MOSAICC:
An inter-disciplinary system of models to evaluate the impact of climate change on agriculture

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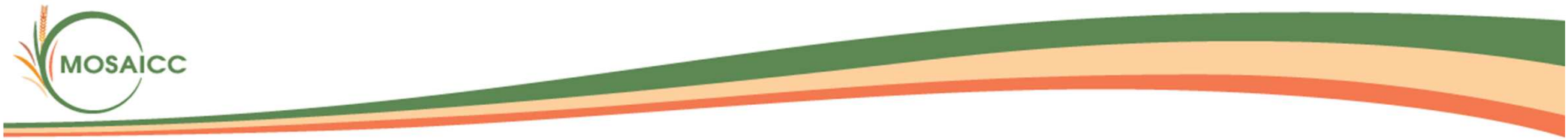
Modelling

System

for **A**gricultural

Impacts

of **C**limate **C**hange

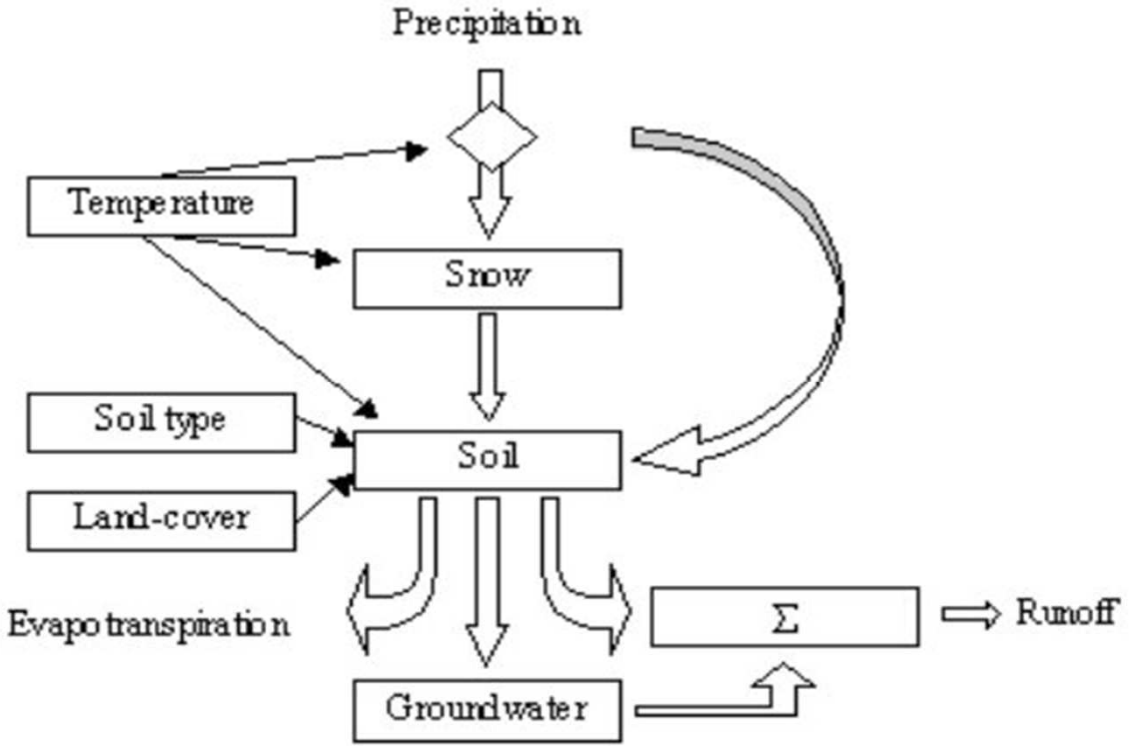


Models

- Statistical Downscaling Portal (ENSEMBLE)
- 2 crop models:
  - AQUACROP
  - WABAL
- 1 Hydrological model: STREAM
- 1 Economic model: DCGE

STREAM (Aerts et al. 1999)

- Raster-based precipitation-runoff model



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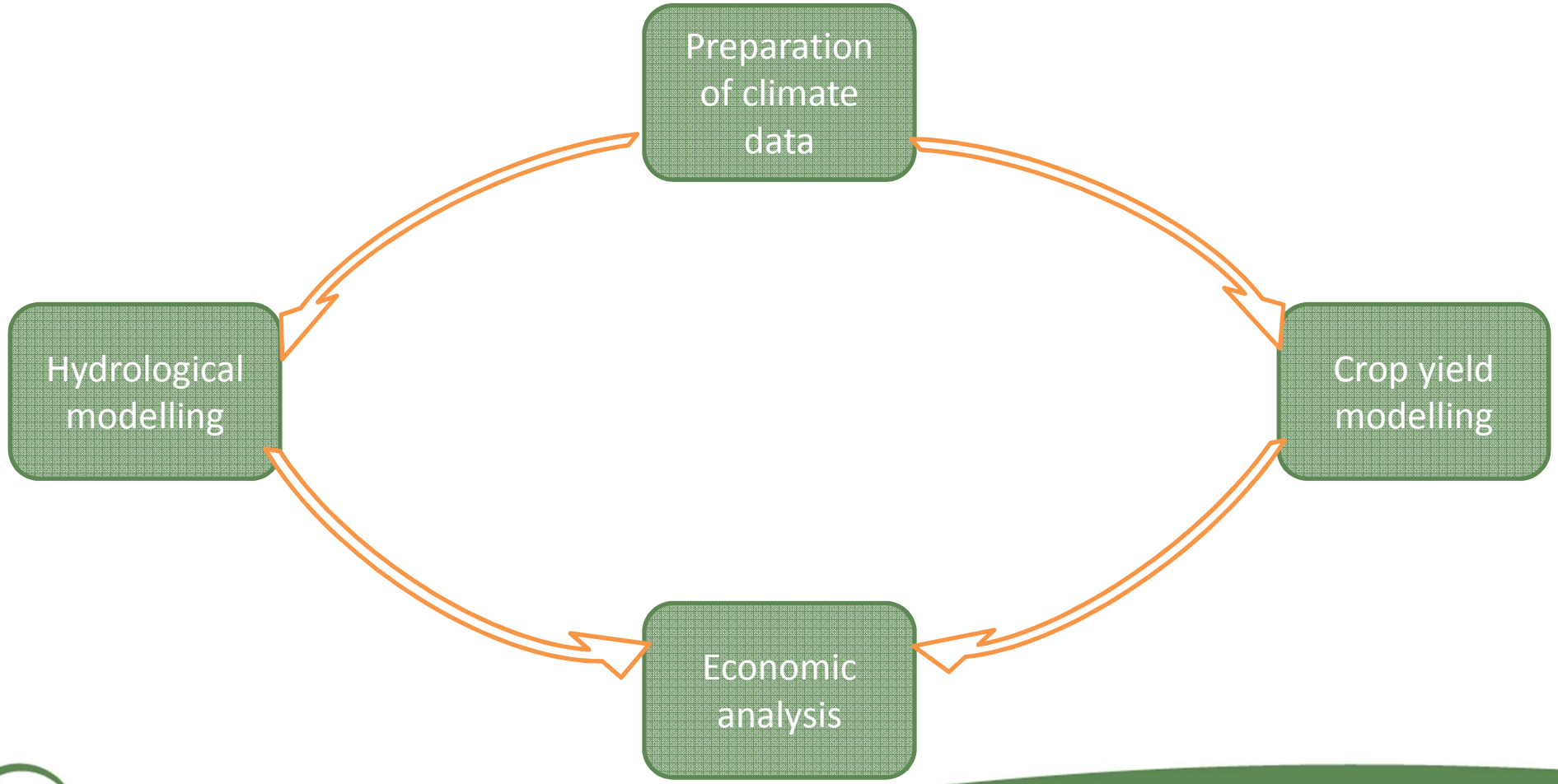
Models



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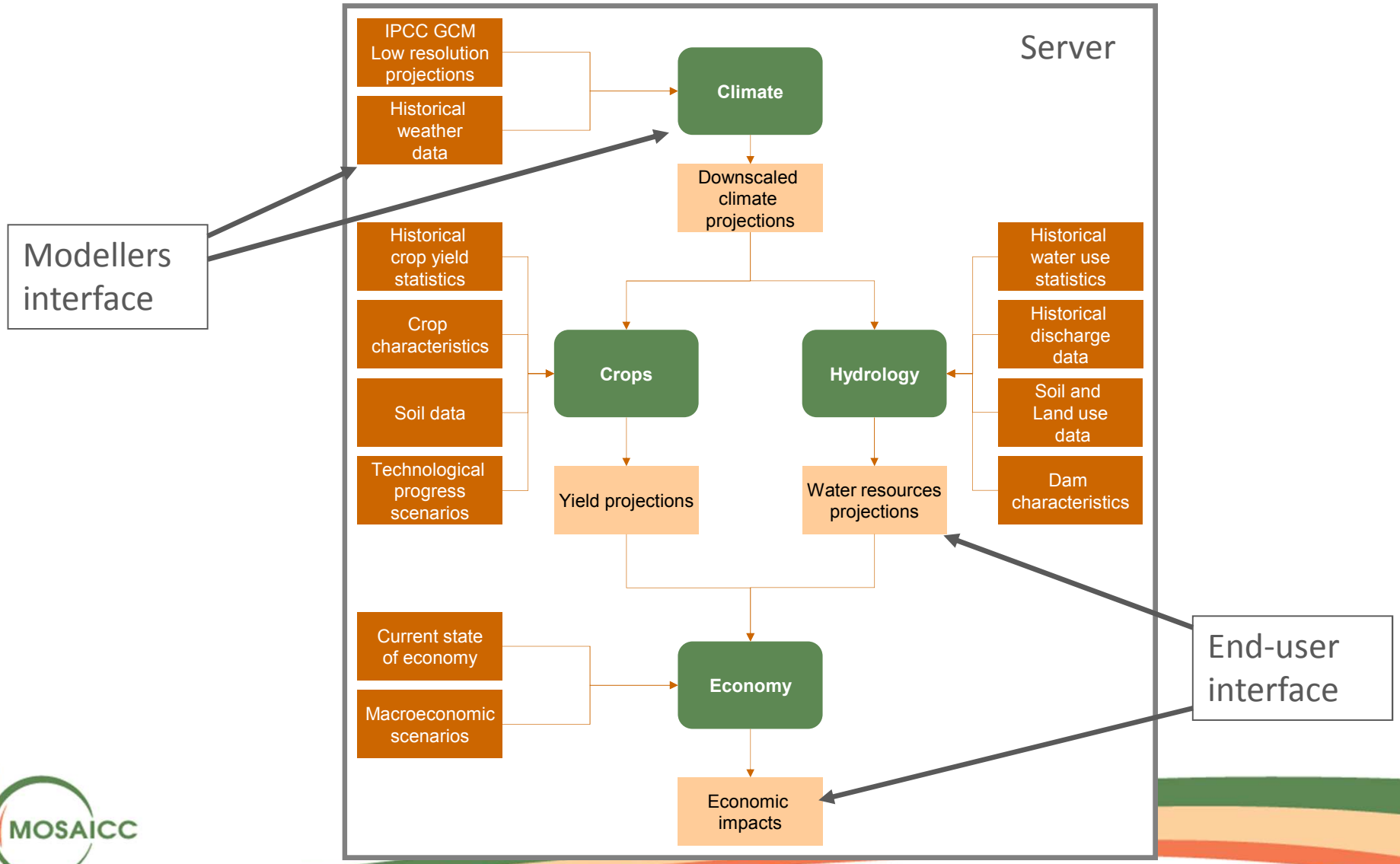
Integration

- Server
- Spatial database
- Web interfaces
- Utilities: data interpolation, PET calculation, data and experiment management etc.

Integration



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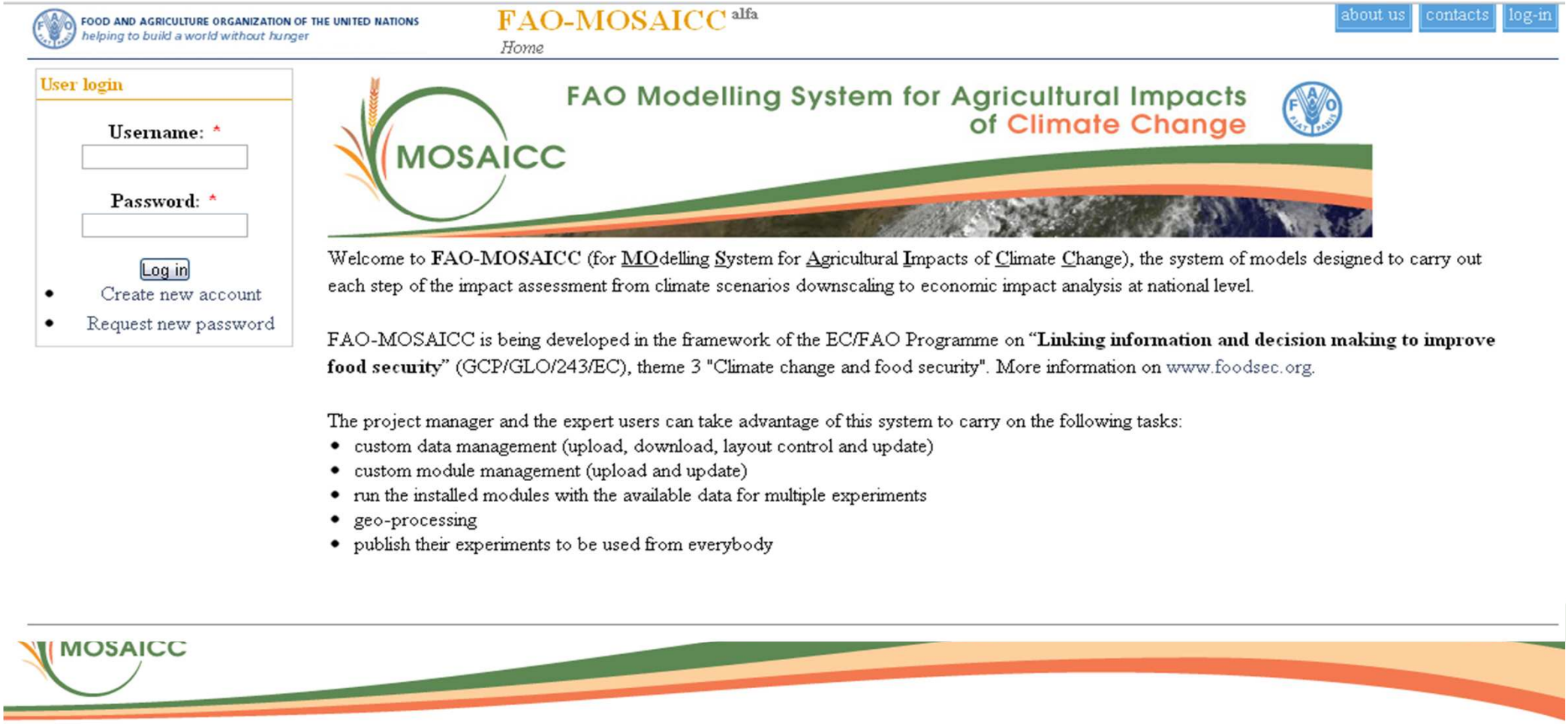
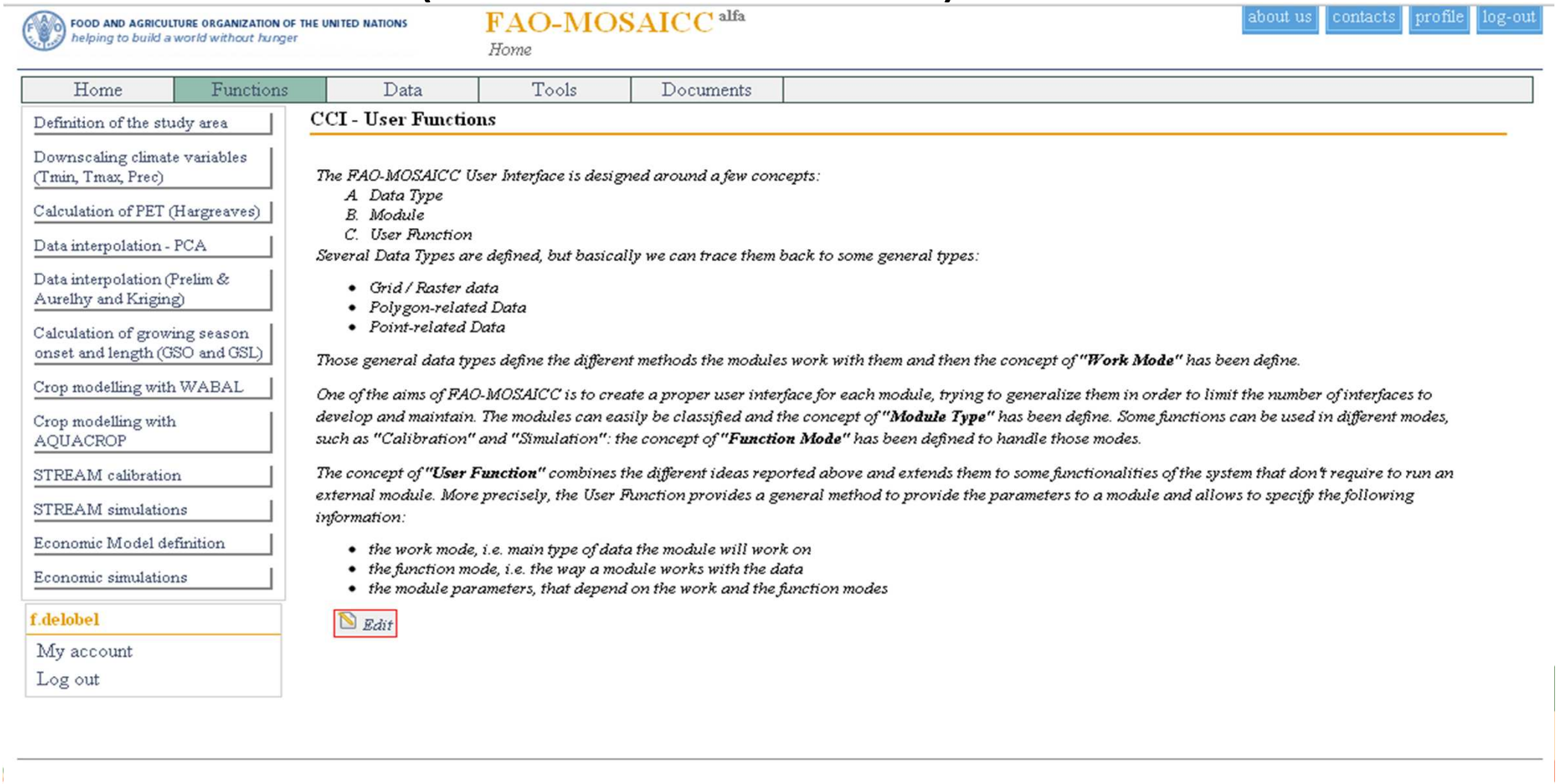
Interfaces

- Home page – log-in



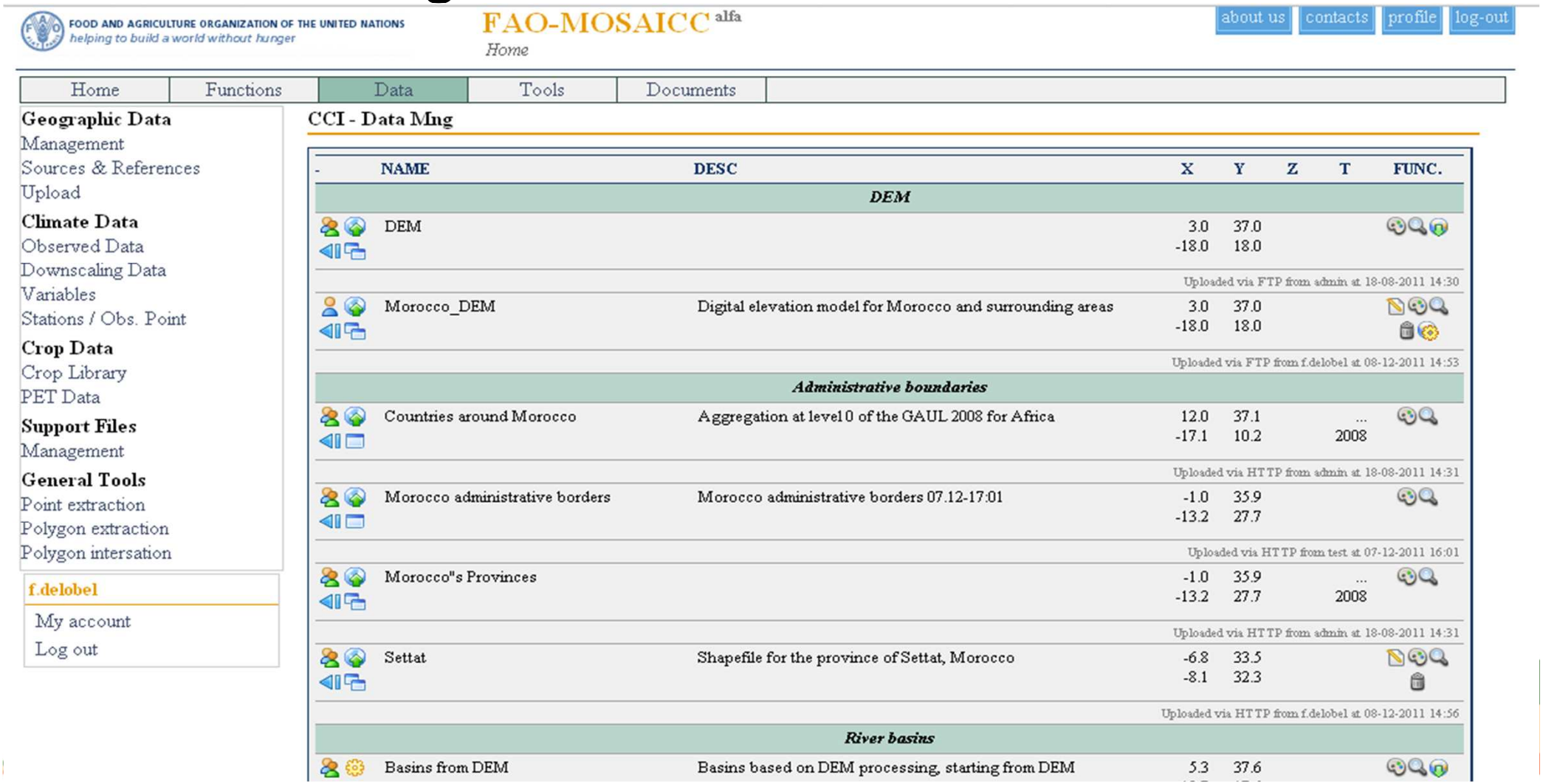
Interfaces

- Functions (utilities and models)



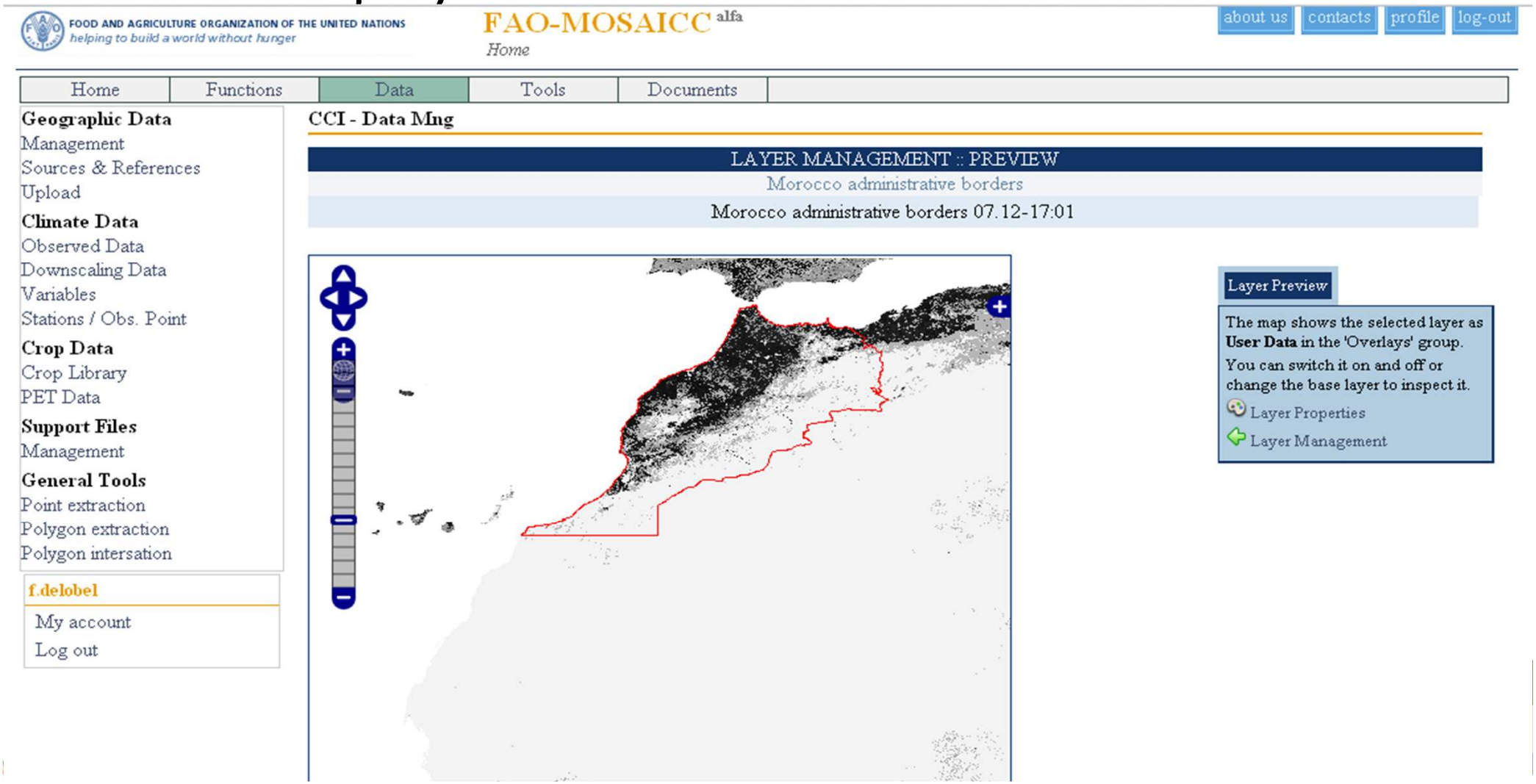
Interfaces

- Data management



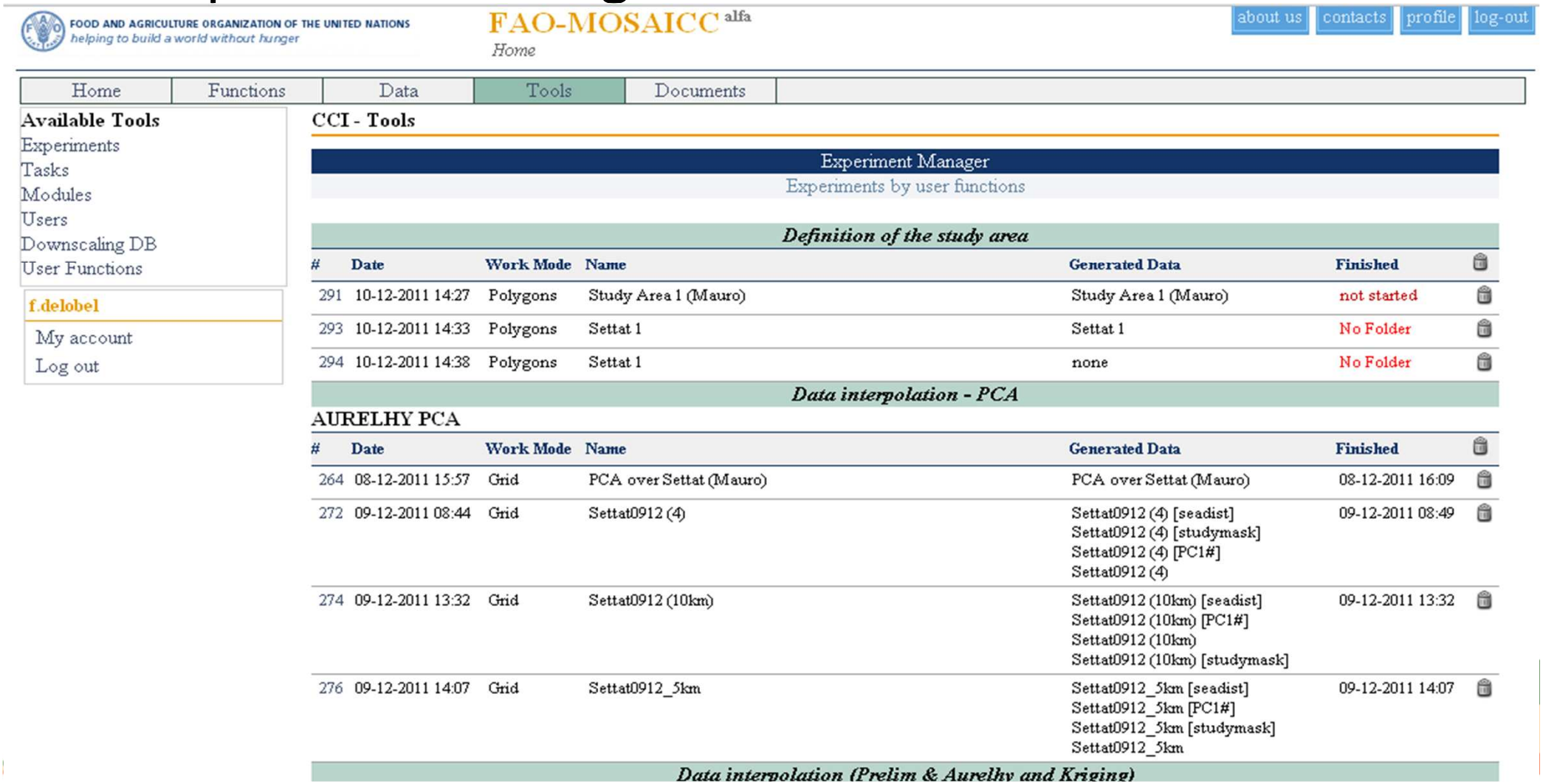
Interfaces

- Data display



Interfaces

- Experiment management



Objectives

- Capacity development tool for
- Assessing climate change impacts on agriculture at national level (trends)
- By national experts (ministries, universities, research institutions)
- Using own data
- In a perspective of decision support

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Advantages

- Participatory approach
- Remote access
- Nothing to install (web browser)
- Easy data exchange
- Low computing time
- No data format or unit conversion
- Data tracking down the flow

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Advantages

- Replicability/ study comparison
- Modularity and substitution
- Maintenance needed but no licensing cost

Open questions

- Study design
  - Model underlying assumptions and level of abstraction
  - Consistency
- Calibration, validation and error propagation

- Need for tests

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Current status

- MOSAICC v.0.1 is being installed in Morocco and in the Philippines
- These pilot experiences comprise:
  - server and software installation
  - constitution of a working group of national experts
  - trainings
  - tests of the models and conduction of an impact study at national level
- These experiences will serve as references for future implementations

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Thank you for your attention

- Info:
  - www.fao.org/climatechange/mosaicc
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- Partners

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