



CROSS-COMPLIANCE ASSESSMENT TOOL

**Policy-oriented research:
Scientific support to policies SSP**

Specific Targeted Research Project (STREP)

Deliverable(s): 5.5:

User manual for the analytical assessment tool for the impacts of CC

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Disclaimer:

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PU	Public	
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	X
CO	Confidential, only for members of the consortium (including the Commission Services)	



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Glossary of terms and acronyms

CC	Cross Compliance
CC standards	SMR and GAEC standards implemented under the Cross Compliance policy between 2005 and 2009.
CCAT	Cross Compliance Assessment tool. It is the acronym of the project and also the name of the integrated assessment tool delivered by the project.

Summary

This manual contains the instructions for using the viewers version of the analytical assessment tool for the impacts of CC. It shows how the end user may view meta data on the scenarios, choose another comparison scenario, how to view indicator meta data and results (in tables and maps), and how to view documents and presentations produced in the project.

1 Introduction

One of the main objectives of the CCAT project was to make an interactive computer application to estimate the effects of a variety of Cross Compliance (CC) measures in terms of agricultural markets, producer's income, consumer's welfare, land use, soil, water, air, climate, biodiversity and landscapes, as well as food safety, animal welfare and health.

The CCAT Final Tool connects the existing core models Capri and Miterra and processes information on Cross Compliance measures, including assumed levels of implementation, compliance and cost. It also translates expert knowledge on potential effects on Biodiversity and Landscape into maps. In addition, it contains two meta models derived from the environmental models of Epic and DNDC, which are solely used for comparison with Miterra.

The CCAT Final Tool has been delivered in two user types: end users and researchers.

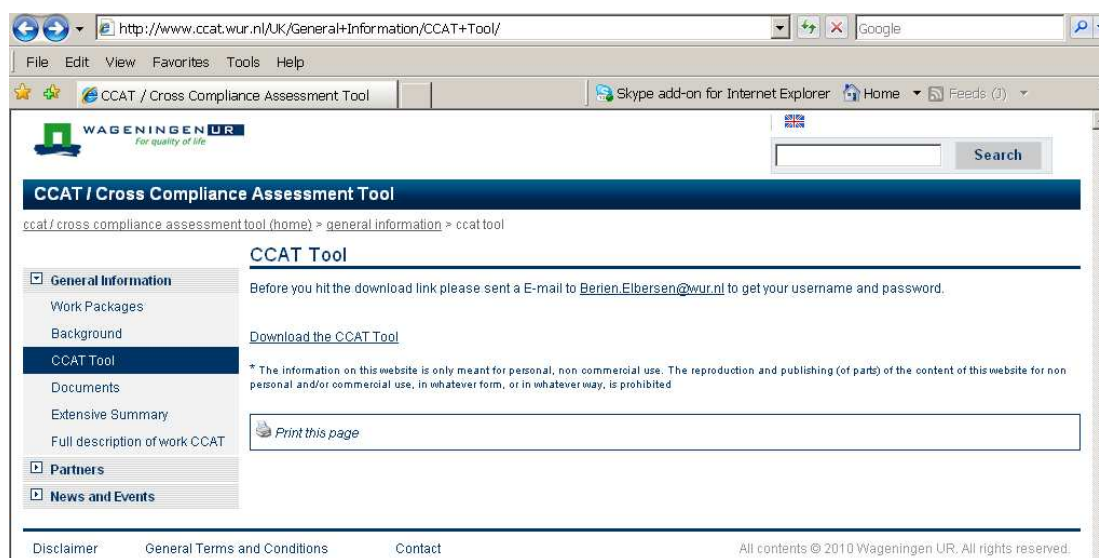
- *End users* or *viewers* can investigate the results of predefined scenarios and have the possibility to extract information from these scenarios to Word, Excel, etc. They do not have the possibility to change and/or rerun these scenarios, nor have the possibility to define and create additional scenarios. End users however will have insight from within the tool in most documents and presentations and also some relevant input data.
- *Researchers* can create and define new scenarios by inheriting from existing scenarios, can run those new scenarios and investigate the results. Researchers will also have insight in all relevant input data.

This manual contains the instructions for using the *viewers* version of the analytical assessment tool for the impacts of CC, to be used by *end users*. The manual for the research version will be available at LEI, The Netherlands, but is not required for the version that will be delivered to the European commission (Deliverable 5.4).

This manual focuses on the use of the tool, not on the technical details and the contents of the tool. For technical details we refer to the Technical description (Deliverable 5.6). Information on the contents can be found in Deliverable 2.8 and all other reports that have been produced in the project, which can be found in the tool under the menu item "Documents".

2 Downloading, installing and starting the CCAT tool

The application of the CCAT tool can be downloaded from the CCAT website <http://www.ccat.nl/UK/> by clicking on menu item CCAT Tool, and then on Download the CCAT Tool:



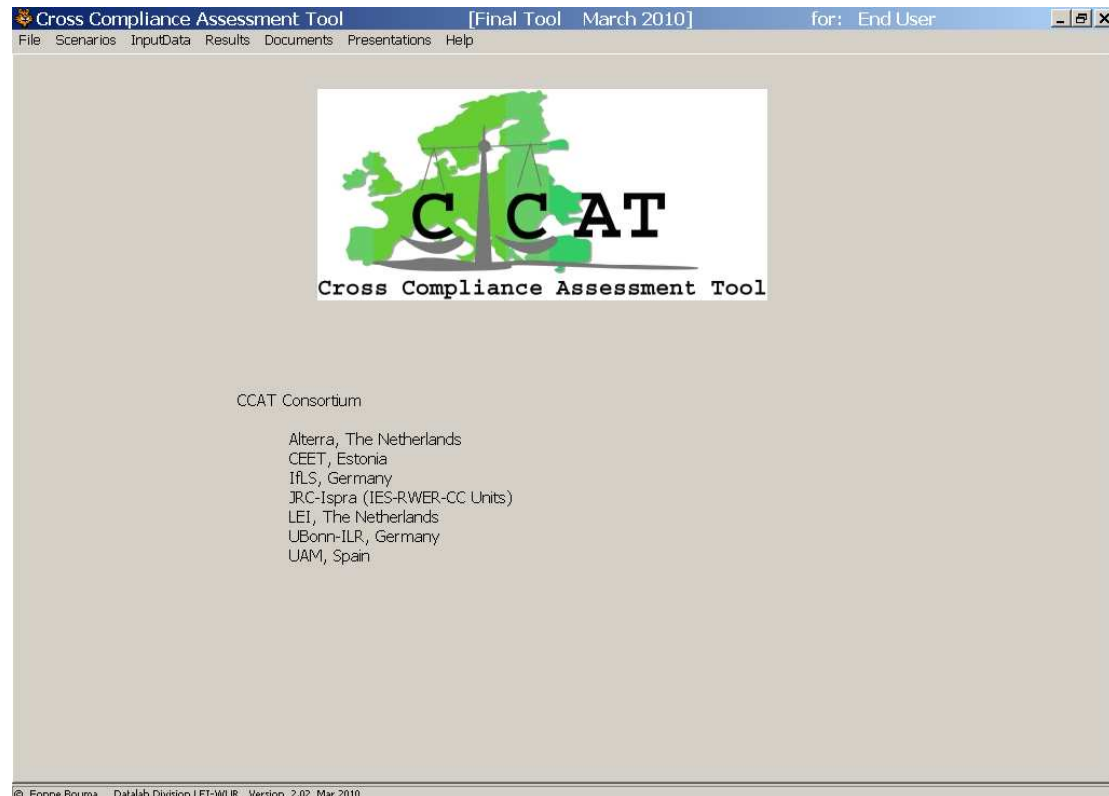
The application can be found in the form of a zipped file called VIEWER.zip. This zipfile must be unzipped in a directory named **CCAT** under a drive, e.g. **C:**. After unzipping the application can be found in the directory:

C:\CCAT\VIEWER\GamsTools\GsePro.exe.

By double clicking on this file the application starts.

3 The different functions of the CCAT tool

After clicking starting the application (see chapter 2) the following opening screen will be presented, indicating the different functions of the tool.

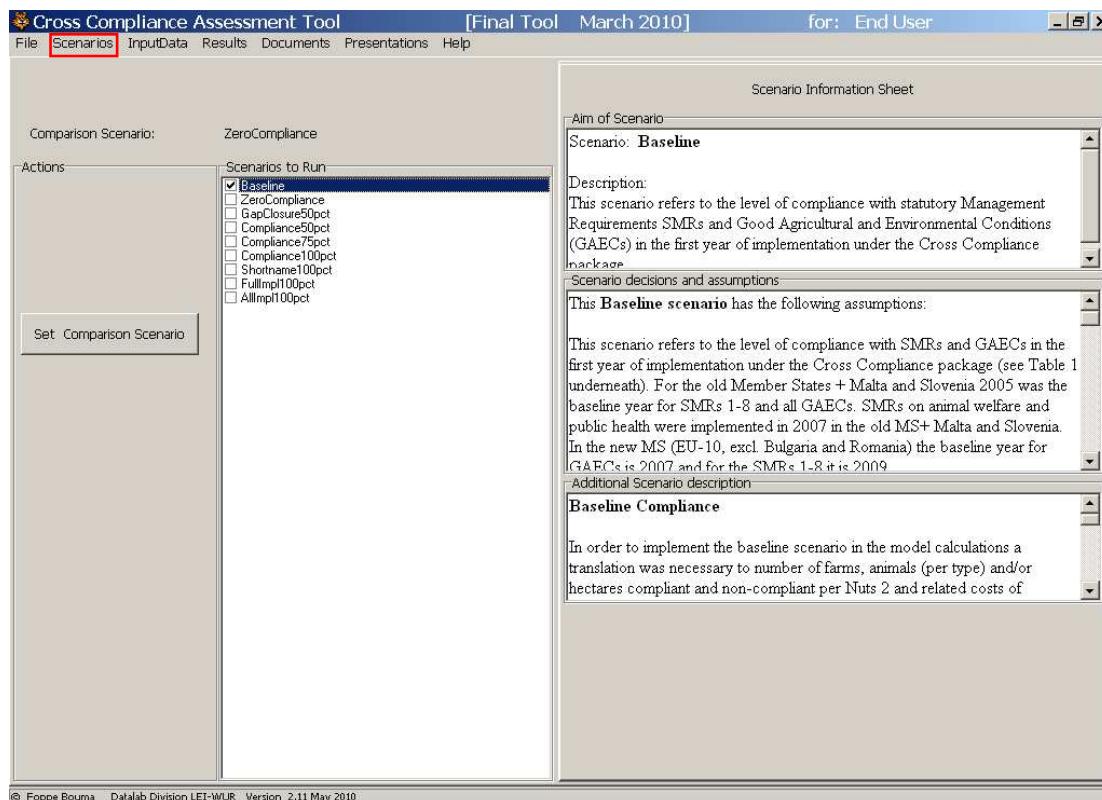


For the end user the following functions are relevant:

- **Scenarios:** to view information on the scenarios and to choose a comparison scenario
- **InputData:** to view relevant input data
- **Results:** to view all results in tabular form or in maps, and to view meta data of the indicators
- **Documents:** to view relevant documents that have been produced in the project
- **Presentations:** to view relevant power point presentations that have been produced in the project

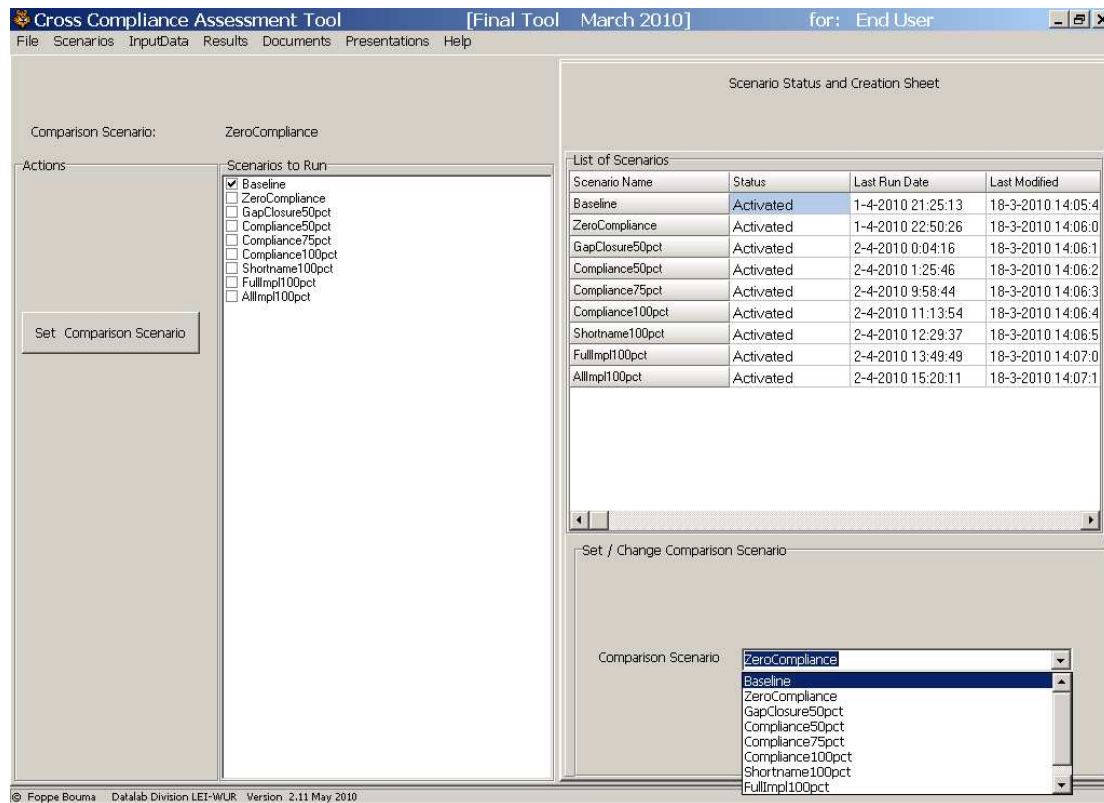
4 Scenarios

If the user clicks on the menu item Scenarios, the following screen appears.



By clicking on a scenario name, a description of the scenario will be shown in the right part of the screen.

With “Set comparison Scenario” the user may change the scenario with which the results of the other scenarios will be compared when viewing the results.



By default the “Zero compliance” scenario is the comparison scenario. For more information on the scenarios we refer to chapter 2 of Deliverable 2.8.

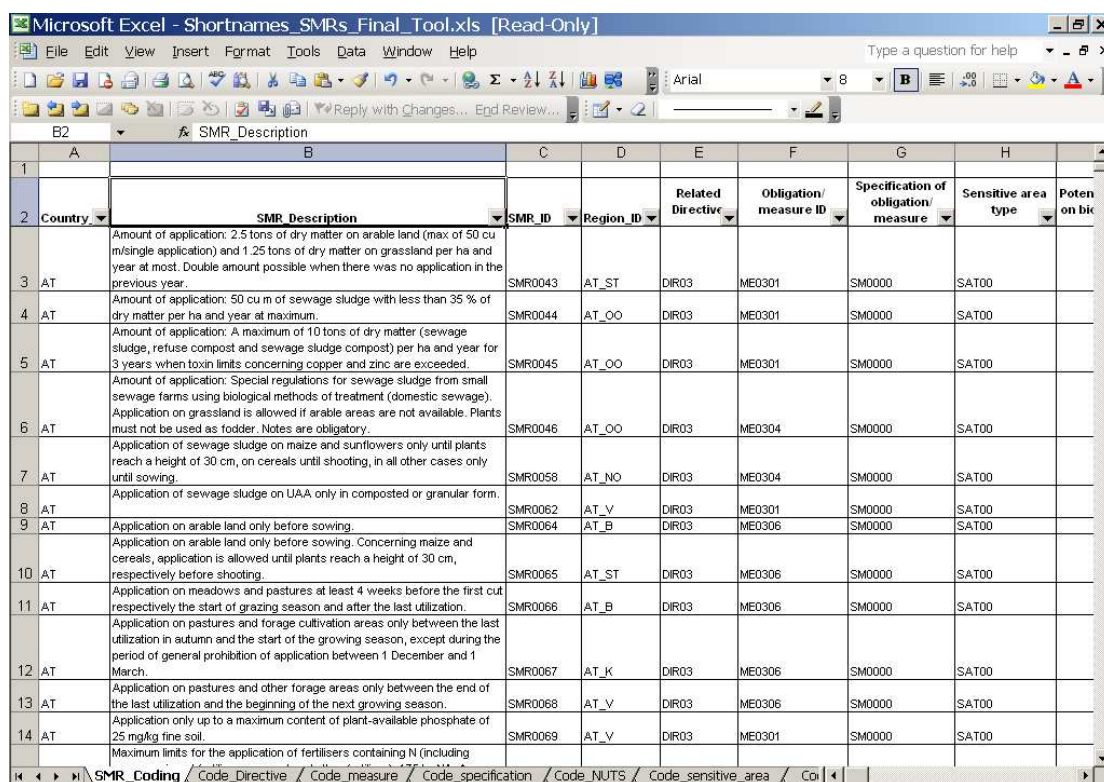
Scenarios cannot be changed, added and run in the viewers version.

5 InputData

The end user is able to look into a part of the InputData, namely the SMR and GEAC Database containing the coding and description characterising the national standards and obligations (see par 2.2 of D2.8).



By clicking on e.g. the menu item SMR Coding table Microsoft excel is started and shows the relevant coding table.



Country	SMR Description	SMR ID	Region ID	Related Directive	Obligation measure ID	Specification of obligation/measure	Sensitive area type	Poten on bic
AT	Amount of application: 2.5 tons of dry matter on arable land (max of 50 cu m/single application) and 1.25 tons of dry matter on grassland per ha and year at most. Double amount possible when there was no application in the previous year.	SMR0043	AT_ST	DIR03	ME0301	SM0000	SAT00	
AT	Amount of application: 50 cu m of sewage sludge with less than 35 % of dry matter per ha and year at maximum.	SMR0044	AT_OO	DIR03	ME0301	SM0000	SAT00	
AT	Amount of application: A maximum of 10 tons of dry matter (sewage sludge, refuse compost and sewage sludge compost) per ha and year for 3 years when toxin limits concerning copper and zinc are exceeded.	SMR0045	AT_OO	DIR03	ME0301	SM0000	SAT00	
AT	Amount of application: Special regulations for sewage sludge from small sewage farms using biological methods of treatment (domestic sewage). Application on grassland is allowed if arable areas are not available. Plants must not be used as fodder. Notes are obligatory.	SMR0046	AT_OO	DIR03	ME0304	SM0000	SAT00	
AT	Application of sewage sludge on maize and sunflowers only until plants reach a height of 30 cm, on cereals until shooting, in all other cases only until sowing.	SMR0058	AT_NO	DIR03	ME0304	SM0000	SAT00	
AT	Application of sewage sludge on UAA only in composted or granular form.	SMR0062	AT_V	DIR03	ME0301	SM0000	SAT00	
AT	Application on arable land only before sowing.	SMR0064	AT_B	DIR03	ME0306	SM0000	SAT00	
AT	Application on arable land only before sowing. Concerning maize and cereals, application is allowed until plants reach a height of 30 cm, respectively before shooting.	SMR0065	AT_ST	DIR03	ME0306	SM0000	SAT00	
AT	Application on meadows and pastures at least 4 weeks before the first cut respectively the start of grazing season and after the last utilization.	SMR0066	AT_B	DIR03	ME0306	SM0000	SAT00	
AT	Application on pastures and forage cultivation areas only between the last utilization in autumn and the start of the growing season, except during the period of general prohibition of application between 1 December and 1 March.	SMR0067	AT_K	DIR03	ME0306	SM0000	SAT00	
AT	Application on pastures and other forage areas only between the end of the last utilization and the beginning of the next growing season.	SMR0068	AT_V	DIR03	ME0306	SM0000	SAT00	
AT	Application only up to a maximum content of plant-available phosphate of 25 mg/kg fine soil.	SMR0069	AT_V	DIR03	ME0301	SM0000	SAT00	
Maximum limits for the application of fertilisers containing N (including								

The database also contains the Directive and Measure code definitions, which can be accessed directly via the menu items, or by clicking on the relevant excel sheets in the database: **Code_Directive** and **Code_measure**:

Value 2	Code for measure / obligation
	DIR 01
ME0101	Appropriate measures to maintain the population of all species naturally occurring birds (eggs, nests and habitats) in the wild state of the EU territory, including the creation of protected areas, the management of habitats inside and outside protected a
ME0102	Special conservation measures concerning habitats of species of Annex I, and regularly occurring migratory species: classification of special protection areas with particular attention to the protection of wetlands; avoidance of pollution and deterioration
ME0103	Prohibition of deliberate killing or capture by any method; of destruction, or removal of their nests and eggs; of disturbance during breeding and rearing seasons (all bird species naturally occurring in the wild); Art. 5.

The database also contains the assumed potential impacts of the obligations on Biodiversity and Landscape per region (see chapter 3.3 of D2.8).

Microsoft Excel - Shortnames_SMRs_Final_Tool.xls [Read-Only]

File Edit View Insert Format Tools Data Window Help

SMR0043

	A	B	J	K
2	Country	SMR_Description	Potential effect on biodiversity	Potential effect on landscape
170	AT	Prohibition of intentional removal, damage or destruction of animals according to Annex I/MFHH Directive and native bird species and their habitats in NATURAL AREAS.	3	-1
171	AT	Prohibition of intentional damage to or destruction of breeding sites and refuge areas of birds. This is valid for all landscape elements over 2 m wide which are connecting with UAAs.	5	2
172	AT	Prohibition of intentional damage to or removal of nests and other breeding sites.	3	-1
173	AT	Prohibition of intentional damage to or removal of nests or breeding sites of protected animals.	3	-1
174	AT	Prohibition of intentional damage to or removal of nests or breeding sites of protected birds.	3	-1
175	AT	Prohibition of intentional damage to, removal or destruction of protected plant species.	3	-1
176	AT	Prohibition of intentional disturbing, hunting, catching or killing of protected birds.	3	-1
177	AT	Prohibition of intentional disturbing, hunting, catching or killing protected birds.	3	-1
178	AT	Prohibition of intentional picking, collecting, cutting, digging out or destruction of protected plants.	3	-1
179	AT	Prohibition of intentional removal, damage to or destruction of clutches of protected birds.	3	-1
180	AT	Prohibition of intentional removal, damage to or destruction of clutches or nests of protected birds.	3	-1
181	AT	Prohibition of interference in natural bodies of water.	2	2
182	AT	Prohibition of interference in natural bodies of water.	2	2
183	AT	Prohibition of interventions in habitats of animals endangered by extinction.	3	-1
184	AT	Prohibition of mowing reed between 15 March and 30 September.	2	1
185	AT	Prohibition of permanent intervention in moorland, swamps, spring areas, surface water and bank areas of natural or semi-natural standing water.	2	2

SMR_Coding / Code_Directive / Code_measure / Code_specification / Code_NUTS / Code_sensitive

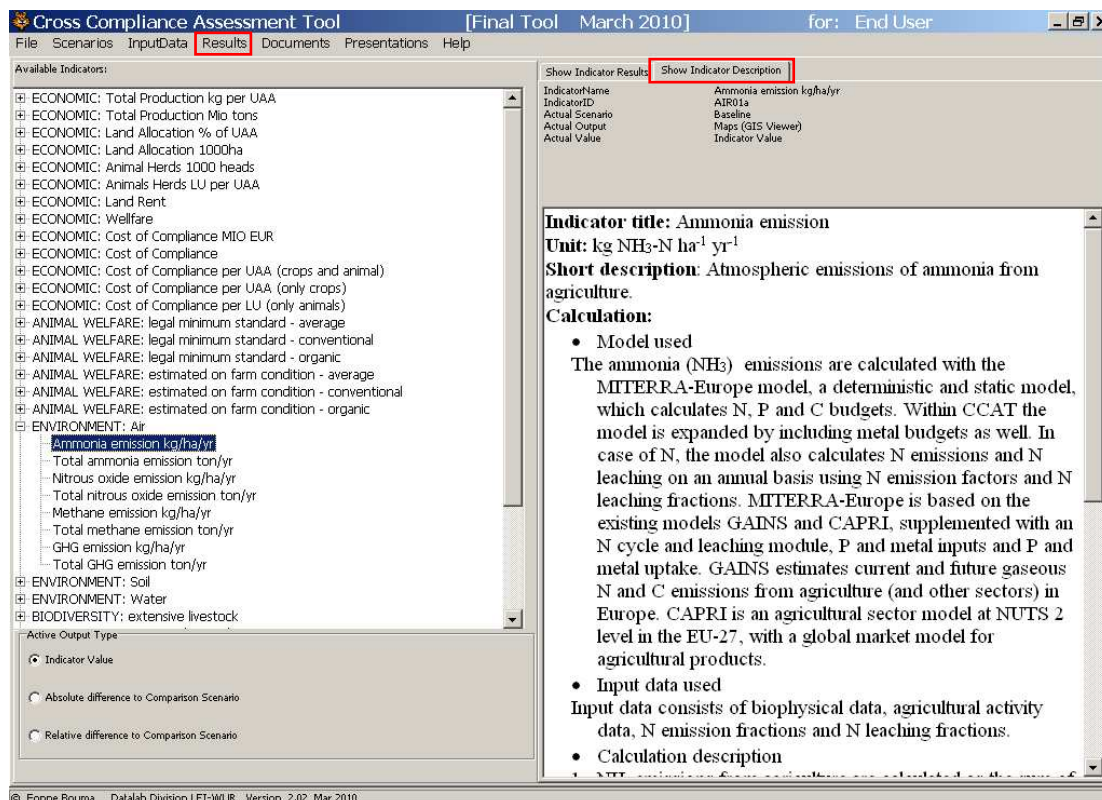
6 Results

The results of the CCAT tool can be viewed in the form of tables or maps.



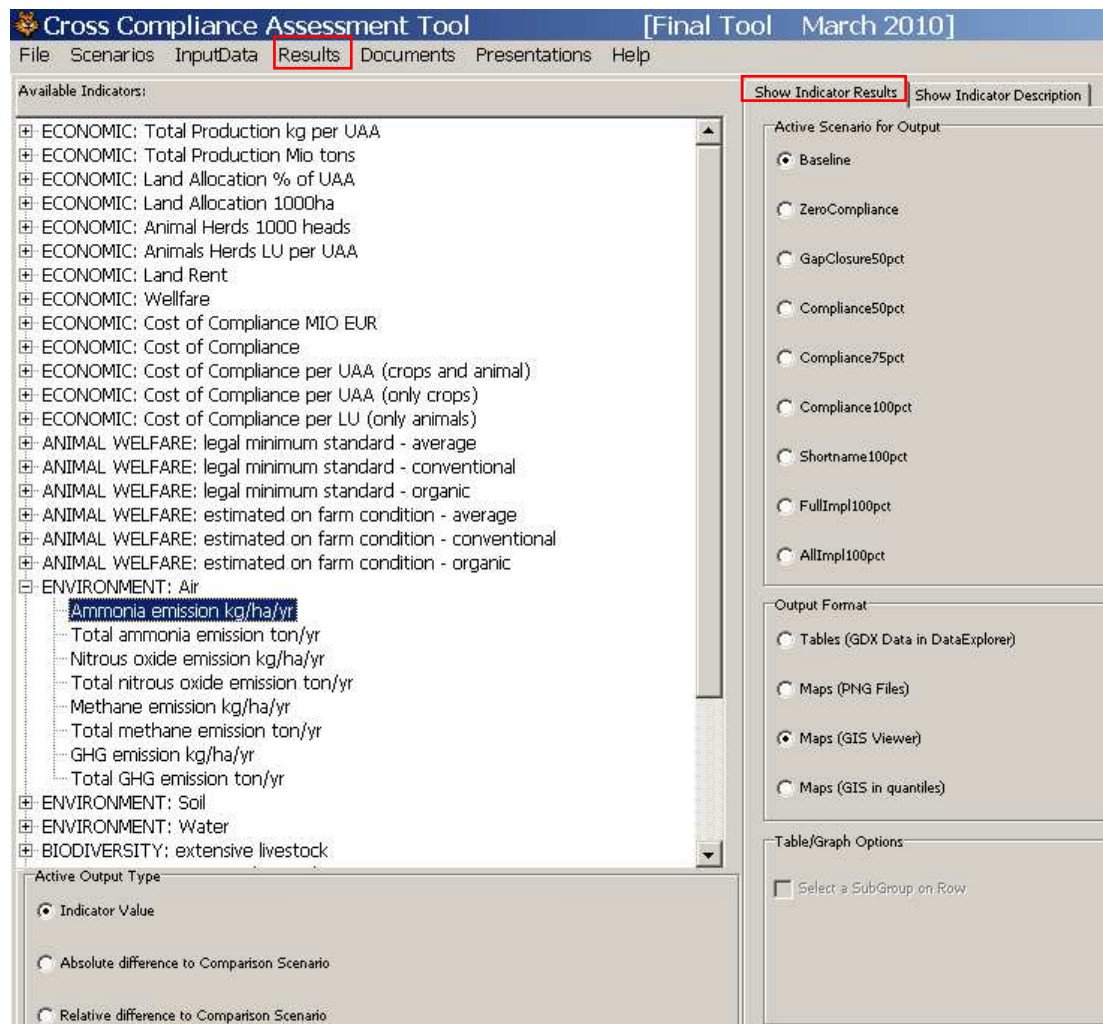
The best way to view the data is with the GIS viewer, because then maps as well as detailed data can be viewed. After choosing this menu item a list of indicators is shown in the left side of the screen. Since there are many indicators they are first shown in groups.

For each (group of) indicator(s) an indicator description can be viewed that gives information on the way the indicator or group of indicators has been calculated. By clicking on an indicator name (e.g. Ammonia emission) and then on the menu item Show Indicator Description (in the right part of the screen), meta data is shown of the selected indicator.



By clicking on the menu item Show Indicator Results (on the right side of the screen) the following screen appears.

On the right side of the screen the scenario can be selected, and in the lower left part you can choose between the indicator value in the selected scenario, or the absolute or relative difference of the selected scenario to the comparison scenario (default ZeroCompliance).



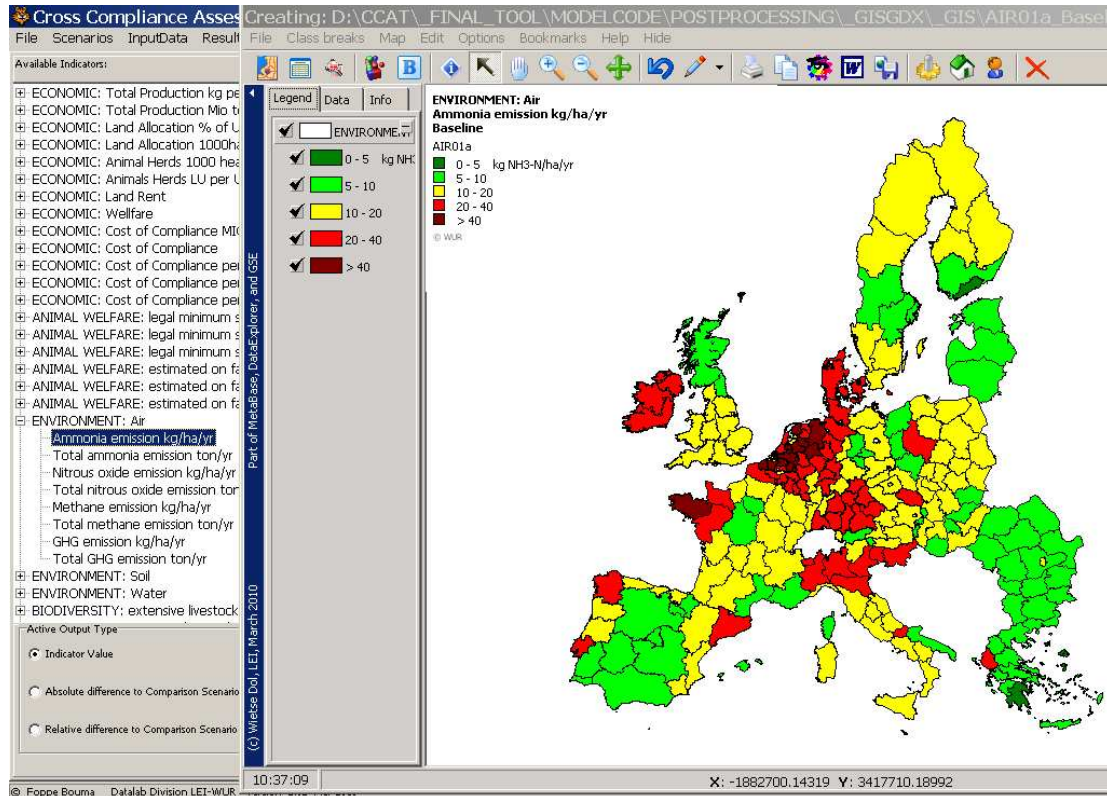
The options Show Indicator Results/Info can also be activated with the right mouse button, and one can reduce the indicator list to only groups (Collaps All) or show all single indicators in the list (Expand All) and show/hide indicator IDs:



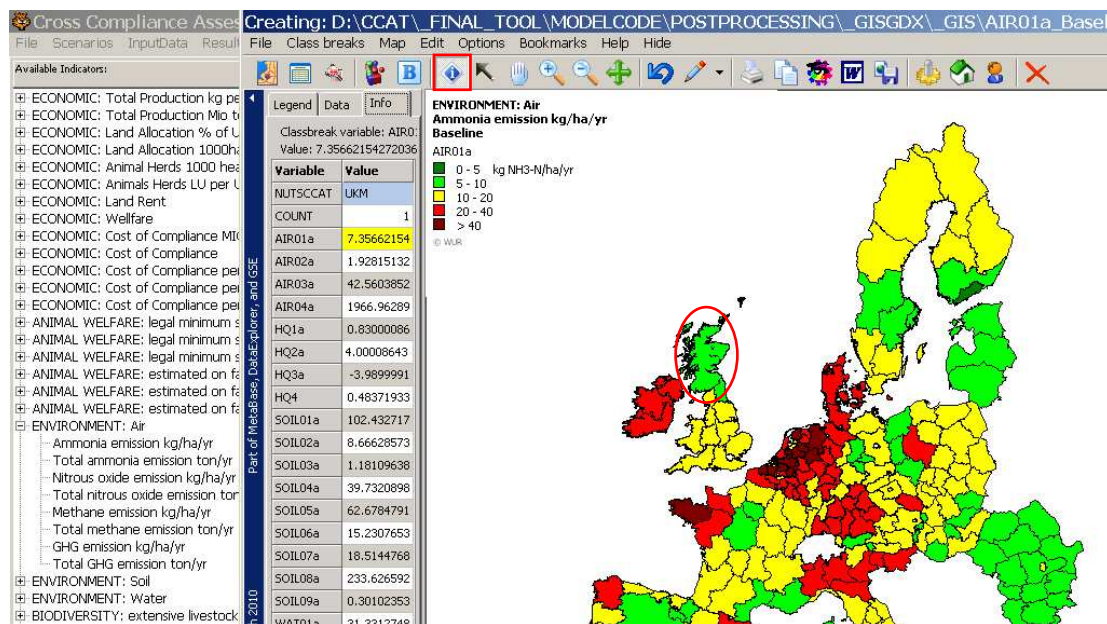
After selecting the option Maps (GIS Viewer) (this is already selected when this option has been selected earlier) and the indicator to be viewed, a separate application will be started automatically (the GISviewer) showing the results in a map in the main viewing area....

6.1 Viewing maps

In the example below the indicator value of Ammonia emission in kg N per year are shown for the baseline scenario, in the form of a map.



By clicking on “i” (of “information”) and then on a region (e.g. UKM) the region blinks and the value of the indicator of the selected region is highlighted in yellow:



By selecting the Data menu item, a group of data (e.g. environmental) can be viewed in tabular form within the GIS Viewer:

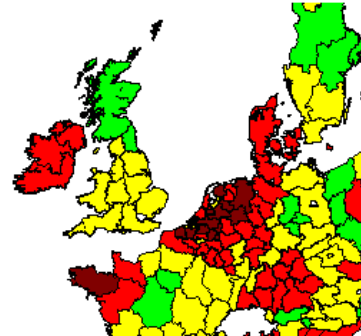
Creating: D:\CCAT\VIEWER_FINAL_TOOL\MODELCODE\POSTPROCESSING_GISGD\GIS\

File Class breaks Map Edit Options Bookmarks Help Hide

Legend **Data** Info

	NUTSCCAT	COUNT	AIR01a	AIR02a	AIR03a	AIR04a	HQ1a
1	AT11	2	6.5341	1.5743	23.9663	1336.4206	5.34
2	AT12	3	10.9442	1.6238	49.1818	1989.9753	2.78
3	AT13	2					
4	AT21	1	11.3146	1.3280	57.3575	2055.8546	2.27
5	AT22	1	16.3835	1.6614	73.6642	2619.6503	0.22
6	AT31	1	19.9985	2.0904	98.2440	3435.0521	5.02
7	AT32	1	10.3605	1.2603	60.7476	2108.8778	6.23
8	AT33	1	8.1471	0.9474	46.6465	1609.8126	6.68
9	AT34	1	10.2953	1.2324	57.5839	2016.7182	8.19
10	BE21	1	88.6780	9.7487	378.7143	14033.1511	28.14
11	BE22	1	51.3337	6.0583	234.3481	8695.8028	29.76
12	BE23	1	64.0483	7.4170	293.7153	10816.2804	21.13
13	BE24	3	27.2062	4.3886	151.0014	5830.2177	22.78
14	BE25	1	89.9898	8.7622	350.2099	12858.5801	16.92
15	BE31	5	18.6666	3.8229	112.4887	4602.4807	19.37
16	BE32	2	26.0760	4.3849	164.6414	6169.5054	17.03
17	BE33	3	30.1391	4.5185	191.7761	6910.4258	14.77
18	BE34	2	29.6152	4.5498	209.2081	7360.8719	9.43
19	BE35	2	23.0466	3.9579	153.7902	5698.2530	13.49
20	BG01	1	6.8135	1.0621	12.7008	814.9088	1.70
21	BG02	1	5.2655	1.0189	13.0060	802.3030	1.57

ENVIRONMENT: Air
 Ammonia emission kg N/ha/yr
 Baseline
 AIR01a
 0 - 5 kg NH3-N/ha/yr
 5 - 10
 10 - 20
 20 - 40
 > 40



By selecting the option Absolute difference To Comparison Scenario (in the Results screen), a map appears showing e.g. the values of Compliance 100pct - Baseline:

Creating: D:\CCAT\VIEWER_FINAL_TOOL\MODELCODE\POSTPROCESSING_GISGD\GIS_tempGis.gis

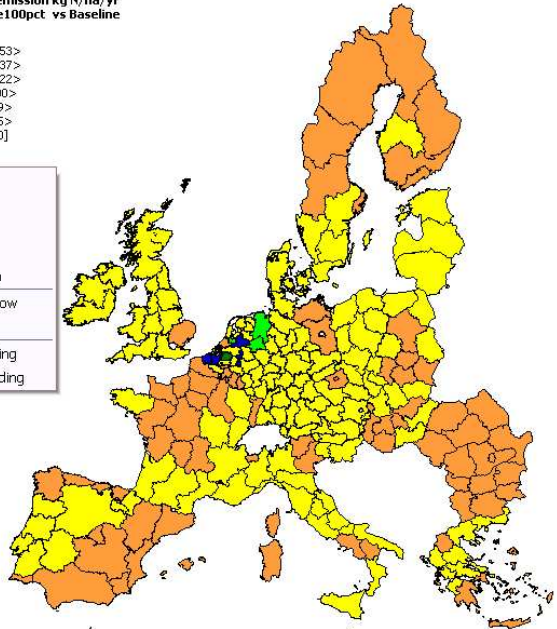
File Class breaks Map Edit Options Bookmarks Help Hide

Legend **Data** Info

	NUTSCCAT	COUNT	AIR01a	AIR02
1	AT11	2	-0.0110	-0.00
2	AT12	3	-0.0374	-0.00
3	AT13	2		
4	AT21	1	-0.0239	-0.00
5	AT22	1	-0.0607	-0.01
6	AT31	1	-0.0483	-0.01
7	AT32	1	-0.0833	-0.03
8	AT33	1		
9	AT34	1		
10	BE21	1		
11	BE22	1		
12	BE23	1		
13	BE24	3		
14	BE25	1		
15	BE31	5		
16	BE32	2		
17	BE33	3		
18	BE34	2		
19	BE35	2		
20	BG01	1	0.0024	0.00
21	BG02	1	0.0018	0.00
22	BG03	1	0.0020	0.00
23	BG04	1	0.0019	0.00
24	BG05	1	0.0016	0.00
25	BG06	1	0.0018	0.00
26	CY	1	0.1104	0.00
27	CZ01	1	0.0002	-0.00
28	CZ02	5	0.0005	0.00
29	CZ03	2	-0.0076	0.00
30	CZ04	2	-0.0042	-0.00
31	CZ05	2	-0.0058	0.00
32	CZ06	2	-0.0110	0.00

ENVIRONMENT: Air
 Ammonia emission kg N/ha/yr
 Compliance100pct vs Baseline
 AIR01a
 [-.68; -.53>
 [-.53; -.37>
 [-.37; -.22>
 [-.22; .00>
 [.00; .09>
 [.09; .25>
 [.25; .40]

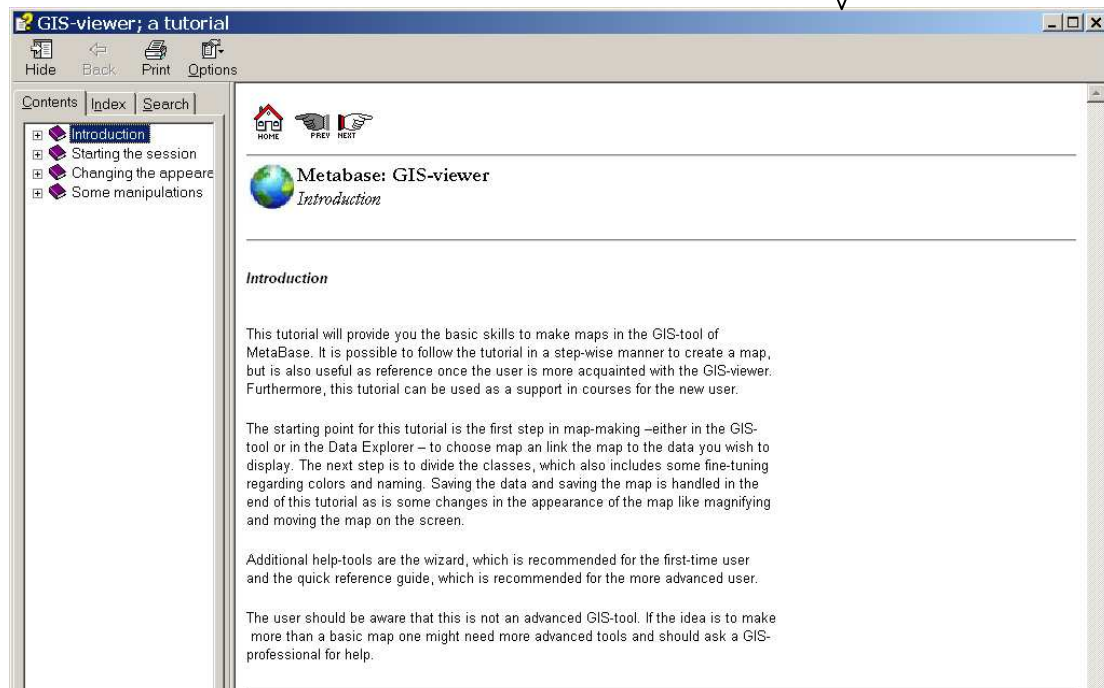
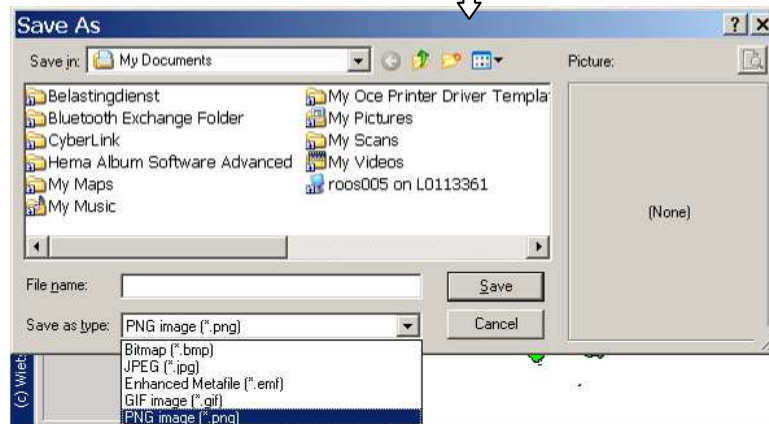
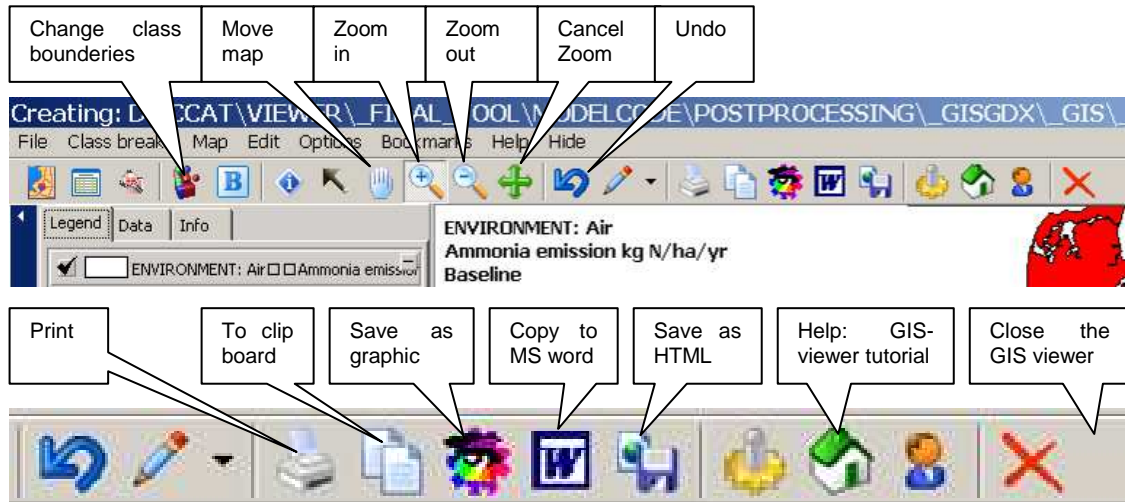
- Blink shape
- Highlight shape
- Zoom to selection
- Add new data
- Map below legend/data
- Open data in new window
- Rename variable
- Sort on column ascending
- Sort on column descending



18:41:44 X: -2201708.04731 Y: 3395349.23079

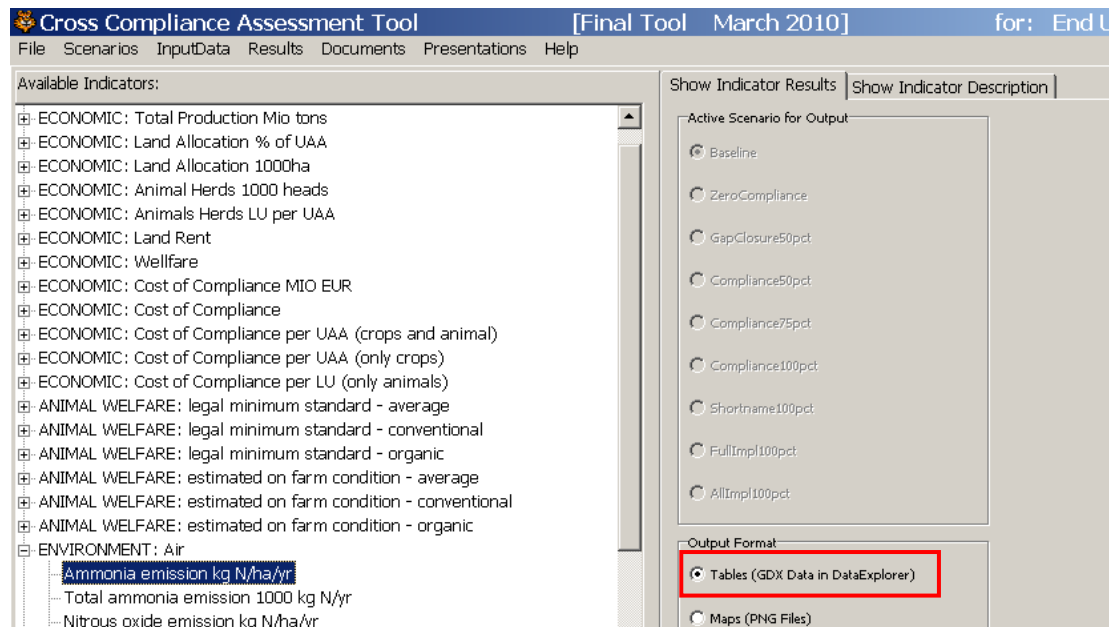
While viewing Data one can - with the right mouse button - e.g. highlight an area, zoom in on a selected area and sort the columns (see pop up menu above).

Other functions of the GIS Viewer are:



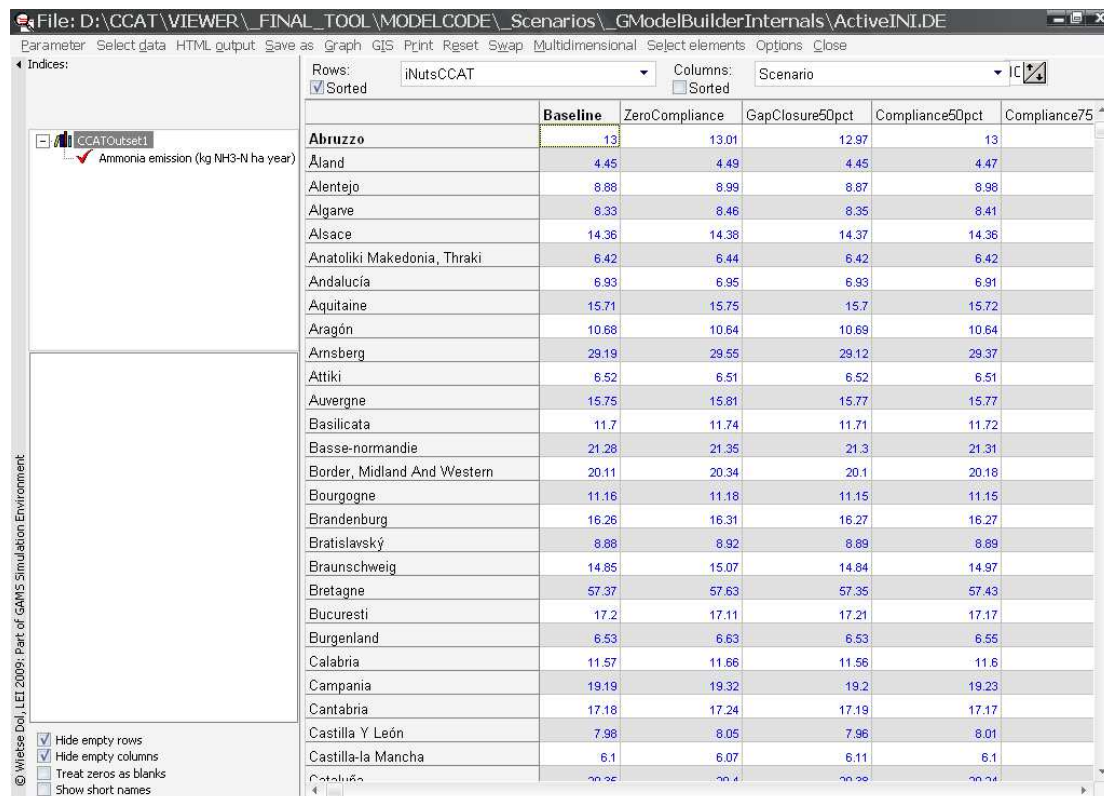
6.2 Viewing tables

When selecting the Tables view in the Results screen:



The screenshot shows the 'Cross Compliance Assessment Tool' interface. On the left, a list of 'Available Indicators' is shown, with 'Ammonia emission kg N/ha/yr' selected. On the right, the 'Output Format' section is visible, where 'Tables (GDx Data in DataExplorer)' is selected and highlighted with a red box. Other options include 'Maps (PNG Files)'.

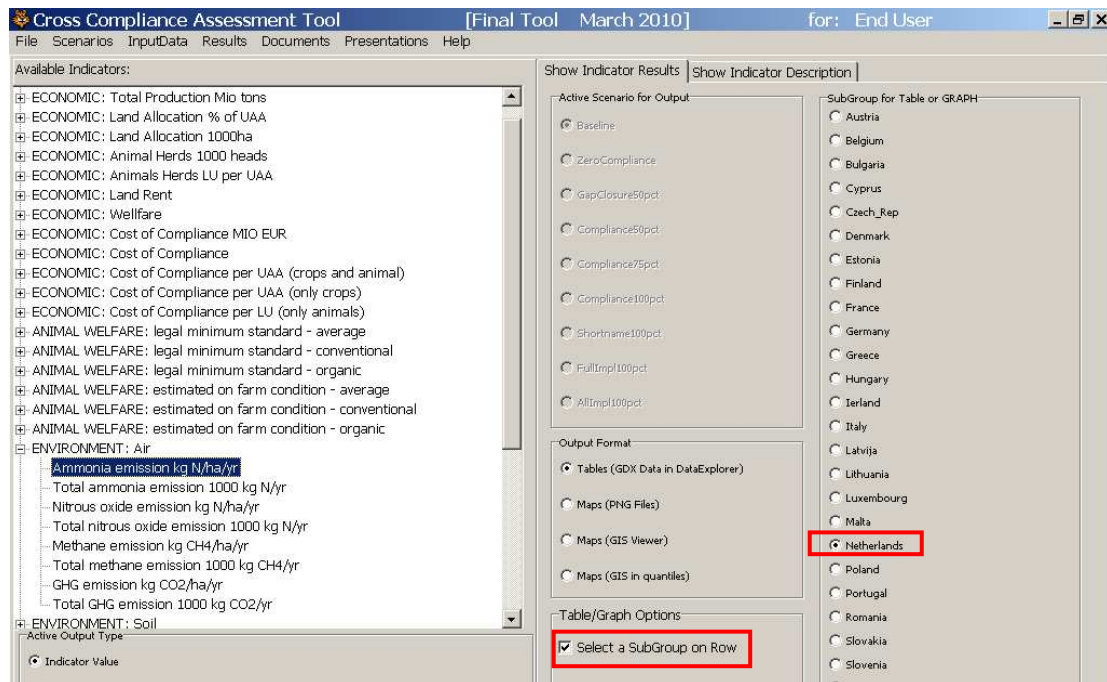
a separate application (Data explorer) will be started automatically, showing all values of the selected indicator:



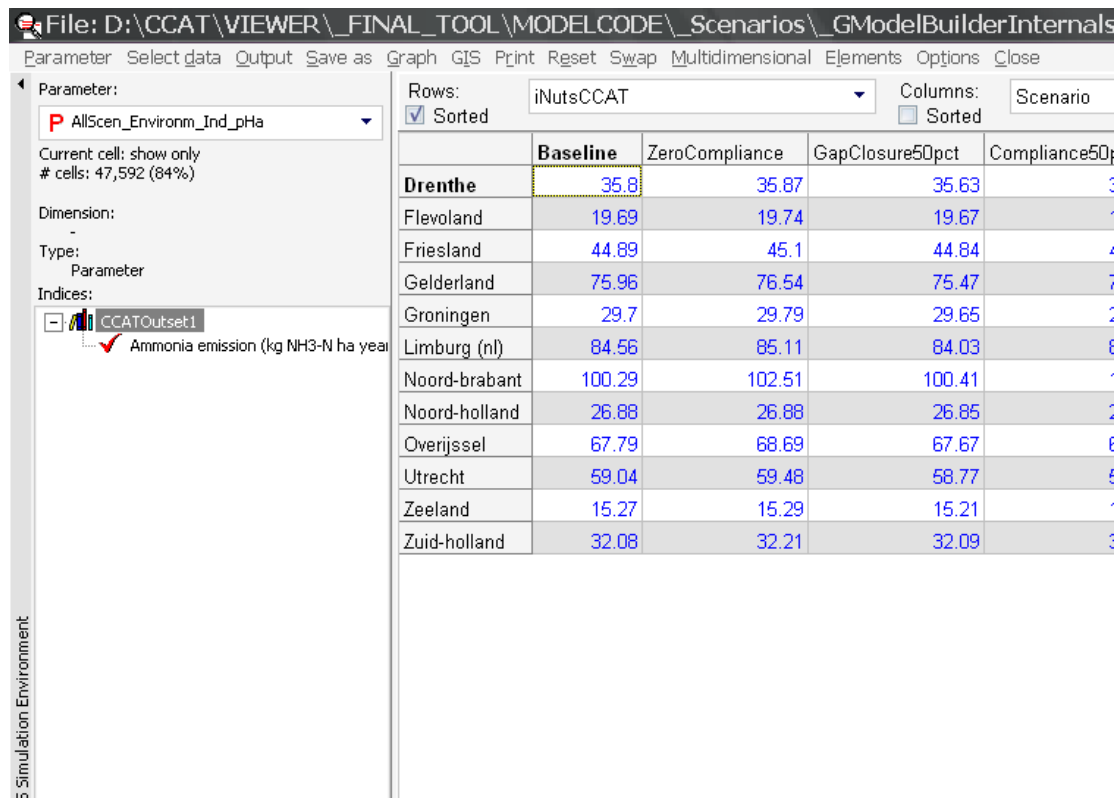
The screenshot shows the 'Data Explorer' application window. The table displays ammonia emission values (kg NH3-N ha year) for various regions across different scenarios. The 'Baseline' scenario is highlighted in yellow.

Region	Baseline	ZeroCompliance	GapClosure50pct	Compliance50pct	Compliance75
Abruzzo	13	13.01	12.97	13	13
Åland	4.45	4.49	4.45	4.47	4.47
Alentejo	8.88	8.99	8.87	8.98	8.98
Algarve	8.33	8.46	8.35	8.41	8.41
Alsace	14.36	14.38	14.37	14.36	14.36
Anatoliki Makedonia, Thraki	6.42	6.44	6.42	6.42	6.42
Andalucía	6.93	6.95	6.93	6.91	6.91
Aquitaine	15.71	15.75	15.7	15.72	15.72
Aragón	10.68	10.64	10.68	10.64	10.64
Arnsberg	29.19	29.55	29.12	29.37	29.37
Attiki	6.52	6.51	6.52	6.51	6.51
Auvergne	15.75	15.81	15.77	15.77	15.77
Basilicata	11.7	11.74	11.71	11.72	11.72
Basse-normandie	21.28	21.35	21.3	21.31	21.31
Border, Midland And Western	20.11	20.34	20.1	20.18	20.18
Bourgogne	11.16	11.18	11.15	11.15	11.15
Brandenburg	16.26	16.31	16.27	16.27	16.27
Bratislavský	8.88	8.92	8.89	8.89	8.89
Braunschweig	14.85	15.07	14.84	14.97	14.97
Bretagne	57.37	57.63	57.35	57.43	57.43
Bucuresti	17.2	17.11	17.21	17.17	17.17
Burgenland	6.53	6.63	6.53	6.55	6.55
Calabria	11.57	11.66	11.56	11.6	11.6
Campania	19.19	19.32	19.2	19.23	19.23
Cantabria	17.18	17.24	17.19	17.17	17.17
Castilla Y León	7.98	8.05	7.96	8.01	8.01
Castilla-la Mancha	6.1	6.07	6.11	6.1	6.1
Cataluña	20.25	20.4	20.28	20.34	20.34

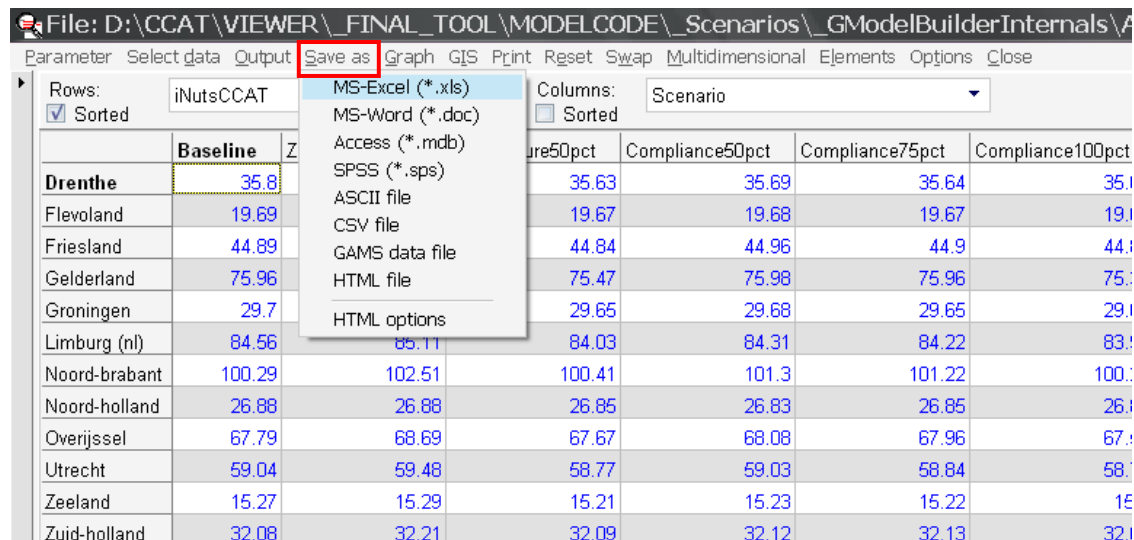
After selecting the Table/Graph option Select SubGroup on Row the member states appear on the right side of the screen:



After selecting a member state and an indicator, the DataExplorer starts automatically, showing the data of the selected member state in tabular form:



By clicking on the small triangle in the upper left corner one can switch to full screen and back.



Rows:	iNutsCCAT	Baseline	Compliance50pct	Compliance50pct	Compliance75pct	Compliance100pct
Drenthe		35.8	35.63	35.69	35.64	35.1
Flevoland		19.69	19.67	19.68	19.67	19.1
Friesland		44.89	44.84	44.96	44.9	44.1
Gelderland		75.96	75.47	75.98	75.96	75.1
Groningen		29.7	29.65	29.68	29.65	29.1
Limburg (nl)		84.56	84.03	84.31	84.22	83.1
Noord-brabant		100.29	100.41	101.3	101.22	100.1
Noord-holland		26.88	26.85	26.83	26.85	26.1
Overijssel		67.79	67.67	68.08	67.96	67.1
Utrecht		59.04	58.77	59.03	58.84	58.1
Zeeland		15.27	15.21	15.23	15.22	15.1
Zuid-holland		32.08	32.09	32.12	32.13	32.1

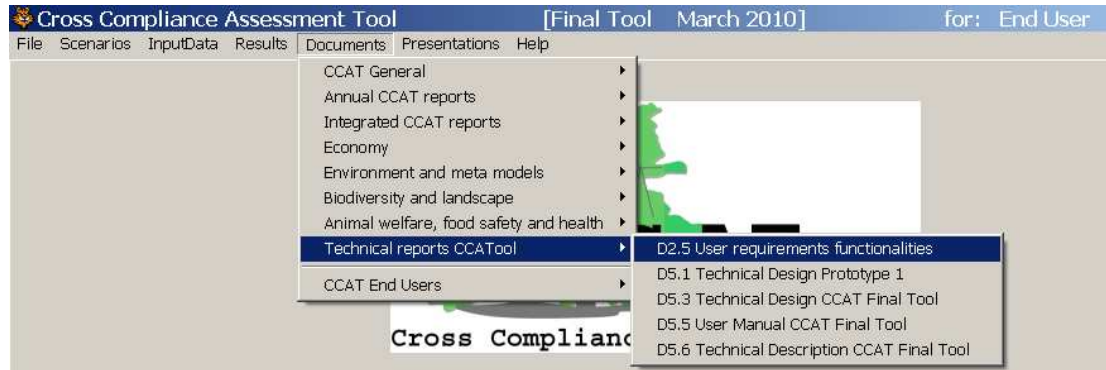
The data can be saved as Excel files, Word files and in other formats (see popup menu above)

The values of different indicators can be viewed within one table by changing the subjects in the Rows and Columns boxes.

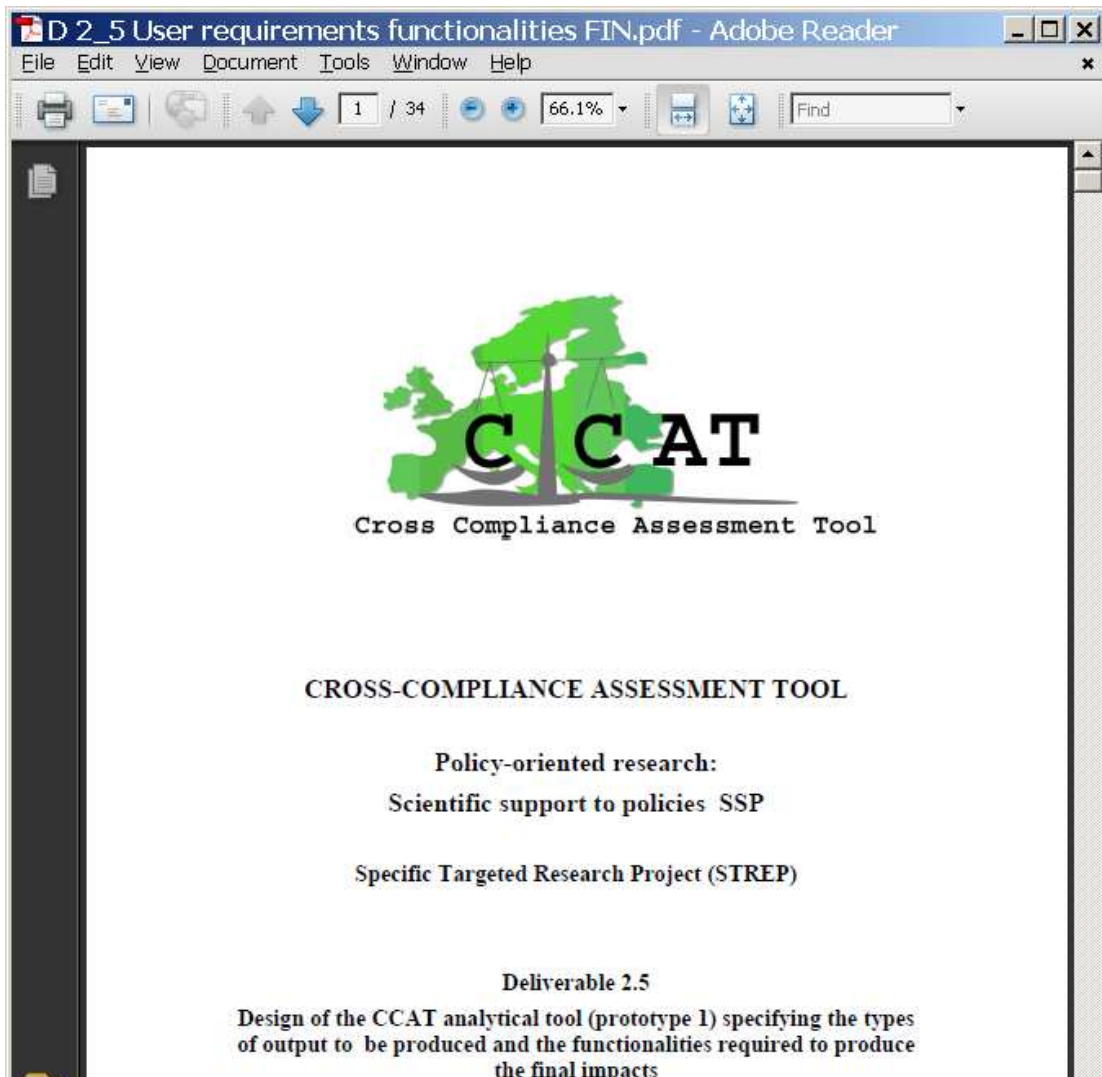
The DataExplorer also offers the possibility to view the data in graphs (select the Graph menu item in the top bar). The user is invited to explore these different possibilities; these will not be explained further in this manual (a manual of the DataExplorer can be obtained at LEI).

7 Documents and presentations

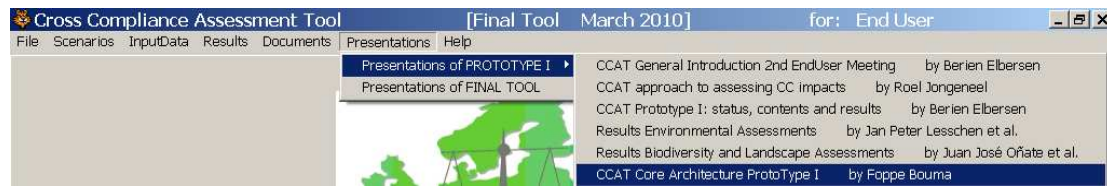
Under the menu item Documents the documents that have been produced in the CCAT project can be selected and viewed:



After selecting the document the appropriate application will be started automatically, e.g. Adobe Reader:



Under the menu item Presentations the presentations that have been produced in the CCAT project can be selected and viewed:



After selecting the presentation the appropriate application will be started automatically, e.g. Microsoft PowerPoint:

