

# **IAMC Scientific Working Group on Data Protocols and Management**

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# Harmonized model documentation

# EU FP7 Project: ADVANCE

## Documentation

- Objective: comparable documentation for a larger set of models with two levels of detail
  - Reference cards: mostly tables with predefined categories (2-3 pages)
  - (Moderated) Wiki: harmonized outline with guidance on information that should be covered (~30 pages)
  - Appendices (optional)
    - Mathematical formulation
    - Input data

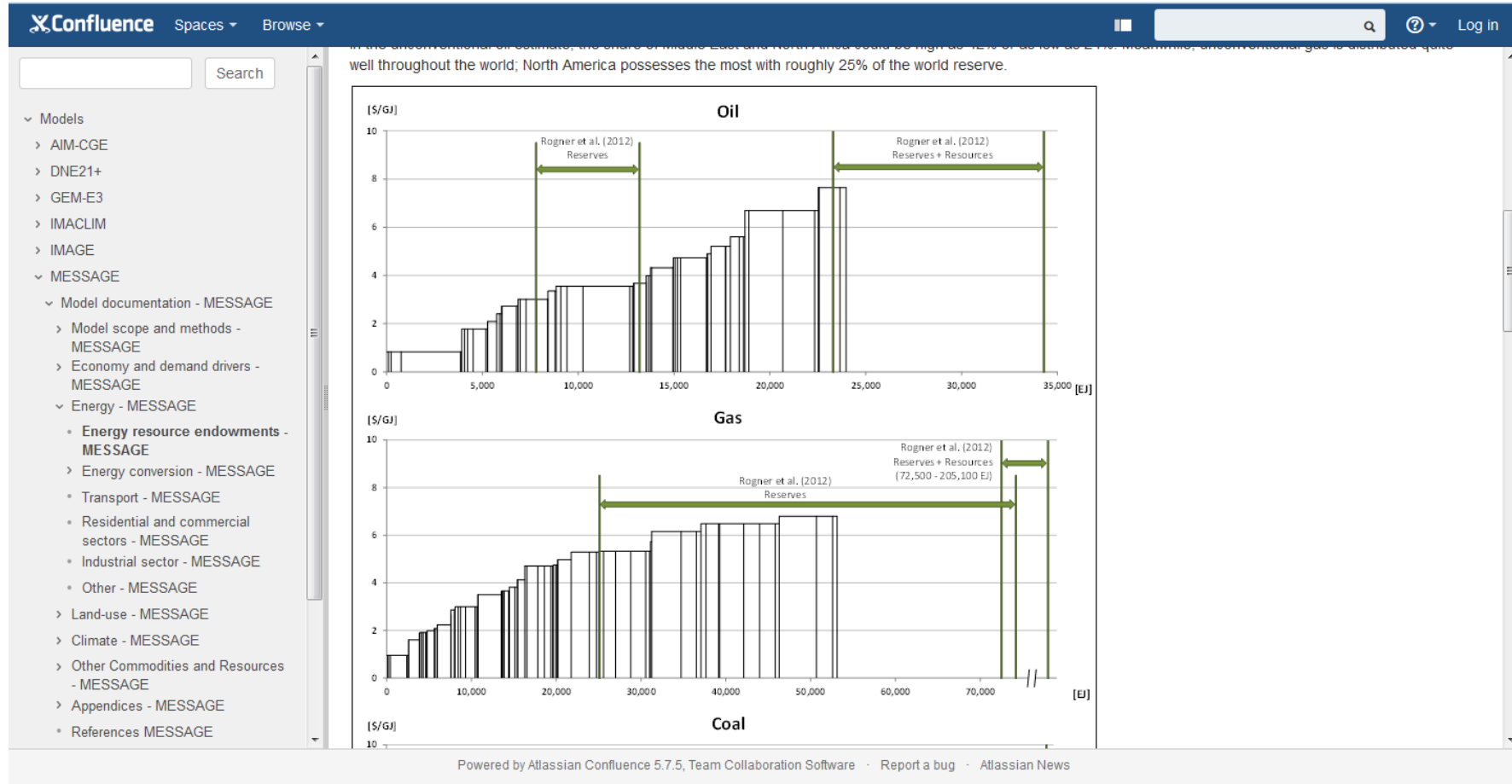
## Publication

- Moderated Wiki format (incl. versioning, allows continuous updating), hosted by UCL

# ADVANCE Wiki Outline

- *Model scope and methods*
  - Model concept, solver and details
  - Temporal process
  - Spatial process
  - Policy
- *Economy and demand drivers*
  - Population and GDP
  - Demand
  - Technological change
  - Macro-economy
  - Behavioural change
- *Energy*
  - Energy resource endowments
  - Energy conversion
  - Transport
  - Residential and commercial sectors
  - Industrial sector
  - Other
- *Land-use*
  - Agriculture
  - Forestry
  - Biofuels
  - Other
- *Climate*
  - GHGs
  - Pollutants and non-GHG forcing agents
  - Modelling of climate indicators
- *Other Commodities/Resources*
- *Optional appendices*
  - Appendix 1: Mathematical appendix on model equations
  - Appendix 2: Data used in the models

# ADVANCE Wiki Screenshot



# Model Documentation

- ADVANCE project developed model documentation Wiki:  
<https://wiki.ucl.ac.uk/display/ADVIAM>
- Documentation available for 10 models
- Public review: 15 July – 15 October 2015
  - IAM community (via IAMC listserv)
  - Other networks (e.g., GTAP, ETSAP community)
  - Stakeholders, incl. government agencies (e.g., US EPA, DG Climate)
  - Individual researchers familiar with IAMs

# Review comments: Content and Structure

## Content

- Provide information on model parameterization in different dimensions (e.g., technologies, efficiency, resources)
- Require information on data sources
- Elevate “water” to be a topic of its own (currently under “other commodities”)

## Structure

- Provide a ‘template’ model to improve comparability across models (ask modeling groups how they deviate from template)

# Review comments: Implementation

## Implementation

- Improve navigation (e.g. have documentation on one page with subtitles)
- Allow comparison across models (for both reference cards and documentation)
- Some pages provide inadequate description
- Facilitate updates (specification, spatial, sectoral aggregation)



# Some takeaways...

- Adjust structure to reflect more recent developments (and establish process for future updates)
- More rigorous template to improve comparability?
- Establish a review process?
- Integrate “structural” documentation with parametric assumptions – joint activity between data and diagnostics SWGs
- Move to a more flexible platform

# Discussion

## Content and Structure

- Revision of structure
- Creating templates for certain types of models

## Implementation

- Wiki vs. other formats
- Central vs. self-hosting
- Linking documentation to parametric assumptions (e.g., diagnostics activity)

## Review process?

**Thank you!**