

# ISIM-MAMS Interface: An Introduction and Real-Time Simulations

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# Outline

- Introduction
- Using ISIM-MAMS
- Real-Time Simulations

# Introduction

- The purpose of developing an interface for MAMS is to make MAMS user-friendly.
- The combined program, consisting of the underlying MAMS program and the MAMS interface is referred to as ISIM-MAMS.
- ISIM-MAMS is being developed as a plug-in for Excel 2007
  - the user can define and run MAMS simulations in the Excel 2007 environment, without directly running GAMS

# Using ISIM-MAMS

- When doing simulations using ISIM-MAMS, the user has to
  1. open Excel 2007
  2. open an existing ISIM-MAMS application or create a new application
    - an application is associated with a country-specific dataset
    - the user can select to work with the Core or MDG version of MAMS
  3. select the ISIM-MAMS tab
    - opens a ribbon with MAMS-specific buttons

# Using ISIM-MAMS – cont.

- When doing simulations using ISIM-MAMS, the user has to – cont.
  4. define and/or run one or more scenarios
    - a base scenario and one or more policy scenarios
    - to run MAMS, the user has to click on the “Run” button on the MAMS Interface ribbon
  5. access MAMS results inside the Excel file
    - pre-defined tables
    - pre-defined graphs
    - raw results

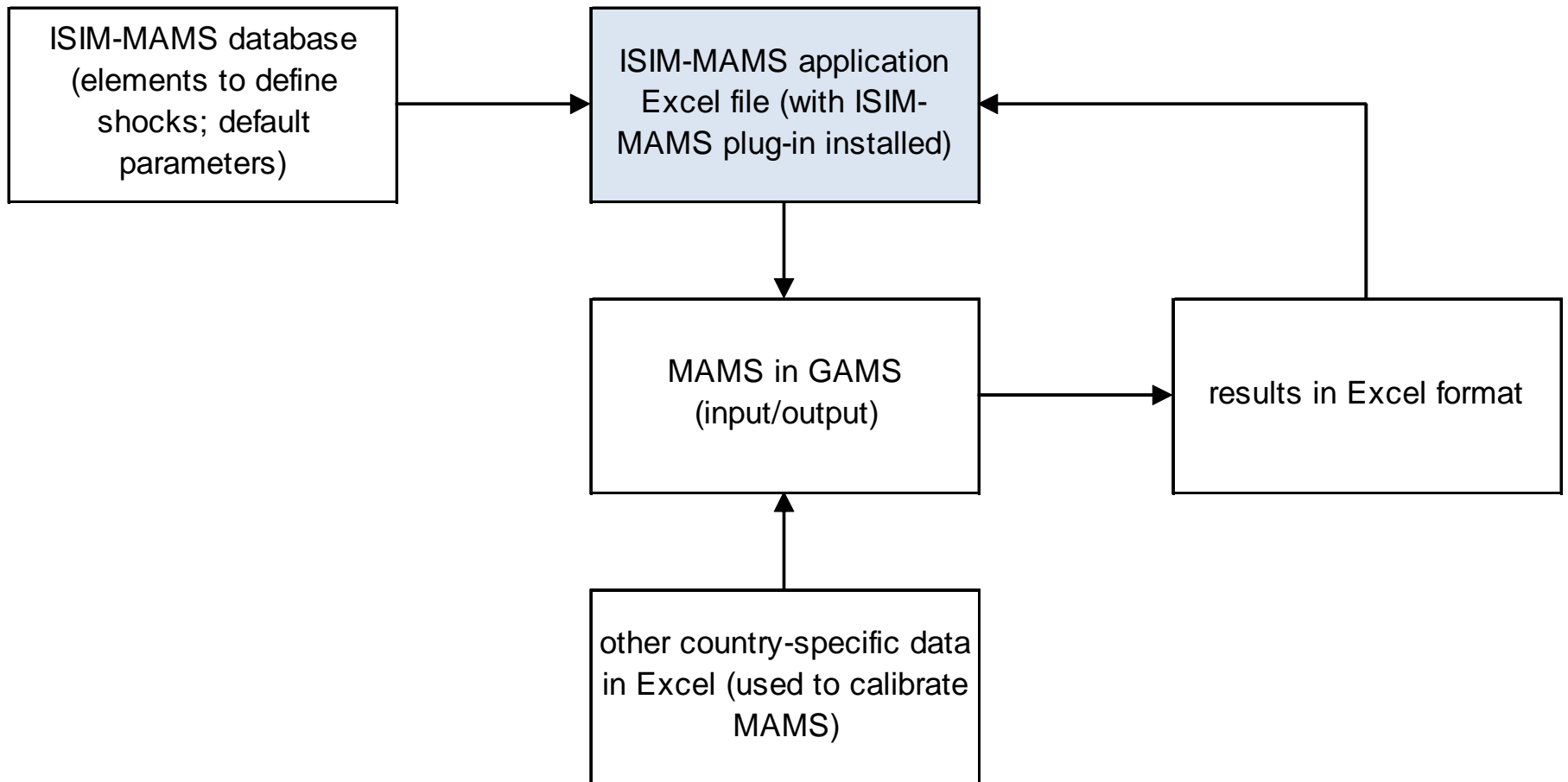
## Using ISIM-MAMS – cont.

- The MAMS Interface is connected to a database that stores, among other things, data elements that are specific to the country dataset and that may be needed to define scenarios
  - set elements
    - commodities, activities, factors, institutions, etc.
  - default elasticities and closure and rules/policies elements
    - these can be re-defined using ISIM-MAMS

# Using ISIM-MAMS – cont.

- The user-defined scenarios are saved as part of the ISIM-MAMS application Excel file.
- ISIM-MAMS allows changes in and creation of application datasets. In addition,
  - an “Expert Mode” permits the addition of new country datasets
  - advanced users can change these datasets and the MAMS code by editing relevant files in the MAMS folder

# ISIM-MAMS Software Organization





# Installing ISIM-MAMS

- The ISIM-MAMS software is distributed as a zip file that contains a setup file
  - to install the software, unzip the file isim-mams-setup.zip and run the file setup.exe; an ISIM-MAMS tab will be added to Excel 2007
- In case the installation process detects the presence of an older version of ISIM-MAMS, the installer will stop and will ask the user to uninstall the previous version before proceeding.

# Simulation Parameters

- The shocks are grouped in different Excel sheets according to their category
  - external
    - world price of exports and imports, FDI, borrowing
  - total factor productivity
  - demographic
    - population and growth in non-capital factors – only for the Core version of MAMS
  - MDG targeting
    - only for MDG version of MAMS

# Simulation Parameters – cont.

- The closure and rules/policies selection includes the following elements:
  - government
  - savings-investment
  - factor markets
  - government spending
    - growth rates, GDP shares, absorption shares
  - government receipts – including foreign transfers
    - growth rates, GDP shares, absorption shares
  - non-government payments
    - transfers, borrowing, investment, others

# Computer Presentation

- getting help on ISIM-MAMS
- getting help on MAMS
- ISIM-MAMS configuration
  - GAMS executable
  - MAMS-in-GAMS folder
  - reports (period, tables, order)
  - MAMS Poverty Module
- create a new ISIM-MAMS application
- restart an ISIM-MAMS application

# Computer Presentation – cont.

- model setup – implies the selection of
  - version (Core/MDG)
  - simulation period
  - elasticities – contextual help
  - closure and rules/policies – contextual help
  - the MAMS Poverty Module
- using the Navigation Tree
- run pre-programmed reference scenario
  - validation of user input

# Computer Presentation – cont.

- define simulation scenarios (base + others)
  - scenario manager
    - create and edit simulations (e.g., rename scenarios)
  - adding shocks – hide/unhide
  - selecting closure and rules/policies
  - view the summary report of closures and shocks
- run simulations
  - validation of user input
- view log and/or listing files
  - capturing GAMS errors
- view MAMS results
  - macro reports
  - meso reports
  - graphics in the dashboard

# Example Simulations

- As an example, we will use the Uganda dataset to conduct the following simulations:
  1. inspect the SAM and other data
  2. increase in the world price of agricultural products – using MDG version of MAMS
    - 20% during 2011-2015
  3. (1) + targeting of MDG 2
    - use government consumption of c-edup as policy tool
  4. increase in foreign aid channeled to the financing of public infrastructure (roads)
    - foreign transfers increase to 10% of GDP during 2011-2015
  5. targeting of MDG 2, 4, 5 and 7 using different financing mechanisms

# Show and Analyze Results