

## Context - St3TART project

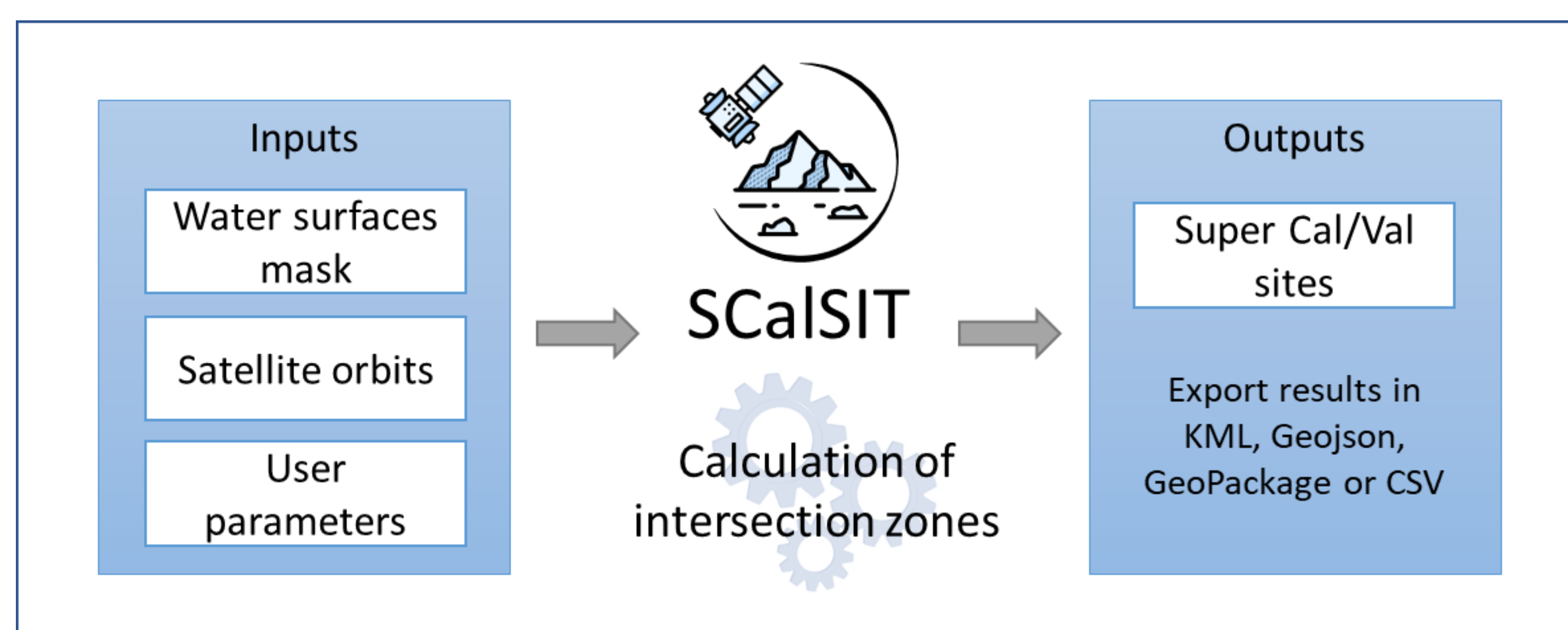
- The St3TART project is aimed at preparing a roadmap and providing a preliminary proof of concept for the provision of Fiducial Reference Measurements (FRM) in support of the validation activities of the Sentinel-3 (S3) radar altimeter over land surfaces of interest, i.e. inland water bodies (lakes, reservoirs, rivers including estuarian areas), as well as sea ice and land ice areas (ice caps, mountain glaciers).
- Typically, St3TART and its follow-up activities should ensure a supply of fiducial data for the Cal/Val activities of the ESA S3 Mission Performance Center/Cluster and of the S3 Validation Team.
- The **Super Cal/Val Site Identifier Tool (SCaSIT)** software aims to support the Cal/Val community and scientists in **identifying potential in-situ Cal/Val sites over Inland Water Surfaces**, to contribute to the validation activities effort of the Copernicus Sentinel-3 STM mission, but also to **perform in-situ hydrological measurements** for downstream applications or R&D".

## SCaSIT: How does it work?

- To identify such sites, it detects all potential intersections between inland water surfaces and altimetry satellites orbits.
- The user only needs to define a water surface mask and the altimetry satellites orbits, and the tool will automatically calculate the intersection zones of both within a specific area of interest, taking into account any additional parameters defined by the user, such as the distance to the water body, the time period, a specific water body, a minimum number of passes over the water body.
- Once the intersection zones are calculated, the user can save these zones and use them within any GIS tool.

### GOOD TO KNOW!

The tool has been created for the S3 Topography mission Assessment, but it could work for other altimetry satellites, because it takes the satellites orbits as an argument.



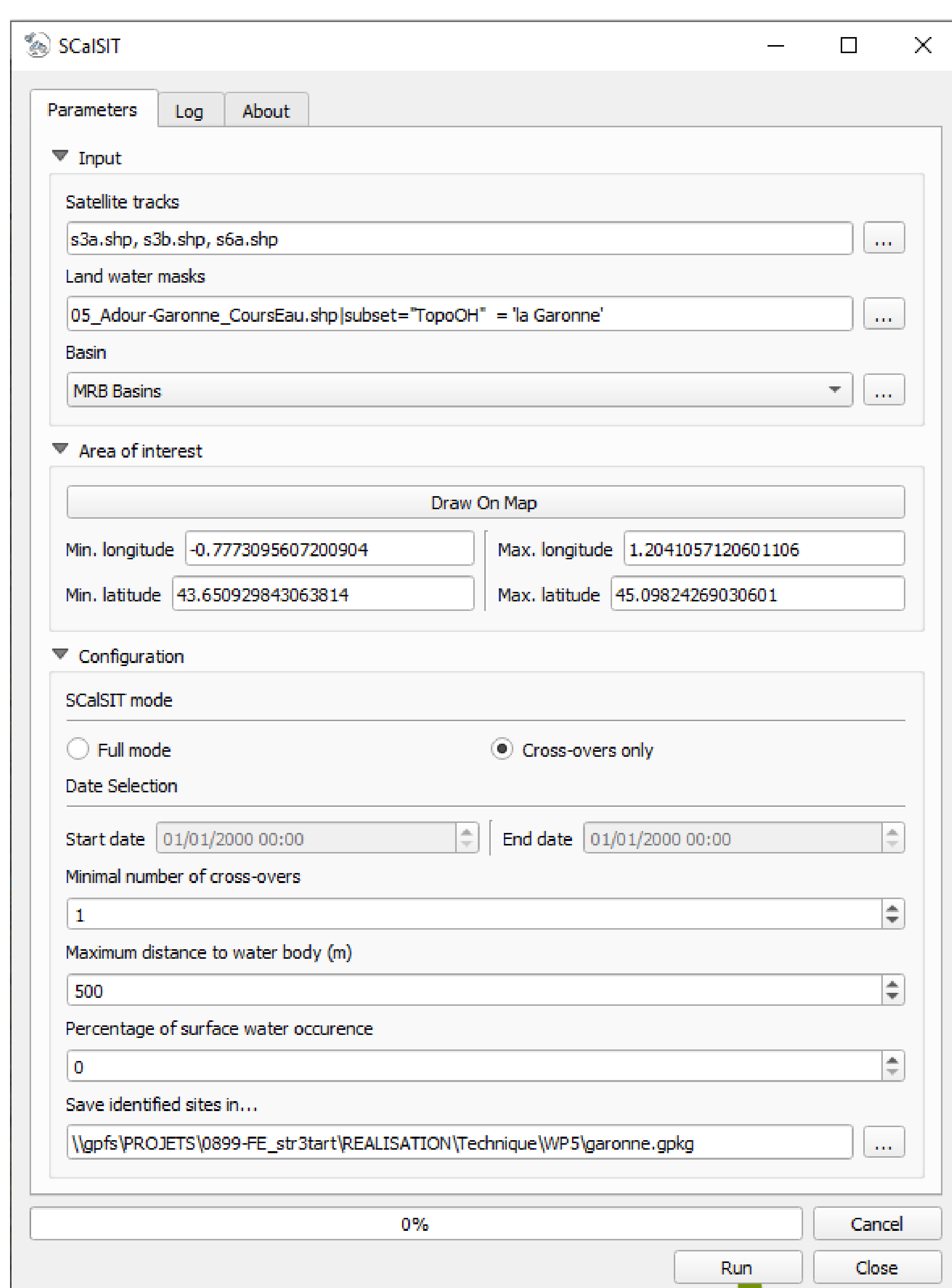
TWO WAYS OF USING IT:



OR



## Example on the Garonne river



Parameters Log About

Input

Satellite tracks  
s3a.shp, s3b.shp, s6a.shp

Land water masks  
05\_Adour-Garonne\_CoursEau.shp[subset="TopoOH" = "la Garonne"]

Basin  
MRB Basins

Area of interest

Draw On Map

Min. longitude: -0.7773095607200904 Max. longitude: 1.2041057120601106

Min. latitude: 43.650929843063814 Max. latitude: 45.09824269030601

Configuration

SCaSIT mode

☐ Full mode ☒ Cross-overs only

Date Selection

Start date: 01/01/2000 00:00 End date: 01/01/2000 00:00

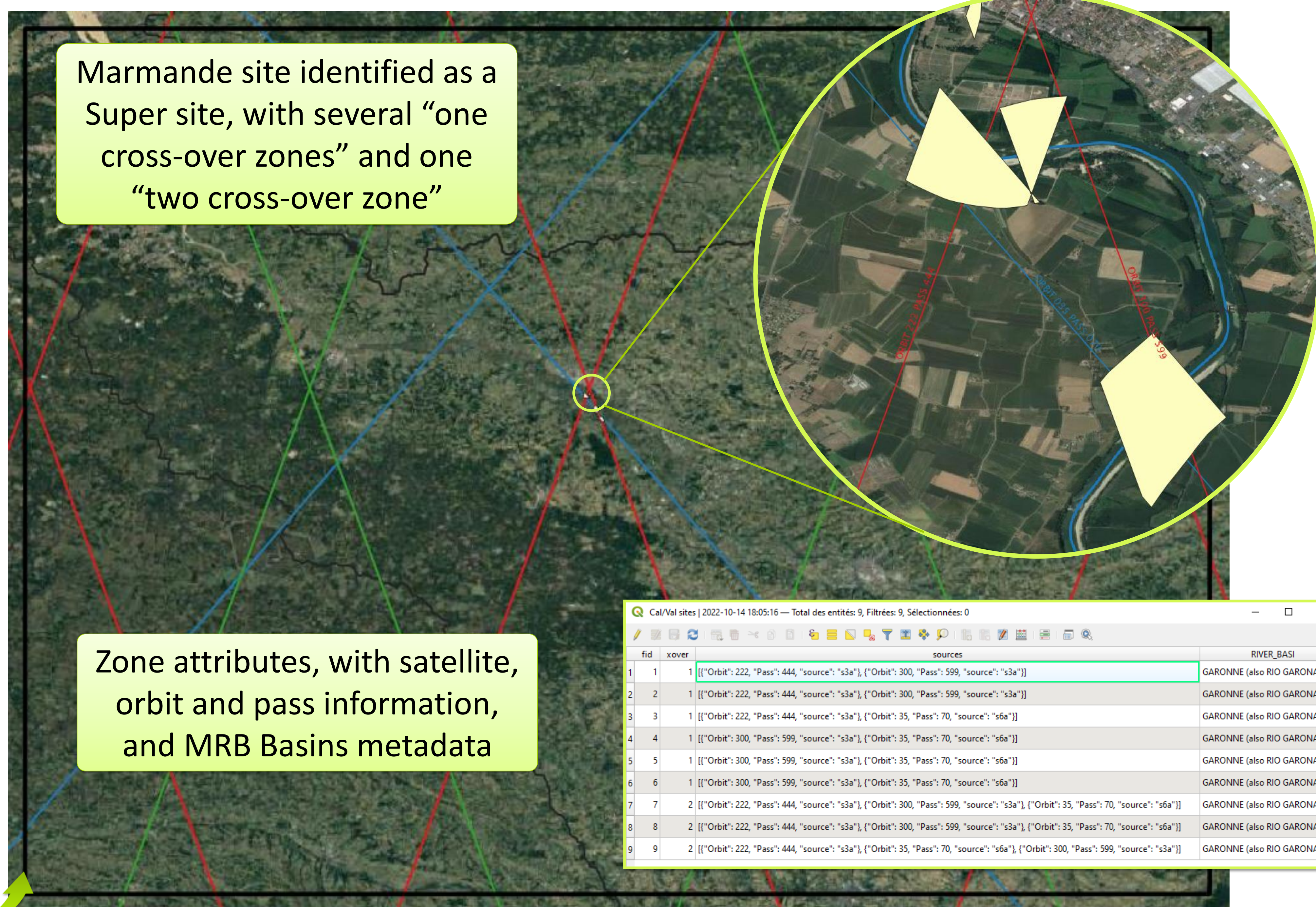
Minimal number of cross-overs: 1

Maximum distance to water body (m): 500

Percentage of surface water occurrence: 0

Save identified sites in...  
\\gifs\PROJETS\0899-FE\_str3tart\REALISATION\Technique\WP5\garonne.gpkg

0% Run Cancel



## Need more info?

This tool is an open-source software. It will be distributed on Gitlab once validated by ESA.

If you are interested by this tool, please contact us through the project website contact form: <https://sentinel3-st3tart.noveltis.fr/contact/>, and we will keep you informed as soon as the tool is publicly available.