Long term air quality monitoring is important for local, regional and international governments. For this long term data series are vital. Satellite data products available from GOME, SCIAMACHY and OMI combined (1995-present) form a set usable for this kind of analyses. Such a set will be produced and used within the AMFIC project (Air Quality Monitoring and Forecasting in China).

Besides ‘just’ providing data, an important requirement is a standardized, clearly defined and structured format. The HDF-5 ADAGUC data products standard has been defined for this purpose, which includes structured metadata (ISO 19115). All ADAGUC data will be archived in this format. Converters for converting these data into GIS friendly formats are developed (e.g. GeoTIFF, GML) within the project as are conversion tools for the most commonly used formats: Google’s KML, ESRI’s Grid/Shapefile and Google’s KML.

At the final ADAGUC Workshop (December 4-5 2008, Amsterdam) the project results will be presented. On this poster the main results and 3 use cases are presented.

### Use case  – Trend monitoring of air quality on regional scale (China)

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### Use case - Relating Remote Sensing Data to Vegetation/Roads/Land Cover/Land Use Change

Though global annual reactive oxidized nitrogen (NOy) emissions are relatively well known, the spatial-temporal deposition schemes remain largely uncertain. Using a unique combination of satellite products and models, wet and dry oxidized nitrogen will be assessed for the large and relatively constant N-loading of W-Europe and the highly variable Amazonian wet and dry season regimes.

### Use case  – Improving the Performance of River Basin Simulation Models

Uncertainty in stream flow simulations can be reduced by using additional data for an improved initialization of the model’s state variables. This method will be applied to large river basins like the Rhine, Nile and Mississippi and use the hydrological STREAM model (Aerts et al '99). Datasets will include ECMWF precipitation and temperature, land cover characteristics and satellite derived soil moisture.