SECTION 4

CLIMATE CHANGE AND SUSTAINABLE DEVELOPMENT. RENEWABLE ENERGY SOURCES AND ENERGY CONSERVATION

WEB-APPLICATION FOR GEOINFORMATION MODULE AS A PART OF UNIFIED DATA BASE OF PERSISTENT ORGANIC POLLUTANTS

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According to Stockholm Convention on Persistent Organic Pollutants (POPs) countries-participants should take measures to eliminate or reduce the release of POPs into the environment. Belarus is one of 152 signatories of Stockholm Convention. This circumstance imposes on our country a number of obligations. One of them is development and maintenance of unified data base of Persistent Organic Pollutants that will contain all information connected with POPs utilization, storage, transition and elimination. Unified data base of POPs will be implemented as an open source web-application. Belarus Research Center "Ecology" is main executor of this important international obligation. Proposed geoinformation module is a part of the project.

Keywords: Stockholm convention, persistent organic pollutants, ASP.NET, C#, web-application, GIS, MySQL.

Web-application for unified data base of persistent organic pollutants is developing on ASP.NET MVC technology. According international obligations the web-application should be open source and anyone can use provided public information. MySQL data base management system (DBMS) is using to store large amount of data. The main reasons of this choice is openness of software product and DBMS performance. The aim of our work is development geoinformation module which will be integrated in web-application of unified data base.

To reach main goal we should complete a number of tasks. They are: 1) set up connection to unified data base; 2) create necessary layers on map of territory of Belarus; 3) develop user interface; 4) display special information on the map and give users ability to choose kind of displayed data; 5) develop administrative and user parts of this geoinformation module.

These tasks are solved: frontend part by using Google Maps API, HTML, CSS and Java Script programming language with it's different frameworks; backend part by using ASP.NET technology and C# programming language; storage access part by using DBMS MySQL and SQL programming language.

LEGAL REGULATION OF USE AND PROTECTION OF SURFACES IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT

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In this article, some aspects of the legal regulation of the use and protection of subsoil in the context of sustainable development are considered. The study of the presented direction requires an integrated approach that provides for the wide application of scientific knowledge from various fields. Subsoil use often leads to negative anthropogenic impact on the environment, which causes significant harm both to the environment as a whole, and to its individual components, natural objects.

Keywords: sustainable development, mineral resources, mineral resources, environment