

Overview of sensitivity simulation input files

Instructions: In order to select sensitivity simulations, open “data/excel_data/model_setup.xlsx”, and change the simulation type entry to “sensitivity” and the simulation number to one of the file numbers listed below.

Baseline and counterfactual tests:

File no.:	Sensitivity simulated:	File / code adjustments:
1	Baseline	none
2	No Refugees	misc/refugee_counterfact=yes
37	No Tanker Market	tanker/max_tanker_sale_distance=0

Inter-modular interactions:

File no.:	Sensitivity simulated:	File / code adjustments:
4	GW Drawdown Response +10%	gw/gw_response_factor=1.1
5	GW Drawdown Response +100%	gw/gw_response_factor=2
6	CWA Allocations to WAJ +10%	cwa/cwa_waj_factor=1.1
7	WAJ Deliveries to Governorates +10%	waj/waj_gov_factor=1.1
8	SWAT Inflows -10%	sw/inflow_factor=0.9
9	SWAT Inflows -100%	sw/inflow_factor=0.5
10	Household Demand Curve +10%	hh/demand_factor=1.1
11	Commercial Demand Curve +10%	co/demand_factor=1.1
12	Wastewater Effluent +10%	ww/ww_factor=1.1
13	Evaporation +10%	sw/evap_factor=1.1
14	Evaporation +100%	sw/evap_factor=2
15	Highland Farmer Reservation Price +10%	farms/price_factor=1.1
16	Highland Farmer Quantity Offer +10%	farms/offer_volume_factor=1.1

Scenario inputs:

File no.:	Sensitivity simulated:	File / code adjustments:
17	Population +10%	hh/population_factor=1.1
18	Population +50%	hh/population_factor=1.5
19	No. of Commercial Establishments +10%	co/population_factor=1.1
20	Crop Prices +10%	farms/crop_price_scenario=CP13
21	Crop Prices +100%	farms/crop_price_scenario=CP14
22	Transportation Energy Prices +10%	tanker/transport_cost_factor=1.1
23	Transportation Energy Prices +100%	tanker/transport_cost_factor=2
24	GW Energy Prices +10%	farms/energy_price_scenario=EP05
25	GW Energy Prices +100%	farms/energy_price_scenario=EP06
26	Income +10%	hh/income_factor=1.1
27	Income +50%	hh/income_factor=2

28	GW Capacity Reduction Threshold	gw/gw_reduction_start=0.5
29	Refugee Wave	rf/refugee_remigration_type=1; ind_remigration_factors adj remigration_factors_1
30	Representative Concentration Pathway (RCP) 8.5	sw/rcp='rcp 8.5'; farms/rcp_choice=8.5
31	Shared Socio-Economic Pathway (SSP) 3	human/ssp_selection=3
38	Crop Price Increase	farms/crop_price_scenario=CP02

Intervention inputs:

File no.:	Sensitivity simulated:	File / code adjustments:
32	Include RSDSC Phase 1 and Phase 2	sup_int
33	Include Technical NRW Reduction	ind_nrw_reduction adj tech_nrw_reduction
34	Higher Water Tariffs	ind_hh_tarriff_structures add 2nd 2016
35	Ag to Urban GW Transfer	gw_abstr_scenario='GW01'; sup_int ag-urb on
36	Reduce Supply Duration Disparity	misc/supply_hours_equal='yes'