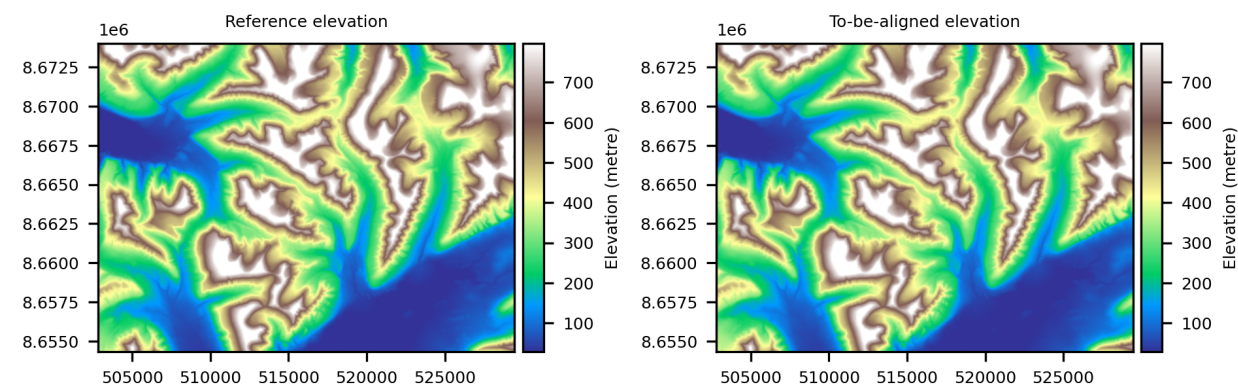# Accuracy assessment report — xDEM

xDEM version: 0.2.3.dev26
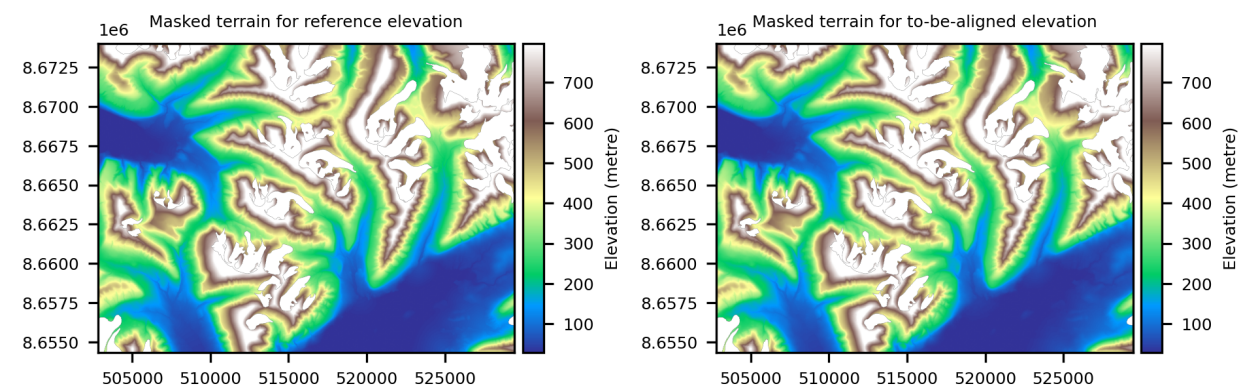
Date: 25/02/2026 10:26:29

Computing time: 16.28 seconds

Elevation inputs

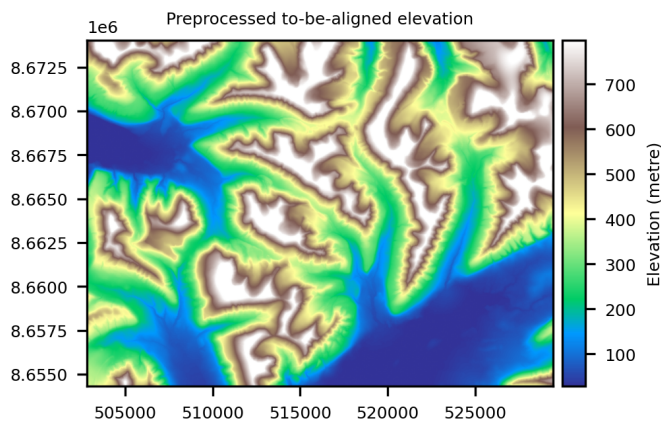## Masked elevation data

Information about inputs

Information	Value
reference_elev	{'path_to_elev': '../../../xdem/example_data/Longyearbyen/data/DEM_2009_ref.tif', 'from_vcrs': 'None', 'to_vcrs': 'None', 'downsample': '1'}
to_be_aligned_elev	{'path_to_elev': '../../../xdem/example_data/Longyearbyen/data/DEM_1990.tif', 'path_to_mask': '../../../xdem/example_data/

Longyearbyen/data/glacier_mask/
CryoClim_GAO_SJ_1990.shp', 'from_vcrs': 'None', 'to_vcrs':
'None', 'downsample': '1'}

sampling_grid	reference_elev

Preprocessed elevation data

1e6
Preprocessed to-be-aligned elevation

Coregistration user configuration

Information	Value
step_one	{'method': 'LZD', 'extra_information': "{'subsample': 10000}"}
process	True

LZD inputs

Information	Value
random	{'subsample': '10000', 'random_state': '42'}
fitorbin	{'fit_minimizer': 'least_squares', 'fit_loss_func': 'linear'}
iterative	{'max_iterations': '200', 'tolerance': '0.01'}
specific	{}
affine	{'only_translation': 'False'}

LZD outputs

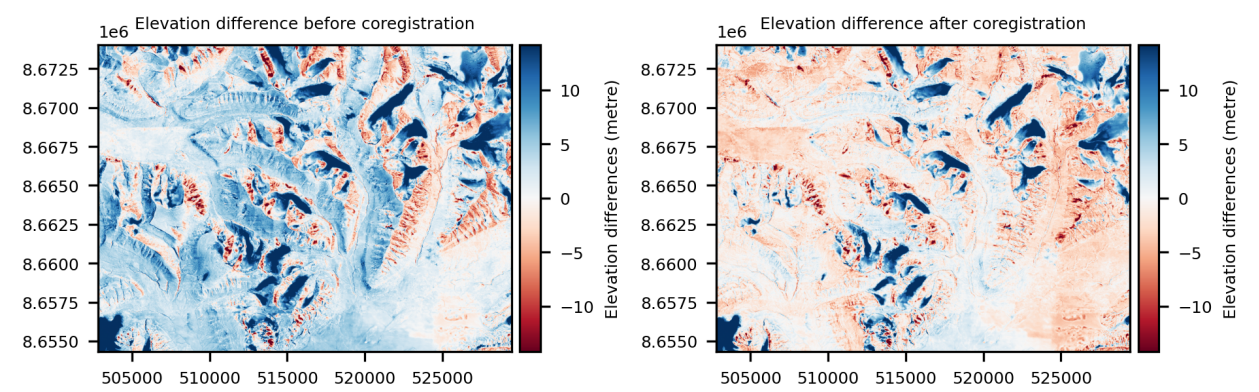| Information	Value
affine	{'centroid': '(516048.39, 8664263.24, 377.02)', 'matrix': '[[9.99999989e-01 1.18935868e-04 -8.98659020e-05

9.27075541e+00]\n [-1.18939217e-04 9.99999992e-01
-3.72660317e-05 1.15738237e-01]\n [8.98614690e-05 3.72767199e-05
9.99999995e-01 -3.12406906e+00]\n [0.00000000e+00
0.00000000e+00 0.00000000e+00 1.00000000e+00]]', 'shift_x': '9.27',
'shift_y': '0.12', 'shift_z': '-3.12'}

random   {'subsample_final': '10000'}

Statistics

Data	Aligned elevation	Difference before coreg	Difference after coreg
Median	361.983	2.766	-0.847
NMAD	291.535	3.806	2.551
Valid count	1309691	1312020	1309691

Elevation differences

Differences histogram