

CLIMATE CHANGE
SCIENTIFIC ASSESSMENT AND POLICY ANALYSIS

**Information Toolkit for post-2012
climate policies**

Installation and User Manual

Report

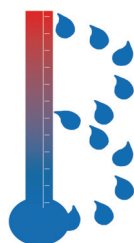
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(Installation and User Manual Version 1)

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November 2007



This study has been performed within the framework of the Netherlands Research Programme on Scientific Assessment and Policy Analysis for Climate Change (WAB), project 'Information Toolkit for post-2012 climate policies'.

Wetenschappelijke Assessment en Beleidsanalyse (WAB) Klimaatverandering

Het programma Wetenschappelijke Assessment en Beleidsanalyse Klimaatverandering in opdracht van het ministerie van VROM heeft tot doel:

- Het bijeenbrengen en evalueren van relevante wetenschappelijke informatie ten behoeve van beleidsontwikkeling en besluitvorming op het terrein van klimaatverandering;
- Het analyseren van voornemens en besluiten in het kader van de internationale klimaatonderhandelingen op hun consequenties.

De analyses en assessments beogen een gebalanceerde beoordeling te geven van de stand van de kennis ten behoeve van de onderbouwing van beleidsmatige keuzes. De activiteiten hebben een looptijd van enkele maanden tot maximaal ca. een jaar, afhankelijk van de complexiteit en de urgentie van de beleidsvraag. Per onderwerp wordt een assessment team samengesteld bestaande uit de beste Nederlandse en zonodig buitenlandse experts. Het gaat om incidenteel en additioneel gefinancierde werkzaamheden, te onderscheiden van de reguliere, structureel gefinancierde activiteiten van de deelnemers van het consortium op het gebied van klimaatonderzoek. Er dient steeds te worden uitgegaan van de actuele stand der wetenschap. Doelgroepen zijn de NMP-departementen, met VROM in een coördinerende rol, maar tevens maatschappelijke groeperingen die een belangrijke rol spelen bij de besluitvorming over en uitvoering van het klimaatbeleid. De verantwoordelijkheid voor de uitvoering berust bij een consortium bestaande uit MNP, KNMI, CCB Wageningen-UR, ECN, Vrije Universiteit/CCVUA, UM/ICIS en UU/Copernicus Instituut. Het MNP is hoofdaannemer en fungeert als voorzitter van de Stuurgroep.

Scientific Assessment and Policy Analysis (WAB) Climate Change

The Netherlands Programme on Scientific Assessment and Policy Analysis Climate Change (WAB) has the following objectives:

- Collection and evaluation of relevant scientific information for policy development and decision-making in the field of climate change;
- Analysis of resolutions and decisions in the framework of international climate negotiations and their implications.

WAB conducts analyses and assessments intended for a balanced evaluation of the state-of-the-art for underpinning policy choices. These analyses and assessment activities are carried out in periods of several months to a maximum of one year, depending on the complexity and the urgency of the policy issue. Assessment teams organised to handle the various topics consist of the best Dutch experts in their fields. Teams work on incidental and additionally financed activities, as opposed to the regular, structurally financed activities of the climate research consortium. The work should reflect the current state of science on the relevant topic.

The main commissioning bodies are the National Environmental Policy Plan departments, with the Ministry of Housing, Spatial Planning and the Environment assuming a coordinating role. Work is also commissioned by organisations in society playing an important role in the decision-making process concerned with and the implementation of the climate policy. A consortium consisting of the Netherlands Environmental Assessment Agency (MNP), the Royal Dutch Meteorological Institute, the Climate Change and Biosphere Research Centre (CCB) of Wageningen University and Research Centre (WUR), the Energy research Centre of the Netherlands (ECN), the Netherlands Research Programme on Climate Change Centre at the VU University of Amsterdam (CCVUA), the International Centre for Integrative Studies of the University of Maastricht (UM/ICIS) and the Copernicus Institute at Utrecht University (UU) is responsible for the implementation. The Netherlands Environmental Assessment Agency (MNP), as the main contracting body, is chairing the Steering Committee.

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This report in pdf-format is available at www.mnp.nl

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Warranty /Liability of the Information Toolkit for post-2012 climate policies software

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1. Toolkit installation

The Toolkit is a computer-based information system that contains flexible factsheets, including tables, figures and graphs. It is built in AIMMS software (AIMMS3.8 Viewer, www.aimms.com),. AIMMS enables users to easily show large datasets in graphs and to easily add or remove parameters. The Toolkit brings together data and information from various national and international sources and integrates them into one system.

1.1 Hardware and operating system requirements

The hardware requirements are:

- 1.6 Ghz or higher x86 or x64 processor
- XGA display adapter and monitor
- 1 Gb RAM
- 1 Gb free disk space

Running an AIMMS project with large data sets on a PC with a small amount of installed or available RAM, you may find that the increased memory requirements of running large models give rise to extensive disk swapping. In general, this will have a dramatic effect on the overall performance of both AIMMS and the other applications running concurrently with AIMMS. In such a case please install sufficiently additional RAM to run all applications comfortably again.

The AIMMS 3.8 Viewer is designed to run under

- Windows 2000,
- Windows XP,
- Windows Server 2003
- Windows Vista.

1.2 Download software

Please visit the AIMMS website: <http://www.aimms.com>

Then go to DOWNLOADS → AIMMS 3.8 → download AIMMS viewer 3.8

To download the AIMMS software, please use from the blue box:

AIMMS Viewer 3.8 (Standard version; single byte)

Full installation including prerequisites (43.4 MB)

Click on the http button (first red arrow button) behind the text. Please follow the download instructions.

Once the software has been installed, an AIMMS Viewer icon is displayed on the desktop.

It must be emphasised that you need **administrator** rights to be able to download software on your computer. Please be aware the software creates a new directory: C:/ Program Files / Paragon Decision Technology.

1.3 AIMMS Viewer Licence

The AIMMS Viewer is freely and publicly available and can be downloaded from the AIMMS website www.aimms.com.

The Toolkit datasets (prj-file) is available at all times from the WAB website. The datasets might be updated regularly, depending on resources and project extension.

1.4 Download datasets

The contents of the Toolkit (prj-file), the datasets, can be downloaded from the WAB-website: <http://www.mnp.nl/en/themasites/wab/index.html>. Please create a Toolkit directory on the local desktop to save the (prj) file. If the contents are put in a zip-file, please right-click on it, and choose “unpack all”. Once saved, double click on the AIMMS Viewer icon on the desktop. The Viewer opens, and an existing project (prj) can be opened.

Please browse, locate and click on the Toolkit file in the Toolkit directory created in the previous step. After closing the software the path to the prj will be saved by the viewer. The next session will automatically open with this project. A project list is visible in the main screen when a new session of AIMMS is started.

Now the Toolkit opens in a new window and should run properly. If not, please try the whole procedure again.

2. Contents of the Toolkit

The subjects covered in the Toolkit (Version 1) are:

I - Emission pathways and corridor analysis

- Ia - IPCC Stabilisation Categories
- Ib - Characteristics of Greenhouse gas Stabilisation scenarios
- Ic - Characteristics of post-TAR Stabilisation scenarios
- Id - Stabilisation targets and chance of meeting temperature target
- Ie - Temperature Change
- If - Peaking and stabilization concentration profiles
- Ig - Emission pathways for meeting stabilisation targets
- Ih - Implications of delaying global actions for emission pathways
- Ii - Global corridors for meeting long-term stabilisation levels

II - Baseline projections

- Ila - Historical Trends
- Ilb - Scenario Intensity Indicators
- Ilc - Shares in GHG development
- Ild - Emission reduction gaps for 2020 and 2050
- Ile - Projections of non Annex I emissions
- Ilf - GHG emission with frozen and baseline technology
- Ilg - Baseline projections of bunker emissions
- IIh - Share of bunker emissions
- IIIi - Projections of global bunker emissions
- IIj - Projections of global land use emissions of CO₂

III - Mitigation potentials

- IIIa - Global economic mitigation potential
- IIIb - Sectoral economic mitigation potential
- IIIc - Business as Usual and reduction potential for different sectors
- IIId - Cumulative emission reduction
- IIIe - Cumulative emission reductions up to 2100
- IIIf - Mitigation strategies
- IIIg - Share of renewable energy in primary energy supply

IV - Mitigation costs

- IVA - Abatement costs
 - IV-Aa - Global abatement cost as % of GDP for meeting pathways
 - IV-Ab - Global abatement costs as % of GDP
 - IV-Ac - Estimated global macro-economic costs in 2030 and 2050
 - IV-Ad - Net Present Value of abatement costs
 - IV-Ae - NPV abatement cost levels
 - IV-Af - Regional abatement costs as % of GDP in 2025 and 2050 for 450 ppmv
 - IV-Ag - Financial flows and abatement costs in 2020 as percentage of GDP
 - IV-Ah - Abatement cost for European countries (2010 and 2020)
 - IV-Ai - Global cost curve
- IVB - MAC Curves
 - IV-Ba - Regional MAC curves
 - IV-Bb - MAC curve 2020
 - IV-Bc - MAC curves POLES model for 2020
 - IV-Bd - Marginal CO₂ prices

V - Additional data

- Va - Mitigation potentials and costs on a country basis
- Vb - Energy related R and D expenditures on a country basis
- Vc - Energy import dependency in scenarios
- Vd - UN Human Development Index
- Ve - Historic Responsibilities
- Vf - Reduction of CO₂ emission compared to the baseline
- Vg - Reduction of air pollutants due to GHG mitigation
- Vh - Avoided external costs due to GHG mitigation

3. Start and browse

3.1 Start

When starting the Toolkit, the opening page will be shown.

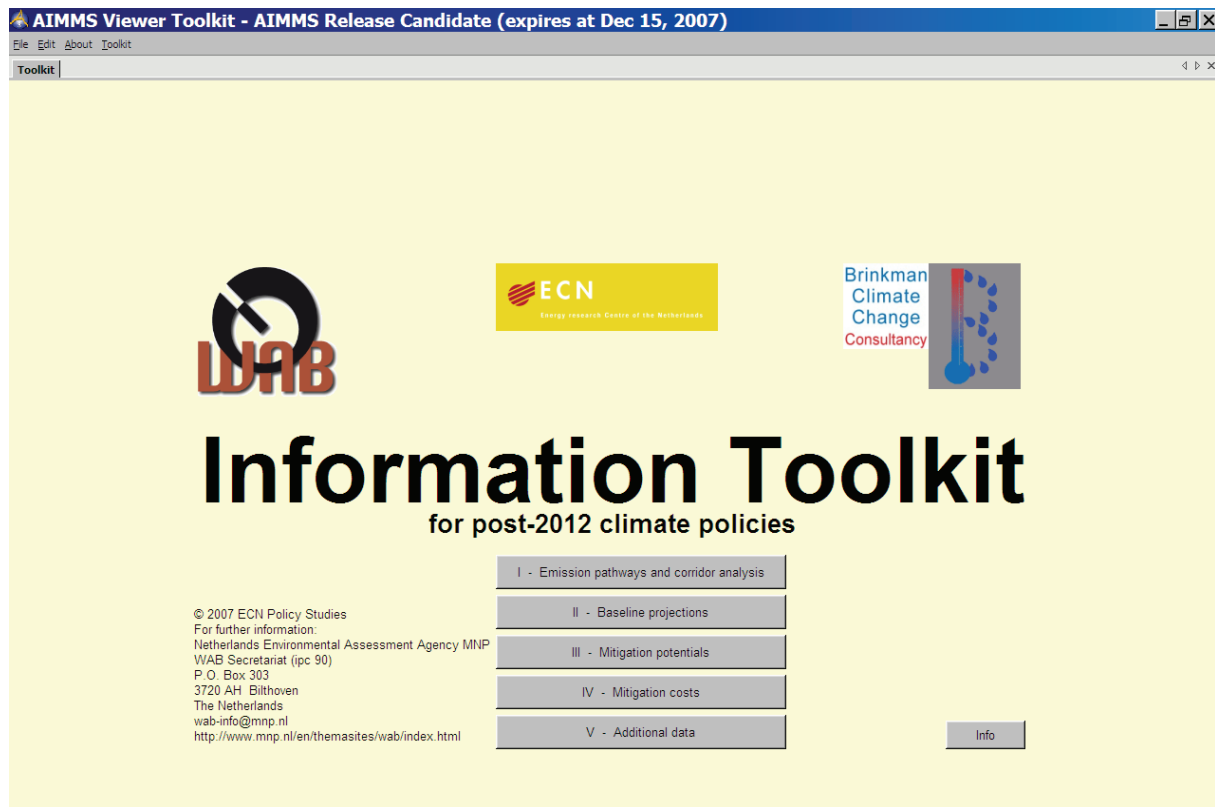


Figure 3.1: Opening page

On the opening page 4 menu options are displayed: File, Edit, About, Toolkit. These menus will be available at all times when using the Toolkit:

File Edit About Toolkit

File

In the file menu 3 functions are included. Two are for printing, one is “Print Setup” containing the printer identification and selection, the other is “Print” which sends the current view to the selected printer. The last one, “Exit”, is to exit the Toolkit Viewer.

Edit

The “Grab screen” function for exporting figures to other applications. See chapter 6.

About

Information about the AIMMS software and Toolkit version.

Toolkit

This menu item contains all subjects covered by the Toolkit. This menu option can also be used to return to other indicators included in the Toolkit. By clicking the “About Toolkit” option users return to the main screen.

The “Show table” function, when enabled, shows the data included in the figures in a table. The data shown can be exported as explained later (See chapter 6).

3.2 Browse

Use the “Toolkit” function in the top-menu for browsing through the Toolkit. When clicking on “Toolkit”, a list of subjects covered in the Toolkit is shown. There are currently 5 main levels. Please scroll through the menu and choose the subject of choice.

A second way to browse through the Toolkit is to enter one of the five main categories by clicking on one of the five buttons at the main screen:

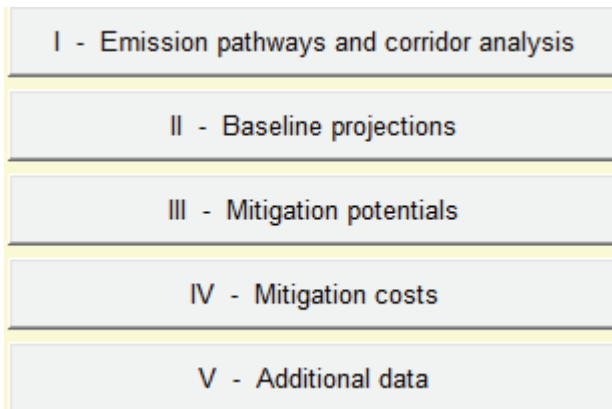


Figure 3.2: The five main categories

Once entered the main category, the following functions at the bottom are shown:

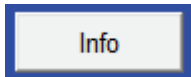


Figure 3.3: Browsing through the five main categories

Figure 3.3. shows the five main categories. The categories can be changed by clicking on the I, II, III, IV or V. For browsing within a main category click on the < or >.

4. Info button

For every figure an info button is provided.



Clicking on this button will open an pdf file - external to the Toolkit - which shows:

- 1) Relevant background information on the datasets and on the displayed information
- 2) Source information: reference to articles or reports, and a website address when available, concerning the displayed information.

5. Create figures and tables

There are different types of figures in the Toolkit with different flexibilities and functions as explained below.

5.1 Create figures

Hard coded figures

e.g. Toolkit → I : Emission pathways and corridor analysis → Ic : Stabilisation targets and chance of meeting temperature target

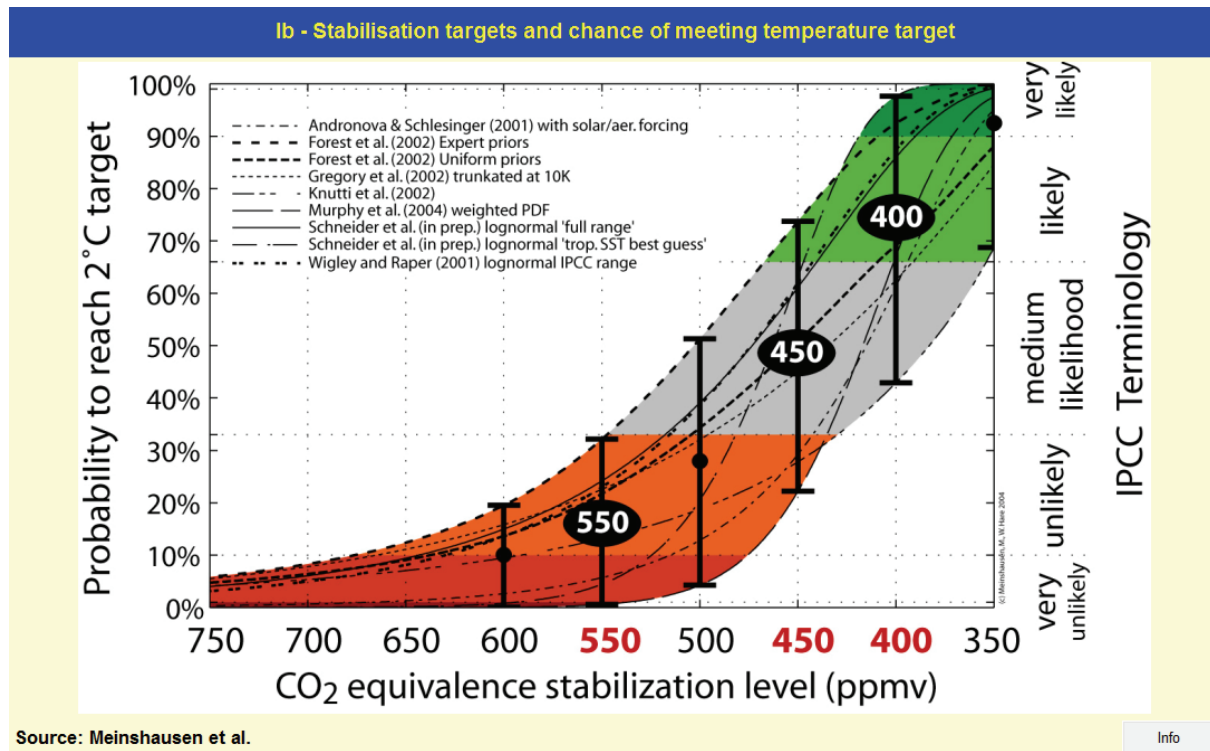


Figure 5.1: Example hard coded figure

These figures are copied from articles, reports or websites. The figures can only be copied into other applications e.g. Powerpoint or Word document by using the Edit- Grab Screen function.

Flexible Figures

Type 1

e.g. Toolkit → I : Emission pathways and corridor analysis → Ie : Temperature change

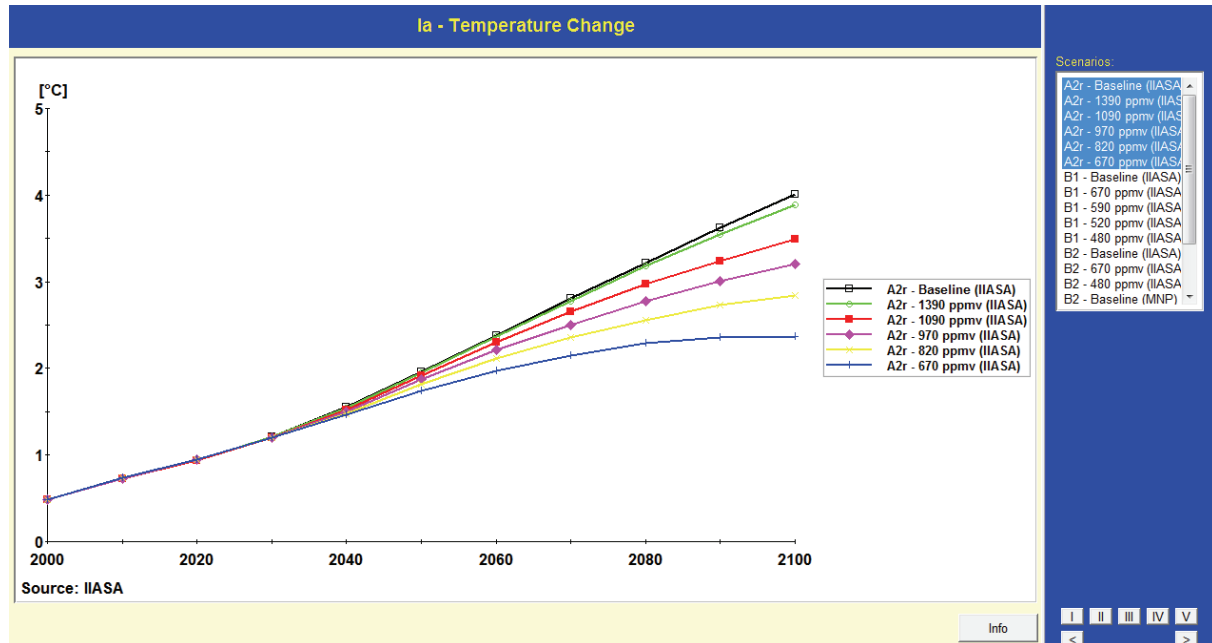


Figure 5.2: Example of a limited flexible figure

On the right hand side there is a scroll menu headed with “Scenarios”. Please select one or more stabilisation scenarios to display. For selecting several scenarios, please use CTRL and click on the scenarios. For selecting a number of consecutive scenarios, please click on the first and use SHIFT while clicking on the last scenario.

Type 2

e.g. Toolkit → I : Emission pathways and corridor analysis → Ie : Emission pathways for meeting stabilisation targets

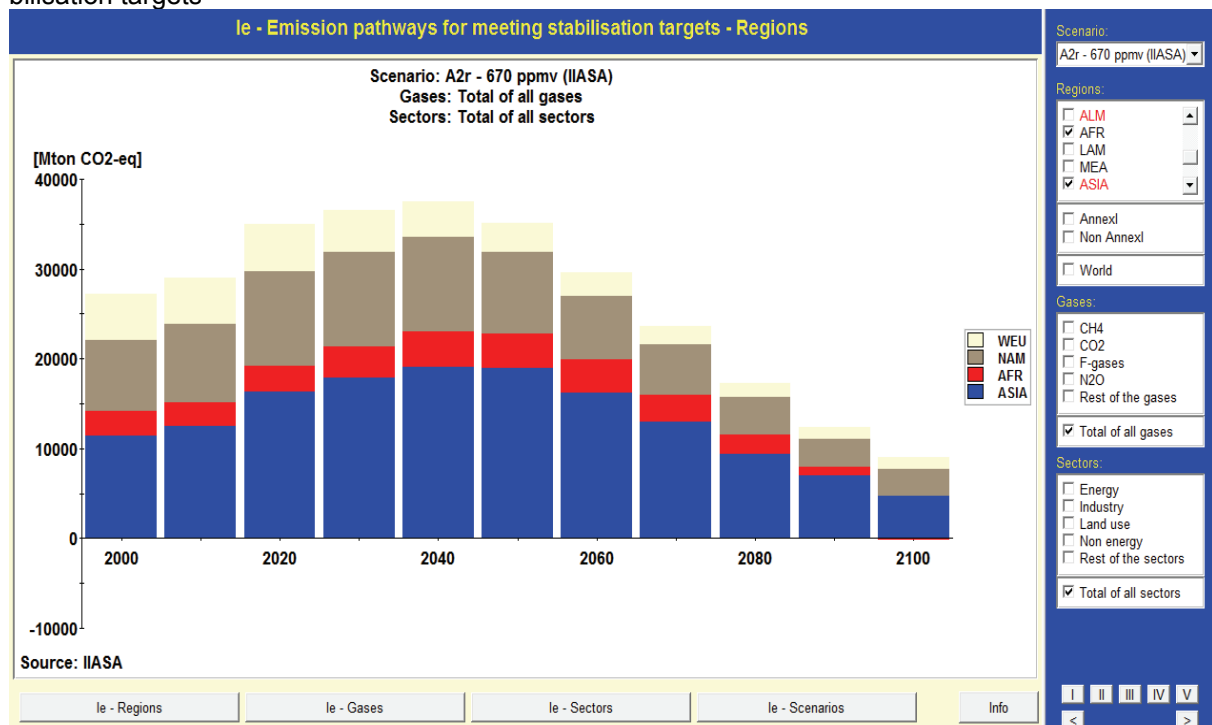


Figure 5.3: Example of a fully flexible figure.

This is the maximum flexibility you can get. Please be aware you first have to choose whether you want to show the emission pathways per sector, per gas, per region or per scenario (at the bottom of figure 5.3).

If you choose to show the figure by region, all contributions will be shown per region. However, if you choose to select the gases CH₄ and CO₂ at the same time, these will be shown together as a sum, instead of separated. So if you want to show the gases separately, you have to choose to show the figure by gases, instead of by regions (option buttons below the figure).

5.2 Create tables

Please click on the “Toolkit” button and choose “show table”. As shown in figure 5.4, a pop-up appears presenting the underlying data of the figure. To make another selection, please close the table, select your new choice, and repeat the procedure again to view the renewed table.

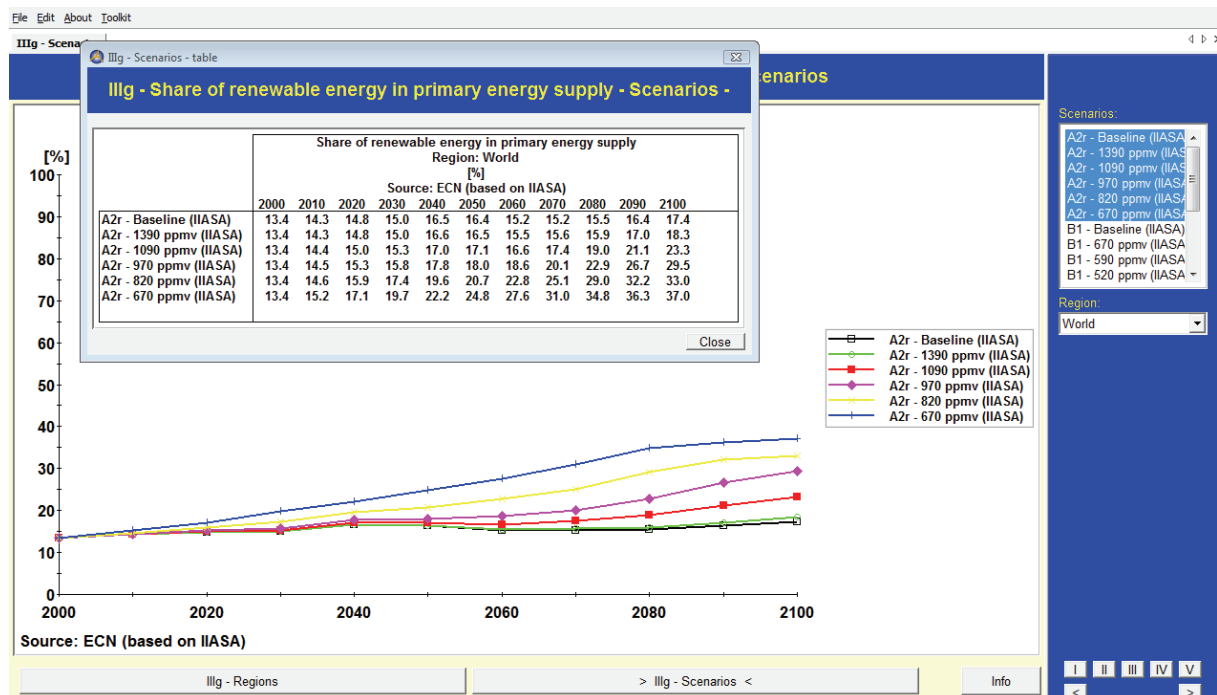


Figure 5.4: Example of creating a table

6. Export data

There are two ways of exporting data: as a figure, or as a table.

6.1 Export Figures

A figure should be exported by using the “Grab screen” function. First select the area to copy using the grab screen: in the menu click “Edit” → “Grab screen area”, select the figure and use the left-click mouse option, select the area by dragging the area to select. The selection is automatically copied to the clipboard. Use the paste option to copy the selection into another application. (Powerpoint, Word, etc.).

6.2 Export Tables

First create your table by creating a figure as explained in Section 5.1. Once the figure is displayed use the menu: Toolkit → “Show table” to display the values making up the shown figure (see section 5.2). Once the table is shown in the Toolkit (see figure 5.4), click on the table and right click or press CTRL+C to copy the table.

A pop-up screen “Copy Table Data” appears, please select one of the options:

- export a selection from the table
- export the complete table

It is also possible to export the table with or without headers. The headers contain the title of the table data as well as the selection you made while creating the figure underneath. Then click on the “copy” button.

Now open an Excel document, open a new worksheet, and “paste”. From this point on it is possible to use and edit the table, and even reproduce the figure in Excel. Please make sure that the regional settings on your computer are using a “.” as decimal separator and a “,” as thousands separator.

The table can be removed from the screen by clicking “Close” in the right bottom corner of the displayed table.

Appendix, Abbreviation of regions

IIASA regions:

NAM = North America (Canada, Guam, Puerto Rico, United States of America, Virgin Islands)

WEU = Western Europe (Andorra, Austria, Azores, Belgium, Canary Islands, Channel Islands, Cyprus, Denmark, Faeroe Islands, Finland, France, Germany, Gibraltar, Greece, Greenland, Iceland, Ireland, Isle of Man, Italy, Liechtenstein, Luxembourg, Madeira, Malta, Monaco, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom)

PAO = Pacific OECD (Australia, Japan, New Zealand)

EEU = Central and Eastern Europe (Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, The former Yugoslav Rep. of Macedonia, Hungary, Poland, Romania, Slovak Republic, Slovenia, Yugoslavia)

FSU = Newly independent states of the former Soviet Union (Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Republic of Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan)

CPA = Centrally planned Asia and China (Cambodia, China (incl. Hong Kong), Korea (DPR), Laos (PDR), Mongolia, Viet Nam)

SAS = South Asia (Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka)

PAS = Other Pacific Asia (American Samoa, Brunei Darussalam, Fiji, French Polynesia, Gilbert-Kiribati, Indonesia, Malaysia, Myanmar, New Caledonia, Papua, New Guinea, Philippines, Republic of Korea, Singapore, Solomon Islands, Taiwan (China), Thailand, Tonga, Vanuatu, Western Samoa)

MEA = Middle East and North Africa (Algeria, Bahrain, Egypt (Arab Republic), Iraq, Iran (Islamic Republic), Israel, Jordan, Kuwait, Lebanon, Libya/SPLAJ, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syria (Arab Republic), Tunisia, United Arab Emirates, Yemen)

LAM = Latin America and the Caribbean (Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bermuda, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, French Guyana, Grenada, Guadeloupe, Guatemala, Guyana, Haiti, Honduras, Jamaica, Martinique, Mexico, Netherlands Antilles, Nicaragua, Panama, Paraguay, Peru, Saint Kitts and Nevis, Santa Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, Venezuela)

AFR = Sub-Saharan Africa (Angola, Benin, Botswana, British Indian Ocean Territory, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Cote d'Ivoire, Congo, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Reunion, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Saint Helena, Swaziland, Tanzania, Togo, Uganda, Zaire, Zambia, Zimbabwe)

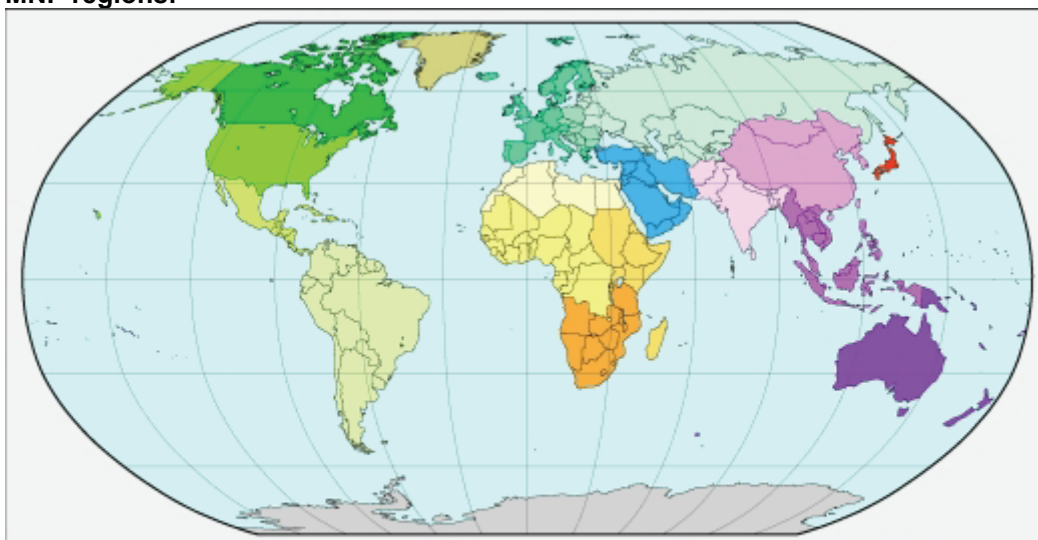
Aggregation on the 4 region level

OECD = Includes the OECD countries, therefore encompassing the countries included above in the regions **WEU**, **NAM** and **PAO**.

REF = Countries undergoing economic reform, i.e. countries listed under the regions **EEU** and **FSU** above.

ASIA = The countries included in the regions **SAS**, **PAS** and **CPA** are aggregated into this region.

ALM = This region includes the Latin American and African countries that make up the regions **AFR**, **LAM** and **MEA** above.

MNP regions:

1 Canada	5 Northern Africa	9 OECD Europe	13 South Asia	17 Japan
2 USA	6 Western Africa	10 Eastern Europe	14 East Asia	18 Greenland
3 Central America	7 Eastern Africa	11 Former USSR	15 South East Asia	19 Antarctica
4 South America	8 Southern Africa	12 Middle East	16 Oceania	