

Integration of EuroGeoss Applications to Enhance the Research Methods in the Region

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Abstract. This paper represents research related to the climate and climate changes in Macedonia and worldwide. The paper described climate events in the past and today, emphasizing the efforts of researchers and institutions dealing with such climatic changes and disasters. Macedonia, as a developing country has not yet achieved significant results related to the climate, so this study actually represents the introduction and integration of new tools and services in Macedonia which are used by worldwide institutions for research, prediction and reduction of those change. The key points in our research are: to review the available applications and explain the process and methods with which the data will be edited, stored, standardized, multimedia displayed and published. Our main goal is to describe the services and tools to standardize data from surveys and use all opportunities that can be use by these organizations. The creation of such a work in environment, improves the climate picture in Macedonia, and will be driving force of climate researchers and institutions.

Keywords: Climate, Change, Climate organizations, Geoss, Biodiversity, European Union, Applications, Standardization, mapping.

1 Introduction

The climate represents set of meteorological elements in the atmosphere such as temperature, precipitation, wind and others. The climate is very important geographical factor in each state. It affects the amount of precipitation, vegetation, hydrograph and of demographics. On the climate affects: geographical location, relief, atmospheric currents, and in recent times the people through technology and activities. Through the years there have been many climate changes, warming and vulnerabilities that led a change in flora and fauna in some areas, their disappearance up to the human sacrifices and devastation. The consequences and the vulnerabilities of these changes are continuation with global warming, the warming of the Arctic and Antarctica, melting glaciers, changing the seasons, spreading diseases, snow storms, droughts, floods and etc. The world's leading economic forces are making many efforts to tackle with climate change. In addition the leading forces are creating applications, do monitoring on the all events, organize conferences in order to inform the public about the dangers

of climate change. The European Union is the main driving force in this region for the climate change. On the last summit the European Union come forward with 7.2 billion Euros in aid for adaptation to developing countries to new technologies.

2 National platforms and strategies to reduce climate change

Republic of Macedonia is characterized by a striking manifestation of history and modern destructive processes, among other things resulted in occurrences of intense seismic activity in many areas and regions. The floods are natural disasters that often occupy the territory of the Republic of Macedonia and they result from the particularities of relief, topographic, geomorphologic and climatic conditions, and unequal regime of flow of natural watercourses.

One of the major problems that facing our country are losses in biodiversity. Although this sector depends on several segments, however, the key factors that give a sign of declining biodiversity in Macedonia are: anthropogenic land use in the past in general, recent economic collapse, inadequate spatial planning and inappropriate land use. Just assumed it would come losing and disturbing the ecology of different species. Until now are produced several significant projects that emerged significant documents to preserve biodiversity here. Although these climate changes are not treated directly, however they highlight their importance. The Government of the Republic of Macedonia has implemented several action plans consisting of a sequence of necessary actions to mitigate the negative consequences of climate change.

3 Strategies and plans to reduce climate change in Republic of Macedonia

Our main objective in this research is to describe the biodiversity in Macedonia and globally and finally offer solution to long-term problems in our region. The solution is a combination of already available applications and would give a draft program of which will be designated for our researchers. We analyzed the results and applications, and in this article we have described their functionality and ability as they use them and upgrade. These applications give us the opportunity to update their content and customization depending on the region. Most of the functionality would have taken the applications and would complement the programming part that will be only for researchers in Macedonia region. So they would set up according to the requirements and needs of the most vulnerable areas in Macedonia. . From the very beginning I adopted standard professional terminology that will be written in English language. During the program would add a map with the territory of the Republic of Macedonia, which will be specially prepared the draft of the territory, and the coordinates of the regions. From the research that we have done so far, we came to the conclusion that you need to build a store that would be an archive of previous research papers and storage of future results. Researchers will be able on Macedonian language to perform data standardization. If they want their data to be accessible in the world,

they will synchronize in the main application, as described below, and if they meet the required standards will be published in the pages of international organizations. The next section will give a brief description of the functionalities of applications and their global application.

3.1 Guidelines for creating and updating metadata in the drought metadata catalogue

One of the applications created by EuroGeoss is CatMDedit, and its main goal is to create and update the metadata. This program facilitates the documentation of resources, with particular focus on the description of geographic information. On the internet are available instructions for installation and a description of the main functionalities of the tools. In this section we will try to briefly give a description of this application to discern its strengths and to conclude that the benefits of application, how applicable is in our situation, whether to enable researchers new concept of work that will move to world institutions.

When metadata is created there is an opportunity for them to be added to the appropriate catalog and how the export of metadata as XML files in accordance with ISO 19139 specifications for coding. If metadata is properly updated, they are exported as XML file in alignment with the standards. If you want to delete given records with confirmation of your verification you can remove the selections. EuroGeoss and CatMDedit have created a template and instructions for using the application, where are described in detail all steps and procedures of the functionalities of the system. The last upgrade of the application was made 8 months ago and it has the ability to upgrade with an appropriate vocabulary that is simple and can be easily integrated with CatMDedit accommodation of the files in the application directory. Also upgrading GEMET is very simple and enables new privileges and features of CatMDedit.

3.2 EUOSME: European Open Source Metadata Editor

The European Open Source Metadata Editor (EUOSME) is a web application written in Java and based on Google Web Toolkit (GWT) libraries. More specifically, this implementation allows to describe a spatial data set, a spatial data set series or a spatial data service compliant with the standards ISO 19115:2003 (corrigendum 2003/Cor.1:2006)ii and ISO 19119:2005iii. It is therefore an implementation of the INSPIRE Metadata Technical Guidelines based on these two ISO standards, and published on the INSPIRE web site³. This editor builds on the experience acquired in the development of the INSPIRE Metadata Implementing Rules, and includes the INSPIRE Metadata Validated Service available from the INSPIRE EU Geo-portal (<http://www.inspire-geoportal.eu/>).

Identification of resource is composed of two elements: law and namespace and annotation data in this field is mandatory. This program is more advanced than previously described and provides detailed tagging of each imported data with the above described functions. In the functionality will enumerate the possibilities for the the

topic categories, resource locator, a tab with keywords, panel with a choice of language etc. The implementation of these two applications of the European Union and GEOSS and any other applications that will be available in future will enable us to move to these global institutions, and that means using the same involves financial, technical and educational assistance.

4 Conclusion

In this research examined part of climate change which for years has been most vulnerable and has suffered major losses. Due to persistent climate change biodiversity faces transformations, losses and even extinction of some species. In Macedonia it is this area's most threatened because the competent institutions have so far neither achieved significant results, nor have conducted monitoring to discover the causes of such phenomena. Our main goal is the presentations to be the start to new work environments in our region, to reduce losses from year to year are bigger and more devastating. Through their application and standardization of research would have moved to global institutions and their work commitments and efforts to overcome and alleviate the situation of different regions of the the planet earth.

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