

GISAT

EO-based Solutions for Sustainable Development

Lubos Kucera

lubos.kucera@gisat.cz

www.gisat.cz

SME geoinformation company since 1991,
located in Prague, Czech Republic

Committed to EO-based services & data-2-
information solutions

Capacity building, training, consultation

EU Copernicus Service Provider

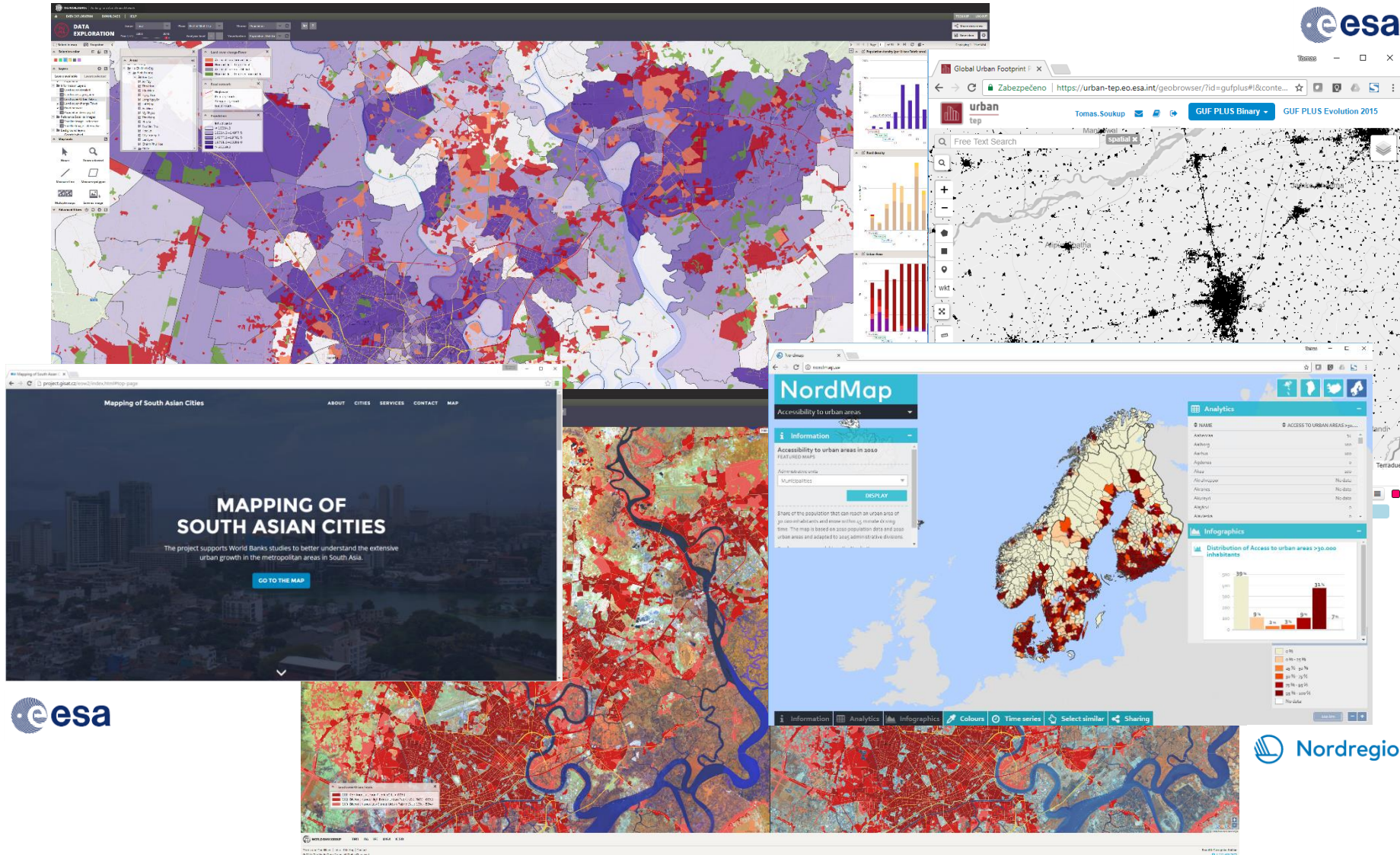
ISO quality certified

Monitoring Environmental, Economic and Social Changes

EO-based Solutions for Sustainable Development
Worldwide

Serving our customers agendas: Public,
Institutional, Commercial/Corporate, NGOs

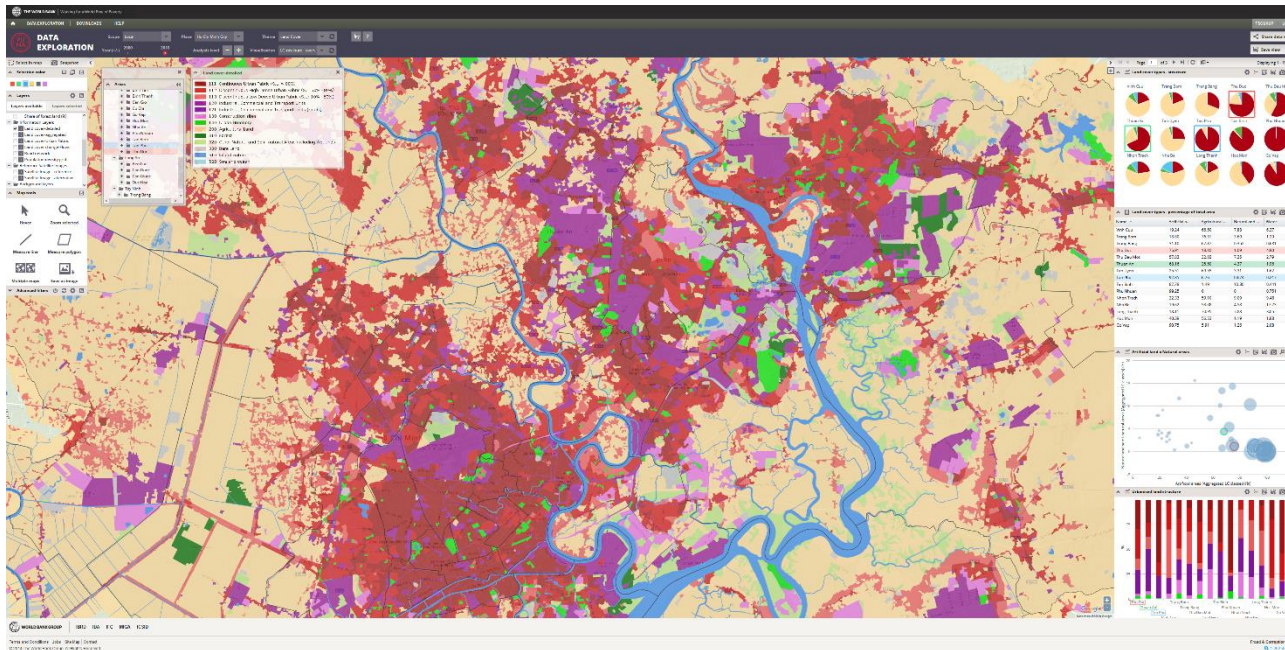




data-2-info: smart data exploration
platforms

Selected services examples

- sustainable urban growth
- sustainable use of resources
- emergency management (hazard monitoring and risk assessment)
- monitoring of terrain motions (urban subsidence, transport infrastructure)

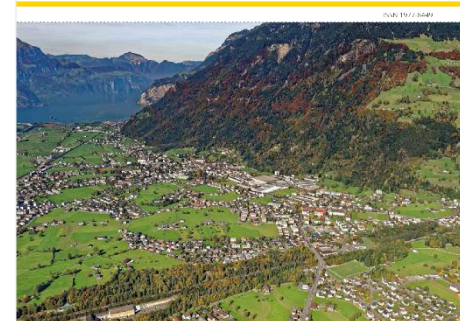


- detailed urban growth insight
- potential development areas
- land consumption monitoring
- compliancy with zone regulations
- urban growth related indicators

urbanisation: urban accounting services

Ho Chi Min (Vietnam)

Urban sprawl in Europe Joint EEA-FOEN report



Швейцарская конфедерация
Confédération suisse
Confederazione Svizzera
Confederaziun Svizra

European Environment Agency

Federal Office for the Environment FOEN

EEA Report | No 2/2013

Landscape fragmentation in Europe Joint EEA-FOEN report

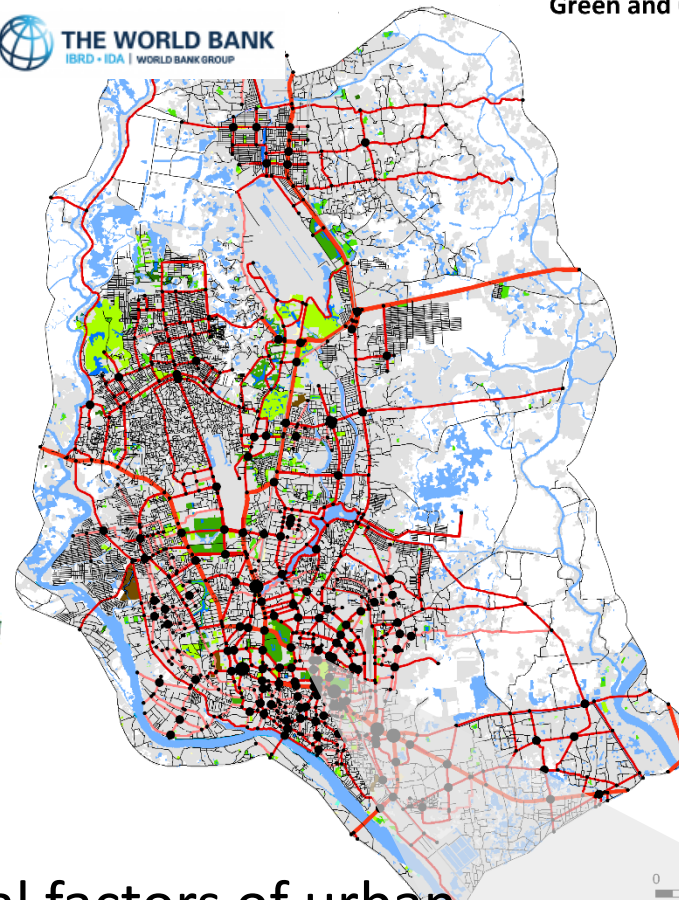
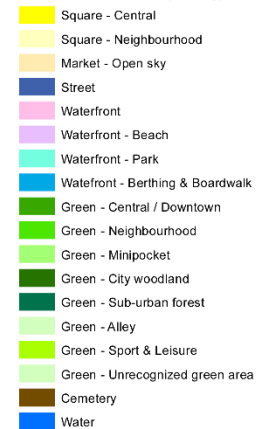


Швейцарская Конфедерация
Confédération suisse
Confederazione Svizzera
Confederaziun Svizra

European Environment Agency

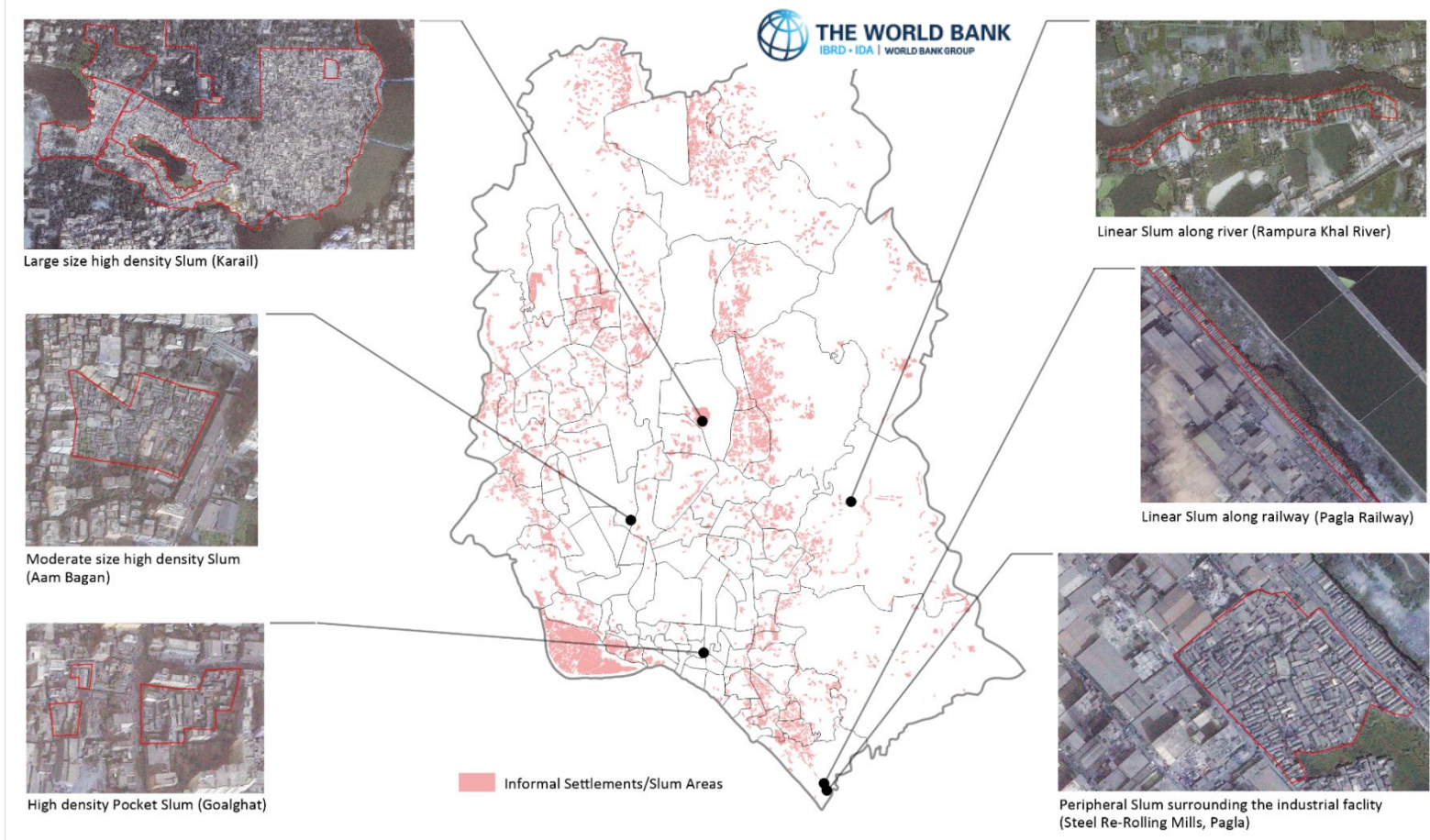
Swiss Confederation
Federal Office for the Environment FOEN

Based on:
 Open Street Map (c) Open Street Map contributors
 Interpretation of Earth Observation imagery
 (GISAT s.r.o. in frame of EO4SD-Urban)

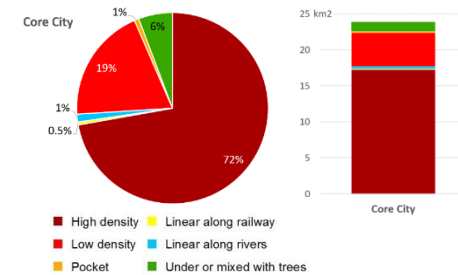
**Transportation connectivity nodes****Transportation network****Open / Green areas typology**

- physical and functional factors of urban green and open areas network
- land use-activities/comfort/safety
- mobility-accessibility/connectivity

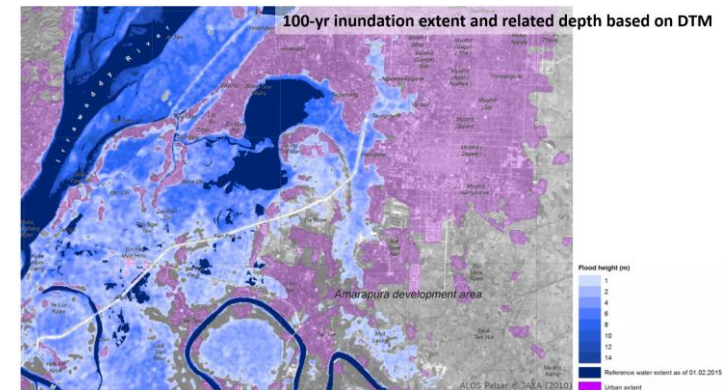
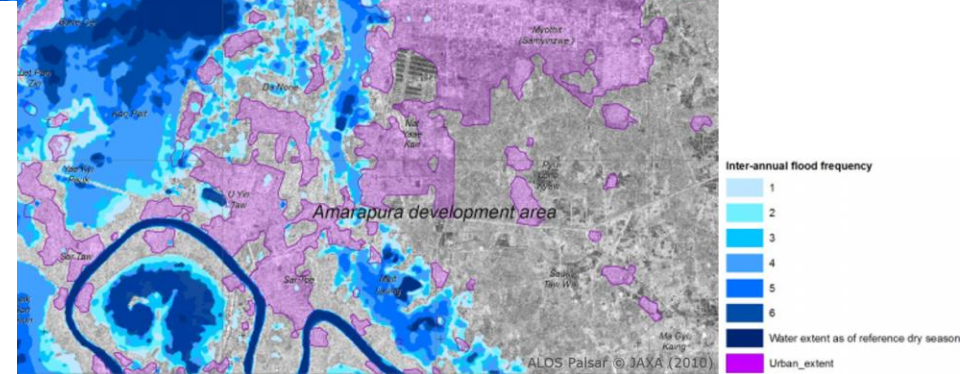
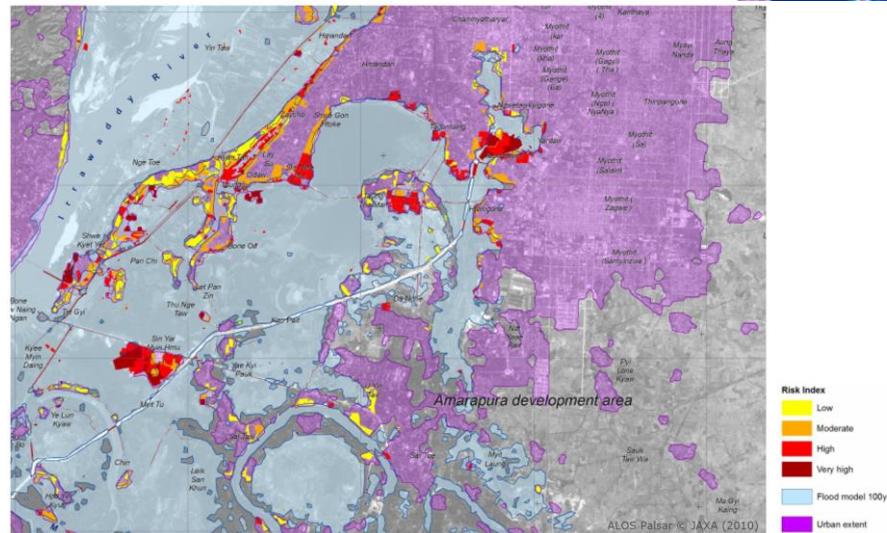
urbanisation: green and open space services



- slum identification and monitoring
- slum characterization and typology
- slum development trends
- slum upgrading and re-habilitation

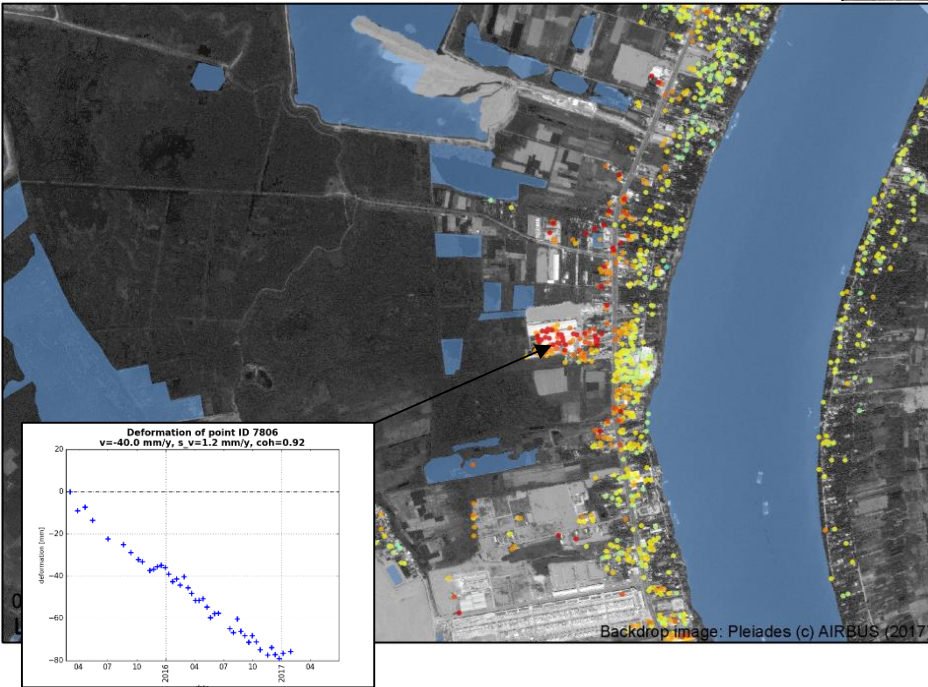


urbanisation: informal areas / slums services



- urban settlement mapping incl. urban structure and growth
- flood frequency
- modeled flood inundation and depth
- risk assessment for urban blocks

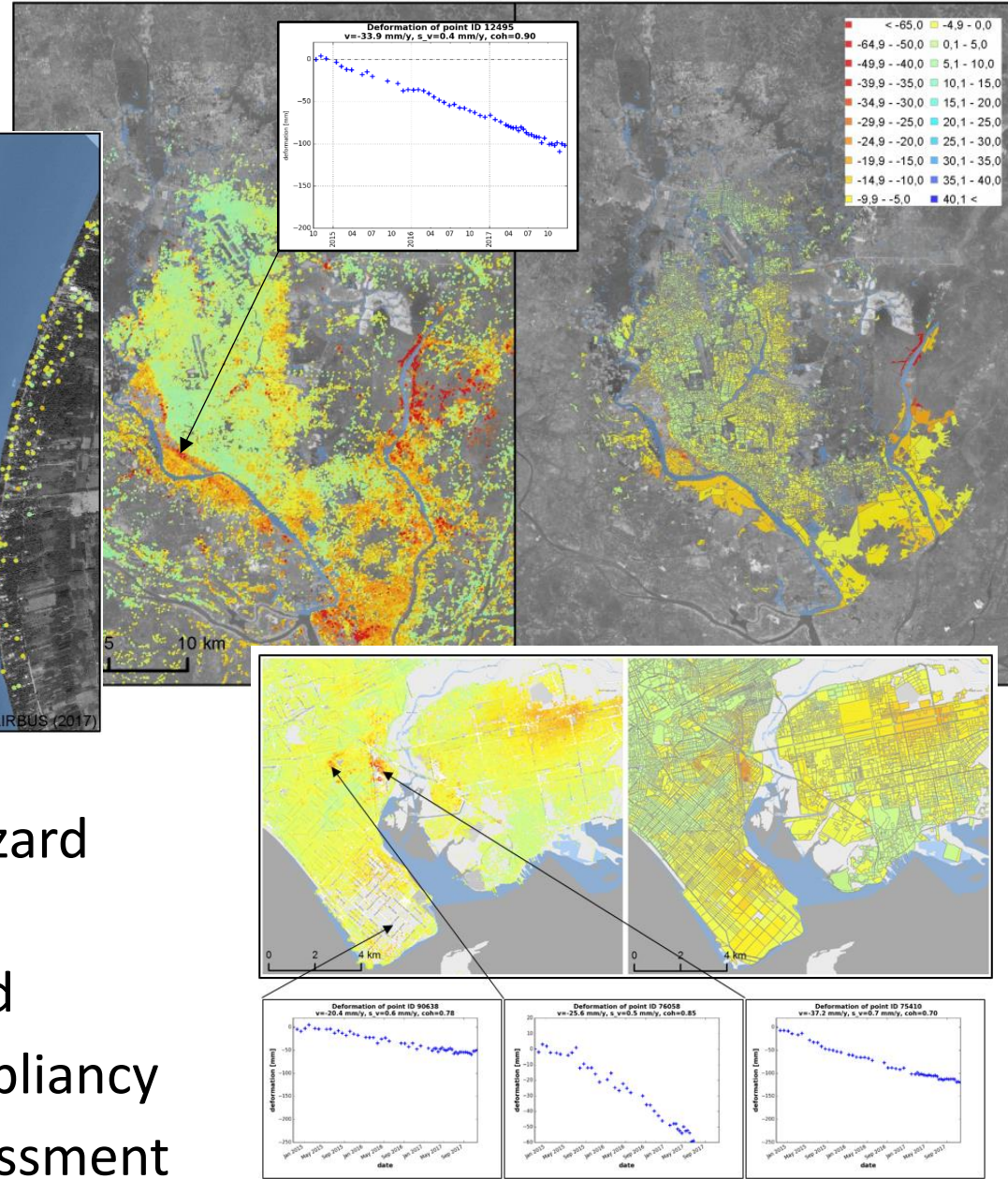
emergency management: assessment of flood risk



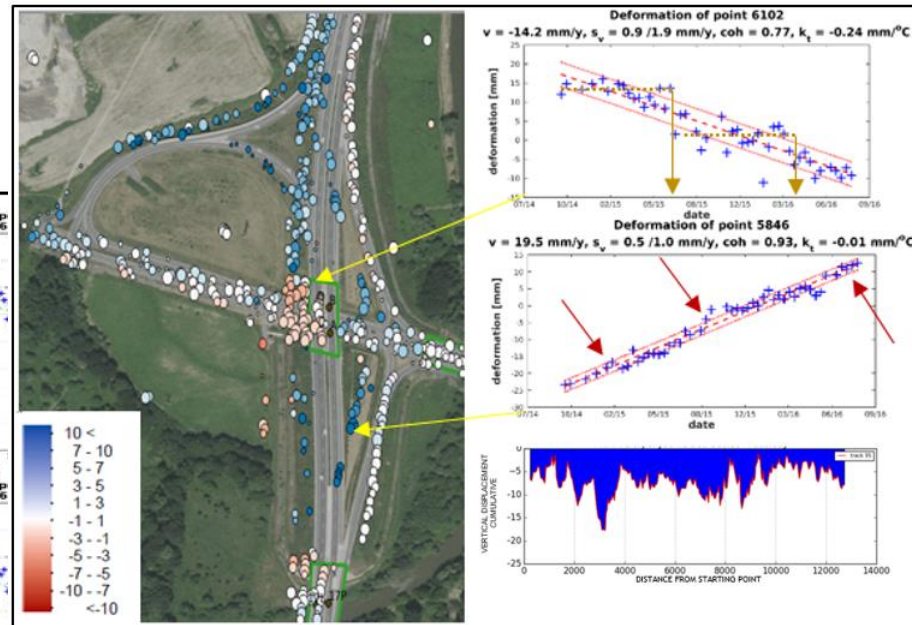
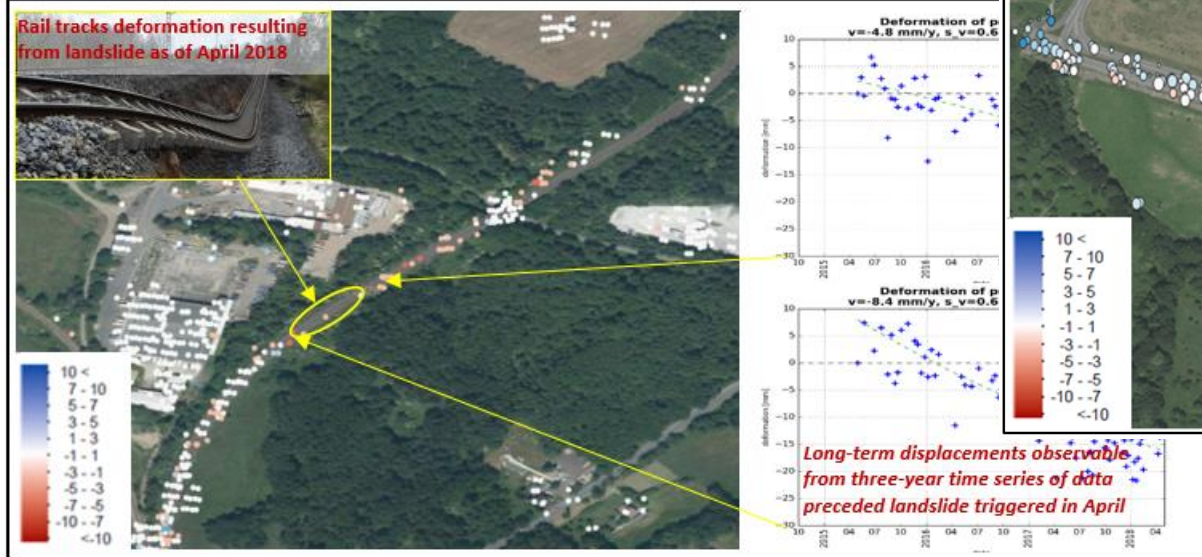
- land subsidence hazard
- urban growth on unconsolidated land
- building zones compliancy
- support to risk assessment

emergency management: subsidence services

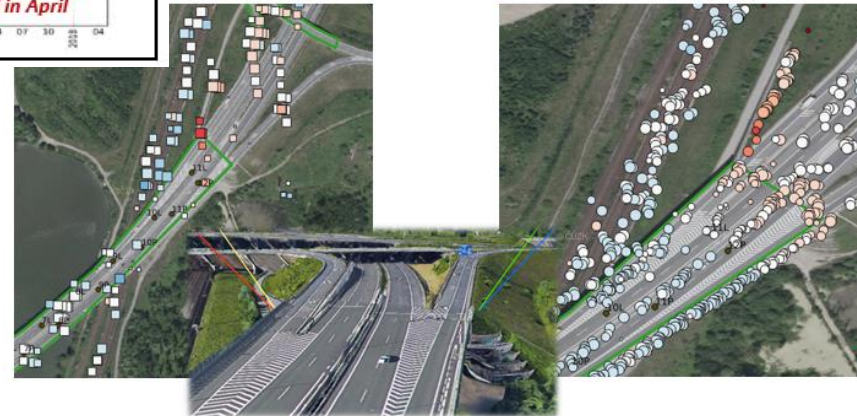
Dhaka (Bangladesh), Karachi (Pakistan), Phnom Penh (Cambodia), Mandalay (Myanmar)



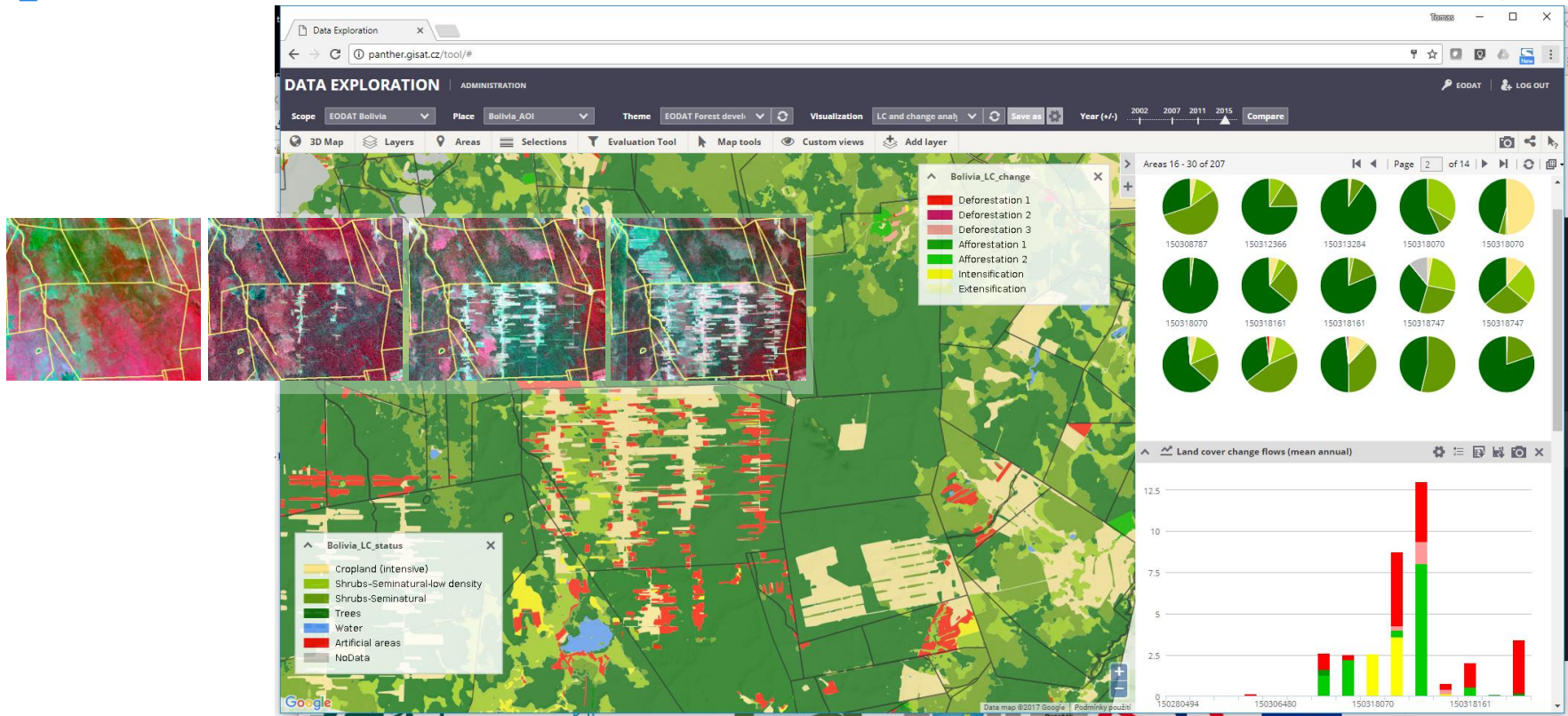
Rail tracks deformation resulting from landslide as of April 2018



- monitoring of infrastructure deformations
- average displacement rate, cumulative displacement
- identification of risk for population, settlements, industries or infrastructure

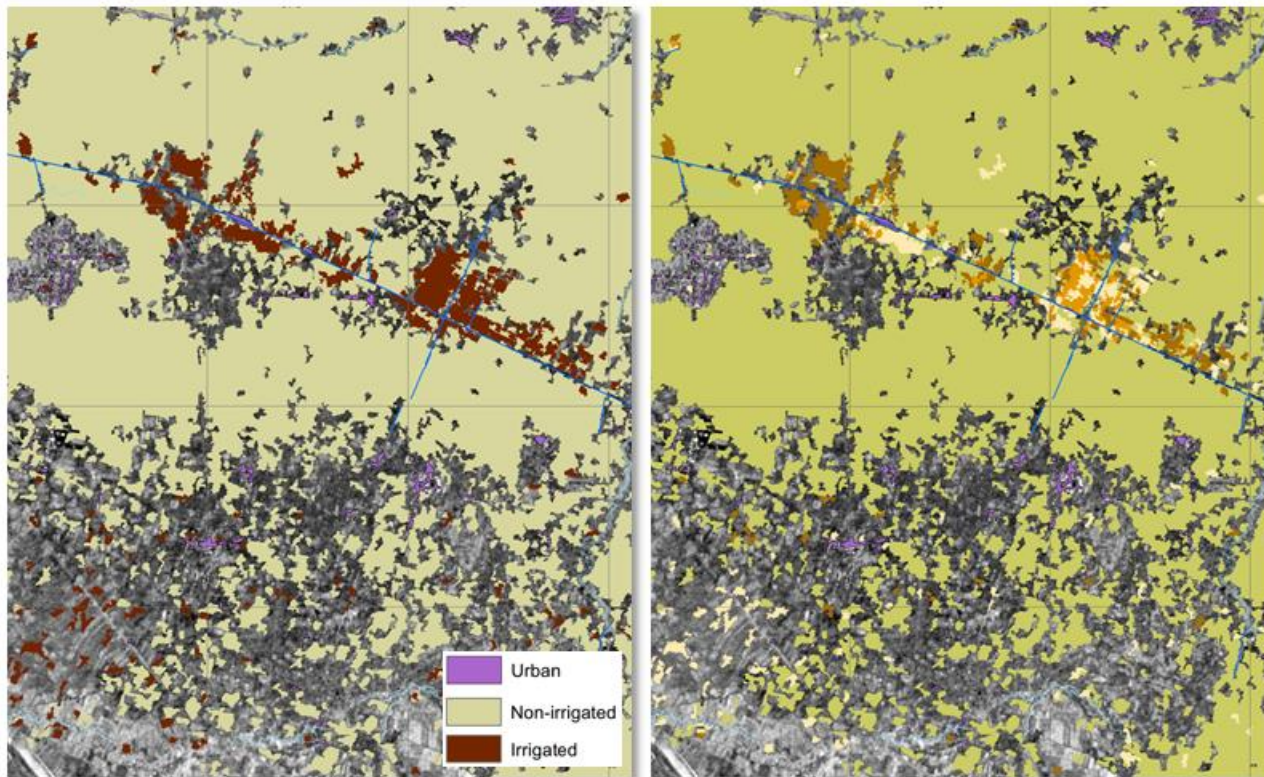


emergency management: infrastructure monitoring

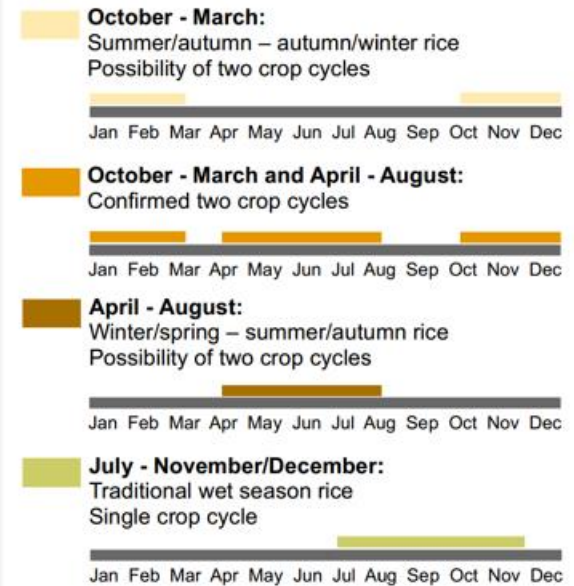


- land use management changes monitoring
- deforestation observed towards agriculture areas
- land titling process (2006 Agrarian Reform) support

forestry: deforestation monitoring service



Rice Crop Cycles

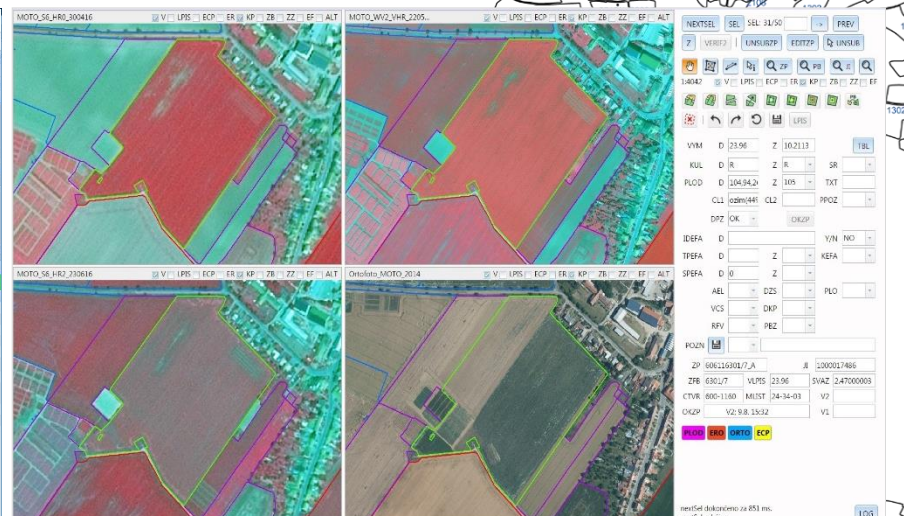
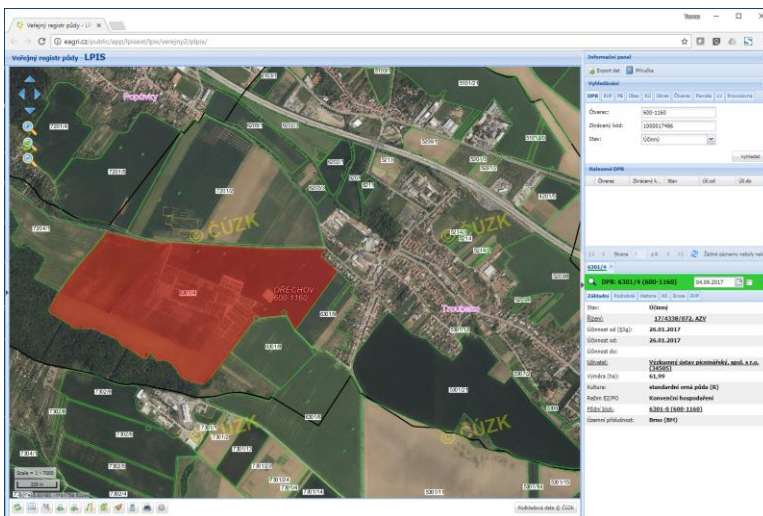


- rice crops management
- monitoring of irrigated and non-irrigated rice crops
- annual rice crop cycles

agriculture: rice cropping irrigation

Prek Chik, Tang Krasang (Cambodia)

- subsidy applications screening
- subsidy scheme compliency verification
- agro-environmental measures check
- operational full country crop monitoring
- crop types, agricultural practices, grassland mowing



agriculture: subsidy control services

Czech Republic

unique potential of Copernicus programme still to be explored by user community

added-value services supporting solutions for sustainable development exists

transfer into different country/client context is feasible with joint effort of local users

dialog and active engagement of both user community and service industry is essential to **move forward**

GISAT

Thank you !

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project.gisat.cz/eow2

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