

# GWSDAT (GroundWater Spatiotemporal Data Analysis Tool)

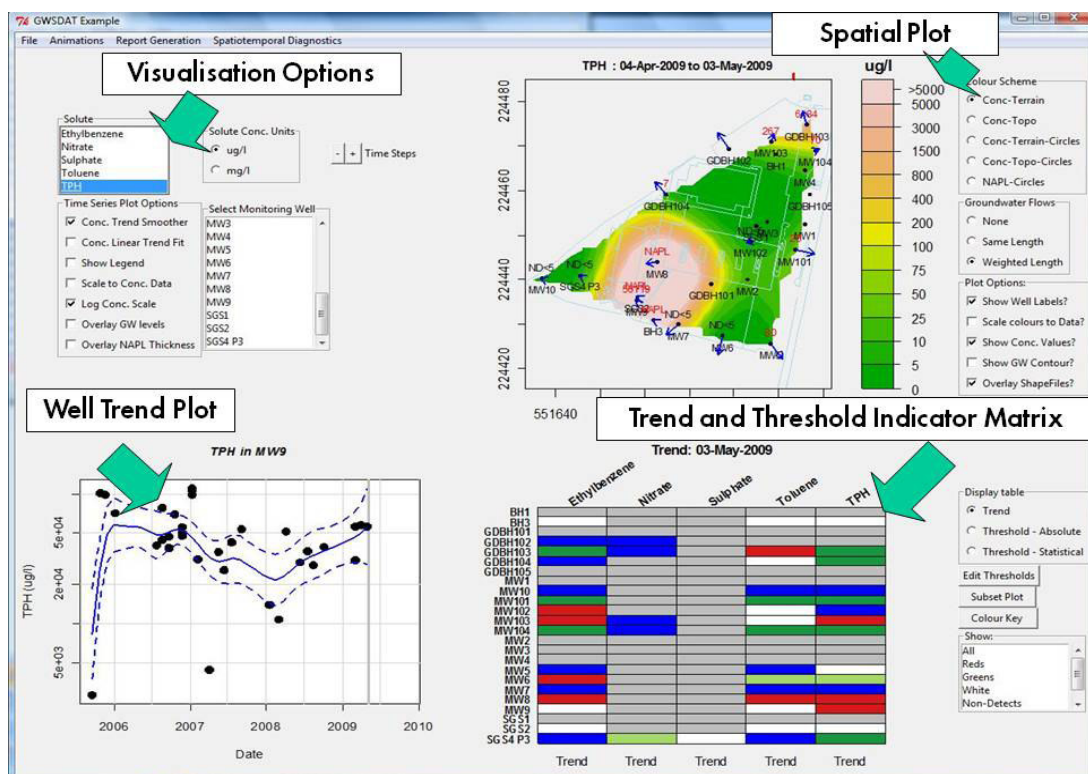
Wayne Jones<sup>1,\*</sup>, Michael Spence<sup>2</sup>

1. Shell Projects and Technology, Statistics and Chemometrics, Shell Technology Centre Thornton, Chester, United Kingdom
  2. Shell Projects and Technology, Soil and Groundwater Group, Shell Technology Centre Thornton, Chester, United Kingdom
- \*Contact author: [wayne.w.jones@shell.com](mailto:wayne.w.jones@shell.com)

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The GroundWater Spatiotemporal Data Analysis Tool (GWSDAT) is a user-friendly software application developed by Shell for the analysis and visualisation of visualise trends in environmental (groundwater) monitoring data. In this presentation we will discuss the underlying software architecture and demonstrate GWSDAT functionality which includes:

- Linking GWSDAT to Microsoft products for a user friendly application entry point (e.g. Excel, PowerPoint, Word) and automatic report generation (R packages: **RExcel** and **rcom**).
- Graphical User Interface (R packages: **tcltk** and **rpanel**).
- Time series trend detection (R packages: **sm**, **Kendall** and **zoo**).
- Methods for visualising and handling Spatial data (R packages **deldir**, **sp**, **splancs** and **maptools**).
- Smoothing and spatial plot animations for spatiotemporal trend detection.



GWSDAT Screenshot.