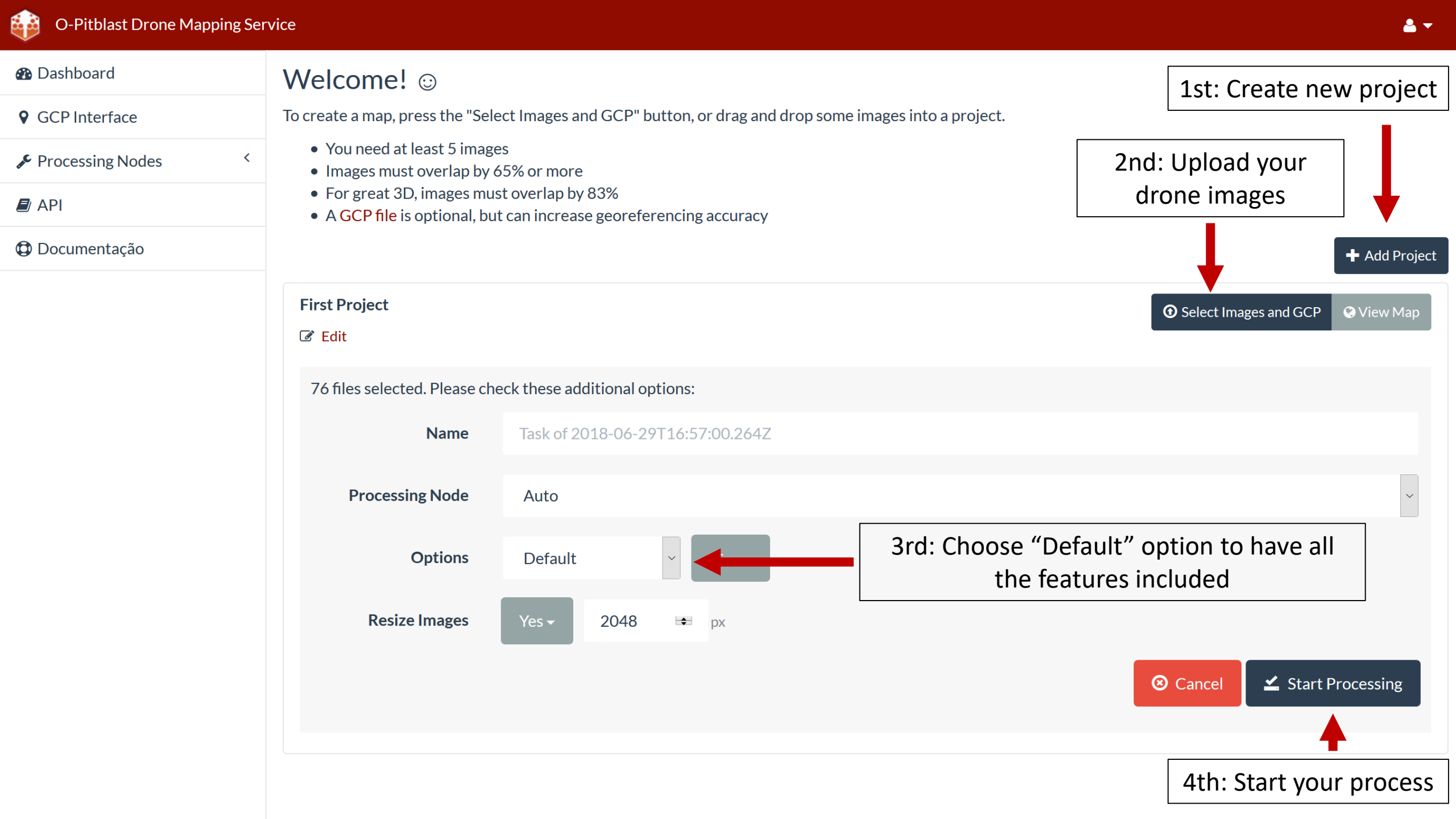
Drone Mapping Service Manual

3D Model Without Ground Control Points (GCP)


O-Pitblast Drone Mapping Service
Dashboard
GCP Interface
Processing Nodes
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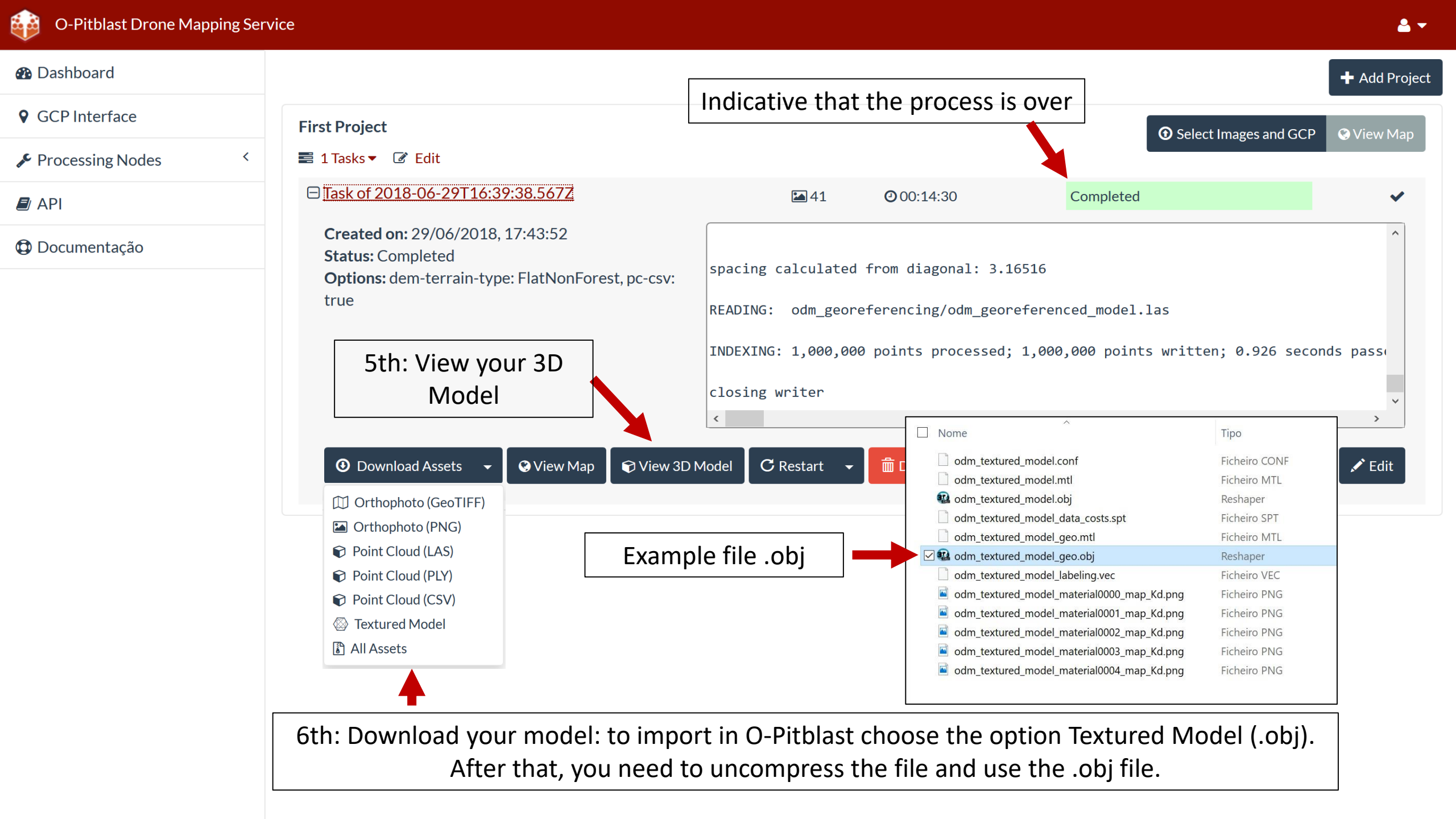
Documentação
Welcome! ☺
To create a map, press the "Select Images and GCP" button, or drag and drop some images into a project.
You need at least 5 images
Images must overlap by 65% or more
For great 3D, images must overlap by 83%
A GCP file is optional, but can increase georeferencing accuracy
1st: Create new project
2nd: Upload your drone images
Add Project
First Project
Edit
Select Images and GCP
View Map
76 files selected. Please check these additional options:
Name
Task of 2018-06-29T16:57:00.264Z
Processing Node
Auto
Options
Default
3rd: Choose “Default” option to have all the features included
Resize Images
Yes
2048
px
Cancel
Start Processing
4th: Start your process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Add Project
Indicative that the process is over
First Project
1 Tasks
Edit
Select Images and GCP
View Map
Task of 2018-06-29T16:39:38.567Z
41
00:14:30
Completed
Created on: 29/06/2018, 17:43:52
Status: Completed
Options: dem-terrain-type: FlatNonForest, pc-csv: true
spacing calculated from diagonal: 3.16516
READING: odm_georeferencing/odm_georeferenced_model.las
INDEXING: 1,000,000 points processed; 1,000,000 points written; 0.926 seconds pass
closing writer
5th: View your 3D Model
Download Assets
View Map
View 3D Model
Restart
Edit
Orthophoto (GeoTIFF)
Orthophoto (PNG)
Point Cloud (LAS)
Point Cloud (PLY)
Point Cloud (CSV)
Textured Model
All Assets
Example file .obj
Nome
Tipo
odm_textured_model.conf
Ficheiro CONF
odm_textured_model.mtl
Ficheiro MTL
odm_textured_model.obj
Reshaper
odm_textured_model_data_costs.spt
Ficheiro SPT
odm_textured_model_geo.mtl
Ficheiro MTL
odm_textured_model_geo.obj
Reshaper
odm_textured_model_labeling.vec
Ficheiro VEC
odm_textured_model_material0000_map_Kd.png
Ficheiro PNG
odm_textured_model_material0001_map_Kd.png
Ficheiro PNG
odm_textured_model_material0002_map_Kd.png
Ficheiro PNG
odm_textured_model_material0003_map_Kd.png
Ficheiro PNG
odm_textured_model_material0004_map_Kd.png
Ficheiro PNG
6th: Download your model: to import in O-Pitblast choose the option Textured Model (.obj). After that, you need to uncompress the file and use the .obj file.

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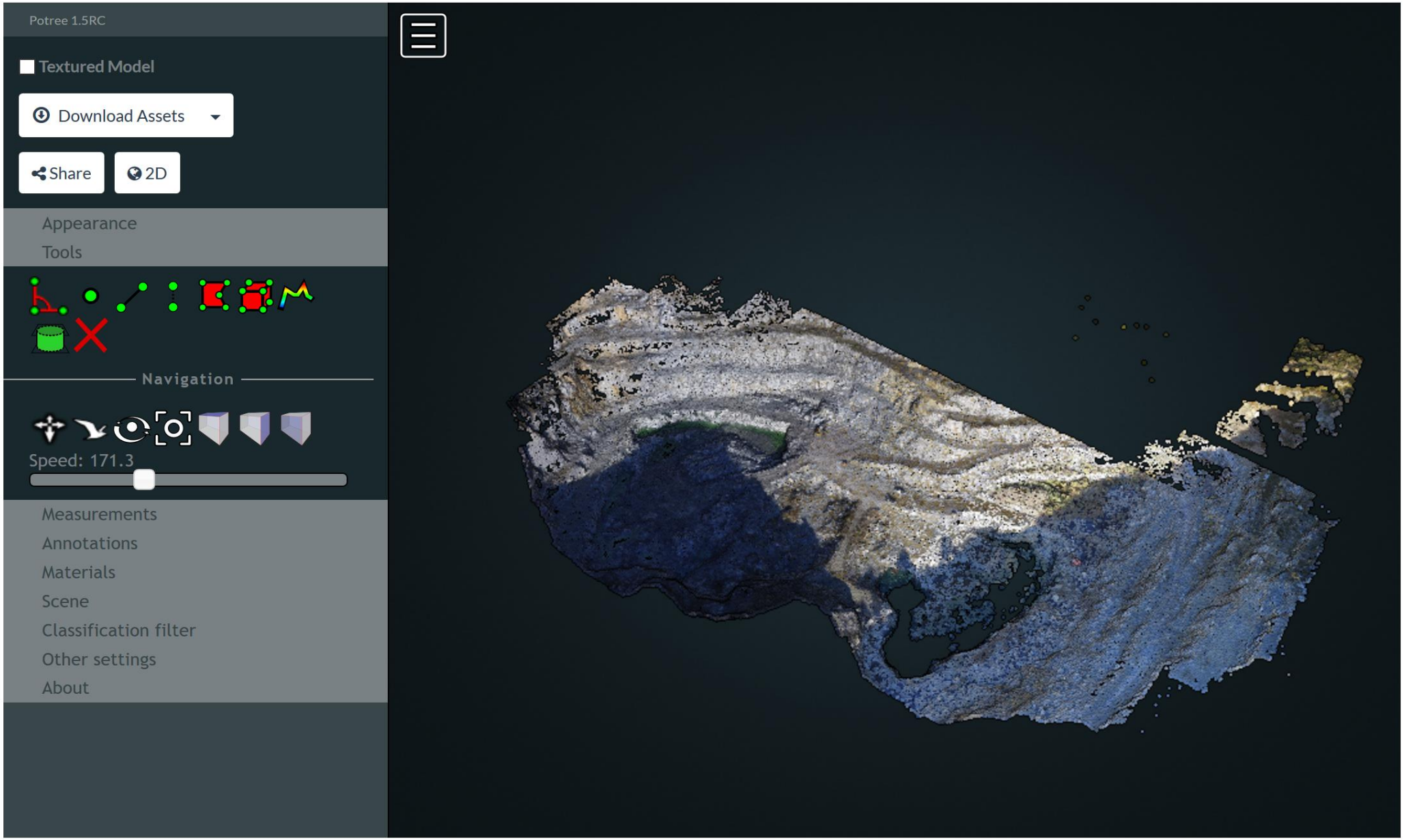
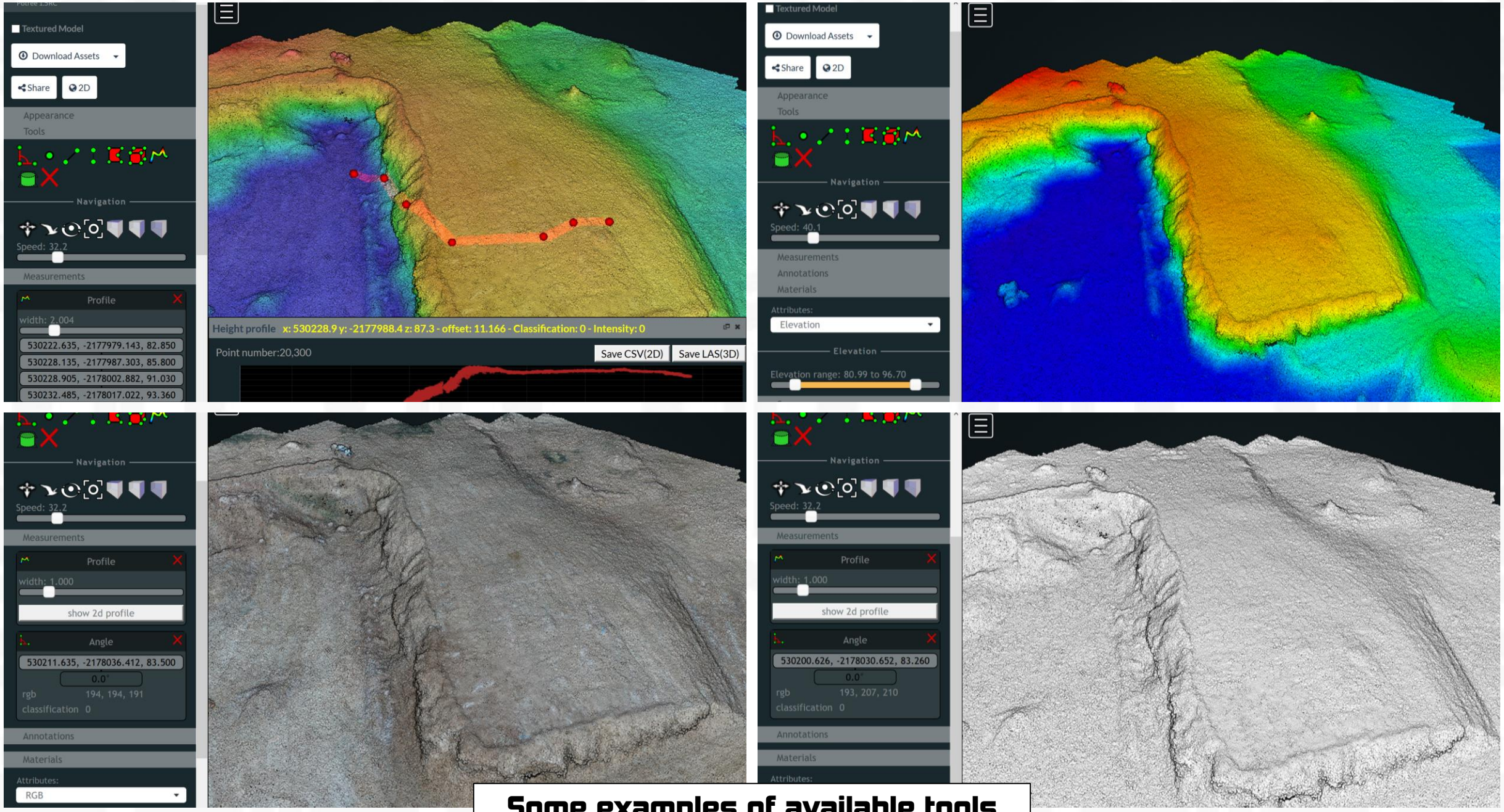
Task of 2018-06-29T16:39:38.567Z



Viewer tool box



Some examples of available tools

3D Model With Ground Control Points (GCP)

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1st: Go to GCP interface

Ground Control Point Interface

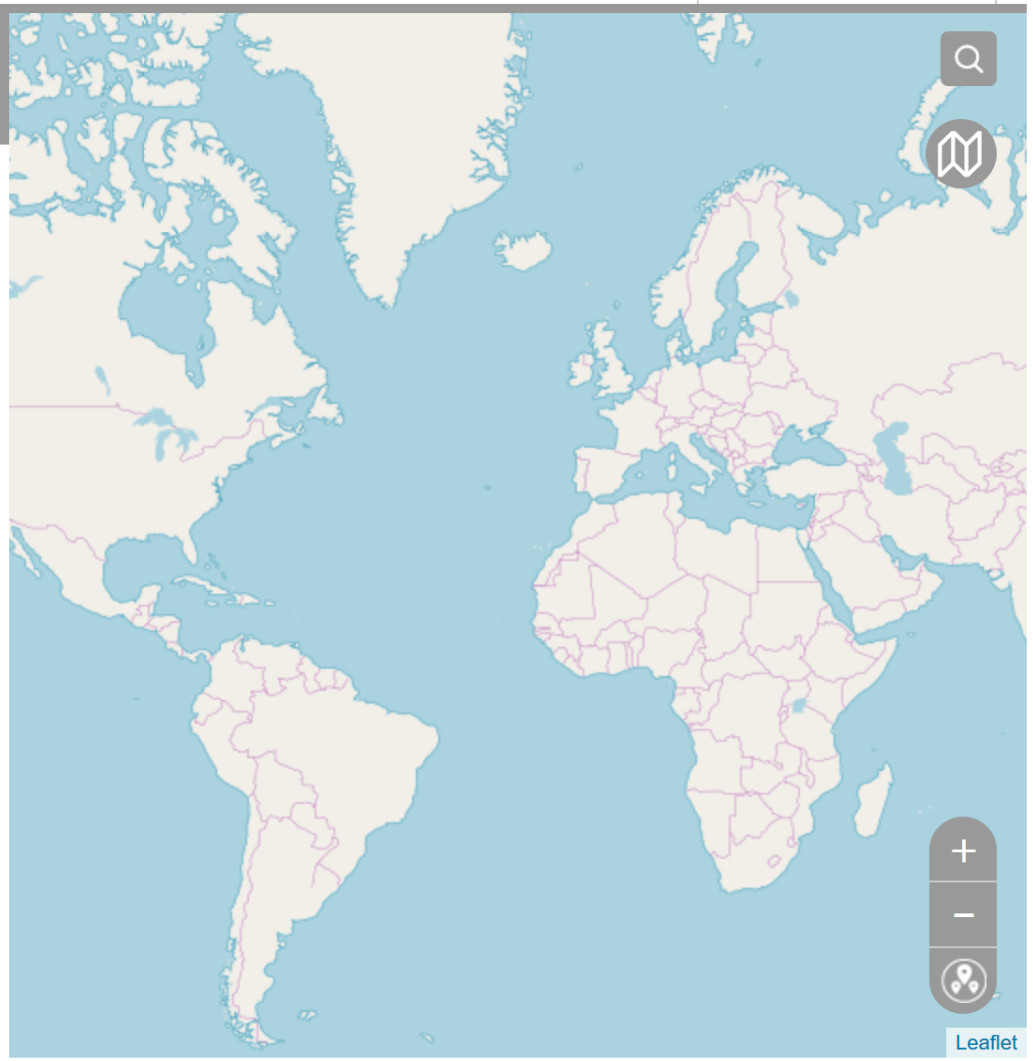
EXPORT FILE

GROUND CONTROL POINTS
No points...

DIRECTIONS

Load existing Control Point File

Choose images / drag here



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Ground Control Point Interface

EXPORT FILE

GROUND CONTROL POINTS
No points...

DIRECTIONS

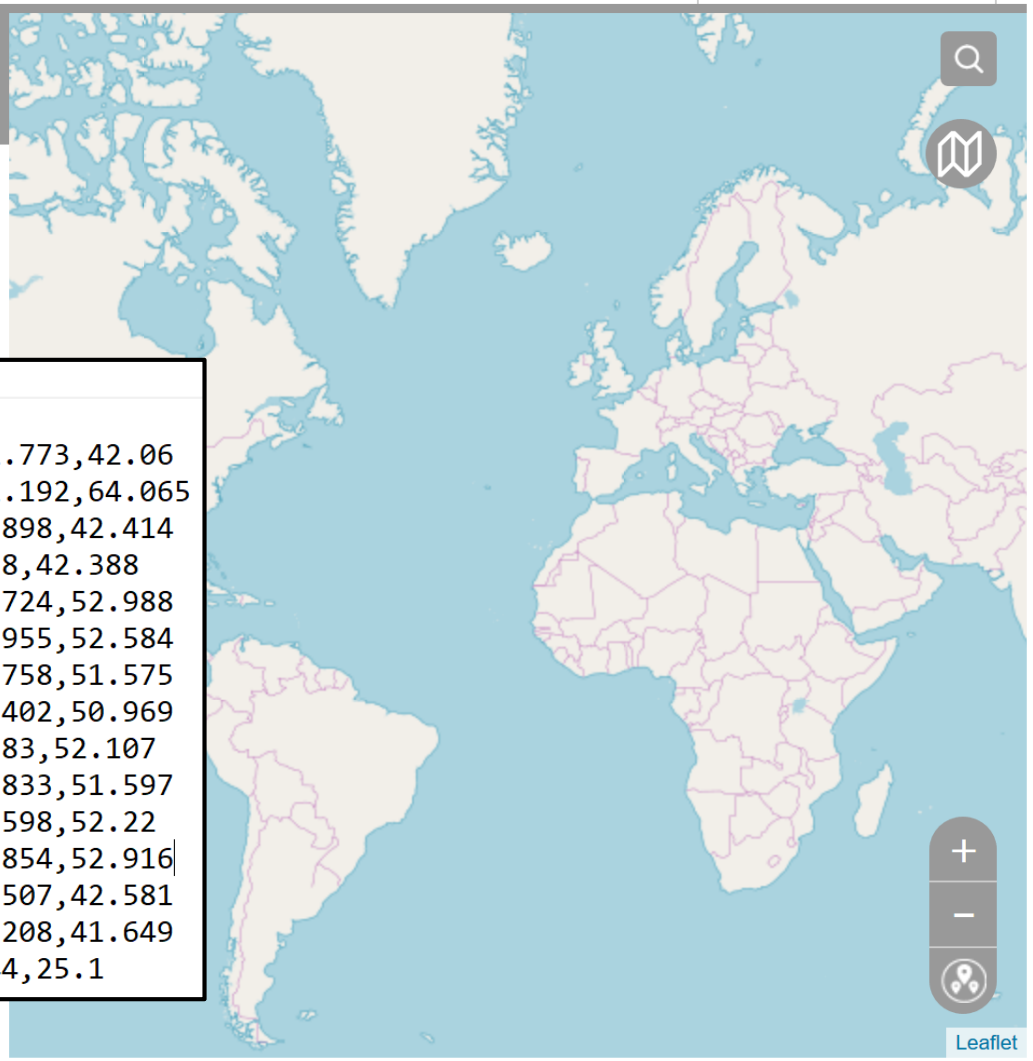
Load existing Control Point File

Choose images / drag here

2nd: Load your .txt (**See APEX A to see how your file must be prepared**) with your Control Points

Example file

```
Ficheiro  Editar  Formatar  Ver  Ajuda
WGS84 UTM 55S
BCH-042,530203.512,7821872.773,42.06
BHC-064,530082.657,7822091.192,64.065
DCP-22,530214.878,7821994.898,42.414
DCP-23,530222.978,7822027.8,42.388
DCP-02,530235.272,7822011.724,52.988
DCP-03,530232.957,7821991.955,52.584
DCP-04,530230.081,7821969.758,51.575
DCP-05,530232.314,7821960.402,50.969
DCP-06,530252.735,7821970.83,52.107
DCP-07,530257.007,7821991.833,51.597
DCP-08,530252.005,7822022.598,52.22
DCP-01,530237.806,7822034.854,52.916
LCP-01,530189.843,7821990.507,42.581
LCP-02,530207.497,7821914.208,41.649
WBCP-,529938.94,7821549.544,25.1
```



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Ground Control Point Interface

EXPORT FILE

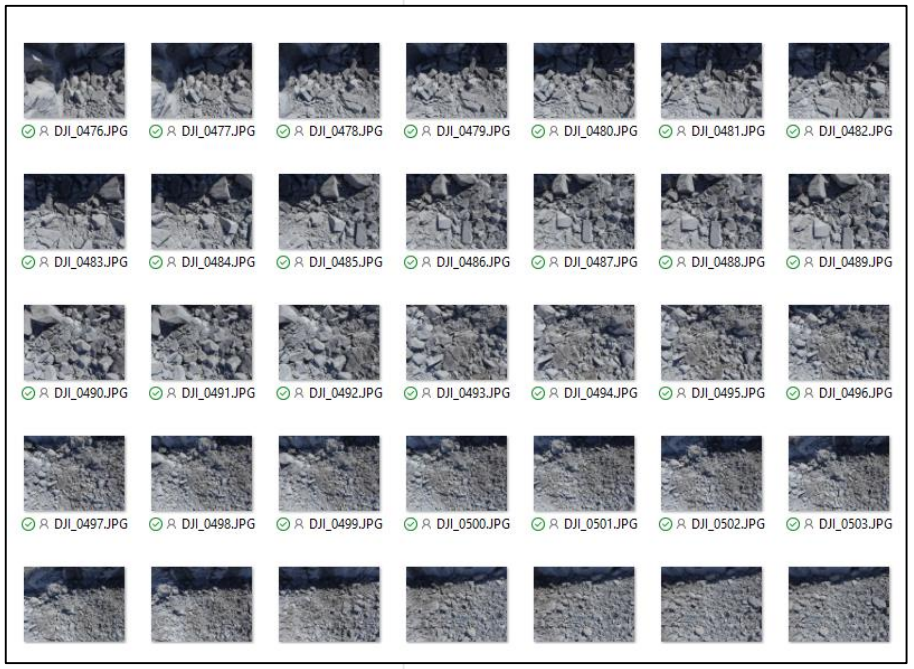
GROUND CONTROL POINTS

No points...

► DIRECTIONS

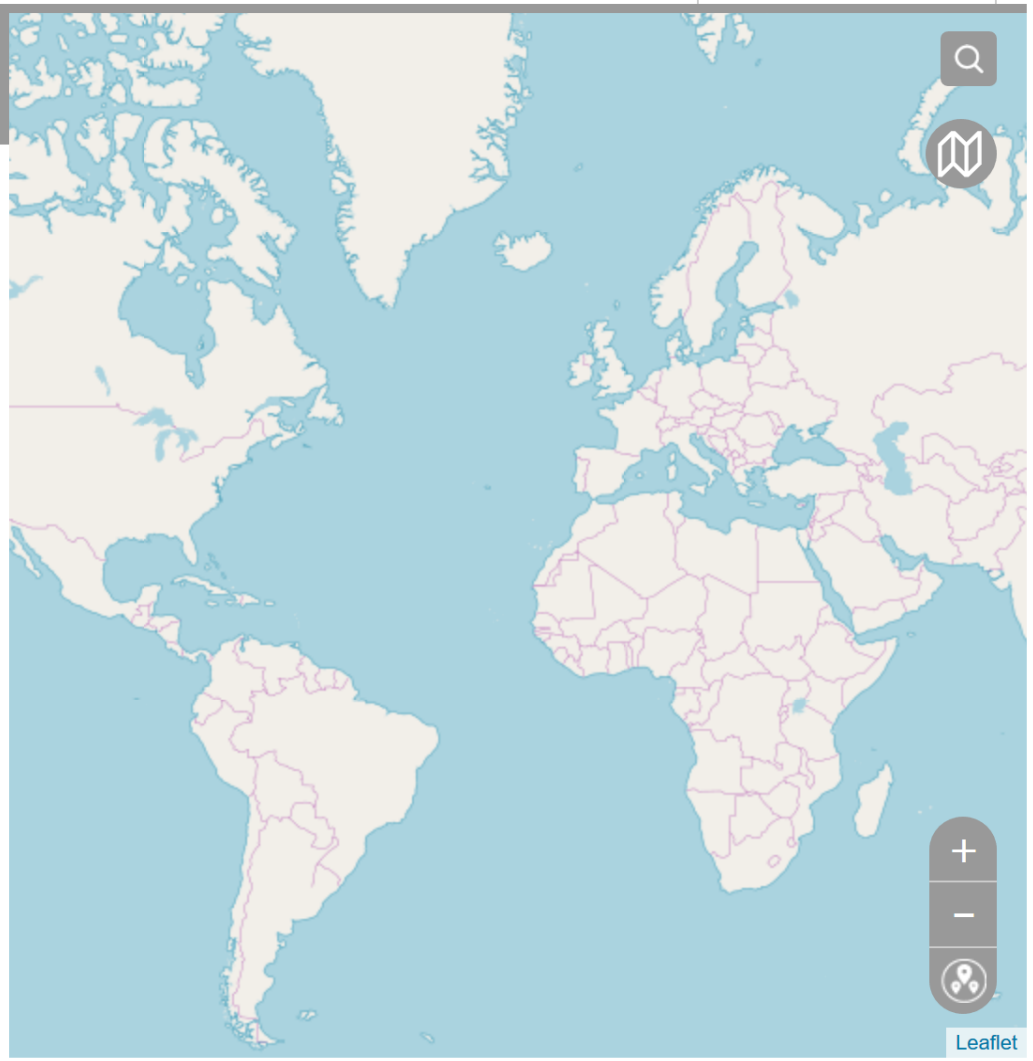
Load existing Control Point File

Choose images / drag here



3rd: Choose your drone photos

Example



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Ground Control Point Interface

4th: Click on the plus sign to assign a GCP on the image. After that select the on the GCP respectively on the map.

EXPORT FILE

GROUND CONTROL POINTS

GCP on the image

GCP on the map

Note: when this GCP is green it means that that is active!

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Ground Control Point Interface

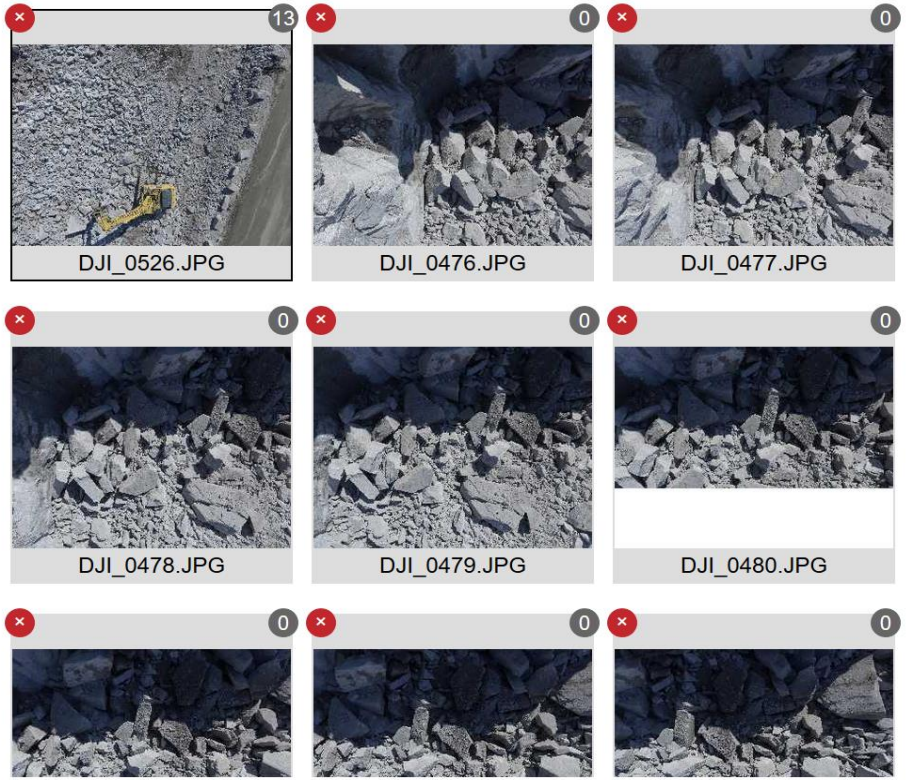
5th: Export file

EXPORT FILE

GROUND CONTROL POINTS

pontos_novosBM.txt

Choose images / drag here



Export file

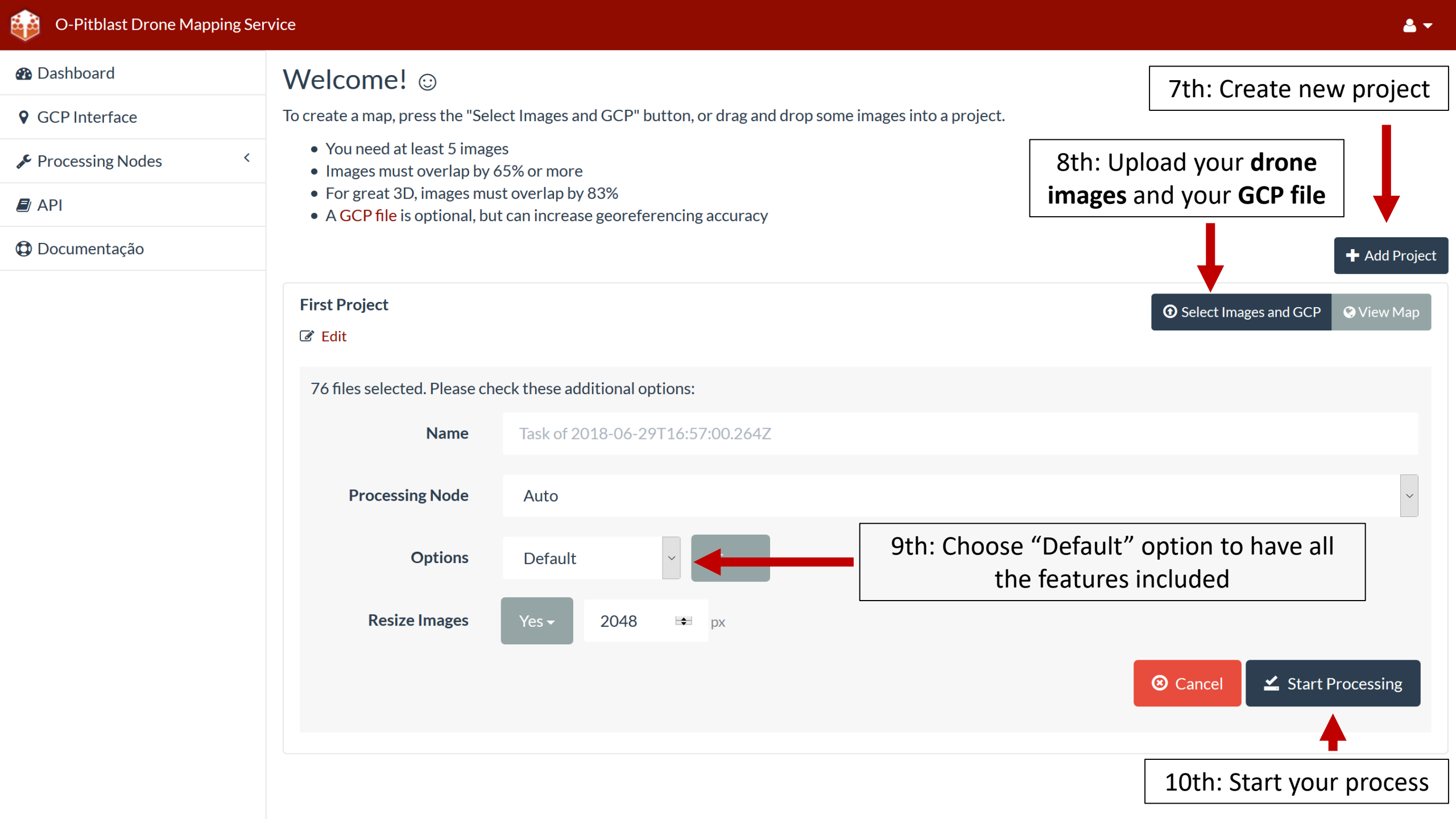
GROUND CONTROL POINT FILE ×

+proj=utm +zone=55 +south +ellps=WGS84 +datum=WGS84 +units=m +no_defs

```
+proj=utm +zone=55 +south +ellps=WGS84 +datum=WGS84 +units=m +no_defs
530207.50       7821914.21      41.649  2994.12 1764.71 DJI_0526.JPG    LCP-02
530232.31       7821960.40      50.969  1052.94 2029.41 DJI_0526.JPG    DCP-05
530230.08       7821969.76      51.575  2729.41 623.53  DJI_0526.JPG    DCP-04
530257.01       7821991.83      51.597  2905.88 900.00  DJI_0526.JPG    DCP-07
530252.74       7821970.83      52.107  3447.06 882.35  DJI_0526.JPG    DCP-06
530189.84       7821990.51      42.581  2735.29 1194.12 DJI_0526.JPG    LCP-01
530232.96       7821991.96      52.584  3188.24 1058.82 DJI_0526.JPG    DCP-03
530214.88       7821994.90      42.414  3294.12 564.71  DJI_0526.JPG    DCP-22
530235.27       7822011.72      52.988  3300.00 311.76  DJI_0526.JPG    DCP-02
530252.01       7822022.60      52.22   2694.12 194.12  DJI_0526.JPG    DCP-08
530203.51       7821872.77      42.06   2594.12 1635.29 DJI_0526.JPG    BCH-042
530222.98       7822027.80      42.388  2100.00 341.18  DJI_0526.JPG    DCP-23
```

Copy text with **Ctrl / Cmd+C** or Copy Save

6th:Save the file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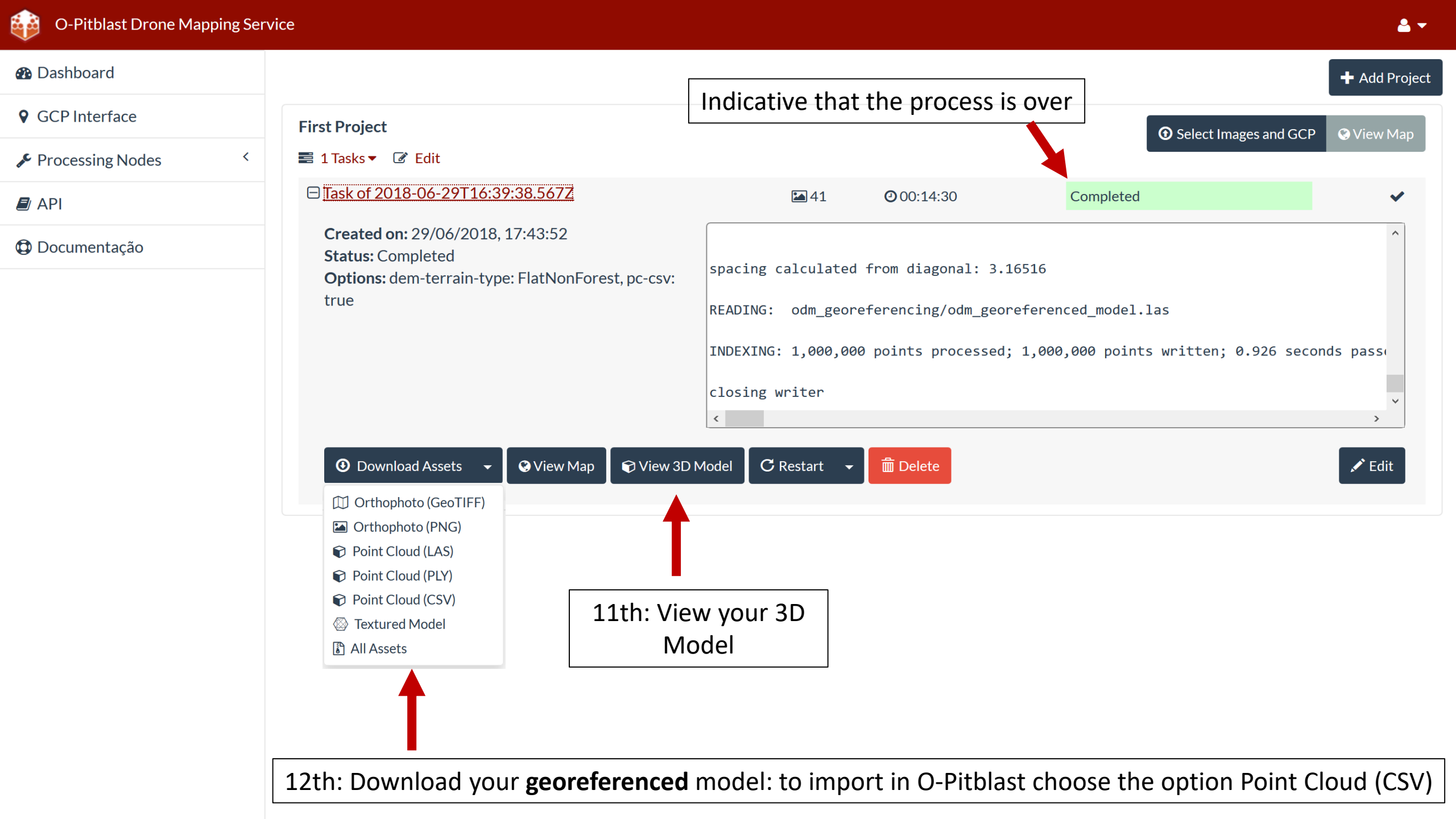
Options
Default
9th: Choose “Default” option to have all the features included
Resize Images
Yes
2048
px
Cancel
Start Processing
10th: Start your process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spacing calculated from diagonal: 3.16516
READING: odm_georeferencing/odm_georeferenced_model.las
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closing writer
Download Assets
View Map
View 3D Model
Restart
Delete
Edit
Orthophoto (GeoTIFF)
Orthophoto (PNG)
Point Cloud (LAS)
Point Cloud (PLY)
Point Cloud (CSV)
Textured Model
All Assets
11th: View your 3D Model
12th: Download your georeferenced model: to import in O-Pitblast choose the option Point Cloud (CSV)

Apex A

Prepare your GCP file to importation

```
Ficheiro  Editar  Formatar  Ver  Ajuda
WGS84 UTM 55S
BCH-042,530203.512,7821872.773,42.06
BHC-064,530082.657,7822091.192,64.065
DCP-22,530214.878,7821994.898,42.414
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DCP-03,530232.957,7821991.955,52.584
DCP-04,530230.081,7821969.758,51.575
DCP-05,530232.314,7821960.402,50.969
DCP-06,530252.735,7821970.83,52.107
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DCP-08,530252.005,7822022.598,52.22
DCP-01,530237.806,7822034.854,52.916
LCP-01,530189.843,7821990.507,42.581
LCP-02,530207.497,7821914.208,41.649
WBCP-,529938.94,7821549.544,25.1
```
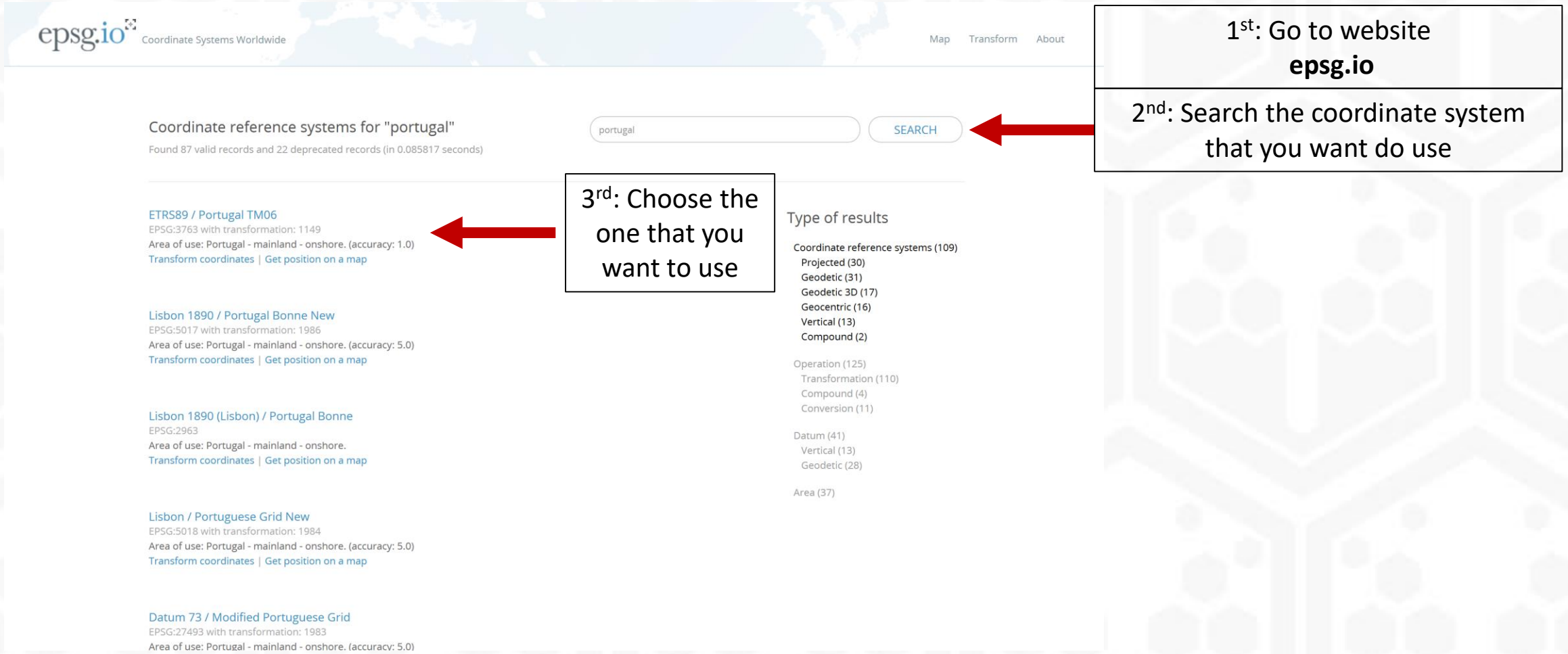

String with defined coordinate system that you want to use.
How to get it and how to use it?
Follow the next steps.

What string should I use?



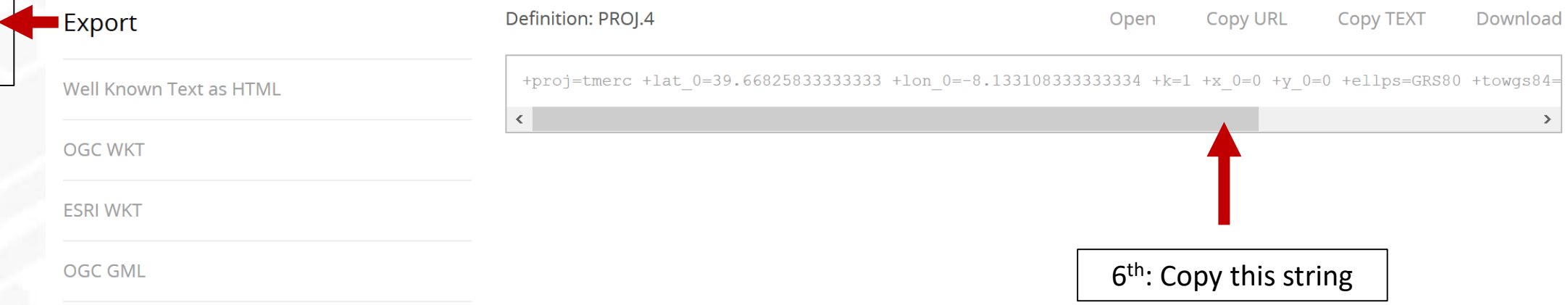
1st: Go to website **epsg.io**

2nd: Search the coordinate system that you want do use

3rd: Choose the one that you want to use

How I get the string?

4th: Open and search for "Export"



5th: Select the option Proj.4

6th: Copy this string

How I get the string?

Ficheiro Editar Formatar Ver Ajuda

```
+proj=tmerc +lat_0=39.66825833333333 +lon_0=-8.133108333333334 +k=1 +x_0=0 +y_0=0 +ellps=GRS80 +towgs84=0,0,0,0,0,0,0 +units=m +no_defs
BCH-042,530203.512,7821872.773,42.06
BHC-064,530082.657,7822091.192,64.065
DCP-22,530214.878,7821994.898,42.414
DCP-23,530222.978,7822027.8,42.388
DCP-02,530235.272,7822011.724,52.988
DCP-03,530232.957,7821991.955,52.584
DCP-04,530230.081,7821969.758,51.575
DCP-05,530232.314,7821960.402,50.969
DCP-06,530252.735,7821970.83,52.107
DCP-07,530257.007,7821991.833,51.597
DCP-08,530252.005,7822022.598,52.22
DCP-01,530237.806,7822034.854,52.916
LCP-01,530189.843,7821990.507,42.581
LCP-02,530207.497,7821914.208,41.649
WBCP-,529938.94,7821549.544,25.1
```

7th: Paste on the first line of your .txt the string that you copy

Save the new file and it's all set to do the importation!