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Common database on national science policies towards global issues

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Executive Summary

This deliverable “D3.15: Common database on national science policies towards global issues” is one of two deliverables (the other one is D3.1: Common methodological approach to collect information on national science policies towards global issues) of the task “T3.5 Analysis of National Policies Regarding Global Issues” of Workpackage 3 Monitoring and Analysis of S&T Cooperation.

The purpose of this task (T3.5) has been to analyse and document, if and how, the global S&T issues are of relevance for the Western Balkan Countries and to establish in cooperation with other INCO-NETs, a database/information system on national RTD policies and programmes on global issues.

The main objectives of this deliverable (D3.15) are - as agreed upon at the workshop in Bled (March 2008, see D3.14) - to develop the technical platform (online questionnaire and homepage for data retrieval) for the information system and to collect data about national RTD policies and programmes with regard to Climate Change Research in Western Balkan countries.

The present report on national Climate Change research programmes in Western Balkan countries is based on information received from correspondents from Western Balkan Countries (Albania, Croatia, Bosnia and Herzegovina, Former Yugoslav Republic of Macedonia, Kosovo (under UNSCR 1244), Montenegro, Serbia) through web based online questionnaire and desk research carried out by staff of Centre for Social Innovation Vienna. This report was first drafted on December 2008 and has been regularly (annually) updated for the duration of the project. The last update was carried out in September/October 2010.

Gathering of the information for building up the Common database on national science policies towards global issues with regard to Climate Change Research turned out to be a big challenge, which could be accomplished only partially, because of the general

problem that Climate Change research specific “programmes” do not exist yet in the Western Balkans Countries: **None of the Western Balkans Countries has a special national research programme on Climate Change yet** and also attempts to get WBCs involved (as observers) in the leading European ERA-net on climate change adaptation research CIRCLE-2 (Climate Impact Research & Response Coordination for a Larger Europe www.circle-era.eu) have not been successful.

The climate change (scientific) capacity building governance process which appear to be of highest relevance for WBCs is the United Nations Framework Convention on Climate Change – UNFCCC. In 2010 Croatia submitted its 5th national communication to the UNFCCC in which one of the announced activities is also the establishment of a Research and Development programme on Climate Change issues. In 2010 Albania submitted its second national communication to UNFCCC. This document includes a set of RTD activities in different Climate Change related areas and a list of approved projects (with funding) with RTD components.

In first half of 2010 Bosnia and Herzegovina submitted its first communication to the UNFCCC. In the submitted document Climate Change related RTD activities are foreseen in the near future.

The first Montenegro’s national communication to the UNFCCC is already finished and will be submitted till the end of 2010.

There are several governmental climate change strategies (often directly linked with UN Framework Convention on Climate Change - UNFCCC) adopted or in preparation which include RTD components and there are some climate change related RTD projects being carried out in WBC, but specific programmes in which a coherent set of RTD activities over a wider area of scientific disciplines would have been put together with clear sources of funding could not be identified in WBC.

It should be pointed out that in November 2008 there was one positive change in WBC and this is the establishment of the SEE/CCFAP-A platform and adoption of SEE/CCFAP-A action plan, which intends to intensify the cooperation between the participating countries in the development of the regional (WBC) programmes concerning climate change issues and it can be expected that such regional

cooperation has the potential to accelerate also the development of national Climate Change Research programmes and strategies. Some of projects with RTD components which were foreseen in the action plan will start in autumn 2010.

Although no significant activities in this process could be observed in recent months (2010), it is still the process with the best elaborated regional strategy on research and scientific capacity building related to climate change in SEE region (see also Annex IV of this report for details).

From an EU integration perspective the most relevant process/platform for coordination is the Working Group "Climate Change" under the Regional Environmental Network for Accession (RENA)", which for the time being has no specific research cooperation component. (See: http://ec.europa.eu/enlargement/pdf/financial_assistance/ipa/2009/assumption/pf5_rena_final_en.pdf)

As regards research policy coordination of WBCs, WBC-INCO.NET plays a crucial role in mapping, awareness raising, research priorities setting and in promotion of Intersectoral knowledge based responses to climate change in WB (hopefully in future including also aspects like eco-innovation and climate change related social innovation issues).

Therefore in addition to this report, also the "Report on each of the thematic priorities defined in the second phase of the identification and consultation processes (Health, Transport and Environment)" – D 2.12. of WBC-INCO.NET should be read by those interested in climate change research in WBCs.

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0. Abbreviations

DLR	International Bureau of the Federal Ministry of Education and Research at the Project Management Agency - c/o German Aerospace Center (DLR)
IPCC	Intergovernmental Panel on Climate Change
GEF	Global Environment Facility
NGOs	Non-governmental organisations
RCC	Regional Cooperation Council (located in Sarajevo)
REC	Regional Environmental Centre for Eastern and Central Europe
RTD	Research and Technological Development / Research and Technology Development
S&T	Science and Technology
SEE	South Eastern Europe
SEE/CCFAP-A	South East European Climate Change Framework Action Plan for Adaption
UNFCCC	United Nations Framework Convention on Climate Change
UNDP	United Nations Development Programme
WBC	Western Balkan Countries
WP	Work Package
ZSI	Centre for Social Innovation, Vienna

1. Data Gathering & Realisation

For data collection, for the “INCO-NETs Global Issues RTD Programmes Information System”, an online-survey has been chosen as main method to be applied. As agreed on Bled Workshop in March 2008 the online questionnaire tool (with information about the data collection) was developed by the Centre for Social Innovation.

Figure 1: Global Issues RTD website

With this online tool our correspondents could enter data via internet.

The data received via the online questionnaire has been complemented also by desk research and telephone interviews.

The data collection template (and the questionnaire) for the “INCO-NETs Global Issues RTD Programmes Information System” (for details see Annex I or <http://www.global-issues-rtd.info/programmes/blank>) offers specific fields for data entry, which clearly describe the expected categorisation and documentation of RTD

programmes. The data collection template is very much oriented on the information architecture of ERAWATCH¹ in order to develop an ERAWATCH compatible information system.

The database provides a directory of submitted research programmes and other relevant documents (e.g. national strategies), which can be accessed worldwide over the Internet by anyone. The data submitted are included in the online database after the approval by the database administrator (for further information about the database see: <http://www.global-issues-rtd.info/index.html>).

In 2010 the “search tool” of the database was updated and is now more user-friendly, based on some suggestions, which have been proposed by DLR (Dr.Ulrike Kunze).

As decided at Bled INCO-Net Global Issues Workshop in March 2008 (see D3.14) for the pilot phase of information gathering for the common database on national science policies towards global issues the topic of “Climate Change research programmes” (climate mitigation and adaptation) has been chosen. The topic for the pilot phase has been chosen among other important global issues identified at the workshop (e.g. Poverty reduction / MDGs, Energy and water scarcity, Change in the balance of economic power, Food security, Migration and conflicts (local and global), etc.), because currently Climate Change represents one of the major global problems (see D3.14). Furthermore, the research community from the field of Climate Change Research has shown an interest for the collection of the “Climate Change research programmes”, because until now such a database did not exist.

For the gathering of the information, we implemented a mixed approach:

- a) identify local correspondents to provide the requested information
- b) complement input by desk research at the same time.

¹ ERAWATCH is (<http://cordis.europa.eu/erawatch/>) a very valuable information system of the European Commission documenting RTD programmes and policies in EU Member States as well as in some selected third countries (but not extended to the International Cooperation Partner Countries - ICPCs and not thematically focussing on any global issue).

Identification of competent local correspondents from the field of Climate Change research in Western Balkan countries was carried out as follows (for details see also Annex II – List of contact persons and correspondents):

1. WBC-inco.net partners suggested some of the correspondents and informed us about the competent institutions in their countries.
2. Correspondents were identified through extensive Climate Change experts mapping in the Western Balkan Countries.
3. Some of the Climate Change experts from WBC have been contacted during the “FP7 Environment Partnering Event Slovenia and the Western Balkan Information day” (Ljubljana, October, 22 2008 - organised within the framework of the ERAWESTBALKAN+ project) and the International Conference: Teaching Climate Change and United Nations System (Belgrade, May 17 – 18 2010)

The information for correspondents (purpose of information collection, questionnaire in excel format, example from Germany, climate change research programme data set, spreadsheet and link to online database) was distributed via email to all correspondents. Further information about the questionnaire has been provided to local correspondents during telephone conversations with each of the correspondents. With some of the correspondents, also a method of telephone interview (open question method) was chosen to gather more information about further developments in the field of Climate Change Research in their countries.

2. Results and Conclusions

2.1 Summary of the received information

Gathering of the information for building up the common database on national science policies towards global issues with regard to Climate Change Research was a big challenge, which could be accomplished only partially, because of the general problem that Climate Change research specific “programmes” do not exist yet in the Western Balkans Countries.

There are several governmental climate change strategies (often directly linked with UN Framework Convention on Climate Change UNFCCC) adopted or in preparation, which include RTD components and there are some climate change related RTD projects being carried out in WBC but specific programmes in which a coherent set of RTD activities over a wider area of scientific disciplines would have been put together with clear sources of funding could not be identified in WBC.

Practical problems with data collection have been as follows:

- Better and more exact definition of the terminus “Climate Change Research” is needed.
- Clear definitions and distinctions between “research project”, “research programme”, “plan” and “strategy” have to be elaborated in order to guide local correspondents in their delivery of information.
- Lack of access to information and lack of motivation to provide requested information among some of correspondents
- Lack of inter-sectoral information exchange (between Ministries of Environment, Agriculture, Science, etc.)
- Discontent over the flood of questionnaires received from European and other international stakeholders

It should be pointed out that the received responses show, that **none of the Western Balkans Countries has a special national research programme on Climate Change.**

The same results have been shown also by the research, which was done in 2006 in the framework of the FP6 based project CIRCLE – Climate Impact Research Coordination for a Larger Europe - *“It should be pointed out that most countries in South-Eastern Europe don’t have any running national Programmes on climate impacts and adaptation measures. They are – to a different extent – integrated in international, European or US-American or Canadian studies and projects which are funded from various sources (including the European Commission).”* (see Report on the current state of National Research Programmes on Climate Change Impacts and Adaptation in Europe - Examples from SEE Countries, p. 247- 260)².

However, our investigations show (see the data sets in Annex II for details) that some progress in past four years has been achieved: in Albania, Croatia, Bosnia and Herzegovina and Former Yugoslav Republic of Macedonia by adaption of the National Strategies on Climate Change. Recently, also “National Focal Points to the UNFCCC”³ in all of Western Balkan Countries, except Kosovo (under UNSCR 1244), have been established.

² CIRCLE- Report available online: <http://www.circle-era.net/results/>

³ List of National Focal Points to the UNFCCC: <http://maindb.unfccc.int/public/nfp.pl>

Table 1: Matrix - Types of available information/documents on Climate Change Research (updated 2010)

Types of available Information/Documents on Climate Change Research	UNFCCC National Communication (chapter on RTD)	National Strategy/-ies and National Action Plan/-s, with Climate Change Research Components	National Funding Programmes on Climate Change in Related Sectors (Energy, Environment, Forestry...	Special National Funding Programmes on Climate Change Research	Participation in SEE/CCFAP-A ⁴	Other
Country						
Albania	X		X		X	
Croatia	X	X				
Bosnia and Herzegovina	X	X			X	
Former Yugoslav Republic of Macedonia	X	X			X	
Kosovo(under UNSCR 1244)						Project driven research
Montenegro		X			X	
Serbia		X			X	

The matrix above shows, the types of information/documents which are currently available in WBC. Through our investigation we have identified following types of documents regarding Climate Change research:

- UNFCCC National Communications (chapter on RTD)⁵,
- National Strategies and National Action Plans with Climate change research components,
- National Funding Programmes on climate Change Related Sector (e.g. Energy, Environment, Water and so on),
- Special National Funding Programmes on Climate Change Research

⁴ South East European Climate Change Framework Action Plan for Adaption (See page 8)

⁵ See: http://unfccc.int/national_reports/non-annex_i_natcom/items/2979.php

- Sub-regional Programmes towards Climate Change Issues and
- other mainly smaller research projects (funded by international NGOs). For detailed information about the documents see Annex 1 or <http://www.global-issues-rtd.info/index.html> .

Currently (September 2010) Albania, Croatia, Bosnia and Herzegovina and Former Yugoslav Republic of Macedonia have national strategies, where climate change impacts and adaption measures, including research are mentioned and foreseen in the near future.

In Albania, UNDP is running a Programme on Climate Change with a research component. In 2010 Albania submitted also the second national communication to the UNFCCC.

In Bosnia and Herzegovina the National Environmental Action Plan was adopted in 2003 by the Federal government. A First National Communication to the UNFCCC was submitted in 2010.

Montenegro's first National Communication to the UNFCCC which was prepared by the Montenegrin Government and UNDP with the GEF funding will be submitted to the UNFCCC in the end of 2010.

The National Strategy of Sustainable Development of Montenegro which was adopted in 2007 also includes RTD components.

Serbia has a running environmental programme with research component on Climate Change (from 2005). In 2010, a National Strategy for Incorporation of the Republic of Serbia into Clean Development Mechanism-Waste Management, Agriculture and Forestry Sector was adopted. Currently Serbia's Ministry of Environmental Protection and Spatial Planning is preparing a National Strategy on Climate Change and first national communication to UNFCCC, which will be submitted in 2011.

Kosovo (under UNSCR 1244) does not have any national strategy on Climate Change and currently no active national Climate Change research programme. The UNDP and the Ministry of Environment and spatial planning are currently co-operating in 3 environmental (Climate Change) projects⁶.

It should be pointed out that our investigation has shown that there has been made some progress in **SEE regional cooperation between Albania, Bosnia and Herzegovina, Montenegro, Former Yugoslav Republic of Macedonia and Serbia** in the field of Climate Change related RTD policies and programmes in cooperation with the Regional Cooperation Council, Sarajevo. All listed SEE Countries (except Croatia and Kosovo (under UNSCR 1244)) are participating in the **South East European Climate Change Framework Action Plan for Adaption – SEE/CCFAP-A**, which was developed by the joint effort of participating countries, which have been interested in creating a common platform for regional cooperation in climate change issues. The development of SEE/CCFAP-A has been funded by the Royal Ministry of Foreign Affairs of Norway. The SEE/CCFAP-A was supported by the Ministers of Environment of the participating countries and other donor institutions (UNDP, World Bank and other) and the agreement was set through joint statement at the conference, which was held in Sarajevo in November 2008.

The **SEE/CCFAP-A action plan** consists of Programmes for Adaption and defines proposed actions and needs in different sub-regional programmes in which also the research components are foreseen⁷:

- SUB-REGIONAL PROGRAMME 1/ STRATEGIC FOCUS: Climate Change and Public Health, Safety and Emergency Preparedness
- SUB-REGIONAL PROGRAMME 2/ STRATEGIC FOCUS: Climate Change and Water Resources Management, Freshwater Quantity and Quality and Water Supply

⁶ See: <http://www.ks.undp.org/?cid=2,124>

⁷ See South East European Climate Change Framework Action Plan for Adaption – Printed Issue (p.58 -68) or <http://www.global-issues-rtd.info/programmes/2138.html> (Further information: www.rcc.int Contact: miroslav.kukobat@rcc.int)

- SUB-REGIONAL PROGRAMME 3/ STRATEGIC FOCUS: Climate Change and Agriculture and Forestry
- SUB-REGIONAL PROGRAMME 4/ STRATEGIC FOCUS: Climate Change and Land Use, Buildings and Transportation
- SUB-REGIONAL PROGRAMME 5/ STRATEGIC FOCUS: Climate Change and Tourism
- SUB-REGIONAL PROGRAMME 6/ STRATEGIC FOCUS: Climate Change and Coastal Zone
- SUB-REGIONAL PROGRAMME 7/ STRATEGIC FOCUS: Climate Change and Biodiversity and Ecosystems
- SUB-REGIONAL PROGRAMME 8/ STRATEGIC FOCUS: Climate Change and Energy

The above listed cooperative Sub-regional SEE Programmes for Climate Change Adaptation are focused on integrated impact and vulnerability assessments, adaptation planning and implementation in a variety of sectors that are very important to the region, and also for the regional and international co-operation.

In the frame of the SEE/CCFAP-A, the establishment of a **Balkan Regional Climate Change Forum** (BRCCF) is planned in the near future. The role of this forum would be to support the political and policy dialogue to facilitate the coordination of the activities on Climate Change mitigation and adaptation. Also, it should be used by UNFCCC focal points and the Open Balkan Group to get endorsement from the Ministries for joint regional actions in the global climate change process (see Joint statement of the Ministers, Sarajevo November 2008)⁸.

It should be stressed, that adopted SEE/CCFAP-A action plan already contains proposed national adaptation policies/measures and proposed projects (some of

⁸ See http://www.rec.org/REC/Programs/REREP/docs/11th_meeting/statement.pdf

them with Climate Change research components) from participating countries⁹. Some of projects with RTD components which were foreseen in the action plan will start in autumn 2010. The Framework Action Plan will be subject to a mid-term review in 2012.

Although in the recent months no significant activities in this process could be observed, it is still the process with the best elaborated regional strategy on research and scientific capacity building related to climate change in SEE region (see also Annex IV of this report for details)

It should be pointed out that between 2011 – 2013, the development of a **Regional Strategy for Research and Development for Innovation for the Western Balkans** is foreseen by the Regional Cooperation Council Sarajevo (RCC) / funded by DG Enlargement / in cooperation with the Worldbank. The RCC intends to facilitate experts from the region in contributing to a project which will develop a comprehensive regional research strategy with emphasis on identifying existing research capacities and considering how networking and interconnections can be established and/or improved among Western Balkans institutes and researchers. It will channel their work towards establishment of benchmarks for research and innovation systems and cooperation at the regional level, as well as explore possibilities to finance such regional initiatives, including from the business sector.¹⁰

It should be also mentioned that one of the tasks of the WBC-INCO.NET project was to identify thematic research priorities of the WBC. In the deliverable D2.12 (Report on each of thematic priorities defined in the second phase of the identification and consultation process (Health, Transport and Environment)¹¹ **6 regional research priorities in the field of Environment were commonly agreed (among them also Climate Change):**

- Biodiversity
-

⁹ See South East European Climate Change Framework Action Plan for Adaption – Printed Issue (Further information: www.rcc.int (p.84-107)

¹⁰ See RCC Work programme (p. 17) - <http://www.rcc.int/index.php?action=page&id=29>

¹¹ See <http://www.wbc-inco.net/object/document/62532.html>

- Climate change
- Sustainable management of natural resources
- Cleaner production/Environmental technologies
- Ecosystems (cross border and marine)
- Cultural heritage

Table 2: Research priorities of the WBC in the field of environment taken from their national background reports¹²

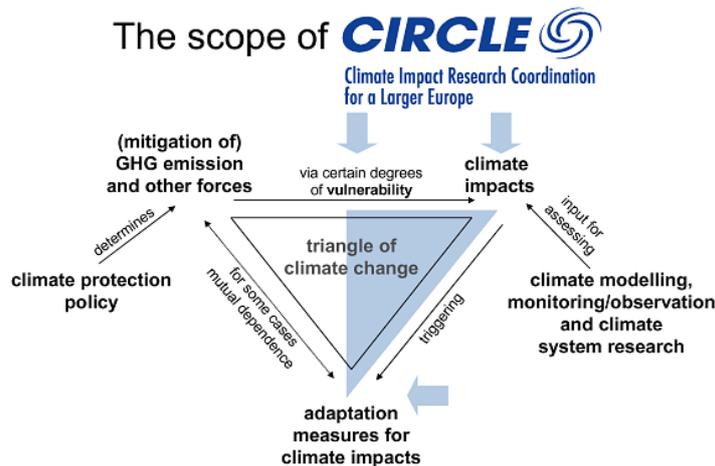
Albania	Bosnia and Herzegovina	Croatia	FYR of Macedonia	Kosovo (under UNSCR 1244)	Montenegro	Serbia
-marine and coastal protection, control and monitoring -climate change Sustainable management of natural resources and biodiversity conservation -Waste waters and solid waste management -Environmental technologies	-Climate change - reflection on environment and economy -Biodiversity and Ecosystems Management -Water Resources Management Land use -Species control and management	-Sustainable management of resources -Environmental technologies -Climate change	-Cleaner production -Environmental technologies -Climate change -Cultural heritage Solid waste management and recycling -Integrated water management -Sustainable management of resources	-Climate change pollution and risks -Environment and health -Sustainable management of natural and man-made resources Environmental technologies	-Biodiversity -Cross-border ecosystems -Climate change -Marine ecosystems -Sustainable resources management -Cleaner production	Environmental technologies -Developing materials for environmental protection -Climate change -Cultural heritage -Energy efficiency -Monitoring and waste management -Biodiversity

It needs to be stressed that an important European platform for coordination of Climate Change research is the **CIRCLE (Climate Impact Research for a Larger Europe) ERA-net project** www.circle-era.net. CIRCLE ERA-Net is a Coordination network of research funding and management organisations aiming at the implementation of a European Research Area (ERA) on Climate Change Impacts,

¹² See p. 24 - <http://www.wbc-inco.net/object/document/62532.html>

Vulnerability and Adaptation. CIRCLE started in summer 2004 and extended its activities within the ERA-Net frame for 2005-2009.

Figure 2: The scope of CIRCLE¹³



A follow-up project called **CIRCLE 2 (Climate Impact Response Coordination for a Larger Europe)** has been submitted in FP7 and approved by the European Commission. The aim of CIRCLE 2¹⁴ is to actively support, based on its research funding and coordination, adaptation efforts on different scales. There are regional sub-groupings (like for instance a Central and Eastern European group of countries) with special joint calls planned and partially already active in CIRCLE. Western Balkan countries have the opportunity to participate in the network as „observers“ - without the obligation of providing funding for the joint ERA-net call. However, till date (October 2010) the attempts to get WBCs involved (as observers) in the leading European ERA-net on climate change adaptation research CIRCLE-2 (Climate Impact Research & Response Coordination for a Larger Europe www.circle-era.eu) have not been successful. Contact: circle@circle-era.net

¹³ See <http://www.circle-era.net/about-circle/>

¹⁴ See http://cordis.europa.eu/fetch?CALLER=FP7_PROJ_EN&ACTION=D&DOC=1&CAT=PROJ&QUERY=012b7a1528a3:dc0e:3891ef17&RCN=96260

In general it can be said – based on the discussions that took place at CIRCLE Final and Outlook conference which took place in Vienna (September 9, 2009) and based on the findings of the investigations within WBC-INCO.NET Global Issues task - that there are huge gaps existing even in EU Member States regarding information systems on climate change related research. Climate Change Impact, Mitigation and Adaptation has implications for very many sectors (environment, economy, energy, forestry, to name only some of them) and thus there are climate change related research activities carried out by several public authorities with often limited coordination even on national level. If subnational/provincial level and local level (which is actually most important for climate change adaptation) are added to the observation, it becomes clear that the building up of information systems on climate change research is a very important but yet by far unfinished task even in advanced countries.

From the perspective of EU integration, the most relevant process/platform for coordination is the Working Group **”Climate Change” under the Regional Environmental Network for Accession (RENA)**¹⁵ which for the time being has no specific research cooperation component.

The information collected in “T3.5 Analysis of National Policies Regarding Global Issues” of Workpackage 3 “Monitoring and Analysis of S&T Cooperation” can be regarded as a status quo analysis which can help to identify knowledge and coordination gaps in WBCs that can be addressed in a next phase in policy dialogue activities (on the one hand this topic could be addressed at one of next WBC Steering Platform meetings and on the other hand the results can be discussed in a cross-regional comparison with other INCO-NETs at the Global Issues conference which is planned within EECA INCO.net).

¹⁵ See:

http://ec.europa.eu/enlargement/pdf/financial_assistance/ipa/2009/assumption/pf5_rena_final_en.pdf

As mentioned above a very recommendable way of know-how transfer from climate change research frontrunner countries of ERA to WBCs would be for WBCs to participate in CIRCLE2 as observers.

It is also **proposed** to provide within the FP Capacities programme the opportunity to develop some kind of **thematic global INCO-net on Climate Change research** which would provide the policy dialogue platform for a cross-regional thematic approach to the challenge of building up collaboratively an ERA-Watch compatible **global information system on climate change research** (e.g. Global research area information clearing house on climate change).

We can also conclude that currently Climate Change research in Western Balkan Countries is developing very slowly because of the lack of national funding for Climate Change Research Programmes.

From our correspondents from WBC, we have also received the information that Climate Change Research is more project-based driven. This means that Climate Change research depends on available international funding by EU, individual EU member state governments, US-American NGOs, UNDP and other international governmental organizations (United Nations system) or other international NGOs.

We can conclude that as a common element in WBC the development towards adaption of national Climate Change research programmes has been very slow. Among other reasons (e.g. very high percentage of national budgets allocated to countries' social transfers), currently one of the main reasons for little or no progress in this area is the current global economic and financial crisis, which causes difficulties in funding national Climate Change research programmes.

Some further information about current and expected developments in each of Western Balkan countries is available on links to further information sources provided by correspondents (See Annex III or <http://www.global-issues-rtd.info/programmes/list>).

As D.3.15. has been a pilot case with “climate change” as a major “global issue” and with Western Balkan countries comprising a manageable number of countries, it can be said that the exercise has been very useful, unveiling very valuable insights into potentials for improvement of the data collection approach for building up a common (global) database on national science policies towards global issues with other INCO-NETs and other INCO projects.

Cooperation in this regard is clearly foreseen with the projects SEA-EU-NET (focused on South-East Asia) and INCO-NET-EECA (focused on Eastern Europe and Central Asia), which have already used the same method to gather data and started to insert programmes that will also be available at <http://www.global-issues-rtd.info/programmes/list>.

One lesson learnt is certainly the experience that local correspondents don't provide the requested data unless they are continuously contacted, motivated and informed by the data base administrator. The only viable solution might be perhaps even to build up a national (or regional) correspondent's network and to pay these experts (as it is being done within ERA-Watch).

The second very important lesson learnt is that significant efforts should be invested in the area of development of sophisticated guidelines for data collection. Such guidelines should give clear answers what to interpret the term “climate change research”, where to draw delimitations and so on.

2.2 Short Information on recent Climate Change Research Issues developments in WBC (by country)

Albania

Types of Documents submitted: Programme and National Strategy

In Albania a special “**UNDP Climate Change Umbrella Programme**” is running, which provides overall support to the Government of Albania in addressing climate change issues and implementation of the UNFCCC and its Kyoto Protocol. The submitted programme on Climate Change issues has a research component on Climate Change. The programme is funded by: Global Environmental Agency, United Nations Development Programme, Austrian Development Agency and Regional Environmental Center. Currently Albania has no national research programme on Climate Change. Most of the research institutions dealing with Climate Change Research collaborate in different research projects.

The Second National Communication to the UNFCCC (2010) was prepared by the Ministry of Environment, Forests and Water Administration and UNDP Albania. In this document, among other Climate Change measurements, it is stressed that the main tasks of the Ministry of Environment, Forests and Water Administration are: Implementing relevant national policies; Defining priority environmental and forestry investments; Development of national research programs in the environmental field; and Coordinating environmental protection-related activities of the other ministries and local authorities.

Further Information:

http://www.moe.gov.al/en/index.php?option=com_content&view=section&layout=blog&id=5&Itemid=28

http://www.undp.org.al/index.php?page=WWD/e_env

<http://www.rec.org/rec/Introduction/CountryOffices/Albania.html>

<http://www.rec.org/rec/Introduction/CountryOffices/Albania.html>

Bosnia and Herzegovina

Types of Documents submitted: National Strategy and National Action Plan

National Environmental Action Plan (NEAP) for B&H which is based on national sustainable development priorities, Rio Agenda 21 and on objectives and priorities of The Sixth European Community Environment Action Programme 2001-2010, also considers climate change issues. The National Strategy on Climate Change will be prepared in the next years. Useful link for further information about the current developments is <http://www.undp.ba/index.aspx?PID=21&RID=71> .

In the chapter 5 and 6 of the **B&H National Communication under the United Nations Framework Convention on Climate Change** an overview of national plans and programmes for systematic observing and improvement of climate research and forecast capacities is available. These include project-driven research and also applied research in different Climate Change related fields.

Further information:

<http://www.unfccc.ba/en/latest/news/21-bih-adopts-the-initial-national-communication-under-the-united-nations-framework-convention-on-climate-change>

Croatia

Types of Documents submitted: 2 Strategies, Action Plan and National Programme

The Croatian government adopted a “**National Strategy for Implementation of the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol in the Republic of Croatia, with an Action Plan**”. In this document it is stressed that further research and development programmes in the Climate Change field shall be promoted and transfer and utilization of new technologies, optional technical measures, pilot-projects and researches in adaptation to impacts of climate change shall be encouraged. Research policy areas targeted in this strategy are: Applied industrial research, Human resources development, International research collaboration, Knowledge transfer (between researchers) and Problem driven (basic) research. At beginning of 2009 Croatian government announced its intention to establish a “Research and development programme on Climate Change

issues” in the next years. The foreseen programme is one of National Action plan measures¹⁶. Also in Croatia a **National Programme to Mitigate Drought Impacts and Combat Desertification (NAP)** was developed through a project founded by the Ministry of Science, Education and Sport.

Further information:

http://klima.hr/razno_e.php?id=projects¶m=

Croatia as Annex I. observer to UNFCCC¹⁷ in 2010 has submitted the **Fifth National Communication of the Republic of Croatia under the United Nation Framework Convention on the Climate Change**. This document includes and describes also the “Air Quality Protection and Improvement Plan” which determines 33 basic measures that are in a phase of implementation, while some of them in a phase of preparation. Among them also the “Establishment of a research and development programme focusing on climate change issues”.¹⁸

Former Yugoslav Republic of Macedonia

Types of Documents submitted: 3 National Strategies

There are three documents (strategies) dealing with Climate Change issues. First is the “**First National Communication to the UNFCCC**”, which aims to improve the existing databases and to carry out the research of mezzo-scale and micro-scale climate systems. In this communication, the research policy priority targeted is problem-driven (basic) research and the target groups are higher education institutions research units/centres.

In December 2008 the “**Second National Communication to the UNFCCC**”, has been adopted by the Government of Former Yugoslav Republic of Macedonia. In the coming years the Government plans to develop a “Research support programme for

¹⁶ See http://klima.mzopu.hr/UserDocslimages/STRATEGY_Objective_and_measures.pdf and <http://www.global-issues-rtd.info/programmes/122.html>

¹⁷ See http://unfccc.int/parties_and_observers/parties/annex_i/items/2774.php

¹⁸ See http://meteo.hr/index_en.php

development of new mitigation technologies and transfer of existing ones”. Funding for this programme, which is one of the measures mentioned in the Second National Communication to the UNFCCC, is planned to be financed from national budget, foreign donations and EU Research programmes.¹⁹

The third document submitted, is “**Strategy on Sustainable Development of Forestry**”, where climate change issues (Support to research and monitoring activities for better understanding of the possible impact of climate change on forests and their ability to reduce the impact of disasters as extreme weather events) are considered.

Further information: <http://www.unfccc.org.mk/>

Kosovo (under UNSCR 1244)

Kosovo (under UNSCR 1244) currently has no national strategy and no running national Climate Change research programme. There are currently some projects on Climate Change issues funded by international NGOs. Currently (2010) UNDP and the Ministry of Environment and Spatial Planning are participating in 3 environmental (Climate Change) projects. Some other local-based projects are coordinated through REC – Regional Environmental Center²⁰

Further Information:

<http://kos.rec.org/> or http://www.ks-gov.net/mmph/english/index_eng.htm

¹⁹ See Second National Communication to the UNFCCC, December 2008 (page 96) <http://www.unfccc.org.mk/>.

²⁰ See <http://kos.rec.org/new/rec/indexx.php?mod=top&cat=40&lang=2>

Montenegro

Type of Document submitted: Strategy

In 2007 Government of Montenegro adopted the **National Strategy of Sustainable Development of Montenegro**²¹ which includes among other environmental measurements also RTD components in the field of Climate Change Issues.

Currently Montenegro has neither a national strategy nor a running national research programme on Climate Change. In 2009 also the Agency for Environmental Protection has been established.

The **First National Communication to UNFCCC**, which was prepared by the Ministry of Environmental Protection (National Focal Point) and UNDP with the GEF funding (2008 – 2010) will be submitted to the UNFCCC in the end of 2010. In this document also RTD related activities in the Climate Change are foreseen.²²

Further Information:

<http://www.gov.me/eng/minzastsred/vijesti.php?akcija=rubrika&rubrika=28> or
<http://www.undp.org.me/>

Serbia

Type of Documents submitted: Programme & National Strategy

Currently Serbia has no special national programme on Climate Change Research. However, the submitted “**National Environmental Protection Programme**” also considers climate change issues in the field of research.

In 2010, the Ministry of Environment and Spatial Planning has successfully finalized the implementation of the project „*Development of National Strategy for Incorporation of the Republic of Serbia, into Clean Development Mechanism (CDM) under the Kyoto protocol*”. Implementation of this project has been realized with the financial support received from the Government of the Kingdom of Norway. The result of this

²¹ See <http://www.global-issues-rtd.info/programmes/2124.html>

²² See <http://www.undp.org.me/home/inc.html>

project is the **National Strategy for Incorporation of the Republic of Serbia into Clean Development Mechanism-Waste Management, Agriculture and Forestry Sector**²³. Currently (2010) Serbia's Ministry of Environmental Protection and Spatial Planning is preparing a National Strategy on Climate Change and first national communication to the UNFCCC, which will be submitted in 2011. From January 2010 Serbia became associated country with Copenhagen Accord.²⁴

Further Information: <http://www.ekoplan.gov.rs/en/Climate-change-46-p1-list.htm>

²³ See <http://www.global-issues-rtd.info/programmes/2136.html>

²⁴ See <http://www.unfccc.int/files/meetings/application/pdf/serbiacphaccord.pdf>

Annex I – Data Collection/Questionnaire Template

I. General information	
Country	
Type of the Document:	Programme/Strategy/Other
Title of the Programme/Strategy (in English)	
Title of the Programme/Strategy (Original language)	
Keywords	
Overview (Short summary of goals, aims, focus, beneficiaries)	
Background and rationale (Explain the rationale of the programme/Strategy in relation to the national research system)	
II. Detailed information	
Start date	
Expected end date	
Research Policy Priorities Targeted (More than one answer possible)	Basic research
	Problem driven (basic) research
	Pre-competitive research
	Applied industrial research
	Social sciences research
	Knowledge transfer (between researchers)
	Human resources development
	International research collaboration
	Networking
Additional comments	
Relation to other Programmes (Please describe if/how the programme relates to other programmes)	
The programme was inspired by (More than one possible answer)	Inspired by an existing programme of another country
	Inspired by national policy debate (e.g. study, consultative review, etc.)
	Inspired by need to meet EU level policy objectives
	Programme is novel
	Other (Please explain)

<p>Geographic coverage (If the programme only concerns certain region(s) of the country, please mention them)</p>	
<p>Target group(s) (or beneficiaries of the programme and also which group (s) are eligible to apply for funding (more than one possible answer - please make it bold))</p>	<p>All companies</p> <p>SMEs only</p> <p>Consultancies and other private service providers (for-profit)</p> <p>Scientists/researchers (as individuals)</p> <p>Higher education institutions research units/centres</p> <p>Other non-profit research organisations (not HEI)</p> <p>Higher education institutions (education function)</p> <p>Other public education institutions (secondary, etc.)</p> <p>Private institutions for education / lifelong learning</p> <p>Technology and innovation centres (non-profit)</p> <p>Business organisations (Chambers of Commerce...)</p> <p>New technology based firms/ new knowledge intensive service firms</p> <p>Others</p>
<p>Research Themes and Disciplines of Research Targeted (Please describe briefly the thematic orientation of the programme)</p>	
<p>Target fields (Please indicate which categories/themes are relevant in the program) (More than one possible answer)</p>	<p>Health</p> <p>Environment</p> <p>Energy</p> <p>ICT</p> <p>Biotechnology</p> <p>Food and Agriculture</p> <p>Socio-economic sciences and the Humanities</p> <p>Nanotechnology, nanosciences, materials and new production technologies</p> <p>Other (Please specify)</p>
<p>Overall implementation structure of the programme (Brief description the way in which this programme is implemented, in terms of its organisation (e.g. as series of subprogrammes or around themes)</p>	

Subprogramme structure (Please briefly describe (if any))	
Management structure (How is the programme managed, which are the cycles of operation?)	
Selection of Projects (Please indicate if there are fixed calls for participation and list the selection criteria)	
Openness to other countries (Please indicate under what conditions are participants from EU or third countries able to participate and/or get financing from this programme)	
Mode of funding (More than one possible answer)	Grants
	Subsidized loans (including interest allowances)
	Venture capital (including subordinated loans)
	Guarantees
	Tax incentives (including reduction of social charges)
	Other (Please specify)
	No direct funding provided
Co-financing sources (other than national public sources of funding)	
Eligible costs (More than one possible answer)	Labour costs (including overheads)
	Infrastructure (buildings)
	Equipment
	Training (including study trips)
	External expertise (consultants, studies, etc.)
	Other (Please specify)
Overall budget of the programme (in EUROS)	
Additional Comments	
III. Results, Evaluation and Impact	
Measurement of outcomes (Please indicate if any indicators were publicly specified ex ante)	Yes
	No
Programme Evaluation (more than one possible answer)	Ex-ante
	On-going/Mid-term
	Final/Ex-post
	Additional Comments
Results (Publication and exploitation: is there any information on exploitation of this programme)	

Further Developments (Please indicate if the outcome of the programme led to an extension or renewal of the programme)	
IV. How to find out more	
Information Source (URL - website, reports)	
Funding Agency (Name and URL)	
Launching Agency (Name and URL)	
Administering Agency (Name and URL)	
Correspondent name and Institution, contact details (Person who fill in this questioner)	
Date of Submission	

Annex II – List of Contact persons and Correspondents

N.	Country	Correspondent/Contact: Name and Last Name	Institution	Email
1	Albania	Erion Fejzulla	Ministry of European Integration	erion.fejzulla@mie.gov.al
2	Albania	Odetta Zheku	UNDP-Albania	odeta.zheku@undp.org
3	Albania	Edmond Agolli	Ministry of Education and Science	eagolli@mash.gov.al
4	Bosnia and Herzegovina	Borislav Jaksic	B&H Focal Point for Climate Change - Ministry for physical planning, civil engineering and ecology of RS	bojaksa@inecco.net
5	Bosnia and Herzegovina	Selma Čengić	Hydro-Engineering Institute of Civil Engineering Faculty in Sarajevo	selma.cengic@heis.com.ba
6	Bosnia and Herzegovina	Djordje Vojinović	The Regional Environmental Centre for Central and Eastern Europe Country Office Bosnia and Herzegovina	djolev@blic.net
7	Croatia	Gordana Ruklić	Ministry of Environmental Protection, Physical Planning and Construction Head of international cooperation	gordana.ruklic@mzopu.hr
8	Croatia	Gordana Prutki - Pečnik	Ministry of Science, Education and Sport	gpecnik@mzos.hr
9	Former Yugoslav Republic of Macedonia	Bojan Rantaša	Forestry Institute	rante@gmx.net
10	Former Yugoslav Republic of Macedonia	Elizabeta Buova	Government of Macedonia, Head of EU Cooperation Unit	Elizabeta.Buova@sep.gov.mk
11	Kosovo (under UNSCR 1244)	Dukagjin Pupovci	Kosova Education Center (KEC); Executive Director	dpupovci@kec-ks.org

12	Montenegro	Snežana Dragojević	UNDP- Montenegro	snezana.dragojevic@undp.org
13	Montenegro	Biljana Đurović	Ministry of Environmental Protection – Focal Point Climate Change	biljanad@mn.yu
14	Montenegro	Sanja Pavičević	Hydrometeorological Institute of Montenegro	sanja.pavicevic@meteo.co.me
15	Serbia	Miljan Šuković	Government of Serbia	msukovic@merr.sr.gov.yu
16	Serbia	Suzana Vojinović	Department of International S&T Cooperation Ministry of Science and Technological Development	suzana.vojnovic@nauka.gov.rs
17	RCC	Miroslav Kukobat	RCC- Regional Cooperation Center, Sarajevo	miroslav.kukobat@rcc.int

Annex III – Table1: Summary of received Information – Western Balkans Countries

(available also at <http://www.global-issues-rtd.info/programmes/list>)

Country	Type of the Document / Geographic coverage	Title of the Document (English/ National Language)	Start Date-End Date (expected)	Research policy priorities targeted	Target group(s)	Research themes and disciplines of research targeted	Target fields	Overall budget	Founding Agency/ Administrating Agency	Further information	Link (Global Issues Database)
Albania	Programme / Albania	UNDP-GEF CLIMATE CHANGE PROGRAMME/ PROGRAMME I NDRYSHIM EVE KLIAMTIK E	01/11/1998 - 01/11/2009	Other - The establishment of the Climate Change Unit/Programme is in line with the fulfilment of the Albania's commitment as a Party to the UNFCCC	Other - National related stakeholders; National/ International Consultant/Experts are hired as per UNDP rules/procedures to perform programme related task.	(i) GHG inventory; (ii) vulnerability and adaptation (iii) GHG mitigation and carbon financing.	Environment (including Climate Change)	421,807 USD	Global Environmental Agency - www.gefweb.org ; United National Development Programme - www.undp.org ; Austrian Development Agency Regional Environmental Centre - www.rec.org / UNDP Albania	Contact Person: Odeta Zheku; http://www.ccalb.org	http://www.global-issues-rtd.info/programmes/121.html
Albania	National Strategy/Albania	Albania's Second National Communication to the Conference of Parties under the United Nations Framework	23/11/2009-NA	Applied industrial research Basic research International research collaboration Networking Problem	Other	Other	Biotechnology Energy Environment (including Climate Change) Food and Agriculture	N/A	Ministry of Environment, Forestry and Water Administration http://www.moe.gov.al/en/index.php?option=com_content&view=section&layout=blog&id=5&Itemid=28	http://www.moe.gov.al/en/index.php?option=com_content&view=section&layout=blog&id=5&Itemid=28	http://www.global-issues-rtd.info/programmes/2133.html

Dissemination level: PU

Work Package Title

Nature of the Deliverable: Other

Monitoring and Analysis of S&T Cooperation

		Convention on Climate Change		driven (basic) research			re Health Socio-economic sciences and the Humanities				
Croatia	Strategy and National Action Plan /Croatia	National Strategy for Implementation of the UNFCCC and the Kyoto Protocol in the Republic of Croatia, with an Action Plan / Nacionalna Strategija za provedbu UNFCCC i Kyotskog protokola u Republici Hrvatskoj s planom djelovanja	01/06/2008 - 31/12/2012	Applied industrial research, Human resources development, International research collaboration, Knowledge transfer (between researchers), Problem driven (basic) research	Business organisations, Higher education institutions (education function), Higher education institutions research units/centres, New technology based firms/ new knowledge intensive service firms, Technology and innovation centres (non-profit)	Technological development and transfer of technologies for reducing greenhouse gas emissions; mitigation to impact of climate change; preparation of comprehensive research programme on adaptation to impact of climate change	Energy, Environment (including Climate Change), Food and Agriculture, Health	N/A	Found for environmental protection and energy efficiency - www.fzoeu.hr	Contact Person: Mr. SINISA OZIMEC, Senior Expert Advisor; Ministry of Environmental Protection, Physical Planning and Construction; sinisa.ozimec@mzpu.hr	http://www.global-issues-rtd.info/programmes/122.html

Dissemination level: PU

Work Package Title

Nature of the Deliverable: Other

Monitoring and Analysis of S&T Cooperation

Croatia	Strategy	Fifth National Communication of the Republic of Croatia under the United Nations Framework Convention on the Climate Change	12/2/2010 –N/A	Applied industrial research Basic research International research collaboration Knowledge transfer (between researchers) Networking Problem driven (basic) research Social sciences research	Higher education institutions (education function) Higher education institutions research units/centres New technology based firms/new knowledge intensive service firms Other non-profit research organisations (not HEL) Other public education institutions (secondary, etc.) Scientists/researchers (as individuals) Technology and innovation centres (non-profit)	N/A	Biotechnology Energy Environment (including Climate Change) Food and Agriculture Health ICT Socio-economic sciences and the Humanities	N/A	Ministry of Environmental Protection, Physical Planning and Construction (http://www.mzopu.hr/default.aspx?id=3967)	http://meteo.hr/index_en.php	http://www.global-issues-rtd.info/programmes/2134.html
Bosnia and Herzegovina	National Action Plan/ Bosnia and Herzegovina	National Environmental Action Plan (NEAP)/ Akcioni plan zaštite okoliša za Bosnu i Hercegovinu	01/03/2003	Basic research, International research collaboration, Knowledge transfer (between researchers), Networking	N/A	N/A	Energy, Environment (including Climate Change), Health		International Development Fund (IDF) grant from the World Bank for environmental capacity building	Contact Persons: Denis Zvizdić Co-Director, FBiH Federalno ministarstvo prostornog uređenja i okoliša E-mail: dzvizdic@bih.net.ba or Dragan Milošević Co-Director, RS NEAP BIH DIRECTORATE IURS, Banjaluka E-mail: milojcic@inecco.net	http://www.global-issues-rtd.info/programmes/138.html

Dissemination level: PU

Work Package Title

Nature of the Deliverable: Other

Monitoring and Analysis of S&T Cooperation

Bosnia and Herzegovina	National Strategy /Bosnia and Herzegovina	NATIONAL COMMUNICATION UNDER THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC)	21.4.2010/NA	Applied industrial research Basic research International research collaboration Knowledge transfer (between researchers) Networking Problem driven (basic) research Social sciences research	All companies Consultancies and other private service providers (for-profit) Higher education institutions (education function) Higher education institutions research units/centres Other non-profit research organisations (not HEI) Scientists/researchers (as individuals) Technology and innovation centres (non-profit)	N/A	Energy, Environment (including Climate Change), Health	N/A	Administering agency: http://www.unfccc.ba/en/unfccc/unfccc-focal-point	mgr@mgr.vladars.net	http://www.global-issues-rtd.info/programmes/2130.html
Former Yugoslav Republic of Macedonia	National Strategy/Former Yugoslav Republic of Macedonia	Strategy on Sustainable Development of Forestry/ Стратегија за одржлив развој на шумарството во Република Македонија	01/01/2007 - 31/12/2026	Applied industrial research, Human resources development, Problem driven (basic) research	Business organisations, Consultancies and other private service providers (for-profit), Higher education institutions (education function), Higher education	The strategy aims at the forestry sector, but it also supports research done in context of forests and climate change.	Energy, Environment (including Climate Change), Food and Agriculture		Ministry of Agriculture, Forestry and Water Management www.mzsv.gov.mk	Contact Person: Mr. Vojo Gogovski, State Advisor on Forestry to the Minister of Agriculture, Forestry and Water Management at vojo.gogovski@mzsv.gov.mk ; http://www.mnfps-fao.org.mk	http://www.global-issues-rtd.info/programmes/84.html

Dissemination level: PU

Work Package Title

Nature of the Deliverable: Other

Monitoring and Analysis of S&T Cooperation

					institutions research units/centres, New technology based firms/ new knowledge intensive service firms, Other non- profit research organisations (not HEL), Scientists/resea rchers (as individuals), SMEs only, Technology and innovation centres (non- profit						
Former Yugoslav Republic of Macedonia	Natio nal Strate gy/ Forme r Yugos lav Repub lic of Mace donia	First national communicati on on climate change to the UNFCCC/ Прв национален извештај на Република Македонија кон Рамковната конвенција на ОН за климатски промени	01/04/20 03 - 31/12/20 08	N/A	Higher education institutions research units/centres, Scientists/resea rchers (as individuals)	N/A	Energy, Environ ment (includin g Climate Change), Food and Agricultu re	N/A	Ministry of Environment and Physical Planning UNFCCC Focal point http://www.unfccc.org.mk	National Contact Person is M.Sc Teodora Obradovic Grncarovska State counsellor, Ministry of Environment and Physical Planning UNFCCC Focal point Office E-Mail: T.Grncarovska@moepp.gov.mk	http://www.global-issues-rtd.info/programmes/88.html

Dissemination level: PU

Work Package Title

Monitoring and Analysis of S&T Cooperation

Nature of the Deliverable: Other

Former Yugoslav Republic of Macedonia	National Strategy/ Former Yugoslav Republic of Macedonia	SECOND national communication on climate change to the UNFCCC	3/12/2008-2015	Applied industrial research, Basic research, International research collaboration, Networking, Pre-competitive research	Higher education institutions research units/centres, Scientists/researchers (as individuals)				Ministry of Environment and Physical Planning UNFCCC Focal point http://www.unfccc.org.mk	National Contact Person is M.Sc Teodora Obradovic Grncarovska State counsellor, Ministry of Environment and Physical Planning UNFCCC Focal point Office E-Mail: T.Grncarovska@moepp.gov.mk	http://www.global-issues-rtd.info/programmes/1427.html
Kosovo (under UNSCR 1244)	/	/	/	/	/	/	/	/	/	Further Information: http://www.ks.gov.net/mmph/english/index_eng.htm	/
Montenegro	Strategy/Montenegro	National Strategy of Sustainable Development of Montenegro/ Nacionalna Strategije Održivog Razvoja Crne Gore	1/10/2007 – N/A	Basic research International research collaboration Knowledge transfer (between researchers) Networking Problem driven (basic) research	All companies Business organisations (Chambers of Commerce...) Higher education institutions (education function) Higher education institutions research units/centres Other non-profit research organisations (not HEI) Other public education institutions (secondary, etc.)	N/A	Energy, Environment (including Climate Change), Food and Agriculture	N/A	Administering agency: Office of Sustainable Development	kor@kor.gov.me http://www.kor.gov.me	http://www.global-issues-rtd.info/programmes/2124.html

Dissemination level: PU

Work Package Title

Nature of the Deliverable: Other

Monitoring and Analysis of S&T Cooperation

					Private institutions for education / lifelong learning Scientists/researchers (as individuals) Technology and innovation centres (non-profit)						
Serbia	National Strategy	National Strategy for Incorporation of the Republic of Serbia into Clean Development Mechanism - Waste Management, Agriculture and Forestry Sector	10.1.2010 - N/A	Networking Problem driven (basic) research	N/A	N/A	Energy, Environment (including Climate Change), Food and Agriculture	N/A	Administering agency: The Ministry of Environment and Spatial Planning of the Republic of Serbia - http://www.ekoplan.gov.rs/en/Climate-change-46-p1-list.htm	http://www.ekoplan.gov.rs/en/Climate-change-46-p1-list.htm	http://www.global-issues-rtd.info/programmes/2136.html
Serbia	Programme / Serbia	National Environmental Protection Programme/ Nacionalni program zaštite životne sredine	01/01/2005 - 31/12/2009	Networking	Governmental institutions (also Research Institutions), municipalities, public utilities, other public or private companies/industries, NGOs	N/A	Environment (including Climate Change)	N/A	Ministry of Environmental Protection and Spatial Planning, Republic of Serbia Ministry of Environment, Land and Sea of the Republic of Italy/ Ministry of Environmental Protection and Spatial Planning, Republic of Serbia	Contact: Ms. Danijela Bozanic - Head of. Climate Change Unit Email: danijela.bozanic@ekoserb.sr.gov.yu	http://www.global-issues-rtd.info/programmes/133.html

Dissemination level: PU

Work Package Title

Nature of the Deliverable: Other

Monitoring and Analysis of S&T Cooperation

South East European Climate Change Framework Action Plan for Adaption – SEE/CCFAP-A	Regional SEE Action Plan	Participating Countries: Albania, Bosnia and Herzegovina, Former Yugoslav Republic of Macedonia, Montenegro, Serbia Further information: http://www.global-issues-rtd.info/programmes/2138.html
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ANNEX IV – Climate Change Research Status quo and gap analysis as presented by Miroslav Kukobat of Regional Cooperation Council at the international conference “Teaching Climate Change and the UN System in Belgrade May 17 2010

For more details see:

<http://www.investsciencesee.info/ccandun/index.php/videosandpresentations>

We have witnessed an obvious increase in certain extreme events in recent years, which makes it clear that one of the current research needs is to respond to issues related to such extreme events, and to question whether climate change is related to increases in the frequency and intensity of these events. The focus during the next years of science efforts to address the challenges of climate change should be the following:

- Provide multidisciplinary impact assessments over the region and across sectors like water, agriculture, forestry, energy, infrastructure, biodiversity and ecosystems, tourism and health.
- Improve the quantification of the anthropogenic component of observed changes in climate and improving the estimates of natural influences and natural variability over the SEE region;
- Improve methods to quantify uncertainties of climate projections and mitigation scenarios.

To reach these goals, first we have to face some barriers.

The number of climate change researchers and analysts involved on a long-lasting basis on all climate change-related activities in SEE is small.

Within the climate science community, there is only some collaborative activity. These are mainly set up at only individual/personal initiatives and are therefore at a small scale involving a few researchers or groups. Collaborative activities among these groups are rarely catalyzed by institutional or programmatic structures. Therefore, science efforts to understand and characterize regional climate changes or future projections over SEE are sporadic and fragmented.

Also, lack of a dedicated financial support with access to sufficient funds, does not permit regular systematic investigations in a sustained manner. This also restricts interactions with international scientific community which is vital for exchange of ideas within and across disciplines or building of networks. Researchers cannot afford to regularly go to conferences, training courses and other meetings where they

can meet and interact with international scientists and experts on a regular basis, which can lead to, sustained capability development.

Interactions between the science and policy analysis community, are limited. The linkages between climate analysts and the government in SEE countries are less institutionalized than in EU countries. Policy-making bodies seek advice from scientists on a more immediate “need to-know” basis.

At present there is no collaborative program devoted to the science issues of climate change.

There is also an urgent need for building a critical mass of trained researchers who can engage in science issues of climate change that are of particular relevance for SEE region.

No doubt, we need a dedicated program.

Dealing with complex science issues of climate change requires skills in a number of research areas such as climate, sustainable development, natural resource management and evaluation, environmental impact analysis, environmental economics and institutional and societal adaptation. It is also important to combine such knowledge with the local and regional conditions to formulate effective response - methods fine-tuned to specific situations. Enhancing science strengths at regional and local levels is therefore of immediate importance for producing sound scientific assessments on which national response strategies could be based. This will also ensure SEE countries effective contribution into international assessments and policymaking process. Without such initiatives the scientific understanding or implementation of global adaptation and mitigation strategies will not be sustained.

It is therefore necessary to create a high-priority program to address the science issues of climate change at regional level. The program should establish strong linkages with leading international research groups and research centers involved in related areas, and should be supported by a well equipped center of excellence for inter-disciplinary research and training in the area of science of climate change. The Virtual Climate Change Center could serve as a mechanism for Program coordination as well as nucleus for SEE climate research networking in climate modeling activities on various sectors with priorities defined by CCFAP-A.