High resolution mapping for the city of Velika Gorica

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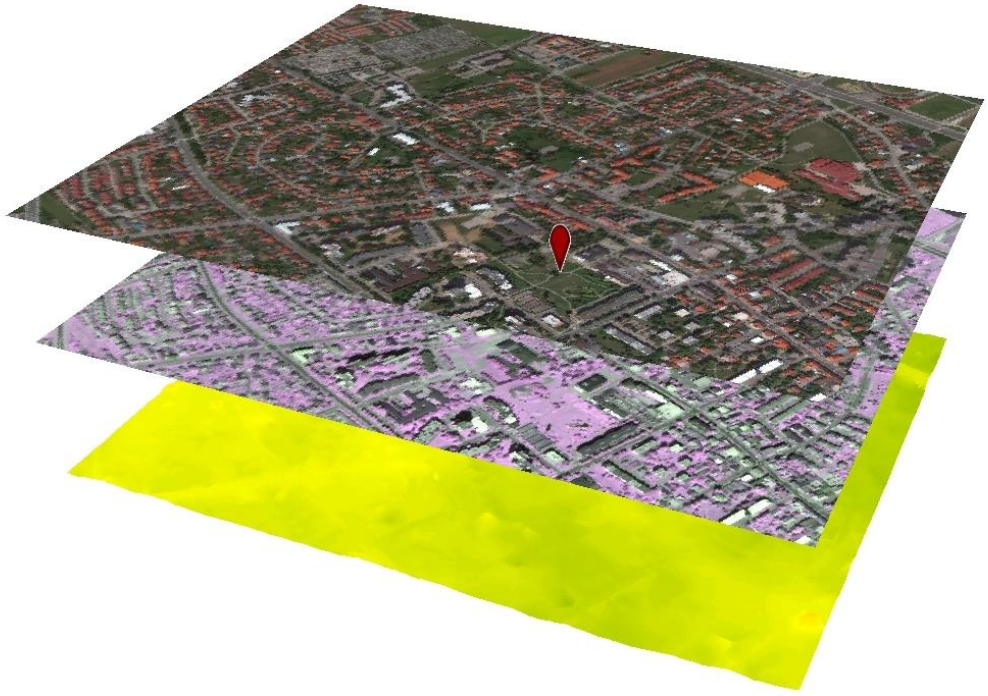
The available remote sensing and spatial data for the different ULLs in REGREEN are far from consistent. Thus, the mapping routines for tasks drivers and pressures and mapping and modelling ecosystem services have to be adapted to each individual case. As for the ULL Velika Gorica, we solved the bottleneck by using high resolution satellite imagery acquired through ESA's third party programme in combination with a recent normalised digital surface model. This dataset represents Velika Gorica's surface with all its features, without any topographical information. This product gives the researchers and stakeholders an understanding of the different heights of objects such as houses or individual trees.

Although it is challenging to establish a link between the different datasets, it now gives the team in REGREEN a good understanding of the Urban Living Lab Velika Gorica in Croatia. The figure below illustrates at which detail we can make out different features in Velika Gorica.



The 3 different slices above show a small part of the datasets: the top layer is a true colour representation of what the optical remote sensing satellite World View 3 captures. The intermediate layer shows a colour rendition which can't be perceived by the human eye, as it is in the near infrared colour spectrum. This is helpful for us to make assumptions about vegetation and its state, even at the level of different species. The lowest slice is a digital topographical model, here coloured in green- yellow for low and high lying areas.

Below is a picture taken of the Park dr. Franjo Tuđman in Velika Gorica.

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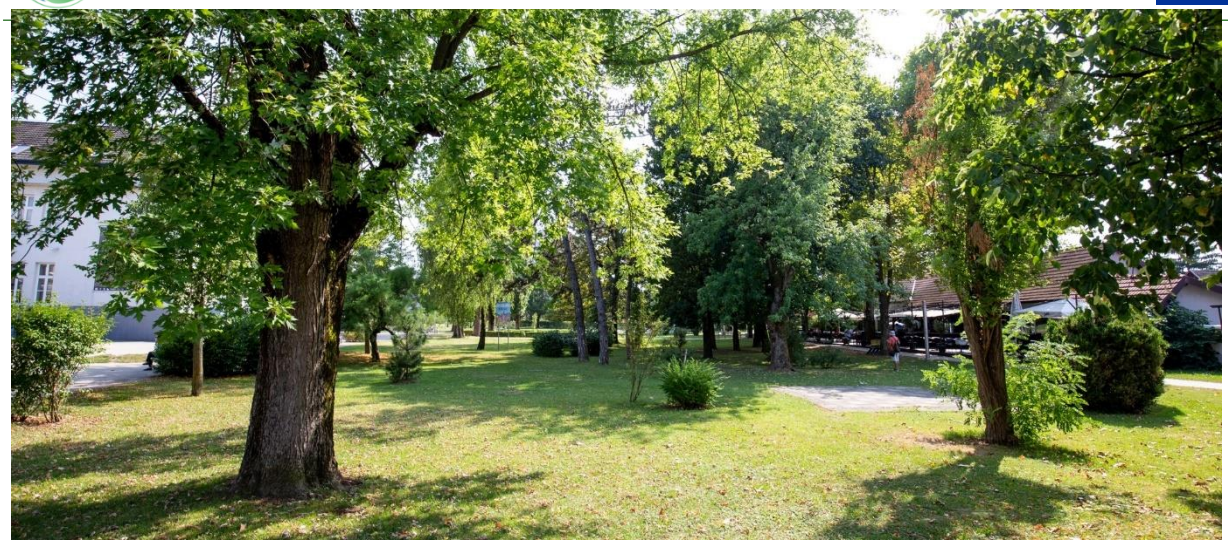

Photo: Marko Ruzic

This picture connects to the 3D visualisation above, see red icon. It deepens our understanding of all remote sensing data at hand and the real world situation for any location around the urban area.

Using this data will enable us to investigate the availability and the accessibility of urban green areas for the whole urban area with a spatial connotation. Utilising all these remote sensing data enable us to undertake the same spatial planning routines as for the other EC ULLs in the REGREEN project.

These mapping products serve as vital input information to implement new Nature Based Solutions in the different ULLs.

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