**WARM Project: a Play-Based Exploration and Development Plan for Geothermal Energy in the Netherlands.**

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Abstract

The presented ‘Play-based Exploration and Development Plan for Geothermal Energy in the Netherlands’ provides an up-to-date overview of how and where geothermal heat can be developed safely, responsibly, sustainably and cost effectively.

To reach this goal, a play-based portfolio approach was adopted, allowing to extract best value from available information and to guide further exploration steps. Using current knowledge, Common Risk Segment (CRS) maps of the six main aquifers of the Dutch subsurface were generated. However, since the deployment of geothermal heat is not only influenced by subsurface geology, but also by local heat demand and presence of heat networks, CRS maps were integrated with this type of surface data. As a result, the presented Exploration and Development Plan brings together in one map subsurface knowledge, heat networks and heat demand, opening to a new world for understanding, steering, planning and budgeting for long term geothermal development.

This makes it a valuable source of information not only for geoscientists, but for also for regional governments, civil society organizations and commercial operators that have to make choices between the development of geothermal heat or applying other renewable sources.

Biosketch

Francesco has a background in Carbonate Geology and holds a PhD in Earth, Environmental and Resource Science from University of Naples Federico II.

He worked on a commercially funded PhD project specializing in the sequence stratigraphic controls on the mechanical stratigraphy shallow-water carbonates applied to hydrocarbon industry, a study awarded with a Special Mention at the Petroleum Geology Student Contest - 3rd Edition, in Calvello (Italy).

His academic profile is complemented by a Diploma in Classical Guitar from Conservatory of Naples.

Since 2018 he is Reservoir Geologist at PanTerra Geoconsultants (the Netherlands), where he is involved in projects around the globe for both O&G and Geothermal exploration and production.