



MANAGEMENT OF ENVIRONMENTAL RISKS DURING AND AFTER MINE CLOSURE

towards Sustainability in Underground Coal Mines Closures – R&D project supported by RFCs under Contract No. RFCR-CT-2015-00004

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15/12/2015 - 15/12/2019

10 partners from: Poland, Spain, Germany, United Kingdom, Czech Republik, France

2 mining companies from Poland and Spain

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Project coordinator: Główny Instytut Górnictwa



G I G

M E R I D A
RFCS RESEARCH PROJECT



Towards Sustainability in Underground Coal Mine Closures

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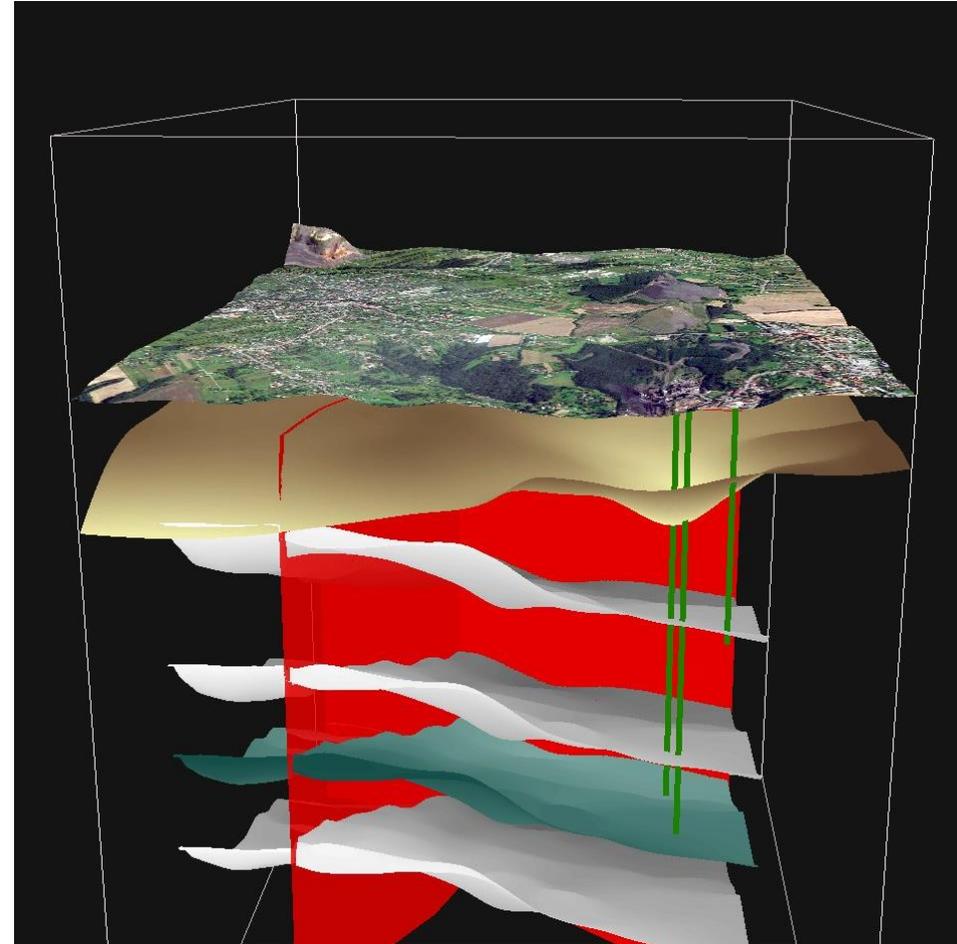
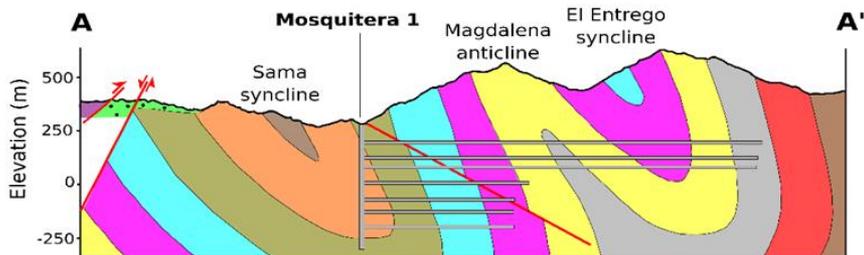
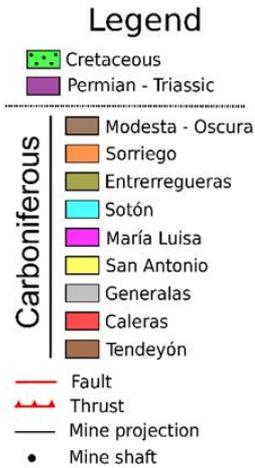
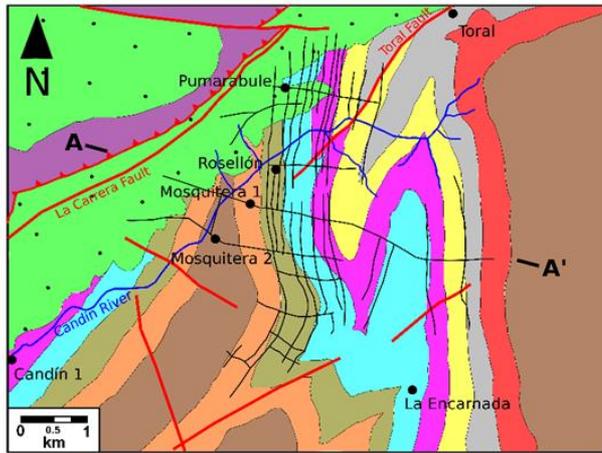
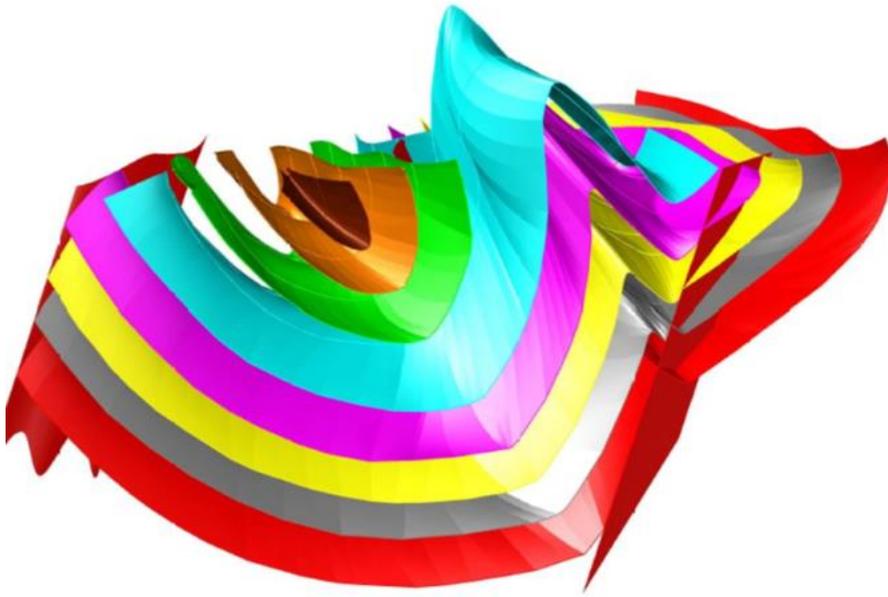
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OBJECTIVES:

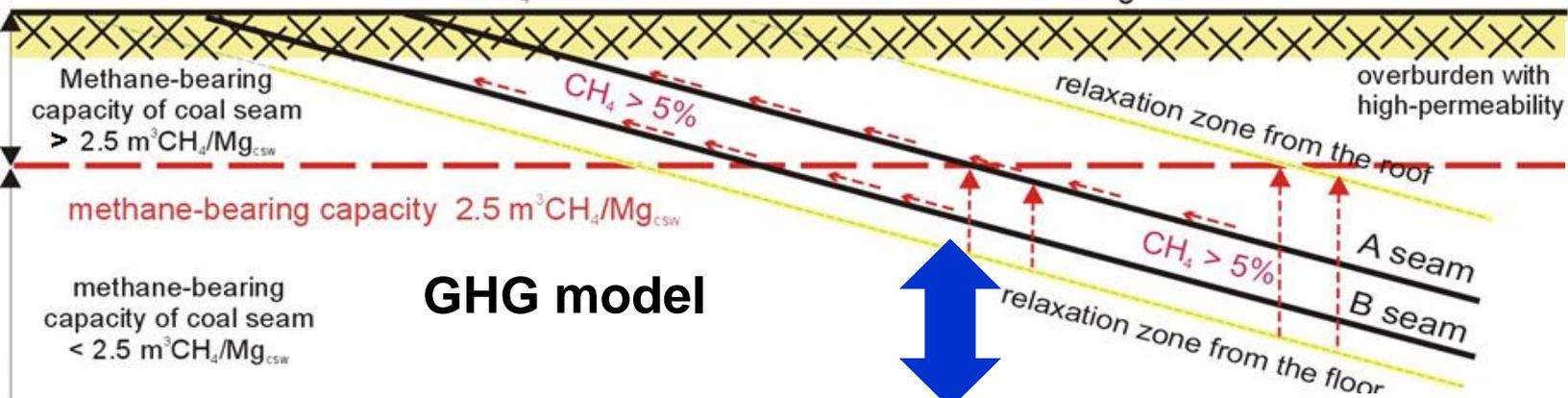
- *to provide specific guidance on the issues that need to be considered when assessing the environmental impacts from coal mines at closure and post-closure stages;*
- *to identify the physical and chemical processes that affect environmental risks during mine closure and post-closure and establish monitoring and modelling methods that should be implemented in order to make reliable environmental impact predictions;*
- ***to establish an integrated risk assessment methodology;***
- *to provide a practical methodology (written up as a technical guidance) that can be used for the evaluation of risk*
- *remediation measures in terms of their performance in risk reduction, practical implementation and cost.*

3D geology for both sites

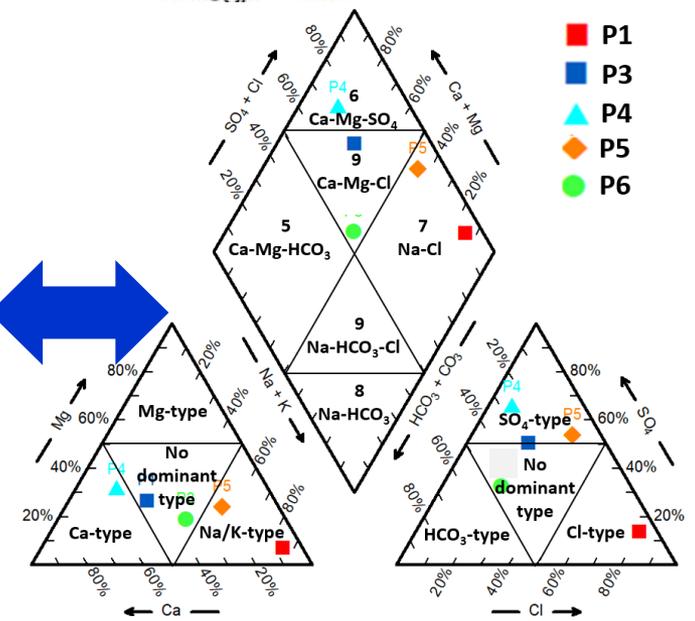
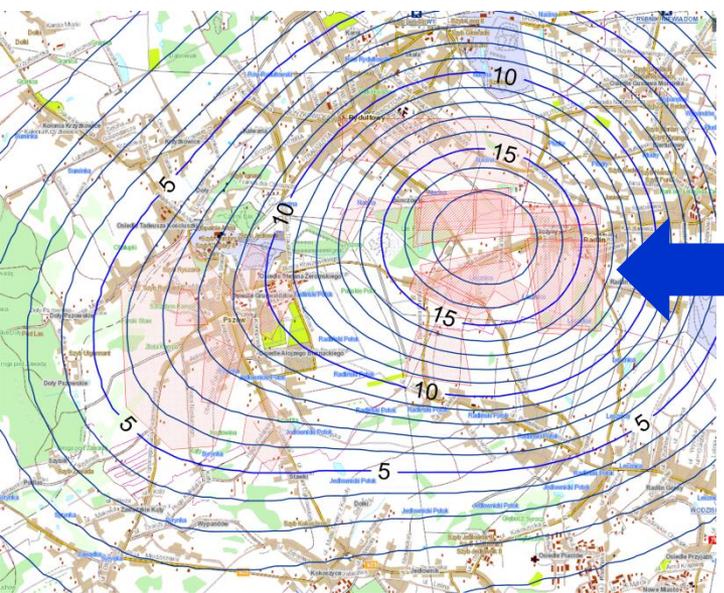


$CH_4 > 5\%$

surface of mining area

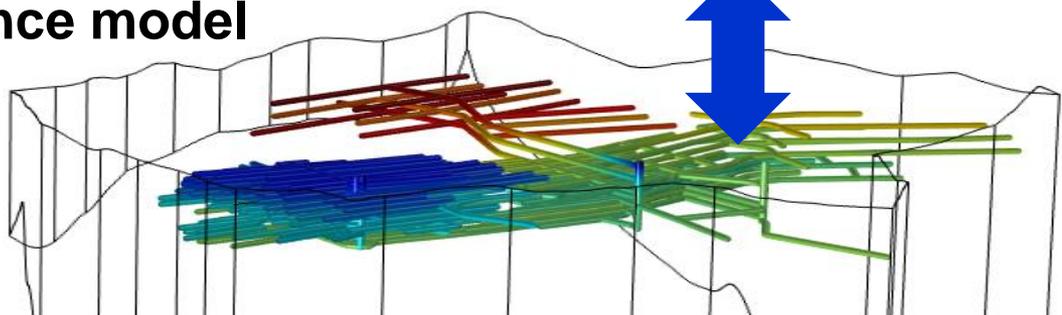


GHG model



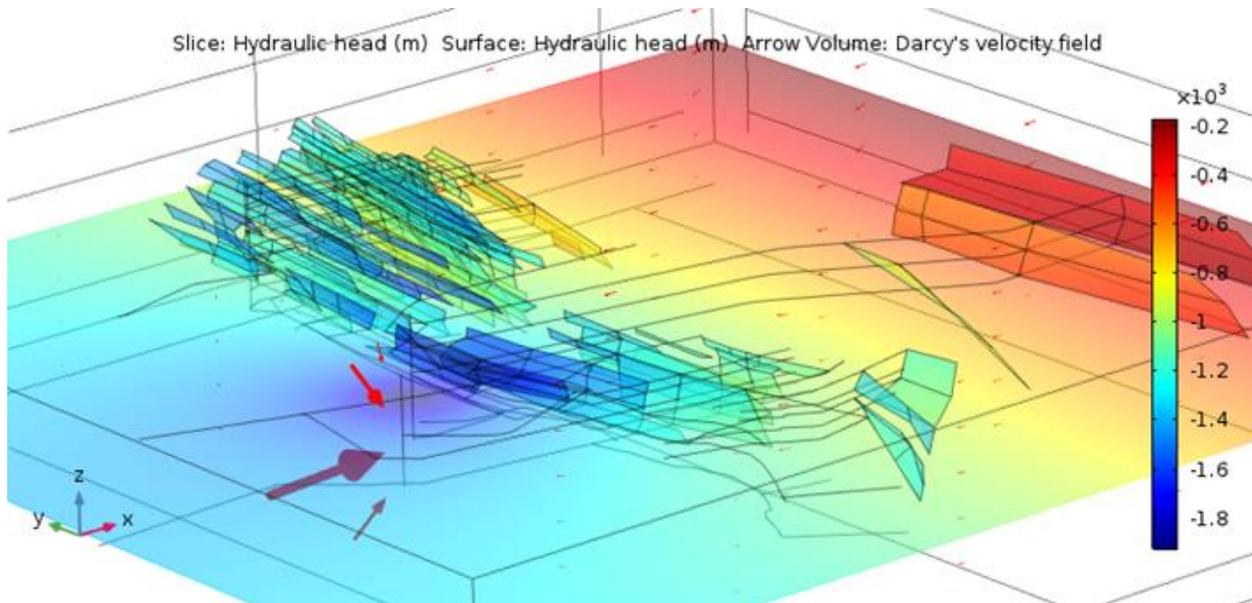
Surface water model

Subsidence model

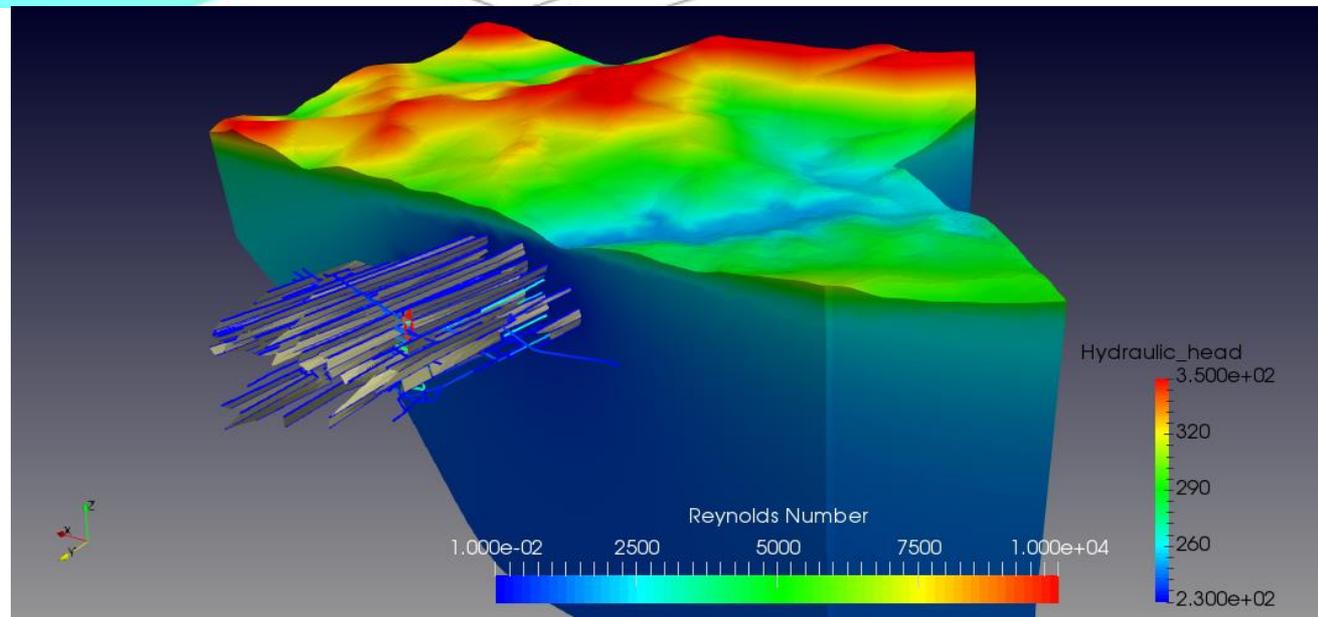


Underground water model

SOME PRELIMINARY RESULTS



**Hydraulic Head in massif +
Reynolds numbers in
galleries**
Imaged clipped in Paraview



GIS tool



The screenshot shows a web browser window displaying the "DMT SAFEGUARD 3D" application. The browser's address bar shows the URL "https://safeguard.dmt.de/sgkw/" and the page title "DMT SAFEGUARD Professional Geomonitoring". The main content area is a 3D aerial view of a landscape with a central blue and white structure. The interface includes a "Toolbox" on the right side, a scale bar indicating "500 m" in the bottom left, and a navigation bar at the bottom with "Ansichten:" and "Hintergrundkarte: Google Luftbilder".

GIS tool





Thank you very much!

For further information please visit our project website

www.meridaproject.com



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