Spanish openair / R Workshop

Training for air pollution data analysis and insights

David Carslaw and Hao Wu

7 – 9 October 2019

Ricardo Energy & Environment / University of York

- Brief introduction to R and RStudio for beginners
- Importing and working with air quality data using the package `saqgetr`
- Overview of the `openair` R package
- Use of bivariate polar plots for analyising air quality data

- All course material will be available on a Ricardo server:
  http://met-data.ricardo-aea.com/R-course/
    - This will include all data and script files
- All material used in this course will be **entirely reproducible**
    - This means that you will be able to recreate all the outputs shown during the course (and afterwards)
- A mix of demonstration and exercises — practical work and challenges for you!
- We will be flexible and help you individually as much as we can

- Introduction to R
  - Brief history and purpose
  - A programatic way of working with data
  - Core R and optional packages
  - The basic R console (demonstration)
- Introduction to RStudio
  - A general purpose Integrated Development Environment (IDE), open source and free
  - Tour of the main features

- Getting basic data into R and understanding what you have
- Brief overview of useful packages for working with data
- Accessing Spanish and other European data
  - Extended practical session
- Overview of main aims and purpose of the `openair` package
- Bivariate polar plots
  - Basic plots, their use and extensions