

Co-seismic ALOS-2 Imagery Analysis of Bangkok, Thailand

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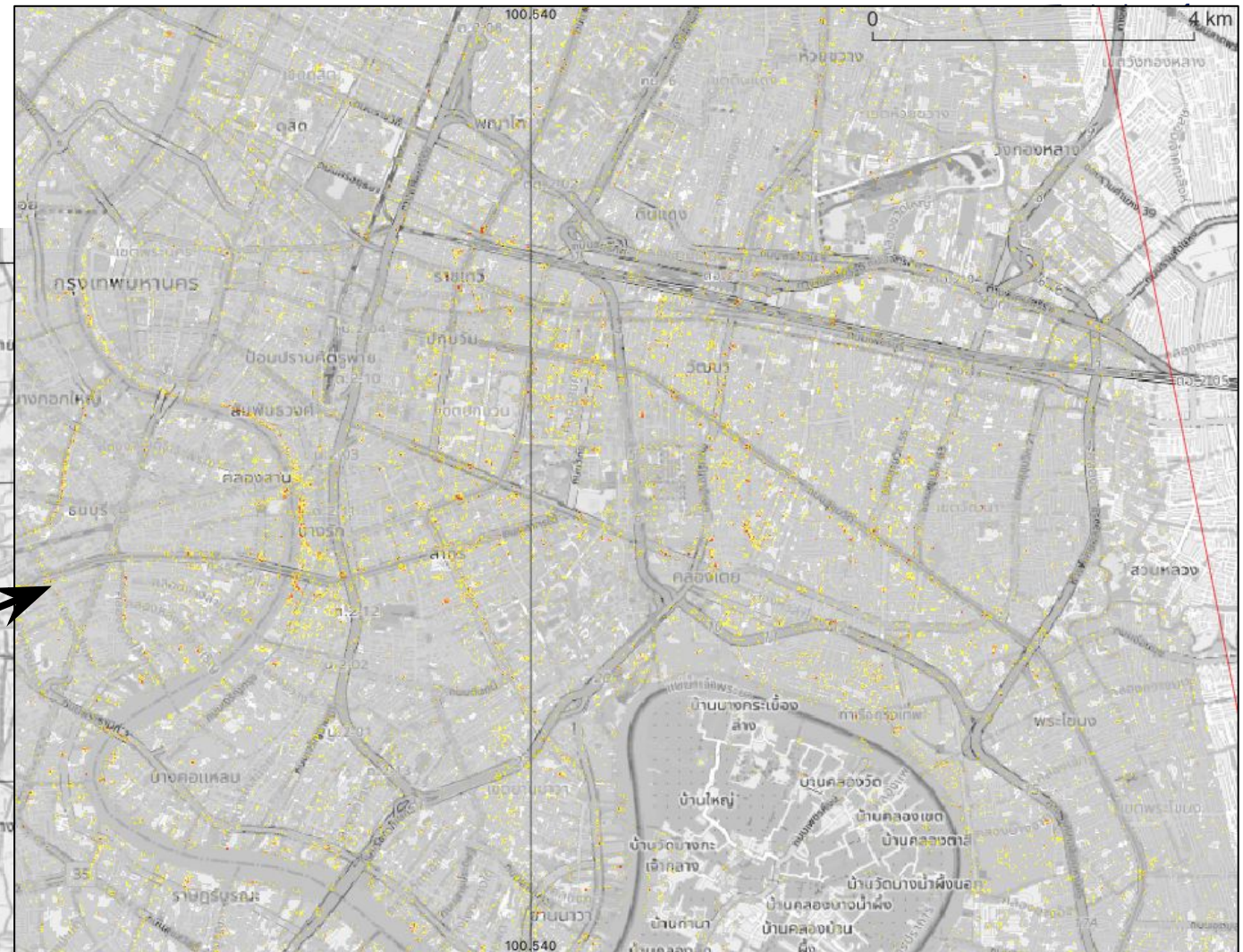
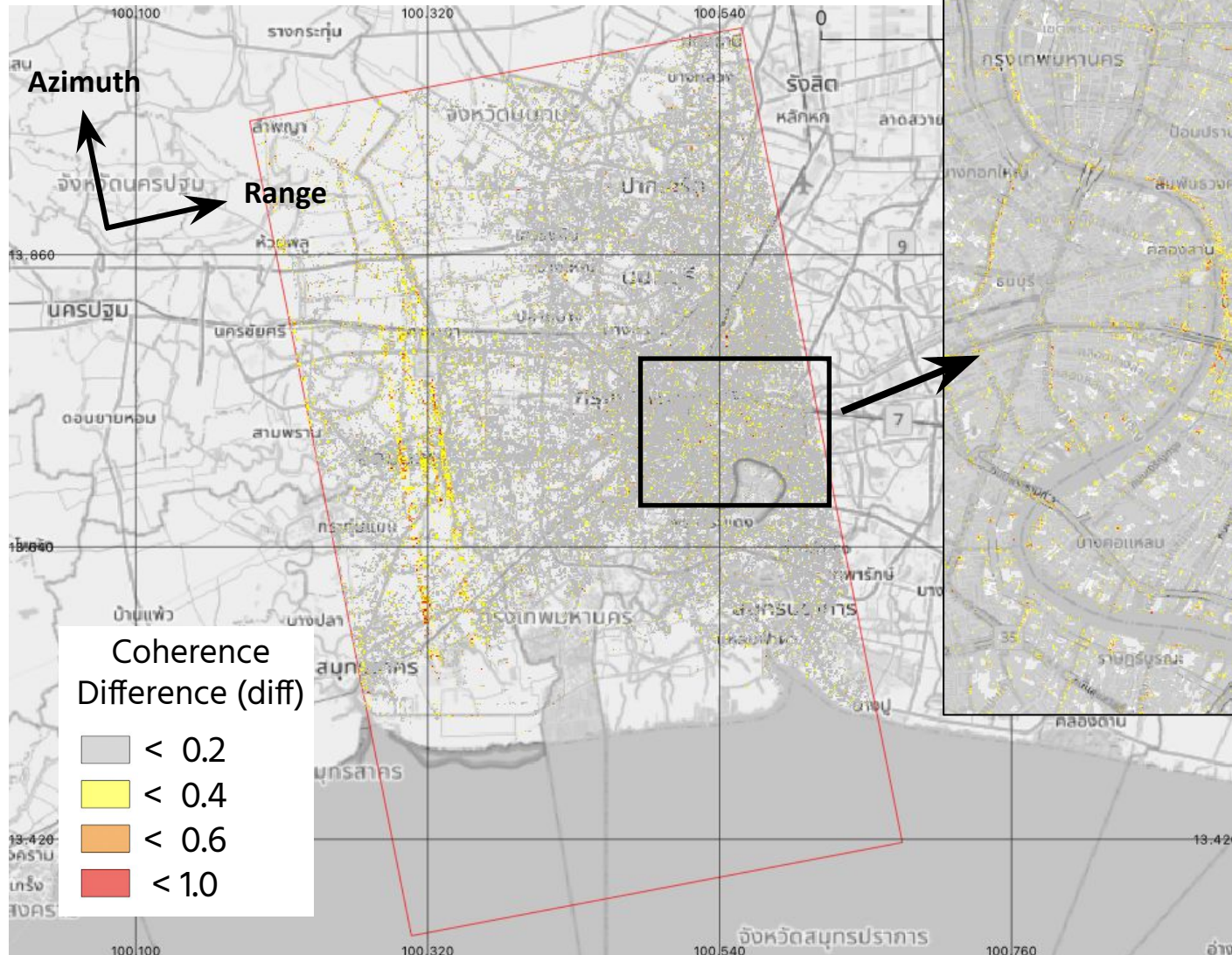
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ALOS-2 PALSAR-2 Imagery

Satellite	ALOS-2
Area	Bangkok
Orbit	Ascending
Look	Right
Off-nadir	32.7
Polarization	Full
Pre-event	2025/2/1 2025/3/1
Post-event	2025/3/29



Coherence Difference



$$diff = \gamma_{pre-seismic} - \gamma_{co-seismic}$$

diff: Coherence Difference

$\gamma_{pre-seismic}$: Coherence of pre – event images

$\gamma_{co-seismic}$: Coherence of pre – and post – event images

Observation and Discussion

- The larger the coherence difference, the more change was observed after the earthquake.
- Areas with a coherence difference greater than 0.2 correspond roughly to changes in areas where ground and building deformation associated with liquefaction (e.g., the 2024 Noto Peninsula earthquake) was observed.
- Note that line noise (near range side) is observed in the images and that the phase differences caused by vehicles and medium- and high-rise buildings are not fully removed.
- The resulting kmz file is below,

https://drive.google.com/file/d/1fUJC6f0La7hzNjcbFZXAr5pgIM1PDej_/view?usp=sharing