## Interferometry Synthetic Aperture Radar (InSAR) Application for Flood Area Detection Observed by Sentinel 1A

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Abstract	Almost every year, flood and landslide occur at Pangkalan Lima Puluh Kota district, West Sumatra, Indonesia. These not only destroyed the agricultural but also isolated the area. The area is essential for supporting transportation connection in the center of Sumatra. However, the handling of this issues is insufficient then scientific information is a necessity. In this research, flood monitoring data extracted using InSAR processed by SNAP Sentinel-1 toolbox. The data were provided by European Space Agency (ESA) Ground Range Detected (GRD) High resolution, Interferometric Wide Sentinel-1A observation product in ascending and descending orbit Both co-polarization VV and cross-polarization VH of satellites detected slightly different flood covered. The cross-polarization is high sensitive than co-polarization. The result was the present great potential of SAR satellite data for detection and delimitation flood risk in the area.
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