

## Description of output 0.3.3 Ecological corridors database within CCIBIS



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# 1. Summary of the output

The ecological corridors database with CCIBIS is a web-based GIS database representing a support tool for sharing data and information related to the project topic with specific target groups – nature preservationists, spatial planners, decision-makers, students and others. This database is accessible to all stakeholders dealing with ecological corridors' management or spatial planning. To support the sustainability of outputs from previous EU projects, the web-based GIS database related to the identified ecological corridors at pilot sites' as well as at national and Carpathian levels is built on the existing database "Carpathian Countries Integrated Biodiversity Information System" (CCIBIS – [www.ccibis.org](http://www.ccibis.org)).

There are 2 main parts of the database. First is focused on presenting GIS data through interactive geoportal – accessible here <https://gis.vm.stuba.sk/portal/apps/webappviewer/index.html?id=a074b7cd120d42df863f89e9e9414d49>. The second part is CCIBIS website (the narrative part) from where other outputs of the ConnectGREEN projects are accessible (the innovative Decision Support Tool, the e-learning platform) and other projects (TRANSGREEN's planning toolkit and project library etc.) – accessible here <http://ccibis.org/>. Through this website, the geoportal is accessible, too.

The ecological corridors database within CCIBIS for sharing information and building a set of data that is useful for project planning and implementation in the topic of green and grey infrastructure development. It is an accessible for anyone, thus any organization, institution or private person is welcome to access it and possibly to share additional data. The database is open for all users and data providers so the target group of users can actively not only use functions of the database but also be an active subject creating the content or sharing their knowledge, data and information. The ecological corridors database within CCIBIS is promoted to a wide range of possible users of the platform. Especially is promoting to future professionals at universities – students. The database is actively used in the education process at Slovak University of Technology in Bratislava to educate spatial planners and is shared to other planning schools via AESOP – Association of European Schools of Planning.

The ecological corridors database within CCIBIS is collecting and publishing data and information from almost all Danube countries (mainly the project partner countries -Romania, Austria, Czech Republic, Slovakia, Hungary and Serbia). The database is free to access without any limitations. All GIS data can be downloaded by users of the database.

The output is available and is promoted under the Carpathian Convention, reaching high-level authorities in the field of transport, biodiversity and spatial planning from across the Carpathians.

## 2. How to access the output

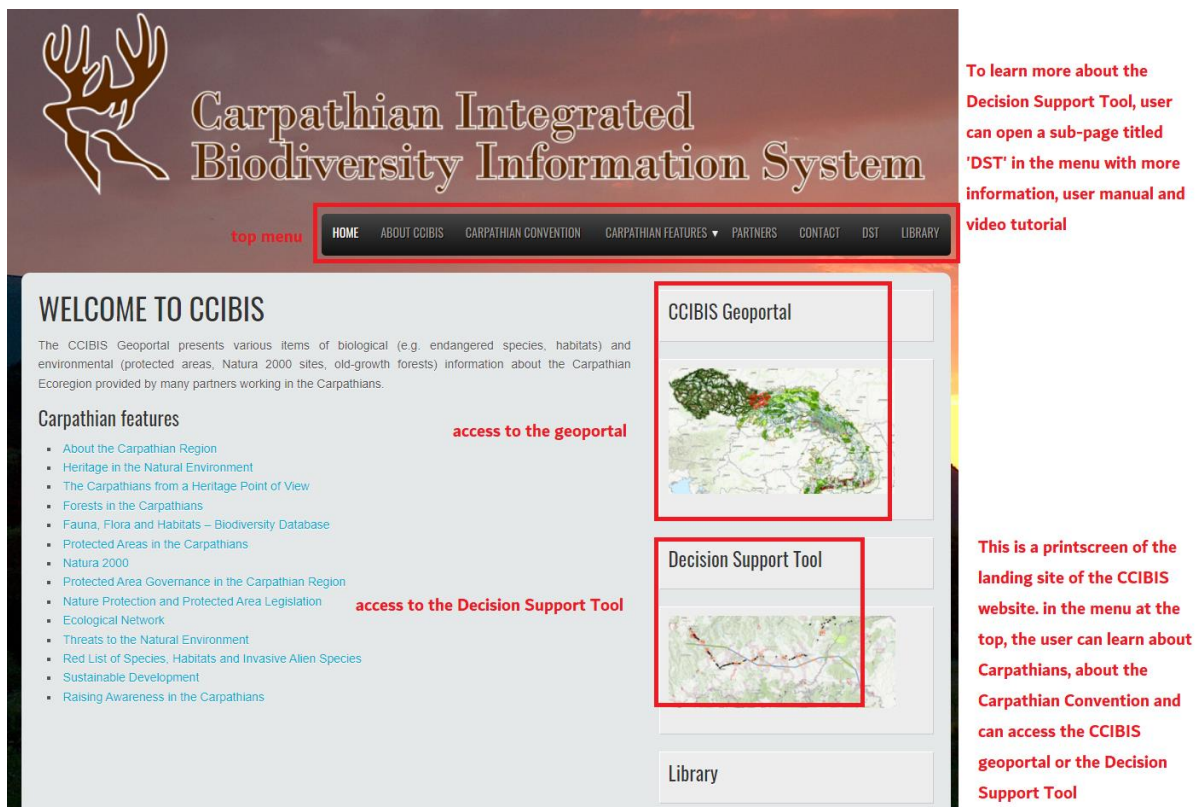
The CCIBIS website (the narrative part) is available here: <http://ccibis.org/> . Through this website, the geoportal and other online tools accessible (the innovative Decision Support Tool, the e-learning platform) are accessible, too.

The CCIBIS geoportal is accessible here:

<https://gis.vm.stuba.sk/portal/apps/webappviewer/index.html?id=a074b7cd120d42df863f89e9e9414d49> .

## 2. Basic functionalities of the output

- Integration of electronic tools developed under the ConnectGREEN Project (geoportal, Decision Support Tool, E-learning platform) under one website, available and accessible to any user



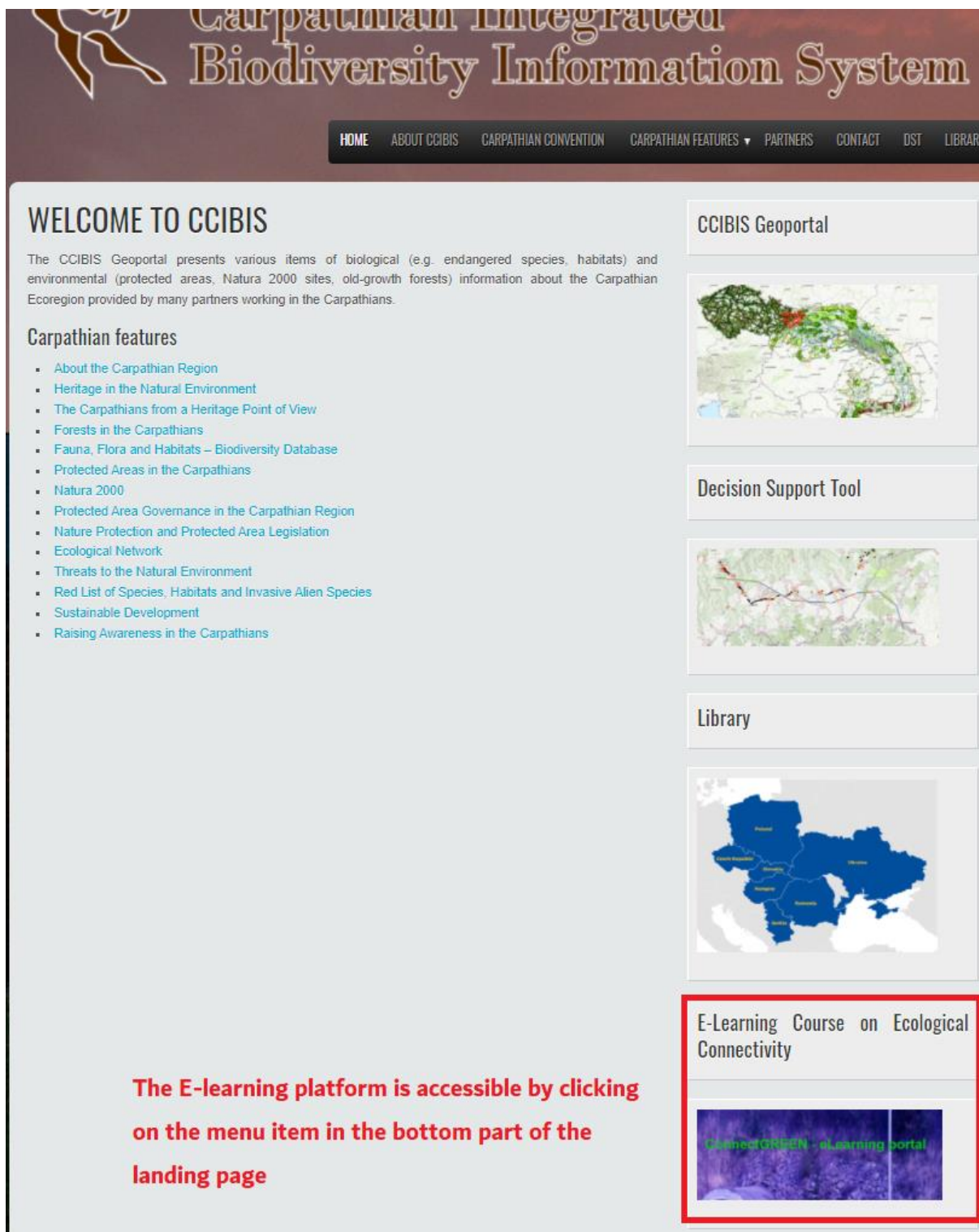
The screenshot shows the landing page of the Carpathian Integrated Biodiversity Information System (CCIBIS). The page features a dark header with the CCIBIS logo and title. Below the header is a navigation menu with links for HOME, ABOUT CCIBIS, CARPATHIAN CONVENTION, CARPATHIAN FEATURES, PARTNERS, CONTACT, DST, and LIBRARY. The main content area is divided into several sections:

- WELCOME TO CCIBIS:** A introductory text block.
- Carpathian features:** A list of 14 items, including 'About the Carpathian Region', 'Heritage in the Natural Environment', 'The Carpathians from a Heritage Point of View', 'Forests in the Carpathians', 'Fauna, Flora and Habitats – Biodiversity Database', 'Protected Areas in the Carpathians', 'Natura 2000', 'Protected Area Governance in the Carpathian Region', 'Nature Protection and Protected Area Legislation', 'Ecological Network', 'Threats to the Natural Environment', 'Red List of Species, Habitats and Invasive Alien Species', 'Sustainable Development', and 'Raising Awareness in the Carpathians'.
- CCIBIS Geoportal:** A section with a map of the Carpathian region, highlighted with a red box and the annotation 'access to the geoportal'.
- Decision Support Tool:** A section with a map of the Carpathian region, highlighted with a red box and the annotation 'access to the Decision Support Tool'.
- Library:** A section with a placeholder for a library of resources.

Annotations on the right side of the screenshot provide additional context:

- Top menu:** A red box highlights the navigation menu, with the annotation: "To learn more about the Decision Support Tool, user can open a sub-page titled 'DST' in the menu with more information, user manual and video tutorial".
- Decision Support Tool:** A red box highlights the DST section, with the annotation: "This is a printscreen of the landing site of the CCIBIS website. in the menu at the top, the user can learn about Carpathians, about the Carpathian Convention and can access the CCIBIS geoportal or the Decision Support Tool".

Figure 1: The CCIBIS website landing page and basic orientation



**WELCOME TO CCIBIS**

The CCIBIS Geoportal presents various items of biological (e.g. endangered species, habitats) and environmental (protected areas, Natura 2000 sites, old-growth forests) information about the Carpathian Ecoregion provided by many partners working in the Carpathians.

**Carpathian features**

- [About the Carpathian Region](#)
- [Heritage in the Natural Environment](#)
- [The Carpathians from a Heritage Point of View](#)
- [Forests in the Carpathians](#)
- [Fauna, Flora and Habitats – Biodiversity Database](#)
- [Protected Areas in the Carpathians](#)
- [Natura 2000](#)
- [Protected Area Governance in the Carpathian Region](#)
- [Nature Protection and Protected Area Legislation](#)
- [Ecological Network](#)
- [Threats to the Natural Environment](#)
- [Red List of Species, Habitats and Invasive Alien Species](#)
- [Sustainable Development](#)
- [Raising Awareness in the Carpathians](#)

**CCIBIS Geoportal**

**Decision Support Tool**

**Library**

**E-Learning Course on Ecological Connectivity**

ConnectGREEN - eLearning portal

**The E-learning platform is accessible by clicking on the menu item in the bottom part of the landing page**

Figure 2: How to enter the E-learning platform using the menu side-bar on the right

- The innovative Decision Support Tool had been integrated as a component into CCIBIS

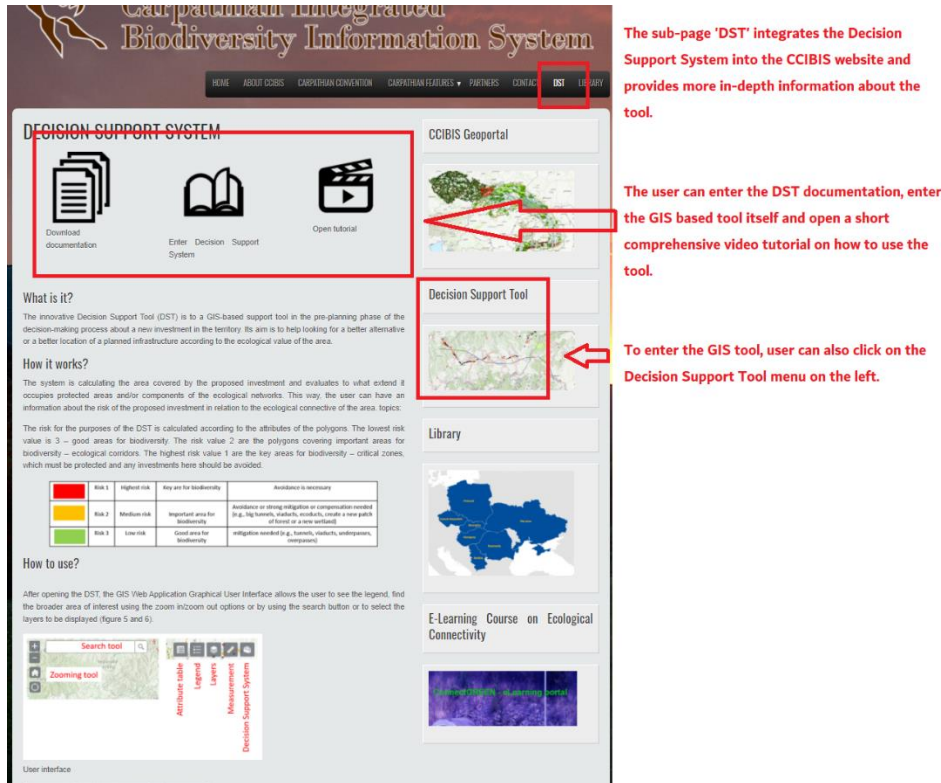


Figure 3: Integration of the Decision Support Tool into CCIBIS

- Modelled ecological corridors (modelled within ConnectGREEN Project) have been incorporated into the database

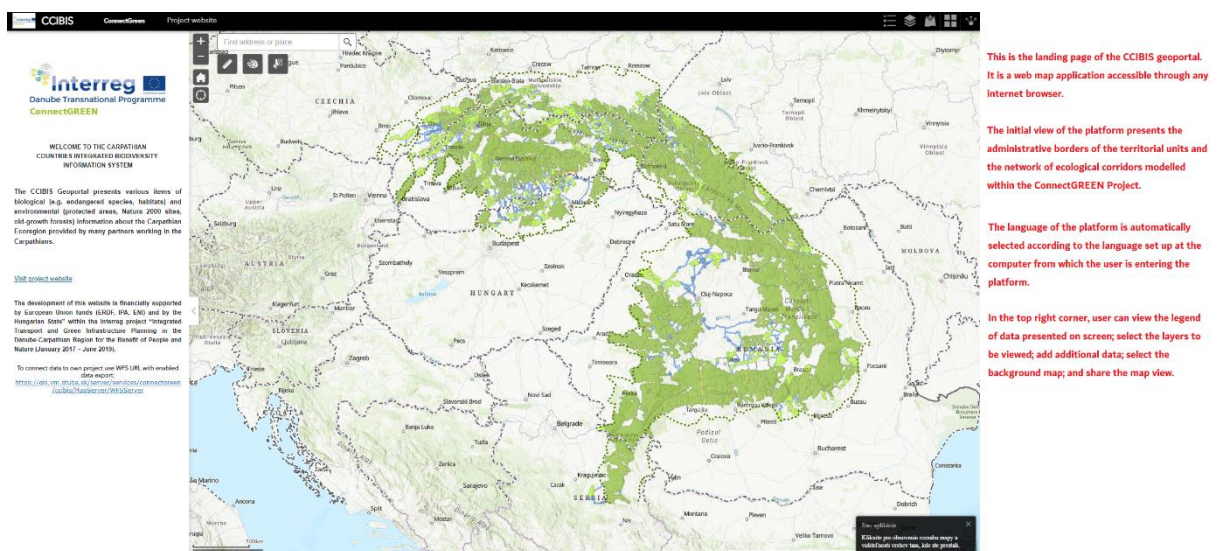
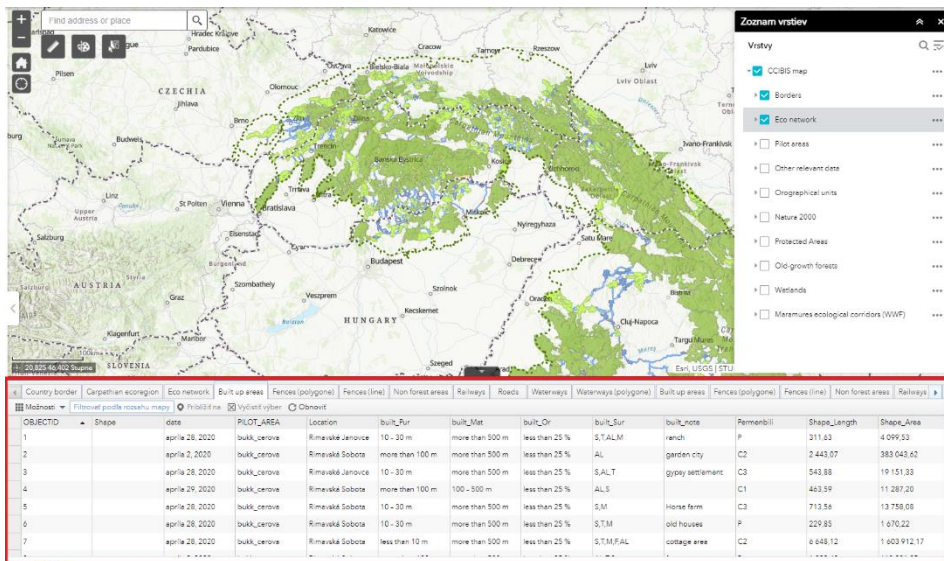
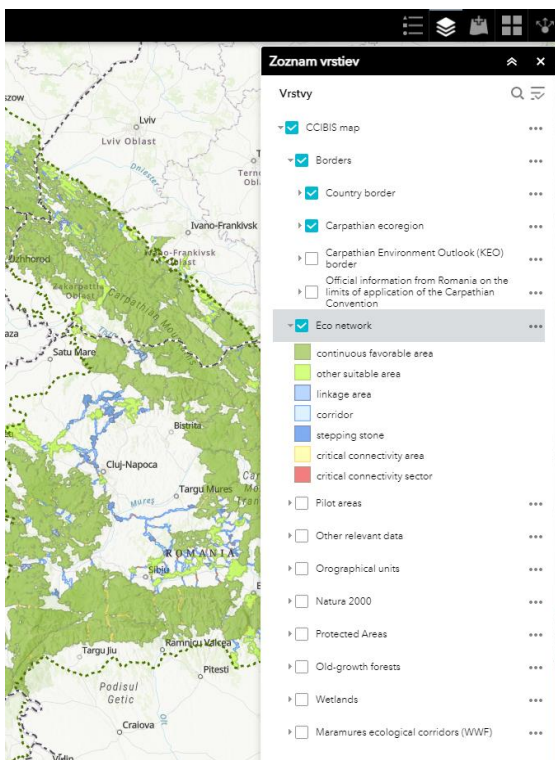


Figure 4: CCIBIS geoportal - basic orientation



At the bottom of the screen, the CCIBIS web application allows the user to view the attribute table of the selected data layer.

Figure 5: CCIBIS geoportal - viewing data attribute table



In the layer option, the user can select what data is visible in the map view.

The database of modelled ecological corridors have been added to the CCIBIS database and is displayed by default setting, according to user's preference, it can be visible or invisible.

Figure 6: CCIBIS geoportal - viewing data (the modelled ecological corridors on screen)



- Data collected within the pilot sites had been incorporated into the database

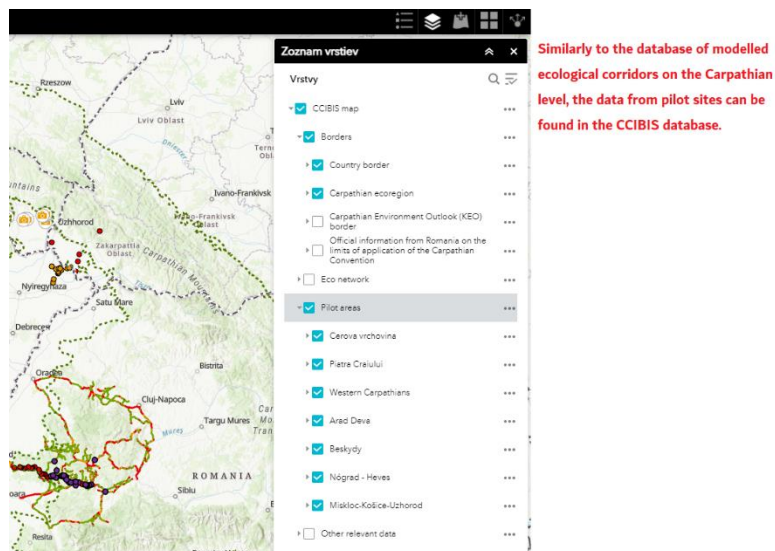


Figure 7: CCIBIS geoportal - viewing data (the pilot area data on screen)

- Data are viewable through the web map application (the CCIBIS geoportal). Data are presented in a user-friendly way and the access to the database will be granted to all key stakeholders

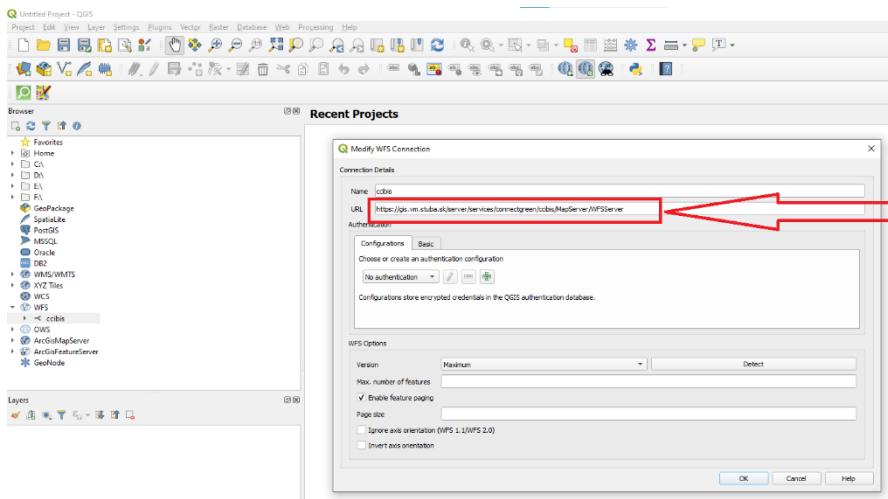
- Data is available to be accessed and worked with using WFS (Web Feature Service) service which allows linking data to a desktop GIS application (ArcGIS, QGIS etc.). This way the user can work with the data according to his/her preference and purpose. The WFS service is available using this link  
<https://gis.vm.stuba.sk/server/services/connectgreen/ccibis/MapServer/WFSServer?SERVICE=WFS&REQUEST=GetCapabilities>



The weblink for using WFS service is available in the bottom left part of the CCIBIS geoportal.

This link can be copied and inserted into a desktop GIS application. In the following figure this option is shown using open-source GIS application QGIS.

Figure 8: Access to WFS service in order to access data with desktop GIS application



This is a view from GIS application QGIS. It shows how the data from CCIBIS geoportal database can be linked to the desktop application using WFS service.

To do this, user needs to establish a WFS connection and add the WFS link from the geoportal.

After opening the connection, the data from geoportal can be viewed, downloaded, modified and used for spatial analyses, mapping the current state etc.

Figure 9: Access to WFS service from QGIS desktop GIS application - demonstration of connecting application to CCIBIS database