Coordinating and integRating state-of-the-art Earth Observation Activities in the regions of North Africa, Middle East and Balkans and Developing Links with GEO related intiatives toward GEOSS

GEO-CRADLE pre-Kick-Off Meeting
Friday, 18th of February, 2016

Gerardo Herrera, EuroGeoSurveys

{Logo of Institute}

IONIC Centre, 11 Lysiou Street
Athens, Greece

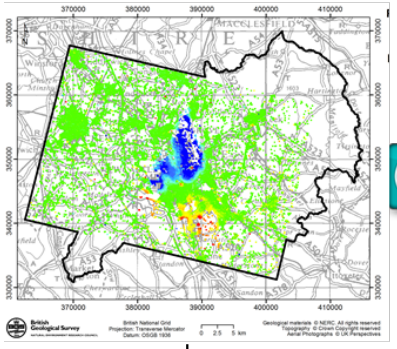
HORIZON 2020


PanGeo
Service Map
PanGeo Town Listing
Country Town 1 Town 2
Austria Salzburg Vienna
Belgium Brussels Liege
Bulgaria Sofia Varna
Cyprus Lefkosia N/A
Czech Republic Prague Ostrava
Denmark Copenhagen Aalborg
Estonia Tallinn Tartu
Finland Helsinki Turku
France Lyon Toulouse
Germany Berlin Hannover
Greece Athens Larissa
Hungary Budapest Miskolc
Ireland Cork Dublin
Italy Palermo Rome
Latvia Riga Liepaja
Lithuania Vilnius Kaunas
Luxembourg Luxembourg N/A
Malta Valetta Gozo
Netherlands Amsterdam Rotterdam
Poland Warsaw Nowy Sacz
Portugal Lisbon Faro
Romania Bucurest Cluj-Napoca
Slovakia Kosice Presov
Slovenia Ljubljana Maribor
Spain Zaragoza Murcia
Sweden Stockholm Göteborg
UK Stoke London

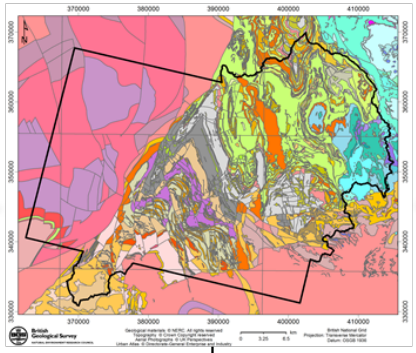

Germany
Czech Republic
Slovakia
Ukraine
Austria
Moldova
Hungary
Slovenia
Romania
Croatia
Bosnia and Herzegovina
Serbia
Black Sea
Italy
Kosova (Kosovo)
Bulgaria
Macedonia (FYROM)
Albania
Tyrrhenian Sea
Greece
Malta
Cyprus
Mediterranean Sea

1. Free and open access to geohazard information in support of Copernicus
2. Free to view, download and use pan-European geohazard information service; standardised geohazard information across 52 towns
3. Delivered via the One Geology Europe portal, Google Earth and as direct download – inspire compliant

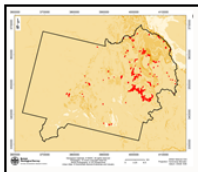
Satellite terrain-motion data



Geology



Other relevant info



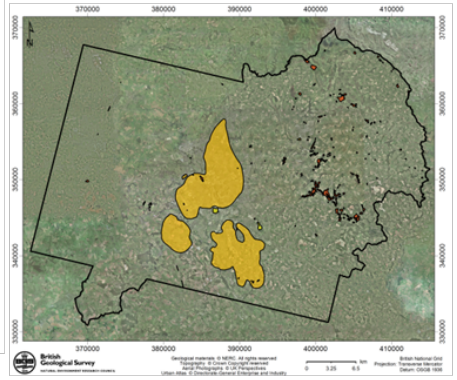
Geohazard data and information already held (derived maps, GPS, levelling, etc.)

Evidence

The '*Ground Stability Layer*' is a **vector** layer to be made by the Surveys. They will make it by importing into their GIS and interpreting:

- Satellite terrain-motion data,
- Basic geology (that they hold),
- Any other pertinent spatial information, e.g. borehole data that they hold.

From this on-screen analysis, the Surveys will digitise around the main hazard areas, assigning a tag to each, facilitating a hyperlink from the *Ground Stability Layer* to text within the *Geohazard Summary* document.



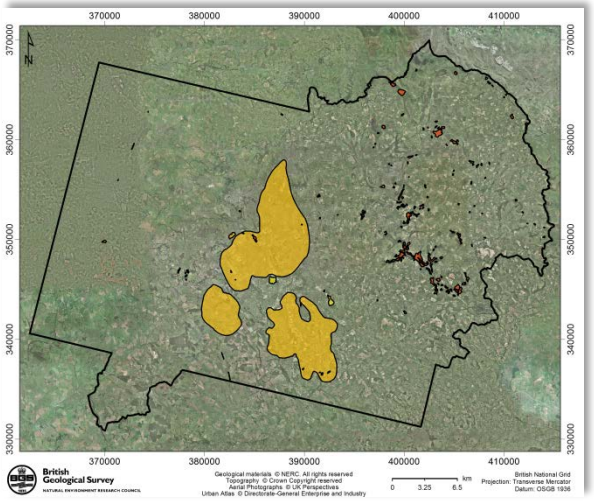
Ground Stability Layer

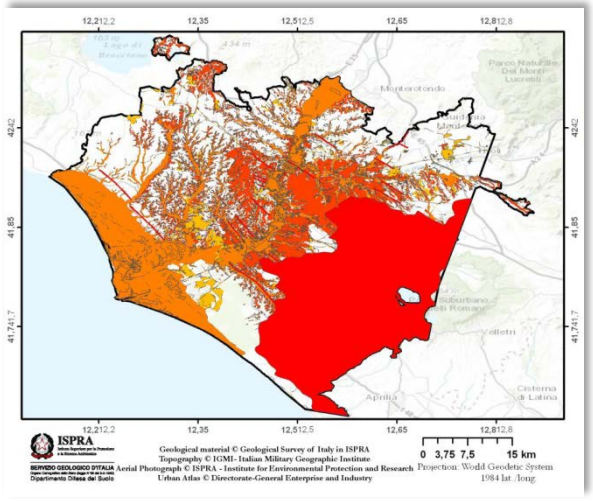
Tagged to allow portal requesting

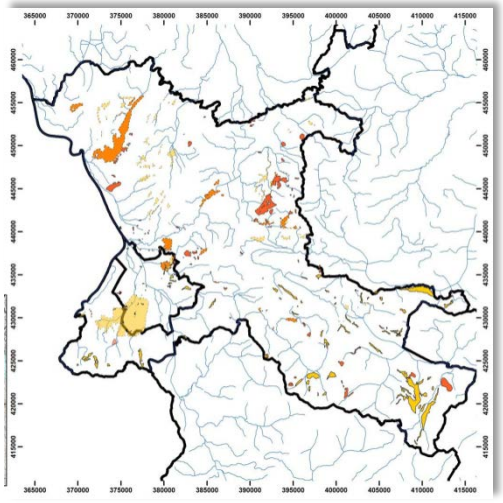
hyper-link

Geohazard Description

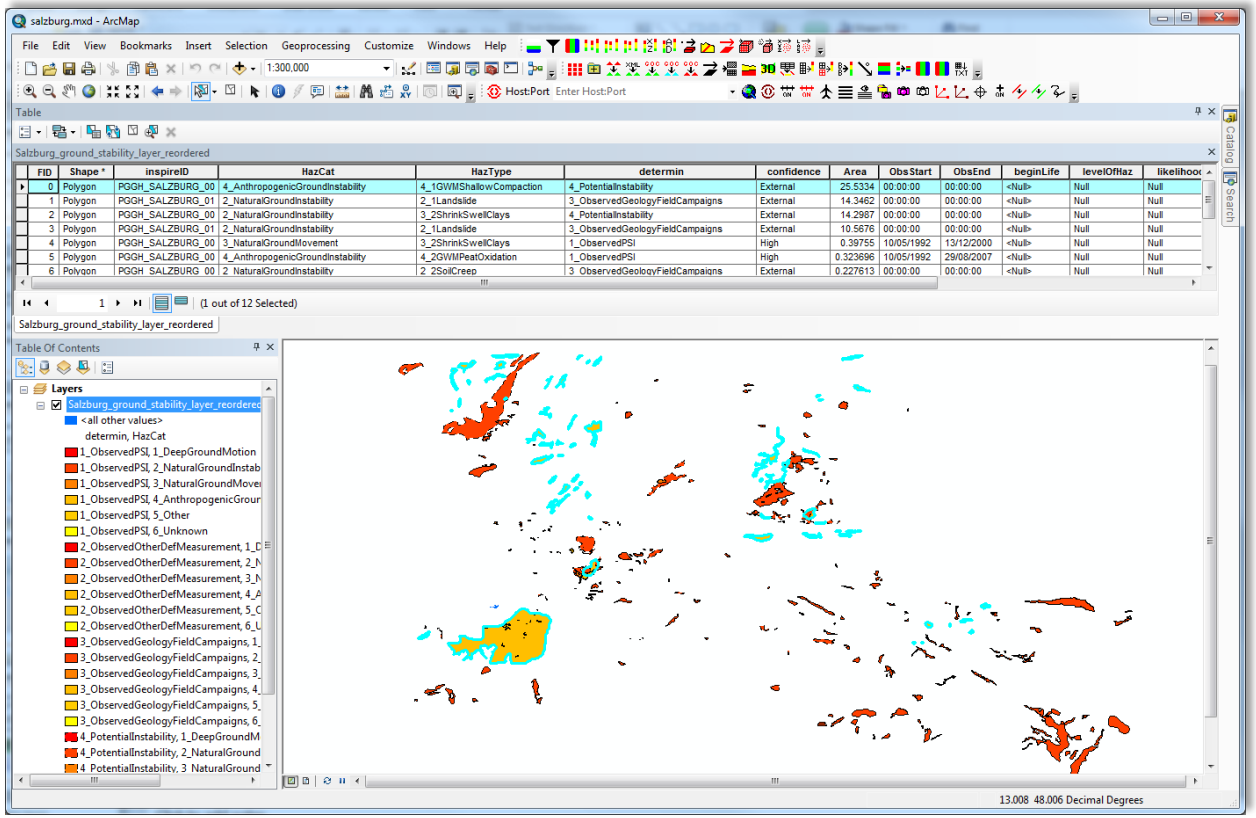
1. Attributed vector polygons for each PanGeo town indicate areas of ground instability, which can be caused by a number of natural and anthropogenic processes or phenomena
2. Attributes are compliant with the INSPIRE Natural Risk Zones specification







- Polygons only
- 1: 10 000 scale
- Polygons are attributed according to INSPIRE
- Polygons are styled according to the Geohazard category



a) A document describing the geological interpretation for each GSL polygon

b) Each GSL polygon has a corresponding section in the Geohazard Description explaining the polygon

c) Also contains background geological information about the PanGeo town; therefore the Geohazard Description can be used as a standalone document

d) Contains maps and evidence of Instability such as photographs of damage


EUROPEAN COMMISSION
Research Executive Agency

Seventh Framework Programme
Cooperation: Space Call 3
FP7-SPACE-2010-1

Grant Agreement: 262371

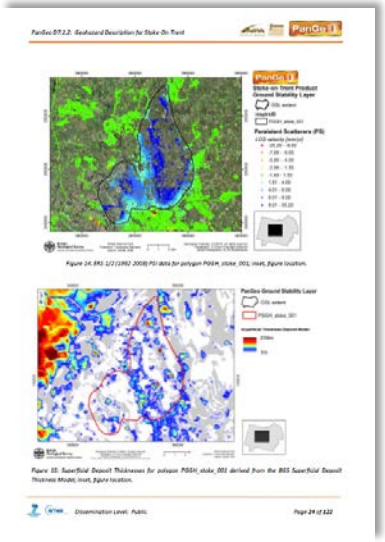
PanGeo

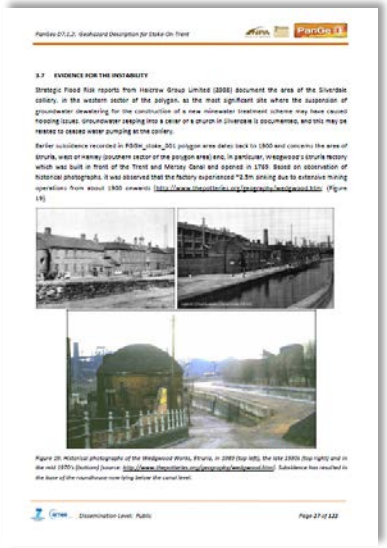
Enabling Access to Geological Information in Support of GMES

Geohazard Description for Stoke-On-Trent
1.0

19th July 2013

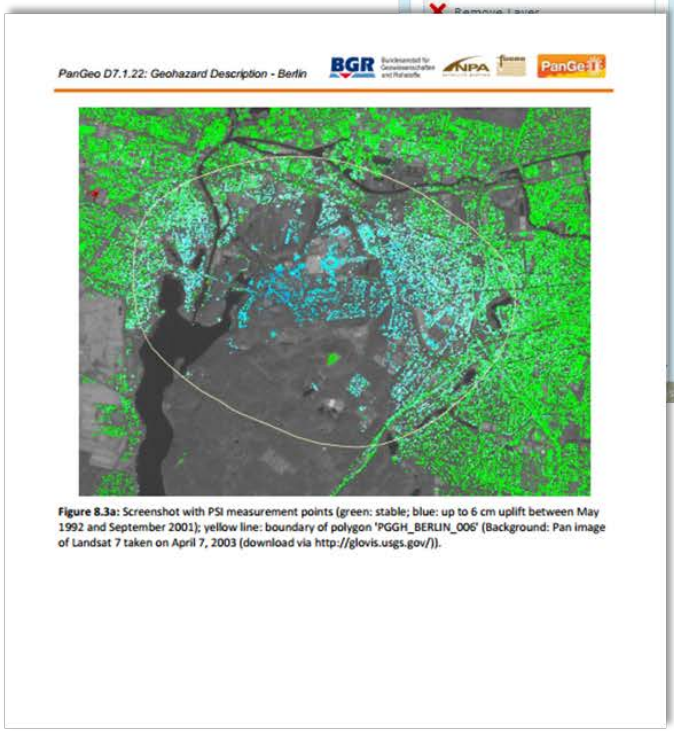
Dissemination Level:	Public	
Authors:	H. Jordan, F. Cigna, L. Bateson (BGS)	Date: 19/07/13
Checked by (WP Leader):	L. Bateson (BGS)	Date: 31/07/2013
Date of Issue:	31/07/2013	

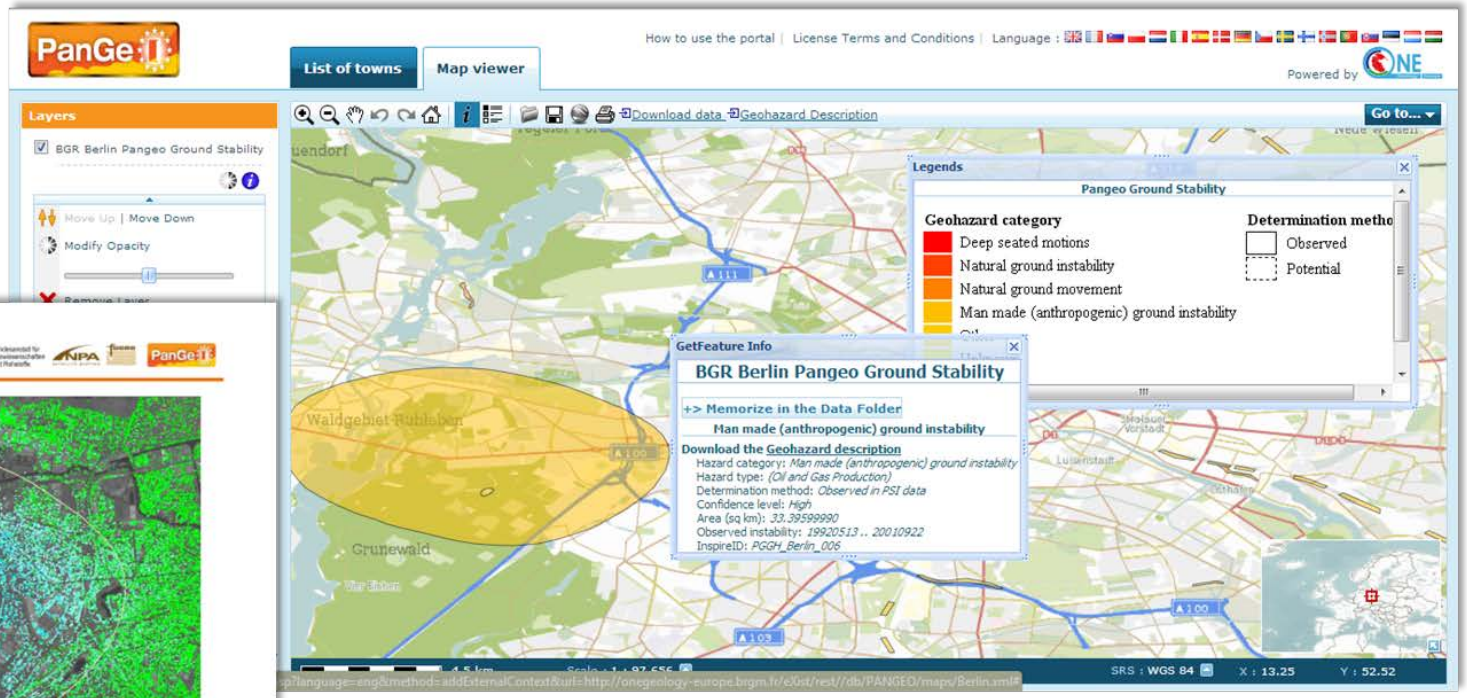




Deep Ground Motion Earthquake (seismic hazard) Tectonic Movement Salt Tectonics Volcanic inflation/deflation	**Man Made (Anthropogenic) Ground Instability** Groundwater Management - Shallow compaction Groundwater Management - Peat oxidation Groundwater abstraction Mining Underground construction Made ground Oil and Gas production
Natural Ground Instability Landslide Soil Creep Ground Dissolution Collapsible Ground Running Sand/Liquefaction	**Other**
Natural Ground Movement Compressible Ground Shrink-swell clays	**Unknown**

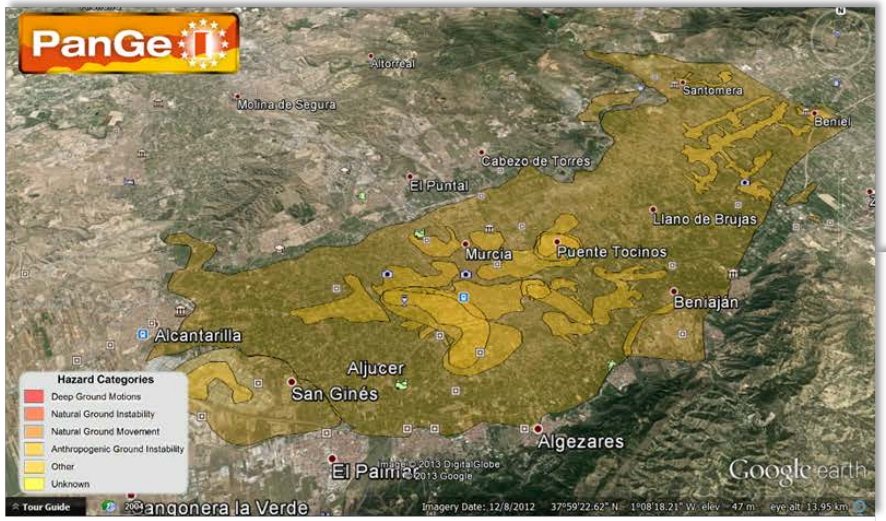
London; tunnelling

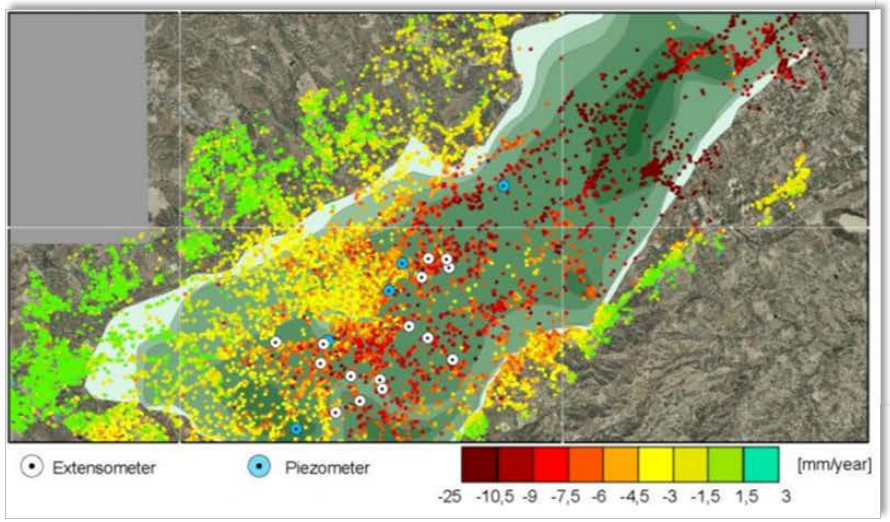


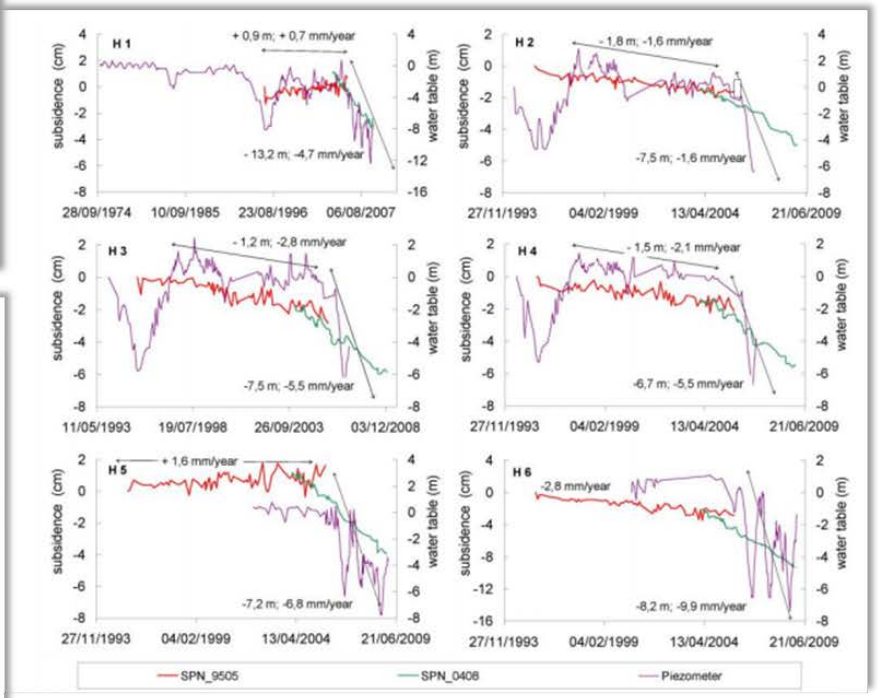


Berlin; Oil and gas Production

Ground water abstraction; Murcia







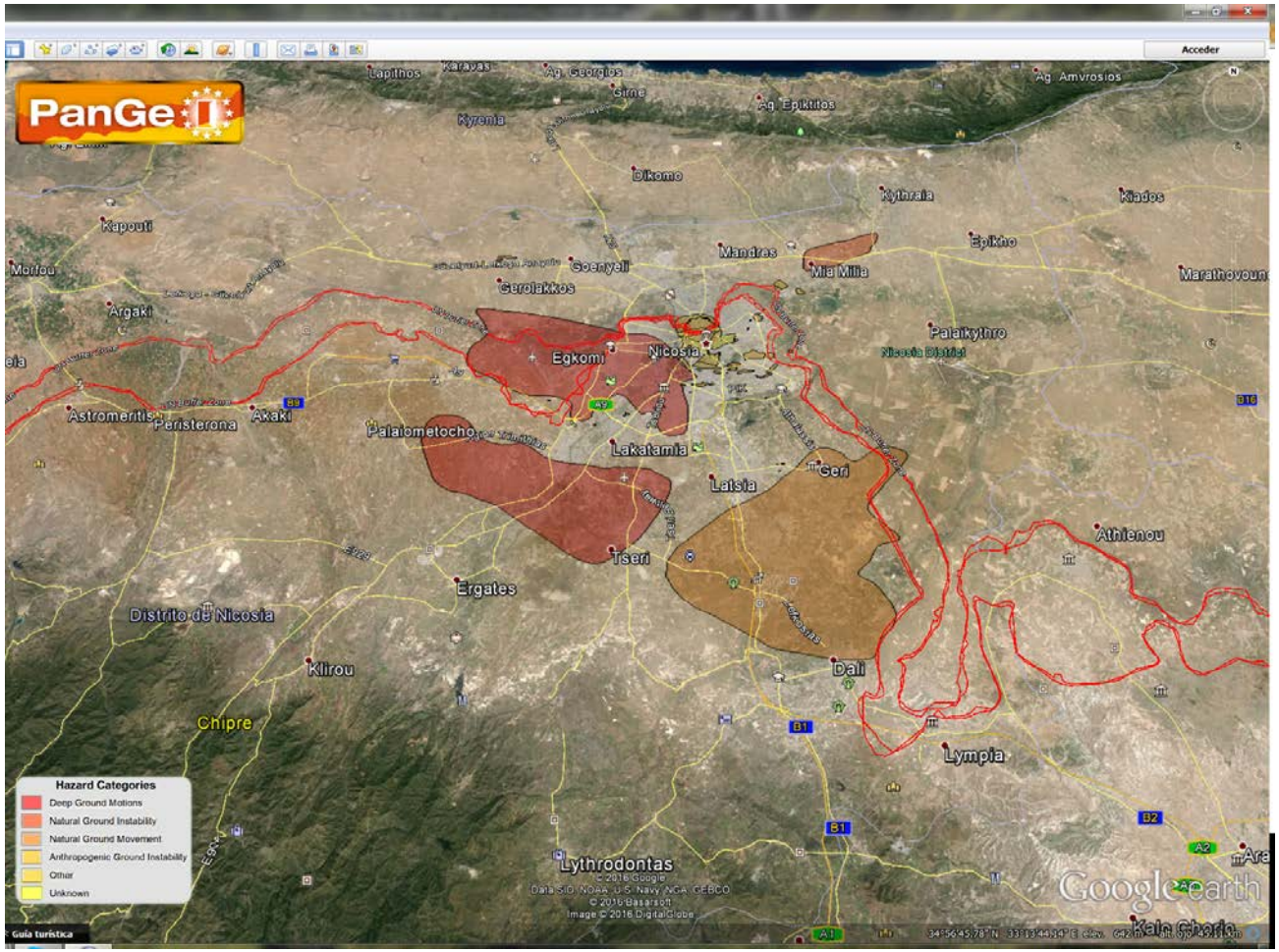
Shrink-Swell Clays

Geohazard Document: English or Local

Open in PanGeo Portal to view with Urban Atlas

Hazard Category:	Natural Ground Movement
Hazard Type:	Shrink-Swell Clays
Determination Method:	Observed PSI
Confidence:	High
Area (sq km):	69.606 (InspireID area: 69.725)
Observed Start Date:	
Observed End Date:	
Estimated Population:	Not yet computed
InspireID:	PGGH_Lefkosia_005
Town:	Lefkosia
Country:	Cyprus

PanGeo Licence

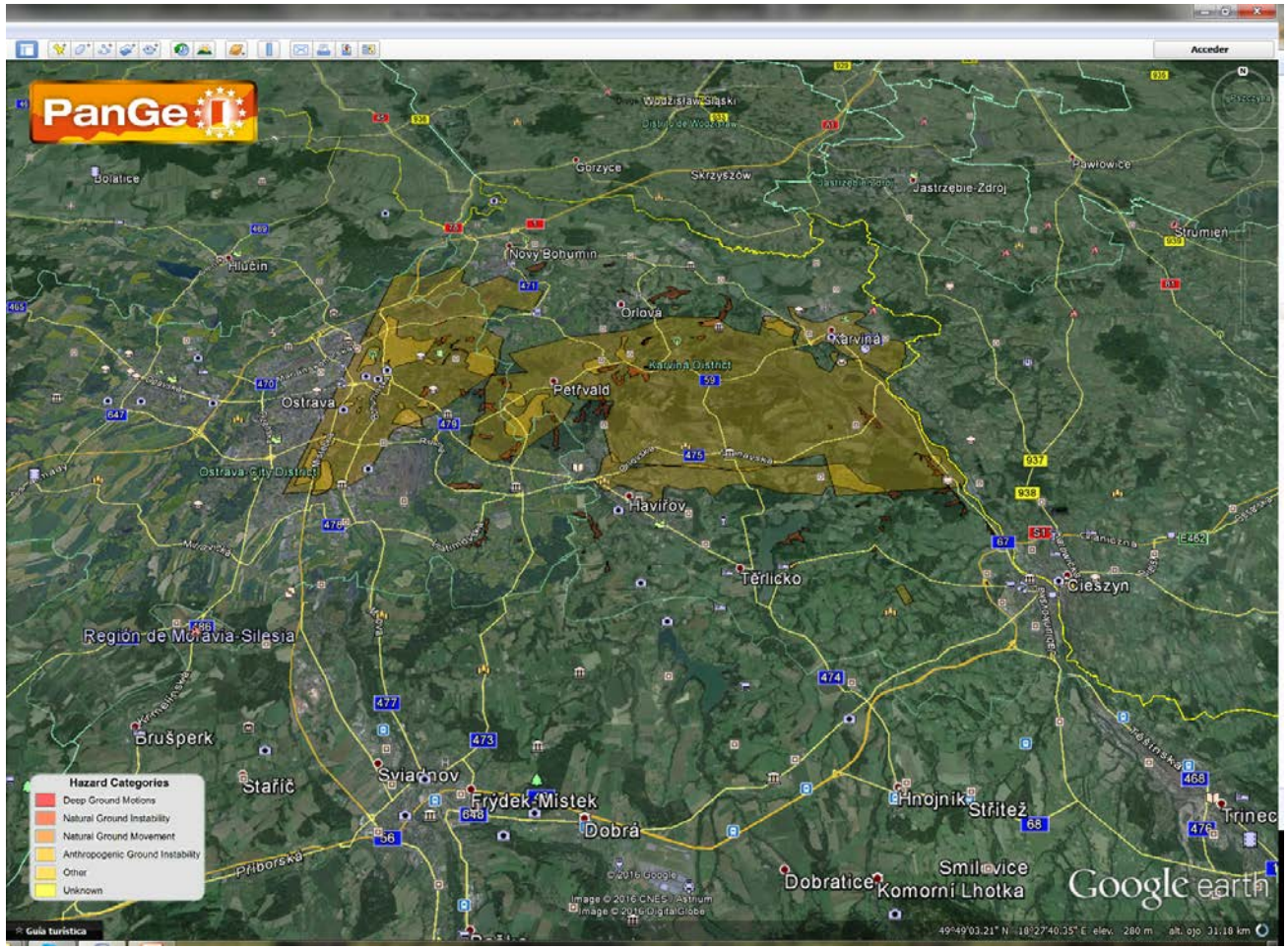


Mining

Geohazard Document: English or Local

Open in PanGeo Portal to view with Urban Atlas

Hazard Category:	Man Made (Anthropogenic) Ground Instability
Hazard Type:	Mining
Determination Method:	Observed PSI
Confidence:	Medium
Area (sq km):	1.648
Observed Start Date:	05/30/1995
Observed End Date:	11/15/2000
Estimated Population:	Not yet computed
InspireID:	PGGH_Ostrava_109
Town:	Ostrava
Country:	Czech Republic



PanGeo Licence

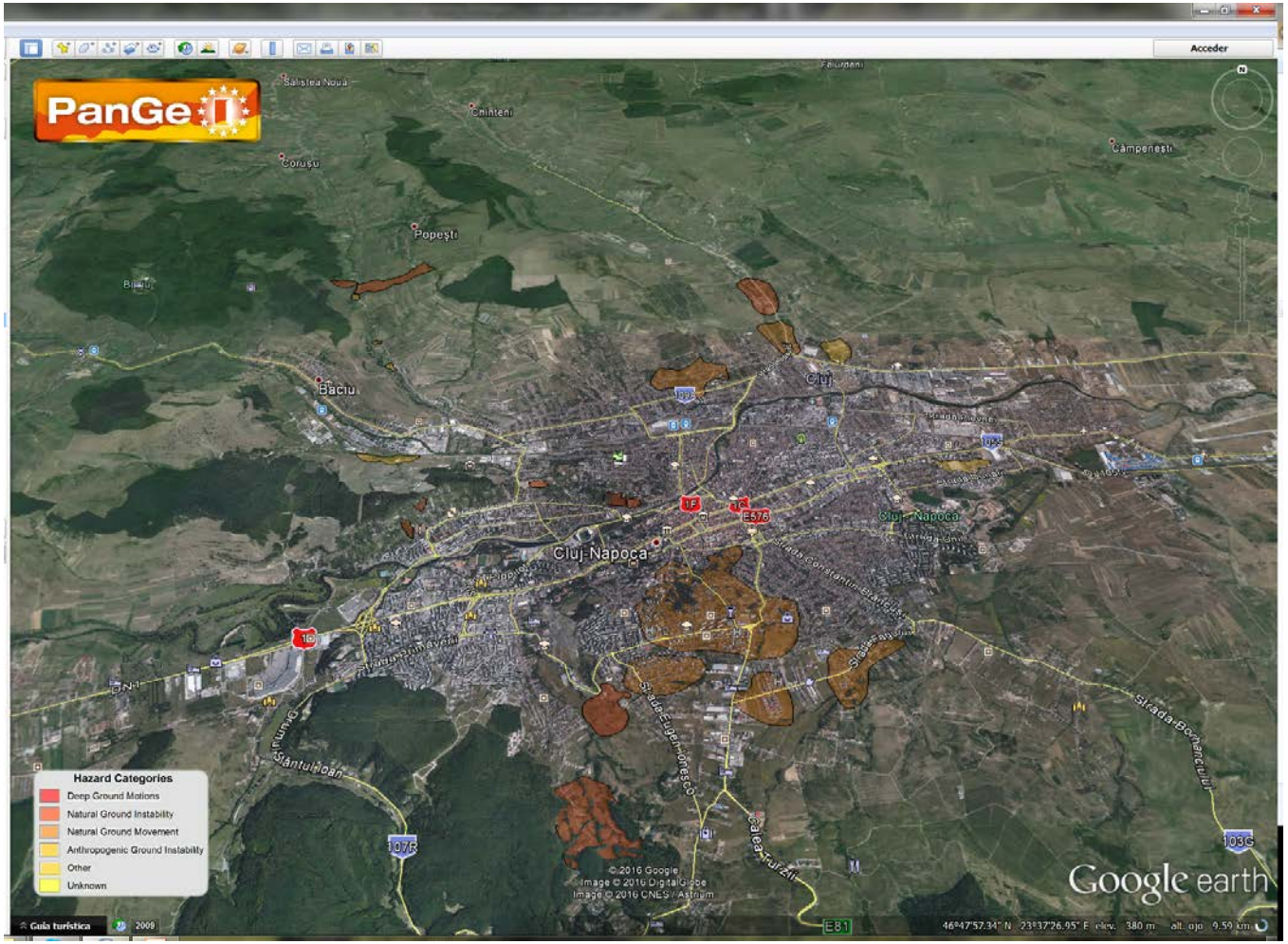
Land Slide

Geohazard Document: English or Local

Open in PanGeo Portal to view with Urban Atlas

Hazard Category:	Natural Ground Instability
Hazard Type:	Land Slide
Determination Method:	Observed Geology Field Campaigns
Confidence:	High
Area (sq km):	0.535
Observed Start Date:	08/13/2012
Observed End Date:	10/30/2012
Estimated Population:	Not yet computed
InspireID:	PGGH_CLUJ-NAPOCA_009
Town:	Cluj-Napoca
Country:	Romania

PanGeo Licence

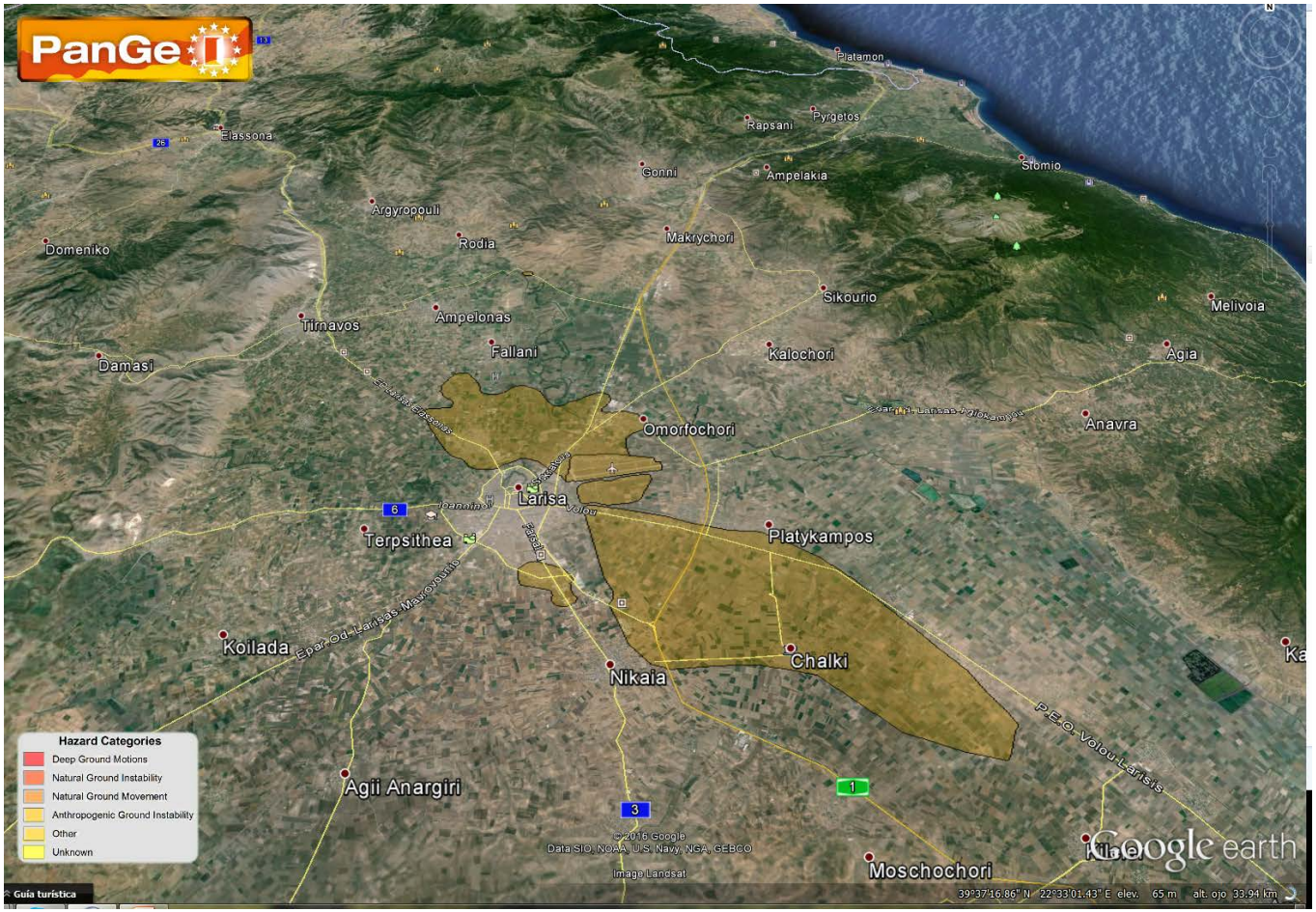


Groundwater Abstraction

Geohazard Document: English or Local

Open in PanGeo Portal to view with Urban Atlas

Hazard Category:	Man Made (Anthropogenic) Ground Instability
Hazard Type:	Groundwater Abstraction
Determination Method:	Observed Geology Field Campaigns
Confidence:	High
Area (sq km):	79.899 (InspireID area: 80.029)
Observed Start Date:	08/01/1990
Observed End Date:	07/05/2013
Estimated Population:	Not yet computed
InspireID:	PGGH_Larissa_001
Town:	Larissa
Country:	Greece



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All are related to Anthropogenic activities.

001 Observed Geology Field Campaigns, high confidence, in addition to observed PSI.

002 Observed Geology Field Campaigns, External sources, in addition to observed PSI.

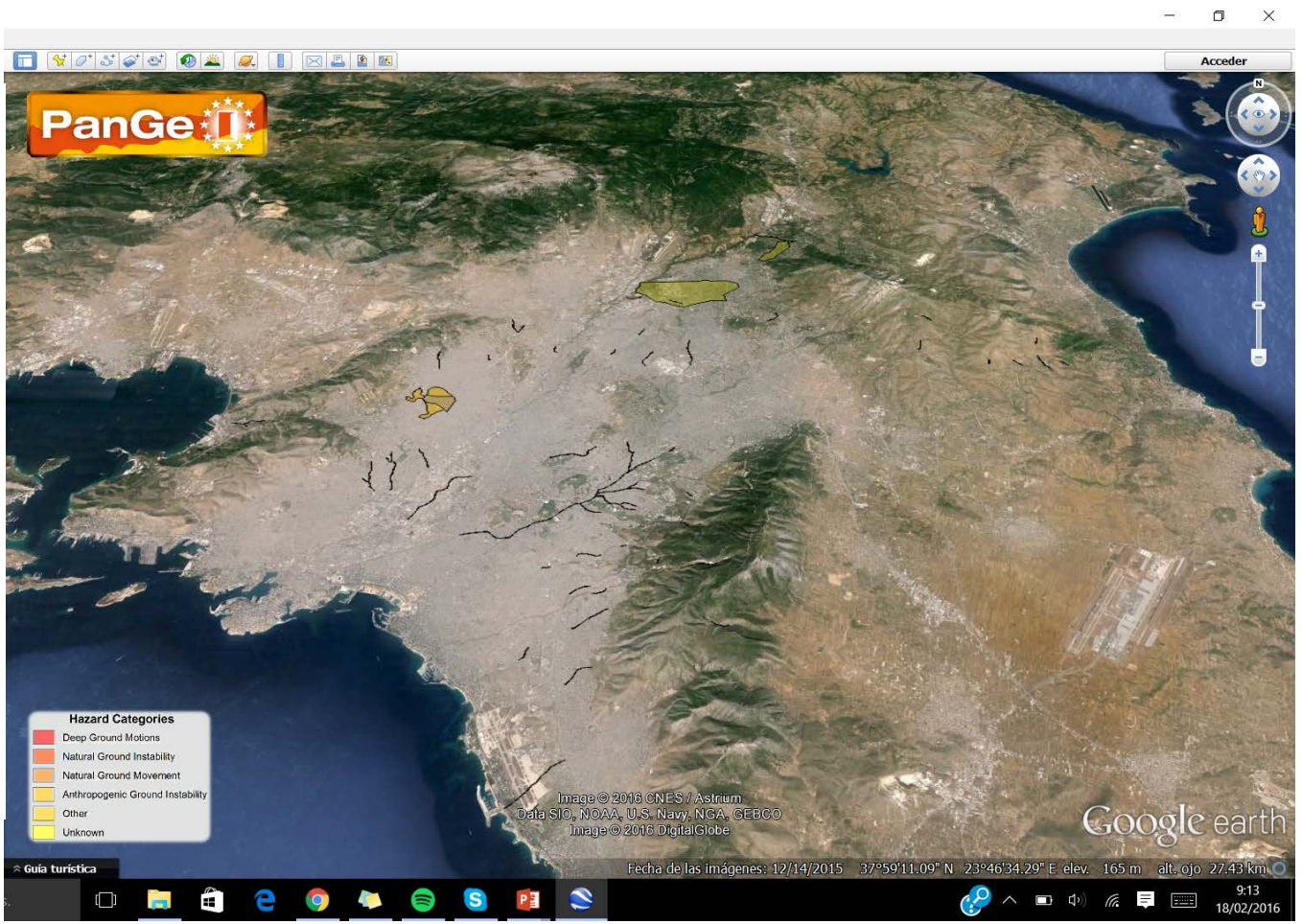
Unknown

Geohazard Document: English or Local

Open in PanGeo Portal to view with Urban Atlas

Hazard Category:	Unknown
Hazard Type:	Unknown
Determination Method:	Observed PSI
Confidence:	Low
Area (sq km):	5.327 (InspireID area: 6.147)
Observed Start Date:	
Observed End Date:	
Estimated Population:	Not yet computed
InspireID:	PGGH_ATHENS_004
Town:	Athens
Country:	Greece

PanGeo Licence



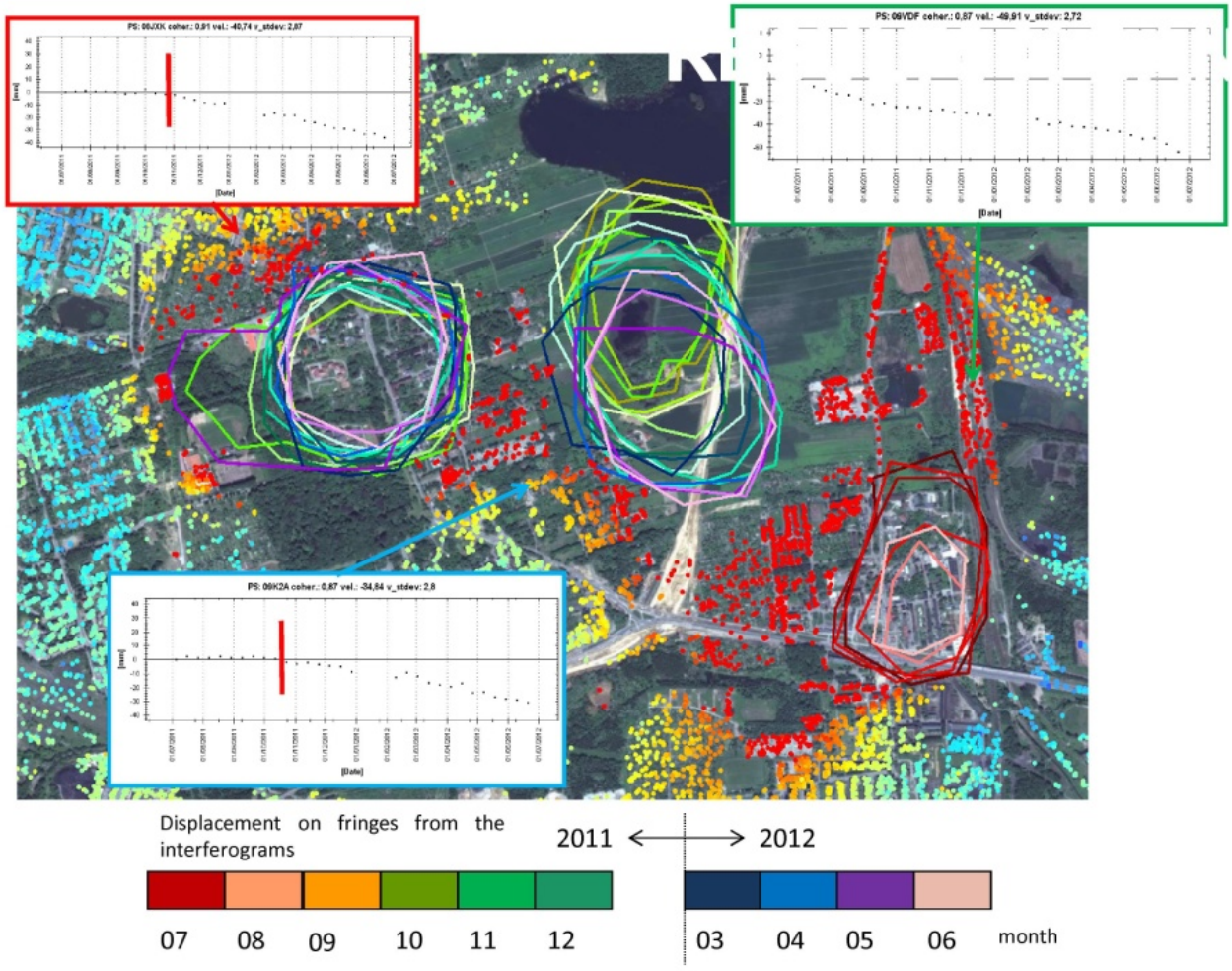
All are related to Anthropogenic activities.

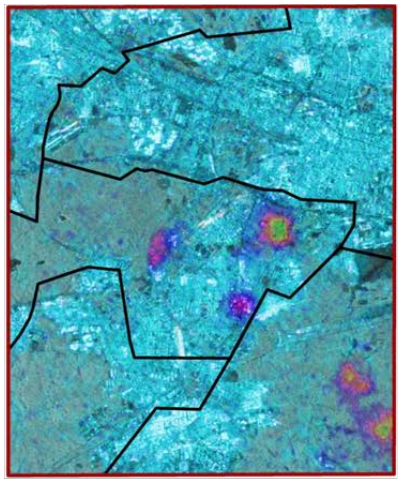
1,2 Related to abandoned lignite mines. Observed Geology Field Campaigns, high confidence, PSI no indications.

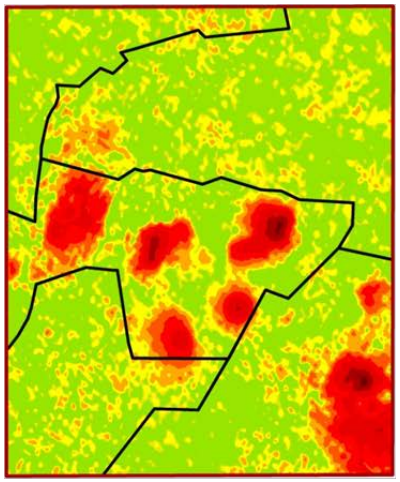
3 Buried hydrographical network Observed Geology Field Campaigns, PSI no indications.

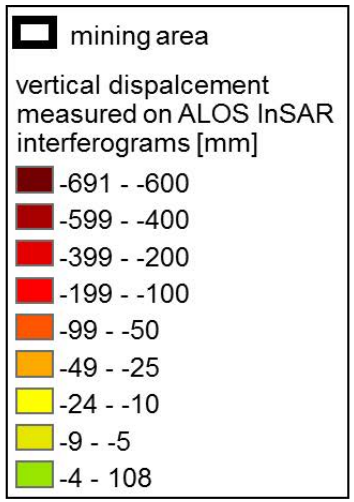
4 Only observed PSI, Not any evidence - Unknown

Determine the state of activity of subsidence phenomena



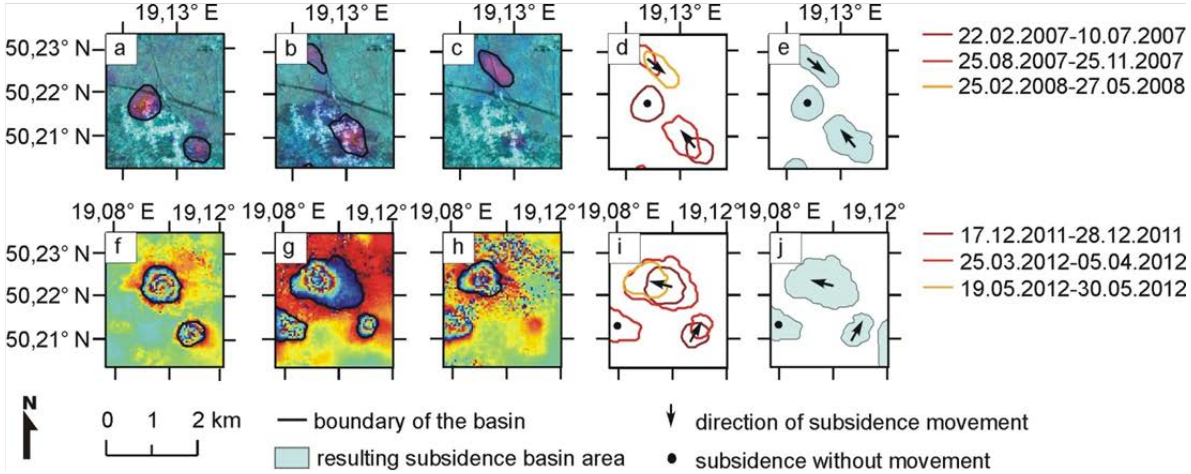




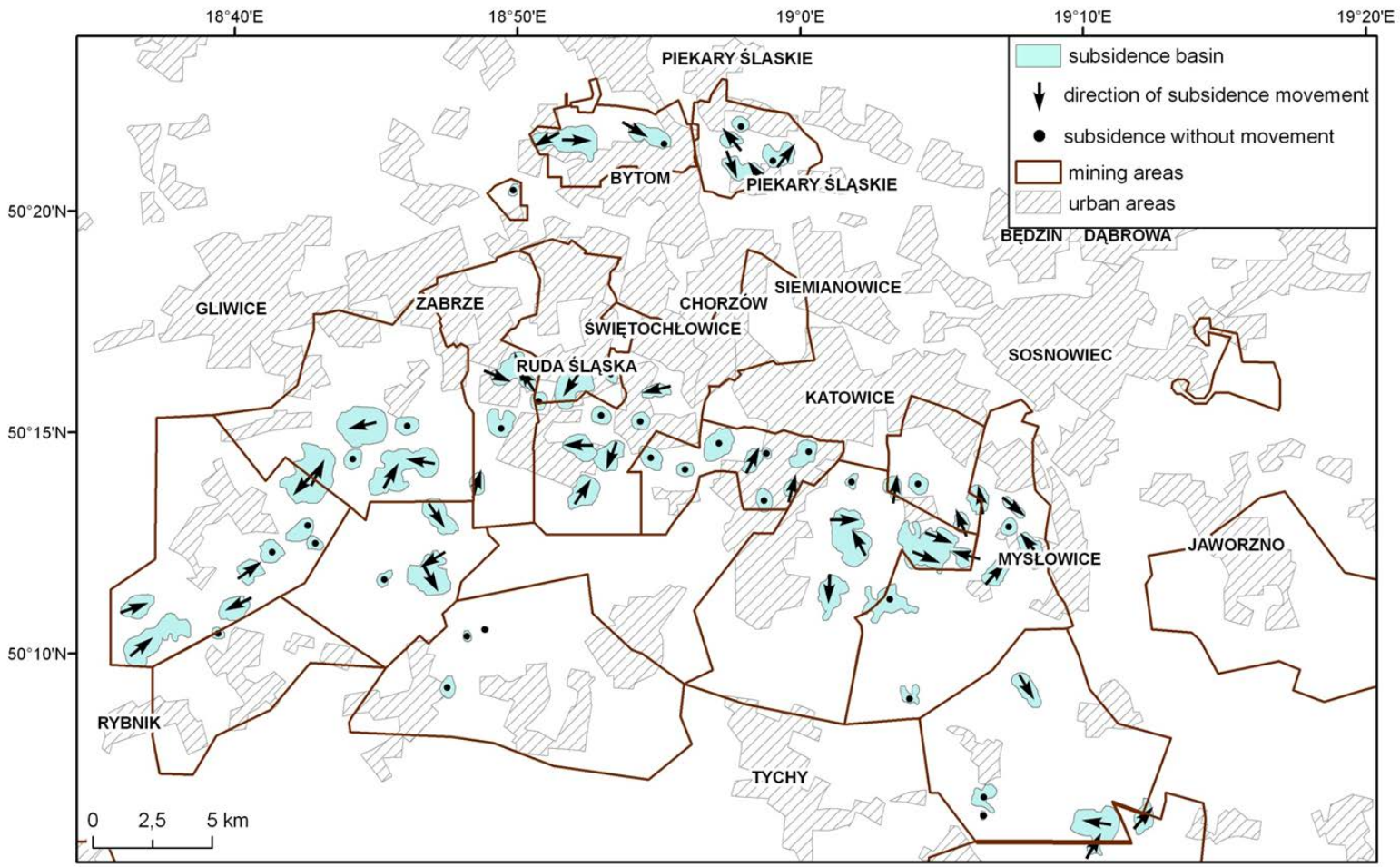


22/02/2007-10/07/2007

22/02/2007-27/05/2008



Subsidence movement based on ALOS-PALSAR data, period 22/02/2007-27/05/2008



Thank you!