

Landsat 8 bi-temporal dataset

Spatial resolution 30 m; Land cover: Agriculture / Urban (Figure S1);

57 Segmentations using Multiresolution Segmentation (eCognition) on 6 bands (both: 4, 5, 6)

Scale 20 – 300 (increment of 5); Shape 0.1 / Compactness 0.5

In Figure S2 the “optimal” segmentation changes with the subset of segmentations used for evaluation.

Figure S3 exhibits a stable optimum due to the proposed alternative normalization.

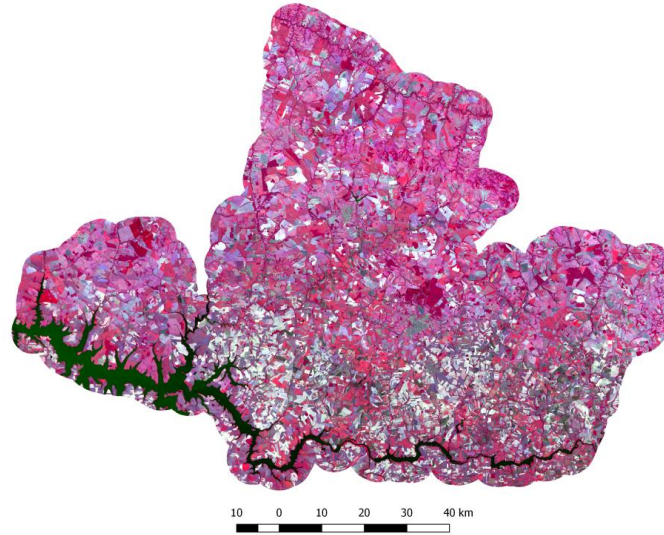


Figure S1. False color composite (bands 5,6,4) of the Landsat-8 scene

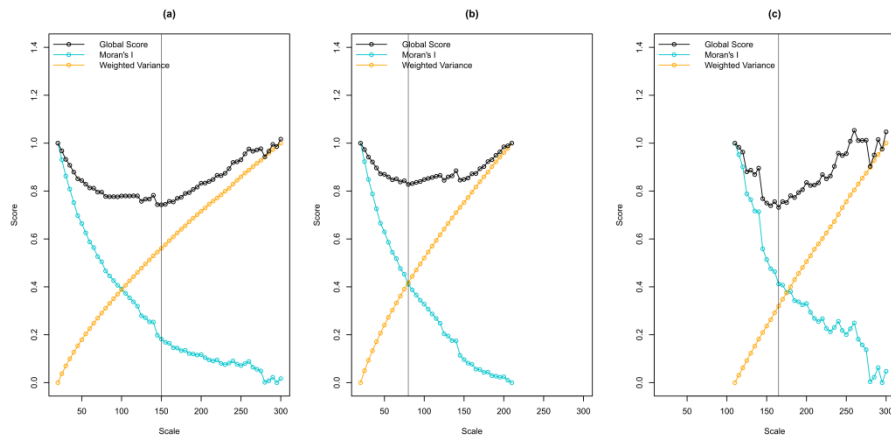


Figure S2. Results for original Global Score, Moran's Index and Weighted Variance based on the NIR band of the Landsat-8 data set (a) GS calculated for all 57 segmentations; (b) GS calculated on the subset of Scale lower than 210, (c) GS calculated on the subset of Scale larger than 110

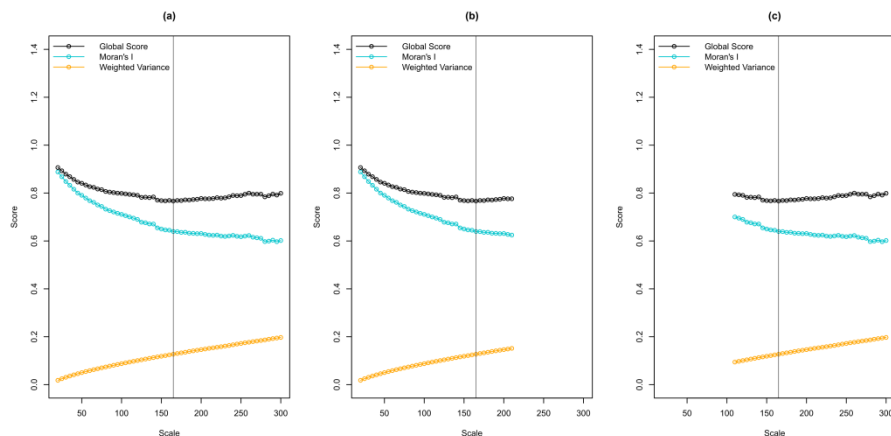


Figure S3. Results for proposed Global Score, Moran's Index and Weighted Variance based on the NIR band of the Landsat-8 data set (a) GS calculated for all 57 segmentations; (b) GS calculated on the subset of Scale lower than 210, (c) GS calculated on the subset of Scale larger than 110

Sentinel-2 dataset

Spatial resolution 10 m; Land cover: Agriculture / Mixed Forest / Urban (Figure S4);

100 Segmentations using Multiresolution Segmentation (eCognition) on 4 bands (2, 3, 4, 8)

Scale 10 – 1000 (increment of 10); Shape 0.1 / Compactness 0.5

In Figure S5 the “optimal” segmentation changes with the subset of segmentations used for evaluation.

Figure S6 exhibits a stable optimum due to the proposed alternative normalization.

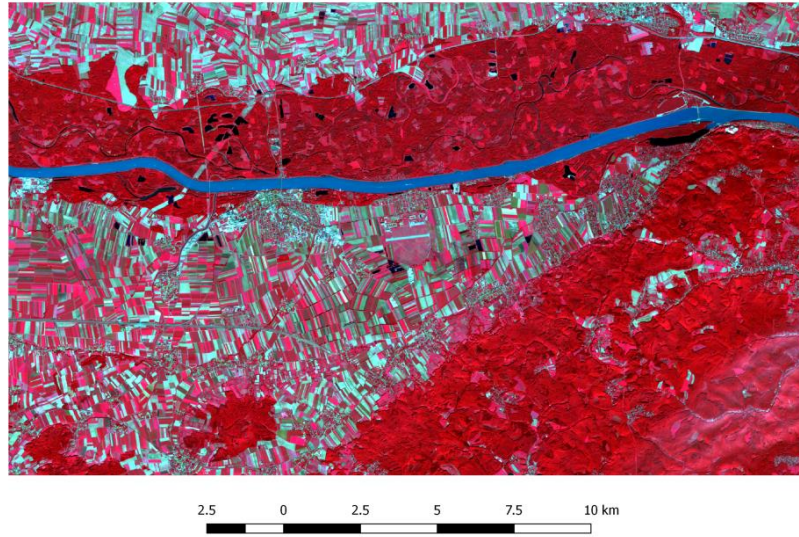


Figure S4. False color composite (bands 8,4,3) of the Sentinel-2 scene

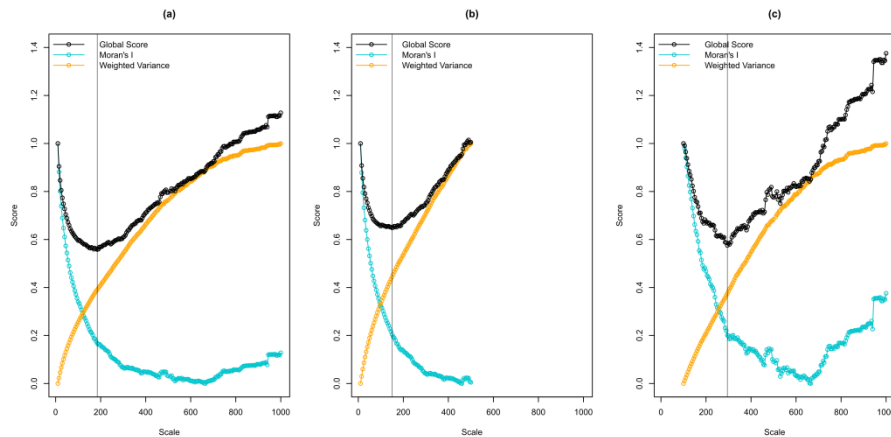


Figure S5. Results for original Global Score, Moran's Index and Weighted Variance based on the NIR band of the Sentinel-2 data set (a) GS calculated for all 100 segmentations; (b) GS calculated on the subset of *Scale* lower than 500; (c) GS calculated on the subset of *Scale* larger than 100

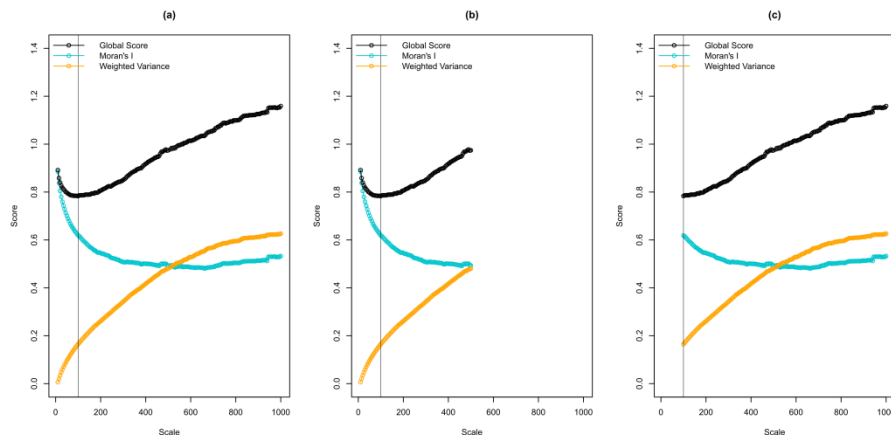


Figure S6. Results for proposed Global Score, Moran's Index and Weighted Variance based on the NIR band of the Sentinel-2 data set (a) GS calculated for all 100 segmentations; (b) GS calculated on the subset of *Scale* lower than 500; (c) GS calculated on the subset of *Scale* larger than 100

WorldView-2 dataset

Spatial resolution 2 m; Land cover: Mixed Forest (Figure S7);

100 Segmentations using Multiresolution Segmentation (eCognition) on 8 bands

Scale 10 – 1000 (increment of 10); Shape 0.1 / Compactness 0.5

In Figure S8 the “optimal” segmentation changes with the subset of segmentations used for evaluation.

Figure S9 exhibits a stable optimum due to the proposed alternative normalization.

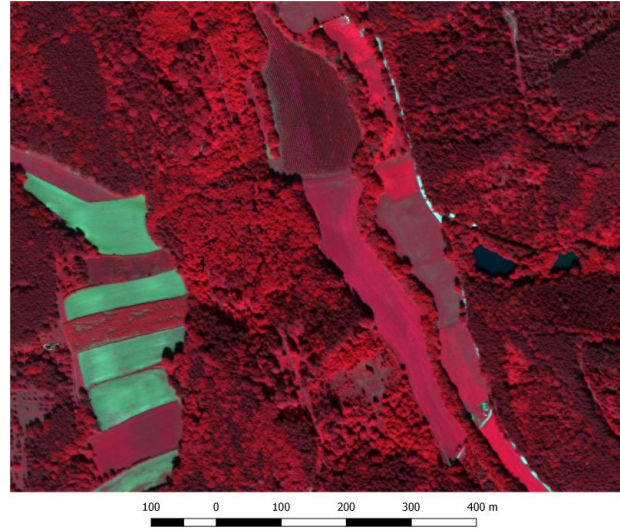


Figure S7. False color composite (bands 7,5,3) of the WorldView-2 scene

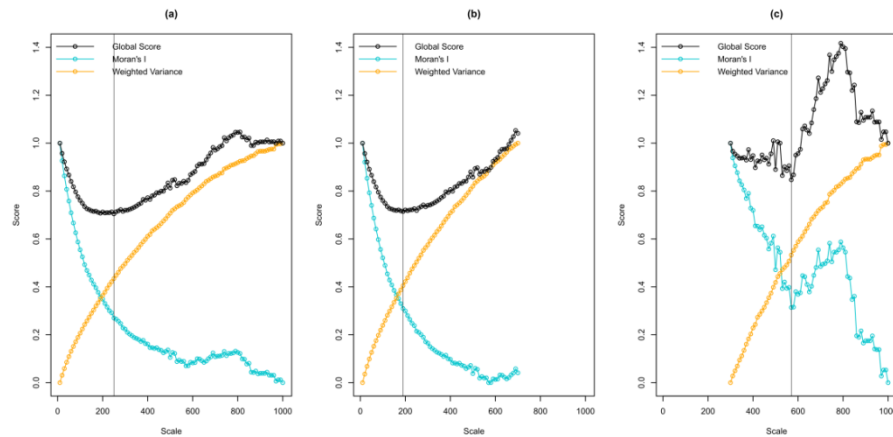


Figure S8. Results for the original Global Score, Moran's Index and Weighted Variance based on the NIR band of the WorldView-2 data set (a) GS calculated for all 100 segmentations; (b) GS calculated on the subset of *Scale* lower than 700; (c) GS calculated on the subset of *Scale* larger than 300

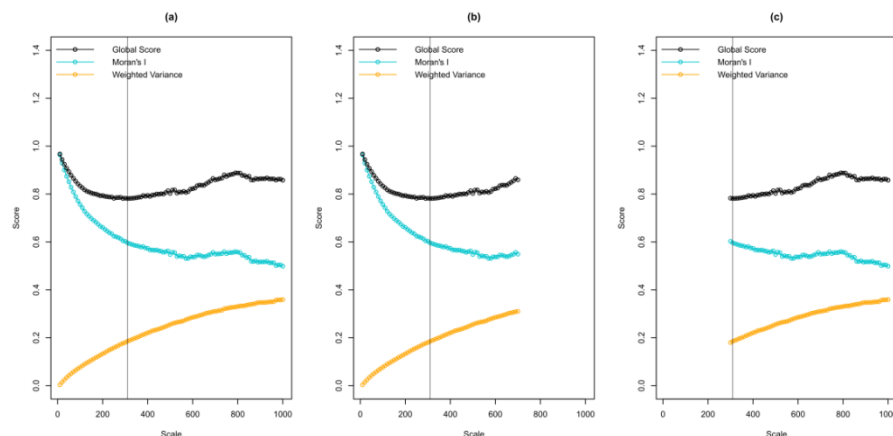


Figure S9. Results for the proposed Global Score, Moran's Index and Weighted Variance based on the NIR band of the WorldView-2 data set (a) GS calculated for all 100 segmentations; (b) GS calculated on the subset of *Scale* lower than 700; (c) GS calculated on the subset of *Scale* larger than 300