I. Project Context

Country Context
Montenegro is a small (population est. 623,000), middle-income, and relatively young country, having become an independent nation after separating from Serbia in 2006. Four years later, in November 2010, Montenegro was accepted as a candidate to begin negotiations for EU membership. Moving closer to EU accession, Montenegro will need to significantly increase its competitiveness and review its policies with regard to employment, skills development and technological innovation and absorption.

Montenegro has made significant progress in its transition towards a market economy. Real GDP growth has averaged 4.6 percent during 2006-2010 with inflation in the low single digits (below 4 percent). These numbers compare well with the countries that joined the European Union (EU) in May 2004 (EU8) as well as with EU15 countries. Montenegro’s economy remains highly susceptible to economic developments elsewhere, which contributed to a post-independence episode of a full boom-bust cycle. Gross Domestic Product (GDP) growth in 2006-2008 averaged nearly 9 percent per annum, but 2009 was marked by a severe recession due to the global economic and financial crisis, with a GDP contraction of 5.7 percent.

In its economic growth and competitiveness efforts, Montenegro is aided by the fact that it lies in close proximity to both European and Russian markets. The key sectors of Montenegro’s open economy and potential growth engines over the longer term include tourism, service, and other knowledge-driven industries. Montenegro’s energy sector could also become an important source of growth and exports provided that environmental impacts can be adequately contained. The economic relevance of the heavy metal and associated industries and services (mining, railways, harbor, and energy) has declined, owing to deteriorating competitiveness. The share of small and medium enterprises (SMEs) has constantly increased but these firms remain focused on the domestic market and need to become more competitive. An important mechanism for increasing competitiveness encompasses improvements in the efficiency and quality of higher education and the strengthening of the links between research and innovation and business.

The number of highly educated people in the country is increasing, but more remains to be done to enhance the resultant benefits to the economy. From 2005 to 2010, two new private universities were open as well as a number of additional faculties. During this period, the number of students enrolled in faculties increased by 64.3 percent, with the share of self-financed students increasing from 53.3 percent to 79.7 percent, with the remainder fully funded through government subsidies. Over this period, the number of bachelors, specialists, masters, and PhD holders increased significantly (by 96.1%, 935.8%, 486.5% and 157.1%, respectively). Though supportive data is currently unavailable, anecdotal evidence currently holds that the employability of the highly educated population was increasing in the post-independence period but experienced a reversal brought on by the 2008 global financial and economic crisis. Ongoing surveys of employers run by the Employment Agency of Montenegro indicate a continual dissatisfaction of employers with the level of knowledge and skills of their highly educated staff, pointing to the necessity of further improvements of the high education in Montenegro.

As student numbers have increased, so, too, has the number of researchers and scientific activity, but the links between academic research and technology transfer to the private sector, and especially to SMEs, remains weak. Organizations engaged in science and research increased in the observed period by 56.5 percent, along with increase in number of their employees (by 21.3 percent) and their income (by 25.3 percent). In 2009, some 80 percent of research and scientific institutions referred to parts of faculties. Anecdotal evidence proves rather weak connections between research and scientific institutions and industry and SMEs, suggesting that stronger relations should be established with the view not only to improve productivity, enhance competitiveness, and propel economic growth, but also to improve the standards of living of the Montenegrin society.

These multiple objectives place higher education and research at the center of the GoM policy agenda. That policy is being supported not only by the adoption of the Strategy for Higher Education Reform and of the Law for Scientific and Research Activities, but also by some important academic work (Montenegro in the New Millennium, Montenegrin Academy of Science and Arts). The request for World Bank support in the areas of higher education and research has been very encouraging, demonstrating Montenegro’s interest in building on the progress made thus
far (the recent Global Competitiveness Index 2010-2011 ranked Montenegro's competitiveness as 49th out of 139 countries, ahead of some EU countries and 6th out of 24 Europe and Central Asia Region countries).

Applied knowledge is the key in this context for relevant and impactful research and technology transfer, and the partnership between the Ministry of Science of Montenegro (MoS), Ministry of Education and Sports of Montenegro (MoES) and the World Bank can provide the large-scale leverages needed to transform higher education and research into mainstream economic drivers for Montenegro. These efforts will support Montenegro as it moves closer to EU accession, by helping the GoM develop the capacity to meet the EU Acquis standards in the areas of enterprise and industrial policy and science and research, and to align the economic directions with the priorities expressed in the Europe 2020 Strategy. Montenegro must increase its competitiveness and review its policies with regard to employment, skills development, and technological innovation and absorption. In all of these areas, education plays a crucial role.

II. Sectoral and Institutional Context
More than one-fifth of Montenegrin citizens attend schools or universities. In Montenegro, elementary education is compulsory and was recently extended from eight to nine years. As in other countries of former Yugoslavia, there are three types of secondary education: general secondary education, 4-year vocational training, and 3-year vocational training. The first two types of secondary education allow students to access the Matura exam, which serves simultaneously to certify learning at the upper secondary education level and provides the basis for access to tertiary education. In 2009/2010, 74,539 pupils were enrolled in primary education and 31,758 students in secondary education, about one-third of the latter in general secondary schools (gymnasia).

Achieving the objective of modernizing education within well-defined budgetary constraints is particularly difficult, as the GoM has already been investing in education at rates relatively similar to other countries in the region without achieving comparable outcomes. Current obstacles to effective reforms include: (i) the lack of easily accessible information on spending, staffing, graduation rates, graduate employment, and research output in the higher education sector; (ii) the existing financing mechanisms of public higher education, which are rather static and have no performance-related component; and (iii) the fragmentation and internal organization of the public university, in which faculties continue to act as quasi-autonomous entities.

Montenegro faces difficult choices in the twin challenge of improving the quality and outputs of education and curtailing fiscal expenditures in this sector. To this end, the GoM has paid particular attention to the need for targeted reforms, to spur quality improvements in both human capital formation and innovative research. To this end and to provide focused, strategic leadership in these two priority areas, the GoM split the Ministry of Education and Science into two separate ministries, each charged with the implementation of a comprehensive reform strategy aimed at improving outcomes, expenditures, and re-balancing the composition of spending in their respective areas. At the same time, the Department of Higher Education within the MoES has purposefully remained located within adjacent work spaces to the Ministry of Science, to ensure ease of communication and continued collaboration and collegiality among the staffs. Providing such clarity of mission for each Ministry, while encouraging collaborative efforts as relevant for each, is particularly important in the areas of higher education and research, which are complementary but complex engagements.

There are three accredited universities in Montenegro, of which the University of Montenegro (Univerzitet Crne Gore - UCG) is the largest and only public university. The Mediterranean University (Univerzitet Mediteran - UM) and the University Donja Gorica (UDG) are the two accredited private universities. Collectively, these institutions provide Montenegro with a university density that is comparable to most other countries in the region. At the time of its establishment in 1974, the UCG was the only institution of higher education in pre-independence Montenegro, comprising three faculties (economics, engineering, and law) as well as various smaller units. Today, this University consists of 20 faculties, three research institutes, and one independent study program, which are located in eight different towns throughout Montenegro. The university currently enrolls about twenty one thousand students.

While gross tertiary education enrollments are relatively high, at 52% (World Economic Forum/Global Competitiveness Report, 2010-11), the higher education system faces funding and institutional constraints, and reforms are needed to align with EU practices. Montenegro's higher education system suffers from structural issues similar to other former socialist countries, resulting in comparatively high drop-out and deficiencies in quality and management. The funding model is currently based on academic and administrative staff costs, where the faculties receive funding budgets based on the salaries of its staff members. Moreover, academic staff are allowed to supplement their income through enrollments of fee-paying students, who are admitted without government supports. As a result, the inventive structure provided by the current funding norms promote over-enrollment, a focus on teaching over research (for which supplemental funding is almost non-existent and which must be done in addition to managing full teaching loads, as opposed to being in balance with teaching), and minimal concerns about quality.

The academic infrastructure of the public university must be modernized and instruction standards upgraded in line with the Bologna agreements. For the private institutions, regulatory frameworks which enable transparency and confidence in their quality in order to promote healthy competition with the public university ought to be encouraged, as is the case in the Strategy for Higher Education (April 2011). The newly adopted strategy, prepared with World Bank assistance, proposes new approaches to funding and quality assurance, to ensure a level playing field for public and private providers in terms of accessing student enrollments and research opportunities.

Like many other developing and middle-income countries, Montenegro suffers from a mismatch between the skills and knowledge provided by its educational system and the needs of the labor market. According to the Employment Agency of Montenegro, the lack of trained labor in the market represented the single most important barrier employers experienced to filling vacant positions. At the same time, however, anecdotal observations by university leaders and the Employment Agency (though data has not been systematically collected and is, therefore, currently unavailable) hold that the universities are graduating more students than ever before and unemployment of university graduates is on the rise. This disparity indicates one or more challenges that must be addressed in Montenegro:

- the universities may be providing sub-standard and/or irrelevant education to their students;
- universities have not developed the mechanisms or relationships needed to illustrate the value of their graduates to the labor market;
- the labor market is in transition, from manufacturing and agriculture to increasing areas of knowledge and service industries, and the skills for these myriad industries are not being transferred through tertiary education; and
- employers have not modernized to understand the value of the employees having the soft skills (critical thinking, adaptability, teamwork, and so on) as well as subject-specific training provided by tertiary education.

Reform efforts in higher education must examine the existing challenges and disparities, root out the underlying issues, and implement strategic action to address and overcome the barriers in place today.

Tertiary education institutions are recognized as creators of both human capital and knowledge, both of which underpin any modern economy. With Montenegro focused on EU accession, it is imperative that the outputs of its higher education institutions, including universities and research institutes are of the best quality, are provided efficiently, and are aligned with the labor market and local/regional industry. Only then can they serve as the necessary foundation for innovation and competitiveness.

Comparatively low spending on research and development (R&D), particularly by the business sector, is constraining Montenegro's innovative capacity. The R&D expenditures amount to less than 0.16 percent of GDP according to the available data, which would significantly trail the EU25 average of 1.86 percent and falls far short of the 3 percent target of the Lisbon Agenda/Europe 2020 Strategy. The low levels of business R&D are a result of the decline or closure of industrial firms that used to have in-house R&D units and now tend to rely on technology acquisition from abroad. At the same time, no new knowledge-intensive industries are emerging yet in significant numbers. Consequently, the share of high-technology exports in Montenegro's export basket remains low. The UCG absorbs the majority of public R&D expenditures and generates the most publications in international refereed journals, but its pipeline of applied R&D and technology commercialization projects is still weak.

Several factors are inhibiting R&D in Montenegro: a fragmented policy framework focused too much on basic, isolated R&D; poor linkages
III. Project Development Objectives

The Project development objective is to strengthen the quality and relevance of higher education and research in Montenegro through creating a transparent finance system and a coherent quality assurance system and by strengthening research and development capabilities.

IV. Project Description

Component Name

Human Capital Development through Internationalization Initiatives
Establishing a Competitive Research and Innovation Environment
Project Management and Monitoring and Evaluation

V. Financing (in USD Million)

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VI. Implementation

A Project Steering Committee (PSC) would be established to ensure inter-institutional coordination, provide overall Project oversight and strategic guidance, and assist in resolving obstacles to Project implementation. This PSC would be co-chaired by the Ministers of Education and Sports and of Science, and would include representatives of the Ministry of Finance (MoF), Ministry of Economy, University of Montenegro, other relevant institutions and beneficiaries (R&D centers, civil society, local institutions and private sector).

The Ministries of Education and Sports (MoES) and Science (MoS) would be the main Project implementing agencies. Project implementation would basically rely on the existing structures of these Ministries and the activities proposed under the Project would be part of the everyday work of their staff, hence it would not require the establishment of parallel structure or a specific Project Implementation Unit. At the same team, a very small Project Management Team composed of a Project Director and two Project managers would be hired to support MoES and MoS.

The Project Director would report to the Minister of Education and Sports and to the Minister of Science. The main role of the Project Director would be to efficiently and effectively coordinate overall implementation. Two Project Managers one for the subcomponents to be carried out by the MoES and other for the subcomponents to be implemented by the MoS and two Assistants would also be hired. The Project Managers would report directly to the Project Director.

The fiduciary responsibilities of the Project would rest with the fiduciary staff of a technical unit (TSU) within the MoF. This Unit is already in charge of the fiduciary aspects of five ongoing World Bank-financed projects. If needed, an environmental specialist would also be hired to review, advise and oversee compliance with the Environmental Management Framework and specific Environmental Management Plans.

Appropriate measures must be taken to ensure that the communication between the TSU and the Project Director and Project Managers is efficient. Adequate procedures and controls also need to be instituted and applied in practice for grant subcomponents to be financed by the HERC Project.

HERC grant funds would be awarded through competitive processes, either for institutional improvements or innovations in research. Two Evaluation Committees of international experts culled from both academic and private sector communities as appropriate—as well as from relevant government agencies would evaluate the grants sub-projects based on clear criteria and rules stated in the Project's Operational Manual. The TSU would supervise all the financial management and procurement activities of the grants beneficiaries. An additional Procurement Officer would be hired to assist in the procurement aspects of Project activities implementation, mainly considering the grants subcomponents to be financed.

Annual competitive rounds would be held to select those institutions/faculties whose proposals show greatest potential to drive improvements in quality and innovation. All accredited universities and faculties may compete for grants funds by submitting project proposals with clearly defined and measurable objectives, strategies, action plans, milestones, goals, and performance indicators. Dynamics of the funds transfer would be described in the grant agreement to be signed with the beneficiary in relation to the approved grant, and should be in multiple tranches, each following depending on satisfactory and acceptable reports about the use of the previous tranche. Selected applicants are invited to fully develop their proposals, negotiating directly with the Ministry of Education and Sport or Ministry of Science to establish the contractual, budgetary and technical terms of their agreements. The grants funds would flow directly to the grant beneficiaries.

VII. Safeguard Policies (including public consultation)

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</table>

VIII. Contact point

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