

Result replication instructions: How achievable are human development SDGs on our current path of development?

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International Futures (IFs) is a tool for thinking about long-term country-specific, regional, and global futures. IFs integrates forecasts across different sub-models, including: population, economy, agriculture, education, energy, sociopolitical, international political, environment, technology, infrastructure, and health. The interconnection of these sub-models allows IFs to simulate how changes in one system lead to changes across all other systems.

These instructions will help you download and run scenarios that reflect work done in this study. If you would like additional information on specific result replication please direct requests to pardee.center@du.edu.



Contents

Specific instructions

Necessary files

General Instruction

- How to install IFs

- How to run individual scenarios

- How to save a model run as a new scenario

- How to add variable lists from a transmission file

- Visualizing results

- Sample results

Relevant Documentation

Specific instructions

1. Download model and all supplementary files (see below)
2. Install IFs
3. Add new display lists to IFs (see below)

4. Run the scenarios (see below)
5. Save the model run (see below)

Necessary files

IFs Model: [Link to download IFs \(version 7.32\)](#)

Variable display lists: [Link to download display list transmission file](#)

General Instruction

How to install IFs

Requirements for installing and running IFs on your computer can be found on our website [here](#). Requirements and instructions on installing IFs on a Mac can be found [here](#).

After downloading IFs (as a zipped folder), you will need to extract all the files from the zipped folder. Then double-click 'IFsSetupStarter'. This should initiate the installation. After installation, go to 'Start' and select 'IFs' from the list of programs to run IFs.

How to run individual scenarios

Select 'Scenario Analysis' on the top left corner of the IFs home screen. Select 'Quick Scenario Analysis with Tree' from the dropdown menu. This will take you to a new interface that allows for scenario construction as well as the ability to load pre-made scenario files. The SSPs are all pre-made and loaded in the 7.32 version of IFs. To load SSP2 select 'Add Scenario Components' from the header. Select SSP2 using the following path:
World Integrated Scenario Sets > SSP scenarios > SSP2Final

Follow the path by clicking '+' to expand the sections.

After the scenario is selected, click 'load'. Select the 'Run Scenario' option. You will be asked if you want to process the parameters in the tree and proceed to running the scenario. Click 'yes'. This may take several minutes.

A screen will load and the user will be prompted to enter the run year, or the time horizon of the projection. Select 2100. Select 'Start Run.'

For more information on running scenarios in IFs, please [click here](#).

How to save a model run as a new scenario

After selecting the 'SSP2Final' scenario and running the model to 2100 (instructions above), you will need to save this model run so that you can view later. After the model has run to 2100, click 'Run Successful - Click to Continue'. This will take you back to the homescreen of IFs. Select 'Scenario Analysis' from the header, then select 'File Management' and then select 'SAVE working file as...'. Chose a name for this model run, probably something like 'SSP2'.

How to add variable lists from a transmission file

To add a new variable list you will need the proper transmission file, which should be found with all necessary replication files. From the IFs homepage, select the 'Display' tab and the 'Flexible Display' sub-option from the dropdown. From this Flexible Display screen select the List Features tab, the Exchange List sub-option, and the Import Lists command. From here select the desired transmission file and the proper variable list and click import. The proper lists may now be found in the Flexible Display. For more information on the use of display lists, please click [here](#).

Visualizing results

There are many ways to visualize Base Case and scenario results in IFs. The Flexible Displays allows a user to display a wide variety of projected variables (sometimes in combination with historical data series), create graphs and view tables of these displays. This display also allows the user to compare results across countries, groups, and scenarios. Not all of the variables available in IFs can be found in Flexible Displays; its purpose is to provide users with access to commonly used variables. If you wish to access the full range of variables and parameters, you can do so in Self-Managed Displays. For more information on using Flexible Displays, click [here](#) and for more information on self managed displays, please click [here](#).

Sample results

The following instructions will produce a table of results for the nine SDG outcome variables across the five scenarios described in this study. After completing the above steps, go to "Displays" followed by "Flex Display" in the main menu. In the subsequent window's menu bar, choose "Geography Options" and toggle "Using Groups." Navigate to "Development" under the display category menu, then select the display "SDG Outcome Variables." Next, under the geography menu, scroll down and select "World." Choose a horizon of 2050, and then select "IFsBase" and "SSP2" (or whatever you saved your model run as). Finally, click on "Table" at the bottom left of the window. IFs should now display the desired output table.

Relevant Documentation

IFs training manual: [Link to IFs Training Manual](#)

IFs scenario guide: [Link to IFs Scenario Guide](#)

Model documentation: [Link to all documentation](#)

Relevant code: [Link to all code](#)

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