

EBS & MAED

Hands-on 6: Entering Input Data

Learning outcomes

By the end of this exercise, you will be able to:

- 1. Enter Base Year Data
- 2. Enter Scenario Data
- 3. View Results

Activity 1: Adding Base Data

In the previous hands-on, we configured the model structure. All the input and output data tables now correspond to the defined structure. The model is now ready to be loaded with input data.

Input data are usually entered in two phases. The first phase involves reconstructing the base year. The second phase involves entering scenario data. The scenario data are input data with the assumptions about future years.

When phase one is completed and the reconstructed data for the base year are entered, it should not be changed. To test other scenarios, we need only repeat phase two and enter new scenario data based on new assumptions about future years.

We shall practise this procedure by entering some demonstration data in the two phases described above. We shall first create a copy of Demo MAED 1 and rename it Demo MAED 2. This will have the same structure as the case Demo MAED 1, because it is a copy of it. However, we shall change the planning period to practice adding new data. Change the planning years to "2030,2035,2040", as shown below. Because this is a new planning period, all input data should now be zero. This is done to avoid conflicts with the demo case data.

In this example, 2030 is our base year so we will assume we have fast-forward into the future and 2030 is a year in the past for which we have input data.

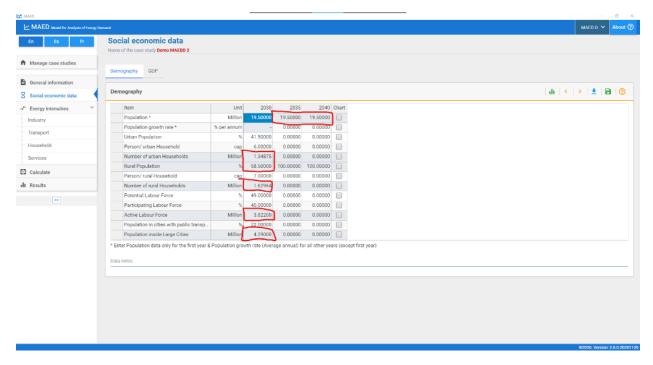
MAED Model for Analysis of Energy	Demond	MAED D 🛩	About
En Es Fr	General information Name of the case study Demo MAEDD 2		
Manage case studies	Definitions (name, years, description)	Units	8
General information	Name of the case study	Population	
Social economic data	Demo MAEDD 2	Thousand Million	
Energy intensities ~	Vests 2030.2035.2040	COP Million [109] Billion [109] US Dollar US Dollar	
Industry Transport	Case description	Transport Pessenger (pkm)	
Household	The data used in this demonstration case correspond to a hypothetical scenario for a hypothetical country.	Million [10"] Billion [10"] Trillion [10"]	
Services	They are there only for illustration purposes and will need to be replaced by actual country and scenario specific data by the user of the model.	Transport Freight (km) Million (10*) Million (10*) Trillion (10**)	
Calculate		Energy unit	
Results		GWyr PJ Tcal Mtce GBTU	
	A		
	Sectors & Clients		8
	Agriculture Construction Mining Manufacturing Energy Service Household Transport		
	0	Specific Electricity Thermal use Hower use	
	Farming	0 0 0	

Let us start with entering the data for demography. As the base year is 2030, we must only enter data in the white cells for that year. Enter the data given in the screenshot below. Don't forget to click the Save button, every time you change data.

A Manage case studies	f the case study Demo MAEDD 2 graphy GDP						
General information							
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Energy intensities ~	ltem	Unit	2030	2035	2040	Chart	
	Population *	Million	19.50000	19.50000	19.50000		
	Population growth rate *	% per annum		0.00000	0.00000.0		
Transport	Urban Population	%	41.50000	0.00000	0.00000		
Household	Person/ urban Household	cap	6.00000	0.00000	0.00000		
Services	Number of urban Households	Million	1.34875	0.00000	0.00000		
3 Calculate	Rural Population	%	58.50000	100.00000	100.00000		
	Person/ rural Household	cap	7.00000	0.00000			
II Results	Number of rural Households	Million	1.02.904	0.00000	0.00000		
\leftrightarrow	Potential Labour Force	%	49.00000	0.00000	0.00000	_	
	Participating Labour Force	%	40.00000	0.00000	0.00000		
	Active Labour Force	Million	3.82200	0.00000			
	Population in cities with public transp	%	22.00000	0.00000	0.00000		
	Population inside Large Cities	Million	4.29000	0.00000	0.00000		



The data in the shaded cells should automatically be calculated. For example, the percentage of the rural population is calculated as the difference between 100% and the declared value of the percentage of the urban population.



We shall similarly introduce data for the economy for the base year. Enter the data given in the screenshot below in the GDP and Distribution of GDP by subsectors tables.



Cn Cn Fr Social economic data Namee of the case study Beno MAEDO 2 Manage case studies Demography General information GOP Social economic data Interm ** Energy intensities Industry GOP Transport Household Sorvices ColP growth rate Sorvices Calculate Manufacturing Sport Sectorial shares of GOP 245000 Manufacturing Sport Sectorial shares of GOP 235000 Manufacturing Sport Basedia Sport Sectorial shares of GOP 245000 Manufacturing Sport	En Is IP Social economic data Name of the case study Demo MAEDO 2 Manage case studies General information Social economic data	MAED						_
Manage case studies Name of the case study Demo MAEDO 2 General information Demography GDP Social economic data Intern Uss 2030 2035 2040 Chart Industry Transport GDP It<	Alter of the case study Been ALEO 2 Annage case study Correct Information Concert Information Con	MAED Model for Analysis of Energy Dem	and					
Manage case studies Demography GDP General information GDP Social economic data Industry Industry GOP Services Sectorial shares of GOP Sectorial shares of GOP USS/Col Agriculture 2.24000 Agriculture 2.24000 Minning 5.50000 Manufacturing 12.00000 Manufacturing 12.00000	Manage case studied Demography GDP © encal information GDP d1 < > 1 1<	En Es Fr						
Demography GOP 6 General information 3 8 Social economic data Industry Industry 1 Industry GOP Industry Sectorial shares of GOP GOP per capita USS/Col Services Sectorial shares of GOP Agriculture 2.4 50000 Agriculture 2.4 50000 Minning 5.50000 Manufacturing 12.00000 Manufacturing 12.00000 Manufacturing 12.00000	Concert and momentation Social concome data Percegn for instantice Industry Transport Household Social concome data Social concome data Social concome data Social concome data Neurophile Social concome data		Name of the case study Demo MAEDD 2					
General information Social economic data Constrainties Industry Industry Transport Household Services Calculate Mining Mining Mining Substance Results	General Information Gop Gop	Manage case studies						
Social economic data GDP alt < > • ** Energy intensities ~ Intem Uns 2035 2040 Chart Industry COP USS Millior 33.50000 33.50000 33.50000 1 Industry Transport COP Growth rate % p.p.d 0.00000 0.00000 0 GDP gre capita USS/Grip 1.7795 1.55000 1.40932 • <td< th=""><td>8 Social consented data OP at < > 1 at < 1</td> at < > 1 at < > 1<td></td><td>Demography GDP</td><td></td><td></td><td></td><td></td><td></td></td<>	8 Social consented data OP at < > 1 at < 1		Demography GDP					
Item Unit 2030 2035 2040 Chart Industry GDP USS Millior 33.5000 35.5000 14.0932 35.5000 30.5000 35.5000 30.5000 35.5000 35.5000 30.50000 35.5000 30.50000	Best Method Million Imm Unit 2000 2005 2040 Chart Industry Transport GDP USS Million 33.50000 33.50000 33.50000 10.50000 Houseshold Sorvices 0.00000 0.0000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 <t< td=""><td>General information</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	General information						
Industry GDP US\$ Million 33.50000 33.50000 1 Transport GDP Growth rate % p.a 0.00000 0.00000 0 Transport GDP per capita US\$/Cip 1.55600 1.4932 1 Household Sectorial shares of CDP 0 0.00000 0.00000 1 Services Apricutive 2.245000 0.00000 0.00000 1 Construction 2.30000 0.00000 0.00000 1 Apricutive 5.50000 0.00000 0.00000 1 Minrig 5.50000 0.00000 0.00000 1 Ferror 5.70000 0.00000 0.00000 1	industry GOP USS Millio 33 50000 33 50000 0 00000 0 Transport GOP per capita USS Cal 1 71798 0 00000 0 00000 0 God per capita USS Cal 1 71798 1 50000 0 00000 0 0 God per capita USS Cal 1 2 30000 0 00000 0 00000 0 0 God per capita USS Cal 1 2 30000 0 00000 0 00000 0	Social economic data	GDP					
Industry GDP Growth rate S p.a 0.00000 0.00000 0 Transport GDP growth rate USS/Car 1.77195 1.55600 1.49832 0 Household Secrical shares of GDP 0.00000 0.00000 0.00000 0 Services Agriculture 0.00000 0.00000 0.00000 0 Construction 0.230000 0.00000 0.00000 0.00000 0 It Results Manufacturing 5.5000 0.00000 0.00000 0.00000 0	Tanapot GDP Growth rate % pa 0.00000 0.00000 0.0	Energy intensities ~	Item	Unit	2030	2035	2040	Chart
Transport GDP per capita USS/Cap 1.71795 1.55600 1.40922 I Household Sectorial shares of GDP I	Inanport IOP per capita USXCa 1.71758 1.5560 1.4092 Image: Construction Image: Constructio	Industry	GDP	US\$ Million	33.50000	33.50000	33.50000	
GOP per capita USS/Cap 1.7795 1.55600 1.4093 Household Sectoral abares of ODP 0 0.00000 0.00000 0 Services Apriculture 6 24.50000 0.00000 0.00000 0 Calculate Mining 5 50000 0.00000 0.00000 0.00000 It Results Manufacturing 5 50000 0.00000 0.00000 0.00000	Household Sectoria blace of COP USX/CB 1.4032 Sectoria blace of COP V 245000 0.0000 0.0000 Calculate Agriculture V 245000 0.0000 0.0000 0.0000 Mining Sectoria blace of COP V 245000 0.0000 0.0000 0.0000 0.0000 Mining V 25000 0.0000	Transport	GDP Growth rate	% p.a	-	0.00000	0.00000	
Services Apriculture 6 24.5000 0.00000 0.00000 0 3 Calculate Construction 5.5000 0.00000 0.00000 0 1t Results Manufacturing 5.5000 0.00000 0.00000 0.00000	Services Agricultare 4 24 5000 0.0000 0.0000 0 Calculate Agricultare 2 2,0000 0.0000 0.0000 0 Mining 10,0000 0.0000 0.0000 0.0000 0.0000 0 Mining 10,0000 0.0000		GDP per capita	US\$/Cap	1.71795	1.55600	1.40932	
Construction Construction 0.00000 0.00000 0.000	Construction 0.00000	Household						
3 Calculate Mining 5.50000 0.00000 0.00000 M Results Manufacturing 11.00000 0.00000 0.00000 0.00000	Calculate Mining 0.00000 0.00000 </td <td>Services</td> <td>Agriculture</td> <td>6</td> <td></td> <td></td> <td></td> <td></td>	Services	Agriculture	6				
In Results Maning 5.5000 0.0000 0.0000 0.0000 Energy 5.5000 0.0000 0.0000 0.0000 0.0000	It Results Maning 30000 0.00000 0.0	Calculate	Construction	6				-
Energy 9 5 70000 100 00000 0	Image: Service 1 570000 100.0000 100.0000 0 Service 1 44.0000 100.0000 0 0 0 *Enter CDP data for first Year & Average annual growth rate for each person 100.0000 100.0000 0 </td <td></td> <td></td> <td></td> <td>5.50000</td> <td>0.00000</td> <td>0.00000</td> <td></td>				5.50000	0.00000	0.00000	
Energy 5,70000 100,00000 100,00000	Image: Service 1 49.0000 0.0000 0.0000 0 Total 1 00.0000 100.0000 0 0 0 • Total 0 000.0000 100.0000 0	Results	Manufacturing	1				
	Service 1 40.00000 0.00000 0.00000 0.00000 * Enter GDP data for first Year & Average annual growth rate for each partoet investep 0 000.00000 100.00000			5				
Service 9 49.0000 0.00000 0.00000	Construction Sublings S		Service	9				
Total 9 100.00000 100.00000 0	Internit Unit 2030 2035 2040 Chart Agriculture Internit 100,00000 100,00000 Internit 100,00000 100,00000 Total % 100,00000 100,0000 Internit 100,00000 Internit 100,0000		Total		100.00000	100.00000	100.00000	
	Agriculture Image: Construction		Distribution of GDP by subsectors					
	Farming % 100.0000 100.0000 100.0000 I Total % 100.0000 100.0000 I<			Unit	2030	2035	2040	
Item Unit 2030 2035 2040 Chart	Total % 100.00000 100.00000 E Construction		Agriculture					
Item Unit 2030 2035 2040 Chart Agriculture Image: Chart State S	Construction Image: Construlititititititititititititititititititit		Farming	%	100.00000	100.00000	100.00000	
Item Unit 2030 2035 2040 Chart Agriculture Image: Chart State S	Buildings 5 100.00000 100.00000 []			%	100.00000	100.00000	100.00000	
Item Unit 2030 2035 2040 Chart Agriculture Image: Compare the second sec								
Item Linit 2020 2024 Chart Agriculture			Buildings	%	100.00000	100.00000	100.00000	

En Es Fr	Data notes							
Manage case studies	Distribution of GDP by subsectors						di l	< >
General information	Item	Unit	2030	2035	2040	Chart		
Social economic data	Agriculture		2000	2000	2010			
	Farming	%	100.00000	100.00000	100.00000			
Energy intensities ~	Total	%	100.00000	00.00000	100.00000			
Industry	Construction							
Transport	Buildings	%	100.00000	00.00000	100.00000			
Household	Total	5	100.00000	100.00000	100.00000			
	Mining							
Services	Metal ores	5	30.00000	0.00000	0.00000			
Calculate	Non-metal ores	9	70.00000	00.00000	100.00000			
Results	Total	9	100.00000	00.00000	100.00000			
resures	Manufacturing							
\Leftrightarrow	Basic materials	9	100.00000	100.00000	100.00000			
	Total		100.00000	100.00000	100.00000			
	Energy							
	Energy	5	100.00000	100.00000	100.00000			
	Total	9	100.00000	100.00000	100.00000			
	Service							
	Commercial and turism	9	30.00000	0.00000	0.00000			
	Public administration	%	10.00000	0.00000	0.00000			
	Finance and Buss	%	5.00000	0.00000	0.00000			
	Personal Services and others	%	55.00000	100.00000	100.00000			
	Total	%	100.00000	100.00000	100.00000			

Save the data that you have entered and click the "calculate" button from the main menu.

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MAED Model for Analysis of Energ	y Demand					
En Es Fr	Social economic data					
	Name of the case study Demo MAEDD 2					
Manage case studies						
	Demography GDP					
General information	GDP					
Social economic data	GDF					
Energy intensities	Item	Unit	2030	2035	2040	Chart
Industry	GDP	US\$ Million	33.50000	33.50000	33.50000	
Transport	GDP Growth rate	% p.a.		0.00000	0.00000	
	GDP per capita	US\$/Cap	1.71795	1.71795	1.71795	
Household	Sectorial shares of GDP					
Services	Agriculture	30	24.50000	0.00000	0.00000	
Calculate	Construction	30	2.30000	0.00000	0.00000	
	Mining	%	5.50000	0.00000	0.00000	
Results	Manufacturing	%	13.00000	0.00000	0.00000	
	Energy	%	5.70000	100.00000	100.00000	
	Service	%	49.00000	0.00000	0.00000	
	Total	%	100.00000	100.00000	100.00000	
	* Enter GDP data for first Year & Avera Data notes	ge annual growth rate fo	or each period	/timestep		
	Distribution of GDP by subsector	s				
	Item	Unit	2030	2035	2040	Chart
	Agriculture					
	Farming	%	100.00000	100.00000	100.00000	
	Total	5		100.00000		-
	Construction					
	Buildings	5	100.00000	100.00000	100.00000	

Even with the little data that we have introduced, we should be able to see some intermediate results. Clicking the calculate button should already bring you to the Results page, if not, click the results button. Now click the GDP title on the Results page. This should show subresults for the GDP. Click GDP formation by sector/subsector (absolute values).

MAED Model for Analysis of Energy	Domand	MAED D 🗸	About
En Es Pr	Results Name of the case study Demo MAEDD 2		
Manage case studies		export all result tables to	xcel
General information	1. GDP		
Social economic data	1.1. GDP formation by sector/subsector (absolute values)		
Energy intensities ~	1.2. Per Capita GDP by sector	-	
Industry	1.3. GDP formation by sector/subsectors (growth rates)	=	
Transport	2.1. INDUSTRY - Useful Energy		
Household	2.2. INDUSTRY - Energy Demand ACM		
iervices	2.3. INDUSTRY - Final Demand Manufacturing		
Calculate			
Results	2.4. INDUSTRY - Demand Industry		
0	3.1. TRANSPORT - Freight		
	3.2. TRANSPORT - Intercity		
	3.3. TRANSPORT - Urban		
	3.4. TRANSPORT - Final Demand Transport		
	4. HOUSEHOLD		
	5. SERVICES		
	6. TOTAL FINAL ENERGY Demand		

This table shows the contribution to GDP of each subsector, in the base year.

Climate Compatible Growth

Es Fr RESULTS				
anage case studies		,	1.1. GDP formation by sector/subsector (absolute values)	
neral information CHART TABLE				
cial economic data				
ergy intensities	ubsector (absolute values)	-		< > :
ustry	US\$ 10^6	2030	2035	2
Agriculture Agriculture		8.20750	0.00000	0.00
usehold Farming		8.20750	0.00000	0.00
Construction		0.77050	0.00000	0.00
Buildings		0.77050	0.00000	0.0
lculate Mining		1.84250	0.00000	0.0
isults Metal ores		0.55275	0.00000	0.00
Non-metal ones		1.28975	0.00000	0.00
Manufacturing		4.35500	0.00000	0.0
Basic materials		4.35500	0.00000	0.0
Energy		1.90950	33,5000	33.5
Energy		1.90950	33.50000	33.5
Service		16.41500	0.00000	0.0
Commercial and turism		4.92450	0.00000	0.0
Public administration		1.64150	0.00000	0.0
Finance and Buss		0.82075	0.00000	0.0
Personal Services and others		9.02825	0.00000	0.00
Total GDP		33.50000	33.50000	33.56

Let us introduce more data. We shall now introduce the energy intensities for the motive power in each subsector of the Industry. Go to the Energy Intensities for Industry page and add the data for the base year shown below. Be carefully with the energy unit, highlighted by the red box. In this case, we have kWh/US\$.

General information	no MAEDD 2 ecific Electricity El-Their Motive Power (final energy	Unit	ACM	of Energy Forr led) 2035	ns in 2040	Efficiencies in ACM Chart	Temperature level in Menufacturing	Penetration of Energy Forms in Manufacturing	h	ficiencies in anufacturing	a @
General information General informatinformation General information General informati	use Motive Power (final energy	Unit	ACM t of value add 2030	led)		ACM			h	anufacturing	a (?
	Motive Power (final energy	Unit Wh/US\$	t of value add		2040	Chart	Manufacturing	Manufacturing		-	a (?
Ferry Intensities Forery Intensities of MC Forery Intensities of MC Agriculture Transport Household Services Mining Metal ores	kW	Unit Wh/US\$	2030		2040				l di 🛛 K	> ₫	a
Ferrgy Intensities Industry Agriculture Transport Household Services Mining Metal ores	kW	Unit Wh/US\$	2030		2040						
Industry Agriculture Transport Farming Fousehold Services Mining Calculate Metal ores		wh/US\$		2035	2040						
Transport Farming Household Construction Services Mining Calculate Metal ores		_	1.50000			-					
Household Construction Services Mining Calculate Metal ores		_	11.040.00								
Services Buildings Mining Calculate Metal ores	kW					•					
Calculate Metal ores		Wh/US\$	0.10000								
						-					
Results Non-metal ores		Wh/US\$	0.30000								
	kW	Wh/US\$	0.20000								
Manufacturing Basic materials	1.00	Nh/US\$	0.15000								
Basic materials	KV	nn/uss	0.15000			U					
Data notes											



As soon as the values of the energy intensities for the motive power are introduced, some interesting results can be seen. For example, after clicking Calculate, we can see the values of the useful energy, used to produce the motive power in the Industry for the base year.

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MAED Model for Analysis of Energy De		MAED D 🗸	About ⑦
En Es Fr	Results Name of the case study Demo MAEDD 2		
 Manage case studies 		Export all result tables to e	xcel 👲
General information	1. GDP		
Social economic data	2.1. INDUSTRY - Useful Energy		
→ Energy intensities ~	2.1.1. Useful energy demand for Motive Power		ali i
- Industry	2.1.2. Useful energy demand for Electricity specific uses	==	- di
Transport	2.1.3. Useful energy demand for Thermal uses		- di
Household	2.1.4. Total useful energy demand in Industry		ale 👘
Calculate	2.2. INDUSTRY - Energy Demand ACM		
La Calculate	2.3. INDUSTRY - Final Demand Manufacturing		
e e e e e e e e e e e e e e e e e e e	2.4. INDUSTRY - Demand Industry		
	3.1. TRANSPORT - Freight		
	3.2. TRANSPORT - Intercity		
	3.3. TRANSPORT - Urban		
	3.4. TRANSPORT - Final Demand Transport		
	4. HOUSEHOLD		
	5. SERVICES		
	6. TOTAL FINAL ENERGY Demand		

En Es Fr	RESULTS			
Manage case studies	2.1. INDUSTRY - Useful Energy	* 2.1.1. Useful	energy demand for Motive Power	
General information	CHART TABLE			
Social economic data				
Energy intensities	2.1.1. Useful energy demand for Motive Power			< >
ndustry				
	GWyr	2030	2035	2
ransport	Agriculture	0.00141	0.00000	0.00
lousehold	Farming	0.00001	0.00000	0.00
Services	Construction	8,00001	0.00000	0.0
Calculate	Buildings	0.00005	0.00000	0.0
Results	Mining Metal ores	0.0002	0.0000	0.00
	Non-metal ones	0.00003	0.0000	0.00
⇔	Manufacturing	0.00007	0.00000	0.00
	Basic materials	0.00007	0.00000	0.0



It is at this point in the process that the results from the MAED model should be compared to recorded data to confirm the accuracy of the reconstruction of the base year.

Activity 2: Adding Scenario Data

Let us move on to the scenario data. We shall start with the population and other parameters of the demographic data. The base year data have already been entered. We are now going to enter data for future years; these are referred to as the scenario data.

To add population scenario data in MAED-D, we need to enter the assumed population average annual growth rates for future years.

If we do not enter any data, the model interprets the growth rate as zero and assumes that the population remains constant.

19.50000 19.3 0.0 41.50000 0.0 6.00000 0.0	.50000 19.500 .00000 0.000 .00000 0.000	00		1	h < >	± €	3 0
19.50000 19.3 0.0 41.50000 0.0 6.00000 0.0	.50000 19.500 .00000 0.000 .00000 0.000	00		1	h < >	1 1	3 0
19.50000 19.3 0.0 41.50000 0.0 6.00000 0.0	.50000 19.500 .00000 0.000 .00000 0.000	00			h < >	±	3 0
19.50000 19.3 0.0 41.50000 0.0 6.00000 0.0	.50000 19.500 .00000 0.000 .00000 0.000	00					
- 0.0 41.50000 0.0 6.00000 0.0	0.0000 0.000	00					
41.50000 0.0	.00000 0.000						
6.00000 0.0		00					
	00000 0.000						
1.34875 0.0		00					
	0.0000 0.000						
	.00000 100.000						
	.00000 0.000						
4.29000 0.0	0.000 0.000	00					
1. 49. 40. 3. 22. 4.	62964 00 00000 00 82200 00 00000 00 29000 00	62964 0.00000 0.0000 00000 0.0000 0.0000 00000 0.0000 0.0000 82200 0.00000 0.0000 00000 0.0000 0.0000 29000 0.00000 0.0000	62964 0.00000 0.00000 00000 0.00000 0 02000 0.00000 0 02000 0.00000 0 02000 0.00000 0 00000 0.00000 0 00000 0.00000 0	62964 0.00000 0.00000 0 00000 0.00000 0.00000 0 82200 0.00000 0.00000 0 90000 0.00000 0.00000 0 92000 0.00000 0.00000 0 92000 0.00000 0.00000 0 92000 0.00000 0.00000 0	62964 0.00000 0.00000 00000 0.00000 0.00000 82200 0.00000 0.00000 00000 0.00000 0.00000 29000 0.00000 0.00000	62964 0.00000 0.00000 00000 0.00000 0.00000 82200 0.00000 0.00000 00000 0.00000 0.00000 29000 0.00000 0.00000	62964 0.00000 0.00000 00000 0.00000 0.00000 82200 0.00000 0.00000 90000 0.00000 0.00000 29000 0.00000 0

Note that the growth values for each interval are the average growth rates. In our case, the values are the average growth rates over the 5-year intervals. The model calculates the total population in the future.

Columns for the years 2035 and 2040 will contain the scenario data for the corresponding parameters. For example, according to this scenario, the size of the households in the urban area will be reduced, from 6 persons per dwelling in the base year, to 5.2 persons per dwelling at the end of the study period. At the same time, the proportion of potential labour is considered constant in this scenario.

Please, enter all these data shown below.

MAED Model for Analysis of Financy Day En ES Fr	Note of the case study Demo MAEDD 2						MAED D 🗸	About
Manage case studies	Nume of the case story being marche 2							
	Demography GDP							
General information	Demography						ılı < > ≛	
Social economic data	Demography						Ⅲ ≤ ≥ ⊻	
nergy intensities ~	ltern	Unit	2030	2035	2040	art		
dustry	Population *	Million	19.50000	20.20215	20.81553			
ansport	Population growth rate *	% per annum	-	0.71000	0.60000			
	Urban Population	%	41.50000	42.70000	44 00000			
ousehold	Person/ urban Household	cap	6.00000	5.40000	5.20000			
ervices	Number of urban Households	Million	1.34875	1.59747	1.76131	2		
Calculate	Rural Population	%	58.50000	57.30000	56.00000			
	Person/ rural Household	cap	7.00000	6.50000	6.00000			
lesults	Number of rural Households	Million	1.62964	1.78090	1.94278			
0	Potential Labour Force	1	49.00000	49.00000	49.00000			
	Participating Labour Force	1	40.00000	40.00000	40.00000			
	Active Labour Force	Million	3.82200	3.95962	4.07984			
		70						
	Population in cities with public transp. Population inside Large Cities * Enter Population data only for the first year & Data notes	% Million Population grov	22.00000 4.29000 wth rate (Avera	27.00000 5.45458 age annual) fo	33.00000 6.86913 or all other yea			

We are now going to enter the scenario data for GDP growth and structure. Just like with the population, future GDP data is introduced using annual average GDP growth rates.

The data corresponding to the future GDP structure must be introduced in their respective blank cells. Enter the following data in the GDP and Distribution of GDP by Subsectors tables.

MAED								- c
MAED Model for Analysis of Energy De	amuend							MAED D 🗸 Abox
En Es Fr	Social economic data Name of the case study Demo MAEDD 2							
Manage case studies	Demography GDP							
General information								
Social economic data	GDP			-	_	~		ılı < 🔺 👱 🔂
Energy intensities *	ltern	Unit	2030	2035	2040	Chart	t	
Industry	GDP	US\$ Million	33.50000	46.98548	62.87718	Ð		
	GDP Growth rate	% p.a.		7.00000	6.00000	0		
Transport	GDP per capita	US\$/Cap	1.7179	2.32577	3.02069	0		
Household	Sectorial shares of GDP							
Services	Agriculture	%	24.50000	21.00000	18.00000			
	Construction	%	2.30000	2.10000	2.00000			
Calculate	Mining	%	5.50000	5.30000	5.20000	0		
II Results	Manufacturing	56	13.00000	15.00000	17.00000	0		
	Energy	%	5.70000	5.60000	4.80000	D		
	Service	%	49.00000	51.00000	53.00000			
	Total	%	100.00000	100.00000	100.00000			
	* Enter GDP data for first Year & Avera Data notes Distribution of GDP by subsector		in each period	Junestep				du < > 🛓 🖬 🤇
	Item	Unit	2030	2035	2040	Chart	t.	
	Agriculture							
	Farming	%	100.00000	100.00000	100.00000			
	Total	%		100.00000				
	Construction							
	Buildings	%	100.00000	100.00000	100.00000			



	ed						
Es Fr	Data notes						
fanage case studies	Distribution of GDP by subsectors						di < >
General information	Item	Unit	2030	2035	2040	Chart	1
Social economic data	Agriculture	om	2000	2000	2040		
	Farming	%	100.00000	100.00000	100.00000		
nergy intensities ~	Total	%	100.00000		100.00000		
dustry	Construction					1	
ransport	Buildings	%	100.00000	100.00000	100.00000	- The second sec	
ousehold	Total	%	100.00000		100.00000	1	
	Mining						
ervices	Metal ores	%	30.0000	40.00000	50.00000		
Calculate	Non-metal ores	%	70.0000	60.00000	50.00000		
Results	Total	%	100.00000	100.00000	100.00000	E	
neouto	Manufacturing					E	
0	Basic materials	%	100.00000	100.00000	100.00000		
	Total	%	100.00000	100.00000	100.00000	E	
	Energy					E	
	Energy	%	100.00000	100.00000	100.00000		
	Total	%	100.00000	100.00000	100.00000		
	Service					4	
	Commercial and turism	%	30.00000	28.00000	25.00000		
	Public administration	%	10.00000	10.00000	10.00000		
	Finance and Buss	%	5.00000	10.00000	15.00000		
	Personal Services and others	%	55.00000	52.00000	50.00000		
	Total	%	100.00000	100.00000	100.00000		

We shall now enter the scenario data for the energy intensities of motive power. Enter the data shown below.

MAED										-	a ×	
MAED Model for Analysis of Error	gy Demand									MAED D 🗸	About ⑦	
En Es Fr	Energy inte Name of the case	ensities study Demo MAEDD 2										
Manage case studies	El-Motive	EI-Specific Electricity	El-Thermal	Penetration of Energy Forms in			Efficiencies in	Temperature level in	Penetration of Energy Forms in	Efficiencies in		
General information	Power use use		use	ACM			ACM	Manufacturing	Manufacturing	Manufacturing		
Social economic data	Energy intens	ities of Motive Power (fi	nal energy per ur	nit of value a	dded)	di < > 🛓 f	a 📀					
→* Energy intensities ~	-											
Industry	Agricultu	74	Unit	2030	2035	2040	Chart					
Transport	Farming		kWh/US\$	1.50000	1.50000	1.50000						
Household	Construct	tion					-					
Services	Buildings		kWh/US\$	0.10000	0.10000	0.10000	_					
Calculate		Mining Metal ores Non-metal ores		0.30000	0.30000	0.30000						
I Results				0.2000	0.20000	0.20000						
	Manufact	uring										
0	Basic mat	terials	kWh/US\$	0.1500	0.15000	0.15000						
				- C			$ \rightarrow $					
	Data notes											
										(02020, Versio		
										\$2020. Versio	c.2.0.0.2020113	

You will now be able to click calculate and look at the results for the years 2035 and 2040.

Congratulations, you now know how to enter data into the MAED-D model.