

## SAR Change Detection in a General Case Using Normalized Compression Distance

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### ABSTRACT:

During the last decades, natural and human-made disasters had a strong impact on their surrounding areas, and also the development of cities changed the land cover of the affected areas. To detect these changes in a satellite image time series, a parameter-free unsupervised approach using Normalized Compression Distance (NCD) was used to calculate a binary change map. NCD is a distance measure where an extraction of features is not required; instead, this method can calculate the distance between two objects with respect to the context within an image using patches. This approach was used to detect changes in different regions of interest (e.g., the Danube Delta in Romania or Belgica Bank in Greenland) independently of a special scenario or a specific SAR satellite, which enables the use of parameter-free unsupervised change detection for different scenarios.