# National Initiatives for Open Science in Europe

Open Call Climate Thematic Services

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# Climate Research Areas

- **CR Area A:** Regional climate modelling to better understand and predict climate change and impacts, and phenomena such as dust storms.

- **CR Area B:** Air quality modelling, including atmospheric chemistry and air pollution transport.

- **CR Area C:** Weather forecast and extreme weather prediction, model development, application.

# Application-specific services for Climate

- ❑ **RS2C – Remote Sensing Scene Classification**
  - ❑ RS2C is a RESTful web service and web application for remote sensing scene classification based on convolutional neural networks.
  - ❑ Currently, ResNet-50 pre-trained on ImageNet and fine-tuned on MLRSNet is used for classification.
  - ❑ **The web service** is implemented in Python using TensorFlow Serving and Flask.
  - ❑ **The RS2C API** provides methods for single-and multi-label classification

# RS2C – Remote Sensing Scene Classification



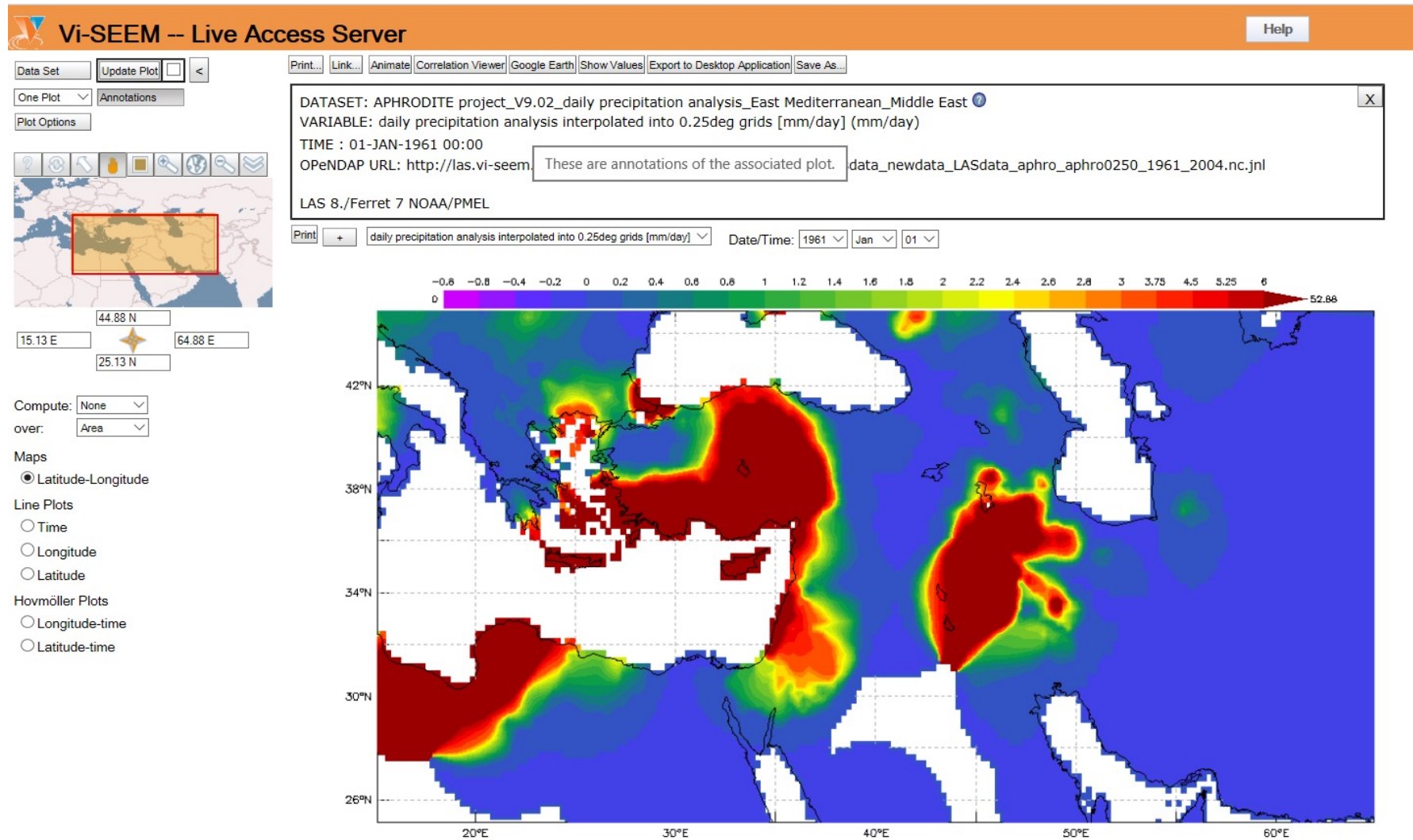https://rs2c.etfbl.net/upload
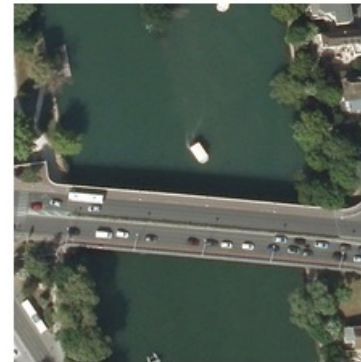
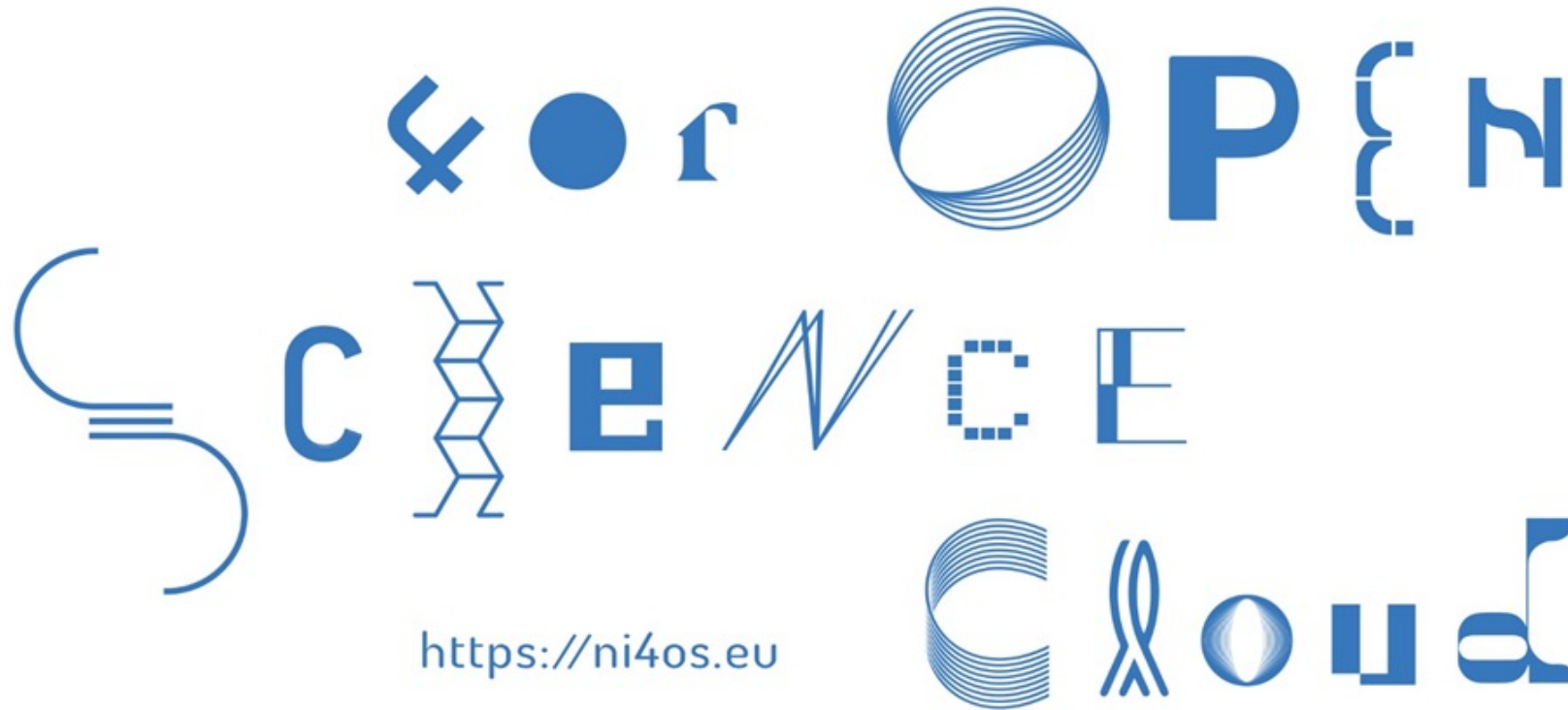# Application-specific services for Climate

❑ **LAS – Live Access Server**

LAS is a highly configurable server designed to provide flexible access to geo-referenced scientific data. It can present distributed data sets as a unified virtual data base through the use of DODS networking. Ferret is the default visualization application used by LAS, though other applications (Matlab, IDL, GrADS etc) can also be used. LAS enables web user to:

❑ visualize data with on-the-fly graphics

❑ request custom subsets of variables in a choice of file formats

❑ access background reference material about the data (metadata)

❑ compare (difference) variables from distributed locations

# Live Access Server

# Thanks!

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