



World Resources Institute

## INTRODUCTION TO USING CAIT-EXCEL

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World Resources Institute

This document accompanies the Climate Analysis Indicators Tool (CAIT), version 3.0 (Excel).

### About this Document

This document provides basic information about CAIT and how to use CAIT. It pertains only to the version of CAIT that operates in Microsoft® Excel (CAIT-Excel, shown at right), not the online version of CAIT. For more detailed information about greenhouse gas data and sources or other indicators found in CAIT-Excel, users should refer to other supporting documents available on the CAIT website (<http://cait.wri.org>).

Microsoft Excel - CAIT 2.0 11-23.xls

CAIT - The Climate Analysis Indicators Tool  
GHG Emissions Indicators

Yearly emissions  
 Rank by Per Capita  
 Reverse  
 Change Year/Gas Selection

Apply Filter  
 Set Filter  
 Options  
 Page Info

\* non-Parties to the UNFCCC  
 Annex I in red

GHG Emissions in 2000				
CO2 (energy), CH4, N2O, PFCs, HFCs, SF6				
rank	country	MtC	% of world total	tons C per person
1	United States of America	1,891.8	20.62%	6.6
2	China	1,355.6	14.77%	1.1
3	European Union (15)	1,085.7	11.83%	2.9
4	Russian Federation	519.9	5.67%	3.6
5	India	506.0	5.51%	0.5
6	Japan	364.1	3.97%	2.9
7	Germany	265.2	2.89%	3.2
8	Brazil	229.5	2.50%	1.3
9	Canada	194.7	2.12%	6.3
10	United Kingdom	180.6	1.97%	3.1
11	Italy	145.9	1.59%	2.5
12	Korea (South)	143.4	1.56%	3.1
13	Ukraine	142.5	1.55%	2.9
14	Mexico	139.4	1.52%	1.4
15	France	137.2	1.49%	2.3
16	Indonesia	135.0	1.47%	0.7
17	Australia	130.4	1.42%	6.8
18	Iran	119.7	1.30%	1.9
19	South Africa	112.8	1.23%	2.6
20	Spain	104.2	1.14%	2.6

Introduction / Indicators / Analysis / SourceData / Notes / Credits / License / Help / GHG Emissions / Socio- |

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## 1. Introduction

Over the coming decade, governments will need to make important decisions with respect to a wide range of issues under the UN Climate Change Convention (UNFCCC). To effectively address issues that are important to all Parties to the Convention, data and information are needed to support decision-making. With this need in mind, World Resources Institute (WRI) aims to provide an information and analysis tool—the Climate Analysis Indicators Tool (CAIT)—to build capacity and help support future policy decisions made under the Climate Convention and in other fora.

### 1.1. CAIT Products

CAIT is not a single tool, but a set of tools, each with its own purpose. Each is available free of charge from the CAIT website (<http://cait.wri.org>). The principal CAIT products are briefly described below.

- **CAIT** (online) operates through a web-based interface. CAIT includes a wide variety of data sets and indicators that can be viewed through an interactive and customizable interface. For GHG emissions-related indicators, CAIT’s interface allows the user in most instances to choose particular years, sectors, gases, and countries to display. CAIT includes numerous analysis features that allow for a range of comparisons across gases, sectors, countries, and years (including with graphing and charting tools). Three additional modules accompany CAIT that incorporate different data and indicators:
  - **CAIT-UNFCCC** is a basic interface for viewing and analyzing official GHG emissions data submitted by UNFCCC Parties to the Convention Secretariat.
  - **CAIT-U.S.** is an interface for viewing data, indicators, and policy development for U.S. *states*.
  - **CAIT-V&A** is an interface for viewing data and indicators related to countries’ vulnerability and adaptive capacity (V&A).
- **CAIT-Excel** operates using interface built in Microsoft® Excel. CAIT-Excel includes most of the same features as the online version of CAIT, with some exceptions (e.g., absence of sector-level greenhouse gas emissions data). CAIT-Excel can be downloaded and subsequently used without an internet connection.

This Guide supports CAIT-Excel. It provides a basic description of the contents and features of CAIT-Excel. It also serves as a “how to” guide for users that may want extra assistance navigating CAIT in Microsoft® Excel, and utilizing CAIT’s features. For more detailed information about greenhouse gas data and sources found in CAIT, or other data and indicators found in CAIT, users should refer to other supporting documents available on the CAIT website (<http://cait.wri.org/downloads.php>).



## 1.2. Hardware and Software Requirement

CAIT-Excel operates using Microsoft® Excel on a Windows-based platform. CAIT will *not* properly function in Microsoft® Excel operated on an Apple-based platform. CAIT is designed for use on Microsoft® Excel versions 2000, 2002, or a more recent release. CAIT may not operate properly on earlier versions of Microsoft® Excel, such as Excel 1997 or 1998.

CAIT-Excel is a large file; approximately 15 megabytes. Accordingly, it may not perform well on older computers with slower processors or small memories. Minimum recommended system requirements for operating CAIT are a 300 Mhz processor and 128 MB of RAM.

An alternative, for Apple users or other users for whom the above hardware or software requirements presents problems, CAIT is available in online form (<http://cait.wri.org/online.php>), which requires only an internet connection and internet browsing software (e.g., Microsoft® Explorer).

## 1.3. Macros and Security

CAIT-Excel incorporates a large number of *macros*. Macros are used to automate tasks and are written in Visual Basic, Excel’s programming language. Accordingly, CAIT will not function properly unless *macros* are “enabled” by the user. When CAIT is opened in Excel, Excel prompts the user to enable macros. Here, the user must choose “ENABLE MACROS.”

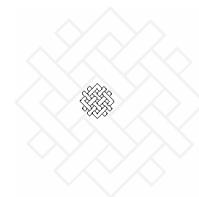
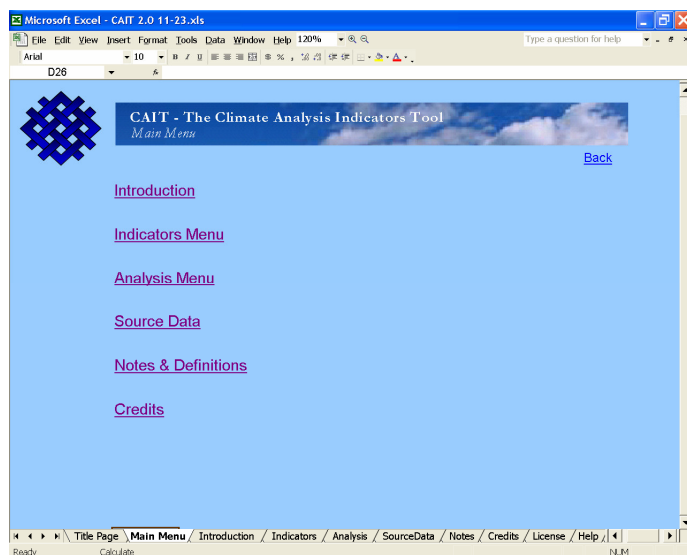
However, Excel will not allow the user to enable macros if the user’s Excel “Security Level” is on HIGH. If this is the case, security settings in Excel need to be changed. This can be done under the “Tools” Menu by selecting “Macro,” then selecting “Security.” From here, the security level must be changed to MEDIUM or LOW.

*NB: CAIT-Excel will not function properly if macros are disabled.*

## 1.4. Basic Navigation in CAIT-Excel

CAIT-Excel employs a “point and click” menu-based navigation system. Similar to navigating the world wide web, users should navigate CAIT-Excel by clicking on the underlined “hyperlinked” text. WRI does not recommend that users navigate CAIT-Excel by clicking on the “tabs” at the bottom of the page.

CAIT’s Main Menu is shown to the right. CAIT’s substantive content is concentrated under the Indicators Menu (see below, Section 3) and the Analysis Menu (see below, Section 4).



## 2. Countries and Regions

This section describes the countries and regions that are included in CAIT. The default view for CAIT's indicator tables is for all countries to be shown. Using the *Filter* feature, described in Section 5.2, users can limit the tables to specified countries or regions.

### 2.1. Country Inclusions and Definitions

Countries are the main unit of analysis in CAIT. CAIT includes Parties to the UNFCCC and two non-Parties (Brunei and Iraq) that are members of the UN (Non-Parties are specified in CAIT with an asterisk “\*”). All UNFCCC Parties are included in CAIT except Liechtenstein, Marshall Islands, Micronesia, Monaco (combined with France), San Marino (combined with Italy), and Tuvalu. For these countries, there was inadequate emissions data. The European Union is also included as a “country” because the European Community (a unit of the EU) is a Party to the Convention. Taiwan (Chinese Taipei), which is neither a UN member nor a Convention Party, is also included in CAIT. This exception is made because Taiwan (Chinese Taipei) is a significant source of GHG emissions.

Numerous other principalities, territories, politically independent provinces, and other non-UN members are generally excluded from this Tool. In several instances, non-states are included within the definition of countries included in CAIT. For example, the United States includes several territories such as Puerto Rico and the Virgin Islands. The supporting document entitled **CAIT: Greenhouse Gas Sources & Methods** provides a full list of countries included in CAIT as well as notes regarding country definitions (available on the CAIT website, at <http://cait.wri.org>).

### 2.2. Geographic Regions

There are nine geographic regions included in CAIT: Asia, Europe, Middle East & North Africa, sub-Saharan Africa, North America, Central America & the Caribbean, South America, Oceania, and World. These regions correspond to those traditionally used in WRI's World Resources Reports. The memberships of these regions can be found in Appendix A.

### 2.3. UNFCCC Regions and other Organizations

In addition to geographic regions, CAIT includes 17 regions classified as “UNFCCC Regions and other Organizations.” UNFCCC regions are based on classifications found in the Climate Convention and recognized negotiating groups operating within the Convention process. These regions include: Annex I, non-Annex I, AOSIS (small island states), Economies in Transition, European Union (15, 25, and 29 members),<sup>1</sup> G-77/China, and Least Developed Countries. Further regions in this category include political and economic integration organizations, including the Commonwealth of Independent States (CIS), APEC, ASEAN, G-8, MERCOSUR, NAFTA, OECD, and OPEC. The memberships of these regions can be found in Appendix B.

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<sup>1</sup> The EU is included in CAIT as both a country and a region. As a country, users have the option of specifying one of three EU memberships. However, all three membership possibilities are available as “regions.” This enables comparisons *between different EU membership* configurations in CAIT's *Analysis* features, described in Section 6.3.



## 2.4. Custom Regions

Users may specify up to five “Custom Regions” in CAIT-Excel. Custom regions are created within CAIT-Excel’s *Filter* feature described below in Section 5.2.

## 2.5. Calculating Regional Totals in CAIT: A Cautionary Note

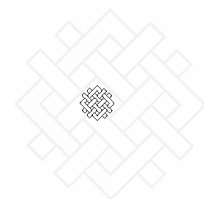
Regional totals (e.g., for Africa) are calculated *within* CAIT-Excel, rather than from published sources (e.g., the World Bank’s regional total for Africa). The reason is that we have compiled data in CAIT from a large number of sources, and regional definitions across different data sources are not uniform. For that reason, there may be discrepancies between regional totals found in CAIT and those in other published sources. The only exception to this rule is World Totals. We have used *published* World Totals from various sources because the countries included in CAIT do not constitute 100 percent of the global coverage.

An important caution regarding regional totals is that, in some cases, data is not available for all countries included in CAIT. Regional totals will be affected by these data gaps. We have not made any effort to correct for missing country data in the regional calculations. In many cases, data gaps will not have a material effect on emissions for particular regions (e.g., lack of data for Afghanistan will have little influence on G-77/China totals).

Where data gaps present a problem is for trend analyses, including graphing (see **Analysis Features** below, Section 4). Problems arise because the further back in time one goes, the greater the number of gaps in the data. Data gaps are particularly acute for gross domestic product (GDP) data and energy use data:

- GDP. The GDP data set is nearly complete for recent years, but many countries are missing GDP data in the 1960s and 1970s. Thus, trends might be highly misleading when the start year (e.g., 1970) includes fewer data points than the end year (e.g., 2002). For example, no GDP data exists for Germany’s prior to 1971. Accordingly, GDP and Carbon Intensity of Economy graphs and trend calculations that cross the 1971 threshold for regions that include Germany (e.g., Annex I) will be misleading.
- Energy Use. Here, data for former Soviet Republics usually begins only in 1992. Therefore, Energy Use and Carbon Intensity of Energy Use (see **Indicators** below, Section 3) graphs and trend calculations that cross the 1992 threshold for regions that include former Soviet Republics (e.g., EITs, Annex I) will suffer from the same problem described above. Users can verify exactly which countries have GDP or Energy Use data for a given year under the Source Data link on the Main Menu.

For the other time series data—Emissions and Population—this problem is less significant. For population, the 2002 data set is nearly identical in coverage to the 1960 dataset. For carbon dioxide (CO<sub>2</sub>) emissions from fossil fuels and cement manufacture, most countries have data extending back to at least 1950. Coverage of this data is summarized on the Country Notes & Sources page that can be found under the Notes & Definitions link on the CAIT Main Menu.



### 3. Indicators

Data & Indicators in CAIT-Excel are divided into three categories:

- GHG Emissions Indicators
- Socio-Economic Indicators
- Natural Factor Indicators

These categories are loosely mapped to the Convention principles of *responsibility*, *capability*, and *national circumstances* (e.g., in UNFCCC, Articles 3.1 and 3.2). GHG Emissions indicators include Annual (yearly) Emissions of greenhouse gases (1850 to 2002) as well as several indicators that relate to the historical responsibility for climate change—namely cumulative emissions, contributions to CO<sub>2</sub> concentration increases, and contributions to global temperature increase.

Socio-Economic indicators are framed broadly and include numerous indicators that relate to the capabilities that countries may have to protect the climate system, including health, education, income, governance and other indicators.

Finally, Natural Factor indicators represent those factors that tend to lie largely beyond the reach of public policy (like climatic conditions, fossil fuel reserves, and geography), but which nevertheless may significantly influence GHG emissions. The actual indicators included in CAIT-Excel are shown in Table 1.

<b>Table 1. Summary of Indicators</b>		
<b>Category</b>	<b>Indicator (s)</b>	<b>Units</b>
<b>Emissions</b>	Annual Emissions	Tons of carbon equivalent (national and per person)
	Cumulative Emissions	Tons of carbon equivalent (national and per person)
	Contributions to Concentration Increase	National share (percentage) and per person (index)
	Contributions to Temperature Increase	National share (percentage) and per person (index)
<b>Socio-Economic</b>	Health	Healthy life expectancy, in years
	Education	Index value: combination of (1) literacy rates and (2) school enrollment rates
	Income and Economy	(1) Income per capita: GDP (PPP) per capita (2) Size of economy: total GDP (PPP)
	Access to Electricity	Percent of population with access
	Carbon Intensity of Energy Use	Carbon emissions per unit energy consumption
	Carbon Intensity of Electricity Production	Carbon emissions per unit kwh (electricity production only)
	Carbon Intensity of Economy	GHG emissions per unit GDP (PPP)
	Governance	Index value covering six areas of governance
<b>Natural Factors</b>	Climatic Conditions	(1) Heating needs (heating degree days) (2) Cooling needs (cooling degree days)
	Natural Resource Endowments	(1) Fossil fuel reserves (coal, oil, and gas); by tons of carbon equivalent (total and per capita) and carbon intensity of reserves (2) Energy use mix; by carbon intensity (carbon per unit of electricity production)
	Geography	Total land area impacted by human activity (proxy for transport requirements) (total and per capita)
	Population	Total number of people

All indicators included in CAIT-Excel can be accessed from the [Indicators Menu](#) (via the [Main Menu](#)). Short descriptions of a particular indicator being displayed can be found via the “Page Info” button, located to the left of the display table. For more information about the specific indicators (and supporting data) included in CAIT, see **CAIT: Indicator Framework Paper**, available for download on the CAIT website (<http://cait.wri.org/downloads>).

When considering the indicators presented in CAIT, users should keep several points in mind. First, users should be aware that the data that appears in CAIT may be subject to substantial uncertainties. This applies especially to CO<sub>2</sub> emissions from land-use change and some non-CO<sub>2</sub> gases. For more information, see **CAIT: Greenhouse Gas Sources & Methods** available for download on the CAIT website (<http://cait.wri.org/downloads>). Second, although the data and indicators presented in CAIT may be useful to assist in decision-making, the indicator values or rankings are not necessarily suggestive of any specific commitments that Parties should take on (or rights they should acquire). For example, if one country has higher emission levels than another, it does not directly suggest a policy recommendation. Finally, the list of indicators presented in CAIT is not complete. In some cases, data constraints prevented particular indicators from being selected. In other cases, indicators are included, despite that lack of complete global geographic coverage.



## 4. Analysis Features

CAIT-Excel includes seven analysis features (found under the [Analysis Menu](#)), each of which is explained below. Generally, these features allow users to undertake simple analyses using the indicators described in the previous section.

### 4.1 Compare Indicators

The *Compare Indicators* feature allows users to set two indicators side by side and see how each country fares with respect to the two indicators. The display shows the ranks and values of each indicator, as well as a “rank difference.” For example, if Country *A* ranks 6<sup>th</sup> in “Yearly Emissions” and 106<sup>th</sup> in “Income Per Capita,” the rank difference is 100, meaning that Country *A* moves down in rank 100 spots when it comes to income compared with emissions. This feature is similar to the one used in UNDP’s Human Development Report,<sup>2</sup> which shows a rank difference between the Human Development Index and GDP (PPP) per capita.

On the right hand side of this page, a box shows the “correlation” between the two indicators selected. Correlation is a measure of the linear relation between the two indicators (ranging from -1.00 to +1.00). A value of +1.00 represents a perfect *positive* correlation. A value of -1.00 represents a perfect *negative* correlation. A value of zero represents *no* correlation.

Certain useful juxtapositions may be obtained using this feature, including comparisons between (1) the same emissions indicator with different sources, gases, or years; (2) different GHG emissions indicators (e.g., yearly emissions and contributions to temperature increase); (3) emissions and natural factor indicators; (4) emissions and socio-economic indicators, etc.

### 4.2. Compare Countries

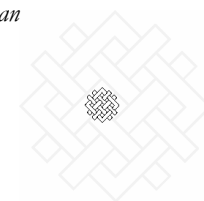
The *Compare Countries* feature allows users to view all indicators for two specified countries side by side. Users can select the two countries from the dropdown boxes, and scroll down the page for a comparison of all indicators. Users can also compare regions, such as Annex I versus non-Annex I or EU (15) versus EU (25). Regions are listed at the end of the countries (i.e., below Zimbabwe) in the dropdown box.

### 4.3. Calculate Trends

The *Trends* feature allows users to analyze a time-series for a particular indicator. Users can select an indicator from the dropdown menu and specify a start year and end year for the trend analysis. The table displays four pieces of information: (1) absolute value of the start year, (2) absolute value of the end year, (3) average annual rate of growth (between start and end year), and (4) total growth (in percent, between start and end year). There are also two graphing features related to *Trends* described below.

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<sup>2</sup> See UNDP. 2003. *Human Development Report. Millennium Development Goals: A Compact among Nations to End Human Poverty*. New York and Oxford: Oxford University Press.



#### 4.4. Graph Trends: Single Country

This *Graph Trends* feature allows the user to graph a variety of indicator trends for one specified country or region (e.g., GDP, population, and emission trends of Country *A* from 1990 to 2002). Here, users can specify the start and end years, as well as the indicators to be graphed.

#### 4.5. Graph Trends: Compare Countries

This *Graph Trends* feature allows the user to graph the trends for one specified indicator for up to five countries (e.g., emission trends for Country *A*, Country *B*, Country *C*, Region *X*, and Region *Y* from 1990 to 2002). Again, the indicator, countries, and years may be specified by the user.

#### 4.6. Combine Indicators into an Aggregate Index

The *Aggregate Index* feature allows users to aggregate multiple indicators into a single composite index according to user-specified weightings. (A description of the indexing methodology employed by WRI can be found in **CAIT: Indicator Framework Paper**, available for download on the CAIT website (<http://cait.wri.org/downloads>).

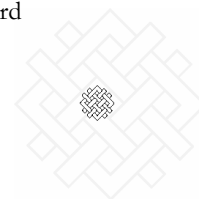
To create an aggregate index, a user must click on the “Set Weightings” box, which activates the “Set Index Weightings” window. Within this window, users can set the *overall* weightings between three categories: “emissions,” “socio-economic,” and “natural factors.” Next, users can set the weightings *within* each of these three categories by activating the subsequent tabs within the “Set Index Weightings” window.<sup>3</sup> For convenience, CAIT shows the weightings in percentage terms (weightings will sum to 100 percent). So, two indicators can be weighted 50:50, 60:40, or any other combination. Similarly, three indicators can be weighted 30:30:40. A prominent example of an aggregate index is the UNDP’s Human Development Index (HDI), which weighs each of its three constituent indexes (life expectancy, education, and GDP-PPP) evenly, at 1/3 each.<sup>4</sup>

Users should note the alternative option available for the treatment of Natural Factor indicators. On the “Natural Factors” tab of the “Set Index Weightings” window, there is a check box that reads “apply natural factor indicators as ‘mitigating’ factors.” This option is intended to reflect the character of Natural Factors like heating and cooling needs (i.e., that Natural Factors may have a significant influence on emission levels). If, in constructing an aggregate index, the user applies Natural Factors as “mitigating,” its effect on the aggregate index will be the opposite of the normal indexing effect. For example, assume Country *A* has moderate emissions levels, but very high heating needs. An aggregate index that includes both emissions *and* heating needs (e.g., on an 80-20 ratio) is likely to increase Country *A*’s index value (compared with an index of emissions alone). However, by applying heating needs as “mitigating,” the effect is to *reduce* the aggregate index (again,

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<sup>3</sup> Note that population is excluded in the Aggregate Index feature. As explained in Section 5.2, this is to avoid redundancies, since population considerations are built into many other indicators (e.g., emissions per capita).

<sup>4</sup> However, WRI employs a different indexing methodology than UNDP. See **CAIT: Indicator Framework Paper**, available for download on the CAIT website (<http://cait.wri.org/downloads>). See also UNDP. 2003. *Human Development Report. Millennium Development Goals: A Compact among Nations to End Human Poverty*. New York and Oxford: Oxford University Press.



compared with an index of emissions alone). In this way, Natural Factors may be used in an aggregate index to “offset” emissions to some degree.

#### 4.7. View Projections

CAIT includes 11 emission projections drawn from a variety of sources and models. Projections are only available for CO<sub>2</sub> from fossil fuels and for the period up to 2025. Like other features in CAIT, the display table will show results based on the user’s selection of (1) a particular model projection (from a dropdown menu) and (2) a start and end year (from the “change year selection” box). The display shows the absolute values for the start and end year, as well as the average annual rate of growth and the total growth over the period specified by the user.

For a detailed description of projections data and models, users should refer to **CAIT: Greenhouse Gas Sources & Methods** available for download on the CAIT website (<http://cait.wri.org/downloads>).



## 5. Using CAIT-Excel: Some Key Features

### 5.1. Ordering and Ranking

All indicator displays in CAIT-Excel allow for ordering and ranking according to user preferences. Ordering and ranking functionalities can be accessed via the first three items shown in Figure 1.

*Ordering* refers to the order of countries as they appear in the table. Countries (or regions) can be ordered (i.e., sorted) according to (1) alphabetical order or (2) any of the indicator values shown on a particular table. For example, under “yearly emissions,” countries can be alphabetically ordered, or ordered according to total emissions or per capita emissions. By checking a “reverse order” box, users can view the bottom countries at the top of the table (and vice versa).

*Ranking* is displayed in the first column of most indicator tables and shows the relative positions of countries for the particular indicator being displayed. In some indicator tables, the ranking can be changed to “per capita” by checking a “rank by per capita” box. It is important to distinguish between ordering and ranking. When the ordering criterion is changed by the user (e.g., to alphabetical), each country retains its ranking.

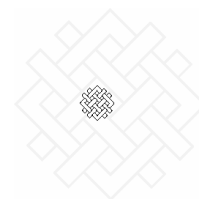
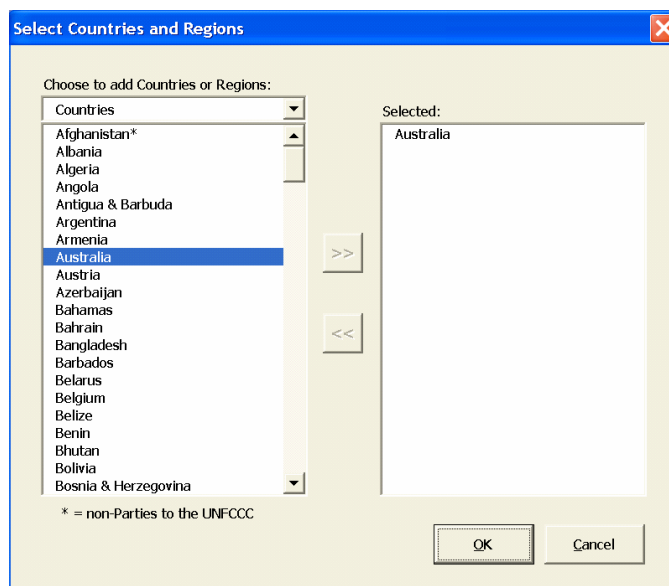
### 5.2. Filter

For each indicator table, the default setting is for all countries to appear. The *Filter* feature allows users to reduce the number of countries displayed, or to add regional totals to the display. This is done through a two step process.

The first step is to click the “Set Filter” button located to the left of the indicator table (see Figure 2). Once this button is pushed, the “Select Countries and Regions” window appears (see right). From this window, users can:

- Choose to add *countries* to the table. This can be done by selecting countries and clicking the “>>” button to add. The countries selected will appear on the right. (Hint: hold down the Ctrl button to select more than one country at a time). Countries can be removed in a similar manner by clicking on the “<<” button.
- Choose to add *regions* to the table. This can be done by selecting “Regions” from the dropdown menu at the top of the “Select Countries and Regions” window. Regions can be selected in the same manner as countries. To select all of the *countries within a region* (rather than the regional total itself), enable the “Add individual countries in region” button that appears at the bottom of

**Figure 1. Tools**



the “Select Countries and Regions” window (not shown above). (Note: regions and countries can be mixed together in a single table).

Once the desired countries and regions are selected, click “OK.”

The second step is to check the “Apply Filter” box located above the Set Filter button (see Figure 1). Upon doing this, only the user-selected countries and regions will appear. Regions will appear in **bold-faced** type.

As noted in Section 2, the *Filter* feature can also be used to create custom regions. To create a custom region:

1. Click the Set Filter button to enable the “Select Countries and Regions” window.
2. From the dropdown box at the top of the window, select “Regions.”
3. Scroll to the bottom of the Regions listed and select one of the five Custom Regions.
4. Click “Edit” to enable the “Edit Custom Region” window.
5. Select the countries and regions to be included and type a name for your Custom Region in the box at the top right hand side of the “Edit Custom Region” window.
6. Click “OK.”

Once this is done, this custom region will have the same functionality as any other region. If selected in a Filter, this custom region total will be displayed in the color **magenta**. (Note: If you would like to use your newly created Custom Region in the future, be sure to save the version of CAIT-Excel you are using before closing it. *Newly created Custom Regions will be lost if the file is not saved.*)

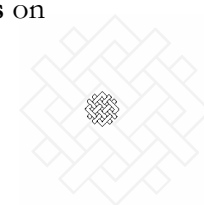
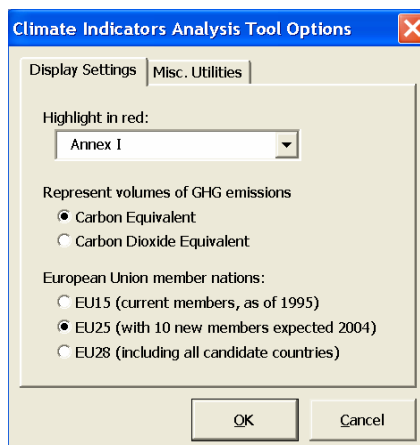
### 5.3. Options Features

There are three CAIT-wide settings that can be changed via the Options button (Figure 1). First, from the dropdown menu, users can highlight a selected group of countries to appear in the color **red** (see figure). Second, users can select between viewing greenhouse gas indicators in terms of tons of carbon or carbon dioxide equivalents. Third, users can select one of three European Union memberships: 15 (1995-2004), 25 (as of 2004), and 29 (all candidate countries). Once selected, these options will activate on all worksheets throughout CAIT-Excel.

Note: All three EU memberships are always available to be selected as *regions*.

### 5.4. Change Year/Gas Selection

Many of the indicator tables and analysis features allow the user to choose particular year(s) and gas(es). This can be done by clicking the “Change Year/Gas Selection” button (Figure 1). However, indicators are subject to the data availability constraints. Thus, for historically-based emissions indicators, the earliest possible year to select is 1850. Furthermore, only emissions from fossil fuels are available back to that date. CO<sub>2</sub> from land-use changes is available from 1950 to 2000 and non-CO<sub>2</sub> gases are available only for 1990, 1995, and 2000. For a full explanation of greenhouse gas emissions data availability, see **CAIT: Greenhouse Gas Sources & Methods** on the CAIT website (<http://cait.wri.org/downloads>)



## 5.5. Page Info

The *Page Info* button (Figure 1) will reveal relevant information about the indicator(s) currently being displayed, including underlying data sources. It is important to note that the *Page Info* content is limited. For a more complete discussion of various indicators in CAIT, see **CAIT: Indicator Framework Paper**, available for download on the CAIT website (<http://cait.wri.org/downloads>).



## 6. Frequently Asked Questions (FAQs) and Troubleshooting

### ➤ How do I get a copy of the Climate Analysis Indicators Tool?

Copies of CAIT-Excel are downloadable free of charge from <http://cait.wri.org>. Prior to download, users are required to register on the site by providing basic name and contact information. E-mail information will not be shared outside WRI. We collect this information to track usage of CAIT and so that we can contact you when an updated version of CAIT is released.

### ➤ I cannot open the Climate Analysis Indicators Tool file.

First, check to make sure that you have properly downloaded the file (or have it on CD-ROM). The file should appear as “CAIT.exe”. Opening this file should launch a setup process that will install CAIT-Excel on your computer. After installing CAIT, you can select CAIT from the Start Menu of your computer, under “Programs” (or, you can open the Excel file from the location you selected during the setup). Second, make sure you have Microsoft® Excel properly installed on your computer, with adequate system requirements (see Section 1.1, above).

### ➤ I have opened CAIT-Excel, but when I click on buttons and links, nothing happens.

Most likely, your “macros” are not properly enabled. To function properly, macros must be enabled. To do this, you may need to change your Excel security settings. See Section 1.2 above regarding how to change security settings to enable macros.

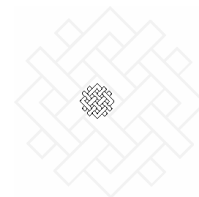
### ➤ CAIT-Excel is operating slowly.

First, try closing other programs and files that may be occupying your computer’s memory and slowing CAIT’s operation. Second, check your computer’s memory and processor speeds. CAIT-Excel may not function properly on computers with memory less than 128 MB and processors slower than 300 Mhz. Naturally, the more capacity a computer has, the faster CAIT will function. Restarting your computer may also help to free up memory. Finally, *saving* CAIT-Excel, due to the large file size, may take 20 seconds or longer so to complete, depending on your computer’s speed (some users do this instinctually by pressing CTRL-S). While the file is saving, CAIT-Excel may appear “frozen.”

Many of the formulas and functions in CAIT-Excel have been optimized for maximum speed. However, keep in mind that executing some features of CAIT—even on fast computers—may take a few seconds. For example, changing the displays from carbon equivalent to carbon dioxide equivalent (under the Options feature) is likely to take several seconds.

### ➤ When I have CAIT-Excel open, other Excel files don’t seem to be working properly.

It is recommended that users not have other Excel files open while using CAIT-Excel. Most users are accustomed to using Excel in “automatic” calculation mode (which is set as a default). In this mode, if a user enters a formula (e.g., summing the quantities in two different cells), Excel automatically calculates the result (e.g.,  $2+2 = 4$ ). However, CAIT-Excel uses a *manual calculation*



*mode*. Accordingly, when CAIT is open, it changes your computer's Excel calculation mode to manual (See Tools → Options → Calculation).

If you first open CAIT-Excel, then open another Excel file, that second file will then be in manual calculation mode. Likewise, even if you close CAIT-Excel, and keep the second Excel file open, it will remain in manual mode. The user can revert to automatic calculation mode through the Excel menus (Tools → Options → Calculation) or, alternatively, by closing and re-opening Excel. However, changing the calculation mode to automatic while CAIT is open will adversely affect its performance and is not recommended. That is why we advise users not to have other Excel files open while using CAIT. If other files must be opened and used (simultaneously with CAIT-Excel), we recommend closing them prior to returning to CAIT.

➤ **The display in CAIT-Excel is too large (or small) for my screen.**

Monitors are available in different sizes and resolutions. As a result, a particular page of CAIT-Excel may appear too large or small. This problem can be easily remedied through the “Zoom” feature in Excel. Zoom can be accessed through Excel menus (View → Zoom) or on the Toolbar, usually at the top of the screen. If a page in CAIT-Excel appears too large, reduce the Zoom to below 100 percent. Conversely, increase the Zoom above 100 percent to increase the size. Each worksheet in CAIT-Excel can be calibrated uniquely, and any changes made by the user may be saved for future use.

Note: A more complete FAQ discussion is available online at <http://cait.wri.org>.



## Appendix A. Geographic Region Definitions

This appendix specifies the membership of the geographic regions included in CAIT.

### Asia

Armenia, Azerbaijan, Bangladesh, Bhutan, Brunei, Cambodia, China, Georgia, India, Indonesia, Japan, Kazakhstan, Korea (North), Korea (South), Kyrgyzstan, Laos, Malaysia, Maldives, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Tajikistan, Thailand, Turkmenistan, Uzbekistan, Vietnam.

### Europe

Albania, Austria, Belarus, Belgium, Bosnia & Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Macedonia (FYR), Malta, Moldova, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Serbia & Montenegro, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, United Kingdom.

### Middle East & North Africa

Afghanistan, Algeria, Bahrain, Cyprus, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, Turkey, United Arab Emirates, Yemen.

### Sub-Saharan Africa

Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo, Congo (Dem. Republic), Côte d'Ivoire, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, South Africa, Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia, Zimbabwe.

### North America

Canada, United States of America.

### Central America & Caribbean

Antigua & Barbuda, Bahamas, Barbados, Belize, Costa Rica, Cuba, Dominica, Dominican Republic, El Salvador, Grenada, Guatemala, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Saint Kitts & Nevis, Saint Lucia, Saint Vincent & Grenadines, Trinidad & Tobago.

### South America

Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela.

### Oceania

Australia, Cook Islands, Fiji, Kiribati, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Vanuatu.



## Appendix B. UNFCCC Regions and other Organizations

This appendix specifies the membership of the UNFCCC regions and other organizations included in CAIT as “regions.” Categories in CAIT may differ from “official” ones in two ways. First, to the extent possible, we use the categories as they are constituted *under the UNFCCC*. For example, Romania is a member of the Group of 77; however, it is excluded from the group in CAIT because, under the UNFCCC, Romania is an Annex I Party and not a member of the G-77/China. Second, in some cases all of the “official” members of a group are not included in CAIT. In these cases, these members are not listed in the memberships below. For example, Palestine is a member of the Group of 77, but it is excluded from the group below because it is not included in CAIT. Generally, CAIT includes two groups of countries: (1) Parties to the Climate Convention and (2) other members of United Nations.<sup>5</sup> This is discussed in [Section 6.1](#) and [Appendix A](#) lists all the countries that are included in CAIT.

### Annex I Parties

Australia, Austria, Belarus, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, United States of America.

Source: <http://unfccc.int>

### Non-Annex I Parties

Albania, Algeria, Angola, Antigua & Barbuda, Argentina, Armenia, Azerbaijan, Bahamas, Bahrain, Bangladesh, Barbados, Belize, Benin, Bhutan, Bolivia, Bosnia & Herzegovina, Botswana, Brazil, Burkina Faso, Burundi, Cambodia, Cameroon, Cape Verde, Central African Rep., Chad, Chile, China, Colombia, Comoros, Congo, Congo (Dem. Rep.), Cook Islands, Costa Rica, Côte d'Ivoire, Cuba, Cyprus, Djibouti, Dominica, Dominican Republic, Ecuador, Egypt, El Salvador, Equatorial Guinea, Eritrea, Ethiopia, Fiji, Gabon, Gambia, Georgia, Ghana, Grenada, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, India, Indonesia, Iran, Israel, Jamaica, Jordan, Kazakhstan, Kenya, Kiribati, Korea (North), Korea (South), Kuwait, Kyrgyzstan, Laos, Lebanon, Lesotho, Libya, Macedonia (FYR), Madagascar, Malawi, Malaysia, Maldives, Mali, Malta, Mauritania, Mauritius, Mexico, Moldova, Mongolia, Morocco, Mozambique, Myanmar, Namibia, Nauru, Nepal, Nicaragua, Niger, Nigeria, Niue, Oman, Pakistan, Palau, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Qatar, Rwanda, Saint Kitts & Nevis, Saint Lucia, Saint Vincent & Grenadines, Samoa, Sao Tome & Principe, Saudi Arabia, Senegal, Serbia & Montenegro, Seychelles, Sierra Leone, Singapore, Solomon Islands, South Africa, Sri Lanka, Sudan, Suriname, Swaziland, Syria, Tajikistan, Tanzania, Thailand, Togo, Tonga, Trinidad & Tobago, Tunisia, Turkmenistan, Uganda, United Arab Emirates, Uruguay, Uzbekistan, Vanuatu, Venezuela, Vietnam, Yemen, Zambia, Zimbabwe.

Source: <http://unfccc.int>

### Asia Pacific Economic Cooperation Forum (APEC)

Australia, Brunei, Canada, Chile, China, Indonesia, Japan, Korea (South), Malaysia, Mexico, New Zealand, Papua New Guinea, Peru, Philippines, Russian Federation, Singapore, Taiwan, Thailand, United States of America, Vietnam.

Source: <http://www.apecsec.org.sg/>

### Association of Southeast Asian Nations (ASEAN)

Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam.

<sup>5</sup> Non-Parties are specified in CAIT with an asterisk (\*).



Source: <http://www.aseansec.org>

### **Commonwealth of Independent States (CIS)**

Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan.

Source: <http://www.cisststat.com/eng/cis.htm>

### **Economies in Transition (EITs)**

Albania, Armenia, Azerbaijan, Belarus, Bosnia & Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Macedonia (FYR), Moldova, Poland, Romania, Russian Federation, Serbia & Montenegro, Slovakia, Slovenia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan.

### **European Union (EU) (15)**

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom.

### **European Union (EU) (25)**

Members of EU-15 (above), plus Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia.

### **European Union (EU) (29)**

Members of EU-25 (above), plus Bulgaria, Croatia, Romania, Turkey.

Source: [http://europa.eu.int/abc/index\\_en.htm](http://europa.eu.int/abc/index_en.htm)

### **G-77/China**

Afghanistan, Algeria, Angola, Antigua & Barbuda, Argentina, Bahamas, Bahrain, Bangladesh, Barbados, Belize, Benin, Bhutan, Bolivia, Bosnia & Herzegovina, Botswana, Brazil, Brunei, Burkina Faso, Burundi, Cambodia, Cameroon, Cape Verde, Central African Republic, Chad, Chile, China, Colombia, Comoros, Congo, Congo (Dem. Republic), Costa Rica, Côte d'Ivoire, Cuba, Djibouti, Dominica, Dominican Republic, Ecuador, Egypt, El Salvador, Equatorial Guinea, Eritrea, Ethiopia, Fiji, Gabon, Gambia, Ghana, Grenada, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, India, Indonesia, Iran, Iraq, Jamaica, Jordan, Kenya, Korea (North), Kuwait, Laos, Lebanon, Lesotho, Liberia, Libya, Madagascar, Malawi, Malaysia, Maldives, Mali, Mauritania, Mauritius, Mongolia, Morocco, Mozambique, Myanmar, Namibia, Nepal, Nicaragua, Niger, Nigeria, Oman, Pakistan, Palau, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Qatar, Rwanda, Saint Kitts & Nevis, Saint Lucia, Saint Vincent & Grenadines, Samoa, Sao Tome & Principe, Saudi Arabia, Senegal, Seychelles, Sierra Leone, Singapore, Solomon Islands, South Africa, Sri Lanka, Sudan, Suriname, Swaziland, Syria, Tanzania, Thailand, Togo, Tonga, Trinidad & Tobago, Tunisia, Turkmenistan, Uganda, United Arab Emirates, Uruguay, Vanuatu, Venezuela, Vietnam, Yemen, Zambia, Zimbabwe.

Source: <http://www.g77.org/>

### **Group of 8 (G8)**

Canada, France, Germany, Italy, Japan, Russian Federation, United States of America, United Kingdom.

### **Least Developed Countries (LDCs)**

Afghanistan, Angola, Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Cape Verde, Central African Rep., Chad, Comoros, Congo (Dem. Rep.), Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kiribati, Laos, Lesotho, Liberia, Madagascar, Malawi, Maldives, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Samoa, Sao Tome & Principe, Senegal, Sierra Leone, Solomon Islands, Sudan, Tanzania, Togo, Uganda, Vanuatu, Yemen, Zambia.

Source: <http://www.un.org/special-rep/ohrrls/ldc/list.htm>



**Mercado Común del Sur (Common Market of the South, MERCOSUR)**

Argentina, Brazil, Paraguay, Uruguay.

Source: <http://www.mercosur-comisec.gub.uy/>

**North American Free Trade Agreement (NAFTA)**

Canada, Mexico, United States of America.

Source: <http://www.nafta-sec-alena.org/>

**Organization of Economic Cooperation and Development (OECD)**

Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea (South), Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States of America.

Source: <http://www.oecd.org>

**Organization of Petroleum Exporting Countries (OPEC)**

Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, Venezuela.

Source: <http://www.opec.org>

**Small Island Developing States (AOSIS)**

Antigua & Barbuda, Bahamas, Barbados, Belize, Cape Verde, Comoros, Cook Islands, Cuba, Cyprus, Dominica, Fiji, Grenada, Guinea-Bissau, Guyana, Haiti, Jamaica, Kiribati, Maldives, Malta, Mauritius, Nauru, Niue, Palau, Papua New Guinea, Saint Kitts & Nevis, Saint Lucia, Saint Vincent & Grenadines, Samoa, Sao Tome & Principe, Seychelles, Singapore, Solomon Islands, Suriname, Tonga, Trinidad & Tobago, Vanuatu.

Source: <http://www.sidsnet.org/aosis/members.html>

