INFORMATION OFFICE OF THE STEERING PLATFORM
ON RESEARCH FOR THE WESTERN BALKAN COUNTRIES
see-science.eu
(ed.)

Needs/Offer Matrix and Analysis

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Written by:
Evelina Santa
Austrian Research Promotion Agency
Sensengasse 1
A – 1090 Wien


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Contents

1. INTRODUCTION

1.1. Background of the study

The present study was conducted in the frame of the project: "SEE-SCIENCE.EU Info Office for the Steering Platform on Research for Western Balkan Countries (WBC)", financed under the 6th European Framework Programme for Research, technological Development and Demonstration (RTD).
The project's objective is to offer documentary and information support to the Steering Platform for WBC, an initiative which was launched in June 2006 by the Austrian Presidency and the EU Commission, in personam by Commissioner Potocnik, to support, streamline, monitor, synchronize and optimize all efforts with respect to RTD in SEE.

The Western Balkan Countries (Albania, Bosnia and Herzegovina, Croatia, FYR of Macedonia, Montenegro and Serbia (with Kosovo)) had suffered long phases of political instability, armed conflicts, economic depression, disruption of states and massive emigration.
The consequences for the RTD system in WBC were devastating: demolished RTD infrastructure, massive brain drain and brain waste, isolated international position of the successor states of the Socialist Federal Republic of Yugoslavia and absent public financing.
Today, the RTD systems have not recovered fully yet, the problems still exist in all WBCs although to different extent. Still, all WBCs are fully committed to integration into the European Research Area and accession to the EU in general.
With the Lisbon Agenda, scientific and technological development was acknowledged as THE key to wealth and economic growth in the European Union. For the Western Balkan countries, this means a lot of effort to overcome the current gap and reach the status quo of the European Union Member States. All WBCs lag behind in their development to knowledge based economies.
Therefore, the Thessaloniki Summit in 2003 was an important step to bring the topic of WBC RTD on the European tableau. The West Balkan Action Plan, which was adopted there by all Ministers of the WBCs, the neighbouring countries and the European Commission, resulted in new initiatives, measures and incentives for the RTD system in WBCs.
The launch of the Steering Platform for WBC RTD by Commissioner Potocnik in 2006 marks the next step in EU's commitment to support WBC in their S&T development and integration efforts into ERA.

1.2. Objectives

The present study analyses the relation between existing and virulent needs of WBCs' RTD system and currently available funding programmes. In detail, it focuses on the correspondence between these two components: the needs and the offer
The present study:
A) Includes:

- Survey of needs of the RTD system and its key-players (researchers, policy makers)
- Survey of existing international and bilateral RTD funding programmes, which are open for WBC participation
- Matrix on the relationship between needs/offered programmes

B) Discusses following aspects:

- Does correspondence exist between the available funding programmes and the eminent needs of the WBC in RTD?
- To which extent do existing funding programmes respond to the need and demands of the RTD systems of WBC?
- Where are the major gaps? Which needs have not been addressed by the existing programmes yet? Which needs are not covered to full extent by funding programmes – where should the focus of improvement be put on?

C) Can be used as a handbook for:

- Universities, research institutes, industry, SMEs, single researchers in WBC who look for appropriate funding for their research activities
- WBC and EU Policy makers' to define new strategies and initiatives
- Intermediaries, like NCPs, governmental agencies, who want to offer tailored information to national clients on how and where to receive funding for RTD activities.

1.3. Methods

Previous studies and statistical surveys have identified the needs of the components of the RTD systems of WBCs (for more information on the sources used, please refer to the „acknowledgements" section). The present study does not double these findings; rather it puts them in relation to offers and objectives of international funding programmes. The use of a matrix was chosen in order to show both components (thus needs and programmes) of the study at one glance. The correspondence factors were introduced to quantify and qualify the extent of correspondence between the two components of the study.

1.4. Structure of the study

There are two ways to approach this study:

1) Focusing on a specific need: the major needs of the WBCs in RTD are discussed with reference to the causes and national peculiarities. A brief overview on funding programmes that tackle the particular need is offered at the end.
2) Focusing on the different funding programmes, which objectives, budget, funding conditions, fields of funding etc. are introduced and learning briefly of the needs which this programme covers.

Accordingly, chapter 2 (page 7) introduces the needs and chapter 3 (starting page 37), discusses the programmes.
Results and recommendations are discussed in the chapter „Conclusions.

1.5. Matrix

Correspondence factors:

*****	Main objectives of the funding programme adress the need to 100% Budget is dedicated to 100%
****	Main objectives of the funding programme adress the need to 75% Budget is dedicated to 75%
***	Objectives of the funding programme adress the need to 50% Budget is dedicated to 50%
**	Objectives of the funding programme adress the need to <=25% Budget is dedicated to <=25%
*	Objectives of the funding programme do not meet the specific need but spill-over effects are possible
(R)	Restricted WBC eligibility
(NB)	No dedicated budget available

Amount of budget:
Programme budget / average project budget

€€€€€	500.000 – 1M € and more
€€€€	300.000 – 500.000 €
€€€	100.000 – 300.000 €
€€	50.000 – 100.000 €
€	up to 50.000 €

Programmes/ Needs	FP7: Cooperation	FP7: Ideas	FP7: People	FP7: Capacities – Research Potential	FP7: Capacities – RTD Infrastructure	FP7: Capacities – Internat. Cooperation	Cooperatation and Innovation Programme CIP	IPA	COST	EUREKA	JRC	SEE-ERA.NET: joint calls	Innovation 2010	LIFE +	INTERREG III	NATO SPS	TEMPUS	Life Long Learning	UNESCO	Worldbank	Bilateral S&T Agree-ments	DE, CH, NO, AT National unilateral S&T Programmes	DE, CH, IT, FR, SI, NO, AT Official Development Assistance	AT - CIRCE National unilateral Innovation/Business Programmes
	€€€€€ / €€€€€	€€€€€ / €€€€	€€€€€ / €	€€€€€ / €€€€€	€€€€€ / €€€€€	€€€€€ / €€€€	€€€€€ / €€€€	€€€€€	€€€€€ / €€	(NB)	€€€€€	€€€€€ / €	€€€€€ / €	€€€€€ / €€€€€	€€€€€ / €€€€	€€€€€ / € - €€€	€€€€€ / €€€€	€€€€€		€€€€€ / €€€€€	€ - €€€€	€€€ / €		€€€€€ / €€€ -
Upgrading RTD Infrastructure				**	**			*						***				**		***	**	**			
Upgrading e-Infrastructure								*						**			***		*	**					
Enhancement of regional cooperation								**					*****			***	**	***	**	**	**		***		*****
Focus priority research areas	*****	*** (R)							***** (R)	***** (NB)	***** (NB)	***		**	***	***** (R)						*****	**		
Brain drain/Brain waste	*	*	**	*	*	*	*	*	*	*	*	*	*	*	*	** (R)	*	*	*	*	*	*	*	*	*
Mobility of researchers	**	**	*****	**	**	**	**		*****		***	****		***	**	***	***	****	***		*****	*****			****
Transition of universities from teaching to research institutions	*	*	*		*	*		*	*			*				*	***	**	**	**	*	*	*		
Support of basic research	*****	*****							***** (R, NB)			***			***	***** (R)						**			
Support of applied research							*****			***** (NB)			**		**										*****
Strengthen connection basic-applied research	*	*					*		*	*		*	*		*	*						*			*****
RTD capacity of industry and SMEs							*****			***** (NB)			**		**										****
EU standards/ harmonization	*	*	*	*	*	*	*	***** (R)	*	*	*	*	*	*	*	*	*	*							
Research carreer development		*****	*****																						
Institution building						***		**							*		**			**					

2. NEEDS

In previous studies and through surveys amongst researchers, policy makers and other key-players of the WBC RTD systems, a number of most prevalent needs has been identified, which affect all WBCs to different extent.
The scope of needs is a product of different historical starting conditions and armed-conflicts intensity, showing that the region of Western Balkans is not homogenous in its RTD systems. The successor states of the Socialist Federal Republic of Yugoslavia (SFRJ) can draw on a long lasting RTD culture and well-developed RTD systems, backed by a wide pool of human resources and international contacts. This has not been the case in Albania, which followed the Russian Communist model of separation and inclusion. The communist dictatory regime prevented internationalisation of RTD and exchange.
Still, armed conflicts have resulted in a vast destruction of RTD infrastructure (most heavily in BiH), discruption of scientific regional and international cooperation, massive brain drain and brain waste. In addition, diffucult political and economic situations resulted in low investement in basic and applied research, low RTD capacity of SMEs and industry, little innovation incentives, weakened position of universities as research institutes etc.
Thus, even if the starting conditions were different amongst the successor states of SFRJ and Albania, recent political and economic developments contributed to the similar situation for RTD in all WBCs nowadays.

2.1. Renewal and Upgrading of Research Infrastructure

Background:

The term "research infrastructure" sums up all devices, equipments, tools, facilities and establishments being at the disposal of the research community to conduct research activities on a competitive and advanced level.
Research Infrastructure in WBC is destroyed, outdated or inadequate.
Various factors account to this problem, ranging from devastative effects of war and post-war situation, lack of national funding due to low level of GDP and transitory economies to lack of focus of international donor funds on investment in RTD.
Even if there are regional differences and not all countries are affected by this need in the same extent, the inadequacy of existing research infrastructure remains one of the most significant barriers to the development of excellence in the region.
Therefore, optimization of existing capacities, upgrading and modernization of equipment and laboratories are the key requirements. Also, access to international research infrastructure remains an obstacle.

Country specification:

- Albania:

General upgrading and renewal of physical research infrastructure is important. In addition, the development of new research centres on local and regional levels as well as building new technology parks and innovation centres is of importance in order to catch up with international developments and in order to trigger the "spill over" effect of innovation clusters and start-up companies on the RTD system in general.

- Bosnia and Herzegovina:

Armed conflicts and difficult post-war situation has led to massive destruction of research infrastructure on university and industry level. The country is in the most difficult situation of almost starting from the scratch. Renewal and restructuring of research facilities and revitalisation of scientific institutions and research capacities is of utmost importance to the country.
The need for adequate research infrastructure, for technology parks and for new research centres is highest priority.

- Croatia:

Researchers in Croatia are generally satisfied with the adequateness of research infrastructure. The country hosts, beside universities in all major cities, some important research institutions on public and private level (Rugjer Boskovic Inst., PLIVA for pharmaceutical research, Nicola Tessla Inst. for telecommunications etc.).

- FYR of Macedonia:

Outdated and inadequate research equipment and facilities pose obstacles to high-level research performance. The country has some potential centres of excellence, like the Research Centre for Genetic Engineering and Biotechology of the Macedonian Academy of Science and Arts; further the Institute for

Earthquake Engineering and Engineering Seismology; etc. These centres require substantial investment to upgrade and renew infrastructure.

- Montenegro:

It is a small country with generally few research institutes. Even more, outdated and inadequate research infrastructure is the country's bottleneck in scientific progress and advanced research activities.

- Serbia:

Since the late 1980's the number of R&D organisation has decreased, existing RTD equipment is outdated and the need for building technology parks and regional RTD clusters is eminent.
The creation of high-tech clusters and spin-offs is more a matter of self-initiative than the result of national strategy and policies, as it is the case with the Electro technical faculty of the university of Novi Sad, where a professor's initiative has led to the creation of almost 20 spin offs in cooperation with his students.

Kosovo:

The university of Prishtina is the only research/teaching institution in the country. International support is focused on other key priorities; RTD investment remains low, resulting in old and outdated research infrastructure.

Correspondent funding programmes:

- FP7: Specific Programme: Capacities/Research Infrastructure: **

Under this funding line, the use and development of RTD infrastructure is optimized and international cooperation is envisaged in areas of mutual interest. Recently, initiatives in ESFRI (European Strategic Forum for Research Infrastructure) were launched to lobby for the allocation of funds for upgrading and renew RTD infrastructure in WBC.

- FP7: Specific Programme: Capacities/Research Potential: **

A specific call has been dedicated to the WBC with the possibility of funding research equipment and infrastructure in early 2007. At the time of writing the study, no information is available whether further calls are planned for WBC in this area.

- IPA: *

Recently, RTD has been taken up into the CARDS/IPA programme as a focus area of intervention and support. In detail, the upgrade and renewal of RTD infrastructure will be supported by IPA funds. Still it is not known to which extent IPA will offer financing.

- Innovation 2010 (i2i): ***

The European Investment Bank supports through the i2i programme the development of research centres of excellence in the countries of the Western Balkan.

- TEMPUS: **

The programme focuses on supporting tertiary education systems, therefore only small-scale funding is provided for purchase of computers and teaching material for universities.

- UNESCO: ***

Upgrading and renewal of RTD infrastructure is one of the core objectives of UNESCO's support activities for WBC.

- Worldbank: **

The Bank's strategy for SEE includes investment into RTD infrastructure.

- Bilateral S&T agreements: **

In general, mobility and exchange activities are funded under the umbrella of bilateral S&T agreements. Until now, only FYR of Macedonia additionally supports the purchase of small-scale RTD equipment for bilateral RTD activities.

2.2. Upgrade of Information- and e-Infrastructure and Internet Connections

Background:

The WBCs' research systems are in specific need of improving their electronic networks for RTD, their information infrastructure (access to scientific journals and e-libraries) and of continuing to build on the established connection to GEANT.
The access to international journals and databases and also the access to international information sources that are already available inside the SEE countries are of vital importance. In other terms, the international visibility of WBC researchers is enhanced when the possibility is given to publish in international journals and bring national scientific journals into international networks.
Often, university libraries lack funds to subscribe to international journals. Low level of inter-connectivity between libraries of different institutes, faculties; default catalogue systems etc. prevent thorough diffusion of information resulting that the availability of material and information is often not known amongst the researchers.

Country specification:

- Albania:

The information infrastructure is inadequate and does not meet the demands of the research community, the access to international journals is inappropriate and the information system of libraries is insufficiently developed, e-catalogues of the libraries' stocks mostly do not exist.
The SEEREN network connected Albania to GEANT, the multi-gigabit pan-European data communications network, reserved specifically for research and education use. Now, in the second phase of SEEREN, the connectivity of various Albanian research institutes is ensured further.

- Bosnia and Herzegovina:

The connection to GEANT is provided by the national research and education network BIHARNET. Unfortunately, it did not function at all.
Also here, information systems for libraries are insufficiently developed and access to electronic journals and science databases is limited. Thus upgrading of information infrastructure is a key priority.

- Croatia:

The access to electronic journals and scientific databases, the e-accessibility of libraries and the very well established connection to GEANT offer adequate e-infrastructure to the Croatian research community.

- FYR of Macedonia:

Unrestricted access to international journals and scientific databases is essential for the research community in the country, until now subscription fees are provisionally covered through international donor funds and projects. The connection to GEANT needs to be strengthened. Information systems in libraries remain inadequate.

- Montenegro:

Through insufficient national financial support, information infrastructure is insufficient, access to international scientific databases and the low levels of library documentation remain obstacles for the development of RTD in the country.

- Serbia:

Serbia's researchers can rely on well-developed information infrastructure; national funds are available for the subscription to international journals and scientific databases. Steady connections to the GEANT network are ensured.

Correspondent funding programmes:

- IPA: *

WBCs strongly expressed their need to introduce the support for RTD infrastructure into the IPA programme. It is unknown until now, to which extent IPA will offer financing and whether e-Infrastructure will be part of it.

- Innovation 2010 (i2i): **

The i2i programme supports various aspects of e-infrastructure and internet connectivity. Special focus is put on modernisation and extension of existing networks (e.g. ensuring GEANT connection) and on the establishment of physical and virtual infrastructure, where e.g. the need for e-access to libraries could be met.
Still, as loans and credits are the financing models, appropriate national/own financial resources are necessary.

- NATO SPS: ***

Besides other objectives, the programme offers grants for improvement of and better use of telecommunication facilities.

- LIFE LONG LEARNING: *

In transversal programmes, the creation and renewal of ICT contents, services, pedagogies for life long learning, also at universities, is supported. The specific need is not addressed directly. Still, support for upgrading of university networks is possible, thorough following of the programme and its open calls is necessary.

- UNESCO: **

UNESCO supports measures to enhance the electronic connectivity between universities in SEE.

2.3. Enhancement of Regional RTD Cooperation

Background:

International integration and regional cooperation is the key to stability and prosperity of the Western Balkan region.
Regional cooperation and coordination on all levels of the RTD system help the countries to unite their strengths and have a stronger international voice.
Crucial problems/needs:

- Full integration/eligibility of WBC in international RTD programmes, such as FP7, EUREKA, JRC, etc.
- Stronger focus of international programmes to RTD in WBC (IPA, Stability Pact, Worldbank etc.)
- Renewal of regional and international links between research communities
- Easier mobility of researchers

Country specification:

The problems described above reflect the situation in all WBC to different extent. Especially for Albania, regional integration poses a specific problem which dates back to the times during the isolatory dictatory communist regime. Albania still faces isolation and needs to overcome this issue more than other Western Balkan Countries.

Correspondent funding programmes:

Stronger regional cooperation is necessary between the different WBCs in order to respond to regionalization trends in the EU and in order to use the power of united efforts. Following programmes specifically support regional cooperation in the western Balkans:

- IPA: **

The Mulit-Beneficiary part of the IPA programme adresses problems and issues which afftect several WBCs. Solving them requires joining forces and results in mutual benefit for all partners.

- SEE-ERA.NET Pilot Joint Call: *****

The programme requires cooperation on regional level, cooperation between several WBCs is an evaluation criteria for submitted proposals.

- INTERREG: ***

Trans-regional cooperation is the cornerstone of the programme.

- NATO SPS: **

Also here, projects which adress issues important to several partner countries of the NATO SPS are fostered.

- TEMPUS: ***

The programme fosters regional and international cooperation amongst its partnering regions (such as WBCs) and the EU Member States.

- LIFE LONG LEARNING: **

Through thematic networks and multilateral projects, the programme aims to enforce regional cooperation amongst educational intstitutions.

- UNESCO: **

UNESCO supports thematic regional networks of reserach centres in order to enhance the WBCs' research potential across borders and strengthen the position of the whole region of western Balkans in RTD.

- WORLDBANK: **

Regional cooperation by means of srengthening partnerships with and between regional networks was identified as a cornerstone of the Worldbank's strategy of support of WBCs.

- NATIONAL UNILATERAL S&T PROGRAMMES: ***

Various national, unilateral S&T programmes support regional cooperation and require collaboration of at least two WBCs in projects.

- NATIONAL, UNILATERAL INNOVATION/BUSINESS PROGRAMMES: *****

CIR-CE (currently the only national, unilateral programme supporting the involvement of the business sector of WBCs) specifically adresses regional cooperation through its multi-partner participation rules for projects.

2.4. Identification and Concentration on Priority Research Areas

Background

The difficult political and economic situation many SEE countries are still facing going hand in hand with a low level of national investment in RTD requires a concentration of forces:
Specific and country-focused RTD priorities need to be set. The strategic allocation of RTD budget on some promising and important science and technology fields will facilitate further development and improve performance in these fields. The countries have recognised the driving force of prioritisation of research topics.
In general, following research priorities have been identified:

- Information and Communication Technologies, ICT
- Life Sciences and Biotechnology
- Environmental and Material research
- Renewable Energies and Sustainable Development
- Water resources
- Transport
- Humanities and Social Sciences
- Research in SMEs

Country specification:

- Albania:

Priority definition is intended to strengthen applied research and improve scientific results, protect national interests and improve international cooperation. It includes:

- ✓ Electric power industry, ICT industry and Food industry
- ✓ Agriculture and food
- ✓ Natural resources
- ✓ IST
- ✓ Biotechnology and biodiversity
- ✓ Human science and Albanology
- ✓ Public health

- Bosnia and Herzegovina:

Priorities are focused on the restructuring of the industrial RTD sector and on some specific fields in applied research, like:

- ✓ Electric power industry, ICT industry and Food industry
- ✓ Woodworking and wood pulp industry
- ✓ Mining and ferrous metallurgy
- ✓ Machine-building and metal working
- ✓ Chemical and petrochemical industry

Following RTD areas need to be addressed in addition:

- ✓ Environment
- ✓ Energy efficiency
- ✓ Agriculture and food processing

- ✓ Public health
- ✓ Industrial technologies for the reconstruction of the country

- Croatia:

As the only Western Balkan Country until now, Croatia is fully associated to EU's Framework Programme for RTD. Therefore, strategic importance is given to connect and synchronize Croatia's RTD needs to EU priorities, standards and regulations.
The thematic areas include:

- ✓ Biotechnology
- ✓ Biomedicine
- ✓ Environmental Technologies
- ✓ ICT
- ✓ Nanotechnology
- ✓ Agriculture

- FYR of Macedonia:

Being the second candidate country, after Croatia, for accession to the EU, the priorities are set in order to complement EU standards and in order to harmonize its research policy with the EU RTD policies:

- ✓ Sustainable development
- ✓ Water resources and management
- ✓ Energy
- ✓ New materials
- ✓ Environmental Protection
- ✓ ICT
- ✓ Health
- ✓ Biotechnology
- ✓ Production of high quality food
- ✓ Geological science and engineering

- Montenegro:

In order to allocate appropriate funds to priority topics, the financing system of research needs to be stabilized through sound economic policy measures. Nevertheless, Montenegro has identified these priorities:

- ✓ Improving quality of life and communication infrastructure
- ✓ ICT
- ✓ Environmental technologies and water management
- ✓ Materials research
- ✓ Research on agro-business and biotechnology

- Serbia:

Serbia is currently implementing and setting several measures to tackle main RTD needs, including priority setting in basic and applied research programmes as follows:
Priorities in the Basic Research Programme:

- ✓ Natural sciences (physics, chemistry, biology, mathematics), mechanics, geosciences and medicine
- ✓ Social Sciences (law, economics, etc)
- ✓ Humanities (Serbian language and literature, history etc.)

Priorities covered in the Technology Development Programme are:

- ✓ Information technology
- ✓ Electronics and electrical engineering
- ✓ Mechanical engineering
- ✓ Construction industry and civil engineering
- ✓ Biotechnology

Special sub-programmes address:

- ✓ Energy efficiency
- ✓ Biotechnology and Agro-industry

- Kosovo:

Kosovo has not defined any research priorities yet, focus is put on initial steps to build the legislative framework and increase RTD funds. In a latter stage, priority setting is envisaged.

Correspondent funding programmes:

Different international programmes focus on priority research areas, which coincide with WBCs' areas of focus:

- FP7: Specific Programme: Cooperation: *****
  Through SICA (Specific International Cooperation Actions), FP7 budget is dedicated to foster projects in thematic areas prioritized by WBC. Besides, participation of WBC is possible in all ten thematic areas. Still, as experience from FP6 has shown, participation of WBC partners is difficult due to following reasons:
  - ✓ FP7 is a highly competitive programme and participants show a high level of RTD performance – for WBC partners often a hurdle
  - ✓ Lack of international contacts
  - ✓ European partners lack trust in including WBC partners into consortia
  - ✓ Only Croatia can initiate FP7 projects on its own, as it is fully associated to FP7 – proactive involvement for other WBC depends on their association to FP7
- FP7: Specific Programme: Ideas: ***(R)
  Pioneer, basic research is funded with the possibility of WBC researchers to get involved into executive research teams. Still, the areas of research are completely open, scientific excellence is the sole criteria, which needs to necessarily meet the priority objectives of Western Balkan Countries. In addition, WBC researchers are eligible if their host institution is located in a EU MS.
- COST: *****(R)
  This programme supports the creation of international RTD projects in different basic research areas. Still, it is limited to fund only meetings and coordination activities (workshops, conferences etc) within the project, whereas RTD activities need to be financed by different means other than COST.
- EUREKA: *****(NB)
  The programme offers a platform for market-oriented, applied research activities. The funds come from national budgets of the EUREKA Member Countries (Croatia, Serbia).
- JRC: ***** (NB)

JRC actions concentrate on supporting WBC RTD organisations in policy implementation in all thematic areas prioritized by WBC. Also here, no RTD activity itself is supported, only know-how transfer, workshops, JRC experience for WBC researchers and institutional links.

- SEE ERANET Joint Calls: ***
  These calls address thematic areas specifically important to WBC RTD. Besides networking activities, multilateral RTD projects are funded.
- LIFE+: **
  In the priority area of environment, the programme supports WBC in implementing EU standards. RTD activities are not funded.
- INTERREG III: ***
  Cross-border and inter-regional RTD cooperation in thematic areas of mutual interest is funded.
- NATO SCIENCE FOR PEACE: *****(R)
  This programme supports research activities in areas defined by the partner countries (for WBC: only Croatia and FYR of Macedonia), which include Environmental security, Food security, Information technology and Human and Social security
- Bilateral Agreements: *****
  S&T agreements between countries focus on priority areas of both partners. In general, only mobility and exchange of research personnel is funded.
- National, unilateral S&T programmes: **
  The Austrian (ASO - Austrian Science Liaison Office), Norwegian and German RTD programmes for WBC fund cooperation in certain RTD areas of mutual interest.
  The Austrian programme supports RTD networking in areas of interest for all partner countries. Only small RTD projects are carried out (up to 12.000€), further common studies, workshops and conferences and scientific training measures.
  The German programme only funds preparatory actions (travel costs to meetings, conferences etc.) in areas of:
  - ✓ New technologies (correspondent to priorities of all WBC)
  - ✓ Life Sciences (correspondent to priorities of all WBC)
  - ✓ Environmental sustainability (correspondent to priorities of all WBC)

  Research activities are not funded.
  The Norwegian programme supports RTD collaboration between all kinds of Norwegian and WBC research institutions in areas of:
  - ✓ Environmental protection and management of natural resources (priority area of all WBCs)
  - ✓ Governance and democracy building (special priority area of: Albania, Serbia).

2.5. Measures against Brain Drain / Brain Waste

Background:

Years of armed conflicts in former Yugoslavia, disrupted economies, difficult transition phases in all succession states and uncertain future prospects have all contributed to the massive brain drain and also brain waste of researchers, which hit all WBC to major or even fatal extent.
Many researchers have left their countries to seek fortune in other professions (brain waste) or outside their mother countries (brain drain), leaving holes in their national RTD communities, which cannot be filled easily. Few of these (former) researchers intend to come back and links to the expatriate RTD community are weak with the result that neither knowledge backflow nor international contacts are strong enough.
In general, only strong intervention and effective measures can help to prevent further loss of human resources and capacities in WBC.

Country specification:

- Albania:

Over the last ten years, Albania has lost almost 40% of scientific manpower, the biggest part of who are younger than 40 years. All Albanian research institutes, universities etc. are in a critical situation and in desperate need for an increase in academic staff.

- Bosnia and Herzegovina:

During and after war, the country has suffered massive and extensive brain drain of RTD personnel, on average 70% have left the country to the US, Canada and the EU without the intention to return. As BiH had a strong industrial research base, this economical branch has been weakened massively, by physical destruction of industrial sites as well as massive loss of technical and research staff.
Brain drain has predominantly occurred in the group of graduates and young scientists. The current situation shows an imbalance with a large number of (biologically) old researchers, hardly any middle-aged scientific staff and young researchers still leaving the country.

- Croatia:

Throughout the 1990's, there was a notable decline in the scientific manpower, some left the country but more have changed professions. Still, the figures are not as alarming as in BiH and Albania.

- FYR of Macedonia:

The country also registered a decline in scientific personnel during the 1990's with the situation nowadays being more constant.

- Montenegro:

Due to the only recent independence of Montenegro, trends in brain drain and brain waste were measured for the former state union of Serbia and Montenegro. In general, the numbers of scientific personnel remained quite constant in the last ten years (after 1994). The country can make use of the traditionally strong research potential.

- Serbia:

Also here, the numbers have been constant with regards to RTD staff employed in universities, research institutes and industry since 1994.

Correspondent funding programmes:

Brain drain and brain waste are problems, which cannot be solved directly by e.g. preventing people to seek for a better future. Besides favourable living conditions in stable political and economic circumstances, targeted investment into the national RTD system, in research infrastructure in order to offer adequate conditions for research activities, in promoting research careers, in supporting young researchers, in opening to international cooperation and researchers' mobility, in strengthening the RTD capacities of industry and SME etc. is of utmost importance to prevent brain drain, attract expatriate researchers to come back to their mother countries and to gradually build the human resources in WBC.
The available international RTD programmes for WBC do not cover directly the need for measures against brain drain and brain waste in WBC. As it is a multifactor problem, international and national efforts need to be gathered to tackle the bunch of issues.
All funding programmes introduced here have positive effects to prevent brain drain by tackling certain aspects of the whole problem.

- FP7: PEOPLE:: **

The programme offers grants for scientists from third countries to return to their home country and continue their research work there.

2.6. Support to Mobility of WBC Researchers

Background:

In this context, mobility is referred to as:

- Trans-national cooperation in projects (travel, meetings, etc.)
- Short- and long-term stays for experience exchange, working and training purposes at research institutions in EU and WBC
- Trans–sectoral mobility of staff between academia and industry

International experience, exchange of working methods and networking with colleagues from different countries is a crucial asset in today's research careers and for research institutions (international reputation, cooperations, knowledge gain etc.).
Also here, the mixture of post-war situation, loss of human capital in RTD, strict visa regulations, years of international isolation, disrupted RTD systems etc. has prevented mobility in both directions (incoming and outgoing).
Further, the Visa problem is a big hurdle, long bureaucratic procedures and unsure positive replies leave desperate and disillusioned researchers in WBC behind. Positively, visa obligation was abandoned amongst most of the Western Balkan countries; Slovenia, Romania, Bulgaria and Greece have loosened their visa regimes. Still, almost all countries of the EU follow strict rules for citizens from WBC. First steps to issue "smart visa" for researchers and other professionals from WBC have been set by the EU.
Researchers and the RTD system as a whole in WBC are in strong need for mobility (in both directions: from and to WBC) in order to have the possibility of unrestricted international cooperation and experience.

Country specification:

Researchers' mobility is important to all countries in SEE.
Until today, only in the case of Croatia visa is not required to enter the EU.

Correspondent funding programmes:

Despite difficulties in obtaining visa for WBC, different programmes support the mobility of WBC researchers, mostly for short term stays to conduct research in countries of the EU or to meet for international project preparation activities:

- <u>All programmes, which cover travels to project meetings and other international cooperation activities:</u>
  FP7: Cooperation, Capacities programme (Research potential, international cooperation), COST, INTERREG III, Bilateral RTD programmes, Innovation 2010, UNESCO, National, unilateral S&T programmes, National, unilateral Innovation/Business programmes, etc.
- <u>Following programmes cover short- and long term research stays in EU RTD institutions:</u>
  FP7: People/International incoming fellowships, international outgoing Fellowships, industry/academia partnerships; COST, JRC, SEE-ERA.NET PJC, LIFE+, INTERREG III, NATO SPS, TEMPUS, Life Long Learning, etc.

Still, the need for long term stays in research institutions in the EU, which would substantially contribute to new experiences and knowledge gain of WBC researchers, is insufficiently met or insufficiently used respectively, e.g. the Marie Curie mobility scheme in FP6 was hardly deployed by WBC researchers to gain research experience abroad for a longer period.

2.7. Support of Transiation of Universities from Teaching to Research Institutions

Background:

In many cases, universities in WBC are teaching institutions with only a low level of RTD activities, resulting in questionable quality of university diploma, minor international competitiveness of graduates and low attractiveness of research career in general.
This problem can only be seen in a wider context, since it is the result of other developments and factors like e.g. devastation of RTD infrastructure, international isolation, low level of public funding, gap to international developments (Bologna process), traditional role of universities etc.
Still, also the WBC are faced with the requirements set by the Bologna process. In order to accomplish these objectives, universities in WBC need to undergo the transition process. Here, the renewal of university curricula and the adoption of international standards is a core objective.

Country specification:

The more a country has to struggle with the effects of the factors mentioned above, the more the problem of universities, being only teaching facilities, is eminent.
There is no data available, describing this problem in different WBCs.

Correspondent funding programmes:

This need requires support from different angles, since various factors account to this demand like e.g. investment in RTD infrastructure, updating of university curricula, training of university staff, international cooperation etc. In detail, following programmes support the modernization of curricula and universities:

- TEMPUS: ***

The programme aims at improving university curricula, university management and higher education modernization.

- Life Long Learning: **

The programme supports the adoption of Bologna objectives in higher education systems. Also, policy cooperation for know-how transfer in accredition services is a focus. The update of higher education management is a core objective.

- UNESCO: **

The UNESCO supports measures to implement the Bologna objectives in higher education systems of WBCs.

- Worldbank: **

In its strategy for S&T support in SEE, the Worldbank also focuses on improving the quality and relevance of tertiary education (university graduation and research degrees).

2.8. Specific Support to Basic Research

Background:

Basic research had a long-standing tradition in former Yugoslavia/SFRJ (Socialisticka Federativna Republika Jugoslavija). Universities were founded in the 19th century already, state support guaranteed appropriate investment in RTD leading to a strong basic research system and prominent industrial research. In addition, the specific political situation as a non-block state in the times of the Cold War supported international cooperation and encouraged RTD links throughout the world. In contrast, Albania's strict dictatory regime and inclination towards the Soviet system has led to a very close RTD system with a short tradition of universities in the country.
Nowadays, low level of public funding, destroyed or inadequate research infrastructure, massive brain drain/brain waste, "degradation" of universities to teaching institutes and effects of isolation during the 1990s dominate the situation of basic research in all WBC. Despite the heritage of relatively high-quality research institutions in the succession states of SFRJ, the shrinking of national RTD systems in WBCs and thus of basic research remains an obstacle at different extent in all WBC.
Basic research paves the ground for future technologies and developments, whereas applied research drives economic growth at short- and medium term. As WBCs need to strengthen their economies and boost social welfare, applied research is prioritized in the policy orientation of WBC.
Special attention may be given to basic research in social sciences and humanities, which help to understand societal changes, developments in a globalized world, effects on national economies and societies, etc. thus provide the theoretical backbone of a knowledge-based society.

Country specification:

- Albania:

Recently, national policies have prioritized applied research. Nevertheless, support to basic research is important.

- Bosnia and Herzegovina:

The specific situation of the BiH RTD system, being highly fragmented and decentralized on cantonal and entity level and lacking of a coherent RTD policy and investment on the state level, makes support for basic research even more pressing. In the light of these problems, BiH needs to focus its efforts and establish institutes for fundamental and applied research in areas of particular interest. Also, basic research needs to be developed as a ground for training and future technological development.

- Croatia:

A well developed university system and high-level public research institutes (e.g. Rudjer Boskovic Institute) account to the good situation of basic research in the country.

- FYR of Macedonia:

Governmental initiatives have started to support basic research through encouraging and financing national R&D projects. Still, this support needs to be strengthened, as it is vital for the development of the country.

- Montenegro:

The need for support of basic research is profound, governmental initiatives have started their support in specific scientific areas.

- Serbia:

The challenge for Serbia lies in strengthening the connection between the well-developed basic research system and applied research initiatives, technology transfer systems etc.
Governmental programmes focus on support of specific thematic scientific areas.

Correspondent funding programmes:

- FP7: Specific Programme: Cooperation: *****
  Through SICA (Specific International Cooperation Actions), FP7 budget is dedicated to foster projects in thematic areas prioritized by WBC. Besides, participation of WBC is possible in all ten thematic areas. Still, as experience from FP6 has shown, participation of WBC partners is difficult due to following reasons:
  - ✓ FP7 is a highly competitive programme and participants show a high level of RTD performance – for WBC partners often a hurdle
  - ✓ Lack of international contacts
  - ✓ European partners lack trust in including WBC partners into consortia
  - ✓ Only Croatia can initiate FP7 projects on its own, as it is fully associated to FP7 – proactive involvement for other WBC depends on their association to FP7
- FP7: Specific Programme: Ideas: *****
  Pioneer, basic research is funded with the possibility of WBC researchers to get involved into executive research teams. Still, the areas of research are completely open, scientific excellence is the sole criteria, which needs to necessarily meet the priority objectives of Western Balkan Countries. In addition, WBC researchers are only eligible if their host institution is located in a EU MS.
- COST: *****(R)
  This programme supports the creation of international RTD projects in different basic research areas. Still, it is limited to fund only meetings and coordination activities (workshops, conferences etc.) within the project, whereas RTD activities need to be financed by different means other than COST.
- SEE-ERA.NET Joint Calls: ***
  In certain thematic areas specifically important to WBC RTD, multilateral projects in basic research are funded.
- INTERREG III: ***
  Cross-border and inter-regional RTD cooperation in thematic areas of mutual interest is funded.

- NATO SCIENCE FOR PEACE: *****(R)
  Multi-annual, basic research projects in areas defined by partner countries receive funding.
- National, unilateral S&T programmes: **
  The Norwegian programme supports basic RTD collaboration between all kinds of Norwegian and WBC research institutions.

2.9. Specific Support of Applied Research

Background:

Applied research forms an integral part of the innovation system, it combines scientific, entrepreneurial and engineering knowledge. Applied research accounts for new developments, new technologies, production of high-end goods etc. Investment in applied research means long-term investment into a knowledge-based economy, cornerstone of a wealthy and prosperous society.
Unfortunately, investment from the business sector into RTD remains very low: BERD figures (business expenditure on R&D as a share of the gross domestic product-GDP) lag considerably behind the EU-15 heavily impeding the dynamics and competitiveness of WBCs economies. In addition, the innovation spirit has not yet taken hold of entrepreneurs in WBC. On the contrary, the main characteristic of the business sector in many WBC remains one of a service-oriented but not knowledge- and innovation intensive part of the economic system. National initiatives to boost BERD lack as much as does the enterpreneural innovative spirit.

Country specification:

- Albania:

The need to focus on applied research is reflected in the country's strategy to prioritize six scientific areas, essential to meet the demands of Albania's society and economic system (like e.g. ICT, biotechnology, agricultural technologies, etc.)

- Bosnia and Herzegovina:

The need for a general increase of the level of applied expertise in sectors such as electric power industry, ICT, wood-processing industry etc. is essential for the economic growth of the country.

- Croatia:

Applied research needs to be integrated in a wider context of innovation and technological development. National policies need to combine public science with production and entrepreneurship.

- FYR of Macedonia:

Specialisation on e.g. sustainable development, production technologies of high-quality food, biotechnology etc. is essential for the country and requires support of applied research in these areas.

- Montenegro:

Support to applied research is essential with focus on areas like biotechnology, marine biology, tourism, energy efficiency etc.

- Serbia:

In Serbia, various governmental programmes support commercialisation of research results, applied research projects, technology and innovation initiatives etc. Nevertheless, a clear long-term strategy for RTD is missing (as in other WBCs as well) with long term support for applied research being unsure.

Correspondent funding programmes:

- FP7: CIP: *****
  Applied, market-oriented RTD projects in Innovation, Energy and ICT are funded. As it is open to WBC for the first time, no predictions on its applicability and acceptance in WBC can be made at this stage.
- EUREKA: ***** (NB)
  The programme offers the international platform and contacts for conducting RTD projects in innovation and market-orientation. National funds are necessary for RTD activities.
- Innovation 2010: **
  Special attention is given on strengthening SMEs' research capacity and private sector participation in public research.
- INTERREG III: **
  Besides other objectives, the programme supports cross-border and inter-regional cooperation in technology development and enterprises.
- CIRCE: *****
  Networking and innovation projects with focus on SME involvement are fostered

2.10. Strengthen Connection between Basic and Applied Research

Background:

The innovation capacity of countries' S&T system depends to a great extent on the successful link between basic and applied research, thus in the potential of basic research to create results and new findings and in the ability of the innovation system to take up these new developments and commercialize them appropriately.
The success of this model relies on strong components as well as strong interconnection.
For WBC, the need to realize the necessity of interconnection and in a further step to strengthen this link is crucially important. It goes hand in hand with the strengthening of both components; with the need to

- Define and channel resources to S&T priorities
- Upgrade technological capabilities of industry and SME
- Introduce technology transfer systems.

Country specification:

The S&T systems of all WBC reflect the need to strengthen the connection between basic and applied research, but to various extent with Croatia's RTD and innovation system being more advanced in responding to the need than other WBC.

Correspondent funding programmes:

Please refer to the programmes supporting either basic or applied research. Spill-over effects can strengthen the connection between these two components. Besides, this need requires strong intervention through policy strategies and national RTD plans.

- CIRCE: *****
  Consortia usually include intermediaries and companies linking research results to industry. The project partners usually come from universities as well as from the business sector (preferably from SMEs) Networking and innovation projects with focus on SME involvement are fostered

2.11. Enhancement of RTD Capacity of Industry and SMEs

Background:

In many SEE, the level of innovative capacity of the business sector is rather low. Large public enterprises are shut down and SMEs' capacity for innovation, RTD output and commercialization of science is very limited. The reasons are manifold, general economic weakness; insufficient public spending for the innovation system, lack of appropriate state initiatives (tax incentives, technology parks etc.) remain the major problems.
In addition, governments in SEE still lack awareness of the importance of innovation for increased economic competitiveness and growth. Technology transfer systems have only recently been implemented in some WBC.
In general, technological capacity of the business sector is not the top priority in most of the national RTD plans of WBC and conditions for private investment in RTD remain poor.

Country specification:

- Albania:

The Technology Information Promotion Service office has been created to facilitate match-making between demand and supply for technology. Still, a national strategy to improve the innovation capacity of industry and SME in Albania is lacking.

- Bosnia and Herzegovina:

Most of the country's large companies with respectable RTD innovation capacity have not been reconstructed yet due to lack of national and foreign investment. Also, SMEs' RTD output remains very low contributing to the weak technological performance of the country. Governmental intervention has neither been systematic (no state-level strategy due to fragmented structure of RTD in BiH) nor profound.

- Croatia:

The HITRA programme is the first innovation policy programme aimed at fostering the commercialization of science and at improving the overall innovation performance of the country. Still, stronger political awareness of the key role of innovation and commercialization of science for a knowledge based economy is important.

- FYR of Macedonia:

Four technology parks exist in the country and some donor supported technology initiatives have been started.

- Montenegro:

Innovation and technology transfer initiatives are underdeveloped, systematic strategies and investment is needed.

- Serbia:

National programmes try to tackle the issue of low innovation capacity of the business sector by various initiatives focused on innovative SMEs, the development of S&T parks and the interconnection and interaction of the various components of the RTD system (knowledge generation – application – entrepreneurship).

Kosovo/UNMIK:
Technology transfer and innovation capacity of the business sector have not been prioritised in policy strategies.

Correspondent funding programmes:

- FP7: CIP: *****

Support for RTD Innovation and market application is the main objectives of the CIP programme. Special attention is dedicated to the involvement of SMEs, which are encouraged to improve their innovative capacities through low-risk access to financial resources.
The programme is open to WBC, accession may be difficult and participation low due to the low number and low level of RTD capacity of SMEs in WBC.

- EUREKA: ***** (NB)

EUREKA is a platform for market-oriented research, with strong involvement of SMEs.
AS funding comes from national sources, participation of eligible WBC remains unstable and insecure.

- Innovation 2010: **

SMEs receive support through senior and/or structured loans for RTD activities and patent development. In general, the programme covers various objectives and needs.

- INTERREG III: **

The programme targets technology development and support for enterprises, but to very limited extent.

- CIRCE: ****

Networking and innovation projects are supported, with special focus to enhance SMEs' RTD capacity and performance. Funds are divided amongst the two major objectives (networking, innovation), with more financial resources dedicated to innovation projects.

2.12. Implementation of EU Standards and Harmonization

Background:

The integration into the European Union is the long-term goal of all SEE countries. The level of integration varies from country to country. Still, the road to the EU requires a step-by-step implementation of EU standards and adoption of the acquis communitaire in all fields, so as in RTD. Thus, it is of utmost importance for all WBC to adapt their national RTD systems to EU rules, working methods and policies.

Country specification:

The EU has different tools (like IPA, Stability Pact) to assist countries in their association and integration process. The level of integration/Status of accession to EU defines which programmes are applied to the countries:

Candidate Countries: Croatia, FYR of Macedonia

The countries benefit from all five components of the IPA programme. Both are signatories of the Stabilisation and Association Agreement (SAA) pre-requisite for the status of a candidate country.

Potential Candidate Countries:

Albania, BiH, Montenegro and Serbia are eligible for parts of the IPA programme. Albania has signed the SAA, BiH and Montenegro is in the preparation for final signature. At the time of writing (Jan 2007) negotiations with Serbia on the agreement are interrupted due to political reasons.
As Kosovo is UN Protectorate area, EU programmes for accession will be open as soon as the final status is decided.

Correspondent funding programmes:

All EU programmes foster adaptation to EU standards (e.g. FP7, LIFE+, TEMPUS, Life Long Learning Programme, etc.) and working methods. The more WBCs are integrated and the more WBC researchers participate in international actions, the more common is the adaptation to and implementation of EU standards (e.g. in project management, evaluation procedures etc.) in WBCs.
IPA specifically assists Croatia and FYR of Macedonia in adapting the acquis communitaire.

2.13. Support for Research Career Development

Background:

Massive brain drain, low level of public financing, low international visibility and integration, low income of researchers, inappropriate state of RTD infrastructure, difficult international mobility, etc. the list of reasons, why a research career in SEE does not seem appealing is long and reflects the major problems researchers and especially young scientists have to face when following a research career. Young researchers lack sufficient opportunities for training and mobility, talented people need an attractive RTD environment in order to have the possibility to develop a flexible and performance related career.
Alongside with a diminishing appreciation of the research profession and the general low awareness of S&T as a motor for economy, many SEE countries face the problem of a lack of human resources to fill the void and respond to demands for a competitive research system.

RTD systems in WBC lack of following components important for an attractive research career and more young researchers:

- Projects for training of junior researchers and system of their employment
- Initiatives for re-training of people with interrupted research-careers to encourage them to follow up and learn new techniques
- Cooperation between higher education sector and business sector as to ensure employment possibilities after studies
- Training on participation possibilities in EU projects
- International cooperation and mobility

Country specification:

All WBCs are affected by the decreasing number of researchers and young people who opt for the carreer of a researcher.

Correspondent funding programmes:

The problem can be approached from different aspects, which makes it difficult to answer to this need with a single programme. All programmes, which improve the RTD situation in WBCs in general can have long-term positive effects and can result in increased numbers of researchers in WBCs.
Concerning the promotion of young researchers, no national RTD programmes exist in WBC for the promotion of their careers.

- FP7: People: *****

Special initiatives for early stage researchers (max. 4 years of research experience after graduation) in international training networks are offered. Also, career development of researchers is a major objective of the programme. As most of WBCs are not associated to FP7, participation is difficult.

- FP7: Ideas: *****

In ERC Starting Grants, young researchers have the possibility to set up their own research team. WBC researchers can become part of such teams if they are engaged at a university or research institution in a MS or ACC.

2.14. Support to Institution Building

Background:

The RTD systems of the WBCs need to undergo a process of institutional transformation and restructuring in order to be able to respond to national demands and international RTD developments. The main problems are:

- Low level of awareness on S&T as the motor for economic growth in the society
- Fragmented national strategies for RTD lacking long term perspectives
- Lack of coherent strategies to foster involvement of the business sector in RTD
- Inadequate evaluation systems to measure S&T policies, programmes and institutions in WBC
- Lack of regular/appropriate statistical measures of scientific and technological output

A positive development can be seen in the presence of National Contact points for various EU programmes (FP7, JRC, TEMPUS, etc.) in the countries. Such a system is of crucial importance for the integration into various EU programmes and success of WBC researchers in these programmes.

Country specification:

- Albania:

The country faces all problems, which have been mentioned above to serious extent, In addition, the specific lack of data and statistics on S&T indicators alongside with the inexistence of a National Patent Office make it difficult to measure results, effects and developments in the country's RTD performance.

- Bosnia and Herzegovina:

No National Patent Office exists on the state level, also statistical S&T data is hard to obtain. The fragmented state-structure makes it very difficult to create coherent national RTD strategies and evaluation systems.

- Croatia:

Despite the harmonization with international standards in evaluation procedures, the practical application is lagging behind and remains a matter of "good will".

- FYR of Macedonia:

Although coping with the problems described above, progress has been made as the country has improved its national evaluation system through new regulations, making the evaluation procedure more open and scientifically objective.

- Montenegro:

The country especially lacks the presence of a favourable national strategy for RTD with developed national priorities.

- Serbia:

The country faces all problems mentioned above.

Correspondent funding programmes:

- FP7: Specific Programme: Capacities/International Cooperation: ***

The actions foreseen under the INCO programme are mainly targeted towards policy makers in WBC to support the integration of national RTD systems into ERA, which also includes the need for adaptation of institutions and institution building (e.g.: establishing NCP systems in WBC).

- IPA: **

Although Institution Building is one of the five components of IPA applicable to all WBC, RTD is not addressed. Only in the Multi-Beneficiary Programme, institution-building measures (mapping of RTD facilities, integration into ERA) are mentioned.

- INTERREG III: *

The programme supports the exchange of experiences; good practices also cooperation initiatives in technology development. Activities like inter-regional mapping of excellence, synchronization of evaluation procedures etc. can also form part of INTERREG projects.

- TEMPUS: **

The programme supports the development of administrative and institutional structures of universities through training of staff.

Mostly, specific aspects of institution building are addressed by international RTD programmes. Measures to raise the awareness of S&T in the WBCs' societies (through e.g. roundtables, discussions, promotion campaigns etc.); support to the implementation of adequate evaluation systems and systematisation of statistical procedures fails to be addressed by international programmes.
The combination of international support to national developments and efforts can be effective in tackling all aspects of institution building.

3. INTERNATIONAL FUNDING PROGRAMMES FOR WBC

The programmes introduced here summarize all international acitivities, under which funding is available for RTD of WBCs. Some programmes are specifically designed for the WBCs, (IPA, Bilateral S&T agreements, national/unilateral RTD programmes, development programmes) in other programmes; WBCs can participate and/or have Member State status (FP7, COST, EUREKA, TEMPUS, etc.).
As the programmes are all international, cooperation on this level is enhanced and helps the WBCs to step out of their isolation and grow into the European and worldwide RTD family.

3.1. 7th European Framework Programme for RTD – FP7

Introduction:
The 7th EU Framework Programme is dedicated to achieve the Lisbon agenda of making Europe the world-leading knowledge based society with research and innovation being the motors of economic growth and welfare. The FP7 aims to intensify the creation of the European Research Area, the key instrument to counteract fragmentation and duplication and to use Europe-wide synergies in RTD. The four specific programmes in FP7 all adress key priorities of European RTD:

- **Cooperation:** in ten thematic prorities, international projects are carried out.
- **People:** the human potential of Europe's RTD system are fostered and supported
- **Ideas:** new, emerging areas in science, with the possibility to push new developments and scientific break-throughs are funded
- **Capacities:** the programme aims to unlock the research capacity of Europe's outermost regions, further to support SME RTD activities, to foster new RTD infrastructure and revitalize existing infrastructure and also to support the cooperation with third countries (international cooperation) in areas of mutual benefit and interest.

Duration:
2007 – 2013

3.2. FP7 Specific Programme: COOPERATION

Objectives:

The COOPERATION programme aims to foster transnational research cooperation between researchers, universities, research institutes, industry and SMEs in the European Union, Candidate Countries, Associated Countries and International Cooperation Partner Countries (ICPC). The programme supports projects in ten thematic priorities (see „Fields/Areas of funding“)

Elligibility of WBC:

The participation of WBC in the COOPERATION programme is possible in all thematic areas and further, dedicated calls for WBC participation (= **S**pecific **I**nternational **C**ooperation **A**ctions/**SICA**) are opened in topics of mutual benefit and global interest.

Conditions for funding:

- Participation in ten thematic priorities, without dedicated WBC calls: the rules for participation foresee a minimum of 3 partners from different EU MS, once this rule is fulfilled, WBC partners can be part of the consortium as well.
- In **SICAs**, the general rules for participation foresee two partners from EU MS and at least one partner from WBC.

Project types vary from:

- Networks of Excellence: support is given to implement a Joint Programme of Activities by a number of research organisations integrating their activities in a given field.
- Collaborative projects (from large- to small-scale research projects): this project types may vary in size according to topics and research focus but their main aim is to develop new knowledge, new technologies, products, demonstration activities or common resource for research.
- Coordination/Support actions: support for activities aimed at coordinating and supporting reserach activities and policies (networking, exchanges, studies, conferences, trans-national access to research infrastructure, etc.) is offered in this project type.

Fields/Areas of funding:

Ten thematic priorities are foreseen for funding:

- Health
- Food, Agriculture and Biotechnology
- Information and Communication Technologies,
- Nano-sciences, Nano-technologies, Materials and New Production technologies,
- Energy

- Environment (incl. Climate Change)
- Transport (incl. Aeronautics)
- Socio-Economic Sciences and Humanities
- Space
- Security

Budget:

The budget for the COOPERATION programme is 32.413 M €. It is divided amongst the ten thematic priorities and budget for the non-nuclear activities of the Joint Research Centre (JRC).

More information:

http://cordis.europa.eu/fp7/cooperation/home_en.html

Corresponding to following needs:

- Enhancement of Regional Cooperation
- Definition of priority research areas
- Specific support to basic research
- Specific support to applied research

3.3. FP7 Specific Programme: IDEAS

Objectives:

The IDEAS programme is set to foster high level frontier research by supporting research teams of highest excellence conducting research with the potential to scientific breakthroughs and to opening new dimensions in science.
The IDEAS programme is implemented by the European Research Council (ERC), which consists of the Scientific Council (SC) and a Dedicated Implementation Structure (DIS). The SC sets the research topics for the workprogramme; it operates independently and consists of a group of high-level researchers.
The DIS is the operational structure and implements the calls according to the workprogamme set by the SC.

Elligibility of WBC:

Researchers from the WBC can be invited by a principal investigator to participate in the research team of an ERC activity or can be principal investigators themselves. The main pre-condition is that the WBC researcher is engaged at a research organisation located in the EU, AC or ACC.

Conditions for funding:

The ERC activities are implemented in the first two years of FP7 via following mechanisms:

- ERC Starting Grants: young researchers are supported to establish their own research team, which is conducting research on the forefront of science. The „principal investigator“ has absolute autonomy in nominating research colleagues to work in the team, grants are given on the basis of the excellence criterium (team and project).
- ERC Advanced Grants: this grant schemces is targeted towards researchers in all stages of their career path. The content and focus of this scheme is still to be developed at the time of writing of this report (Jan 2007).

Fields / Areas of funding:

In principal, no thematic restrictions consist. The SC of the ERC develops, based on constant information exchange and thorough contact with the research communities in the EU, the workprogramme and topics of the calls.

Budget:

The IDEAS programme has a budget of 7.510 M €

More information:

http://cordis.europa.eu/fp7/ideas/home_en.html

Corresponding to following needs:

- Enhancement of regional/international Cooperation
- Definition of priority research areas
- Specific support of basic research
- Support of Research Career Development

3.4. FP7 Specific Programme: PEOPLE

Objectives:

The PEOPLE programme aims to strengthen the quantitative and qualitative human potential in RTD in the European Union. The programme is structured around following pillars:

- Initial training
- Life long training and career development
- Industry dimension/Industry academia partnerships
- International dimension

Elligibility of WBC:

As the programme aims to foster the human potential in RTD, support is given to single researchers from WBC in certain areas to enhance their international mobility (into the EU) and thus contribute with their expertise to knowledge-gain in the EU.

Conditions for funding:

Funding for WBC partners in the PEOPLE programme can be achieved through:

- Marie Curie networks for early stage researchers: funding for WBC institutions to participate in the Marie Curie network is given if the objectives of the network can be reached only with the participation of the WBC partner;
- Industy dimension: single WBC researchers can be hosted by a European university of industry partner which takes part in a Marie Curie Industy/Academia partnership scheme.
- Incoming international fellowship: Researchers from the the Western Balkan can apply for a research stay in a host institution in the EU,with a scope to knowledge enhancement and collaboration enrichment
- Outgoing international fellowships: EU researchers can receive funding for a research stay in a WBC research organisation with mutual profit of expertise and knowledge. The return to the EU is obligatory.

Fields/Areas of funding:

The PEOPLE programme applies a bottom-up approach, participation is possible in all fields of research.

Budget:

The budget for the PEOPLE programme amounts to 4.750M€

More information:

http://cordis.europa.eu/fp7/people.htm

Corresponding to following needs:

- Enhancement of regional cooperation
- Measures against brain drain/brain waste
- Support of mobility of researchers
- Support for research career development
- Strengthen connection between basic and applied research

3.5. FP7 Specific Programme: CAPACITIES

Objectives:

The aim of the CAPACITIES programme is to optimize the use of research infrastructures, to strengthen the innovative capacity and ability of SMEs, to support the development of reional research-driven clusters, to unlock the research potential of the EU's convergence and outermost regions, further to bring closer together science and society in the EU and to support measures of international cooperation.

Elligibility of WBC:

The WBC is part of the International Cooperation Partner Countries (ICPC). WBC research institutions can fully participate in the INCO funding line of the CAPACITIES programme; further, dedicated budget is envisaged for participation of ICPC (thus also WBC) in the programme line „Research Infrastructure" and „Research Potential".

Conditions for funding:

- Research Infrastructure: the creation of new infrastructure of pan-European interest needed by the European scientific community to remain at the forefront of the advancement of research is funded; also financing is given to the use and development of existing research infrastructure. The activities are undertaken in close coordination with the COOPERATION programme and attention is given to the international dimension.
- Research Potential: this programme line focuses on the financial support to realise the full research potential of the enlarged Union by unlocking and developing existing or emerging excellence in the EU's convergence regions and outermost regions.
  Further activities: staff exchange, between selected organisations, development of research equipment; organisation of workshops/conferences for know-how transfer; evaluation of RTD quality and infrastructure of facilities in outermost regions by international experts.
  Participation of WBC countries can be supported in dedicated calls.
- Activities of international Cooperation (INCO programme): in order to play a leading role, the EU needs a strong and coherent international science and technology policy, which can be achieved through strategic partnerships, facilitated contacts with partners in third countries with the aim to provide better access to research carried out elsewhere in the world and through addressing problems that third countries face or that have a global character on the basis of mutual interest and benefit.

Project types:

Funding opportunities under the INCO programme are given in the frame of *Specific Support and Coordination Actions*, helping to identify regional priorities and S&T cooperation policies in ICPCs, further to enhance and develop S&T cooperation partnerships including structural activities and to

support the coordination of national policies and activities on international S&T cooperation (ERANET, INCONET)

Fields / Areas of funding:

The INCO programme for WBC participation is focused on thematic areas of health and environment.
The topics in the „Research infrastructure“ and „Research Potential“ funding line are thematically open.

Budget:

The CAPACITIES programme's budget amounts to 4.097 M €. The INCO programme has a budget of 315 M €.

More information:

http://cordis.europa.eu/fp7/capacities/home_en.html

Corresponding to following needs:

- Upgrading of RTD infrastructure
- Enhancement of regional Cooperation
- Definition of priority research areas
- Implementation of EU standards/Harmonization
- Institution building

3.6. COMPETITIVENESS AND INNOVATION FRAMEWORK PROGRAMME – CIP

Introduction:

The CIP programme groups all existing Community programmes in the field of innovation and competitiveness, like eTen, eContent, IRC, COOPENER, etc. under one roof.

Duration:

The CIP Programme is implemented for 2007-2013.

Objectives:

- Encourage competitiveness of the business sector, especially of SMEs
- Push innovations to market application
- Accelerate developments of the information society
- Improve the efficient use of energy and renewable energy sources

CIP is structured around three main blocks of activities:

- Entrepreneurship and Innovation: aiming to foster competitiveness and entrepreneurship of industry and SMEs
- Information and Communication technology Policy Support: Actions developing the single European information space and strengthening the internal market for information products and services are supported.
- Intelligent Energy Europe: objectives are to facilitate the development and implementation of the energy regulatory, to increase the level of investment in new and best performing technologies and to increase the uptake and demand for energy efficiency, renewable energy sources and energy diversification.

Eligibility of WBC:

The CIP programme is open to participation from all WBCs.

Conditions for funding:

Financial means include venture capital investment, financial risk-sharing schemes, loans, credits etc.

Fields / Areas of funding:

The focus is set on applicability, market-orientation, raise of competitiveness and innovation potential in the three domains of activities.

Budget:

The total budget amounts to €4.21 b €:
Entrepreneurship and Innovation: € 2631 M €
Information and Communication technology Policy Support: € 801.6 M €
Intelligent Energy Europe: € 780 M €

More information:

http://europa.eu.int/enterprise/enterprise_policy/cip/index_en.htm
http://www.cipprogram.com

Corresponding to following needs:

- Enhancement of regional cooperation
- Specific support to applied research
- Strengthen connection between basic and applied research
- Enhancement of RTD capacity of industry and SME

3.7. INSTRUMENT FOR PRE-ACCESSION ASSISTANCE (IPA)

Introduction:

The Instrument for Pre-accession Assistance (IPA) aims at providing targeted assistance to Candidate Countries (CC) and Potential Candidate Countries (PCC) for membership to the EU. It replaces the 2000-06 financial instrument for the Western Balkans CARDS and other pre-accession financial instruments.

Duration:

2007 - 2013

Objectives:

IPA is made up of five different components:

- Transition Assistance and Institution Building
- Regional and Cross-Border Cooperation
- Regional Development
- Human Resources Development
- Rural Development

The first two of which will apply to both potential candidate and candidate countries, the last three will apply to candidate countries only.
90% of the budget is allocated to National Programmes including areas of specific interest for each country under the five components mentioned above. In areas, where there is a clear advantage to address more countries, thus in areas of common interest, cross-border issues, cooperation possibilities, the remaining 10% of IPA budget is allocated to Multi-Beneficiary Areas of Intervention (see below).

Eligibility of WBC:

- Candidate Countries (CC): Croatia, FYR of Macedonia; are eligible for all five IPA components
- Potential Candidate Countries (PCC): Albania, BiH, Serbia, Montenegro, Kosovo (according to UNSCR 1244) are eligible only for the first two components (thus *Transition Assistance and Institution Building* and *Regional and Cross Border Cooperation*)

Areas of intervention:

RTD as an area of support is not foreseen in any of the five components, it is not included in any of the National programmes.
The Multi-Beneficiary planning envelope for 2007 – 2009 foresees “Education, Youth and Research” as a major area of intervention.
For RTD, the IPA aims to:

- Stimulate regional and international (EU – WBC) research cooperation
- Facilitate integration into ERA

Detailed actions to reach the goals:

- Support mapping of centres of excellence in specific thematic areas, relevant to WBC
- Facilitate further integration into ERA by exchanging information and best practices on role of research in support of economic development in a sustainable way;
- Bring different actors in the region together and identify priority elements necessary to achieve EU targets.

Fields / Areas of funding:

No thematic restriction exists.

Budget:

As regards financial allocations, IPA will provide a total amount of 11,468 Billion€ (current prices) over the 2007-2013 period. Each year, the Commission informs the European Parliament and the Council on its intentions regarding the breakdown of the total envelope.

More information:

IPA general information:
http://ec.europa.eu/enlargement/financial_assistance/ipa/index_en.htm
IPA financial planning:
http://ec.europa.eu/enlargement/pdf/countries/ipa_miff_081106_en.pdf

Corresponding to following needs:

- Upgrading of RTD infrastructure
- Upgrading and renewal of ICT infrastructure
- Enhancement of regional cooperation
- Implementation of EU standards/harmonization
- Institution building

3.8. COST (European Cooperation in the field of Scientific and Technical Research)

Introduction to COST:

COST is one of the largest intergovernmental frameworks for the coordination of national-funded basic research at European level. Cooperation takes the form of concerted activities between research institutions from member countries or cooperating states. Such research networks are called *Actions.* Non COST countries can also participate in these Actions, where there is mutual benefit.

Duration:

COST was established in 1971 and is an ongoing programme.

Objectives:

Research is carried out on a basic pre-competitive, pre-normative or policy-related nature. It is international and it aims to adress issues where cooperation would be beneficial to a number of countries and that require harmonisation of regulations and policy making. Also, cooperation on newly emerging or multidisciplinary scientific topics is desired.

Eligible Countries in WBC:

Following COST signatory countries have full access to COST Actions

- Croatia
- FYR of Macedonia
- Serbia

In addition, support for the integration of scientists from other, non-signatory SEE countries (i.e. BiH, Albania, Montenegro) will be given. COST funds the attendance of researchers coming from these countries to participate in COST Action meetings.

Field / Area of funding:

COST Actions can be initiated by individual scientists („bottom up“).
Following activities can receive funding from COST:

- Travel expenses and daily allowances for delegates to meetings
- Workshops, conferences
- Short term scientific missions (STSMs) – inter-laboratory exchanges
- Training schools
- Action grants
- Publications and dissemination
- High level research conferences organised jointly with ESF
- Studies, reviews, assessments, strategic activities
- Special provision for research from „near neighbours“ countries.

Research activities are NOT funded by COST but by national programmes.

Areas of funding (priorities):

- Biomedicine and molecular biosciences
- Food and agriculture
- Forests, their products and services
- Materials, physical and nanosciences
- Chemistry and molecular sciences and technologies
- Earth system science and environmental technologies
- Information and communication technologies
- Transport and urban development
- Individuals, society, culture and health

COST applies a continous open call procedure, with one collection date for preliminary proposals and a second collection date to invite final proposers to submit their full proposal per year.

Budget:

COST Actions are financed from a specific line within the EU research framework programme in cooperation with the European Science Fund. In FP7, the proposed budget from 2007-2013 amounts to 280M€.

More information:

http://www.cost.org

Correspondent needs:

- Enhancement of regional cooperation
- Definition of priority research areas
- Support of mobility of researchers
- Specific support of basic research

3.9. EUREKA

Introduction:

EUREKA is a pan-European network for market-oriented, industrial RTD created as an intergovernmental initiative in 1985, EUREKA aims to enhance European competitiveness through its support to businesses, research centres and universities who carry out pan-European projects to develop innovative products, processes and services.

Duration:

EUREKA is an ongoing initiative.

Objectives:

Through its flexible and decentralised network, EUREKA offers project partners rapid access to a wealth of knowledge, skills and expertise across Europe and facilitates access to national public and private funding schemes.
The internationally recognised EUREKA label adds value to a project and gives participants a competitive edge in their dealings with financial, technical and commercial partners.
Through an EUREKA project, partners develop new technologies for which they agree the Intellectual Property Rights and build partnerships to penetrate new markets.

Eligibility of WBC:

Member Countries: Croatia, Serbia
Host of National Information Point: Albania

Conditions for funding:

Besides individual projects, two types of initiatives exist in EUREKA:

- EUREKA Clusters are long-term, strategically significant industrial initiatives. They usually have a large number of participants, and aim to develop generic technologies of key importance for European competitiveness, primarily in ICT and, more recently, in energy and biotechnology. Clusters bring together large companies along with SMEs, research institutes and universities, sharing both the risk and benefits of innovation.
- EUREKA Umbrellas are thematic networks that focus on a specific technology area or business sector. The main goal of an Umbrella is to facilitate the generation of EUREKA projects in its own target area

All activities support involvement of SMEs.

Fields / Areas of funding:

- ICT
- Medical and bio-technology
- Robotics
- Transport
- Energy
- New materials etc.

Budget:

EUREKA does not provide any funding, financial support comes from national programmes of Member Countries.

More information:

http://www.eureka.be

Corresponding to following needs:

- Enhancement of regional cooperation
- Definition of priority research areas
- Specific support to applied research
- Strengthen connection basic-applied research
- Enhancement of RTD capacity of industry and SME

3.10. JOINT RESEARCH CENTRES

Introduction:

The Joint Research Centre (JRC) is a research based policy support organisation and an integral part of the European Commission. As such, it is independent from national and private interests. The JRC carries out extensive research of direct concern to European citizens and industry. The work is split between institutional research in support of Commission policy-making, direct support for specific Directorates-General (DGs) and competitive activities in strategic relationships with the scientific and business communities.
The JRC's structure is based on seven specialised institutes, located throughout the European Union and employs about 2.600 staff (Dec 2006).

Duration:

The JRC is directly associated to the European Commission, therefore the „life span" is linked to the Commission's financial periods. The current period is running from 2007 – 2013.

Objectives:

The objectives of the JRC is to provide customer-driven scientific and technical (S&T) support for the conception, development, implementation and monitoring of Community policies.
The JRC strongly supports the enlargement activities of the European Union and offers a wide range of participation possibilities for EU New MS, Acceeding Countries, Candidate Countries and Potential Candidate Countries (NMS/AC/CC/PCC) by fostering collaboration with governmental organisations (or the like) from these countries, which will have an institutional role for providing S&T support to the implementation of policies, particularly through the associated scientific and technical organisations.

Eligibility of WBC:

Special attention is given to candidatures of experts from Croatia and the countries in the Western Balkan region (FYROM - Candidate Country and Albania, Bosnia-Herzegovina, Serbia and Montenegro - Potential Candidate Countries).

Conditions for funding:

The JRC's enlargement actions are composed of two main related instruments, which allow integration of reserachers from WBC:

a) Workshops and Training Courses on Advanced Methods and Techniques for EU policies in order to:

- Assist the competent organisations in the WBC with the scientific and technical methods and techniques underpinning EU policy implementation
- Deepen ERA with all countries concerned.

b) Short-term opportunities for Seconded National Experts (Call for Expression of Interest; **important:** experts from countries not associated to FP7 are not eligible)
In conjunction with the previous activity, the JRC offers a number of short-medium-term job openings which are available for Seconded National Experts (with preference of 12 months depending on the position and area).

Areas / fields for funding:

Topics of consideration are:

- Sustainable development
- Climate change
- Food
- Energy
- Transport
- Chemicals
- Alternative methods to animal testing
- Research policy
- Information Technologies
- Reference methods and materials
- Biotechnology
- Risks, hazards and socio-economic impacts

Budget:

The JRC is financed from a special funding line in FP7. The whole budget for the JRCs (excl. nuclear actions) is: 1.751 M €.

More information:

http://www.jrc.ec.europa.eu

Correspondence to needs:

- Enhancement of regional cooperation
- Definition of priority research areas
- Implementation of EU standards/harmonization

3.11. SEE-ERA.NET Pilot Joint and Multilateral Calls

Introduction:

The SEE-ERA.NET is a European Commission's networking project for the integration of the Southeast European countries into the European Research Area through the opening of bilateral programmes. It is a network of 14 ministries and 3 agencies in 14 European countries that includes all Western Balkan countries and works directly on the level of policy makers.

Duration:

2005 – 2009, with the Pilot Joint Call launched in 2007 and the actual joint call planned to be launched during the project run.

Objectives:

The SEE-ERA.NET project is committed to the networking of research activities within national, bilateral, and regional research programmes throughout Europe, especially targeting South Eastern Europe. Its main objective is to explore and exploit synergies among bilateral S&T agreements of the partner countries. Through the identification of complementarities and the implementation of joint initiatives, multilateral calls for research proposals, open to researchers from participating SEE-ERA.NET partner countries, are implemented.

Eligibility of WBC:

Researchers from all WBC are eligible to participate in projects subject to the Joint Pilot and Multilateral Calls.

Conditions for funding:

In the first phase, a pilot joint call is implemented. Best practice and experience form this call will form the implementation of the multilateral call.

Three types of projects are funded in the Pilot Joint Call:

- Research projects

Small and short term multilateral research projects and short preparatory activities such as feasibility studies or pilot investigations with a duration of up to 9 months including exchange of scientists in order to prepare bigger and longer future research projects are funded. Consortia shall consist of three partners from 3 different SEE-ERA.NET countries, including at least one WBC partner.

- Network projects

The thematic network projects are preferably aiming at the coordination and co-operation of scientists in one specific scientific area based on mutual visits and small workshops.

Participation rule: five partners from three different countries of which two at

least from Western Balkan countries are mandatory.

- Summer Schools

Summer Schools should be organised by a project consortium consisting of at least three participants from three different countries; among them at least one from a Western Balkan country.

Fields / Areas of funding:

The areas of funding address the specific needs of the Western Balkan Countries in RTD and reflect their priority research areas.
Eligible costs for funding are mainly mobility expenditures, to a smaller extent also costs for consumables and organisational costs for meetings, seminars and workshops.

Budget:

The overall budget of the PJC is 830.000 € with an average of 20.000 € per project.

More information:

SEE-ERA.NET project: http://see-era.net
SEE-ERA.NET Pilot Joint Call: http://see-era.net/pjc

Corresponding to following needs:

- Enhancement of regional cooperation
- Definition of priority research areas
- Support of mobility of researchers

3.12. LIFE+

Introduction:

LIFE+ contributes to the implementation, development and enhancement of the Community environmental policy and legislation as well as the integration of the environment into other EU policies.
LIFE+ also supports the development of new solutions to environmental problems facing the EU.

Duration:

At present it is not possible to say if there will be call for proposals and project selection in 2007.

Objectives:

The objective of LIFE+ - Third Countries is to contribute to the establishment of capacities and administrative structure needed in the environmental sector and in the development of environmental policy and action programmes in third countries bordering on the Mediterranean and the Baltic Sea other than Central and East European Accession Candidate Countries.
Technical project assistance projects are eligible for LIFE+ - Third countries if they:

- Are of interest to the Community, notably through their contribution to implementing regional and international guidelines and agreements,
- Promote sustainable development at international. National or regional level;
- Provide solutions to major environmental problems in the region and the relevant sector.

Priority is given to projects, which will promote cooperation at the trans-frontier, trans-national or regional level.

Eligibility of WBC:

In the prior LIFE “Third Countries” programme, projects in countries outside the EU with a clear benefit for all participants, were funded. Albania, BiH, Croatia benefited from LIFE funds. The regulations for LIFE+ will be adopted in September 2007, the sub-programme LIFE+ “Third Countries” will be open again, but no information could be obtained on the eligibility of all WBCs at the time writing of this report.

Conditions for funding:

LIFE+ is currently preparing for conciliation by the European Parliament. No further details on budget, workprogrammes and funding mechanisms are known at this stage.

Budget:

From 2005-2006 the budget amounted to 317M€. The new budget is still under negotiation.

More information:

http://ec.europa.eu/environment/life/news/futureoflife.htm

Correspondence to following needs:

- Enhancement of regional cooperation
- Support of mobility of researchers
- Definition of priority research areas: environment
- Implementation of EU standards/harmonization
- Institution building

3.13. INNOVATION 2010 (i2i Programme)

Introduction:

The INNOVATION 2010 programme was set up by the European Investment Bank (EIB) to respond to the Lisbon Agenda and support Europe's competitiveness, innovation potential and knowledge-based economy.

Duration:

No period specified in the programme.

Objectives:

The i2i programme centres on three objectives:

- Education and training: the modernisation of IT equipment of i.a. universities is supported
- Research and development: the i2i programme finances (1) public RTD programmes with focus on investment which involves cooperation with Community programmes or international public research centres, (2) private sector participation in public research, (3) the establishment of centres of RTD excellence to push the development of science and (4) intangible investments i.e. research expenditure and patents, particularly for SMEs within the framework of global loans
- ICT networks: like (1) ICT projects in broadband and multimedia networks, (2) the modernisation and extension of existing networks, (3) the establishment of physical and virtual infrastructure

Eligibility of WBC:

EIB support through the i2i programme is given to all Western Balkan Countries.

Conditions for funding:

Financing is facilitated through

- Senior loans
- Risk-sharing or structured loans through the Structured Finance Facility (SFF)

Funding Budget:

The EIB aims to mobilise 50M € over the current decade. Until 2005, loans advanced under i2i had reached 32M €

More information:

http://www.eib.org/site/index.asp?designation=i2i

Correspondence with needs:

- Upgrade of RTD infrastructure
- Upgrading and renewal of ICT networks
- Specific support of applied research
- Enhancement of RTD capacity of industry and SME

3.14. INTERREG III

Introduction:

INTERREG III assists cross-border, international and regional co-operation programmes financed by the European Regional Development Fund.
Three sections:

- INTERREG IIIa: cross-border cooperation
- INTERREG IIIb: cross-national cooperation
- INTERREG IIIc: inter-regional cooperation

Duration:

INTERREG III is bound to the European Community's financial periods, now: 2007-2013.

Objectives:

Regional cooperation in the area of research and innovation is supported in INTERREG IIIc:
Priority action areas

- Exchanges of experience and good practice between Member States and with third countries concerning cross-border and trans-national cooperation under Strands A and B of INTERREG III
- Cooperation initiatives in sectors such as research, technology development, enterprise, the information society, tourism, culture or the environment

Elligibility of WBC:

INTERREG III is open for third country participation; funds are allocated through sources other than the ERDF. In case of WBCs, CARDS/IPA funds are used.

Conditions for funding:

Very specific funding conditions exist according to funding line and action. For further information please view website mentioned below.

Fields/Areas of funding:

No thematic restrictions in areas of research and technology development exist. Only, the projects' thematic focus must fulfil the criteria of mutual interest and mutual benefit for the participating regions.

Budget:

INTERREG III is financed through the European Regional Development Fund (ERDF). Currently, no budget information is available.

More information:

http://ec.europa.eu/regional_policy/interreg3/abc/voletc_en.htm

Corresponding to following needs:

- Enhancement of regional cooperation
- Identification and concentration of priority areas

3.15. NATO Science for Peace Programme

Introduction:

The programme aims to link science and society through projects in security, environmental sustainability and other defined priorities of its Partner nations. The SPS Programme enables NATO to demonstrate its commitment to practical, visible projects with tangible output and to contribute to security, stability and solidarity among nations, by applying the best technical expertise to problem solving.

Duration:

Ongoing programme

Objectives:

Grant mechanisms:

A) COLLABORATIVE GRANTS IN PRIORITY RESEARCH AREAS
Advanced Research Workshops (SPS ARWs): grants to organise expert workshops where an intense but informal exchange of views at the frontiers of a subject aims at identifying directions for future action.
Advanced Study Institutes (SPS ASIs): grants to organise high level tutorial courses to convey the latest developments in a subject to an advanced-level audience
Advanced Training Course (SPS ATC): designed to enable specialists in NATO countries to share their expertise with trainees from Partner and Mediterranean Dialogue countries
Collaborative Linkage Grants (SPS CLGs): to pool ideas and resources on research projects, and create specialist networks
Science for Peace projects (SPS SFPs): grants to collaborate on multi-year applied R&D projects in Partner or Mediterranean Dialogue countries
Reintegration Grants (SPS RIGs): to allow young scientists from Partner countries working in NATO countries abroad to return and reintegrate into the research communities of their home countries

b) Computer Networking and Electronic Communication support for Partner Countries
Advanced Networking Workshops (SPS ANWs): grants to enable workshops to be organized in Partner countries to harmonize network policy at a national and international level, to enable the training of qualified network managers and to convene expert meetings to enhance the use of electronic communication.
Networking Infrastructure Grants (SPS NIGs): grants to enable research institutions in Partner countries to improve their telecommunication facilities and to enhance the use of such facilities.

Eligible Countries in WBC:

All WBCs are so-called „NATO Partner Countries“, which are eligible to participate in the NATO SPS activities but are not NATO Members.

Conditions of funding:

Participation rule: 1 researcher from NATO country, 1 from eligible partner country
Projects can be submitted always throughout the year. Three deadlines are set each year to meet the three review sessions of the scientific advisory panels.
SPS Key priorities:

1) Defence against Terrorism: rapid detection of chemical, biological, radiological nuclear (CBRN) agents, physical protection against CBRN, decontamination of CBRN agents, etc.
2) Scientific Collaboration to counter other threats to security:
    - Environmental security with implications for economic, cultural and political instability
    - Water resources management
    - Food security
    - Information security
    - Human and social dynamics
    - Conducting regional studies including cross-border activities, etc.
3) Technology transfer to address partner country in priorities:
    - Priorities identified by Croatia: environmental security, human and societal dynamics, border and transport security
    - Priorities identified by FYR of Macedonia: Information technology, food security, human and societal dynamics

Budget:

The amount of funding of many of the funding types is decided on a case-to-case basis. In case of the reintegration grants, a yearly salary between 20.000 – and 25.000,- € is foreseen, for a period of three years. SFP projects range between 200.000 – 300.000,- € funding.

More information:

General information on the programme:
http://www.nato.int/science/
Grant mechanisms:
http://www.nato.int/science/nato_funded_activities/grant_mechanisms.htm

Correspondence to WBC needs:

- Upgrading and renewal of ICT infrastructures
- Enhancement of regional cooperation
- Definition of priority research areas
- Measures agains brain drain/brain waste
- Support of mobility of researchers
- Specific support to basic research

- Specific support to applied research
- Strengthen connection between basic and applied research

3.16. TEMPUS

Introduction:

The Tempus programme funds cooperation projects in the areas of curriculum development and innovation, teacher training, university management, and structural reforms in higher education. It puts special emphasis on the mobility of academic and administrative staff from higher education institutions, both from the EU and the partner countries.

Duration:

TEMPUS is bound to the financial periods of the European Union, currently 2007 – 2013.

Objectives:

TEMPUS objectives aim to foster:

- Mutual understanding through strengthening cooperation in higher education between the EU and its partner countries from the Western Balkans, Eastern Europe and Central Asia, the Mediterranean region and through enhancing understanding between cultures.
- Cooperation, Tempus promotes the "people to people" approach: its added value lies in its promotion of international and regional co-operation, which generates better communication and new networks of personal and professional contacts between the academic worlds of the EU and the partner countries.
- Higher Education modernisation is achieved by supporting the transition and modernisation processes in higher education through a range of interventions.

Eligibility of WBC:

All WBC are eligible to participate in activities under the Tempus programme.

Conditions for funding:

Tempus provides three funding lines:

Joint European Projects (JEPs)

JEPs aim to increase cooperation and network building between actors in higher education in EU Member States and partner countries, and help the higher education sector propagate its knowledge outside academic institutions.

- JEPs for curriculum development of higher education institutions (update teaching material, train teaching staff, etc.)
- JEPs for university management which focus on the restructuring of universities and their internal management and administration
- JEPs for training courses for institutions building concentrate on developing the administrative and institutional structures of the partner

countries

Structural and Complementary Measures (SCM)

- Structural Measures are short-term policy advice interventions, aimed at supporting reform processes in higher education
- Complementary Measures are designed to disseminate and transfer good practice

Individual Mobility Grants (IMGs)

- Individual Mobility Grants exist for preparation activities of JEPs, for event participation and for short-term stays

Fields / Areas of funding:

No specific areas are addressed in the programme.

Budget:

The Tempus budget allocated to the Western Balkan countries comes from IPA funds. In general 80 % of the Tempus operational budget is allocated to Joint European Projects, 17 % to Structural and Complementary Measures and 3 % to Individual Mobility Grants. Project funding ceiling by project type:

- Joint European Projects (JEPs) have a duration of two or three years with a maximum budget of 300 to 500.000 € (depending on their duration) that has to be co-funded for at least 5 % of its total amount.
- Structural Measures have a duration of one year with a maximum budget of 150.000 € that has to be co-funded for at least 5 % of the total amount.
- Complementary Measures have a duration of one year with a maximum budget of 150.000 € that has to be co-funded for at least 5 % of the total amount.

More information:

http://ec.europa.eu/education/programmes/tempus/index_en.html

Corresponding to following needs:

- Upgrading and renewal of ICT infrastructure
- Enhancement of regional cooperation
- Support of mobility of researchers
- Implementation of EU standards/harmonization
- Institution building
- Support of research career development
- Support of transition of universities from teaching to research institutions

3.17. LIFE LONG LEARNING PROGRAMME

Introduction:

The new Lifelong Learning Programme 2007-2013 replaces the existing Socrates, Leonardo da Vinci, and eLearning programmes which expired at the end of 2006.

Duration:

The Life Long Learning Programme is implemented for 2007-2013.

Objectives:

Aim: to contribute through lifelong learning to the development of the Community as an advanced knowledge society by fostering interaction, cooperation and mobility between education and training systems within the Community.

4 sectoral programmes:

- School education (Comenius),
- Higher education (Erasmus),
- Vocational training (Leonardo da Vinci) and
- Adult education (Grundtvig),

1 transversal programme focusing on

- Policy cooperation,
- Languages,
- Information and communication technology and
- Dissemination and exploitation of results.

Final element to the new programme:

- Jean Monnet action: support for teaching of European integration as a subject at universities, and support for certain key institutions and associations active in the field.

Eligibility of WBC:

All WBC are eligible to participate in activities under the Life Long Learning Programme.

Conditions for funding:

The implementation of the objectives of the programmes is achieved through actions such as:

- Mobility of students, teachers, university staff
- Thematic Networks and university networks
- Multilateral projects
- Accompanying measures
- Studies, comparative research, etc.

Financial support is given for travel expenses, subsistence costs (daily, weekly, monthly) and staff costs.

Fields / Areas of funding:

The programme is focused on the education sector, within which no specific areas are addressed.

Budget:

The programme budget is 13.62 b € for the period 2007-2013.

More information:

http://ec.europa.eu/education/programmes/newprog/index_en.html

Corresponding to following needs:

- Enhancement of regional cooperation
- Support mobility of researchers
- Implementation of EU standards/harmonization
- Institution building

3.18. UNESCO's actions for strengthening scientific capacities in SEE

Introduction:

Science is an instrument for stimulating dialogue; it creates bonds of cooperation across borders and between peoples. UNESCO's strategy is to promote scientific cooperation for peaceful purposes.

Duration:

-

Objectives:

Based on several policy initiatives and statistical analyses of the RTD situation in WBC, UNESCO set strategic objectives to support science in SEE through:

- Electronic connectivity between academic SEE institutions
- Research infrastructures
- Human potential in research
- Thematic regional networks of research centres and laboratories

Activities include training workshops, conferences, exchange visits, mobility grants, investment in RTD infrastructure, etc.
The overall aim is to reconstruct scientific cooperation in SEE, increase RTD capacity and support the involvement into pan-European scientific cooperation programmes.

Eligibility of WBC:

UNESCO supports activities in all WBC.

Conditions for funding:

UNESCO's actions are based on not-refundable grants, which cover all expenses necessary to implement the activities above.

Fields / Areas of funding:

No thematic restrictions are applied.

Budget:

Concrete financial information is not known.

More information:

http://www.unesco.org/science

Corresponding to following needs:

- Upgrade of RTD infrastructure
- Upgrading and renewal of ICT networks
- Enhancement of regional/cooperation
- Support of mobility of researchers
- Support transition of university from teaching to research institutions

3.19. WORLD Bank's initiatives to support S&T in SEE

Introduction:

The Worldbank has recognized the importance of knowledge as a source of economic growth and development. The "Knowlegde for development" programme provides policy advice on four Knowledge Economy pillars: economic and institutional regime, education, innovation, and Information and Communication Technologies (ICTs).

Duration:

-

Objectives:

The Worldbank is currently screening the situation of RTD in WBCs to take appropriate steps. Several key challenges are defined:

- Little private sector participation in innovation
- Weak innovation/technology absorption
- Low political priority to STI, limited funding
- Neglect of STI systems and extensive brain drain
- Marginal position of the region vis-à-vis EU

Based on these factors, support strategies are defined:

- Support for RTD infrastructure
- Capacity building for FP participation
- STI policy articulation and priority setting
- Establishing quality indicators and benchmarking STI capacity
- Improving quality and relevance of tertiary education (UG and research degrees)
- Fostering good governance and institution building in STI
- Partnering with regional networks

Eligibility of WBC:

At the time writing of this report, a pilot project in Croatia for S&T support was launched. Also, activities in FYR of Macedonia were supported. Further projects with other WBCs are planned.

Conditions for funding:

The Worldbank sets initiatives according to its S&T strategies for WBCs.

Fields / Areas of funding:

No thematic restrictions are applied.

Budget:

The Croatian S&T project allocates 40M € to support of RTD infrastructure, support to applied research, etc.

More information:

http://web.worldbank.org/WBSITE/EXTERNAL/WBI/0,,pagePK:208996~theSitePK:213799,00.html

Corresponding to following needs:

- Support for RTD infrastructure
- Enhancement of regional cooperation
- Support transition of universities from teaching to research institutions
- Measures for institution building

3.20. BILATERAL S&T PROGRAMMES

Introduction:

Bilateral S&T programmes are in general focused on strengthening RTD cooperation between the signatory countries.
Diverse S&T agreements exist between EU Member States (old and new) and Western Balkan countries but also amongst Western Balkan countries.

Duration:

The duration varies between 2 – 4 years.

Objectives:

The clear aims of S&T agreements are:

- Foster international and regional cooperation between signatory countries
- Stimulate exchange of researchers; know how, capacities, etc.
- Networking

Eligibility of WBC:

Almost all WBC have bilateral S&T agreements with other WBCs or EU MS.

Tab. 1: Bilateral S&T agreements between WBC – WBC/ WBC - EU MS (from: SEE-ERA.NET "national RTD prpgrammes for South East Europe)

	Albania	BiH	Croatia	FYR of Macedonia	Montenegro	Serbia
Albania	(p)					
Austria			X			
BiH	(p)		(p)	(p)	(p)	(p)
Bulgaria		(p)	(p)	(p)	(p)	
Croatia				X	(p)	X
France		(p)	X	X	X	X
Germany	X	X	X	X	X	X
Greece	X	(p)	(p)	(p)	(p)	X
Hungary		(p)	(p)	(p)	X	X
FYR of Macedonia	X	(p)	X		(p)	X
Montenegro		(p)	(p)	(p)		
Romania		(p)	(p)	(p)	(p)	X
Serbia			X	X		(p)
Slovenia	X	X	X	X	X	X

X agreement in force
(p) agreement in preparation

Areas of intervention:

Usually, S&T agreements support the mobility of researchers and costs for organising bilateral conferences and workshops. In some cases, research activities and the purchase of small-scale research equipment and infrastructure are also financed.

Fields / Areas of funding:

The areas of cooperation depend on the priorities and the mutual benefit of the signatories. In general, natural sciences top the list of priorities, followed by environmental protection, ICT, materials, agriculture etc.

Budget:

Varies according to S&T agreements.

More information:

See study on “National RTD programmes”: http://www.see-era.net

Corresponding to following needs:

- Enhancement of regional cooperation
- Identification and concentration on priority research areas
- Support of mobility of researchers
- Specific support of basic research

A general weakness of bilateral S&T agreements is, that SMEs participation is not considered. Also, the eligibility of funded expenses (usually only mobility and organisation costs) is limited.

3.21. National, unilateral S&T Programmes

Introduction

National, unilateral S&T programmes are designed to foster cooperation between the initiating country and the Western Balkan. Different aspects of cooperation are supported, like project preparation, common RTD projects, organisation of conferences and seminars, exchange of staff etc.

Period

The duration of projects funded by national, unilateral programmes vary according to donor country strategy.

Objectives:

Following national funding programmes exist:

Austria: the Austrian Science and Research Liaison Offices in Ljubljana and Sofia (ASO) are the main focal point to promote RTD collaboration between Austria and the WBCs. Scientific networking, exchange of research results and RTD cooperation in common projects is addressed in different scientific areas.

Switzerland: participation in international scientific conferences in Switzerland is funded for scientists coming from WBC under the SCOPES programme (Scientific Co-operation between Eastern Europe and Switzerland).

Germany: the programme "International Cooperation in Education and Research - Central, Eastern and South Eastern European Region" funds preparation activities for projects of applied research and development for the involvement into projects (either new or ongoing) of other German RTD programmes or into FP7 projects. In addition, funds are allocated for joint research bases.

Norway: the Norwegian cooperation programme with WBC aims to initiate research collaboration, develop and fund collaboration between universities, university colleges and research institutions in the Western Balkans and corresponding Norwegian institutions.

Eligibility of WBC

Programmes are targeted towards RTD collaboration with all WBCs.

Conditions for funding (type, procedures)

Austria: Proposals have to foster regional cooperation and include 1 partner from AT, SI or BG and at least one partner from WBC.

Switzerland: researchers from WBC receive "Conference Grants" for participation in conferences, which are taking place until end of 2008. No restriction exists concerning the scientific disciplines.

Germany: the consortium should include one German and one WBC partner institution. Special attention is given to the involvement of SMEs.
Norway: one partner from Norway and one partner from WBC need to form the consortium. The maximum project duration can be 4 years.

Fields / Areas for funding

Austria: different topics for each call
Switzerland: SCOPES is open for all scientific disciplines
Germany: New technologies, Life Sciences and Sustainability
Norway: Governance and democracy building; Environmental protection, management of natural resources and marine issues

Funding budget

Austria: The total budget usually lies between 100.000 – 130.000 €, with the average budget per project of 12.000 €
Switzerland: SCOPES funds conference participation (travel, accommodation) with a flat rate of CHF 1.500, - .
Germany: Researchers from WBC involved in project preparation activities with German research partner institutions receive grants for daily allowances.
Norway: 75 M NOK for the period from 2006 – 2009 are allocated to research cooperation, 50 % of which are dedicated to partners from WBC.

More information:

Austria: http://www.aso.zsi.at/de/all/ausschreibung/303.html
Switzerland: http://www.snf.ch/en/rep/int/int_sco.asp
Germany: http://www.internationales-buero.de
Norway: http://www.forskningsradet.no/westbalkan

Correspondence to needs:

- Enhancement of regional cooperation
- Identification and concentration on priority research areas
- Specific support of basic research
- Specific support of applied research

3.22. National, unilateral Innovation/Business Programmes:

Introduction:

The only programme currently open is CIR-CE. The Austrian Federal Ministry of Economics and Labour launches the CIR-CE (Cooperation in Innovation and Research with Central and Eastern Europe) programme. It aims to identify and in a further step profit of synergies and complementarities between Austria and partner countries in Central-, East and South-East Europe. Technology oriented enterprises, their needs and chances are the main target group. The strategic aim is to build a common axis with an improved position in a globalized world.

Duration:

The CIR-CE programme is the successor of the STRAPAMO initiative. It started at the beginning of 2005. Calls for proposals are set annually.

Objectives:

CIR-CE supports cooperation and consortia between innovative Austrian enterprises and their counterparts in the target region.

Eligibility of WBC:

Enterprises and intermediaries from all Western Balkan Countries are eligible for funding under the CIR-CE programme.

Conditions for funding:

The main target group supported in the CIR-CE programme is the enterprises sector, especially SMEs.
Three different types of projects exist:

- Network projects: this project type aims to initiate networks, as the primary step to start cooperation. The intermediary organisations play an integral role here, still the focus is to integrate and actively involve enterprises. The consortium consists of 3 Austrian partners and 3 partner countries-partners.
- Innovation projects: this project type is the next step in the process where the enterprise takes over the leading role. The projects should result in new S&T products and processes, technology transfer and quality assessment procedures.. The consortium has to consist of two enterprises from Austria and min. one from a partner country.
- Training projects: this project type can be an optional part of either of the above mentioned project types.

Following institutions can apply for funding:

- Intermediaries: “impulse centres“, centres of competence, start-up centres, enterprise cluster, cooperative research institutions, etc.

- Research institutions: which take over the role of an intermediary
- Enterprises

Fields / Area of funding:

S&T areas of funding include:

- Material sciences and technologies
- ICT, Telematics
- Electrotechnics, Electronics
- Micro- and Nanotechnologies
- Life Sciences and Food Technologies
- Health, Medicine
- Environment, Sustainable Development
- Energy
- Transport, Automotive Engineering
- Social Sciences and Humanities
- Natural Sciences (Physics, Mathematics, Chemistry etc.)

Budget:

For network projects funding amounts to max. 150.000 €, with 75 % of the total project budget being funded.
Innovation projects can receive max. 400.000,- € financial support. The CIR-CE share covers 45 % of the total project budget.
A maximum of 40 % of CIR-CE funding for a project can be allocated to partners in partner countries.

More information:

- http://www.bmwa.gv.at/BMWA/Schwerpunkte/Wirtschaftspolitik/InnovaTechnol/Foerderungen/103_circe.htm
- http://www.cir-ce.at

Correspondence to following needs:

- Enhancement of regional cooperation
- Definition of priority research areas
- Specific support of applied research
- Enhancement of RTD capacity of industry and SME

4. CONCLUSIONS

The present report focuses on the correspondence between specific needs of WBCs in RTD and availabel international RTD funding programmes, which allow participation of WBC.
The two components were set into a matrix and correspondence factors (ranging from full correspondence of the need with the programme (*****) to no correspondence but positive effects possible (*)) used in order to qualify the relation. In addition, as the impact of programmes depends very much on the budget available, the matrix also includes a set of quantificaiton factors (programme budget in scale € / average project budget in scale of €). This set of qualification and quantification factors allows to analyse better following questions:

- To which extent are the needs covered
- Where are the main gaps
- Where is area for improvement?

Discussion of needs

Upgrading of RTD infrastructure:
This is one of the most virulent needs of almost all WBCs, specifically in Albania and BiH.
As international donor support focused more on the upgrading of infrastructure in general, renewal of RTD facilities, industry and university laboratories was mostly neglected. Future will show how much funds of FP7/Research Potential and RTD infrastructure can be used to improve the situation in WBCs. Also, the new IPA programme does not respond to the need of upgrading RTD infrastructure in the extent necessary. Only recently, this need was acknowledged and mentioned in the IPA working documents, still, future will show how much support will come from this fund. The i2i programme's objectives refer to this need, enough capital is also available but as financing is carried out through loans and credits, it is difficult for mainly the smaller countries in the western Balkans to guarantee payback to use i2i support. Promising financial support comes from UNESCO and Worldbank initiatives, both of which focus their funding also on the upgrading of RTD infrastructure.
Upgrading and renewal of ICT infrastructure/internet:
Despite the strong need to catch up with ICT developments, to get connected to virtual libraries and e-journals and to offer appropriate information sources for the national RTD community; the programmes do not reflect this in their objectives strong enough.
The NATO SPS offers financial support for computer networking and electronic communication. Also, UNESCO aims to improve electronic connectivity amongst SEE research institutions.
Unfortunately, the intended GEANT connection within the SEEREN2 project did not work out properly in all WBCs, since some of the countries were not able to financially carry the continuation of the connection. Here, IPA could provide funds, which is the hope of many policy makers in the region.

Enhancement of regional cooperation:

Scientific collaboration amongst scientists as well as coordination of policy-makers from different WBCs for the sake of strengthening the international position of WBCs, creates bonds and can contribute to long-lasting stability in the region. This has been recognised and is reflected in some major funding programmes, which require the involvement of actors from different WBCs: in the FP7 International Cooperation programme, the SEE-ERA.NET programme, the INTERREG III and CIR-CE programme (national, unilateral innovation/business programme). As these funding programmes offer strong financial support, regional cooperation will be fostered even more. Nevertheless, one should not forget that regional cooperation also requires initiative from the countries in the western Balkans. Willingness to cooperate cannot only be pushed from outside but most develop also amongst the WBCs themselves in order to have a strong voice in the international RTD arena.

Identification and concentration on priority research areas:
The identification of strengths in certain RTD areas is necessary for WBCs with respect to the limited national funds and resources available. The WBCs have recognized this fact and have prioritized certain areas (ICT, Life Sciences, Sustainable Development, Water Resources Management, etc.). As the COOPERATION programme and all ten thematic areas are open for participation of WBCs, it is a very good opportunity to make use of this big funding programme and engage in projects in the key areas of interest. Despite generally low participation in FP6, WBCs should use the opportunity now and focus on their strengths in the respective areas. Other programmes (COST, EUREKA, JRC) also offer the possibility to engage in specific RTD areas, but funding for RTD activities themselves is not given. For partner countries of the NATO SPS, RTD activities in key areas receive strong financial support. In bilateral S&T agreements, signatory countries collaborate in RTD areas of mutual interest, but budgets are usually small and limited to mobility rather than to actual RTD activities.

Measures against brain drain/brain waste:
General improvement of the economic and political situation, positive future prospects and stronger investment in RTD in general is required in order to decrease the numbers of researchers to leave their countries or seek fortune in other professions. Therefore, all funding programmes can contribute to ameliorate the situation but cannot prevent brain drain and brain waste directly.

Support to mobility of researchers:
After years of international isolation and disruption of international scientific contacts, WBCs' researchers are in strong need for exchange and transfer of knowledge through increased international mobility. Almost all programmes provide financing for researchers' travels to meetings and conferences. Also, grants for short-term and in some cases also long-term stays (e.g. FP7 People, JRC) are given. The major obstacle remains the difficult obtainment of visa for researchers from WBC to travel to EU countries.

Support of transition of universities from teaching to research institutions:
Many universities have not succeeded in making the transition to research institutions and remain pure "colleges" of teaching. With the Bologna Process, this transition is required in order to harmonize with the European education

area. TEMPUS funds are of respective size to support the modernization and restructuring of universities in WBCs. UNESCO and Worldbank initiatives also recognized the need for support to implement Bologna rules.

Specific support of basic research:
Per definition, basic research is the foreground for RTD development and source of new findings. Therefore, support in this area is of crucial importance for WBCs to strengthen their RTD capacity and performance. The FP7 Cooperation and People programme offer strong funding for basic research, but as both programmes are highly competitive, WBCs have difficulties to get involved in these international projects. Another possibility is applying for projects under the NATO SPS, which provides extensive funding for basic research activities in areas of mutual interest. Although COST is specifically designed for basic research on the European level, no funding is available for the RTD activity itself.
Concluding, basic research in WBC needs stronger support from international programmes, helping to step on their own feet in order to become competitive, be able to get a piece of the big FP7 cake and to be internationally more visible and connected. Also here, IPA could play a path-preparing role, as have PHARE funds done in Poland and other eastern European Member States.

Specific support of applied research:
Applied research drives economies and contributes to the welfare of countries. This sector of the innovative circle remains weak in WBCs. With the new CIP programme, which is open for all WBCs, strong funds are offered to strengthen applied research and boost RTD output of WBCs. Time will show how much WBC SMEs and industry will engage in this programme. Also, the EUREKA programme is open for WBC participation, but financial support depends on national funds, limiting the positive effects of the programme. The CIR-CE programme by the Austrian Federal Ministry of Economics and Labour offers a sound financial basis for innovation projects, which foster applied research.

Strengthen connection between basic and applied research:
Disrupted ties between the various components of the RTD system impede the development and progress of the whole system. Unfortunately, international programmes have not recognized this need yet, only the CIR-CE programme specifically demands the involvement of universities/basic research actors and applied research sector in common projects. Here, the demand for more international support is obvious.

Enhancement of RTD capacity of industry and SME:
The innovative capacity of the business and industry sector in many WBCs is rather weak, only Croatia is advanced in terms of scientific output of the industry sector. Often, policy makers in WBCs lack the understanding of the necessity of a strong innovation system.
Also, international programmes do not respond to this need to necessary extent. As the CIP programme just started, predictions cannot be made on the applicability of the programme in WBCs (although strong financial support is offered and it is recommendable for WBCs' business sector to thoroughly engage in the programme). Again, the CIR-CE programme is the only one really focusing on this need with respectable funds.

Implementation of EU standards and harmonization:
Implementation of EU standards ranges from adapting the aquis communitaire to using project management and auditing standards in EU projects. Therefore, all international EU programmes can support this need. IPA specifically supports the implementation of EU standards for Candidate Countries, such as Croatia and FYR of Macedonia.

Support of research career development:
The research profession has suffered image loss and many young researchers either leave the country or stop pursuing the research profession in search for better future working prospects. Specific programmes to raise the appreciation of this profession and specially support young researchers are of national concern mostly. Probably this is the reason, why international programmes are rare to cover this need, only the financially strong FP7 People and Ideas programme support the human resource aspect of RTD.

Support to institution building:
A strong institutional basis, capable of reacting to and absorbing international trends is necessary for the RTD system in WBCs. Here again IPA is challenged to come up with strong strategies and practical support for institutional set up in WBCs. The FP7 International Cooperation programme supports coordination in S&T policy between EU and WBCs and hence contributes to institution building.

In general, international funding programmes cover all needs. Major obstacles remain that access to the funds is often difficult especially for those WBCs, which are smaller, have lower research capacity, inappropriate and/or devastated RTD infrastructure and cope with international isolation. Hence, participation in competitive programmes, such as FP7, which offer the biggest amount of financial support, is still impeded and the opening of all thematic areas for WBC participation could not be enough.
Also, the visa problem and bureaucratic hurdles may prevent WBC researchers to take part in the FP7 Marie Curie actions of the People programme.
Concerning IPA, expectations in respect to support for RTD in WBC have not been fulfilled. More engagement and support from this side is still required.

Efforts have to be undertaken from national as well as international side in order to help the RTD system in WBCs to step on its feet and have the chance to develop and become competitive for the prosperity of the region, for the stability and for the integration into the European RTD family.

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This report is based on the outcomes of several studies conducted to identify and analyse the needs of WBCs in RTD:

- UNESCO Science policy series: Assesing and disseminating scientific information in SEE
- UNESCO Science policy series: Guidelines for a Science and Research Policy in BiH
- UNESCO Science policy series: Science, technology and economic development in SEE
- SEE-ERA.NET report: National systems of research and development in Western Balkan Countries
- SEE-ERA.NET: Report on the RTD needs of the West Balkan Countries
- SEE-ERA.NET report: National RTD programmes for Southeast Europe

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The Project

The Information Office of the Steering Platform on Research for Western Balkan Countries (***see-science.eu***) acts as a source of high quality targeted information on research in the Western Balkan countries (WBCs) by supporting the Steering Platform through a regular eJournal, analytical studies and reports and directories.
The Information Office contributes to a dialogue on S&T issues between the EU and the Western Balkan countries and the integration of the research and innovation systems of the WBCs into the European Research Area (ERA).
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The Author

Evelina Santa holds an MA in neurobiology and is academically approved balkanologist. Her family roots are in Vojvodina, the norther part of Serbia and she was raised bilingual (Serb/Croat – German). She has started to work in FFG as project manager of the FP6 ERA WESTBALKAN and the FP6 NIP BiH project. The knowledge of the languages and of the mentatility has enabled her to get deeply involved into her work and to build strong partnerships in WBC.
The successor project, ERA WESTBALKAN+, is based on her initiative. Also, together with her colleague from FFG, she initiated the Westbalkan Roundtable, bringing together all Austrian key-players engaged in RTD with WBC twice a year. She recently left FFG to work in Madrid/Spain for the RTD system there.