

ERAWATCH COUNTRY REPORTS 2012: ALBANIA

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The Country Report 2012 builds on and updates the 2011 edition. The report identifies the structural challenges of the national research and innovation system and assesses the match between the national priorities and the structural challenges, highlighting the latest developments, their dynamics and impact in the overall national context.

The first draft of this report was produced in December 2012 and was focused on developments taking place in the previous twelve months. In particular, it has benefitted from the comments and suggestions of Elisabetta Marinelli from JRC-IPTS. The contributions and comments from are also gratefully acknowledged.

The report is currently only published in electronic format and is available on the [ERAWATCH website](#). Comments on this report are welcome and should be addressed to jrc-ipts-erawatch-helpdesk@ec.europa.eu.

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EXECUTIVE SUMMARY

Albania has restructured its research and innovation system and introduced new strategies for research and innovation and higher education, as well as various programmes for funding during last 7 years. The traditional system dominated a single institutions was reorganised and R&D performance is now concentrated in public sector centres and institutes, higher education institutions, line ministries, and the government sector. Ministry of Education and Science is the supreme governing authority in the area of science and technology. This governance system comprises the Academy of Sciences of Albania, Universities, Ministries' Scientific Research Directorate and the R&D private sector. The technology policy is drafted upon the Albanian Strategy of Research, Technological Development and Innovations (ASTDI) (2009-2015). National Research Development Programs for Innovative and Technological Development are under the responsibility of Agency of Research, Technology and Innovation (ARTI)¹. The Albania research system made up of 11 public and 38 private universities, 4 public researches institutes, 11 research centres related to the industry and agriculture area, agencies and other scientific research legal entities.

Recent structures, including [Academy of Sciences of Albania \(ASA\)](#) with the ASA's institutes incorporated into the universities and public research institutions, the [Albanian Agency of Research, Technology and Innovation \(ARTI\)](#), [National Agency for Information Society \(NAIS\)](#), and the [Business Relay and Innovation Centre \(BRIC\)](#), now play active roles in their respective sectors, also managing programme funding. However, private sector R&D remains minimal, with a low level of innovation in private firms. The R&D in Albania continues to be mostly state funded. By the end of 2011 it became evident that there is a growing gap between planned funding and actual funding allocated and disbursed to the Agencies that are supposed to implement foreseen programmes. Most R&D funding comes from the public sector, but public sector funding is experiencing delays in funding and bottlenecks in programme implementation, while the private sector still only contributes marginally to overall research and innovation.

National priorities continue focus on sectors that are considered important in ensuring sustainable development and addressing societal challenges while stimulating growth and productivity to counteract high unemployment (forecasted to increase in 2012 as per official sources of GoA from 13.3% to 13.5%). Albania's national research priorities (2010-2012) are reflected in seven national research programmes managed by ARTI: ICT; agriculture (veterinary, zoo-technical), food and biotechnology; social sciences and Albanology; biodiversity and environment; water and energy; health; and materials. ICT is considered a major driver for modernisation and innovation. Innovation priorities are outlined in the [Business Innovation and Technology Strategy \(BITS\)](#) which, through the BRIC, assists SMEs in adopting new technologies, innovations and market strategies. Yet bottlenecks and delays in implementing programmes and strategies have led to slow progress in improving levels of performance and R&D output. While the innovation system is still weak in terms of viable partnerships between public research performers and the private sector, the new non-profit ICT Training and Resource Centre (PROTIK) is expected to encourage such partnerships in the priority ICT field. However, there is little private initiative for research in the field of energy, agriculture, molecular biology, biotechnology, natural resources and other related fields. In addition, it should be highlighted that development of private entrepreneurship in research, development, technology and knowledge transfer has, in all cases, been speedier than that of public institutions, because of the absence of stimulating financial mechanisms for researchers and genuine public institutional reform of the science system².

¹ http://wbc-inco.net/attach/WBC-INCO.net_AL-Report_Energy_2012_v02.pdf

² http://wbc-inco.net/attach/WBC-INCO.net_AL-Report_Energy_2012_v02.pdf

The following continue to be during last year, the main structural challenges for Albania's research and innovation system.

- *Low level of innovation and performance in the national research and innovation system:* Research performance statistics lag behind the EU27 average and most Balkan countries. Private sector R&D remains minimal, with a low level of innovation in private firms.
- *Lack of reliable and comparable statistics on R&D and innovation:* UNESCO publishes partial data regarding R&D funding and performance for 2007 and 2008, while Eurostat statistics are not available. Albania is not covered in the Innovation Union Competitiveness (IUC)³ report or Innovation Union (IU) scoreboard, making it difficult to track progress or compare developments in Albania with EU and neighbouring countries. Limited availability of data also makes it difficult to estimate the extent of innovation activity or outputs in the enterprise sector.
- *Limited cooperation between universities and public research institutions with the private sector.* Albania's innovation system lacks synergies and cross-fertilisation between research and business, impeding commercialisation of research.
- *Delays and inefficiencies in implementing strategies and programmes* to be managed by new structures make it difficult to *translate strategy objectives into concrete results.*
- Remaining *weaknesses in human resources development* are reinforced by slowness in achieving "brain circulation" and educating new researchers and PhDs in S&T fields.

As far as policy mix is concerned, this has generated mixed results in facing the structural challenges identified. It still has substantial progress to make in transitioning from an "efficiency-driven" economy to an "innovation-driven" economy. While national research and innovation strategies, agencies and programmes have been developed and launched, major weaknesses remain in framework conditions for private investment in R&D and private-public cooperation and knowledge transfer. These are compounded by unattractive employment conditions for researchers, lack of effective mechanisms for monitoring and evaluation in order to develop and sustain overall quality and competitiveness, weak linkages between research and societal challenges as well as a low social valuation of R&D and scientific activity. International partnerships remain limited or in initial stages of development. Albania still relies heavily on bilateral and international donor support rather than endogenous dynamics and partnership cooperation in key sectors, though recent initiatives involving cross-border and bilateral S&T cooperation that have been launched in agriculture and renewable energy are highly promising. Policy measures point in the direction of improving innovation not only in the public sector, but also within SMEs operating in the priority sectors. However there needs to be greater emphasis on programmes linking public research to market demand. Market needs are largely addressed by imports rather than domestic R&D and production activities, unless these can be stimulated by additional funds or fiscal policies such as introducing tax credits for R&D. As a complementary measure over the medium term, there is a need to train an increasing number of knowledge workers for promising fields (energy, environment, agricultural biotechnology, ICT, etc.), necessitating revising university programmes to teach relevant and up-to-date courses as well as engaging guest professors from abroad. As confirmed by the Albanian government economic and fiscal program⁴, for the period 2012-2014, Albania will continue to prioritize investments allocations to sectors such as education, infrastructure, health care, and agriculture. Over the short term the Albanian government will need to ensure that the recently established key agencies (ARTI, BRIC, and NAIS) have access to promised funding and sufficient institutional capacity to allow translating strategies into concrete results. This will need to be reinforced by implementation of a regularly functioning performance system to evaluate policies, especially as regards ERA pillars and objectives. Finally, Albanian researchers need to accelerate the process to

³ Nor in the Global Creativity Index, which focuses not only on education, S&T capacity, but also arts, music and design and openness to immigrants, minorities, and the gay, lesbian and trans gender communities.

⁴ Economic and Fiscal Program 2012 - 2015

become true partners in international efforts rather than remain as recipients of support, and be able to produce knowledge results and fully collaborate in knowledge production.

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1 INTRODUCTION

The territory of Albania has an area of 28,748 km² and is located on the Balkan Peninsula, wedged between Montenegro, Kosovo, FYROM, and Greece. With a long coast on the Adriatic and Ionian seas, around 70% of the country is mountainous. Its administrative units are comprised of 12 regions, 36 districts, 315 communes and 2900 villages⁵. The country has a total [population](#) of 2,831,741 inhabitants, where 53.7% of population reside in urban areas. In 2011 Albanian economy continued to experience a positive growth of around 3.1%, slightly down from 3.5% in 2010, though forecasted to drop to 1.1% in 2012 according to IMF. GDP composition by sector is made of: agriculture 20.4%, industry 19.1%, services 60.5% (2012 est.). Services sector led the economic activity during 2011 with a real growth of about 4.2%, followed by industry and agriculture increasing in real terms by 2.9% and then construction, which barely returned to positive growth of 0.2% after almost two consecutive years of deep contraction. In the beginning of 2012 Albanian economy went through the second most difficult period of time since the end of 2008. GDP recorded a slight unexpected contraction of -0.2% in the first quarter of 2012 compared to the same quarter of the previous year. GDP reached around €9.2 billion (1,297.7b Albanian lekë (ALL) 2011.⁶ During the recent years, the flows of foreign direct investment in the country witnessed a progressive increase, although under pressure from the general economic and financial crisis that affected the international markets. The flow of foreign direct investment (FDI), according to the [Ministry of Finance](#), has increased substantially from about 250 million in 2006 to about 850 million euro in 2011, so as more than tripled. Nevertheless, in late 2011 the flow of FDI was estimated at 7.7% of GDP, about 1.2% lower compared to the level recorded in 2010. Developments in FDI in the country reflect the preference of foreign investors in terms of lower production costs and potentially higher profit margins.

Estimates corroborated in discussions held during the preparation of the [National Strategy of Science, Technology and Innovation 2009-2015](#) suggest that Gross Expenditure on R&D (GERD) was close to €15m in 2009. As such, spending on scientific research remains low, estimated at less than 0.2% of GDP in 2009. However, the budget for R&D remains quite low also in 2012, at 0.04% of GDP, similar to that allocated in 2011⁷. This is the lowest rate in Europe and far below the EU-27 average and the Lisbon target of 3%. The only available UNESCO estimates indicate that GERD in 2008 was 0.15% of GDP and totalled \$40.2 million (around €27.34 million) in terms of PPP\$, while the amount in local currency was reported as 1,665.5m ALL (around €13.651 million). GERD per capita was indicated as \$12.6 (€8.56) in PPP\$, which represents only a tiny fraction (1.8%) of the EU-27 GERD per capita of €481.60 recorded in 2008. UNESCO data also show that 80.8% of R&D funding came from the state budget, 8.6% from higher education, with only 3.3% from business enterprises. Around 7.4% of GERD was funded from abroad in 2008, down from 12.0% in 2007. R&D performance is concentrated in public sector centres and institutes, higher education institutions, line ministries, and the government sector. UNESCO statistics indicate that in 2008, 52.1% of R&D was performed by the public sector and 47.9% by higher education. UNESCO also reports that GERD funded by business enterprises totalled 13.1m ALL in 2007 and 54.3m ALL in 2008 (\$0.308m and \$1.311m in current PPP\$, respectively, or approximately €0.225m in 2007] and €0.891m 2008). This is the first standardized indicator of the size of BERD in the country. Other estimates suggest that the ratio of gross business enterprise expenditure on RTD to GDP is around 0.0025%.

The scientific, technological and economic specialisation of the country derives from its heritage as a highly agricultural society and producer of primary resources. The *National Programmes for Research and*

⁵ Albanian Institute of Statistics, CENSUS, October 2011

⁶ Albanian Government Economic and Fiscal Program 2012 – 2015.

⁷ EC Progress Report – Albania 2012

Development cover seven research fields: ICT, health, agriculture, nutrition and biotechnology, biodiversity and environment, water and energy, material sciences, social sciences and Albanology.

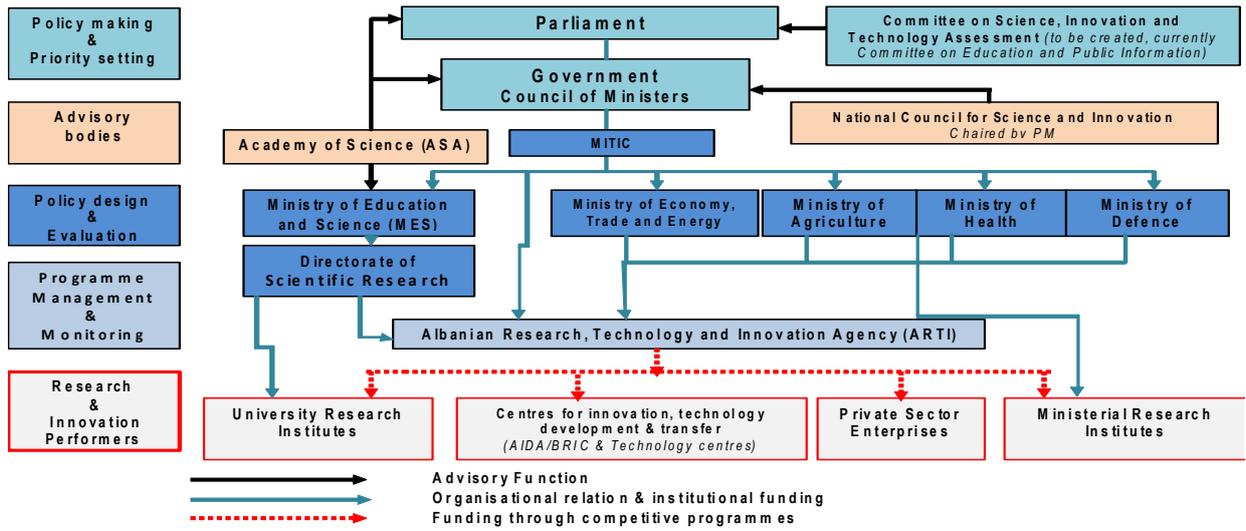
The national research and innovation system involves actors at political, operational and research performer levels (see Figure 1).

- Policy-making and priority setting are undertaken by the Parliament and the Council of Ministers. The Parliament is advised by the Committee on Education and Public Information. The Council of Ministers is advised by the National Council for Science and Innovation and the [Academy of Sciences of Albania \(ASA\)](#).
- The [Ministry of Education and Science \(MES\)](#) is responsible for formulating education, science and R&D policy, and is supported by the [Academy of Sciences of Albania \(ASA\)](#) and the [Albanian Agency of Research, Technology and Innovation \(ARTI\)](#), set up to improve policy implementation and integration between different research actors, including public and private sector entities, in the fields of R&D, S&T and Innovation.
- The [Ministry for Innovation and Information Communication Technology](#) focuses on the development of ICT and Information Society, and is supported by the [National Agency for Information Society \(NAIS\)](#) and the National Authority for Electronic Certification (AKCE). It also oversees the Authority of Electronic and Postal Communications (AKEP).
- The [Ministry of Economy, Trade and Energy \(METE\)](#) is responsible for promoting innovation and technology dissemination among Albanian SMEs. It oversees the activities of the [Albanian Investment and Development Agency](#)⁸ (AIDA) and the [Business Relay and Innovation Centre](#)⁹ (BRIC), established in June 2011 as a special department within AIDA that provides services related to innovation and technology transfer to enterprises.
- Further government bodies with a role in overseeing or promoting innovation in their respective sectors include the [Ministry of Agriculture, Food and Consumer Protection \(MAFCP\)](#), the [Ministry of Environment, Forests and Water Administration](#), the [Ministry of Health](#), and the [Ministry of Defence](#).
- So far business enterprises play only a marginal role in the research and innovation system, though various programmes managed by ARTI are aimed at changing this situation.

Figure 1. National Innovation System (ACER 2012)

⁸ Law no. 10303, dated 15.07.2010 “On creation and organisation and functioning of the Albanian Investment Development Agency” that entered into force on 26 August 2010.

⁹ Decision of the Council of Ministers (DCM) no. 104, dated 09.02.2011, entered into force on June 2011.



2 RECENT DEVELOPMENTS OF THE RESEARCH AND INNOVATION POLICY AND SYSTEM

2.1 National economic and political

Since the result of 2009 parliamentary elections and 2011 local elections were refused by the Socialist Party and the coalition led by it in opposition, the political crisis between government and opposition has worsened over time, with parliamentary debates, showing lack of willingness for constructive dialogue. Weak steering capabilities, inefficient use of resources and divisive politics have further undermined the fragile achievements of democratic transition. Troubling political trends during this period culminated in January 2011 with violent protests. Finally, the political agreement of November 2011 between ruling majority and opposition marked the end of the political stalemate. This agreement set out to address electoral and parliamentary reform and to create the political climate for joint reform efforts in other areas. As a result, political dialogue and cooperation has improved considerably allowing for progress in core reform areas including electoral reform. The positive international signals over the last two years, including NATO membership and the application for European Union membership in April 2009 and visa liberalization within the European Union in December 2010 has not helped to reverse problematic domestic trends. The refusal of the Albanian EU application with the observation that the country has yet to achieve “effectiveness and stability of democratic institutions” was another warning of increasing reverse trends in transformation¹⁰. On 11 June 2012, a new president was elected in the fourth round of the election with the votes of the ruling majority only.

Despite a generally polarised political landscape, the main parties agree on the key essentials of a market economy. Nevertheless, the political situation renders the adoption and implementation of structural reforms more challenging. The government’s main economic policy objective is still to preserve macroeconomic stability, which was broadly maintained. However, the increase in the fiscal deficit in 2011 led to a further rise in the relatively high public debt, aggravating Albania’s macro-financial vulnerability. Progress on structural reform remains insufficient. In particular, the privatisation programme has practically stalled and the institutional set-up to protect property rights and enforce the rule of law is weak. According to now cast and forecast, the Albanian economy will register low positive growth rates of 1.1% for 2012 and accelerate somewhat at around 3.1% in 2013, 3.9% in 2014 and 4.1% in 2015. During the recent years, measures were taken in order to improve the investment environment of the country considering the problems faced with the business environment and competitiveness of the country. In order to support private sector development, a comprehensive regulatory framework was undertaken based on the reduction of administrative burden and cost of doing business. Moreover, the effort to promote FDI by strengthening institutional arrangements are also supported and assisted by international organizations such as World Bank/FIAS, UNDP and UNCTAD. Liberalized economic framework, lowering corporate tax rates and tariffs and relatively stable exchange rate developments, macroeconomic policy and improved conditions for doing business in Albania are expected to favour FDI flows to the country and continue to create an investor-friendly business environment for attracting FDI. There are no yet national accounts statistics on total investment in 2012 but from the indirect available indicators seems that investment is the most negatively affected component of the aggregate demand during 2012. Despite an increase of by around foreign direct investment of 20% during the nine months of 2012 and somewhat higher public investment in the second quarter compared to the same quarter of 2011, other related indicators point to a contraction of private and total investment. The annual inflation rate averaged 3.5% in 2011, remaining within the Bank of Albania’s target band for inflation. At the beginning of the year the inflation rate and inflation expectations were above the upper bound of the target range, and toward the end of the year they declined toward its lower bound. Health,

¹⁰<http://www.bti-project.de/fileadmin/Inhalte/reports/2012/pdf/BTI%202012%20Albania.pdf>

education, infrastructure and agriculture remain priority areas within public investment. However, the main public investments (about 55% of total public investment) are concentrated on road infrastructure.

The level of investment in research as a share of GDP is difficult to establish due to the lack of reliable statistics. However, it is estimated that the national level of investment in research and technological development is still very low and has not increased since 2010, despite the targets set in the national strategy for science, technology and innovation for 2009-2015. This was confirmed also by the “EC Progress report for Albania 2012”, assessing there was no increase in the level of investment in research and no action to stimulate investment in research and innovation by the private sector or to support private public partnerships. Although, the national funding for research has not increased, the system has improved thanks to a new selection process for projects to be funded directly by the departments¹¹. However, no international peer review is being applied so far. The Albanian Business Research and Innovation Centre (AIDA) started to stimulate innovation by entrepreneurs by granting technology audits to SMEs with innovative ideas. Finally, the EC Progress Report concludes assessing that “there was little progress in the area of science and research in Albania”, recommending for further efforts to strengthen the research and innovation capacity and increase the country’s competitiveness.

Public expenditure on education is estimated to have reached 3% of GDP in 2011, while the budget allocation for the Ministry of Education and Science and the Ministry of Health, as in 2011, continue to be in 2012 respectively third and fourth fund. Ministry of Education, compared with 2011 has a budget increase to 1.5%, but the funds allocated to represent only 2.79% of GDP¹². Whereas, there no development to be reported with regard to increasing public spending on research and development (R&D). The budget for R&D remains quite low, at 0.04% of GDP in 2012, similar to that allocated in 2011. There is a lack of scientific research institutions and collaboration between universities and industry on R&D is weak. The ‘brain gain’ system of bonuses given to employees of the public administration who graduated abroad restarted in 2012 after being suspended in 2011¹³.

Main directions for private sector development 2013 – 2015 are:

- ✓ Implementation of the Business and Investments Strategy for the period 2007 – 2013;
- ✓ Implementation of Innovation and Business Technology Strategy and the Action Plan 2011 - 2016;
- ✓ Implementation of European Principles of the Small Business Act;
- ✓ Strengthening of capacities and improving services of AIDA for foreign and domestic investors;
- ✓ Strengthening the capacities of BRIC (AIDA) and participation in European network of enterprises;
- ✓ Establishment and making functional the economic zones (industrial parks, free zones);
- ✓ Implementation of 3-year Albanian - Italian Program for supporting SMEs through soft credit line and credit guarantee fund;
- ✓ Transposing the Directive 2005/56/EC "On cross-border mergers";
- ✓ Implementation of the financial programs of Competitiveness Fund and Export Credit Guarantees Fund;
- ✓ Implementation of the Innovation Fund and the Fund for the Creative Economy;
- ✓ Evaluation of policies for investments reforms according to the methodology of OECD (IRI 2010);
- ✓ Strengthening public–private dialogue and enhancing the role of Consultative Council of Business;
- ✓ Strengthening and expanding the role of women in private entrepreneurship;
- ✓ Supporting the social business and increasing of the corporate social responsibility;
- ✓ Supporting of the creative industries;
- ✓ Support for start-up

¹¹ EC Progress Report – Albania 2012

¹² Open Data Albania (www.opendata.org.al)

¹³ EC Progress Report – Albania 2012

To support the implementation of the above mentioned measures, in the framework of the Medium-Term Budget Program 2013 – 2015, in the budget of Ministry of Economy, Trade and Energy there are planned 1 941 million ALL, of which 941 million ALL to be financed from the state budget and the rest from the donators.

2.2 Funding trends

UNESCO estimates indicate that Albania's GERD in 2008 was 0.15% of GDP and totalled \$40.2 million (around €27.34m¹⁴) in terms of PPP\$, while the amount in local currency was reported as 1,665,5m ALL (around €13,651m¹⁵). GERD per capita was \$12.6 in PPP\$ (€8.56), representing 1.8% of the EU-27 GERD per capita of €481.60 recorded in 2008. The lion's share of R&D funding (80.8%) came from the state budget, 8.6% from higher education, with only 3.3% from business enterprises. Around 7.4% of GERD was funded from abroad. The *National Strategy of Science, Technology and Innovation*¹⁶ 2009-2015 states that GERD was close to €15 million in 2009,¹⁷ accounting for less than 0.2% of GDP.¹⁸ Under the Strategy, GERD is to increase to 0.6% of GDP by 2015. However, data indicates that the budget for R&D remains quite low also in 2012, at 0.04% of GDP, similar to that allocated in 2011¹⁹. UNESCO²⁰ also reports that GERD funded by business enterprises totalled 13.1m ALL in 2007 and 54.3m ALL in 2008 (\$0.308m and \$1.311m in current PPP\$, respectively, or approximately €0.225m in 2007²¹ and €0.891m 2008²²). This is the first standardised *indicator of the size of BERD* in the country—other estimates suggest that the ratio of gross business enterprise expenditure on RTD to GDP is around 0.0025%.²³

The table below reflects the limited data available on the funding and performance of Albanian R&D. EUROSTAT does not yet report the respective data on Albania.

	2009	2010	2011	EU27
GDP growth rate	3.3%	3.5%	3.1% ²⁴	- 0.3 (2012)
GERD (% of GDP)	0.2	0.2	0.2	2.03s (2011)
GERD (euro per capita)	n/a	n/a	n/a	510.5s (2011)
GBAORD - Total R&D appropriations (€ million)	n/a	n/a	n/a	91,277.1 (2011)
R&D funded by Business Enterprise Sector (% of GDP)	0.225	0.891	n/a	1.26 (2011)
R&D performed by HEIs (% of GERD)	n/a	n/a	n/a	24% (2011)
R&D performed by Government Sector (% of GERD)	73.7	47.9%	n/a	12.7% (2011)
R&D performed by Business Enterprise Sector (% of GERD)	26.3	52.1%	n/a	62.4% (2011)
Share of competitive vs. institutional public funding for R&D	n/a	n/a	n/a	n/a

Data Source: EUROSTAT, March 2013

Data Source: UNESCO; National Strategy of Science, Technology and Innovation; EUROSTAT; INSTAT; 2011 Albania Progress Report, Expert calculations based on UNESCO statistics reported in current PPP\$ amounts.

¹⁴ Source: European Central Bank, ECB reference exchange rate, US dollar/Euro equal to \$1,4708/€1, 2008 data.

¹⁵ Source: Bank of Albania, Euro/ALL exchange rate for 2008 is 1 Euro = 122 ALL (average estimation).

¹⁶ The National Strategy for Science, Technology and Innovation reports all main figures in Euros.

¹⁷ Council of Ministers, Department of Strategy and Donor Co-ordination, National Strategy of Science, Technology and Innovation 2009 - 2015, June 2009, Source:

http://www.dsd.gov.al/dsd/pub/national_strategy_of_science_technology_and_innovation_final_draft_381_1.pdf

¹⁸ European Commission, Stabilisation and Association Albania 2009 Progress Report, November 2010, Source:

http://ec.europa.eu/delegations/albania/documents/eu_albania/2009_progress_report_en.pdf

¹⁹ EC Progress Report – Albania 2012

²⁰ [Beyond 20/20 WDS - Table View](#)

²¹ Source: European Central Bank, ECB reference exchange rate, US dollar/Euro equal to \$1,3705/€1, 2007 data.

²² Source: European Central Bank, ECB reference exchange rate, US dollar/Euro equal to \$1,4708/€1, 2008 data.

²³ Estimates from discussions with MES officials, 2011

²⁴ GDP growth rate 2012 estimate 1.1%

The NSSTI foresees that total cumulative funding for research activities during 2009-2015 will amount to €151.95m, including funding to HEI research institutes (€69.45m), MES research project funding (€30m), World Bank Research Infrastructure funding (€3.3m) and funding for the operation of ARTI (€3.25). The largest share (46%) is to be allocated to higher education research institutes—with the actual final share being much higher, given that universities can participate in National Technology Programmes and will benefit from the Research Infrastructure Fund. The budget shares take into account bilateral and multilateral donor support (including future IPA funds), but not contributions gained via participation of Albanian researchers or institutes in the EU's FP7 or other EU level research funding programmes.

Albania's public sector R&D activities are financed directly²⁵ by the state budget, national programme financing through the MES, programme funding under bilateral programmes, and international collaboration. Since 2010, the main public research programmes are coordinated by ARTI. These funds are awarded to different types of institutions or individuals in the form of *competitive grants* from the budget line "Funds for science, technology and innovation (STI)." There was a change in the system for implementing research funding with the *introduction of national programmes with three-year cycles and reduction of the number of priority fields* to seven-funds allocated for the sectorally-oriented national programmes total €2,762,987.50 for 2010-2012. The budget and priorities for the next phase of national research programmes are being developed in the process linked to the definition of the **National Strategy for Development and Integration 2013-2020**, which plays a role in defining new priorities for research.

While not specifically aimed at R&D, funding for innovation initiatives under the [Business Innovation and Technology Strategy \(BITS\)](#) 2011-2016 totals €10.31m, of which €4.8m is dedicated to the *Innovation Fund* which awards grants to SMEs for *product development and process improvement* through technology adoption, among other types of support. BITS is to be mainly funded by foreign donors (€7,893m or 76.5% is expected from the EU and other donors).

Other financial instruments supporting R&D in Albania include third party funding focused on STI; donations from physical and judicial subjects at national and international levels; and the private sector at national and international levels. However, there are as of yet there are no specific budgetary data published on these modes of funding R&D in Albania.

The NSSTI seeks to achieve 40% international funding of GERD by 2015—which can come from EU, other international donor or private investment sources. UNESCO reports the share of GERD funded from abroad as 12% in 2007 and 7.4% in 2008. The results from FP6/FP7 data suggest that European funding remains a marginal, if growing, contribution to the national research system. Albania is also participating in the Competitiveness and Innovation Framework Programme (CIP) in the period 2007 - 2013. Albania is eligible for EIP, the first pillar of the CIP, but it is not yet participating in the Enterprise Europe Network or the EIP's financial instruments.²⁶

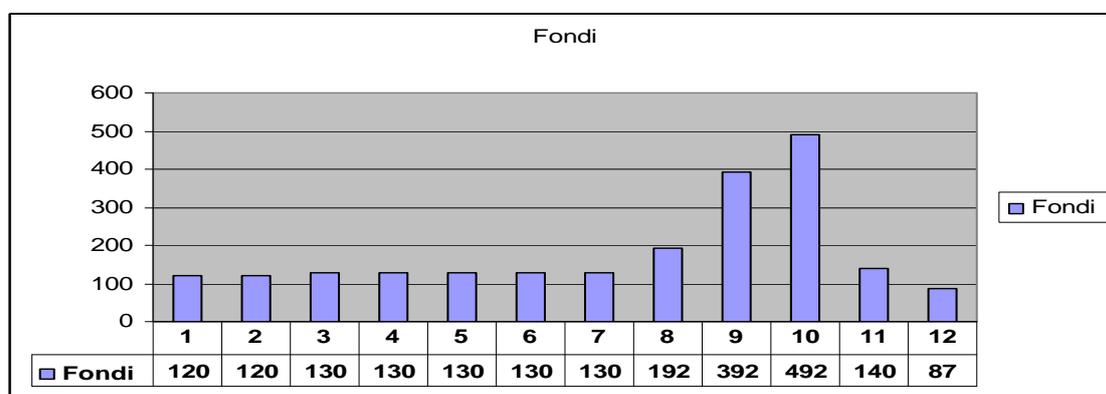
Based on the assessment made through stakeholder's interview in 2011 (for Erawatch Country Report 2011), budget reduction in provided funds for science and technology has been the major concern during 2010 – 2012. For example, for the year 2011 ARTI foreseen/planned a fund of €4,190,403 (578,275,750 ALL)²⁷ for all six national programmes of R&D (in total 7, but the Excellence Fund programme remained under MES implementation). The Ministry of Finance for 2011 allocated to ARTI only €625,173 (90,000,000 ALL), from which €630,434,870,000 ALL) for science programs and €21,739 (3,000,000 ALL) for management and infrastructure. It is noted that the fund provided by the

²⁵ Based on information from MES concerning the current 132 projects being funded in the amount of US\$5m over a 2–3 year period, Source: National Strategy of Science, Technology and Innovation (2009-2015)

²⁶ WBC-INCO.NET "Innovation Infrastructures: Albania" (FINAL VERSION), 22 July 2011, pg. 26.

²⁷ Bank of Albania, Euro/ALL exchange rate for 2011 is 1 Euro = 138 ALL (average estimation).

Ministry of Finance (€630,434 or 87,000,000ALL), results 6.65 times lower than the budget that the Research Department at the Ministry of Education and Science used to have in 2000 (€923,077 or 120,000,000 ALL)²⁸. While, this decrease of budget was not argued by the Ministry of Finance, ARTI should be considered as a national agency that manages all Science fund through competitive procedures. Below is a graph of the provided funds (in million) that shall be granted only through competition from 2000 - 2009 (1 - 10), and the fund that has been provided to ARTI in 2010 (11) and 2011 (12).



(1, 2, 3 represents years 2001 – 2012)

As assessed by ARTI, in 2011 the fund failed to meet projects needs to continue be funded within the National Programmes for Research and Development for the years 2010-2012. Bilateral programs with other countries (all Executive Programs and new foreseen agreements) and those of technology, innovation and infrastructure are blocked.

In addition, as assessed by BRIC the state budget restriction had an impact also on two funds administrated by AIDA/BRIC: innovation and competitiveness funds.

Finally, the review reporting (2011 – 2012) has been accompanied by a slow path for R&D programmes implementation, or postponed until the funding is allocated. In fact, the stakeholders interviewed for the purposes of this assessment²⁹ have confirmed that budgetary restrictions have delayed the implementation of the R&D and innovation – support programmes, therefore research and innovation policy objectives are diminished.

2.3 New policy measures

1. State Budget restriction/decrease for 2011- 2012 to ARTI national programmes for R&D is an indication that availability to support innovation is reduced and this has affected the development of innovation projects.
2. Allocation of funds for both the Competitive and Innovation funds managed by BRIC/AIDA has indicate a positive steps to support SMEs and make them more competitive, but the delay in granting these funds has affected the development of projects.
3. The assignment from Ministry of Education and Science of a new collaboration agreement between Albania and Italy 2012 -2014 shows for a diversification of funds and possibilities for further investment and support to innovation.

²⁸ Bank of Albania, Euro/ALL exchange rate for 2000 is 1 Euro = 130 ALL (average estimation).

²⁹ BRIC (AIDA), METE and ARTI

4. Failure to grant funds for other programmes introduced in the NSTI (until 2013), such as: Fund for transfer of technology and knowledge, Cluster programme; Incubation Programme; Research Infrastructure Programmes; Albanian Centres of Excellence Programme; Research Eagle Grants, affects to a great extent the broadening concept of innovation policies towards addressing societal challenges, supporting research infrastructure in academia, supporting young researchers and innovative project from business and public sector.
5. In terms of funding from abroad, just recently, the European Commission has finalised a series of measures to promote regional cooperation between Western Balkan countries totalling €272.75 million for the period 2012-2013³⁰. The funding earmarked comes under the 2012-2013 Multi-beneficiary and Cross-Border programmes of the EU's Instrument for Pre-accession Assistance (IPA) and will support cooperation with international financial institutions to mobilise funding, help develop civil society, support education schemes such as student mobility programmes, and help beneficiaries meet the requirements for EU membership and align their standards with the EU. The programmes are implemented through specific projects on the country or at the regional level. The next step is the preparation, along with the beneficiaries, of programmes to set the frame for the yearly financial allocation.
6. The Albanian government has benefited for the period 2012 – 2013 from additional funds under the IPA funds for TEMPUS programme by doubling its budget from €1.9 million to €3.8 million³¹. TEMPUS Albania national priorities for 2012 – 2013 are: “Higher Education and Society”: including: a) training of non-university teachers; b) knowledge triangle: education-innovation-research; c) development of lifelong learning in society at large; and “Governance Reform”, including: a) university management and student services; b) introduction of quality assurance; c) institutional and financial autonomy and accountability. Whereas, national priority for joint projects is the development of partnerships with enterprises, along with all priorities mentioned above.

2.4 Recent policy documents

The most important and recent policy documents are National Strategy for Development and Integration 2013-2020 (NSDI) and the Business Development and Investments Strategy 2013 – 2020, replacing the previous strategies 2007 – 2013, which are expected to be published in 2013.

- *NSDI 2013 – 2020* represents the fundamental strategic document of Albania that harmonises in a single strategic document the perspective of sustainable economic and social development, integration into the European Union and NATO structures, as well as achievement of the **Millennium Development Goals**. The Strategy comprised all sector and cross-cutting strategies that had been developed by line ministries and spells out the medium- to long-term vision (2013-2020) of the development of Albania. It links the budgeting to national strategic priorities and goals in a single strategic planning process.
- *Business Development and Investments Strategy 2013 – 2020*, represents a policy document drafted by the Ministry of Economy, Trade and Energy (METE), aiming to guide the government policy towards steady growth and dynamic development of Albanian business entrepreneurship, productivity and competitiveness, investment promotion and orientation and better use of financial, human and natural resources, as well to be able to respond to the challenges of development and integration, regional and global competition, by improving business climate, reducing administrative costs, creating partnerships between government and Business.

³⁰ EC Press release, 27 March 2013

³¹ Tempus Albania, Information Days, available at:

http://www.tempusalbania.edu.al/index.php?option=com_content&view=article&id=130&Itemid=146

- *Albania – United Nations Programme of Cooperation 2012-2016* represents a common action plan for 20 UN agencies (including IOM) with the Government of Albania for the coming five years. The programme substantiates the UN's contribution to national priorities and outlines a series of expected results in four priority areas: Governance and rule of law, Economy and environment, Regional and local development, and Inclusive social policy.
- *Regional Strategy for Research and Development for Innovation for Western Balkans* represents the regional strategy, a project worth €1,500,000 and financed from EU's multi-beneficiary Instrument for Pre-accession Assistance (MB IPA), and will identify existing research capacities and aims to strengthen the innovative capacity of the Western Balkans by stimulating Research and Development (R&D) using the regional potential.

Figure 1 List of new or expected policy documents/papers

Country	Title of the policy document	Publication or expected publication	Responsible organisation and link if possible
Albania	Albania – United Nations Programme of Cooperation 2012-2016	2012	UN and Council of Ministers
Albania	National Strategy for Development and Integration 2013-2020	2013	Council of Ministers
Albania	Business Development and Investments Strategy 2013 – 2020	2013	Ministry of Economy, Trade and Energy
Regional (Western Balkans)	Regional Strategy for Research and Development for Innovation for Western Balkans	2013	Inter-governmental - A Regional Cooperation Council Project

2.5 Research and innovation system changes

During the period 2010-2012 the main change in national innovation policy was the launching of the Business Innovation and Technology Strategy (BITS) 2011-2016 in 2011, as a complementary policy to the National Strategy for Science Technology and Innovation 2009-2015 adopted in 2009. The BITS is linked to the NSSTI in that it seeks support the target of introducing innovation in 100 enterprises and in raising the level of GERD to 0.6% of GDP, by supporting SMEs in engaging in innovation and R&D activities. The BITS focuses specifically on the business community and comes under the purview of METE, whereas the NSSTI is the umbrella strategy for research and innovation for the country as a whole. The BITS introduces specific support measures aimed at different priorities: enabling competitiveness; developing competitiveness.

In 2012 some of the BITS programmes were launched. Also, the public-private partnership ProTIK Innovation Centre, established in October 2011, is supposed to begin operations in 2012 (originally was to start in spring 2012).

2.6 Regional and/or National Research and Innovation Strategies on Smart Specialisation (RIS3)

Smart specialisation for economic development is a new introduced concept to Albania, through targeted support to Research and Innovation (R&I). As it will be the basis for Structural Fund investments in R&I as part of the future Cohesion Policy's contribution to the Europe 2020 jobs and growth agenda, this approach has been recently introduced to the Western Balkan region (WB). The aim to develop synergies with neighbouring countries, based on comparative advantages of their innovation policy. The first event held on the issue was in the frame of the 12th Meeting of the Steering Platform on Research for the Western Balkan Countries (WBC) in middle June 2012, hosted by ARTI in Tirana

and the most recent one is announced to be held in middle April 2013 in Belgrade, Serbia. These events aimed to introduce and discuss the concept of Smart Specialization and its practical implications for the WB region on the road to Horizon 2020. The presentation of the Smart Specialization Strategy helped “understanding the need to prepare and plan well in advance the synergies between Horizon 2020 and other EU instruments”³². Currently, the initiative is reflected in implementing a common regional project (implemented by the Regional Cooperation Council) aiming to draft the first ‘Regional Strategy for Research and Development for Innovation for Western Balkans’.

2.7 Evaluations, consultations

As it was confirmed by the stakeholders interviews analysis, the future of R&D and innovation policy in Albania bases on a mixed scenario, according to which the Albanian Government continues to keep on top of its agenda R&D and innovation strategies, through the revised National Strategy for Development and Integration (to be drafted for the period 2013 – 2020), however due to budget shortcomings, slow economic growth forecasted, and budget deficit to face upon, supporting science and research directly is not likely to happen in the near future. Therefore, the government is more likely to support measures which indirectly support research and innovation, such as: a) creating framework conditions by adapting new relevant laws or amending the existing ones (to be expected in 2013); b) strengthening the recently established national agencies (ARTI; NAIS; BRIC; PROTIK) and reinforcing the coordination and institutional mechanisms; c) increase human capacities to deal with new areas of ICT, S&T; d) procurement of innovation for upgrading its administration and electronic services for citizens, businesses and for public employees.

However, since the innovation support programmes were only set up in 2011-2012, there hasn’t yet been any evaluation yet. While evaluations are required under the NSSTI and BITS, so far none has been undertaken. This was confirmed by BRIC interviews³³, along with the higher interest to evaluate the development impact in SMEs who benefit from the innovation fund³⁴. Instead ARTI has drafted its first Annual Monitoring Report. Moreover, ARTI has published the first Social Sciences Research National Report.

Finally, the focus of future evaluations will be on policy content, strategic sectors and activities; level of use of cost-sharing grants and reliance on foreign sources of funding through international and bilateral programmes; the number and types of public-private partnership (building from ProTIK Innovation Centre experience).

³² Coordination of Research Policies with the Western Balkan Countries: WBC – INCO. NET, available at: <http://wbc-inco.net/object/news/10187>

³³ Erawatch reporting

³⁴ Interview with BRIC Executive Director

3 STRUCTURAL CHALLENGES FACING THE NATIONAL SYSTEM

Despite very good performance in attracting FDI and generating high economic growth over the past decade, Albania lags behind in innovation performance. This is evidenced by very low levels of GERD (estimated at 0.15-0.2% of GDP), low technology and innovation levels of firms and limited private enterprise R&D. UNESCO estimates that in 2008 only 3.3% of GERD was funded by business enterprises (compared to 80.8% by the government sector). FDI tends to have been concentrated in low technology areas of manufacturing and services. Albanian firms have preferred to purchase technologies (mainly imported) on the market rather than developing own solutions through R&D or process innovation--partly due to cost, partly due to lack of qualified personnel. In the *Global Competitiveness Report 2011-2012* (World Economic Forum (2011) which ranks 142 countries in terms of a variety of competitiveness indicators (both statistics and survey opinion results), Albania ranks 78 out of 142 and is categorised as an “*efficiency-driven*” economy, which has not yet made the transition to an “*innovation-driven*” economy. Albania’s country ranking for “business sophistication” (78) is far higher than that for overall “innovation” (123). Its ranking for the subcategory “capacity for innovation” is 119, far below that of Croatia (64) and Macedonia (86) and somewhat below Serbia (110), though ahead of Bosnia and Herzegovina, and it ranks even lower in “quality of scientific research institutions” (134 - practically at the bottom of the list!), compared to Croatia (48), Serbia (61), Macedonia (86), and Bosnia and Herzegovina (98). In terms of USPTO patents grants, Albania is in the last category, with 0.0 patents per million of population. Therefore, Albania represents a low level of innovation and performance in the national research and innovation system. Its main challenges³⁵ are: (i) weak administrative and research capacity; (ii) poor definition of responsibilities and funds allocation, hindering implementation of the Scientific Research Law that merged most scientific institutions with universities. The following structural challenges provide more details on current developments of the Albanian research and innovation system:

1. **Lack of reliable and comparable statistics on R&D and innovation:** Until recently any assessments of Albania’s research and innovation system have been frustrated by a **lack of internationally comparative statistics**. Such data are now becoming available due to the efforts of UNESCO and other international organisations in cooperation with the Albanian government. UNESCO recently published partial data regarding R&D funding and performance for 2007 and 2008, while Eurostat statistics are not yet available for Albania. Albania is not covered in the Innovation Union Competitiveness (IUC)³⁶ Report or the Innovation Union Scoreboard (IUS).
2. **Limited cooperation between universities and public research institutions with the private sector.** So far, Albania’s innovation system has shown serious weaknesses in the lack of synergies and cross-fertilisation between research and business, which has impeded commercialisation of research results. In fact, in the *Global Competitiveness Report*, for the indicator “*university-industry collaboration in R&D*,” Albania is among the lowest ranked in the world - 139 of 142 - and far behind its neighbours, Croatia (77), Serbia (81), Bosnia (84) and FYR Macedonia (92). There is a pressing need to link public research to market demand - such needs are largely addressed by imports rather than domestic R&D and production activities. Reliance on technology imports only marginally improves the prospects for increasing competitiveness and innovation in the economy. Initiatives such as the National Technology Programme and Albanian Centres of Excellence in Science (ACES), announced in the National STI Strategy, are aimed at promoting

³⁵ European Commission, Stabilisation and Association Albania 2009 Progress Report, November 2010.

³⁶ Nor in the Global Creativity Index, which focuses not only on education, S&T capacity, but also arts, music and design and openness to immigrants, minorities, and the gay, lesbian and trans gender communities.

public-private research cooperation, and the intellectual property protection framework has been improved. Yet the two promotion initiatives have experienced delays in implementation, and there has as of yet been only limited intellectual property produced that requires protection. Furthermore, there is a lack of subsidies and tax incentives that might stimulate companies to engage in R&D, and there is no legislation requiring foreign investors to perform R&D in Albania, even though they often introduce new technologies and techniques (i.e. offshore oil drilling, mining, recycling). New opportunities for private companies are foreseen in environmental protection and energy production. These could be promising areas for public-private research and innovation cooperation, given that they also coincide with two of the national research priorities.

3. **Delays and inefficiencies in implementing strategies and programmes:** delays in the release of funding for support measures and insufficient staff capacity to effectively manage funds and programmes in new structures like ARTI, NAIS, and BRIC present major obstacles to the translation of strategy objectives into concrete results. These are among the most serious challenges being faced by the national research and innovation system and are hampering the realisation of the country's national strategy. Certainly, research and innovation could eventually come from the private sector, but in Albania, where the public sector (including public universities and research institute) continues to play the key role in funding and producing R&D, such implementation problems take on an even greater significance. The systemic problems of the public sector are also undermining Albania's credibility as an international partner, for example ARTI's role as an effective interlocutor in bilateral initiatives. *Public Administration Reform* is cited as one of the most important areas where Albania needs to improve, according to the Opinion on Albania's application (November 2010) - this particularly regards absorption capacity of authorities and timely planning.
4. Remaining **weaknesses in human resources development** are reinforced by slowness in achieving "brain circulation" and educating new researchers and PhDs in S&T fields. This is compounded by the need to educate and train an increasing number of knowledge workers in promising fields of the economy (energy, environment, agricultural biotechnology, ICT, etc). In the area of human resources, efforts have been made both to counteract the Brain Drain and to attract foreign professors or researchers. Private universities are playing a bigger role in developing human resources, but the level of quality tends to be low. While some new funds and programmes have been adopted to improve education and reward excellence, more needs to be done to attract students to S&T and engineering fields as well as to improve the employment prospects for graduates by specifically linking academic curricula to the needs of the real economy. University curricula need to be better oriented to training students to perform research that could be of interest to the private sector. Furthermore, there also needs to be improvement in the monitoring and evaluation of the university system in order to better understand the progress Albania has been making toward achieving international standard – a process that began with the adoption of the Bologna process. Again in the Global Competitiveness Report, while Albania is ranked a fairly high 45 for "quality of the educational system" and 42 for "quality of math and science education", it ranks only 100 out of 142 for "local availability of specialised research and training services."

The above-mentioned structural weaknesses all contribute to the fact that **international partnerships remain limited or in initial stages of development**. Due to weaknesses in system performance and limited qualified resources, Albania is still heavily reliant on foreign and international donor support rather than endogenous dynamics and partnership cooperation in development of key sectors. Albanian researchers need to accelerate the process to become true partners in international efforts rather than just recipients of support, and become able to produce and collaborate in knowledge production (scientific publications) and circulation (guest professorships, visiting researcher, etc). FP7 results have been improving slowly, but Albanian researchers could play much larger and more active roles by

providing expertise in fields where they have particular expertise and competence; for example, Mediterranean agriculture and biotechnology; large hydropower, etc. The new IPA programmes (2011-2013) focusing on Environment and Climate Change and Agriculture and Rural Development also provide good potentials for developing Albania's research partnership capacities in these sectors.

Given the lack of a full set of data for Albania to compare to the Innovation Union Scoreboard Indicators, it is difficult to make a meaningful assessment based on the IUS methodology at this point in time. However, even without such an assessment, it can be concluded that Albania would fall into the category of *modest innovators* (which includes Bulgaria, Latvia, Lithuania and Romania). Regarding the enablers used in the IUS assessment, there have been improvements in the supply of higher education with the establishment of new private institutions and in the efforts to improve the curriculum as well as encourage students to study in ST&E fields. However, in the *Global Competitiveness Report 2011-2012*, Albania ranks only 100 out of 142 in the world in terms of *efficiency enhancers* like secondary level education and 89 out of 142 in terms of tertiary education. In terms of the percentage of individuals using the Internet, Albania (45%) ranks above Serbia (40.9%) and Romania (39.9%), but still below the levels of Bosnia and Herzegovina, Montenegro and Macedonia FYR. It would appear that in the areas of Internet and mobile telephony, Albania has made its most significant progress. This is also reflected in a high level of public sector innovation and procurement of high-technology products by different organs of the Albanian public administration. In fact, Albania ranks 58 in terms of "government procurement of advanced technology products" and is well ahead of neighbours including Serbia (92), FYR Macedonia (110) and Croatia (122), though well behind Montenegro (33).

HUMAN RESOURCES	
New doctorate graduates (ISCED 6) per 1000 population aged 25-34	
Percentage population aged 25-64 having completed tertiary education	
Open, excellent and attractive research systems	
International scientific co-publications per million population	
Scientific publications among the top 10% most cited publications worldwide as % of total scientific publications of the country	
Finance and support	
R&D expenditure in the public sector as % of GDP	0.2%
FIRM ACTIVITIES	
R&D expenditure in the business sector as % of GDP	
Linkages & entrepreneurship	
Public-private co-publications per million population	
Intellectual assets	
PCT patents applications per billion GDP (in PPS€)	
PCT patents applications in societal challenges per billion GDP (in PPS€) (climate change mitigation; health)	
OUTPUTS	
Economic effects	
Medium and high-tech product exports as % total product exports	
Knowledge-intensive services exports as % total service exports	
License and patent revenues from abroad as % of GDP	

Data Source: [Innovation Union Scoreboard 2011](#)

4 ASSESSMENT OF THE NATIONAL INNOVATION STRATEGY

4.1 National research and innovation priorities

The problems affecting Albanian society and the weaknesses in the research and innovation system, including the human resources dimension, have been identified and dedicated policies have been presented. In some cases, for example business innovation, the strategy and agency have only been launched in 2011. The main problems are not a lack of identification of problems or the absence of strategies, programmes and agencies, rather their implementation in order to bring about the desired results.

Albania has adopted several key multi-annual strategies supporting the development of the research and innovation system and set up structures to implement them. These strategies are implemented against the overall context of the [National Strategy for Development and Integration \(NSDI\) 2007-2013](#),³⁷ which spells out the country's development goals in a cross-sectoral approach. The strategies were formulated to address specific weaknesses as well as to develop certain perceived strengths enjoyed by the country.

The main priorities and policy developments of the past three years are outlined below:

- The multi-annual [National Strategy for Science, Technology and Innovation](#)³⁸ 2009-2015 adopted in **July 2009** is the main policy document outlining Albania's research and innovation strategy. It was developed by the MES with support from UNESCO, in response to an assessment of Albania's strengths and weaknesses, in particular its lagging position in Europe and the Balkan region. It spells out specific priorities and allocates public funding not only to research undertaken by public institutions, but also by private firms. It highlights **the importance of foreign funding in developing Albania's innovation and research system**. The responsibility for managing funding programmes is to be transferred in large part from the MES to **ARTI**, which will act as an important interlocutor between the government, universities and private firms operating in priority sectors. The NSSTI introduced programmes and funds focused on improving the research infrastructure, expanding graduate and post-graduate programmes, and creating sustainable linkages between academia and the private sector. The Strategy **introduced competitive-based funding criteria** (competitive calls for projects or grant applications) into the main policy instruments. The NSSTI outlined specific targets for R&D (GERD reaching 0.6% of GDP by 2015), innovation (in 100 companies) and foreign cooperation funding (40% of GERD). While monitoring and evaluation mechanisms are foreseen for the funding programmes, most programmes have only just started or are about to begin, so that there are no concrete results yet.
- METE launched the [Business Innovation and Technology Strategy \(BITS\)](#) in 2010 and its respective Action Plan to implement the [Strategic Programme for Innovation and Technology Development of SMEs for 2011–2016](#) (approved February 2011) in 2011. Supported by a EuropeAid project,³⁹ it was recognised that Albanian firms' "technological capacity" to upgrade

³⁷ A strategic document which combines country's medium and long-term economic and social development objectives in accordance with EU integration and NATO agendas, as well as with Millennium Development Goals, approved by CoM Decision No. 342 dated 12.03.2008.

³⁸ The National Strategy for Science, Technology and Innovation reports all main figures in Euros.

³⁹ Supporting SMEs to become more competitive in the EU Market, Republic of Albania, EuropeAid/127727/C/SER/AL.

by absorbing existing advanced technologies is weak and that innovation is a firm-based process; however Albania did not have a specific and targeted strategic approach to business innovation and technological development, as this is only implied in the NSSTI. The BITS and its Action Plan are being implemented by the Business Relay and Innovation Centre (BRIC) that was set up within AIDA and became operational in June 2011. The BITS and its Action plan will be implemented by BRIC in cooperation with other stakeholders. Its main objectives are to develop innovation in key sectors; to initiate, import, modify and diffuse new technologies in enterprises; to increase the capacity of business-support organisations to assist in the innovation of enterprises; to assist directly with technical information; to assist enterprises to gain external funding for innovation activities; and to enable the creation and survival of new innovative firms. For this purpose, four main programmes / projects will be implemented in the period 2011-2016: 1) Innovation Fund; 2) Business Innovation Services; 3) Business Incubator Programme; and 4) Albanian Cluster Programme.

Several other currently active Strategies that complete the framework of the national innovation strategy, complementing the NSSTI, include:

- The [National Strategy for Higher Education](#) 2008-2013 increases university autonomy, seeks to strengthen links between research and higher education, increase international S&T cooperation, improve quality of teaching at university and masters levels, including doctoral/post-university studies; increasing students in science, mathematics and engineering (19% vs. approximately 25% in many countries in the region); and bringing PhD standards in line with those of the European Higher Education Area.
- The [Cross-cutting Strategy of Information Society](#) (2008-2013) emphasises the role of ICT as a driver of innovation in driving the modernisation of the economy, the public administration and improving access of citizens to information and public services. Since 2010 NAIS has engaged in an ambitious Information Society programme, starting with public administration informatisation and installing a modern high-speed telecommunications infrastructure. It is hoped that experience and knowledge gained in working with ICTs will stimulate endogenous innovation within the entities that use them and lead to a new generation of ICT innovators in both public and private sectors, as well as companies in other sectors that will be able to successfully exploit the capacity of these new systems in their business dealings. ICT has become a main driver of public sector innovation. The establishment of the PROTIK in October 2011 is a right step in the direction of promoting ICT innovation in public-private partnership.
- The [Sectoral Strategy on Employment and Vocational Training 2007 – 2013](#),⁴⁰ promoted by the Ministry of Labour and Social Affairs, supports instruments that contribute to the enhancement of *social innovation*. Although the specific term “*innovation*” has not been used in the Strategy, the “*development and strengthening of competition in the market through production of more competitive goods, transfer of new technologies and know-how*” is one of the principal aims in supporting SMEs.

Albania’s national research priorities for 2010-2012 are reflected in seven national research programmes managed by ARTI: Information Systems and Technologies (ICT); Agriculture (veterinary, zoo-technical), Food and Biotechnology; Social Sciences and Albanology; Biodiversity and the Environment; Water and Energy; Health; and Materials. The programmes address sectors considered important in ensuring sustainable development of the economy and society and addressing societal challenges such as access to food and energy, protecting the environment, demographic change (aging society, preservation of Albanian culture and identity) and stimulating growth and productivity to counteract high unemployment.

⁴⁰ Approved by the Council of Ministers, Decree Nr. 751, 7 November 2007

Finally, in the area of defence/security, an intensification of R&D activities is foreseen as part of the long-term Plan for the Development of Military Forces 2020 and Albania's involvement in NATO's Science for Peace Programme. National priorities in the NATO Programme include Environmental Security, Information Technology, Forecasting/Prevention of Catastrophes, Food Security, Biotechnology/Bioscience and Human and Societal Dynamics.

4.2 Evolution and analysis of the policy mixes

Beginning in 2006, Albania implemented a substantial restructuring of its R&D and innovation system and adopted a new policy mix, after emerging from a closed and centralised system where all research and academic activities were under public control. Within the framework of Albania's membership in the NATO and the EU Accession process, the required high rates of socio-economic development necessitated strengthening the role of science, technology and innovation.⁴¹ Despite the adoption of the country's first research and innovation strategy nearly three years ago in July 2009 and the adoption of a National Strategy of Higher Education in 2008 as well as other multi-annual Strategies, Albanian society as a whole has only recently started to recognise the role of R&D and excellence in education and training in ensuring further economic growth. Businesses still tend to simply import better products from abroad and hire foreign staff for temporary jobs. Albanian companies have yet to fully appreciate the impact that increased research could have on their own business. While the brain drain has slowed down in recent years, thanks in part to initiatives like Brain Gain and the Excellence Fund and the impact of the economic crisis in the key emigration destinations (Greece, Italy), jobs outside Albania are often more attractive to researchers in terms of pay and advancement possibilities.

In this context, among the most important developments in recent years is the increasing emphasis on the role that must be played by the business sector, not only in generating output (i.e. GDP growth), but in driving innovation and competitiveness in the country. The government had effectively promoted pro-business and -investment policies, which were successful in attracting large amounts of FDI since 2006, though the technological level of such investments remains relatively low, constrained by the availability of adequately skilled workers and low levels of productivity. In the context of EU-Enlargement, it was recognised that Albania must increase its competitiveness and ability to respond to emerging national and international challenges by improving its research and innovation system, or remain a backwater on the periphery of Europe. While this was first recognised in the NSSTI in 2009, in 2011 the BITS was launched and the BRIC was established to improve SME innovation, though it is still too early to determine the effectiveness of the "business innovation" approach.

The drafting of a **new revised National Strategy for Development and Integration 2013-2020 (NSDI) is expected in 2013, which** aims to address all the problems of the respective Action Plan and the strategic issues of the European Commission progress reports"⁴². The main priorities of NSDI are: **Albania – a developed country; an integrated country; Digital Albania, Open Government.** Knowledge has been stated as the main pillar of the country's development. The national strategy will further strengthen the policy supporting ICT sector and ICT skills among young entrepreneurs in order to increase the businesses competitiveness.

Regarding the policy mix, **Albania has drafted the main national strategies and identified the structural challenges and priorities for development of the R&I system.** The formulation of the strategies was supported by donor organisations working closely with relevant ministries and stakeholders, to improve linkage between policy and real needs. On the other hand, among the most important structural challenges in the realisation of the strategies have been the delays in funding of

⁴¹ UNESCO, Science Policy for Sustainable Development, Minister of Innovation and Technology, Mr. Genc Pollo, Presentation of the Cross-Cutting Strategy of Science, Technology and Innovation, Source:

<http://www.unesco.org/new/en/natural-sciences/science-technology/sti-policy/south-east-europe/albania/>

⁴² CoM meeting, 21 December 2011, Prime Minister Declaration

programmes and still inadequate staff capacities to effectively manage initiatives. Furthermore, lack of available standardised and comparable form statistics —the latest are 2007 - 2008 UNESCO statistics and NSSTI 2009 limited data - makes it too difficult to determine whether there has been any progress, where it has occurred and how Albania compares to other countries in the EU and the Balkan region. This also makes it difficult to understand if private sector R&D has indeed increased as a result of NSSTI programmes. More recent data in order to track research and innovation developments over the last three years are needed.. Therefore, only when monitoring and evaluation feedback becomes available it will be possible to assess impact of the national strategy. Regarding the lack of university/public research institute cooperation with private firms, this is supposed to be addressed by ARTI and several NSSTI programmes, but again due to funding delays and problems in implementing programmes, there may need to be other measures such as tax incentives for private firms or subsidies for university researchers to more effectively overcome this structural weakness.

4.3 Assessment of the Policy Mix

The Albanian policy mix has generated mixed results in facing the structural challenges that were identified. It still has substantial progress to make in transitioning from an “efficiency-driven” economy to an “innovation-driven” economy, as indicated by higher levels of innovation and performance indicated by R&D levels, tertiary education in STE fields, HRST employment and the number of innovative SMEs and cooperation between public, higher education and private research performers as well as partnerships in international projects. As indicated in CR2010 and the Trend Chart Integration report on Albania, major weaknesses remain in framework conditions for private investment in R&D and private-public cooperation and knowledge transfer. These are compounded by unattractive employment conditions for researchers, lack of effective mechanisms for monitoring and evaluation (though spelled out in the NSSTI) in order to develop and sustain overall quality and competitiveness, weak linkages between research and societal challenges as well as a low social valuation of R&D and scientific activity.

Improving level of innovation and R&D performance

Private sector innovation: The NSSTI objective to increase innovation in 100 private companies either through investment in own R&D or in partnership with academic research institutions or foreign partners is to be realised with the support of new structures (ARTI, BRIC, NAIS) that were set up to cooperate with the private sector in research and innovation initiatives. However, in order to effectively deliver results, the agencies need to closely collaborate with companies and focus on two types of innovation-*research and business driven*-linking potentially exploitable R&D results and innovative business opportunities. In order to gradually increase cooperation amongst the various elements of the “Innovation system,” it will be important to work with organisations representing specific sectors of the economy to enable them to motivate and raise awareness of their member firms about innovation.

BRIC is the main body for coordinating and delivering business innovation and technology services and initiatives for SMEs. It is also a representative organisation for Albania in the EU-funded competitiveness, innovation, and technology focussed programmes and initiatives, and functions as the executive body for the implementation of the *BITS*. However, it has only started operating in the summer of 2011. It remains to be seen how effective its innovation measures and structures will be in increasing private investment in R&D. Previous experiences with cluster initiatives (which are also now being promoted by the BRIC) were not successful.

There are some areas of the policy mix to promote private R&D that still need to be addressed. While there are no restrictions on private investments in R&D, the *policy framework still lacks incentives for such investments*. In addition, the business sector needs to be stimulated to upgrade its capacity to cooperate with research institutions and commercialise the results of research carried out nationally, as well as

bringing its technologies up to international standards through purchase of advanced machinery, including related organisational change and training. In this respect, EU IPA funding should be mobilised wherever possible and access for Albania to the Competitiveness and Innovation Programme (CIP), including Enterprise Europe innovation in enterprises, will play an important role.

Promotion of innovation in the public sector, mainly in ICTs, has been a key priority in the policy mix. Over the past decade, the Albanian Government has focused on ICT as a main driver of economic, political and social development, evolving from a low-tech, inwardly looking state to a potential regional leader in e-Government, and connectivity, particularly as major infrastructural investments are being made. The establishment of PROTIK as a PPP between the Albanian Government, the Albanian-American Development Foundation (AADF) and various private ICT companies and Albacom represents an important step in the development of the potential for further public sector innovation and for development of innovations in the Albanian private sector.

However, while there have been significant efforts to introduce innovation in public sector services (i.e. procurement, taxes, e-government, etc), there appears to be a lack of consistency between supply and demand-side policy developments. The sophisticated services introduced may not always be the ones that are most urgently needed and large segments of the target group may be unable to use them (people in rural villages without broadband access, older people who have limited ICT skills, foreigners and linguistic minorities, etc).

Improving cooperation between universities and PROs with private sector

ARTI is the main structure aimed at such cooperation; however the funding for the programmes ACES, National Technology Programme has not been released yet, so these efforts are still on hold. BRIC might have more luck in developing such cooperation, given that it is co-funded by the EU SME project and it has contacts with the relevant stakeholders in the Business Innovation and Technology Strategy Development Group (BITS DG) which includes representatives from METE, AIDA, ARTI, ASA, the RDA network and the Chamber of Commerce and Industry of Tirana.

Incentives to universities to set up science parks or develop spin-offs and technology transfer centres could help stimulate cooperation with private companies, as would setting up stage programmes for students.

Improvements in strategy and programmes implementation

Capacity building initiatives under the IPA programmes for Public Administration could play a key role in improving the capacity of agencies that are supposed to realise the strategies. However, delays in funding usually require solutions that are beyond the scope of this assessment (political stalemate, budget problems, etc) and cannot be resolved with the policy mix alone. The disconnection between policy mix and policy implementation is not necessarily a problem of the policy itself, but its environment.

Improving human resources capacity

Training and university education need to be more closely linked to the priorities within the NSSTI, in particular by building relevant basic skills and encouraging those enterprises with technological know-how or R&D capacity to work together with higher education institutes in defining both undergraduate curricula and post-graduate industrially relevant research. Furthermore, the establishment of stages for university students/graduates in STE in companies that are seeking to innovate could be mutually beneficial by building synergies between higher education and business needs.

Collect Statistics to assess progress

Finally, the capacity to collect statistics and data in areas related to innovation from the private sector is being slowly developed, but it must be updated and expanded in order to have available data that will allow timely and relevant comparisons to be made with other countries. Given that some of the

neighbouring countries are already covered by the Innovation Union Scoreboard assessments, it would be helpful if these IU assessments were also extended to Albania.

Table 1: Policy measures and assessments

Challenges	Policy measures/actions⁴³	Assessment in terms of appropriateness, efficiency and effectiveness
Implementation of R&D and innovation strategy— translating policy into concrete action	NSSTI Cross-cutting Strategy for Information Society Strategy for Higher Education Reorganisation of research system Setting up of ARTI, NAIS, BRIC	NSSTI set goals for increasing R&D and introduced various funding programmes and measures with a budget for the period 2009-2015. Education system reforms undertaken, reorganisation of ASA, public research centres strengthened university research capacities. Structural weakness of institutions and actors which are supposed to implement policy due to inadequate staffing, slow transfer or non-availability of funding. Political stalemate Setting up of institutions such as ARTI, NAIS, and BRIC to coordinate research programmes and funding for research has led to an improvement of overall public research and coordination mechanism.
Increasing innovation of business sector	BITS Setting up of BRIC	Positive initiative to boost innovation in business sector and the development of a knowledge transfer. Low absorption capacities of the business sector and the dominance of the low tech sectors in the structure of economy
Developing human resources	Strategy for Higher Education Brain Gain	The Excellence Fund and Brain Gain programme were set up, respectively, to promote excellence in graduate studies and to support the return of Albanian researchers to the country. It has significantly improved circulation of youth, researchers, students and professors between Albania and the EU ⁴⁴ .
Improving cooperation between universities, research institutes and business	NSSTI/ Albanian Centres for Excellence (ACES) National Technology Programme	While the strategy identifies the weaknesses in the Albanian system in terms of cooperation between academia, research and businesses and sets up programmes to facilitate such linkages, there have been delays in launching and funding the programmes. So far none of the ACES have been formed and there have not yet been any competitive calls for the National Technology Programmes.

⁴³ Changes in the legislation and other initiatives not necessarily related with funding are also included.

⁴⁴Prime Minister declaration during the ceremony of Excellence Fund diploma awards for 2012: Available at: <http://lajme.shqiperia.com/lajme/artikull/iden/1047162744/titulli/Kryeministri-Berisha-Fondi-i-Ekselences-dhe-programi-Brain-Gain-dy-mekanizma-te-fuqishme-per-konsolidimin-e-softit-perendimor-te-kombit-shqiptar>

5 NATIONAL POLICY AND THE EUROPEAN PERSPECTIVE

It is important to take into account that Albania has only recently begun to go down the path of participating in the ERA, while other countries in the Balkans (especially new Member States and Candidate Countries) have already made substantial progress in realising the 15 objectives. This is also hampered by the fact that the country has not yet completed and standardised its R&D statistics system, which however should be put into place soon. Among the main efforts of the Albanian government to support the strategic ERA objectives have been an active human resources policy, increasing public support for research (targeted to increase from 0.2% to 0.6% of GDP), reorganising and strengthening research institutions, including those now integrated with the universities, and strengthening international co-operation in science and technology initiatives. Major weaknesses remain in framework conditions for private investment in R&D and private-public cooperation and knowledge transfer, unattractive employment conditions for researchers, lack of mechanisms for monitoring and evaluation to develop and sustain overall quality and competitiveness, weak linkages between research and societal challenges as well as the low societal valuation of R&D and scientific activity.

Internationalisation and integration into ERA and the building of national competences are mutually reinforcing. Albania is committed to playing as full a part as possible in European level research programmes and initiatives, in line with its financial means and strategic interests, and promoting participation of Albanian researchers in the EU's Research Framework Programme and integration into other European research initiatives (COST, EUREKA, etc). As the Minister of Innovation, Technology and Information Communication (MITIC) has acknowledged "the high rates of socio-economic development required in the process of Albania's membership of the North Atlantic Treaty Organization (NATO) (now a member) and EU accession, necessitate strengthening the role of science, technology and innovation in our society." Therefore, in the National Strategy of Science Technology and Innovation, international and particularly EU cooperation programmes are planned to play a major role in the development of the country's R&D system. Yet in fact, there is still a heavy reliance on foreign and international donor support rather than on endogenous dynamics and cooperation in development of key sectors.

Overall, as stated in the 2012 Albania EC Progress Report (October 2012), "...there was little progress in the area of science and research, where preparations are not very advanced..." On the other hand, there remains a need to strengthen the research capacity and increase the country's competitiveness at the national level, through efficient measures. The level of investment in research remains very low and the human capital-building requires strengthening. Concerted efforts are required in order to facilitate Albania's integration into the European Research Area by, amongst others as mentioned, increasing public and private sector investment in research and strengthening human capital so that Albanian partners (public and private) are in a better position to engage in projects and in competing with the other countries in South Eastern Europe.

Below are suggested the possible direction towards which the current policy mix (analysed in section 4.3.) should evolve on short and medium term (one to three years) as aligned with the ERA Communication objectives.

1. Ensure an adequate supply of human resources for research and an open, attractive and competitive labour market for male and female researchers

Supply of human resources for research

Recent studies indicate that Albania is considered to be at a crucial stage of development of its human capital. The past decade has been characterised by the increasing return of considerable numbers of people qualified abroad. This has increased the necessity to create an environment that adequately provides development opportunities to them, therefore requiring transparent recruitment mechanisms, adequate training, attractive employment packages and career prospects. Considering that since 2006-2007 there have been good initial experiences with the implementation of pilot programmes and new initiatives for the reintegration of qualified returnees, such as the Brain Gain Programme and Excellence Fund, many believe that it is time to invest in more comprehensive and long term policy in this regard. A relevant study⁴⁵ notes that “despite difficulties encountered, there is a strong desire to live and develop a professional career in Albania of high skilled Albanian returnees.” The vast majority of high skilled returnees consider “as good, very good and even excellent the decision to return (approx. 79%). Also, most of them see themselves in Albania in five years time”⁴⁶ (this survey refers to all disciplines of human resources, not only researchers). In this context, an increased confidence has been noticed in the Albanian market, where in some occasions, “companies are replacing expatriate staff with Albanian ones to cut costs, but also because now there is domestic professional staff fit to cover those positions.”

Ensure that researchers benefit from open recruitment, adequate training, attractive career prospects and working conditions and barriers to cross border mobility are removed

International mobility seems to be conceived mainly as a one-way process (i.e. outward flow of resources from Albania), as long as few or no measures are foreseen to allow Albania to compete with other countries in the region and attract foreign researchers, recognising the support and best practice experiences they could provide. At present, knowledge resource inflows are mostly limited to consultancy services provided by researchers and international consultants working for the World Bank, EBRD and UN organisations in Albania. Therefore, there is a need to identify the right instruments to make Albanian universities and research institutes more attractive to foreign academics. So far, internationally funded programmes are providing some application opportunities for the SEE countries, including Albania, to develop “brain circulation” in the form of academic exchanges and fellowships for returning scholars. In addition, just recently the Albanian Parliament adopted the law "On foreigners", which guarantees the treatment of foreigners seeking to enter, reside or work in the territory of the Republic of Albania, according to the criteria and standards of EU legislation. The law foresees that access to the labour market for EU nationals to be implemented without applying for a work permit and their treatment to be equal as Albanian citizens. Further, there are improvements with regard to social protection, for the treatment of foreigners to prevent discrimination in the treatment of employees, particularly in some employment categories, such as: “highly skilled workers who are considered as a new category of employment for disciplines that can be committed by foreigners considered as highly qualified”; workers who provide contractual services for some missing disciplines; introduction of quotas for foreigners to be hired each year, in order to protect the Albanian labor market. Overall, the law facilitate EU nationals, and for the purposes of this report, EU researchers in terms of employment, conditions of employment, remuneration, study, vocational training, etc.

⁴⁵ European Movement of Albania (EMA), Policy Paper ‘Is the Return Worth It? – On the reintegration of the high skilled returnees in Albania’, December 2011 (www.ema-al.org)

⁴⁶ Idem.

Promote equal treatment for women and men in research

In terms of human resources in Albania in the field of academia and research, the latest assessment⁴⁷ from 2011 shows that at research levels lower than professor, women play an important role (at least in numerical terms):

Researchers with the title (Prof.) – 682 (152 women, 22%)

Researchers with the title (Prof. Ass) – 544 (180 women, 33%)

Researchers with the title (Dr) – 1326 (719 women, 54%)

Doctor of Scientific Research – 269 (181 women, 67%)

Master of Scientific Research – 61 (43 women, 70%)

Assistant of Scientific Research – 12 (7 women, 58%)

It would appear that it is more difficult for the women to gain professor status, which cannot be explained by the lack of women with doctoral/PhD degrees. There are no particular incentives to boost female participation in research, but under Albanian law women have equal access opportunities to both education and public research positions. According to official statistics, there is a higher percentage of female than male students pursuing higher education in general. The total number of students who were enrolled in the higher education institutes in the country (both public and private) during the academic year 2009 – 2010 (latest data available) was 116,292. Of these, 64,130 were female students and 52,162 were male, showing about 10% higher female than male participation in the higher education system⁴⁸.

2. Facilitate cross-border cooperation, enhance merit-based competition and increase European coordination and integration of research funding⁴⁹

Albania's international cooperation in research and development takes place mainly in the form of bilateral, as well as EU and UN programmes. The Ministry of Foreign Affairs is in charge of signing new intergovernmental agreements on science and technology. Albania is participating in the work of the European Research Area Committee (ERAC) and has nominated a delegate observer to the Standing Committee for Agricultural Research (SCAR). It has also been invited to nominate delegate observers to the different ERA governance bodies. International cooperation, particularly with EU partners, is high on the national agenda. Albania is actively participating in several regional projects with the other Balkan countries and has recently concluded science and technology agreements with several neighbouring countries and other international partners. FP7 is EU's main instrument for funding research in Europe and it will run from 2007 to 2013. Albania became associated with FP7 in 2008. Two FP7 instruments are particularly important for SEE countries: INCO-NETS and ERA-NETS.

3. Develop world-class research infrastructures (including e-infrastructures) and ensure access to them

Albania is suffering from a lack of modern research infrastructure and state-of-the-art equipment, but efforts are under way to improve infrastructure, starting with support for the development of communication networks and IT systems. Major projects are co-financed by the EIB, along with other international financial institutions, such as the World Bank, which has also funded the equipping of

⁴⁷ WB-INCO-Net, 'Albania Progress Report: On recent developments regarding science and technology cooperation in/with WBC', May 2011 – December 2011.

⁴⁸ NSTAT (Albanian Institute of Statistics), Education Data, 'Registered Students in Albanian Universities per Gender, 2009 – 2010, Available at <http://www.instat.gov.al/>

⁴⁹ Promote more critical mass and more strategic, focussed, efficient and effective European research via improved cooperation and coordination between public research funding authorities across Europe, including joint programming; Jointly funded activities and common foresight; Ensure the development of research systems and programmes across the Union in a more simple and coherent manner; Promote increased European-wide competition and access of cross-border projects to national projects funding.

teaching laboratories. At present Albania is actively working on a reform of science and research statistics to comply with EU criteria. The establishment of a specific fund, known as the Research Infrastructure Fund, will help to improve the quality of the equipment and facilities available. Two programmes, the Research Eagles Grants Programme and the Science Promotion and Education Programme aim to increase the number of Master and Doctoral graduates in the science and engineering fields. This goal is to be achieved through the financial support of the institutions with graduate/doctoral programmes as well as funding of individual researchers and projects.

4. Strengthen research institutions, including notably universities

Over the last couple of years, the amendments to the Law No. 9832 on the Higher Education sought to focus special attention on scientific research. In the law, the Department of Research and Technology has been identified as a very important unit within a university. Each faculty has the right to coordinate its own teaching process and its research. The masters degree programmes established in each faculty offer first and second level master courses (according to the Bologna Chart). The second level master is considered a research programme, given that one of its key components is research. PhD programmes in Albanian universities are identified in the law as the third level of study, and are fully considered to be three-year academic research projects conducted under supervision. The initiative to progressively increase admissions quotas for Master and PhD students, now also extended to non-Albanian citizens, represents an important attempt to promote research in Albanian universities and strengthen their research capacities. Universities and scientific research centres will be connected to the GEANT network, and all the universities of Tirana will use a high-speed fibre network, which will connect all faculties. The Italian Office for Development is currently coordinating a project with MES to establish a telematic network for public universities, which will allow inter-university information exchange in all areas as well as research collaboration. Another form of support to universities is in easing their fiscal obligations, as all private universities are exempted from paying VAT. This is the first specific attempt by the government to ease financial conditions for the institutions of higher education, allowing them not to pay VAT on professors' and researchers' salaries, thus functioning as an indirect incentive for research careers. Much work still needs to be done to promote R&D performed by higher education institutions, though this was announced as a priority by the government.

5. Facilitate partnerships and productive interactions between research institutions and the private sector

The establishment of ongoing cooperation between academia and the private sector is another important goal of the NSSTI. The two main elements of this are the creation and development of Albanian Centres of Excellence in Science (ACES) and setting up of the Business Relay and Innovation Centre (BRIC). The former will support the creation of four to five centres of excellence in order to bring together a substantial number of researchers. These centres will be critical in improving the credibility and visibility of Albanian research and in exchanging information as well as to channel the inflow of funds from the main donors and counterparts. They should also help in bringing together the academic research institutes with the private sector in order to develop a medium-term programme of applied research for mutual benefit. The ACES have not yet been established, although it was planned to set up two during the period 2011 – 2013, with a total of four ACES centres to be set up through 2014 (as per priority of the NSSTI).

6. Enhance knowledge circulation across Europe and beyond

There are no specific measures/policies aimed at making a career in science, technology and engineering more attractive in Albania, but there are efforts to improve the conditions for networking and knowledge exchange of researchers. Concrete examples are SEEREN and SEEREN2, which connect the national research networks in education in the Balkans with the pan-European network of research in education GEANT. The SEE_GRID and SEE_GRID2 projects are aimed at the transfer and development in the Southeast European region of project results in GRID technologies as an important component of the European Research Area (ERA). A new project funded by the Italian Government to establish a National Academic Network (Research in Education) in Albania is also expected to be of high importance. Regarding inflows of knowledge resources into Albania, there are no particular reported barriers to accessing the labour market for EU researchers. On the other hand, there are also no particular incentives for EU and third country researchers to come to Albania (other than those aimed at Albanian émigrés and native Albanian speakers). Therefore, there is a need to develop instruments to make Albanian universities and research institutes more attractive to foreign academics. So far, internationally funded programmes are providing some application opportunities for the SEE countries, including Albania, to develop brain circulation in forms of academic exchanges and providing fellowships for returning scholars⁵⁰. Participation in international projects funded by the EU or NATO, joint publications and attendance in conferences are among the principal avenues for knowledge circulation. Over the past few years research cooperation and information exchange within the Western Balkan region has increased thanks to the WBC-INCO.NET, an FP7-funded project operating during 2008-2013 which seeks to enhance the integration of Western Balkan countries into the European Research Area (ERA).

7. Strengthen international cooperation in science and technology and the role and attractiveness of European research in the world

In terms of Albania's activity in science and technology projects, under the framework of FP7 programmes, the performance has shown steady progress, leading to increased mobilisation of local resources and knowhow in community programmes. SP Cooperation: 15 projects were awarded funding and are mainly in the Social Sciences, ICT and Environment themes. Participation in SP People: seven Marie Curie fellowships were awarded to Albanian scholars to conduct their research in different EU countries. Participation in SP Capacities: this is the programme in which Albania was most successful. Out of 60 proposals submitted, 11 had been retained for funding. Albania is part of three international cooperation projects of which the WBC.INCO.NET is the most important for S&T and research.

⁵⁰ <http://www.opensocietyfoundations.org/grants/academic-fellowship-program>

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LIST OF ABBREVIATIONS

AADF	Albanian-American Development Foundation
ACES	Albanian Centres of Excellence in Science
AIDA	Albanian Investment and Development Agency
AKCE	National Authority for Electronic Certification
AKEP	Authority of Electronic and Postal Communications
ALL	Albanian Lek
ARTI	Agency for Research, Technology and Innovation
ARWU	Academic Ranking of World Universities
ASA	Albanian Science Academy
BERD	Business Expenditures for Research and Development
BITS	Business Innovation and Technology Strategy
BRIC	Business Relay and Innovation Centre
CERN	European Organisation for Nuclear Research
CHES	Council of Higher Education and Science
CIP	Competitiveness and Innovation Framework Programme
CoM	Council of Ministers
COST	European Cooperation in Science and Technology
CR2010	Country Report 2010
CTAT	Centres for Transferring Agricultural Technologies
DCM	Decision of the Council of Ministers
EARMIT	European Association of Research Managers and Administrators
ECB	European Central Bank
EIB	European Investment Bank
EPO	European Patent Organisation
ERA	European Research Area
ERAC	European Research Area Committee
ERA-NET	European Research Area Network
ERP Fund	European Recovery Programme Fund
ESA	European Space Agency
ESFRI	European Strategy Forum on Research Infrastructures
EU	European Union
EU-27	European Union including 27 Member States
FDI	Foreign Direct Investment
FP	European Framework Programme for Research and Technology Development
FP7	7th Framework Programme
FTE	Full Time Equivalent
FYROM	Former Yugoslav Republic of Macedonia
GBAORD	Government Budget Appropriations or Outlays on R&D
GDP	Gross Domestic Product
GERD	Gross Domestic Expenditure on R&D
GOVERD	Government Intramural Expenditure on R&D

GUF	General University Funds
HC	Head Count
HEI	Higher Education Institutions
HERD	Higher Education Expenditure on R&D
HES	Higher Education Sector
HRST	Human Resources in Sciences and Technology
ICT	Information and Communications Technology
IMF	International Monetary Fund
INSTAT	Albanian Institute of Statistics
IP	Intellectual Property
IT	Information Technology
IU	Innovation Union
IUC	Innovation Union Competitiveness
MAFCP	Ministry of Agriculture Food and Consumer Protection
MES	Ministry of Education and Science
METE	Ministry of Economy, Trade and Energy
NAIS	National Agency for Information Society
NATO	North Atlantic Treaty Organisation
NSDI	National Strategy for Development and Integration
NSSTI	National Strategy of Science, Technology and Innovation
OECD	Organisation for Economic Cooperation and Development
PCT	Patent Cooperation Treaty
PPP	Purchase Power Parity
PPS	Power Purchasing Standards
PRO	Public Research Organisations
PROTIK	ICT Training and Resource Centre
R&D	Research and development
R&D	Research and Innovation
RI	Research Infrastructures
RTDI	Research Technological Development and Innovation
S&T	Science and Technology
SCAR	Standing Committee for Agricultural Research
SEE	South Eastern Europe
SF	Structural Funds
SME	Small and Medium-Sized Enterprise
ST&E	Science Technology and Engineering
STI	Science Technology and Innovation
UNESCO	United Nations Educational, Scientific and Cultural Organisation
VC	Venture Capital
WBC	West Balkan Countries