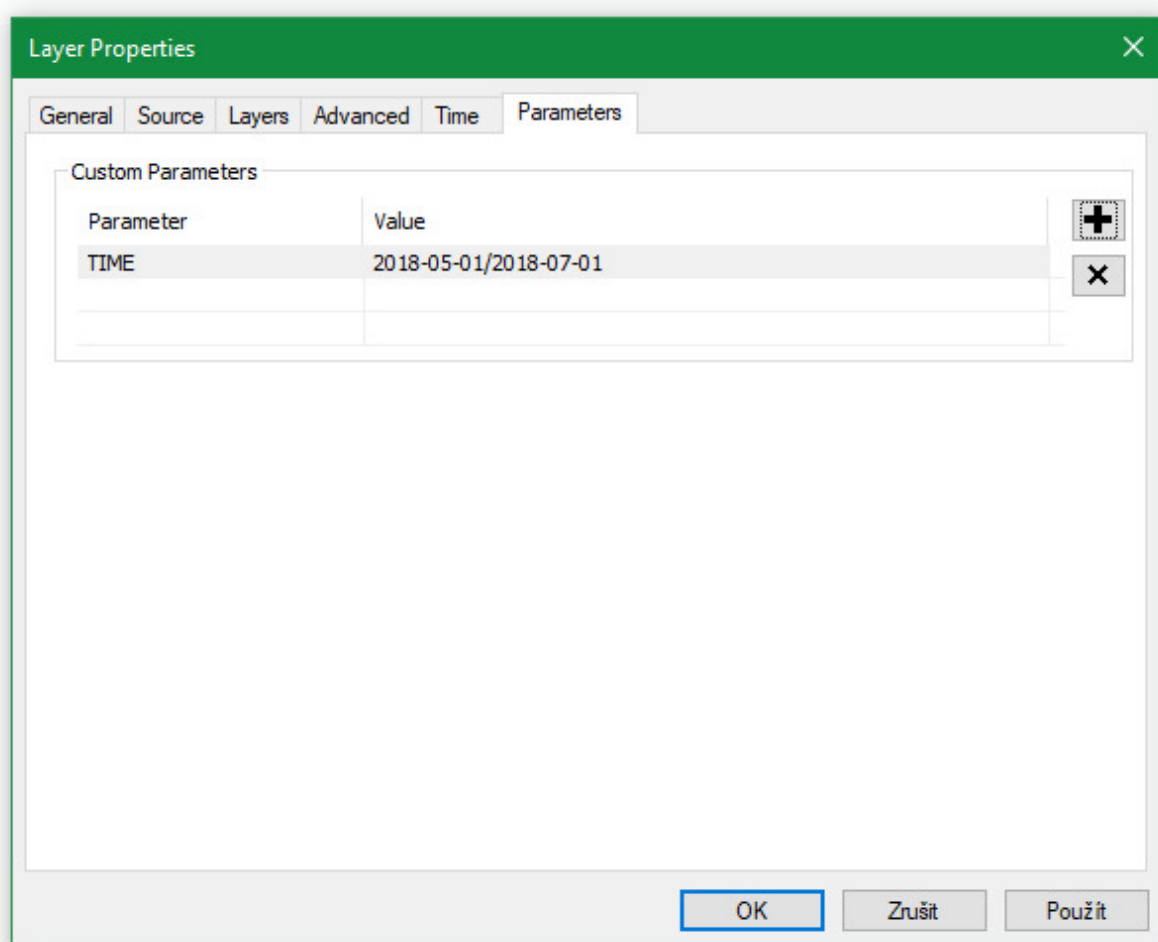


Figure 3.4.9: Select sublayers

Figure 3.4.10: Set custom *TIME* parameter

SEARCHING

The main interface for searching is provided by [OpenSearch](#) using various extensions including the [Geo and Time Extensions](#), the [Extension for Earth Observation](#) as well as the [CEOS OpenSearch Best Practice Document](#).

The OpenSearch URL endpoints are:

- `/opensearch`: Main service description
- `/opensearch/<format>`: Search for collections in a specific format
- `/opensearch/collections/<collection-id>`: Collection specific description
- `/opensearch/collections/<collection-id>/<format>`: Search for products in a collection in that format

4.1 Responses

The description related endpoints provide an OpenSearch Description Document (OSDD). This XML based file format describes general service metadata and various access URL templates.

These URL objects provide templates that can be filled with parameters to submit actual metadata queries. Depending on the used URL, the search result is returned in one of the following formats:

- `atom`: Atom syndication format
- `rss`: RSS
- `html`: HTML
- `kml`: Keyhole Markup Language
- `json`: GeoJSON

The resulting items in that result document can be paged. Specific pages can be retrieved using the `offset` and `count` parameters. Additionally, the response contains links to the first, last, next, and previous pages of the result set.

The results of the search depend on the type of object being searched. For the collection search, the result items are collection descriptions of all matched collections encoded in the selected format. Each description contains a link to its own specific OSDD document.

In product searches, the result document items are descriptions of products, containing links to thumbnails, browses, and product specific services such as WMS or WCS. Additionally it contains the products acquisition footprint and time stamp.

4.2 Filters

The URL templates for both the collection and the record search allow to pass parameters that control the query and shape of the search. The following table shows all parameters available for both collection and product searches:

Parameter	Description
startIndex	The index offset of the items. Used to get subsets of a result set
count	The number of records for each page
start	The start time stamp for the time range
end	The end time stamp for the time range
timere1	The semantic of the time range. Either intersects, contains, disjoint, or equals
bbox	The geographic bounding box expressed as min-lon, min-lat, max-lon, max-lat in WGS84 coordinates
geom	A WKT encoded geometry for a geographic search
lon	The longitude component of point/radius searches
lat	The latitude component of point/radius searches
r	The radius in metres of point/radius searches
georel	The semantic of the geometry filter. One of intersects, contains, or disjoint

The following parameters are only available in product searches in addition to the general search parameters:

Parameter	Description
uid	Filter on identifier
cloudCover	Cloud cover filter. Either a specific value or an interval of values. Values between 0-100

The available parameters depend on the configuration made by the operator.

Samples responses for each of the four URL endpoints are provided in the [Searching](#) section of the [Sample Service Requests](#) chapter.

Continue reading about the provided [Downloading](#) services.

DOWNLOADING

The download interface is implemented following the [Web Coverage Service \(WCS\)](#) as well as the [Download Service for Earth Observation Products Best Practice \(DSEO\)](#) standards.

These interfaces support both, the simple download of entire products via DSEO as well as flexible customized downloads via WCS. Both services can be accessed at the path `/ows?`.

The WCS offers the following customizations in order to optimize downloads and minimize unnecessarily used bandwidth:

- [Earth Observation Application Profile \(EO-WCS\)](#)
- Meaningful default configuration
- Spatial subset to retrieve only the geographic area of interest
- Range subset to retrieve only the band(s) of interest
- Scaling to required resolution
- Format selection
- Interpolation selection if needed
- Projection selection

Note that the download size in WCS is restricted in order to not block the service. Clients are advised to download bigger coverages in chunks and put them together afterwards.

5.1 Downloading in QGIS

In order to use the download via WCS 1.0, that QGIS supports, a WCS layer needs to be added.

Open the Data Source Manager and add a WCS Layer, configuring the URL as shown in [Figure 5.1.1](#) and create a new WCS Connection using the URL of the service and specifying the product id to be downloaded via CQL= query. It is necessary to tick the **Ignore GetCoverage URI reported in capabilities**, as the reference URI usually does not contain the additional CQL or any other request parameters.

A user can be prompted to specify the transformation between coordinate reference systems in case that the default output image is in a different coordinate reference system than current map projection - as shown in [Figure 5.1.2](#)

Currently, QGIS supports specifying the output coordinate reference system and image format through the relevant input fields as shown in [Figure 5.1.3](#). All other optional parameters for WCS request need to be added to the URL manually clicking on Edit button.

The final chapter [Sample Service Requests](#) holds a list of sample requests against the various services described in this user guide.

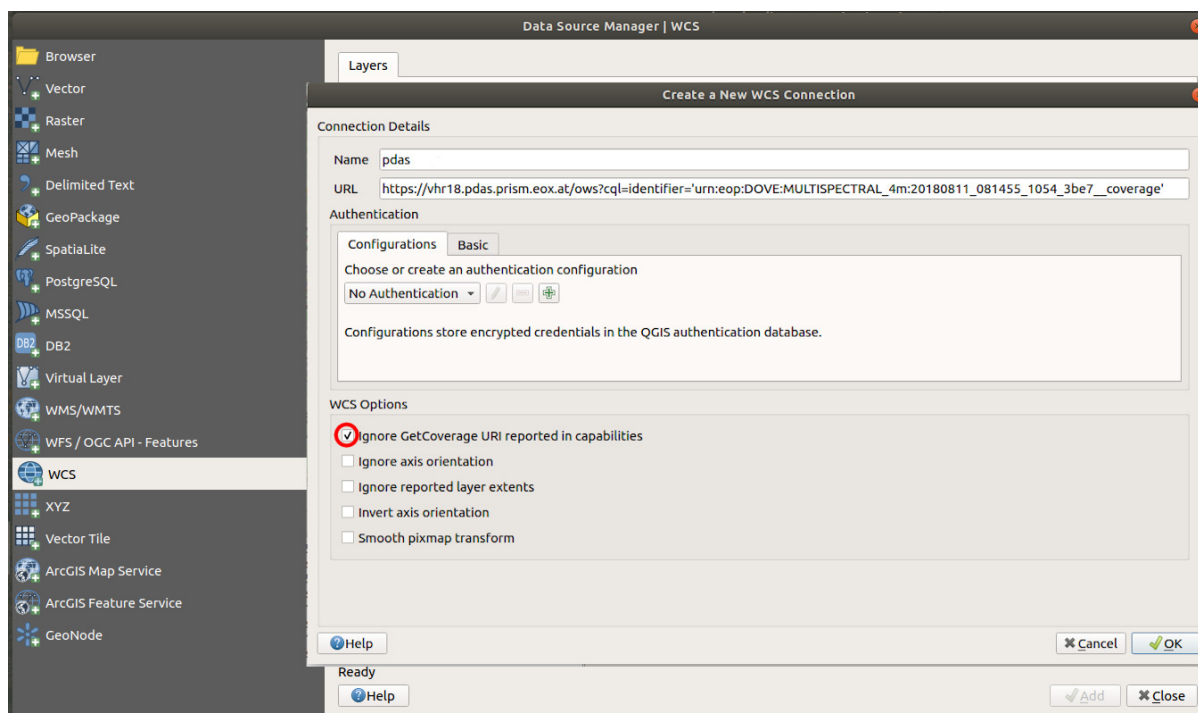


Figure 5.1.1: QGIS - Create WCS Connection

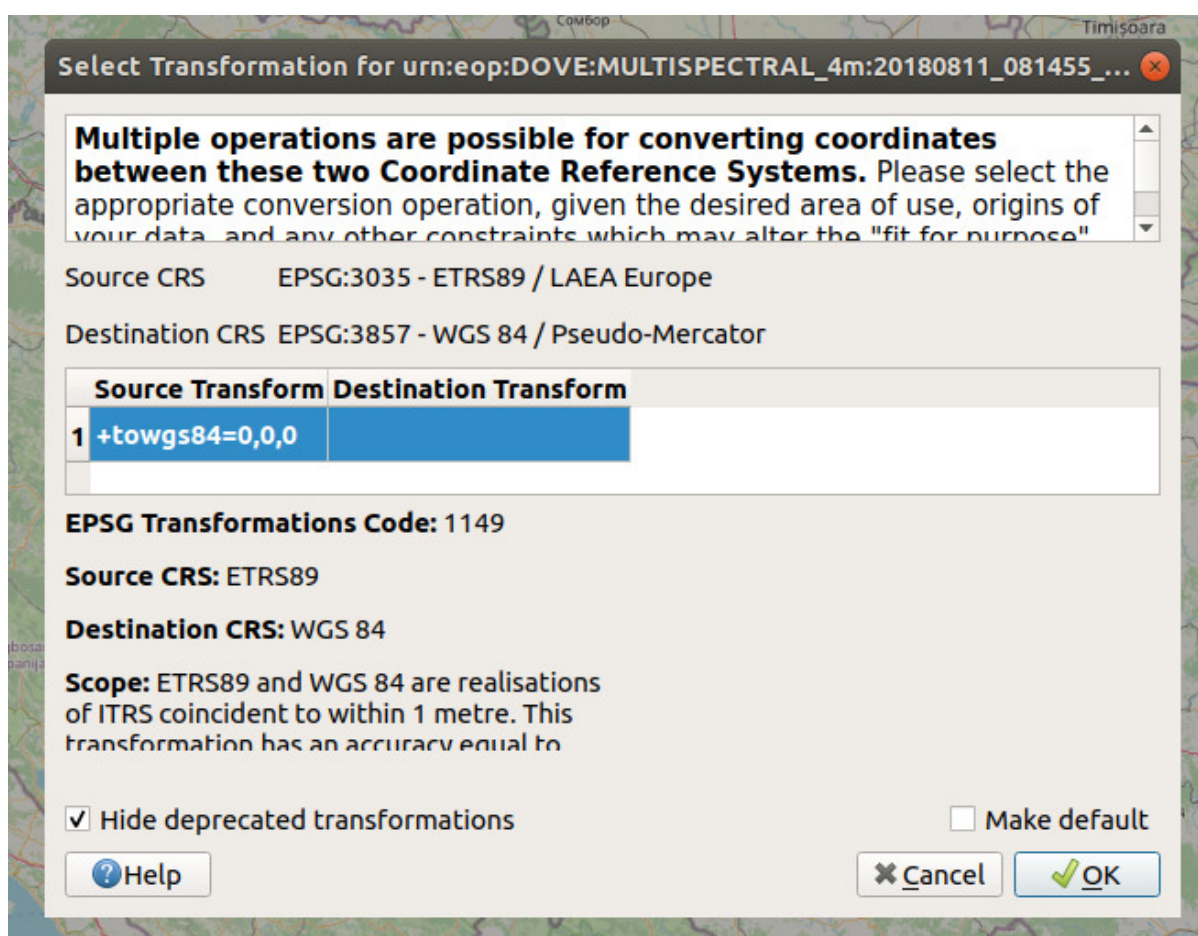


Figure 5.1.2: QGIS - CRS transformation confirmation

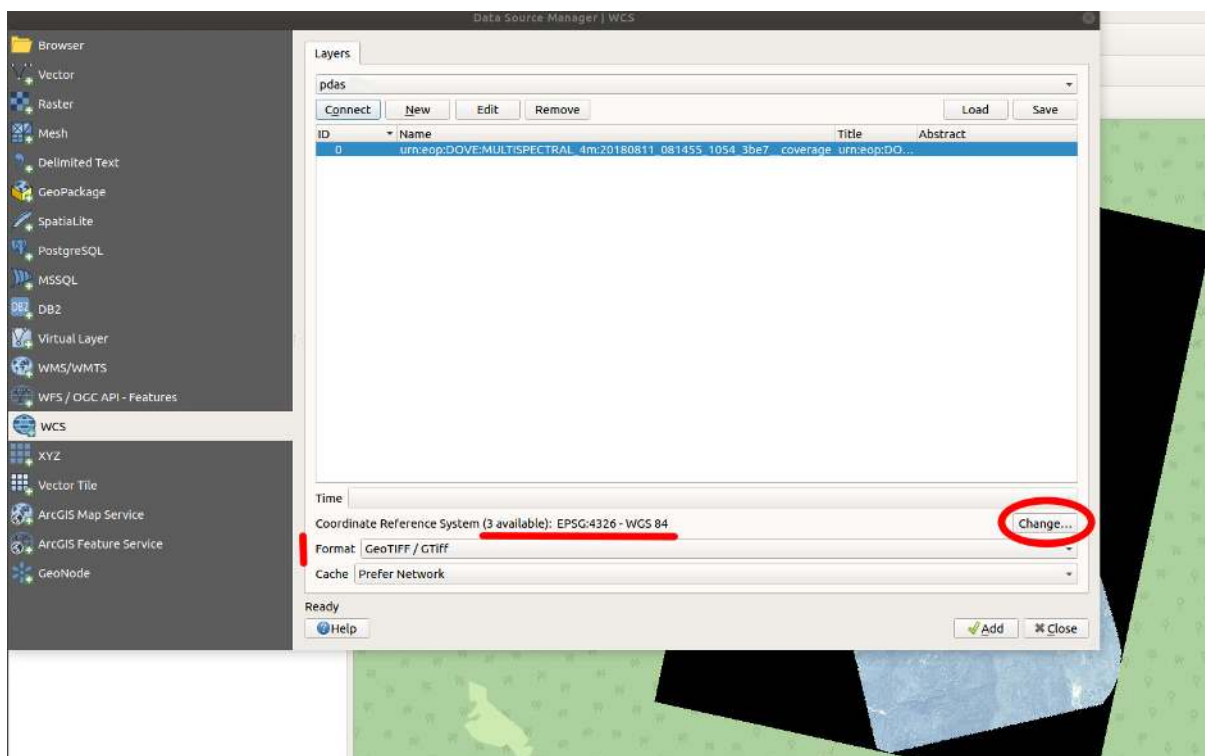


Figure 5.1.3: QGIS WCS layer options

SAMPLE SERVICE REQUESTS

This chapter provides various sample requests. Those requests are against a production service and might get invalid over time.

Please note that the production service used requires user authentication. Please ask the European Space Agency (ESA) to get access granted.

6.1 Web Client

The web and services are accessible at two production URLs:

- pdas.prism.eox.at
- pass.copernicus.eu

Currently as of writing two collections/datasets are available, the [VHR IMAGE 2018](#) and the [Emergency](#) dataset.

6.2 Performance optimized viewing

WMTS Capabilities

```
<?xml version="1.0" encoding="UTF-8"?>
<Capabilities version="1.0.0" xmlns="http://www.opengis.net/wmts/1.0" xmlns:gml=
↪ "http://www.opengis.net/gml" xmlns:inspire_common="http://inspire.ec.europa.eu/
↪ schemas/common/1.0" xmlns:inspire_vs="http://inspire.ec.europa.eu/schemas/
↪ inspire_vs_ows11/1.0" xmlns:ows="http://www.opengis.net/ows/1.1" xmlns:xlink=
↪ "http://www.w3.org/1999/xlink" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
↪ instance" xsi:schemaLocation="http://www.opengis.net/wmts/1.0 http://schemas.
↪ opengis.net/wmts/1.0/wmtsGetCapabilities_response.xsd http://inspire.ec.europa.
↪ eu/schemas/inspire_vs_ows11/1.0 http://inspire.ec.europa.eu/schemas/inspire_vs_
↪ ows11/1.0/inspire_vs_ows_11.xsd">
  <ows:ServiceIdentification>
    <ows:Title>PRISM Data Access Service (PASS) developed by EOX</ows:Title>
    <ows:Abstract>PRISM Data Access Service (PASS) developed by EOX</ows:Abstract>
    <ows:Keywords>
      <ows:Keyword>view service</ows:Keyword>
    </ows:Keywords>
    <ows:ServiceType>OGC WMTS</ows:ServiceType>
    <ows:ServiceTypeVersion>1.0.0</ows:ServiceTypeVersion>
    <ows:Fees>UNKNOWN</ows:Fees>
    <ows:AccessConstraints>UNKNOWN</ows:AccessConstraints>
  </ows:ServiceIdentification>
  <ows:ServiceProvider>
    <stripped/>
  </ows:ServiceProvider>
  <ows:OperationsMetadata>
```

(continues on next page)

(continued from previous page)

```

<ows:Operation name="GetCapabilities">
  <ows:DCP>
    <ows:HTTP>
      <ows:Get xlink:href="https://vhr18.pass.copernicus.eu/cache/ows/wmts?">
        <ows:Constraint name="GetEncoding">
          <ows:AllowedValues>
            <ows:Value>KVP</ows:Value>
          </ows:AllowedValues>
        </ows:Constraint>
      </ows:Get>
    </ows:HTTP>
  </ows:DCP>
</ows:Operation>
<ows:Operation name="GetTile">
  <ows:DCP>
    <ows:HTTP>
      <ows:Get xlink:href="https://vhr18.pass.copernicus.eu/cache/ows/wmts?">
        <ows:Constraint name="GetEncoding">
          <ows:AllowedValues>
            <ows:Value>KVP</ows:Value>
          </ows:AllowedValues>
        </ows:Constraint>
      </ows:Get>
    </ows:HTTP>
  </ows:DCP>
</ows:Operation>
<ows:Operation name="GetFeatureInfo">
  <ows:DCP>
    <ows:HTTP>
      <ows:Get xlink:href="https://vhr18.pass.copernicus.eu/cache/ows/wmts?">
        <ows:Constraint name="GetEncoding">
          <ows:AllowedValues>
            <ows:Value>KVP</ows:Value>
          </ows:AllowedValues>
        </ows:Constraint>
      </ows:Get>
    </ows:HTTP>
  </ows:DCP>
</ows:Operation>
<inspire_vs:ExtendedCapabilities>
  <inspire_common:MetadataUrl xsi:type="inspire_common:resourceLocatorType">
    <inspire_common:URL>TBD</inspire_common:URL>
    <inspire_common:MediaType>application/vnd.iso.19139+xml</inspire_
↪common:MediaType>
  </inspire_common:MetadataUrl>
  <inspire_common:SupportedLanguages>
    <inspire_common:DefaultLanguage>
      <inspire_common:Language>eng</inspire_common:Language>
    </inspire_common:DefaultLanguage>
  </inspire_common:SupportedLanguages>
  <inspire_common:ResponseLanguage>
    <inspire_common:Language>eng</inspire_common:Language>
  </inspire_common:ResponseLanguage>
</inspire_vs:ExtendedCapabilities>
</ows:OperationsMetadata>
<Contents>
  <Layer>
    <ows:Title>VHR Image 2018 Level 3 True Color with masked validity</ows:Title>
    <ows:Abstract>VHR Image 2018 Level 3 True Color with masked validity</
↪ows:Abstract>
    <ows:WGS84BoundingBox>

```

(continues on next page)

(continued from previous page)

```

    <ows:LowerCorner>-180.000000 -90.000000</ows:LowerCorner>
    <ows:UpperCorner>180.000000 90.000000</ows:UpperCorner>
  </ows:WGS84BoundingBox>
  <ows:Identifier>VHR_IMAGE_2018_Level_3__masked_validity</ows:Identifier>
  <Style isDefault="true">
    <ows:Identifier>default</ows:Identifier>
  </Style>
  <Format>image/unknown</Format>
  <Dimension>
    <ows:Identifier>time</ows:Identifier>
    <Default>2017/2019</Default>
    <Value>2017-05-01T09:54:28Z/2019-10-06T07:03:34Z</Value>
  </Dimension>
  <TileMatrixSetLink>
    <TileMatrixSet>WGS84</TileMatrixSet>
  </TileMatrixSetLink>
  <ResourceURL format="image/unknown" resourceType="tile" template="https://
  ↪vhr18.pass.copernicus.eu/cache/ows/wmts/1.0.0/VHR_IMAGE_2018_Level_3__masked_
  ↪validity/default/{time}/{TileMatrixSet}/{TileMatrix}/{TileRow}/{TileCol}.xxx"/>
</Layer>
<Layer>
  <ows:Title>VHR Image 2018 Level 3 True Color with masked validity Full_
  ↪Coverage</ows:Title>
  <ows:Abstract>VHR Image 2018 Level 3 True Color with masked validity Full_
  ↪Coverage</ows:Abstract>
  <ows:WGS84BoundingBox>
    <ows:LowerCorner>-24.700000 27.500000</ows:LowerCorner>
    <ows:UpperCorner>45.000000 71.300000</ows:UpperCorner>
  </ows:WGS84BoundingBox>
  <ows:Identifier>VHR_IMAGE_2018_Level_3__masked_validity__Full</
  ↪ows:Identifier>
  <Style isDefault="true">
    <ows:Identifier>default</ows:Identifier>
  </Style>
  <Format>image/unknown</Format>
  <TileMatrixSetLink>
    <TileMatrixSet>WGS84</TileMatrixSet>
  </TileMatrixSetLink>
  <ResourceURL format="image/unknown" resourceType="tile" template="https://
  ↪vhr18.pass.copernicus.eu/cache/ows/wmts/1.0.0/VHR_IMAGE_2018_Level_3__masked_
  ↪validity__Full/default/{TileMatrixSet}/{TileMatrix}/{TileRow}/{TileCol}.xxx"/>
</Layer>
<stripped_12_layers/>
<TileMatrixSet>
  <stripped/>
</TileMatrixSet>
</Contents>
</Capabilities>

```

WMS Capabilities

```

<?xml version="1.0" encoding="UTF-8" standalone="no" ?>
<!DOCTYPE WMT_MS_Capabilities
  SYSTEM 'http://schemas.opengis.net/wms/1.1.0/capabilities_1_1_0.dtd' [ <!ELEMENT_
  ↪VendorSpecificCapabilities EMPTY]>
<WMT_MS_Capabilities version="1.1.1">
  <Service>
    <Name>OGC:WMS</Name>
    <Title>PRISM Data Access Service (PASS) developed by EOX</Title>
    <OnlineResource xlink:href="https://vhr18.pass.copernicus.eu/cache/ows/?"
    ↪xmlns:xlink="http://www.w3.org/1999/xlink"/>

```

(continues on next page)

(continued from previous page)

```

</Service>
<Capability>
  <Request>
    <GetCapabilities>
      <Format>application/vnd.ogc.wms_xml</Format>
      <DCPType>
        <HTTP>
          <Get>
            <OnlineResource xlink:href="https://vhr18.pass.copernicus.eu/cache/ows/"
            xmlns:xlink="http://www.w3.org/1999/xlink"/>
          </Get>
        </HTTP>
      </DCPType>
    </GetCapabilities>
    <GetMap>
      <Format>image/png</Format>
      <Format>image/jpeg</Format>
      <DCPType>
        <HTTP>
          <Get>
            <OnlineResource xlink:href="https://vhr18.pass.copernicus.eu/cache/ows/"
            xmlns:xlink="http://www.w3.org/1999/xlink"/>
          </Get>
        </HTTP>
      </DCPType>
    </GetMap>
    <GetFeatureInfo>
      <Format>text/plain</Format>
      <Format>application/vnd.ogc.gml</Format>
      <DCPType>
        <HTTP>
          <Get>
            <OnlineResource xlink:href="https://vhr18.pass.copernicus.eu/cache/ows/"
            xmlns:xlink="http://www.w3.org/1999/xlink"/>
          </Get>
        </HTTP>
      </DCPType>
    </GetFeatureInfo>
  </Request>
  <Exception>
    <Format>text/plain</Format>
  </Exception>
  <VendorSpecificCapabilities>
    <stripped/>
  </VendorSpecificCapabilities>
  <Layer>
    <Title>PRISM Data Access Service (PASS) developed by EOX</Title>
    <SRS>EPSG:4326</SRS>
    <Layer cascaded="1" queryable="0">
      <Name>VHR_IMAGE_2018_Level_3__masked_validity</Name>
      <Title>VHR Image 2018 Level 3 True Color with masked validity</Title>
      <Abstract>VHR Image 2018 Level 3 True Color with masked validity</Abstract>
      <LatLonBoundingBox maxx="180.000000" maxy="90.000000" minx="-180.000000"
      miny="-90.000000"/>
      <Dimension default="2017/2019" name="time">2017-05-01T09:54:28Z/2019-10-
      06T07:03:34Z</Dimension>
      <BoundingBox SRS="EPSG:4326" maxx="180.000000" maxy="90.000000" minx="-180.
      000000" miny="-90.000000"/>
      <SRS>EPSG:4326</SRS>
    </Layer>
    <Layer cascaded="1" queryable="0">

```

(continues on next page)

(continued from previous page)

```

<Name>VHR_IMAGE_2018_Level_3_masked_validity_Full</Name>
<Title>VHR Image 2018 Level 3 True Color with masked validity Full Coverage
</Title>
<Abstract>VHR Image 2018 Level 3 True Color with masked validity Full
Coverage</Abstract>
<LatLonBoundingBox maxx="45.000000" maxy="71.300000" minx="-24.700000"
miny="27.500000"/>
<BoundingBox SRS="EPSG:4326" maxx="45.000000" maxy="71.300000" minx="-24.
700000" miny="27.500000"/>
<SRS>EPSG:4326</SRS>
</Layer>
<stripped_12_layers/>
</Layer>
</Capability>
</WMT_MS_Capabilities>

```

WMTS True color tile, WMTS False color tile, and WMTS NDVI tile. Same area via WMS request.

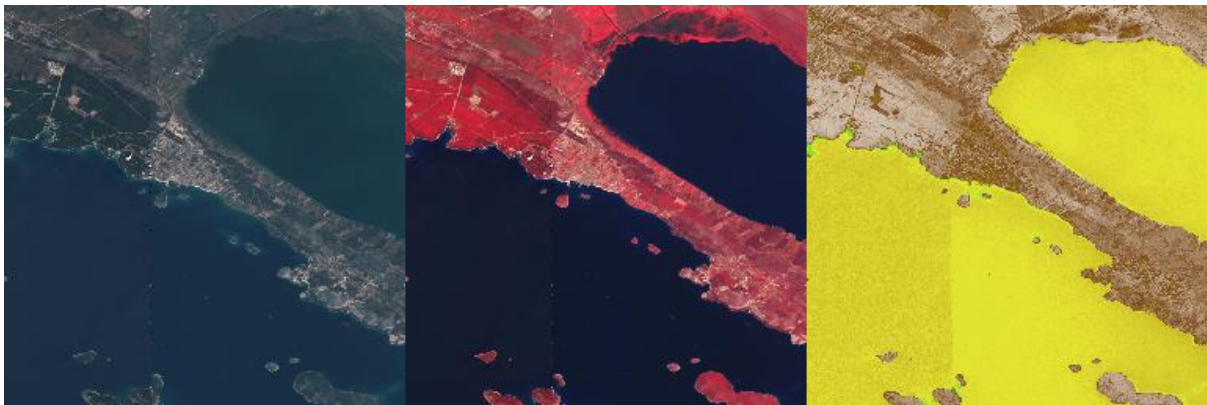


Figure 6.2.1: WMTS Tiles - True color, false color, and NDVI

WMTS True color masked validity tile



Figure 6.2.2: WMTS Tiles - Unmasked and masked

WMTS Full layer



Figure 6.2.3: WMTS Tiles - Full layer

WMS Full layer

6.3 Flexible viewing

Capabilities for collection layers (example below) or Layer capabilities for one product

```
<?xml version='1.0' encoding='iso-8859-1'?>
<WMS_Capabilities updateSequence="20131219T132000Z" version="1.3.0" xmlns="http://
↪www.opengis.net/wms" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns:xsi="http://
↪www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="">
  <Service>
    <Name>PRISM Data Access Service (PASS) developed by EOX</Name>
    <Title>PRISM Data Access Service (PASS) developed by EOX</Title>
    <Abstract>PRISM Data Access Service (PASS) developed by EOX</Abstract>
    <KeywordList>
      <Keyword>&lt;KEYWORDLIST&gt;</Keyword>
    </KeywordList>
    <OnlineResource>http://eoxserver.org</OnlineResource>
    <ContactInformation>
      <ContactPersonPrimary>
        <ContactPerson>&lt;CONTACTPERSON&gt;</ContactPerson>
        <ContactOrganization>&lt;CONTACTORGANIZATION&gt;</ContactOrganization>
      </ContactPersonPrimary>
      <ContactPosition>&lt;CONTACTPOSITION&gt;</ContactPosition>
      <ContactAddress>
        <AddressType>postal</AddressType>
        <Address>&lt;ADDRESS&gt;</Address>
        <City>&lt;CITY&gt;</City>
        <StateOrProvince>&lt;STATEORPROVINCE&gt;</StateOrProvince>
        <PostCode>&lt;POSTCODE&gt;</PostCode>
        <Country>&lt;COUNTRY&gt;</Country>
      </ContactAddress>
      <ContactVoiceTelephone>&lt;CONTACTVOICETELEPHONE&gt;</ContactVoiceTelephone>
    </ContactInformation>
  </Service>
</WMS_Capabilities>
```

(continues on next page)



Figure 6.2.4: WMS - Full layer

(continued from previous page)

```

    <ContactFacsimileTelephone>&lt; CONTACTFACSIMILETELEPHONE&gt;</
↪ContactFacsimileTelephone>
    <ContactElectronicMailAddress>&lt; CONTACTELECTRONICMAILADDRESS&gt;</
↪ContactElectronicMailAddress>
    </ContactInformation>
    <Fees>None</Fees>
    <AccessConstraints>None</AccessConstraints>
</Service>
<Capability>
  <Request>
    <GetCapabilities>
      <Format>text/xml</Format>
      <DCPType>
        <HTTP>
          <Get>
            <OnlineResource xlink:href="https://vhr18.pdas.prism.eox.at/ows" ↪
↪xlink:type="simple"/>
          </Get>
        </HTTP>
      </DCPType>
    </GetCapabilities>
    <GetMap>
      <Format>image/png</Format>
      <Format>image/jpeg</Format>
      <Format>image/gif</Format>
      <Format>image/tiff</Format>
      <DCPType>
        <HTTP>
          <Get>
            <OnlineResource xlink:href="https://vhr18.pdas.prism.eox.at/ows" ↪
↪xlink:type="simple"/>
          </Get>
        </HTTP>
      </DCPType>

```

(continues on next page)

```

</GetMap>
<GetFeatureInfo>
  <Format/>
  <DCPType>
    <HTTP>
      <Get>
        <OnlineResource xlink:href="https://vhr18.pdas.prism.eox.at/ows"
↪xlink:type="simple"/>
      </Get>
    </HTTP>
  </DCPType>
</GetFeatureInfo>
</Request>
<Exception>
  <Format>XML</Format>
  <Format>INIMAGE</Format>
  <Format>BLANK</Format>
</Exception>
<Layer>
  <Title>PRISM Data Access Service (PASS) developed by EOX</Title>
  <CRS>EPSG:4326</CRS>
  <CRS>EPSG:3857</CRS>
  <CRS>EPSG:3035</CRS>
  <EX_GeographicBoundingBox>
    <westBoundLongitude>-180</westBoundLongitude>
    <eastBoundLongitude>180</eastBoundLongitude>
    <southBoundLatitude>-90</southBoundLatitude>
    <northBoundLatitude>90</northBoundLatitude>
  </EX_GeographicBoundingBox>
  <stripped_2_layer_groups/>
  <Layer queryable="0">
    <Name>VHR_IMAGE_2018_Level_3</Name>
    <EX_GeographicBoundingBox>
      <westBoundLongitude>-24.6397992939</westBoundLongitude>
      <eastBoundLongitude>44.8308373419</eastBoundLongitude>
      <southBoundLatitude>27.5748429858</southBoundLatitude>
      <northBoundLatitude>71.2306420611</northBoundLatitude>
    </EX_GeographicBoundingBox>
    <Layer queryable="1">
      <Name>VHR_IMAGE_2018_Level_3__outlines</Name>
      <Style>
        <Name>brown</Name>
        <Abstract>brown</Abstract>
      </Style>
      <Style>
        <Name>yellow</Name>
        <Abstract>yellow</Abstract>
      </Style>
      <stripped_10_styles/>
    </Layer>
  </stripped_6_layers/>
  <Layer queryable="0">
    <Name>VHR_IMAGE_2018_Level_3__masked_validity</Name>
  </Layer>
  <Dimension default="2018-09-30T13:26:34Z" name="time" units="ISO8601">2017-
↪05-01T09:54:28Z/2018-09-30T13:26:34Z/PT1S</Dimension>
</Layer>
</Layer>
</Capability>
</WMS_Capabilities>

```

Quicklook



Figure 6.3.1: *WMS - Quicklook*

False color



Figure 6.3.2: *WMS - False color*

NDVI including style

Custom color stretch

Custom band selection as RGB and color stretch as False color rendering

CQL filtering on Cloud Coverage

Clouds mask

Masked clouds

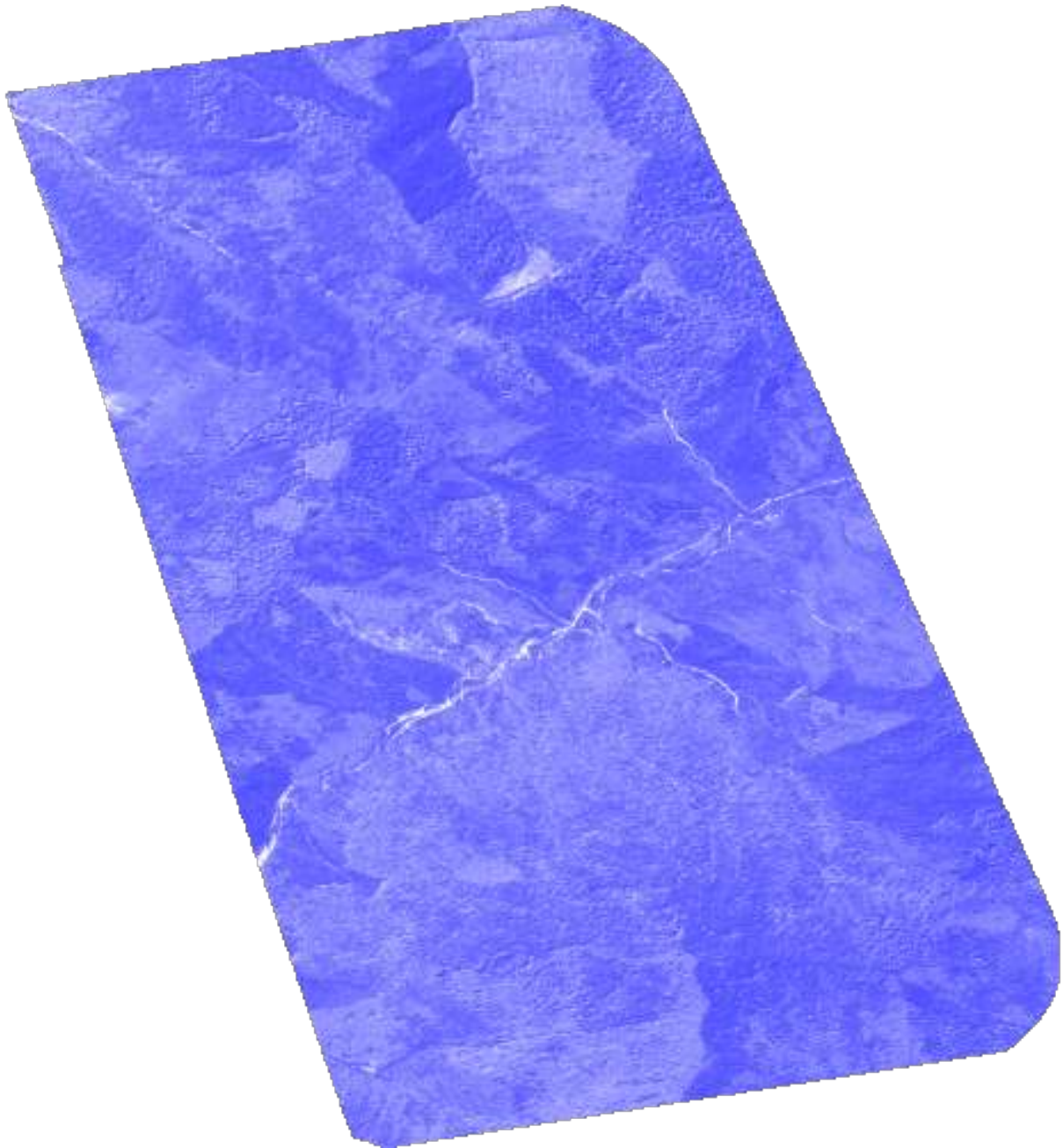


Figure 6.3.3: *WMS - NDVI custom style*



Figure 6.3.4: *WMS - Custom color stretch*



Figure 6.3.5: *WMS - Custom bands*



Figure 6.3.6: *WMS - CQL filtering*



Figure 6.3.7: *WMS - Clouds mask*



Figure 6.3.8: *WMS - Masked clouds*

6.4 Searching

1st step OSDD (stripped to only contain the Atom URL template)

```
<?xml version='1.0' encoding='iso-8859-1'?>
<OpenSearchDescription xmlns="http://a9.com/-/spec/opensearch/1.1/" xmlns:atom=
  ↪ "http://www.w3.org/2005/Atom" xmlns:cql="http://a9.com/-/opensearch/extensions/
  ↪ cql/1.0/" xmlns:eo="http://a9.com/-/opensearch/extensions/eo/1.0/" xmlns:geo=
  ↪ "http://a9.com/-/opensearch/extensions/geo/1.0/" xmlns:parameters="http://a9.com/
  ↪ -/spec/opensearch/extensions/parameters/1.0/" xmlns:time="http://a9.com/-/
  ↪ opensearch/extensions/time/1.0/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
  ↪ instance" xsi:schemaLocation="">
  <ShortName/>
  <Description/>
  <Url indexOffset="0" parameters:enctype="application/x-www-form-urlencoded"
  ↪ parameters:method="GET" rel="collection" template="https://vhr18.pdas.prism.eox.
  ↪ at/opensearch/atom/?q={searchTerms}&count={count}&startIndex=
  ↪ {startIndex}&collection={eo:collection}&productType={eo:productType}&
  ↪ &doi={eo:doi}&platform={eo:platform}&platformSerialIdentifier=
  ↪ {eo:platformSerialIdentifier}&instrument={eo:instrument}&sensorType=
  ↪ {eo:sensorType}&compositeType={eo:compositeType}&processingLevel=
  ↪ {eo:processingLevel}&orbitType={eo:orbitType}&spectralRange=
  ↪ {eo:spectralRange}&wavelength={eo:wavelength}&productMetadataSummary=
  ↪ {eo:productMetadataSummary}&coverageMetadataSummary=
  ↪ {eo:coverageMetadataSummary}&bbox={geo:box}&geom={geo:geometry}&
  ↪ lon={geo:lon}&lat={geo:lat}&r={geo:radius}&georel={geo:relation}&
  ↪ &uid={geo:uid}&start={time:start}&end={time:end}&timerel=
  ↪ {time:relation}&cql={cql:cql}" type="application/atom+xml">
    <parameters:Parameter maximum="1" minimum="0" name="q" value="{searchTerms}"/>
    <parameters:Parameter maxInclusive="200" maximum="1" minInclusive="0" minimum=
  ↪ "0" name="count" value="{count}"/>
    <parameters:Parameter maximum="1" minInclusive="0" minimum="0" name="startIndex
  ↪ " value="{startIndex}"/>
    <parameters:Parameter maximum="1" minimum="0" name="collection" value="
  ↪ {eo:collection}"/>
    <parameters:Parameter maximum="1" minimum="0" name="productType" value="
  ↪ {eo:productType}"/>
    <parameters:Parameter maximum="1" minimum="0" name="doi" value="{eo:doi}"/>
    <parameters:Parameter maximum="1" minimum="0" name="platform" value="
  ↪ {eo:platform}"/>
    <parameters:Parameter maximum="1" minimum="0" name="platformSerialIdentifier"
  ↪ value="{eo:platformSerialIdentifier}"/>
    <parameters:Parameter maximum="1" minimum="0" name="instrument" value="
  ↪ {eo:instrument}"/>
    <parameters:Parameter maximum="1" minimum="0" name="sensorType" value="
  ↪ {eo:sensorType}"/>
    <parameters:Parameter maximum="1" minimum="0" name="compositeType" value="
  ↪ {eo:compositeType}"/>
    <parameters:Parameter maximum="1" minimum="0" name="processingLevel" value="
  ↪ {eo:processingLevel}"/>
    <parameters:Parameter maximum="1" minimum="0" name="orbitType" value="
  ↪ {eo:orbitType}"/>
    <parameters:Parameter maximum="1" minimum="0" name="spectralRange" value="
  ↪ {eo:spectralRange}"/>
    <parameters:Parameter maximum="1" minimum="0" name="wavelength" value="
  ↪ {eo:wavelength}"/>
    <parameters:Parameter maximum="1" minimum="0" name="productMetadataSummary"
  ↪ value="{eo:productMetadataSummary}"/>
    <parameters:Parameter maximum="1" minimum="0" name="coverageMetadataSummary"
  ↪ value="{eo:coverageMetadataSummary}"/>
    <parameters:Parameter maximum="1" minimum="0" name="bbox" value="{geo:box}"/>
    <parameters:Parameter maximum="1" minimum="0" name="geom" value="{geo:geometry}
  ↪ ">
```

(continues on next page)

(continued from previous page)

```

<atom:link href="http://www.opengis.net/wkt/LINESTRING" rel="profile" title=
↪ "This service accepts WKT LineStrings"/>
<atom:link href="http://www.opengis.net/wkt/POINT" rel="profile" title="This
↪ service accepts WKT Point"/>
<atom:link href="http://www.opengis.net/wkt/POLYGON" rel="profile" title=
↪ "This service accepts WKT Polygons"/>
<atom:link href="http://www.opengis.net/wkt/MULTILINESTRING" rel="profile"
↪ title="This service accepts WKT Multi-LineStrings"/>
<atom:link href="http://www.opengis.net/wkt/MULTIPOINT" rel="profile" title=
↪ "This service accepts WKT Multi-Point"/>
<atom:link href="http://www.opengis.net/wkt/MULTIPOLYGON" rel="profile"
↪ title="This service accepts WKT Multi-Polygons"/>
</parameters:Parameter>
<parameters:Parameter maximum="1" minimum="0" name="lon" value="{geo:lon}"/>
<parameters:Parameter maximum="1" minimum="0" name="lat" value="{geo:lat}"/>
<parameters:Parameter maximum="1" minimum="0" name="r" value="{geo:radius}"/>
<parameters:Parameter maximum="1" minimum="0" name="georel" value="
↪ {geo:relation}">
  <parameters:Option label="intersects" value="intersects"/>
  <parameters:Option label="contains" value="contains"/>
  <parameters:Option label="disjoint" value="disjoint"/>
</parameters:Parameter>
<parameters:Parameter maximum="1" minimum="0" name="uid" value="{geo:uid}"/>
<parameters:Parameter maximum="1" minimum="0" name="start" value="{time:start}
↪ "/>
<parameters:Parameter maximum="1" minimum="0" name="end" value="{time:end}"/>
<parameters:Parameter maximum="1" minimum="0" name="timerel" value="
↪ {time:relation}">
  <parameters:Option label="intersects" value="intersects"/>
  <parameters:Option label="contains" value="contains"/>
  <parameters:Option label="disjoint" value="disjoint"/>
  <parameters:Option label="equals" value="equals"/>
</parameters:Parameter>
<parameters:Parameter maximum="1" minimum="0" name="cql" value="{cql:cql}">
  <atom:link href="http://www.opengis.net/csw/3.0/cql" rel="profile" title=
↪ "CQL (Common Query Language) is a query language created by the OGC for the
↪ Catalogue Web Services specification."/>
</parameters:Parameter>
</Url>
<stripped/>
</OpenSearchDescription>

```

1st step search for collections

```

<feed xmlns="http://www.w3.org/2005/Atom" xmlns:cql="http://a9.com/-/opensearch/
↪ extensions/cql/1.0/" xmlns:dc="http://purl.org/dc/elements/1.1/" xmlns:eo="http://
↪ a9.com/-/opensearch/extensions/eo/1.0/" xmlns:geo="http://a9.com/-/opensearch/
↪ extensions/geo/1.0/" xmlns:georss="http://www.georss.org/georss" xmlns:media=
↪ "http://search.yahoo.com/mrss/" xmlns:opensearch="http://a9.com/-/spec/
↪ opensearch/1.1/" xmlns:owc="http://www.opengis.net/owc/1.0" xmlns:time="http://
↪ a9.com/-/opensearch/extensions/time/1.0/">
  <id>https://vhr18.pdas.prism.eox.at/opensearch/atom/</id>
  <title>None Search</title>
  <description/>
  <opensearch:totalResults>3</opensearch:totalResults>
  <opensearch:startIndex>0</opensearch:startIndex>
  <opensearch:itemsPerPage>3</opensearch:itemsPerPage>
  <opensearch:Query role="request"/>
  <link href="https://vhr18.pdas.prism.eox.at/opensearch/" rel="search" type=
↪ "application/opensearchdescription+xml"/>
  <link href="https://vhr18.pdas.prism.eox.at/opensearch/atom/" rel="self" type=
↪ "application/atom+xml"/>

```

(continues on next page)

(continued from previous page)

```

<link href="https://vhr18.pdas.prism.eox.at/opensearch/atom/?" rel="first" type=
↪ "application/atom+xml"/>
<link href="https://vhr18.pdas.prism.eox.at/opensearch/atom/?startIndex=0" rel=
↪ "last" type="application/atom+xml"/>
<entry>
  <title>VHR_IMAGE_2018_Level_3</title>
  <id>https://vhr18.pdas.prism.eox.at/opensearch/atom/?uid=VHR_IMAGE_2018_Level_3
↪ </id>
  <dc:identifier>VHR_IMAGE_2018_Level_3</dc:identifier>
  <dc:date>2017-05-01T09:54:28Z/2018-09-30T13:26:34Z</dc:date>
  <georss:box>27.574843 -24.639799 71.230642 44.830837</georss:box>
  <georss:where>
    <gml:MultiSurface gml:id="multisurface_VHR_IMAGE_2018_Level_3" srsName=
↪ "EPSG:4326" xmlns:eop="http://www.opengis.net/eop/2.0" xmlns:gml="http://www.
↪ opengis.net/gml/3.2" xmlns:gmlcov="http://www.opengis.net/gmlcov/1.0" xmlns:om=
↪ "http://www.opengis.net/om/2.0">
      <gml:surfaceMember>
        <gml:Polygon gml:id="polygon_VHR_IMAGE_2018_Level_3">
          <gml:exterior>
            <gml:LinearRing>
              <gml:posList>27.57484299 -24.63979929 71.23064206 -24.63979929 71.
↪ 23064206 44.83083734 27.57484299 44.83083734 27.57484299 -24.63979929</
↪ gml:posList>
            </gml:LinearRing>
          </gml:exterior>
        </gml:Polygon>
      </gml:surfaceMember>
    </gml:MultiSurface>
  </georss:where>
  <link href="https://vhr18.pdas.prism.eox.at/opensearch/collections/VHR_IMAGE_
↪ 2018_Level_3/" rel="search" type="application/opensearchdescription+xml"/>
  <summary type="html">
    <![CDATA[<table><tr><td valign="top" width="10%"><a href="https://vhr18.pdas.
↪ prism.eox.at/ows?service=WMS&version=1.3.0&request=GetMap&layers=VHR_
↪ IMAGE_2018_Level_3&format=image/png&TRANSPARENT=true&width=500&
↪ height=314&CRS=EPSG:4326&STYLES=&BBOX=27.574843,-24.639799,71.230642,
↪ 44.830837" target="_blank" title="View quicklook image">
↪ </a></td><td valign="top" width="90%"><table><tr valign="top"><td><b>Date </b></
↪ td><td>2017-05-01T09:54:28+00:00 / 2018-09-30T13:26:34+00:00</td></tr><tr valign=
↪ "top"><td><b>Metadata</b></td><td><a href="https://vhr18.pdas.prism.eox.at/
↪ opensearch/atom/?uid=VHR_IMAGE_2018_Level_3" title="Atom format" target="_blank">
↪ ATOM</a></td></tr></table></td></tr></table><h3>OGC cross links</h3><ul><li><b>
↪ WMS</b></li><li><a href="https://vhr18.pdas.prism.eox.at/ows?service=WMS&
↪ request=GetCapabilities&qql=identifier=&#39;VHR_IMAGE_2018_Level_3&#39;"
↪ target="_blank">GetCapabilities</a></li></ul><ul><li><a href="https://vhr18.pdas.
↪ prism.eox.at/ows?service=WMS&version=1.3.0&request=GetMap&layers=VHR_
↪ IMAGE_2018_Level_3&format=image/png&TRANSPARENT=true&width=500&
↪ height=314&CRS=EPSG:4326&STYLES=&BBOX=27.574843,-24.639799,71.230642,
↪ 44.830837" target="_blank">GetMap</a></li></ul></li><li><b>WCS</b></li><li><a
↪ href="https://vhr18.pdas.prism.eox.at/ows?service=WCS&version=2.0.1&
↪ request=DescribeEOCoverageSet&eoId=VHR_IMAGE_2018_Level_3" target="_blank">
↪ DescribeEOCoverageSet</a></li></ul></li></ul><h3>Metadata</h3><table></table>]]>
  </summary>
</entry>
</feed>

```

2nd step OSDDD (stripped to only contain the Atom URL template)

```

<?xml version='1.0' encoding='iso-8859-1'?>
<OpenSearchDescription xmlns="http://a9.com/-/spec/opensearch/1.1/" xmlns:atom=
  ↪ "http://www.w3.org/2005/Atom" xmlns:cql="http://a9.com/-/opensearch/extensions/
  ↪ cql/1.0/" xmlns:eo="http://a9.com/-/opensearch/extensions/eo/1.0/" xmlns:geo=
  ↪ "http://a9.com/-/opensearch/extensions/geo/1.0/" xmlns:parameters="http://a9.com/
  ↪ -/spec/opensearch/extensions/parameters/1.0/" xmlns:time="http://a9.com/-/
  ↪ opensearch/extensions/time/1.0/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
  ↪ instance" xsi:schemaLocation="">
  <ShortName>VHR_IMAGE_2018_Level_3</ShortName>
  <Description/>
  <Url indexOffset="0" parameters:enctype="application/x-www-form-urlencoded"
  ↪ parameters:method="GET" rel="results" template="https://vhr18.pdas.prism.eox.at/
  ↪ opensearch/collections/VHR_IMAGE_2018_Level_3/atom/?q={searchTerms?}&count=
  ↪ {count?}&startIndex={startIndex?}&product={eo:product?}&parentIdentifier={eo:parentIdentifier?}&productionStatus=
  ↪ {eo:productionStatus?}&acquisitionType={eo:acquisitionType?}&orbitNumber=
  ↪ {eo:orbitNumber?}&orbitDirection={eo:orbitDirection?}&track={eo:track?}&
  ↪ amp;frame={eo:frame?}&swathIdentifier={eo:swathIdentifier?}&productVersion={eo:productVersion?}&productQualityStatus=
  ↪ {eo:productQualityStatus?}&productQualityDegradationTag=
  ↪ {eo:productQualityDegradationTag?}&processorName={eo:processorName?}&
  ↪ processingCenter={eo:processingCenter?}&creationDate={eo:creationDate?}&
  ↪ modificationDate={eo:modificationDate?}&processingDate={eo:processingDate?}&
  ↪ amp;sensorMode={eo:sensorMode?}&archivingCenter={eo:archivingCenter?}&
  ↪ processingMode={eo:processingMode?}&availabilityTime={eo:availabilityTime?}&
  ↪ amp;acquisitionStation={eo:acquisitionStation?}&acquisitionSubType=
  ↪ {eo:acquisitionSubType?}&startTimeFromAscendingNode=
  ↪ {eo:startTimeFromAscendingNode?}&completionTimeFromAscendingNode=
  ↪ {eo:completionTimeFromAscendingNode?}&illuminationAzimuthAngle=
  ↪ {eo:illuminationAzimuthAngle?}&illuminationZenithAngle=
  ↪ {eo:illuminationZenithAngle?}&illuminationElevationAngle=
  ↪ {eo:illuminationElevationAngle?}&polarisationMode={eo:polarisationMode?}&
  ↪ polarizationChannels={eo:polarizationChannels?}&antennaLookDirection=
  ↪ {eo:antennaLookDirection?}&minimumIncidenceAngle={eo:minimumIncidenceAngle?}&
  ↪ amp;maximumIncidenceAngle={eo:maximumIncidenceAngle?}&dopplerFrequency=
  ↪ {eo:dopplerFrequency?}&incidenceAngleVariation={eo:incidenceAngleVariation?}&
  ↪ amp;cloudCover={eo:cloudCover?}&snowCover={eo:snowCover?}&lowestLocation=
  ↪ {eo:lowestLocation?}&highestLocation={eo:highestLocation?}&bbox={geo:box?
  ↪ }&geom={geo:geometry?}&lon={geo:lon?}&lat={geo:lat?}&r=
  ↪ {geo:radius?}&georel={geo:relation?}&uid={geo:uid?}&start=
  ↪ {time:start?}&end={time:end?}&timerel={time:relation?}&cql={cql:cql?}
  ↪ " type="application/atom+xml">
    <parameters:Parameter maximum="1" minimum="0" name="q" value="{searchTerms}"/>
    <parameters:Parameter maxInclusive="200" maximum="1" minInclusive="0" minimum=
  ↪ "0" name="count" value="{count}"/>
    <parameters:Parameter maximum="1" minInclusive="0" minimum="0" name="startIndex
  ↪ " value="{startIndex}"/>
    <parameters:Parameter maximum="1" minimum="0" name="product" value="
  ↪ {eo:product}"/>
    <parameters:Parameter maximum="1" minimum="0" name="parentIdentifier" value="
  ↪ {eo:parentIdentifier}"/>
    <parameters:Parameter maximum="1" minimum="0" name="productionStatus" value="
  ↪ {eo:productionStatus}>
      <parameters:Option label="ACQUIRED" value="ACQUIRED"/>
      <parameters:Option label="CANCELLED" value="CANCELLED"/>
      <parameters:Option label="ARCHIVED" value="ARCHIVED"/>
    </parameters:Parameter>
    <parameters:Parameter maximum="1" minimum="0" name="acquisitionType" value="
  ↪ {eo:acquisitionType}>
      <parameters:Option label="NOMINAL" value="NOMINAL"/>
      <parameters:Option label="OTHER" value="OTHER"/>
      <parameters:Option label="CALIBRATION" value="CALIBRATION"/>

```

(continues on next page)

(continued from previous page)

```

</parameters:Parameter>
<parameters:Parameter maximum="1" minimum="0" name="orbitNumber" value="
↪{eo:orbitNumber}"/>
<parameters:Parameter maximum="1" minimum="0" name="orbitDirection" value="
↪{eo:orbitDirection}>
  <parameters:Option label="DESCENDING" value="DESCENDING"/>
  <parameters:Option label="ASCENDING" value="ASCENDING"/>
</parameters:Parameter>
<parameters:Parameter maximum="1" minimum="0" name="track" value="{eo:track}"/>
<parameters:Parameter maximum="1" minimum="0" name="frame" value="{eo:frame}"/>
<parameters:Parameter maximum="1" minimum="0" name="swathIdentifier" value="
↪{eo:swathIdentifier}"/>
<parameters:Parameter maximum="1" minimum="0" name="productVersion" value="
↪{eo:productVersion}"/>
<parameters:Parameter maximum="1" minimum="0" name="productQualityStatus"
↪value="{eo:productQualityStatus}">
  <parameters:Option label="DEGRAGED" value="DEGRAGED"/>
  <parameters:Option label="NOMINAL" value="NOMINAL"/>
</parameters:Parameter>
<parameters:Parameter maximum="1" minimum="0" name=
↪"productQualityDegradationTag" value="{eo:productQualityDegradationTag}"/>
<parameters:Parameter maximum="1" minimum="0" name="processorName" value="
↪{eo:processorName}"/>
<parameters:Parameter maximum="1" minimum="0" name="processingCenter" value="
↪{eo:processingCenter}"/>
<parameters:Parameter maximum="1" minimum="0" name="creationDate" value="
↪{eo:creationDate}"/>
<parameters:Parameter maximum="1" minimum="0" name="modificationDate" value="
↪{eo:modificationDate}"/>
<parameters:Parameter maximum="1" minimum="0" name="processingDate" value="
↪{eo:processingDate}"/>
<parameters:Parameter maximum="1" minimum="0" name="sensorMode" value="
↪{eo:sensorMode}"/>
<parameters:Parameter maximum="1" minimum="0" name="archivingCenter" value="
↪{eo:archivingCenter}"/>
<parameters:Parameter maximum="1" minimum="0" name="processingMode" value="
↪{eo:processingMode}"/>
<parameters:Parameter maximum="1" minimum="0" name="availabilityTime" value="
↪{eo:availabilityTime}"/>
<parameters:Parameter maximum="1" minimum="0" name="acquisitionStation" value="
↪{eo:acquisitionStation}"/>
<parameters:Parameter maximum="1" minimum="0" name="acquisitionSubType" value="
↪{eo:acquisitionSubType}"/>
<parameters:Parameter maximum="1" minimum="0" name="startTimeFromAscendingNode
↪" value="{eo:startTimeFromAscendingNode}"/>
<parameters:Parameter maximum="1" minimum="0" name=
↪"completionTimeFromAscendingNode" value="{eo:completionTimeFromAscendingNode}"/>
<parameters:Parameter maximum="1" minimum="0" name="illuminationAzimuthAngle"
↪value="{eo:illuminationAzimuthAngle}"/>
<parameters:Parameter maximum="1" minimum="0" name="illuminationZenithAngle"
↪value="{eo:illuminationZenithAngle}"/>
<parameters:Parameter maximum="1" minimum="0" name="illuminationElevationAngle
↪" value="{eo:illuminationElevationAngle}"/>
<parameters:Parameter maximum="1" minimum="0" name="polarisationMode" value="
↪{eo:polarisationMode}>
  <parameters:Option label="quad" value="quad"/>
  <parameters:Option label="single" value="single"/>
  <parameters:Option label="twin" value="twin"/>
  <parameters:Option label="dual" value="dual"/>
  <parameters:Option label="UNDEFINED" value="UNDEFINED"/>
</parameters:Parameter>

```

(continues on next page)

(continued from previous page)

```

<parameters:Parameter maximum="1" minimum="0" name="polarizationChannels"
↪value="{eo:polarizationChannels}">
  <parameters:Option label="UNDEFINED" value="UNDEFINED"/>
  <parameters:Option label="VH" value="VH"/>
  <parameters:Option label="HH, HV" value="HH, HV"/>
  <parameters:Option label="HH, HV, VH, VV" value="HH, HV, VH, VV"/>
  <parameters:Option label="HV" value="HV"/>
  <parameters:Option label="HH, VV" value="HH, VV"/>
  <parameters:Option label="HH, VH" value="HH, VH"/>
  <parameters:Option label="VV, HV" value="VV, HV"/>
  <parameters:Option label="HH" value="HH"/>
  <parameters:Option label="HV, VH" value="HV, VH"/>
  <parameters:Option label="VV" value="VV"/>
  <parameters:Option label="VH, VV" value="VH, VV"/>
  <parameters:Option label="VH, HV" value="VH, HV"/>
  <parameters:Option label="VV, VH" value="VV, VH"/>
</parameters:Parameter>
<parameters:Parameter maximum="1" minimum="0" name="antennaLookDirection"
↪value="{eo:antennaLookDirection}">
  <parameters:Option label="RIGHT" value="RIGHT"/>
  <parameters:Option label="LEFT" value="LEFT"/>
</parameters:Parameter>
<parameters:Parameter maximum="1" minimum="0" name="minimumIncidenceAngle"
↪value="{eo:minimumIncidenceAngle}"/>
<parameters:Parameter maximum="1" minimum="0" name="maximumIncidenceAngle"
↪value="{eo:maximumIncidenceAngle}"/>
<parameters:Parameter maximum="1" minimum="0" name="dopplerFrequency" value="
↪{eo:dopplerFrequency}"/>
<parameters:Parameter maximum="1" minimum="0" name="incidenceAngleVariation"
↪value="{eo:incidenceAngleVariation}"/>
<parameters:Parameter maximum="1" minimum="0" name="cloudCover" value="
↪{eo:cloudCover}"/>
<parameters:Parameter maximum="1" minimum="0" name="snowCover" value="
↪{eo:snowCover}"/>
<parameters:Parameter maximum="1" minimum="0" name="lowestLocation" value="
↪{eo:lowestLocation}"/>
<parameters:Parameter maximum="1" minimum="0" name="highestLocation" value="
↪{eo:highestLocation}"/>
<parameters:Parameter maximum="1" minimum="0" name="bbox" value="{geo:box}"/>
<parameters:Parameter maximum="1" minimum="0" name="geom" value="{geo:geometry}
↪">
  <atom:link href="http://www.opengis.net/wkt/LINESTRING" rel="profile" title=
↪"This service accepts WKT LineStrings"/>
  <atom:link href="http://www.opengis.net/wkt/POINT" rel="profile" title="This
↪service accepts WKT Point"/>
  <atom:link href="http://www.opengis.net/wkt/POLYGON" rel="profile" title=
↪"This service accepts WKT Polygons"/>
  <atom:link href="http://www.opengis.net/wkt/MULTILINESTRING" rel="profile"
↪title="This service accepts WKT Multi-LineStrings"/>
  <atom:link href="http://www.opengis.net/wkt/MULTIPOINT" rel="profile" title=
↪"This service accepts WKT Multi-Point"/>
  <atom:link href="http://www.opengis.net/wkt/MULTIPOLYGON" rel="profile"
↪title="This service accepts WKT Multi-Polygons"/>
</parameters:Parameter>
<parameters:Parameter maximum="1" minimum="0" name="lon" value="{geo:lon}"/>
<parameters:Parameter maximum="1" minimum="0" name="lat" value="{geo:lat}"/>
<parameters:Parameter maximum="1" minimum="0" name="r" value="{geo:radius}"/>
<parameters:Parameter maximum="1" minimum="0" name="georel" value="
↪{geo:relation}">
  <parameters:Option label="intersects" value="intersects"/>
  <parameters:Option label="contains" value="contains"/>

```

(continues on next page)

(continued from previous page)

```

    <parameters:Option label="disjoint" value="disjoint"/>
  </parameters:Parameter>
  <parameters:Parameter maximum="1" minimum="0" name="uid" value="{geo:uid}"/>
  <parameters:Parameter maximum="1" minimum="0" name="start" value="{time:start}"
  ↪"/>
  <parameters:Parameter maximum="1" minimum="0" name="end" value="{time:end}"/>
  <parameters:Parameter maximum="1" minimum="0" name="timerel" value="
  ↪{time:relation}">
    <parameters:Option label="intersects" value="intersects"/>
    <parameters:Option label="contains" value="contains"/>
    <parameters:Option label="disjoint" value="disjoint"/>
    <parameters:Option label="equals" value="equals"/>
  </parameters:Parameter>
  <parameters:Parameter maximum="1" minimum="0" name="cql" value="{cql:cql}">
    <atom:link href="http://www.opengis.net/csw/3.0/cql" rel="profile" title=
  ↪"CQL (Common Query Language) is a query language created by the OGC for the
  ↪Catalogue Web Services specification."/>
  </parameters:Parameter>
</Url>
<stripped/>
</OpenSearchDescription>

```

2nd step search and 2nd step search returning one product

```

<feed xmlns="http://www.w3.org/2005/Atom" xmlns:cql="http://a9.com/-/opensearch/
  ↪extensions/cql/1.0/" xmlns:dc="http://purl.org/dc/elements/1.1/" xmlns:eo="http://
  ↪a9.com/-/opensearch/extensions/eo/1.0/" xmlns:geo="http://a9.com/-/opensearch/
  ↪extensions/geo/1.0/" xmlns:georss="http://www.georss.org/georss" xmlns:media=
  ↪"http://search.yahoo.com/mrss/" xmlns:opensearch="http://a9.com/-/spec/
  ↪opensearch/1.1/" xmlns:owc="http://www.opengis.net/owc/1.0" xmlns:time="http://
  ↪a9.com/-/opensearch/extensions/time/1.0/">
  <id>https://vhr18.pdas.prism.eox.at/opensearch/collections/VHR_IMAGE_2018_Level_
  ↪3/atom/?uid=urn:eop:DOVE:MULTISPECTRAL_4m:20180811_081455_1054_3be7</id>
  <title>VHR_IMAGE_2018_Level_3 Search</title>
  <description/>
  <opensearch:totalResults>1</opensearch:totalResults>
  <opensearch:startIndex>0</opensearch:startIndex>
  <opensearch:itemsPerPage>1</opensearch:itemsPerPage>
  <opensearch:Query geo:uid="urn:eop:DOVE:MULTISPECTRAL_4m:20180811_081455_1054_
  ↪3be7" role="request"/>
  <link href="https://vhr18.pdas.prism.eox.at/opensearch/" rel="search" type=
  ↪"application/opensearchdescription+xml"/>
  <link href="https://vhr18.pdas.prism.eox.at/opensearch/collections/VHR_IMAGE_
  ↪2018_Level_3/atom/?uid=urn:eop:DOVE:MULTISPECTRAL_4m:20180811_081455_1054_3be7"
  ↪rel="self" type="application/atom+xml"/>
  <link href="https://vhr18.pdas.prism.eox.at/opensearch/collections/VHR_IMAGE_
  ↪2018_Level_3/atom/?uid=urn%3Aeop%3ADOVE%3AMULTISPECTRAL_4m%3A20180811_081455_
  ↪1054_3be7" rel="first" type="application/atom+xml"/>
  <link href="https://vhr18.pdas.prism.eox.at/opensearch/collections/VHR_IMAGE_
  ↪2018_Level_3/atom/?startIndex=0&uid=urn%3Aeop%3ADOVE%3AMULTISPECTRAL_4m
  ↪%3A20180811_081455_1054_3be7" rel="last" type="application/atom+xml"/>
  <entry>
    <title>urn:eop:DOVE:MULTISPECTRAL_4m:20180811_081455_1054_3be7</title>
    <id>https://vhr18.pdas.prism.eox.at/opensearch/collections/VHR_IMAGE_2018_
    ↪Level_3/atom/?uid=urn:eop:DOVE:MULTISPECTRAL_4m:20180811_081455_1054_3be7</id>
    <dc:identifier>urn:eop:DOVE:MULTISPECTRAL_4m:20180811_081455_1054_3be7</
    ↪dc:identifier>
    <dc:date>2018-08-11T08:14:55Z</dc:date>
    <georss:box>47.297788 25.978201 47.372606 26.047511</georss:box>
    <georss:where>
      <gml:MultiSurface gml:id="multisurface_urn:eop:DOVE:MULTISPECTRAL_
      ↪4m:20180811_081455_1054_3be7" srsName="EPSG:4326" xmlns:eop="http://www.opengis
      ↪net/eop/2.0" xmlns:gml="http://www.opengis.net/gml/3.2" xmlns:gmlcov="http://www.
      ↪opengis.net/gmlcov/1.0" xmlns:om="http://www.opengis.net/om/2.0">

```

(continues on next page)

(continued from previous page)

```

<gml:surfaceMember>
  <gml:Polygon gml:id="polygon_urn:eop:DOVE:MULTISPECTRAL_4m:20180811_
↪081455_1054_3be7_1">
    <gml:exterior>
      <gml:LinearRing>
        <gml:posList>47.29778796 26.00330821 47.29784395 26.00300545 47.
↪29852855 26.00098039 47.33176050 25.98961353 47.35564999 25.98157482 47.35572189
↪25.98204011 47.36693204 25.97820059 47.37260630 26.01455420 47.37197192 26.
↪01658883 47.37098788 26.01863079 47.36976416 26.02036682 47.36834411 26.02173541
↪47.36677806 26.02268812 47.31293985 26.04698765 47.31114307 26.04751063 47.
↪30931486 26.04748521 47.30753117 26.04691252 47.30586607 26.04581637 47.30438870
↪26.04424235 47.30409927 26.04377423 47.29778796 26.00330821</gml:posList>
      </gml:LinearRing>
    </gml:exterior>
  </gml:Polygon>
</gml:surfaceMember>
</gml:MultiSurface>
</georss:where>
<link href="https://vhr18.pdas.prism.eox.at/ows?service=DSEO&version=1.0.0&
↪amp;request=GetProduct&ProductURI=urn:eop:DOVE:MULTISPECTRAL_4m:20180811_
↪081455_1054_3be7" rel="enclosure"/>
  <media:content url="https://vhr18.pdas.prism.eox.at/ows?service=WMS&
↪version=1.3.0&request=GetMap&layers=urn:eop:DOVE:MULTISPECTRAL_
↪4m:20180811_081455_1054_3be7&format=image/png&TRANSPARENT=true&
↪width=463&height=500&CRS=EPSG:4326&STYLES=&BBOX=47.297788,25.
↪978201,47.372606,26.047511">
    <media:category>QUICKLOOK</media:category>
  </media:content>
  <media:content url="https://vhr18.pdas.prism.eox.at/ows?service=WMS&
↪version=1.3.0&request=GetMap&layers=urn:eop:DOVE:MULTISPECTRAL_
↪4m:20180811_081455_1054_3be7&format=image/png&TRANSPARENT=true&
↪width=92&height=100&CRS=EPSG:4326&STYLES=&BBOX=47.297788,25.
↪978201,47.372606,26.047511">
    <media:category>THUMBNAIL</media:category>
  </media:content>
  <owc:offering code="http://www.opengis.net/spec/owc-atom/1.0/req/wms">
    <owc:operation code="GetCapabilities" href="https://vhr18.pdas.prism.eox.at/
↪ows?service=WMS&request=GetCapabilities&cql=identifier=
↪'urn:eop:DOVE:MULTISPECTRAL_4m:20180811_081455_1054_3be7'" method="GET" type=
↪"application/xml"/>
    <owc:operation code="GetMap" href="https://vhr18.pdas.prism.eox.at/ows?
↪service=WMS&version=1.3.0&request=GetMap&
↪layers=urn:eop:DOVE:MULTISPECTRAL_4m:20180811_081455_1054_3be7&format=image/
↪png&TRANSPARENT=true&width=463&height=500&CRS=EPSG:4326&
↪STYLES=&BBOX=47.297788,25.978201,47.372606,26.047511" method="GET" type=
↪"image/png"/>
  </owc:offering>
  <owc:offering code="http://www.opengis.net/spec/owc-atom/1.0/req/wcs">
    <owc:operation code="GetCapabilities" href="https://vhr18.pdas.prism.eox.at/
↪ows?service=WCS&version=2.0.1&request=GetCapabilities" method="GET" type=
↪"application/xml"/>
    <owc:operation code="DescribeCoverage" href="https://vhr18.pdas.prism.eox.at/
↪ows?service=WCS&version=2.0.1&request=DescribeCoverage&
↪coverageId=urn:eop:DOVE:MULTISPECTRAL_4m:20180811_081455_1054_3be7__coverage"
↪method="GET" type="application/xml"/>
    <owc:operation code="GetCoverage" href="https://vhr18.pdas.prism.eox.at/ows?
↪service=WCS&version=2.0.1&request=GetCoverage&
↪coverageId=urn:eop:DOVE:MULTISPECTRAL_4m:20180811_081455_1054_3be7__coverage"
↪method="GET" type="image/tiff"/>
  </owc:offering>
<summary type="html">

```

(continues on next page)

(continued from previous page)

```

<![CDATA[<table><tr><td valign="top" width="10%"><a href="https://vhr18.pdas.
prism.eox.at/ows?service=WMS&version=1.3.0&request=GetMap&
layers=urn:eop:DOVE:MULTISPECTRAL_4m:20180811_081455_1054_3be7&format=image/
png&TRANSPARENT=true&width=463&height=500&CRS=EPSG:4326&
STYLES=&BBOX=47.297788,25.978201,47.372606,26.047511" target="_blank" title=
"View quicklook image"></a></td><td valign=
"top" width="90%"><table><tr valign="top"><td><b>Date</b></td><td>2018-08-
11T08:14:55+00:00 / 2018-08-11T08:14:55+00:00</td></tr><tr valign="top"><td><b>
Metadata</b></td><td><a href="https://vhr18.pdas.prim.eox.at/opensearch/
collections/VHR_IMAGE_2018_Level_3/atom/?uid=urn:eop:DOVE:MULTISPECTRAL_
4m:20180811_081455_1054_3be7" title="Atom format" target="_blank">ATOM</a></td></
tr><tr valign="top"><td><b>Download</b></td><td><a href="https://vhr18.pdas.
prism.eox.at/ows?service=DSEO&version=1.0.0&request=GetProduct&
ProductURI=urn:eop:DOVE:MULTISPECTRAL_4m:20180811_081455_1054_3be7" title=
"Download" target="_blank">Package</a></td></tr></table></td></tr></table><h3>
OGC cross links</h3><ul><li><b>WMS</b></li><li><a href="https://vhr18.pdas.prim.
eox.at/ows?service=WMS&request=GetCapabilities&cql=identifier=&#39;
urn:eop:DOVE:MULTISPECTRAL_4m:20180811_081455_1054_3be7&#39;" target="_blank">
GetCapabilities</a></li></ul><ul><li><a href="https://vhr18.pdas.prim.eox.at/
ows?service=WMS&version=1.3.0&request=GetMap&
layers=urn:eop:DOVE:MULTISPECTRAL_4m:20180811_081455_1054_3be7&format=image/
png&TRANSPARENT=true&width=463&height=500&CRS=EPSG:4326&
STYLES=&BBOX=47.297788,25.978201,47.372606,26.047511" target="_blank">GetMap
</a></li></ul></li><li><b>WCS</b></li><li><a href="https://vhr18.pdas.prim.eox.
at/ows?service=WCS&version=2.0.1&request=DescribeEOCoverageSet&
eoId=urn:eop:DOVE:MULTISPECTRAL_4m:20180811_081455_1054_3be7" target="_blank">
DescribeEOCoverageSet</a></li><li><b>urn:eop:DOVE:MULTISPECTRAL_4m:20180811_
081455_1054_3be7__coverage</b></li><li><a href="https://vhr18.pdas.prim.eox.at/
ows?service=WCS&version=2.0.1&request=DescribeCoverage&
coverageId=urn:eop:DOVE:MULTISPECTRAL_4m:20180811_081455_1054_3be7__coverage"
target="_blank">DescribeCoverage</a></li><li><a href="https://vhr18.pdas.prim.
eox.at/ows?service=WCS&version=2.0.1&request=GetCoverage&
coverageId=urn:eop:DOVE:MULTISPECTRAL_4m:20180811_081455_1054_3be7__coverage"
target="_blank">GetCoverage</a></li></ul></li></ul></li></ul><h3>Metadata</h3>
<table><tr><td>Cloud Cover</td><td>0.0</td></tr></table>]]>
</summary>
</entry>
</feed>

```

Query inside a polygon and with set time interval

Query inside a bounding box

6.5 Downloading

6.5.1 WCS

WCS Capabilities

```

<?xml version='1.0' encoding='iso-8859-1'?>
<wcs:Capabilities updateSequence="20131219T132000Z" version="2.0.1" xmlns:crs=
"http://www.opengis.net/wcs/crs/1.0" xmlns:eop="http://www.opengis.net/eop/2.0"
xmlns:gml="http://www.opengis.net/gml/3.2" xmlns:gmlcov="http://www.opengis.net/
gmlcov/1.0" xmlns:int="http://www.opengis.net/wcs/interpolation/1.0" xmlns:ogc=
"http://www.opengis.net/ogc" xmlns:om="http://www.opengis.net/om/2.0" xmlns:ows=
"http://www.opengis.net/ows/2.0" xmlns:rsub="http://www.opengis.net/ows/2.0"
xmlns:subsetting="http://www.opengis.net/ows/2.0" xmlns:scal="http://www.opengis.net/wcs/scaling/1.0" xmlns:swe=
"http://www.opengis.net/swe/2.0" xmlns:wcs="http://www.opengis.net/wcs/2.0"
xmlns:wcseo="http://www.opengis.net/wcs/wcseo/1.0" xmlns:xlink="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.opengis.net/ows/2.0 http://schemas.opengis.net/
ows/2.0/owsAll.xsd http://www.opengis.net/wcs/wcseo/1.0 http://schemas.opengis.
net/wcs/wcseo/1.0/wcsEOAll.xsd">

```

(continues on next page)

(continued from previous page)

```

<ows:ServiceIdentification>
  <ows:Title>PRISM Data Access Service (PASS) developed by EOX</ows:Title>
  <ows:Abstract>PRISM Data Access Service (PASS) developed by EOX</ows:Abstract>
  <ows:Keywords>
    <ows:Keyword>&lt;KEYWORDLIST&gt;</ows:Keyword>
  </ows:Keywords>
  <ows:ServiceType codeSpace="OGC">OGC WCS</ows:ServiceType>
  <ows:ServiceTypeVersion>2.0.1</ows:ServiceTypeVersion>
  <ows:ServiceTypeVersion>2.0.0</ows:ServiceTypeVersion>
  <ows:ServiceTypeVersion>1.1.2</ows:ServiceTypeVersion>
  <ows:ServiceTypeVersion>1.1.1</ows:ServiceTypeVersion>
  <ows:ServiceTypeVersion>1.1.0</ows:ServiceTypeVersion>
  <ows:ServiceTypeVersion>1.0.0</ows:ServiceTypeVersion>
  <ows:Profile>http://www.opengis.net/spec/WCS_application-profile_earth-
↪observation/1.0/conf/eowcs</ows:Profile>
  <ows:Profile>http://www.opengis.net/spec/WCS_application-profile_earth-
↪observation/1.0/conf/eowcs_get-kvp</ows:Profile>
  <ows:Profile>http://www.opengis.net/spec/WCS_service-extension_crs/1.0/conf/crs
↪</ows:Profile>
  <ows:Profile>http://www.opengis.net/spec/WCS/2.0/conf/core</ows:Profile>
  <ows:Profile>http://www.opengis.net/spec/WCS_protocol-binding_get-kvp/1.0/conf/
↪get-kvp</ows:Profile>
  <ows:Profile>http://www.opengis.net/spec/WCS_protocol-binding_post-xml/1.0/
↪conf/post-xml</ows:Profile>
  <ows:Profile>http://www.opengis.net/spec/GMLCOV/1.0/conf/gml-coverage</
↪ows:Profile>
  <ows:Profile>http://www.opengis.net/spec/GMLCOV/1.0/conf/multipart</
↪ows:Profile>
  <ows:Profile>http://www.opengis.net/spec/GMLCOV/1.0/conf/special-format</
↪ows:Profile>
  <ows:Profile>http://www.opengis.net/spec/GMLCOV_geotiff-coverages/1.0/conf/
↪geotiff-coverage</ows:Profile>
  <ows:Profile>http://www.opengis.net/spec/WCS_geotiff-coverages/1.0/conf/
↪geotiff-coverage</ows:Profile>
  <ows:Profile>http://www.opengis.net/spec/WCS_service-model_crs-predefined/1.0/
↪conf/crs-predefined</ows:Profile>
  <ows:Profile>http://www.opengis.net/spec/WCS_service-extension_interpolation/1.
↪0/conf/interpolation</ows:Profile>
  <ows:Profile>http://www.opengis.net/spec/WCS_service-extension_range-
↪subsetting/1.0/conf/record-subsetting</ows:Profile>
  <ows:Profile>http://www.opengis.net/spec/WCS_service-extension_scaling/1.0/
↪conf/scaling</ows:Profile>
  <ows:Fees>None</ows:Fees>
  <ows:AccessConstraints>None</ows:AccessConstraints>
</ows:ServiceIdentification>
<ows:ServiceProvider>
  <ows:ProviderName>&lt;CONTACTORGANIZATION&gt;</ows:ProviderName>
  <ows:ProviderSite xlink:href="&lt;URL&gt;" xlink:type="simple"/>
  <ows:ServiceContact>
    <ows:IndividualName>&lt;CONTACTPERSON&gt;</ows:IndividualName>
    <ows:PositionName>&lt;CONTACTPOSITION&gt;</ows:PositionName>
    <ows:ContactInfo>
      <ows:Phone>
        <ows:Voice>&lt;CONTACTVOICETELEPHONE&gt;</ows:Voice>
        <ows:Facsimile>&lt;CONTACTFACSIMILETELEPHONE&gt;</ows:Facsimile>
      </ows:Phone>
      <ows:Address>
        <ows:DeliveryPoint>&lt;ADDRESS&gt;</ows:DeliveryPoint>
        <ows:City>&lt;CITY&gt;</ows:City>
        <ows:AdministrativeArea>&lt;STATEORPROVINCE&gt;</ows:AdministrativeArea>
        <ows:PostalCode>&lt;POSTCODE&gt;</ows:PostalCode>
      </ows:Address>
    </ows:ContactInfo>
  </ows:ServiceContact>
</ows:ServiceProvider>

```

(continues on next page)

(continued from previous page)

```

        <ows:Country>&lt;COUNTRY&gt;</ows:Country>
        <ows:ElectronicMailAddress>&lt;CONTACTELECTRONICMAILADDRESS&gt;</
↪ows:ElectronicMailAddress>
        </ows:Address>
        <ows:OnlineResource xlink:href="http://eoxserver.org" xlink:type="simple"/>
        <ows:HoursOfService>&lt;HOURSOFSERVICE&gt;</ows:HoursOfService>
        <ows:ContactInstructions>&lt;CONTACTINSTRUCTIONS&gt;</
↪ows:ContactInstructions>
        </ows:ContactInfo>
        <ows:Role>Service provider</ows:Role>
        </ows:ServiceContact>
    </ows:ServiceProvider>
    <ows:OperationsMetadata>
        <ows:Operation name="GetCapabilities">
            <ows:DCP>
                <ows:HTTP>
                    <ows:Get xlink:href="pdas/ows?" xlink:type="simple"/>
                    <ows:Post xlink:href="pdas/ows?" xlink:type="simple">
                        <ows:Constraint name="PostEncoding">
                            <ows:AllowedValues>
                                <ows:Value>XML</ows:Value>
                            </ows:AllowedValues>
                        </ows:Constraint>
                    </ows:Post>
                </ows:HTTP>
            </ows:DCP>
        </ows:Operation>
        <ows:Operation name="DescribeCoverage">
            <ows:DCP>
                <ows:HTTP>
                    <ows:Get xlink:href="pdas/ows?" xlink:type="simple"/>
                    <ows:Post xlink:href="pdas/ows?" xlink:type="simple">
                        <ows:Constraint name="PostEncoding">
                            <ows:AllowedValues>
                                <ows:Value>XML</ows:Value>
                            </ows:AllowedValues>
                        </ows:Constraint>
                    </ows:Post>
                </ows:HTTP>
            </ows:DCP>
        </ows:Operation>
        <ows:Operation name="GetCoverage">
            <ows:DCP>
                <ows:HTTP>
                    <ows:Get xlink:href="pdas/ows?" xlink:type="simple"/>
                    <ows:Post xlink:href="pdas/ows?" xlink:type="simple">
                        <ows:Constraint name="PostEncoding">
                            <ows:AllowedValues>
                                <ows:Value>XML</ows:Value>
                            </ows:AllowedValues>
                        </ows:Constraint>
                    </ows:Post>
                </ows:HTTP>
            </ows:DCP>
        </ows:Operation>
        <ows:Operation name="DescribeEOCoverageSet">
            <ows:DCP>
                <ows:HTTP>
                    <ows:Get xlink:href="pdas/ows?" xlink:type="simple"/>
                    <ows:Post xlink:href="pdas/ows?" xlink:type="simple">
                        <ows:Constraint name="PostEncoding">

```

(continues on next page)

(continued from previous page)

```

        <ows:AllowedValues>
            <ows:Value>XML</ows:Value>
        </ows:AllowedValues>
    </ows:Constraint>
</ows:Post>
</ows:HTTP>
</ows:DCP>
<ows:Constraint name="CountDefault">
    <ows:NoValues/>
    <ows:DefaultValue>10</ows:DefaultValue>
</ows:Constraint>
</ows:Operation>
<ows:Operation name="GetEOCoverageSet">
    <ows:DCP>
        <ows:HTTP>
            <ows:Get xlink:href="pdas/ows?" xlink:type="simple"/>
            <ows:Post xlink:href="pdas/ows?" xlink:type="simple">
                <ows:Constraint name="PostEncoding">
                    <ows:AllowedValues>
                        <ows:Value>XML</ows:Value>
                    </ows:AllowedValues>
                </ows:Constraint>
            </ows:Post>
        </ows:HTTP>
    </ows:DCP>
    <ows:Constraint name="CountDefault">
        <ows:NoValues/>
        <ows:DefaultValue>10</ows:DefaultValue>
    </ows:Constraint>
</ows:Operation>
</ows:OperationsMetadata>
<wcs:ServiceMetadata>
    <wcs:formatSupported>image/tiff</wcs:formatSupported>
    <wcs:formatSupported>image/jp2</wcs:formatSupported>
    <wcs:formatSupported>application/x-netcdf</wcs:formatSupported>
    <wcs:formatSupported>application/x-hdf</wcs:formatSupported>
    <wcs:Extension>
        <crs:CrsMetadata>
            <crs:crsSupported>http://www.opengis.net/def/crs/EPSG/0/4326</
↪crs:crsSupported>
            <crs:crsSupported>http://www.opengis.net/def/crs/EPSG/0/3857</
↪crs:crsSupported>
            <crs:crsSupported>http://www.opengis.net/def/crs/EPSG/0/3035</
↪crs:crsSupported>
        </crs:CrsMetadata>
        <int:InterpolationMetadata>
            <int:InterpolationSupported>http://www.opengis.net/def/interpolation/OGC/1/
↪average</int:InterpolationSupported>
            <int:InterpolationSupported>http://www.opengis.net/def/interpolation/OGC/1/
↪nearest-neighbour</int:InterpolationSupported>
            <int:InterpolationSupported>http://www.opengis.net/def/interpolation/OGC/1/
↪bilinear</int:InterpolationSupported>
            <int:InterpolationSupported>http://www.opengis.net/def/interpolation/OGC/1/
↪cubic</int:InterpolationSupported>
            <int:InterpolationSupported>http://www.opengis.net/def/interpolation/OGC/1/
↪cubic-spline</int:InterpolationSupported>
            <int:InterpolationSupported>http://www.opengis.net/def/interpolation/OGC/1/
↪lanczos</int:InterpolationSupported>
            <int:InterpolationSupported>http://www.opengis.net/def/interpolation/OGC/1/
↪mode</int:InterpolationSupported>
        </int:InterpolationMetadata>
    </wcs:Extension>
</wcs:ServiceMetadata>

```

(continues on next page)

(continued from previous page)

```

</wcs:Extension>
</wcs:ServiceMetadata>
<wcs:Contents>
  <wcs:Extension>
    <wcseo:DatasetSeriesSummary>
      <ows:WGS84BoundingBox>
        <ows:LowerCorner>12.136296 -24.639799</ows:LowerCorner>
        <ows:UpperCorner>71.230642 52.293404</ows:UpperCorner>
      </ows:WGS84BoundingBox>
      <wcseo:DatasetSeriesId>VHR_IMAGE_2018</wcseo:DatasetSeriesId>
      <gml:TimePeriod gml:id="VHR_IMAGE_2018_timeperiod">
        <gml:beginPosition>2017-05-01T09:54:28Z</gml:beginPosition>
        <gml:endPosition>2019-10-06T07:03:34Z</gml:endPosition>
      </gml:TimePeriod>
    </wcseo:DatasetSeriesSummary>
    <wcseo:DatasetSeriesSummary>
      <ows:WGS84BoundingBox>
        <ows:LowerCorner>27.574843 -24.639799</ows:LowerCorner>
        <ows:UpperCorner>71.230642 44.830837</ows:UpperCorner>
      </ows:WGS84BoundingBox>
      <wcseo:DatasetSeriesId>VHR_IMAGE_2018_Level_1</wcseo:DatasetSeriesId>
      <gml:TimePeriod gml:id="VHR_IMAGE_2018_Level_1_timeperiod">
        <gml:beginPosition>2017-05-01T09:54:28Z</gml:beginPosition>
        <gml:endPosition>2018-09-30T13:26:34Z</gml:endPosition>
      </gml:TimePeriod>
    </wcseo:DatasetSeriesSummary>
    <wcseo:DatasetSeriesSummary>
      <ows:WGS84BoundingBox>
        <ows:LowerCorner>27.574843 -24.639799</ows:LowerCorner>
        <ows:UpperCorner>71.230642 44.830837</ows:UpperCorner>
      </ows:WGS84BoundingBox>
      <wcseo:DatasetSeriesId>VHR_IMAGE_2018_Level_3</wcseo:DatasetSeriesId>
      <gml:TimePeriod gml:id="VHR_IMAGE_2018_Level_3_timeperiod">
        <gml:beginPosition>2017-05-01T09:54:28Z</gml:beginPosition>
        <gml:endPosition>2018-09-30T13:26:34Z</gml:endPosition>
      </gml:TimePeriod>
    </wcseo:DatasetSeriesSummary>
  </wcs:Extension>
</wcs:Contents>
</wcs:Capabilities>

```

EO Coverage set description and Coverage description

```

<?xml version='1.0' encoding='iso-8859-1'?>
<wcs:CoverageDescriptions xmlns:crs="http://www.opengis.net/wcs/crs/1.0" xmlns:eop=
↪ "http://www.opengis.net/eop/2.0" xmlns:gml="http://www.opengis.net/gml/3.2"
↪ xmlns:gmlcov="http://www.opengis.net/gmlcov/1.0" xmlns:int="http://www.opengis.
↪ net/wcs/interpolation/1.0" xmlns:ogc="http://www.opengis.net/ogc" xmlns:om=
↪ "http://www.opengis.net/om/2.0" xmlns:ows="http://www.opengis.net/ows/2.0"
↪ xmlns:rsub="http://www.opengis.net/wcs/range-subsetting/1.0" xmlns:scal="http://
↪ www.opengis.net/wcs/scaling/1.0" xmlns:swe="http://www.opengis.net/swe/2.0"
↪ xmlns:wcs="http://www.opengis.net/wcs/2.0" xmlns:wcseo="http://www.opengis.net/
↪ wcs/wcseo/1.0" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns:xsi="http://www.
↪ w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.opengis.net/wcs/
↪ wcseo/1.0 http://schemas.opengis.net/wcs/wcseo/1.0/wcsEOAll.xsd">
  <wcs:CoverageDescription gml:id="urn:eop:DOVE:MULTISPECTRAL_4m:20180811_081455_
↪ 1054_3be7__coverage">
    <gml:boundedBy>
      <gml:Envelope axisLabels="y x" srsDimension="2" srsName="http://www.opengis.
↪ net/def/crs/EPSG/0/3035" uomLabels="m m">
        <gml:lowerCorner>2817620.000 5518044.000</gml:lowerCorner>

```

(continues on next page)

(continued from previous page)

```

    <gml:upperCorner>2825972.000 5524488.000</gml:upperCorner>
  </gml:Envelope>
</gml:boundedBy>
  <wcs:CoverageId>urn:eop:DOVE:MULTISPECTRAL_4m:20180811_081455_1054_3be7__
↪coverage</wcs:CoverageId>
  <gmlcov:metadata>
    <gmlcov:Extension>
      <wcseo:EOMetadata>
        <eop:EarthObservation gml:id="eop_urn:eop:DOVE:MULTISPECTRAL_4m:20180811_
↪081455_1054_3be7__coverage">
          <om:phenomenonTime>
            <gml:TimePeriod gml:id="phen_time_urn:eop:DOVE:MULTISPECTRAL_
↪4m:20180811_081455_1054_3be7__coverage">
              <gml:beginPosition>2018-08-11T08:14:55Z</gml:beginPosition>
              <gml:endPosition>2018-08-11T08:14:55Z</gml:endPosition>
            </gml:TimePeriod>
          </om:phenomenonTime>
          <om:resultTime>
            <gml:TimeInstant gml:id="res_time_urn:eop:DOVE:MULTISPECTRAL_
↪4m:20180811_081455_1054_3be7__coverage">
              <gml:timePosition>2018-08-11T08:14:55Z</gml:timePosition>
            </gml:TimeInstant>
          </om:resultTime>
          <om:procedure/>
          <om:observedProperty/>
          <om:featureOfInterest>
            <eop:Footprint gml:id="footprint_urn:eop:DOVE:MULTISPECTRAL_
↪4m:20180811_081455_1054_3be7__coverage">
              <eop:multiExtentOf>
                <gml:MultiSurface gml:id="multisurface_
↪urn:eop:DOVE:MULTISPECTRAL_4m:20180811_081455_1054_3be7__coverage" srsName=
↪"EPSG:4326">
                  <gml:surfaceMember>
                    <gml:Polygon gml:id="polygon_urn:eop:DOVE:MULTISPECTRAL_
↪4m:20180811_081455_1054_3be7__coverage_1">
                      <gml:exterior>
                        <gml:LinearRing>
                          <gml:posList>47.29778796 26.00330821 47.29784395 26.
↪00300545 47.29852855 26.00098039 47.33176050 25.98961353 47.35564999 25.98157482_
↪47.35572189 25.98204011 47.36693204 25.97820059 47.37260630 26.01455420 47.
↪37197192 26.01658883 47.37098788 26.01863079 47.36976416 26.02036682 47.36834411_
↪26.02173541 47.36677806 26.02268812 47.31293985 26.04698765 47.31114307 26.
↪04751063 47.30931486 26.04748521 47.30753117 26.04691252 47.30586607 26.04581637_
↪47.30438870 26.04424235 47.30409927 26.04377423 47.29778796 26.00330821</
↪gml:posList>
                        </gml:LinearRing>
                      </gml:exterior>
                    </gml:Polygon>
                  </gml:surfaceMember>
                </gml:MultiSurface>
              </eop:multiExtentOf>
            </eop:Footprint>
          </om:featureOfInterest>
        </om:result/>
      <eop:metaDataProperty>
        <eop:EarthObservationMetaData>
          <eop:identifier>urn:eop:DOVE:MULTISPECTRAL_4m:20180811_081455_1054_
↪3be7__coverage</eop:identifier>
          <eop:acquisitionType>NOMINAL</eop:acquisitionType>
          <eop:status>ARCHIVED</eop:status>
        </eop:EarthObservationMetaData>
      </eop:metaDataProperty>
    </wcseo:EOMetadata>
  </gmlcov:Extension>
</gmlcov:metadata>
</wcs:CoverageId>
</gml:boundedBy>
</gml:Envelope>
</gml:Document>

```

(continues on next page)

(continued from previous page)

```

        </eop:metaDataProperty>
    </eop:EarthObservation>
</wcseo:EOMetadata>
</gmlcov:Extension>
</gmlcov:metadata>
<gml:domainSet>
    <gml:RectifiedGrid dimension="2" gml:id="urn:eop:DOVE:MULTISPECTRAL_
↪4m:20180811_081455_1054_3be7__coverage_grid">
        <gml:limits>
            <gml:GridEnvelope>
                <gml:low>0 0</gml:low>
                <gml:high>1610 2087</gml:high>
            </gml:GridEnvelope>
        </gml:limits>
        <gml:axisLabels>y x</gml:axisLabels>
        <gml:origin>
            <gml:Point gml:id="urn:eop:DOVE:MULTISPECTRAL_4m:20180811_081455_1054_
↪3be7__coverage_grid_origin" srsName="http://www.opengis.net/def/crs/EPSSG/0/3035">
                <gml:pos>2825972.000 5518044.000</gml:pos>
            </gml:Point>
        </gml:origin>
        <gml:offsetVector srsName="http://www.opengis.net/def/crs/EPSSG/0/3035">0.
↪000 4.000</gml:offsetVector>
        <gml:offsetVector srsName="http://www.opengis.net/def/crs/EPSSG/0/3035">-4.
↪000 0.000</gml:offsetVector>
    </gml:RectifiedGrid>
</gml:domainSet>
<gmlcov:rangeType>
    <swe:DataRecord>
        <swe:field name="red">
            <swe:Quantity definition="http://www.opengis.net/def/property/OGC/0/
↪Radiance">
                <swe:description>Red Channel</swe:description>
                <swe:nilValues>
                    <swe:NilValues>
                        <swe:nilValue reason="http://www.opengis.net/def/nil/OGC/0/unknown
↪">0</swe:nilValue>
                    </swe:NilValues>
                </swe:nilValues>
                <swe:uom code="W.m-2.Sr-1"/>
                <swe:constraint>
                    <swe:AllowedValues>
                        <swe:interval>0 65535</swe:interval>
                        <swe:significantFigures>5</swe:significantFigures>
                    </swe:AllowedValues>
                </swe:constraint>
            </swe:Quantity>
        </swe:field>
        <swe:field name="green">
            <swe:Quantity definition="http://www.opengis.net/def/property/OGC/0/
↪Radiance">
                <swe:description>Green Channel</swe:description>
                <swe:nilValues>
                    <swe:NilValues>
                        <swe:nilValue reason="http://www.opengis.net/def/nil/OGC/0/unknown
↪">0</swe:nilValue>
                    </swe:NilValues>
                </swe:nilValues>
                <swe:uom code="W.m-2.Sr-1"/>
                <swe:constraint>
                    <swe:AllowedValues>

```

(continues on next page)

(continued from previous page)

```

        <swe:interval>0 65535</swe:interval>
        <swe:significantFigures>5</swe:significantFigures>
      </swe:AllowedValues>
    </swe:constraint>
  </swe:Quantity>
</swe:field>
<swe:field name="blue">
  <swe:Quantity definition="http://www.opengis.net/def/property/OGC/0/
↪Radiance">
    <swe:description>Blue Channel</swe:description>
    <swe:nilValues>
      <swe:nilValues>
        <swe:nilValue reason="http://www.opengis.net/def/nil/OGC/0/unknown
↪">0</swe:nilValue>
      </swe:nilValues>
    </swe:nilValues>
    <swe:uom code="W.m-2.Sr-1"/>
    <swe:constraint>
      <swe:AllowedValues>
        <swe:interval>0 65535</swe:interval>
        <swe:significantFigures>5</swe:significantFigures>
      </swe:AllowedValues>
    </swe:constraint>
  </swe:Quantity>
</swe:field>
<swe:field name="nir">
  <swe:Quantity definition="http://www.opengis.net/def/property/OGC/0/
↪Radiance">
    <swe:description>Nir Channel</swe:description>
    <swe:nilValues>
      <swe:nilValues>
        <swe:nilValue reason="http://www.opengis.net/def/nil/OGC/0/unknown
↪">0</swe:nilValue>
      </swe:nilValues>
    </swe:nilValues>
    <swe:uom code="W.m-2.Sr-1"/>
    <swe:constraint>
      <swe:AllowedValues>
        <swe:interval>0 65535</swe:interval>
        <swe:significantFigures>5</swe:significantFigures>
      </swe:AllowedValues>
    </swe:constraint>
  </swe:Quantity>
</swe:field>
</swe:DataRecord>
</gmlcov:rangeType>
<wcs:ServiceParameters>
  <wcs:CoverageSubtype>RectifiedDataset</wcs:CoverageSubtype>
  <wcs:nativeFormat>image/tiff</wcs:nativeFormat>
</wcs:ServiceParameters>
</wcs:CoverageDescription>
</wcs:CoverageDescriptions>

```

Full coverage in default configuration

Spatial subset

Range subset

Scaled down

Specific format and interpolation

Specific projection

6.5.2 DSEO

One entire product