

Data & pre-processing

Sentinel-2
multi-spectral images

Spectral bands
(10m)

Indexes
(NDVI,
NDWI, ...)

Hue

JRC water extent
dataset

Training dataset

Stratified
sampling

Water classification model

Possible
water extent
(2019)

Water frequency
(A)

Build model

Water probability layer

Water
classification

Final water
frequency
(10m, 2019)

Water extent detection

Permanent Water
extents
(10 m, 2019)

Water body identification

- Extract water bodies
- Exclude rivers and streams
- Remove noises
- ...

Water bodies
(2019, WBD-NAHL)

Interpreted water
dataset

Regional water
body datasets
(e.g., PeRL)

Comparison &
Confusion metrics

Accuracy Assessment