

PanGeo – Roma (Italy) case history

The PanGeo project is drawing to a close at the end of January 2014, but feedback recently received from Roma illustrates the substantial benefits that can accrue when the Local Authority (LA) and the Geological Survey (GS) combine to form a team that is greater than the sum of its parts.

Representatives of Roma city authority and the Italian Geological Survey (Il Servizio Geologico dell'ISPRA) combined their expertise to create a PanGeo geohazard product integrating their respective expertise and uniting the different databases to produce a geological mapping hazard product for Rome that could leverage all the available aspects of knowledge. Results from the Roma experience seem to confirm that an effective mutualisation of local resources, special expertise and databases can achieve results not easily producible by the individual entities and have an impact well beyond the initial goal for the benefit of a larger community of users.

This interesting initiative arose from the opportunity provided by PanGeo in linking and networking the two institutions and, as such should be regarded a successful example of efficient collaboration which could be promoted and extended to the advantage of other LAs and GS working for PanGeo in other European cities.

The feedback from the LA representative highlighted the positive stimulus that a project such as PanGeo can provide for developing critical knowledge and practical applications (partly derived from space technologies) for better management of the urban environment. An ongoing programme of collaboration between the two institutions is now envisaged to continue in the future. In order to make a real success, this type of collaboration needs to integrate a number of different professional competencies. In the specific case of Rome experience, the team members included geologists, urban planners and GIS specialists able to integrate the products.

The Roma LA gave some practical examples of the application of Pangeo. First is the analysis of area of construction of underground parking (as shown in the figure below). In this instance, the presence of compressible ground and the rates of ground movement that are taking place enables the city planners to optimise the location of the proposed car park development.



Figure 1A: Location of the project

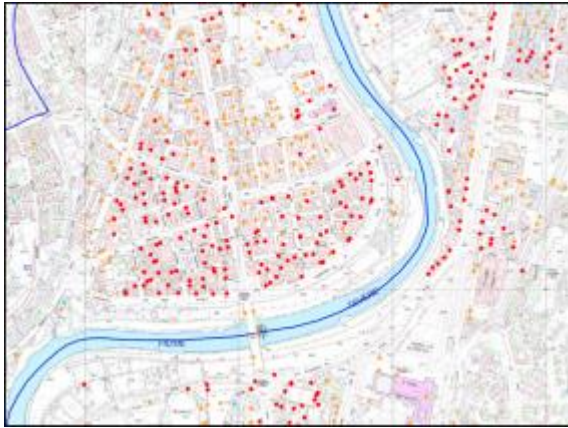


Figure 1B: Location of the project in relation to the evaluation of the maximum carrying capacity of the land, through the analysis of PSI points, highlighted by the movements of the adjacent buildings.



Figure 1C : Location of the project in relation to the Ground Stability Layer information which here indicates compressible ground associated with the fluvial deposits

The second example presented from Roma is the monitoring of industrial structures producing dangerous material, and which is therefore an activity classified at high risk within the city limits. The Pangeo data allow checking of the presence of geohazards that could be the cause of the movement of some structures in an industrial complex producing dangerous material.



Figure 2A: Location of the project



Figure 2B: Location of the project in relation to the evaluation of the maximum carrying capacity of the land, through the analysis of PSI points on adjacent buildings which indicate that potentially significant movements are taking place.



Figure 2C: Location of the project in relation to the Ground Stability Layer which is indicated to comprise compressible ground

The third case presented relates to the planned monitoring of school buildings. Combination of the potential ground hazards and the existing ground movements allowed the LA to review and prioritise the inspection programme for the school buildings

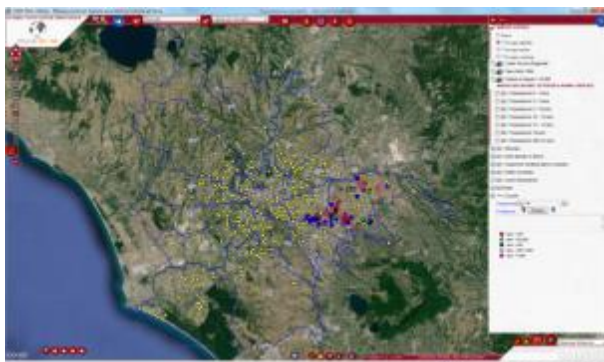


Figure 3: Plan for maintenance of school buildings

Given the large number of school buildings within the portfolio it was decided to use the geo-hazard identified by the project PanGeo and

their points of PSI, to help in prioritising action areas.

Finally, the successful experience of *Roma Capitale* and its direct involvement in PanGeo production phase provides an important example of the benefits of close collaboration and the outcome of products that assist in planning use of the urban environment.