Grant agreement no. 776479

COACCH

CO-designing the Assessment of Climate CHange costs

H2020-SC5-2016-2017/H2020-SC5-2017-OneStageB

D5.2 - Climate Change Impacts & Policy Simulator

Work Package:	5
Due date of deliverable:	M46 (SEP/2021)
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Lead beneficiary for this deliverable:	Fondazione Centro Euro-Mediterraneo sui Cambiamenti Climatici (CMCC)
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Disclaimer

Suggested citation

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Dissemination Level		
PU	Public	X
CO	Confidential, only for members of the consortium (including the Commission Services)	
CI	Classified, as referred to in Commission Decision 2001/844/EC	

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Version log

Version	Date	Released by	Nature of Change
1.1	10/SEP/2021	CMCC	First Draft
1.2	28/SEP/2021	Ecologic	Draft revision
1.3	30/SEP/2021	CMCC	Final version

Deliverable Summary

This deliverable describes the COACCH climate change impacts & policy simulator. The tool has been designed to be interactive, user-friendly, and with open-access data. The main goal of the tool is to allow non-expert users to explore the different consequences of climate change as well as the related policy options using the range of SSP-RCP scenario combination developed within the project for all the NUTS-2 EU regions.

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1. Introduction

The objective of this deliverable is to present the COACCH climate change impacts & policy simulator. The tool has been designed to be interactive and user-friendly, with open-access data. The main goal of the tool is to allow non-expert users to explore the different consequences of climate change as highlighted in the range of SSP-RCP scenario combinations analyzed within the COACCH project. The regional focus of this tool is the EU represented with a NUTS-2 detail .

During the initial stages of the project, a scoping activity was carried out to identify and select the best possible options for the design of the interactive tool, considering also the existing tools from other projects' websites and databases. The final design of the tool takes into account the granularity of the data produced for the EU (NUTS-2 level) plus the feedback from stakeholders provided in the different stakeholder workshops held throughout the project. In this regard, the tool developments were initially presented in the project consortium meetings to discuss the tool's structure and design. In addition, the developed prototypes were presented and shared at the stakeholders' workshops to gather feedback and suggestions to improve the tool's outreach and usability. This consultation process allowed to incorporate useful suggestions such as including the background information of the project results as additional information in the tool's website, or as hyperlinks to the source of data and deliverables/papers produced within COACCH; adding further clarifications on the meaning and role of the different options the user can choose to include in the scenario to visualize (e.g., on the different form of investment mobility). There were also suggestions to improve the visual presentation and style of the web tool (size of the icons, scrolling modes etc.)

The outcome of this process is the "***COACCH Climate Change Impact Scenario Explorer"***; a user-friendly web-based tool developed to target a wide range of users (from policy makers to the general public). The tool is available at the following link:

https://www.scenarioxplorer.coacch.eu/

This web-tool aims to provide an entry-level access for non-expert users interested in exploring COACCH results. This tool is complemented by an open-access data repository described in D5.1 Climate Change Impacts & Policy Database, intended for more advanced users.

The web-tool allows for the visualization of the data at EU NUTS-2 level in different formats. This includes maps and graphs with the possibility of downloading the underlying data. The main features of the web-tool are introduced in the following section.

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2. Web-tool main structure

The web tool is structured in three main sections, allowing for the visualization of maps, graphs and the impact assessment documentation. These can all be reached via the landing page.

Landing page

The landing (welcome) page of the climate change scenario explorer (Figure 1) presents a brief description of the web-tool with three available options in the top menu (dark blue bar): Maps, Graphs and About, with the funding acknowledgement at the bottom.

Figure 1: Web-tool landing page

Map visualization

This section presents the visualization of the data produced in COACCH using maps for all continental EU NUTS-2 regions (Figure 2). The page allows the user to compare two scenarios in two identical panels. The user can select different options following a preestablished order:

1. Impact
2. Scenario
3. Variable
4. Period
5. Investment mobility

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After selecting these options, the user can create a map by clicking the "Show data" button and download the underlying data by clicking the corresponding button.

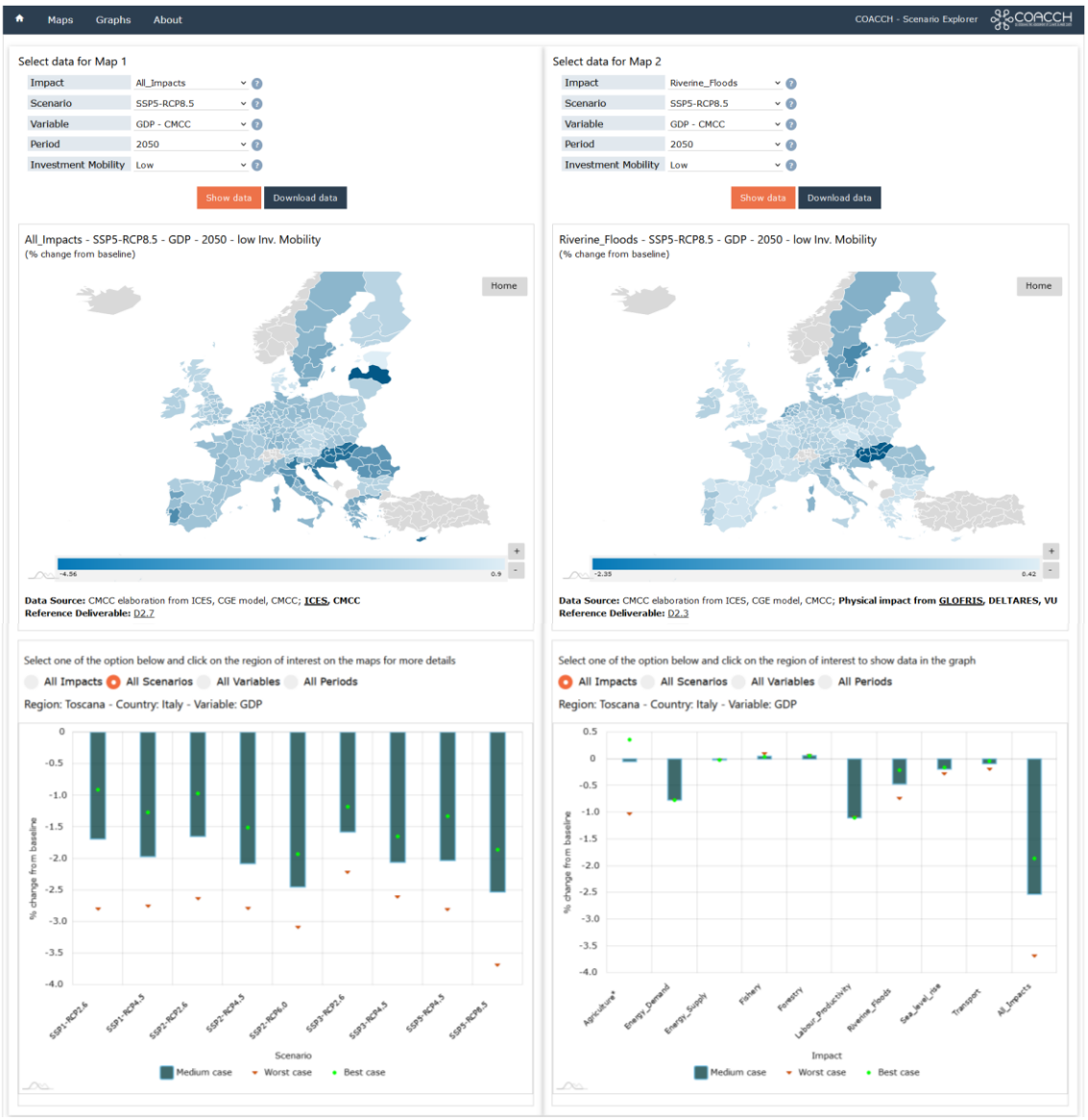

Figure 2: Map visualization features of the web-based tool

After creating the map in the upper panel, it is possible to select a region by clicking it on the map to produce additional graphs following the available options in the lower panel. In this case, it is possible to plot a graph for the selected region and select from four options: All impacts, all scenarios, all variables and all periods.

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Graph Visualization

This section allows the user to select four types of graph combinations that allow the data to be analyzed in more detail by comparing the following dimensions:

1. Region-Period
2. Scenario-Period
3. Impact-Period
4. Scenario-Region

The data selection process mirrors the one available in the map visualization section with the advantage that in this case the user can select up to 50 regions to plot the corresponding graphs (see example in Figure 3).

Figure 3: Graph visualization features of the web-based tool

Given that the user can select several regions for different graph combinations, all the selected data is summarized in the top-right box under the name "View your selection".

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Web-tool documentation

The web tool is documented in the "About section" containing a summary of the assessment framework in seven sub-sections as shown in Figure 4:

1. The COACCH scenario explorer
2. The COACCH assessment framework
3. Core set of scenarios
4. Impacts set
5. Analytical toolkit
6. References
7. How to explore

Figure 4: Documentation features of the web-based tool

Each sub-section introduces the subject to the user and provides hyperlinks to the more in-depth analysis conducted in COACCH plus additional information/links to the models and results of the project.

An example of the documentation format is provided in Figure 5, describing the assessment framework. This briefly introduces and explains the main characteristics of the climate change impact assessment methodology used in COACCH.

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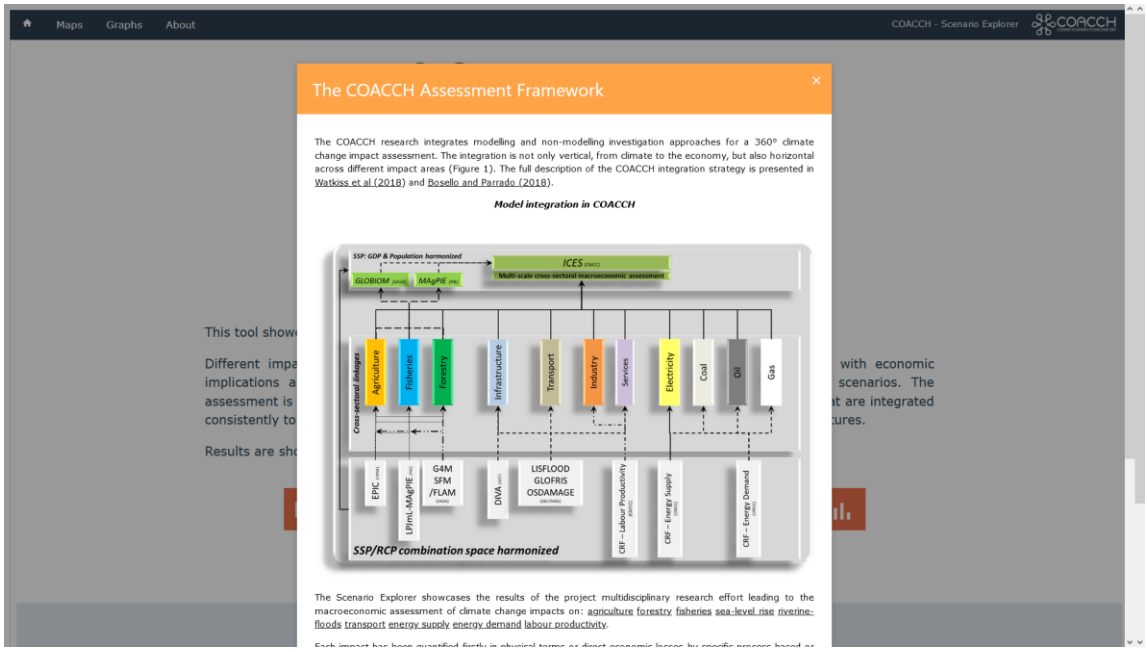

Figure 5: Documentation example of the web-based tool

In addition to this documentation, all sources of data are also documented and hyperlinked in each visualization tool (maps and graphs) to provide the user with all the necessary information and links in case they are interested in more in-depth information about the deliverables, models, or additional data of the project.

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