- WITS Analytical Tools: SMART

ARTNet Capacity Building Workshop for Trade Research

Phnom Penh, Cambodia

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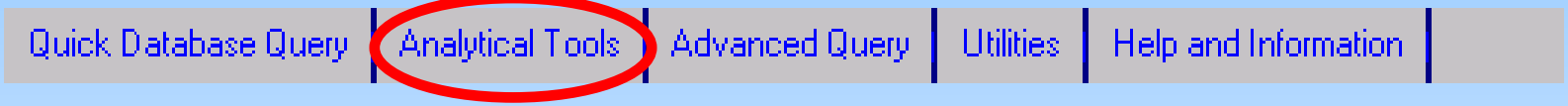
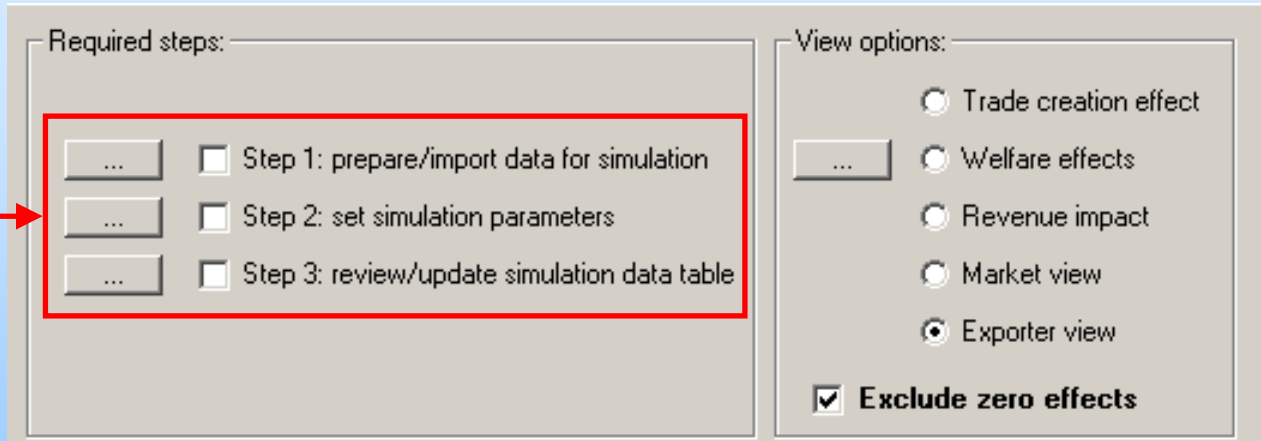
Analytical Tools: SMART



- SMART:
  - Simulates the partial equilibrium impact of a tariff reduction for a single market
  - Can't easily capture the effects of a full round of tariff negotiations (since one market at a time)
  - Largely used to simulate the impact of preferential trade agreements (EPAs, bilateral etc.)

SMART

- A 3 step process:
  1. Prepare or import data for simulation
  2. Specify the simulation parameters
  3. Review or update the data (optional)

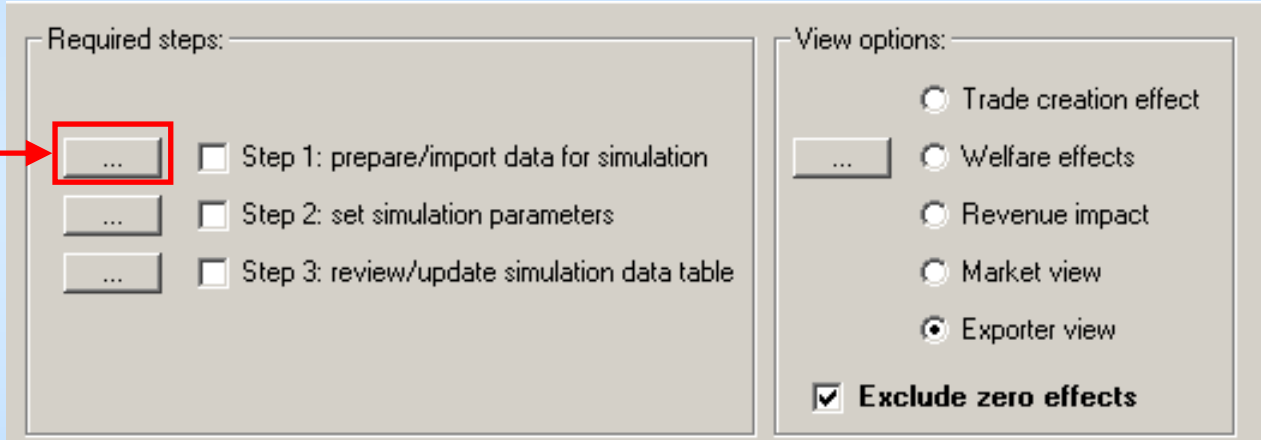


SMART: Example Scenario

- Consider USA grants a free trade agreement (FTA) to El Salvador, Guatemala and Honduras on chapters 61 and 63 (Textile products)
- Let's look at the consequences on:
  - The beneficiaries exports to USA
  - The trade creation, tariff revenue and consumer surplus for USA
  - Pakistan exports to USA on these chapters

SMART: Dataset Definition

Click on the button corresponding to Step 1 to define the dataset

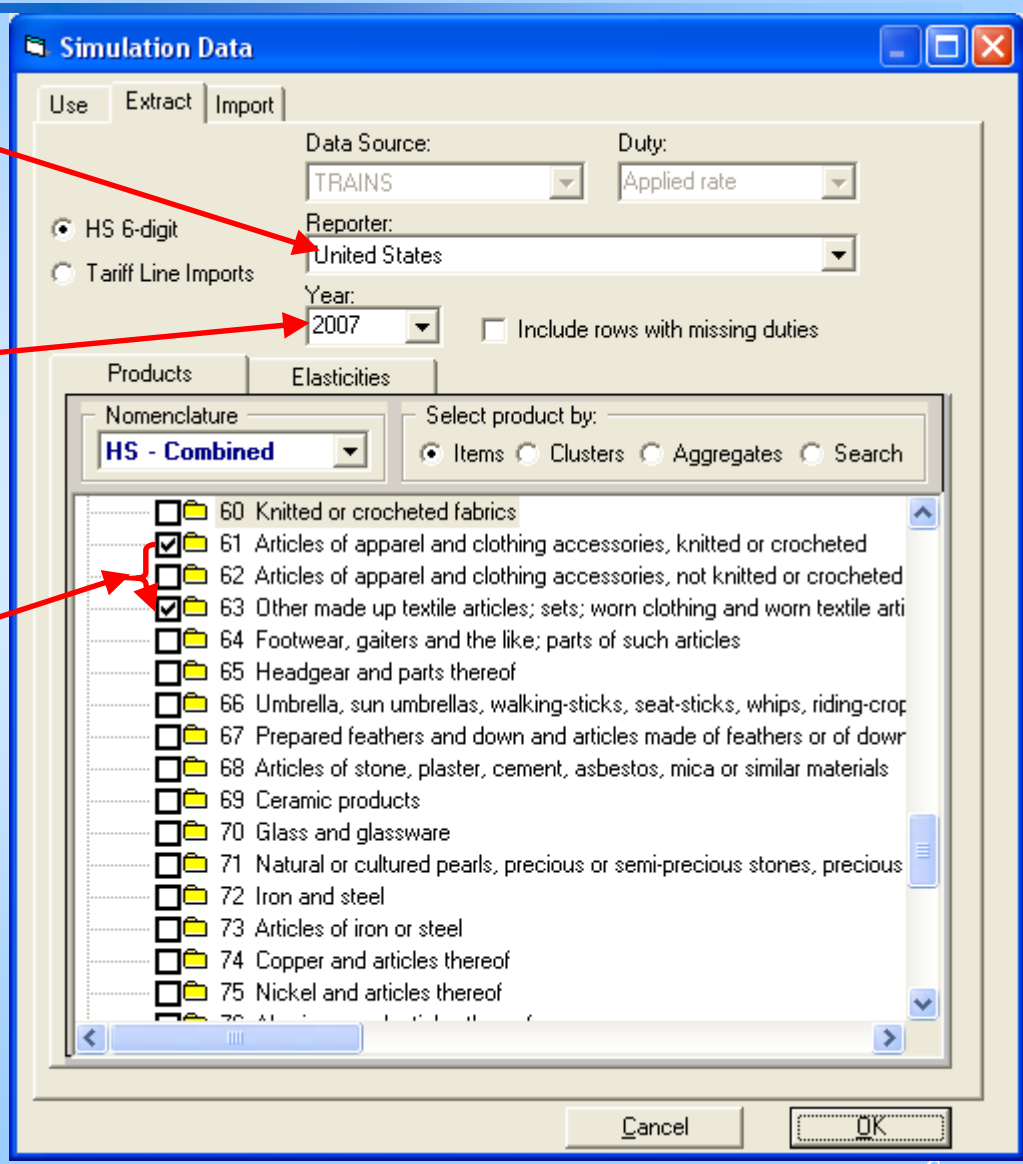


SMART: Dataset Definition

Choose the importing market on which a tariff cut will be applied

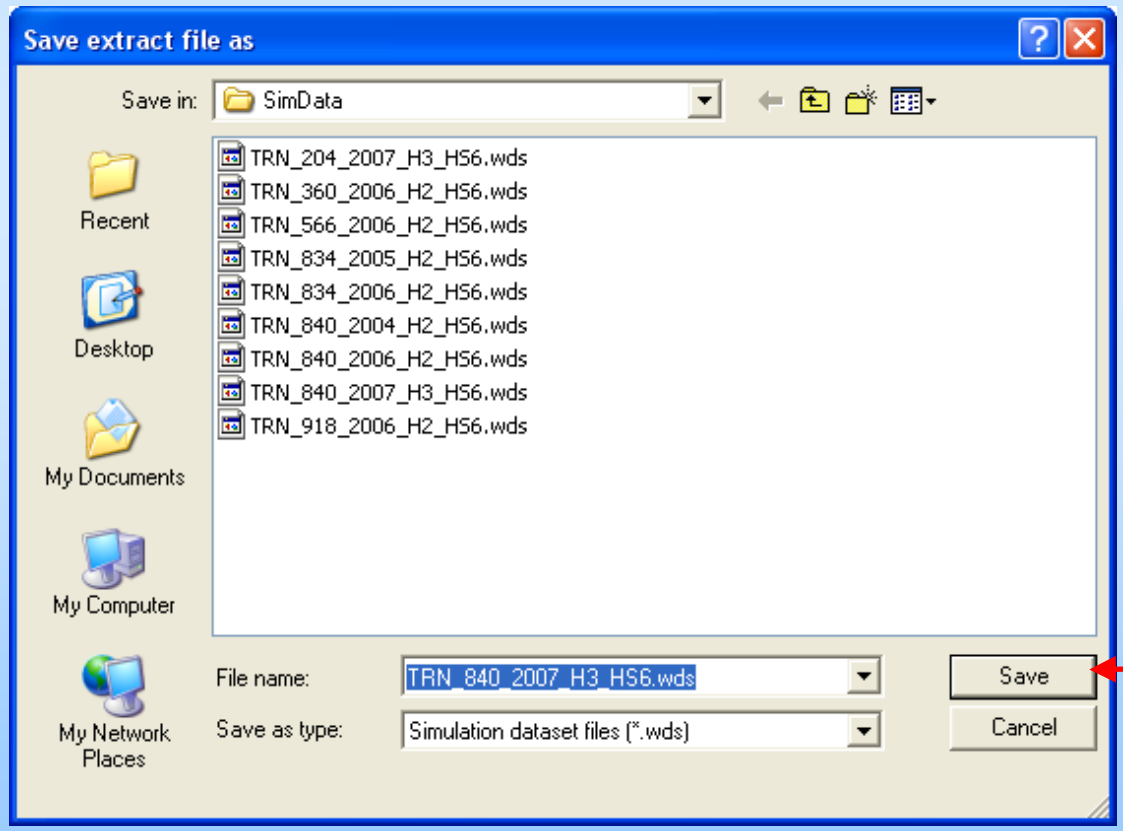
Choose a year

Choose the product categories on which simulation will be applied. Output report will display information at the most detailed level (6 digits or Tariff line level)



SMART: Dataset Definition

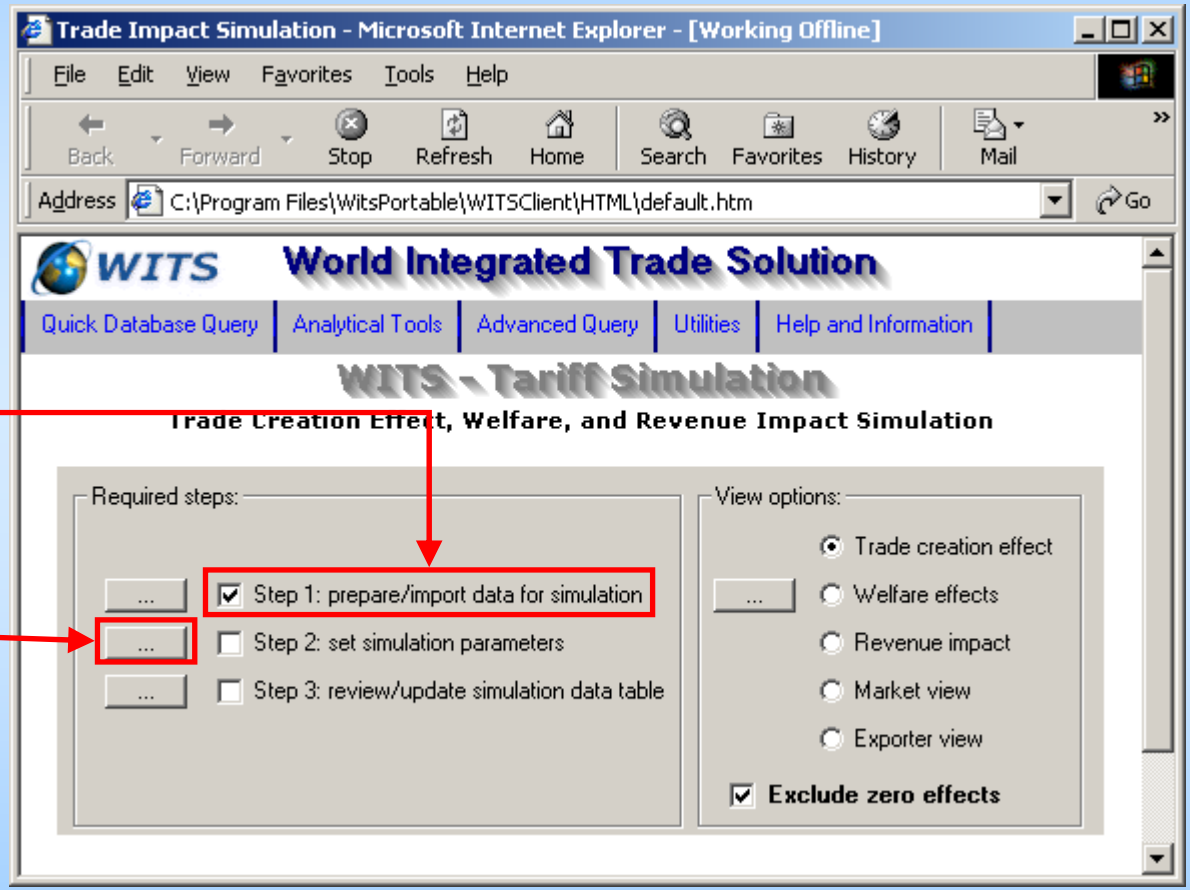
Save the dataset. You can reuse it later to apply new cut parameters.



SMART: Dataset Definition

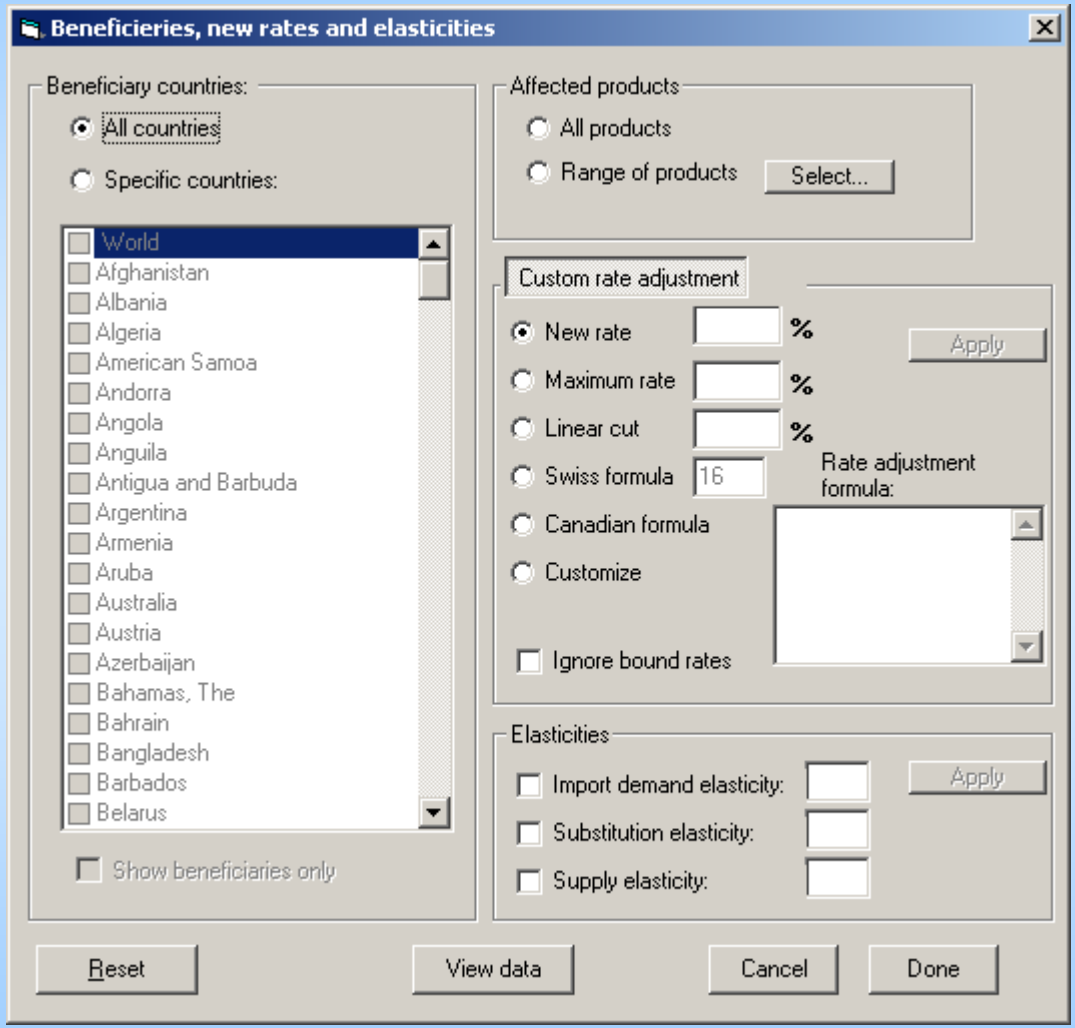
Step 1 is now completed as indicated by the checked box

We can now go for step 2 by clicking on this button



SMART: Simulation Parameters

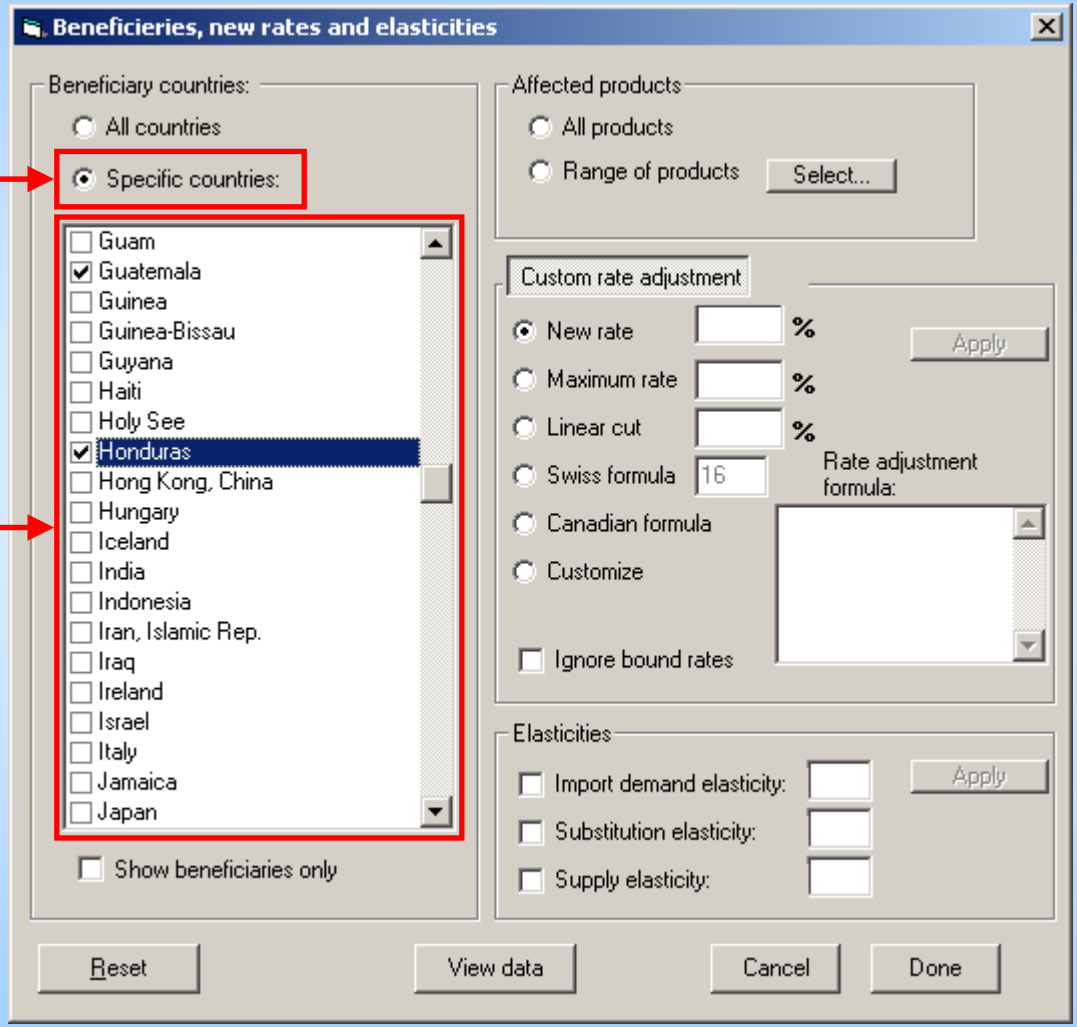
Here we are going to specify tariff cut, affected products as well as beneficiaries



SMART: Simulation Parameters

Here we are going to specify tariff cut, affected products as well as beneficiaries

Click on Specific countries to get access to the country selection panel and select beneficiary countries

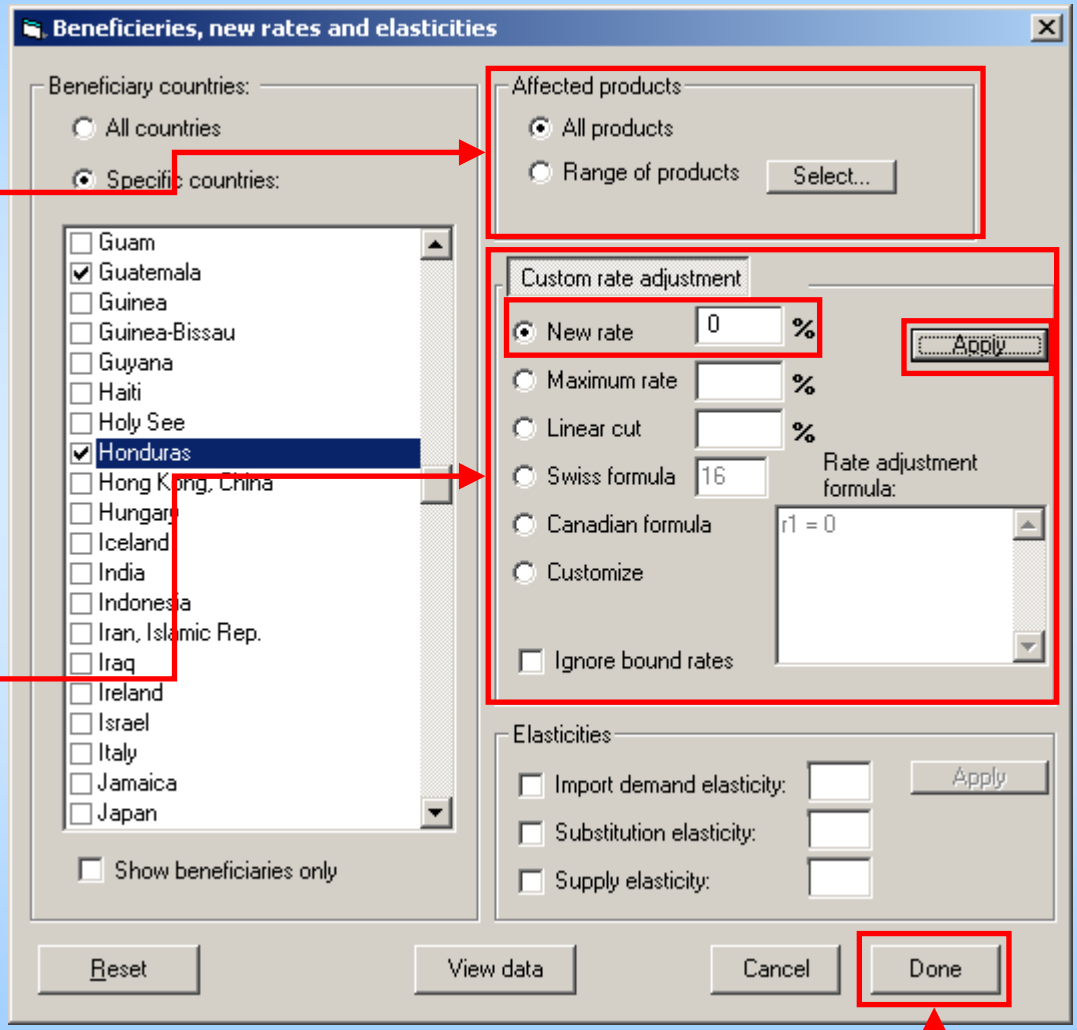


SMART: Simulation Parameters

Affected products can be either all previously selected products in the dataset or only part of them. Here we choose to apply the tariff cut to all.

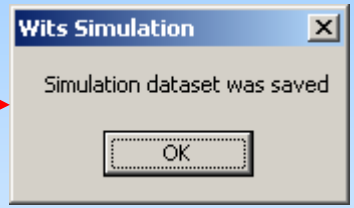
Finally, we specify the cut type from the Custom rate adjustment panel. Here, since we consider a FTA we fix the new rate at 0.
We next click on Apply to confirm the adjustment.

Click on Done when all parameters are set.



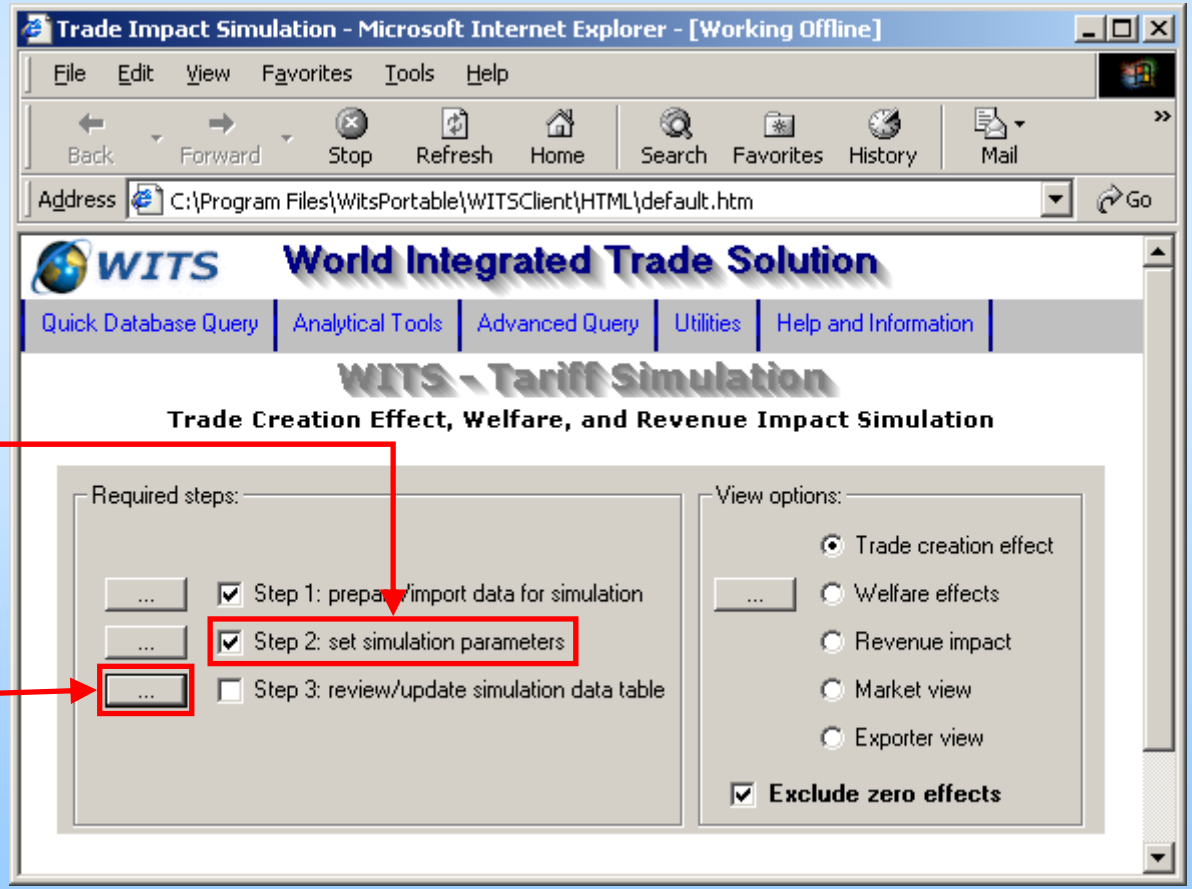
SMART: Simulation Parameters

WITS acknowledges the parameter definition



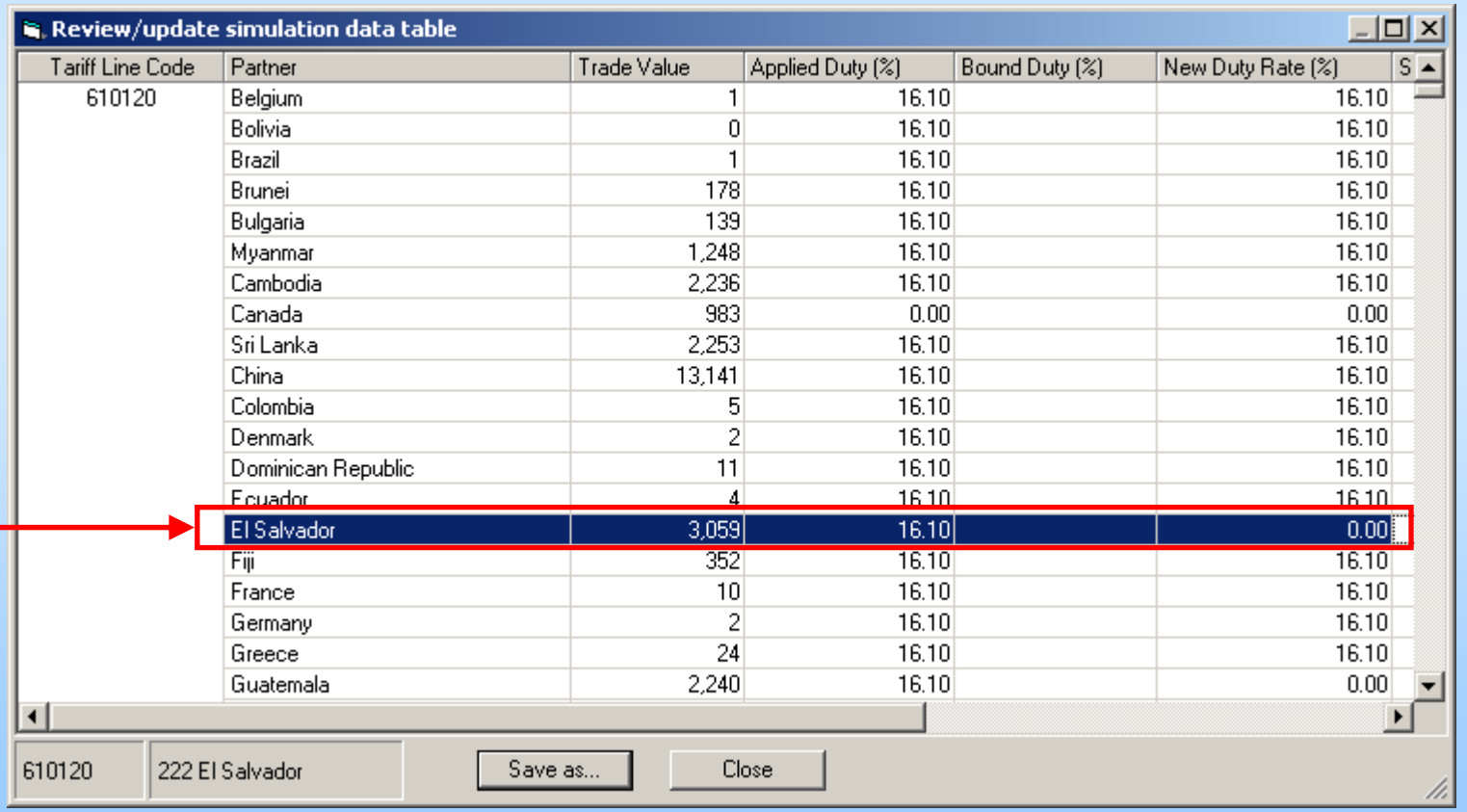
Step 2 is now completed as indicated by the checked box

Click this button to display the data table (Step 3 is optional)



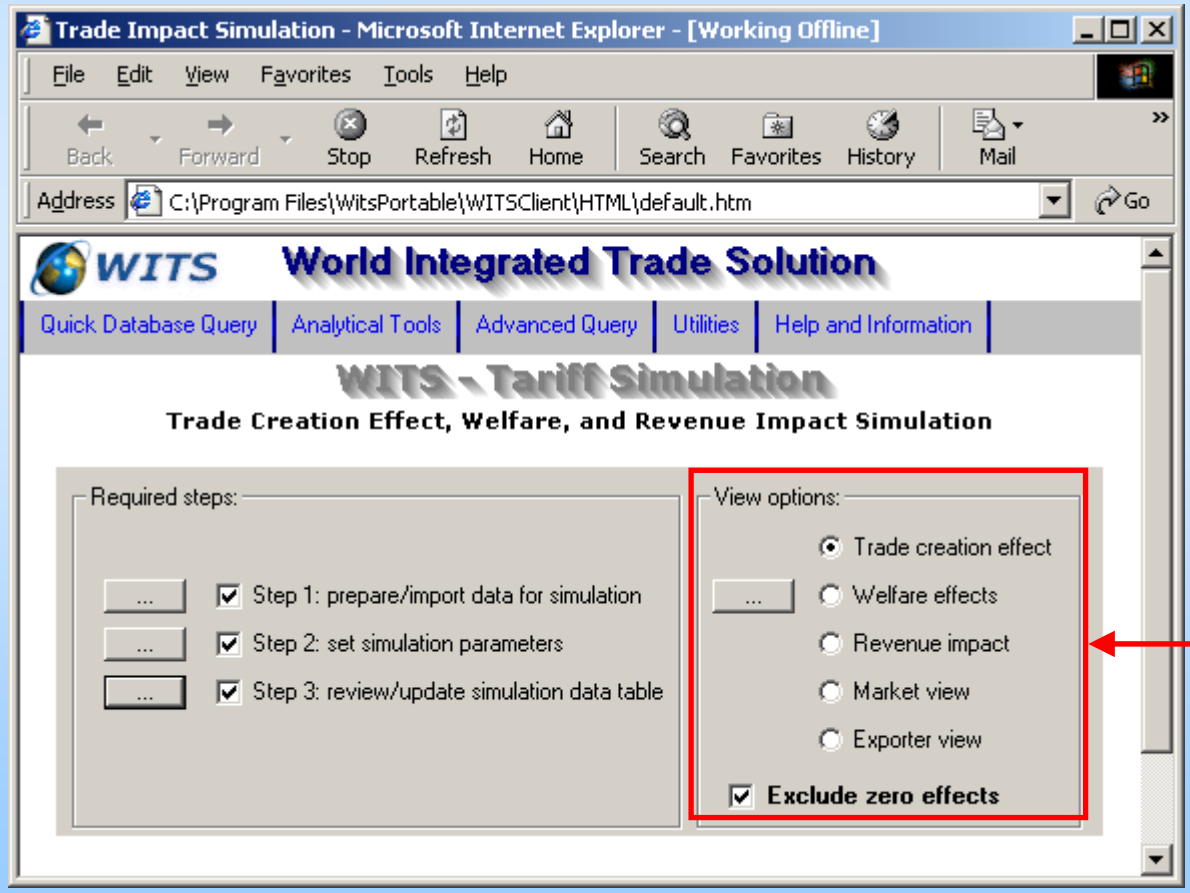
SMART: Review Simulation Data Table

This window allows to control that the parameters are properly set. Here we can see that tariff for El Salvador is indeed cut to 0.



SMART: The Results

Results of the simulation are displayed using the View Options panel.



SMART: The Results

- Through a set of 5 output reports, WITS provides the following results:
  - Trade Total Effect composed of:
    - Trade Diversion Effect
    - Trade Creation Effect
  - Pre and Post Exports by Partner
  - Pre and Post cut average duty rate
  - Consumer Surplus (Welfare)
  - Tariff Revenue effect
  - Price effect only if one uses a non infinite Supply elasticity (infinite by default in SMART)

SMART: Comments

- Preferential tariff reduction (free trade areas, customs unions, bilateral agreements) diverts trade away from countries not enjoying preferences
- When most efficient producers are part of the FTA, preferences may, on balance, create new trade

SMART: Exercise

- Consider USA offers a free trade agreement (FTA) to Cambodia on textile (HS chaps 61, 62 and 63)
- What would be the potential gains for Cambodia
- What would be the most benefiting products

SMART: Exercise

- Same exercise as above but with Australia