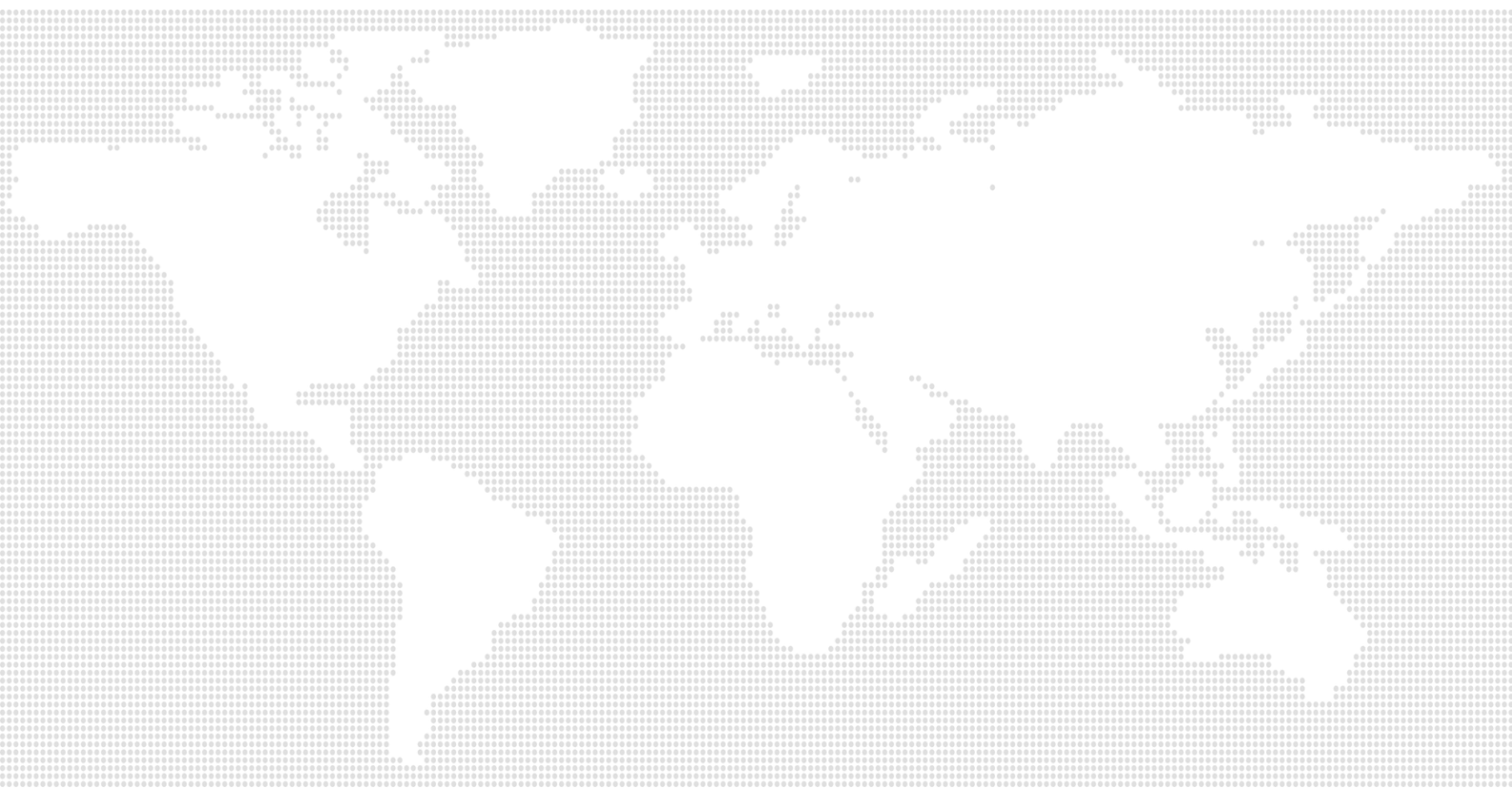


Dashboard user manual

Tools and methods for impact assessment and analysis
of response measures implementation



Version 01.0



United Nations
Climate Change

About the dashboard

This handbook outlines the use of the dashboard¹ for selecting tools for conducting assessment and analysis of the impact of the implementation of response measures.² The purpose of the dashboard is to help users, including policy analysts and advisors, to identify relevant tools which can facilitate the focus of their analyses.

The dashboard utilizes the database for tools for assessment of impacts of the implementation of mitigation policies and strategies (response measures)³ which was compiled and prepared by the Katowice Committee of Experts on the Impacts of the Implementation of Response Measures (KCI).

The dashboard allows the users to find suitable tools associated with countries of their choice, highlighting whether those countries are the center of the analysis or as part of a broader group. It presents various types of information associated with, for example, Sustainability Development Goal Indicators to allow the users to select the model that best suits their needs.

This is a growing list of tools at the level of detail provided by their developers. Please note that tool support and applicability may evolve as authors update, adapt, or retire their models.

The information presented in this dashboard is intended to help users to select tools for further investigation and to look to implement for their purposes. The dashboard does not act as a gateway to run the tools. It presents information that may be useful for training, implementation, and licensing purposes, allowing the advisor to make an informed decision about the investment required either to implement a model locally or to gain advice from a specialist.

The data presented on the dashboard is a subset of the information available in the main database. In some dashboard pages, users can generate a PDF that provides a more complete picture of the selected tool or tools.

¹ Available at <https://unfccc.int/response-measures/impact-assessment-tools>.

² In simple terms, response measures are climate policies, programmes or actions taken by countries to combat climate change. They are typically measures to reduce greenhouse gas emissions.

³ Available at <https://unfccc.int/documents/274695>.

Disclaimer: The material and information contained in the user interface is for general information purposes only. The proprietors accept no liability for consequences arising from the use of the interface or data and tools therein. Any reliance placed on such material is therefore strictly at the user's own risk. Users should ensure they have valid licenses for the data or software before use.

I. Landing page

The initial landing page dashboard, shown in see figure 1 below, can be accessed from <https://unfccc.int/response-measures/impact-assessment-tools>.

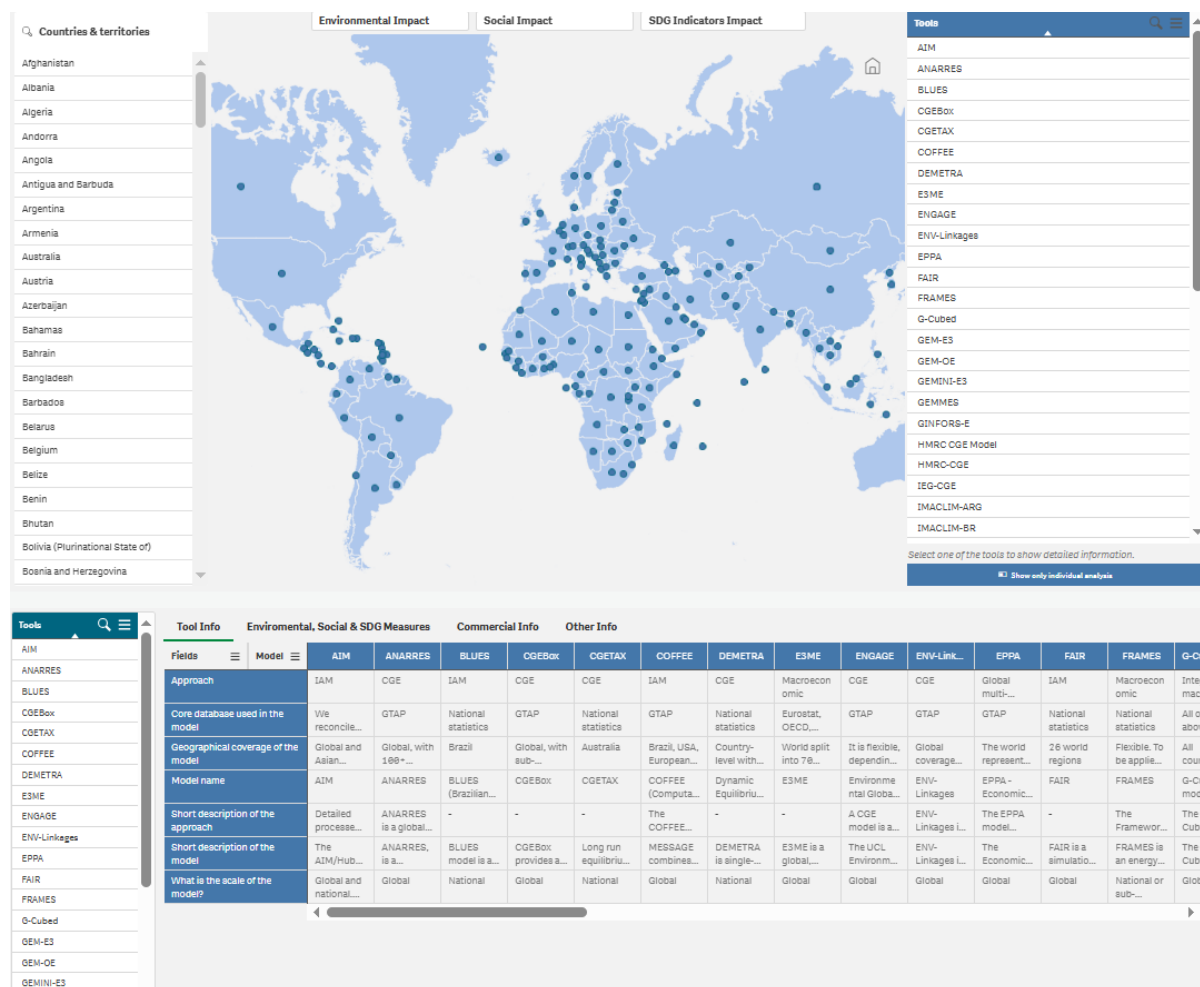


Figure 1. Landing Page for dashboard

This landing page allows users to select a geographical entity of interest and to further restrict available models to those which present or generate explicit measures of interest.

The landing page is divided into four distinct sections. The first section, on the left side, is the list of countries and territories. The second section, in the middle, is a map with clickable dots, each representing a country. The third section, on the right side, is a list of tools. The fourth section, on the bottom, is the table that allows for comparison between multiple tools. See figure 2 below, showing these sections.

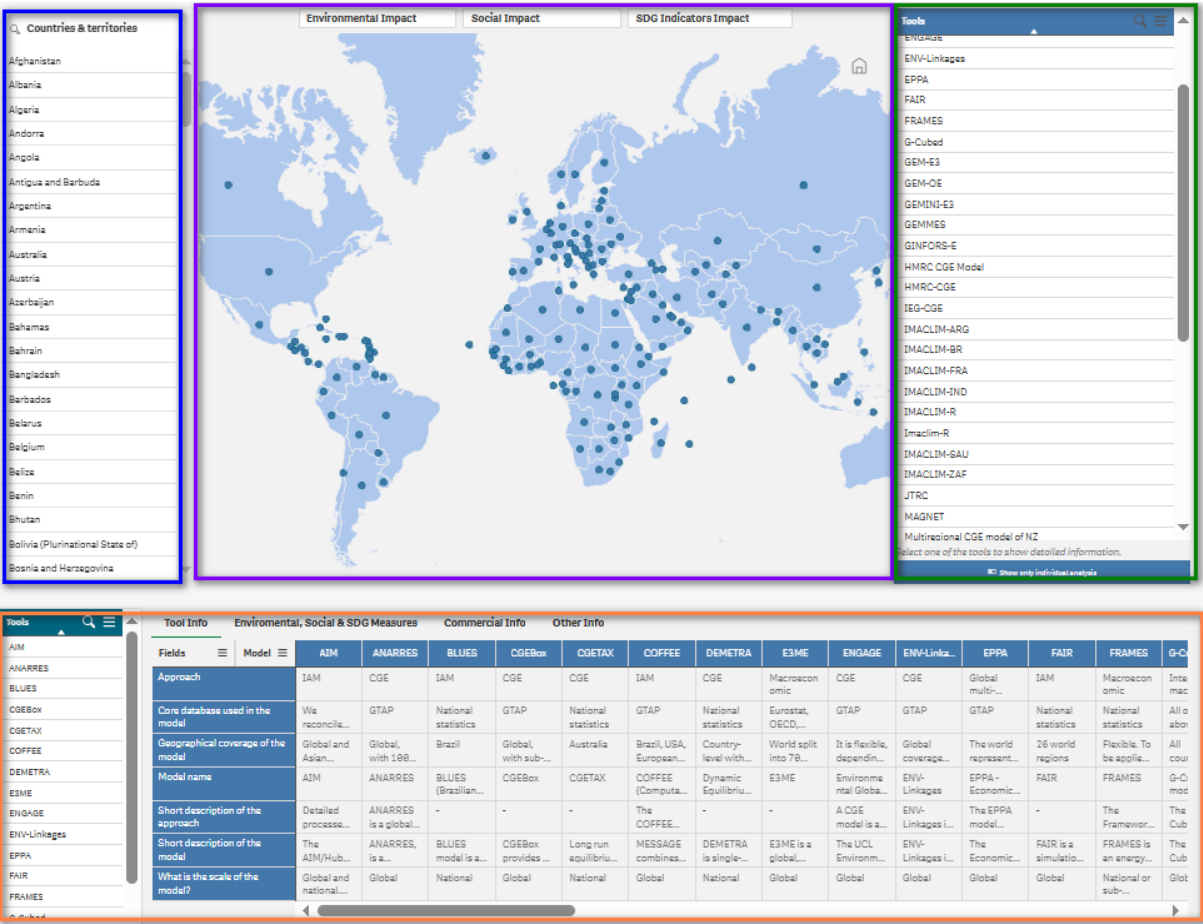


Figure 2. Landing Page showing four distinct sections: blue showing the list of countries and territories; purple showing the world map; green showing the list of tools; and orange showing the comparison table

This section of the handbook describes the process of discovering the relevant tools available for countries or groups of countries of interest.

A. Country selection

The first step is to select a country or countries. It is possible to select countries using the map pane or the **Countries & territories** tab (See figure 3 for selection with the tab).

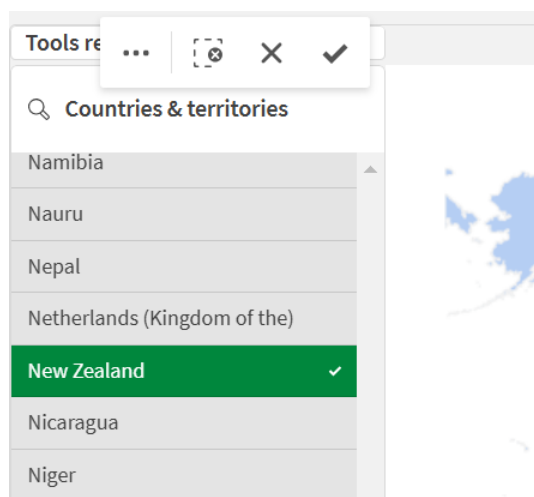


Figure 3. Country Selection Options

When one country is selected on the map pane, additional selection options are made available. This is the Lasso and Circle selection tool. When using the map, in order to select countries nearby, users can use these tools to extend the selection to neighboring countries (Figure 4).

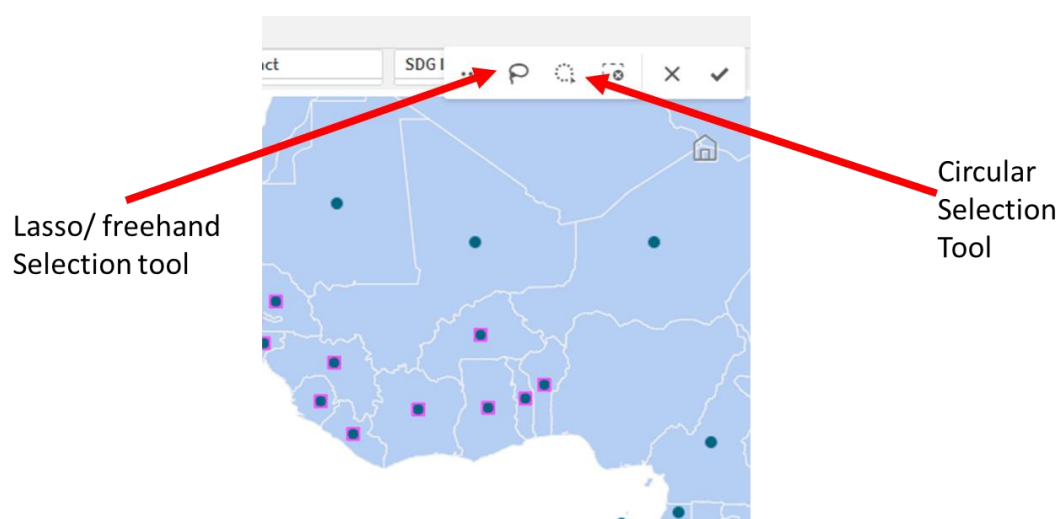


Figure 4 Using Freehand Tools for Country Selection on the Map

B. Additional impacts

Many of the tools have additional information on environmental impacts, social impacts and Sustainable Development Goals indicators⁴. Users can filter the tools based on these three criteria using the tabs at the top of the map pane. These filters are Yes/ No options. Leaving the tabs untouched gives all the models associated with the previous selection without further filtering (Figure 5).

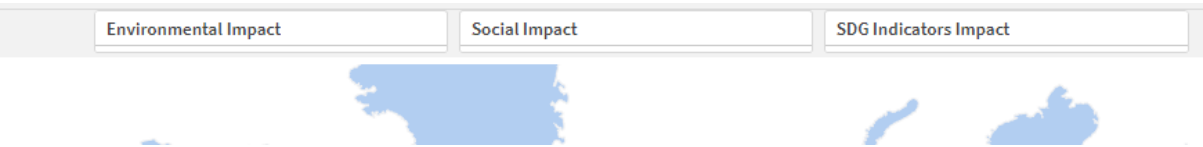
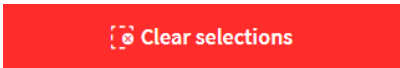


Figure 5. Environmental Impact, Social Impact & Sustainability Development Goals Indicators Selections

If the users wish to reset their selection, a  button is available at the bottom of the map pane. This will remove all selections and will require selecting the desired filters again.

C. Tool selection

Once the subject of interest is selected, the list of tools on the right section will be refreshed, to show tools only for individual analysis applicable for the selected country/ies and/or selected additional impacts (see figure 6 below). By default, this list will display initially the tools that contain this/these country/ies in an individual manner, meaning tools that can be used to assess the selected county/ies individually.

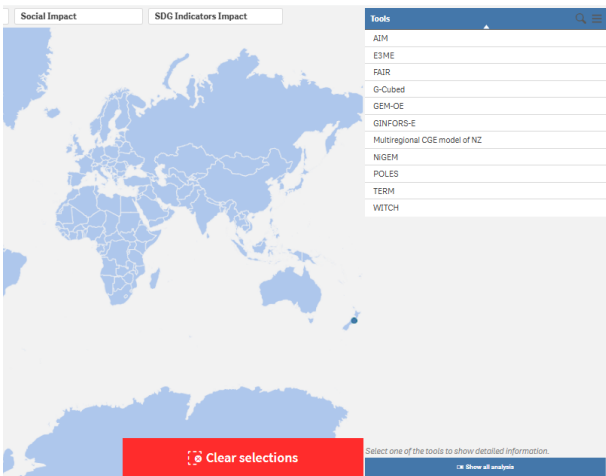
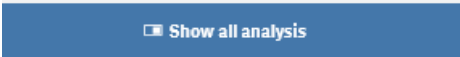


Figure 6. Initial resulting view of applicable tools for New Zealand containing only individual analysis

⁴ All the tools presented produce economic impact measures

If the user wishes to also see the tools that can be used to assess the selected country/ies as part of a region,⁵ the user can click the  button. The results are shown in figure 7 below.

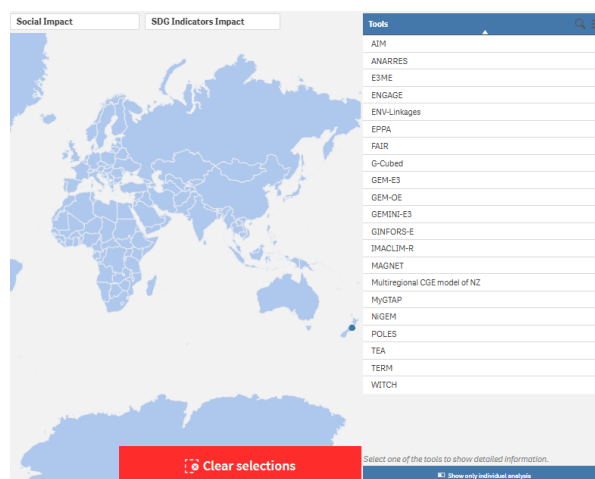


Figure 7. Secondary view of applicable tools for New Zealand containing both individual and aggregated analysis

It might be the case that the number of tools available for use is significantly reduced and that some of the remaining tools may be still highly aggregated as the information provided by the tool providers does not give exact information.

⁵ Note that the definition and coverage of “region” may vary across tools.

II. Tool information and comparison

A. Tool information

Selecting one of the tools available on the right pane brings the user automatically to a tool information page (Figure 8). The information is presented in a structured, tabular format for a single tool at a time. With an identical table being displayed in the bottom pane as well, the difference between these two tables will be further explained in Section II. B.

Tool Info	Environmental, Social & SDG Measures	Commercial Info	Other Info	Open PDF version	×
Approach	IAM				
Core database used in the model	We reconcile data (GTAP, UN SNA, World Bank, IEA and FAO				
Geographical coverage of the model	Global and Asian nations				
Model name	IAM				
Short description of the approach	Detailed processed integrated assessment model which consists of CGE model (AIM/Hub), land-use distribution (AIM/PLUM), Energy system model (AIM/Technology), and simplified climate model.				
Short description of the model	The AIM/Hub model is a recursive-dynamic general equilibrium model that covers all regions worldwide. The main inputs of the AIM/Hub are population, GDP, food preferences, assumptions of energy technology progress on both the supply and demand sides, and air pollution control level. The model provides energy consumption, agricultural and land-use indicators, and GHG and AP emissions. The...				
What is the scale of the model?	Global and national. Both are actively operational				

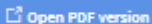
Figure 8. Initial view of tool information page

The information is organised using four main headings (Figure 9):

1. **Tool Info:** This gives information such as the core database and a short description of the model. It highlights the scale, national, global etc. and the approach to the modelling for example Partial Equilibrium or CGE.
2. **Environmental, Social & SDG Measures:** This tab gives a list of the Environmental, and Social impacts, as well as the SDG indicators that are included or indicated in the tool outputs.
3. **Commercial Information:** This includes documentation, licensing and costs.
4. **Other information:** This includes a number of miscellaneous fields including examples of the use of the tools in other projects, economic impact coverage and the type of organisation that supplies the model.

Tool Info	Environmental, Social & SDG Measures	Commercial Info	Other Info
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Figure 9. Tool information tabs on Information Pages

In this view, the user can download a pdf version of the tool information if needed, by clicking  .

Clicking  will take the user back to the main landing page with all the selections in place, allowing a new tool to be selected.

B. Tool comparison

The tool comparison section can be found below the map. This is a useful table to compare two or more tools. There are two ways in which it can be approached:

No previous selection of tools on the landing page

If the users do not select any tools in the landing page, they will first be presented with a tabular table comparing all existing tools. Once a filter is selected, for instance in the example being used here New Zealand, the table will display all applicable tools to the previously selected filters or preferences (Figure 10).

Tools	Tool Info	Environmental, Social & SDG Measures				Commercial Info		Other Info								
	Fields	Model	AIM	ANARRES	E3ME	ENGAGE	ENV-Linka...	EPPA	FAIR	G-Cubed	GEM-E3	GEM-OE	GEMINI-E3	GINFORS-E	IMACLIM-R	MAGNET
AIM	Approach		IAM	CGE	Macroecon omic	CGE	CGE	Global multi-...	IAM	Integrated macro an...	CGE	Macroecon omic	CGE	Macroecon omic	IAM	CGE
ANARRES	Core database used in the model	We reconcile...	GTAP	Eurostat, OECD...	GTAP	GTAP	GTAP	National statistics	All of the above	GTAP	National statistics	GTAP	OECD	GTAP	GTAP	GTAP
E3ME	Geographical coverage of the model	Global and Asian...	Global, with 100+...	World split into 70...	It is flexible, dependin...	Global coverage...	The world represent...	26 world regions	All countries	Global scope wit...	Global	Global with different...	OECD countries...	World	141 countries	141 countries
ENGAGE	Model name	AIM	ANARRES	E3ME	Environmen tal Global...	ENV-Linkages	EPPA - Economic...	FAIR	G-Cubed model	GEM-E3	Oxford Economic...	GEMINI-E3	GINFORS-E	Imacim-R World	IMACLIM-R	MAGNET
ENV-Linkages	Short description of the approach	Detailed processe...	ANARRES is a global...	-	A CGE model is a...	ENV-Linkages I...	The EPPA model...	-	The G-Cubed...	The model is a...	Econometri c...	-	-	IMACLIM-R World is a...	MAGNET	MAGNET
EPPA	Short description of the model	The AIM/Hub...	ANARRES is a...	E3ME is a global...	The UCL Environm...	ENV-Linkages I...	The Economic...	FAIR is a simulatio...	The G-Cubed...	The GEM-E3 model...	Large scale, multi...	GEMINI-E3 is a multi...	GINFORS-E is a global...	IMACLIM-R World is a...	MAGNET	MAGNET
FAIR	What is the scale of the model?	Global and national...	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global
G-Cubed																
GEM-E3																
GEM-OE																
GEMINI-E3																
GINFORS-E																
IMACLIM-R																
MAGNET																
Multiregional CGE model of NZ																
MyGTAP																
NIGEM																
POLES																
TEA																
TERM																
WITCH																
	Clear selected tools															

Figure 10. View showing comparison of all tools for both individual analysis and country group analysis for a selected country

If users want to select a specific number of models to be compared, they can do so by clicking them on the left pane of tools. See figure 11 for an example on the comparison table when three models (AIM, E3ME & FAIR) are selected.

Tools	Tool Info	Environmental, Social & SDG Measures	Commercial Info	Other Info
AIM ANARRES E3ME ✓ ENGAGE ENV-Linkages EPPA FAIR ✓ G-Cubed GEM-E3 GEM-DE GEMINI-E3 GINFORS-E IMACLIM-R MAGNET Multiregional CGE model of NZ MyGTAP NIGEM POLES TEA TERM WITCH Clear selected tools	Fields Model Approach Core database used in the model Geographical coverage of the model Model name Short description of the approach Short description of the model What is the scale of the model?	AIM We reconcile data (GTAP, UN SNA, World Bank, IEA and FAO) Global and Asian nations AIM Detailed processed integrated assessment model which consists of CGE model (AIM/Hub), land-use distribution (AIM/PLUM),... The AIM/Hub model is a recursive-dynamic general equilibrium model that covers all regions worldwide. The main inputs of the... Global and national. Both are actively operational	AIM Macroeconomic Eurostat, OECD, WIOD, IEA, EDGAR and national statistics World split into 78 countries and regions. E3ME - E3ME is a global, macro-econometric model that is designed to address the major economic, social and environmental... Global	FAIR National statistics 26 world regions FAIR - FAIR is a simulation model to analyse the costs, benefits, and climate effects of mitigation regimes, emission reduction... Global

Figure 11. View showing comparison of AIM, E3ME & FAIR

When selecting these tools, a floating menu will appear. By clicking on the check (✓) users will be directed to a secondary view in which they can selectively choose between the three selected tools (Figure 12). To go back to the previous page, users need to click the **Clear selected tools** option at the bottom of the page.

Tools	Tool Info	Environmental, Social & SDG Measures	Commercial Info	Other Info
AIM E3ME FAIR Clear selected tools	Fields Model Approach Core database used in the model Geographical coverage of the model Model name Short description of the approach Short description of the model What is the scale of the model?	AIM We reconcile data (GTAP, UN SNA, World Bank, IEA and FAO) Global and Asian nations AIM Detailed processed integrated assessment model which consists of CGE model (AIM/Hub), land-use distribution (AIM/PLUM),... The AIM/Hub model is a recursive-dynamic general equilibrium model that covers all regions worldwide. The main inputs of the... Global and national. Both are actively operational	E3ME Macroeconomic Eurostat, OECD, WIOD, IEA, EDGAR and national statistics World split into 78 countries and regions. E3ME - E3ME is a global, macro-econometric model that is designed to address the major economic, social and environmental... Global	FAIR National statistics 26 world regions FAIR - FAIR is a simulation model to analyse the costs, benefits, and climate effects of mitigation regimes, emission reduction... Global

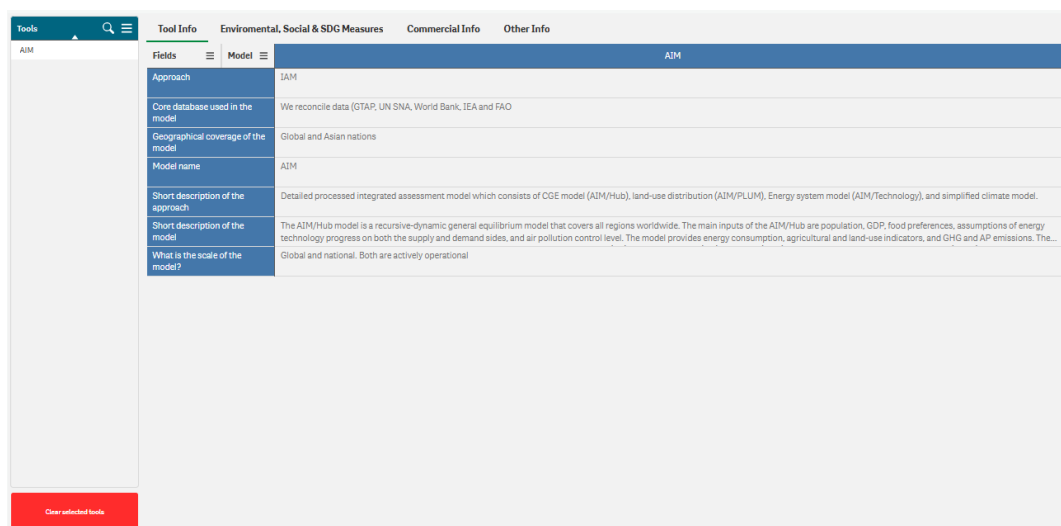
Figure 12 View showing only selected tools

By selecting a single tool on the landing page

If users select a single tool on the landing page, they will be directed to the initial tool page containing the information explained in the previous section. Additionally, the comparisons table will also be adapted to solely display the information of the selected model (Figure 13). To be able to select additional tools the user needs to

Clear selected tools

select the option at the bottom of the pane.



Tools	Tool Info	Environmental, Social & SDG Measures	Commercial Info	Other Info
AIM	Fields	Model	AIM	
	Approach	IAM		
	Core database used in the model	We reconcile data (GTAP, UN SNA, World Bank, IEA and FAO)		
	Geographical coverage of the model	Global and Asian nations		
	Model name	AIM		
	Short description of the approach	Detailed processed integrated assessment model which consists of CGE model (AIM/Hub), land-use distribution (AIM/PLUM), Energy system model (AIM/Technology), and simplified climate model.		
	Short description of the model	The AIM/Hub model is a recursive-dynamic general equilibrium model that covers all regions worldwide. The main inputs of the AIM/Hub are population, GDP, food preferences, assumptions of energy technology progress on both the supply and demand sides, and air pollution control level. The model provides energy consumption, agricultural and land-use indicators, and GHG and AP emissions. The...		
	What is the scale of the model?	Global and national. Both are actively operational		

Figure 13. View displaying solely the AIM model selected

In the case that a previous condition was selected (i.e. New Zealand as a country), the table will go back to displaying a comparison between all tools applicable to that filter for individual analysis or all (Figure 14). The same steps as in the previous section can be followed to compare the tools.

Tools	Tool Info	Environmental, Social & SDG Measures		Commercial Info		Other Info										
AIM	Fields	Model	AIM	ANARRES	E3ME	ENGAGE	ENV-Linka...	EPPA	FAIR	G-Cubed	GEM-E3	GEM-OE	GEMINI-E3	GINFORS-E	IMACLIM-R	MAGNET
ANARRES	Approach		IAM	CGE	Macroecon omic	CGE	CGE	Global multi...	IAM	Integrated macro an...	CGE	Macroecon omic	CGE	Macroecon omic	IAM	CGE
E3ME	Core database used in the model		We reconcile...	GTAP	Eurostat, OECD...	GTAP	GTAP	GTAP	National statistics	All of the above	GTAP	National statistics	GTAP	OECD	GTAP	GTAP
ENGAGE	Geographical coverage of the model		Global and Asian...	Global, with 100+...	World split into 78...	It is flexible, depend...	Global coverage...	The world represent...	26 world regions	All countries	Global scope wit...	Global	Global with different...	OECD countries...	World	14 countries
ENV-Linkages	Model name		AIM	ANARRES	E3ME	Environmen tal Global...	ENV-Linkages	EPPA- Economic...	FAIR	G-Cubed model	GEM-E3	Oxford Economic...	GEMINI-E3	GINFORS-E	Imaclim-R World	MAGNET
EPPA	Short description of the approach		Detailed processe...	ANARRES is a global...	-	A CGE model is a...	ENV-Linkages I...	The EPPA model...	-	The G-Cubed...	The model is a...	Econometri c...	-	-	IMACLIM-R World	MAGNET
FAIR	Short description of the model		The AIM/Hub...	ANARRES, is a...	E3ME is a global...	The UCL Environm...	ENV-Linkages I...	The Economic...	FAIR is a simulatio...	The G-Cubed...	The GEM-E3 model ...	Large scale, multi...	GEMINI-E3 is a multi...	GINFORS-E is a global...	IMACLIM-R World is a...	MAGNET (M)
G-Cubed	What is the scale of the model?		Global and national...	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global
GEM-E3																
GEM-OE																
GEMINI-E3																
GINFORS-E																
IMACLIM-R																
MAGNET																
Multiregional CGE model of NZ																
MyGTAP																
NIGEM																
POLES																
TEA																
TERM																
WITCH																
Clear selected tools																

Figure 14. View displaying individual tools once the selected tools are cleared

Another way in which users can access additional tools from the view of figure 13 is by selecting the search engine in the left panel (Figure 15). This will display a dropdown box containing the full list of available tools, with those applicable to the existing filters being in a light shading format while those not applicable being in a darker shade.

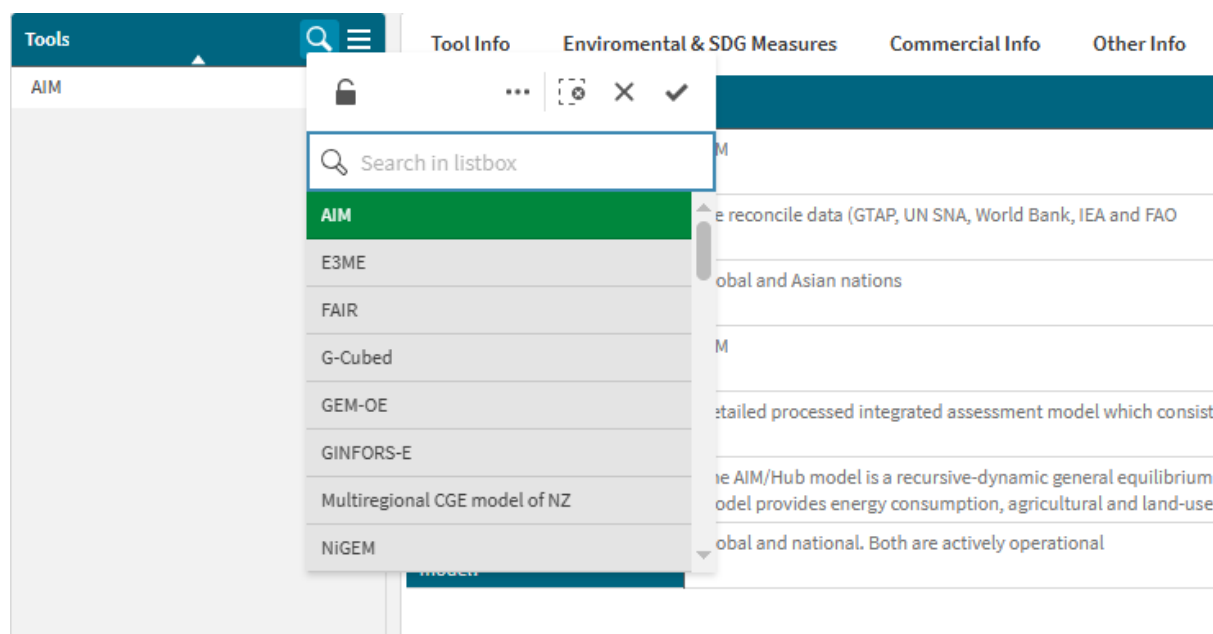


Figure 15. View displaying the search engine to select additional tools for comparison

Users can select as many tools as they wish from this panel to compare the applicable tools. See figure 16 for reference using the models AIM, G-Cubed, and Multiregional CGE model of NZ.

Additionally, if they wish for the entire list of applicable tools to be displayed in the left panel, they can do so by clicking on the **Clear selected tools** button.

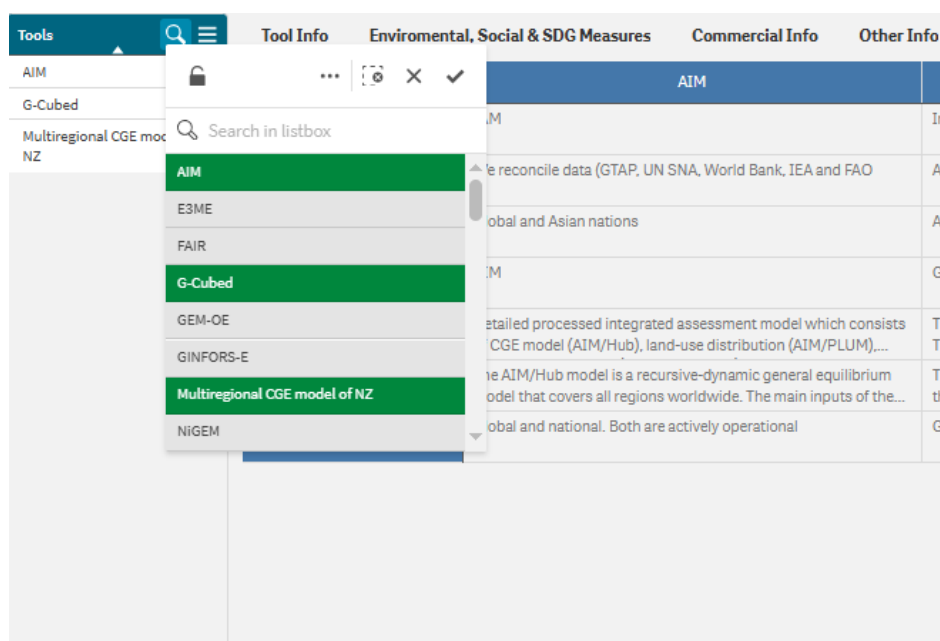


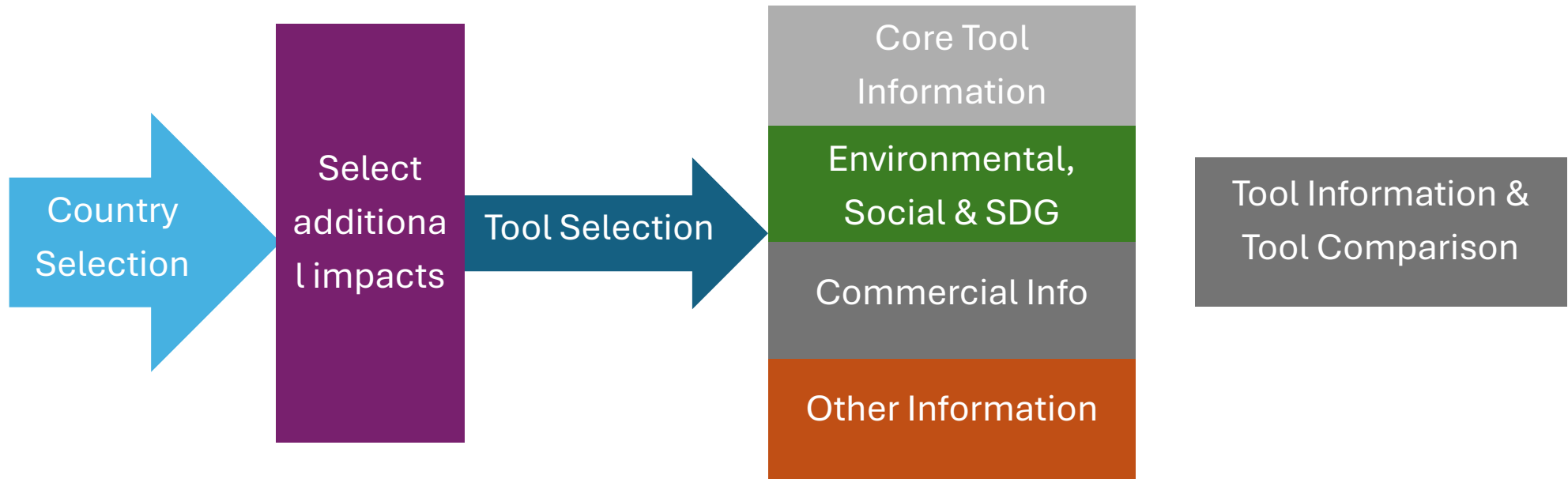
Figure 16. View when selecting AIM, G-Cubed and Multiregional CGE model of NZ from the search option

Tools	Tool Info	Environmental, Social & SDG Measures			Commercial Info	Other Info							
	Fields	Model	AIM	E3ME	FAIR	G-Cubed	GEM-OE	GINFORS-E	Multiregional ...	NIGEM	POLES	TERM	WITCH
AIM	Approach		IAM	Macroeconomi c	IAM	Integrated macro and...	Macroeconomi c	Macroeconomi c	CGE	Macroeconomi c	IAM	CGE	IAM
E3ME	Core database used in the model	We reconcile data (GTAP, U...	Eurostat, OECD, WIOD...	National statistics	All of the above	National statistics	OECD	National statistics	National statistics	National statistics	National Supply-Use...	IEA energy balance...	
FAIR		Geographical coverage of the model	Global and Asian nations	World split into 76 countries...	26 world regions	All countries	Global	OECD countries plu...	New Zealand	Global	66 regions: 54 Individual...	The model has been applied ...	17 global regions
G-Cubed	Model name	AIM	E3ME	FAIR	G-Cubed model	Oxford Economics...	GINFORS-E	Multiregional CGE model of...	NIGEM	POLES (Prospective...	TERM	WITCH	
GEM-OE	Short description of the approach	Detailed processed...	-	-	The G-Cubed model is a...	Econometric relationships...	-	-	Modified Fair- Taylor metho...	-	-	-	
GINFORS-E	Short description of the model	The AIM/Hub model is a...	E3ME is a global, macro...	FAIR is a simulation...	The G-Cubed model consis...	Large scale, multi-country...	GINFORS-E is a global mod...	A bottom-up multiregional...	NIGEM is the leading globa...	POLES is a global energy...	TERM (The Enormous...	WITCH (World Induced...	
Multiregional CGE model of NZ	What is the scale of the model?	Global and national. Bot...	Global	Global	Global	Global	Global	Global	National	Global	Global	Models several regions withi...	Global
NIGEM													
POLES													
TERM													
WITCH													
Clear selected tools													

Figure 17. View once the tools have been cleared

III. Tool selection flow chart

The steps above can be summarized in the flow chart in figure 18 below.



Version information

<i>Version</i>	<i>Description</i>
01.0	Initial version