



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

Sanja Stefanova, Marina Ivanova, Igor Stojanovik, Zoran Zdravev

{sanja.stefanova, marina.ivanova, igor.stojanovik, zoran.zdravev} @ugd.edu.mk

## 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. 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.

## 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. 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.

## Analysis of vulnerability assessment, based on climate change scenarios by 2100, national and regional level in the country, (table.1)

(Source: Second National Communication of the Republic of Macedonia)

| Year | Reduced production as a result of climate change, in tones |         |         | Reduced production costs, in euros |            |           |
|------|--|---------|---------|------------------------------------|------------|-----------|
|      | Winter Wheat   | Wine    | Lucerne | Winter Wheat                       | Wine       | Lucerne   |
| 2025 | 31.806   | 112.910 | 62.204  | 4.104.004                          | 18.211.370 | 7.023.001 |
| 2050 | 41.926   | 122.729 | 66.494  | 5.409.823                          | 19.794.968 | 7.507.346 |
| 2075 | 53.492   | 135.002 | 70.784  | 6.902.188                          | 21.774.465 | 7.991.691 |
| 2100 | 66.504   | 144.820 | 75.073  | 8.581.099                          | 23.258.062 | 8.476.036 |

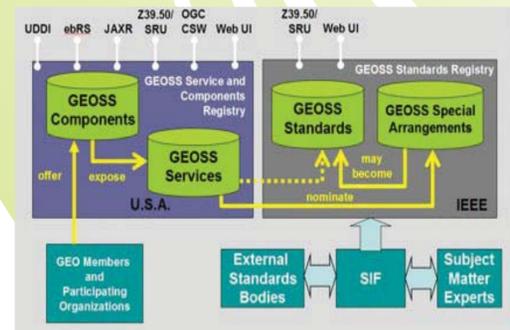
## Estimated economic losses caused by climate change - 2100 year. (Chart.1)

(Source: Second National Communication of the Republic of Macedonia)



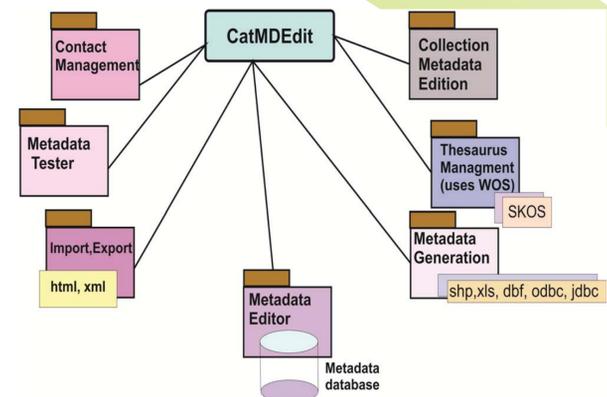
## EuroGeoss Applications

This application is open source and is designed to address problems associated with standardization. CatMedit provides the following functionality: Creating metadata with appropriate terms, sending new metadata in the catalog of metadata, update of existing metadata and their upgrading, deleting of existing data etc.



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.

(Source: [www.eurogeoss.eu](http://www.eurogeoss.eu), [www.ieee-earth.org](http://www.ieee-earth.org))



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

### Our main goals:

- \*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.
- \*Creating standard professional terminology that will be written on Macedonian and English language.
- \*Creating 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.
- \*Creating a repository for i
- \*The resources are accordance with ISO 19115/19119 standard. The application enables creation of data, description of their characteristics and saving in the database. nformation.
- \*Strategic plan with detailed statistics and scenarios for the next ten years.
- \*Integration of available applications and Implementation in a system that will be a solution to the long year problems.