

**QUESTIONNAIRE ON THE RIGHT TO ENJOY THE BENEFITS  
OF SCIENTIFIC PROGRESS AND ITS APPLICATIONS**

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**Accessing the benefits of science and its applications**

**1. What legal, administrative and policy measures exist or are planned in your country:**

- a) To ensure that marginalized groups benefit from scientific progress and its applications including women, persons with disabilities, minority groups, rural communities and indigenous peoples?**

The overall aim of education in Cyprus is the development of free and democratic citizens who contribute to the promotion of cooperation, mutual understanding, respect and love among individuals and people for the prevalence of freedom, justice and peace. The policy priorities of the Ministry of Education and Culture, as deriving from the abovementioned general aim, place particular emphasis on democratization, by cultivating respect for the dignity and uniqueness of each individual; respect for the opinion of the majority; creating opportunities for active participation in the decision making progress; providing equality of opportunity in all aspects of school life; encouraging cooperation and responsibility.

Furthermore, emphasis is being placed by creating favourable conditions for coexistence, cooperation and combating intolerance and xenophobia, in a world where an international character is increasingly developed, cultural diversity is promoted and boundaries are abolished.

The Government recognizes that all students have the right to an education appropriate to their needs and great efforts have been made to achieve this aim. The Ministry of Education and Culture adopts UNESCO's views on inclusion to embrace all students, such as children from disadvantaged socioeconomic backgrounds, children in rural and remote areas, children from ethnic and linguistic minorities, children affected by conflict and natural disasters, children with HIV and AIDS, children of migrants and children with additional and/or special educational needs. Educational requirements and support services are provided in an inclusive and least restrictive learning environment.

In an environment where «the only factor that remains stable is change», the Government of the Republic of Cyprus has initiated an ambitious Educational Reform Program, inviting dialogue among all stakeholders (Political Parties, Teacher Unions, Parents Associations, Associations of Students, and the Government, represented by the Ministry of Education and Culture and the Planning Bureau) with a view to turn into reality the vision of a better and more modern educational system that would meet the needs and challenges of the twenty first century. This initiative was launched in January 2005, following a report by a Committee of seven academics which identified the weaknesses of the Cyprus Education System and the areas in need of reform and made recommendations.

The major goal is to create an integrated continuum of early childhood education, pre-primary education, primary education, secondary general and secondary technical and vocational education. Within this framework special emphasis will be given to defining aims and key contents of different subjects and thematic entities in order to form a more unified educational approach. The new core curriculum will be developed so as to provide all students with the opportunity for individual choice and provision of supporting services, including supplementary instruction in areas of need. The highlighted Key Competences that Europe's citizens should acquire to enable them to adapt to changes will be effectively addressed. For

the development of the new curriculum, the Government has set up a Committee of Experts which has prepared its recommendations and suggestions bearing in mind the stakeholders' contributions who participated in the dialogue.

In February 2009, 20 different sub-committees which mandate was the preparation of the new curriculum for each school subject were announced. Academics as well as practicing teachers participated in the abovementioned process. The new core curriculum was submitted to the MOEC on August 30<sup>th</sup> 2010 and was designed on the philosophy that children should learn to respect accept and tolerate the characteristics of others. A basic principal of the new curriculum is the equal treatment of all children and provisions for the effective prevention and abolishment of negative consequences that often accompany children coming from diverse backgrounds. Issues regarding scientific progress and its applications were also addressed by the aforementioned Committee. The pilot phase of the application of the new syllabus began with the in-training service program for all teachers that started in September 2010. Based on the roadmap, the new curriculum will be implemented in all public schools by September 2011.

- b) **To promote research and development in areas specifically relevant to marginalized groups by, for example, providing incentives for innovative research on neglected diseases?**

Not applicable for the Ministry of Education and Culture (MOEC).

- c) **To ensure and facilitate broad access to information and communication technologies (e.g. computers, internet and mobile phones)?**

The MOEC is currently implementing a technology integration planning program. The aim of this program is to exploit the use of Information and Communication Technologies (ICTs) in the educational process and to enhance the digital literacy of students and teachers. The core objectives of this program include: providing schools with modern technology infrastructure and equipment; modernizing and enhancing teaching and learning in line with the current pedagogical methods; training teachers to keep up with the current technological developments; and reforming the curriculum and teaching/ learning aids. During the recent years the MOEC has materialized the following actions:

- **Technology Infrastructure and equipment:** a substantial number of single-user and school-site licences for educational software was purchased and installed in pre-primary, primary, lower secondary and upper secondary schools as well as Special Schools. Laptops and portable projectors were purchased and distributed to schools of all educational levels. Computers are also installed in teaching classrooms other than computer labs for the instructional needs of subject courses such as Physics, Languages, History, Mathematics, Multimedia, Biology and Typing.
- **DIAS project:** the DIAS project, a Web based School, involving a Digital Educational Environment which aims to promote communication beyond the traditional classroom based setting between teachers, students and parents was launched in 2008. DIAS provides access to information regarding the educational processes as well as a multimedia-rich Digital Education Content (DEC). The development process of the DEC for 17 subjects of the Upper Secondary General and Technical and Vocational Education was completed and delivered to their end users.
- **Information Technology (IT) Courses in Secondary Education:** The syllabi of all computer courses taught at Secondary Education level schools have been updated in order to meet European standards and current trends. The teaching of these courses at the Gymnasium and the lyceum level aims to engage students in meaningful learning using the computer as a problem-solving tool. Additionally, the e-Learning

course offered by CISCO Networking Academy is offered as an elective course at the Upper Secondary level. Furthermore, a pilot project has been operating in Technical Schools and comprises instructional models in Pneumatics, Programmable Logic Control, CNC Machine Tools, Computer Aided Manufacturing and Robotics.

- **Government Subsidization for the purchasing of personal laptops:** The Council of Ministers has approved the proposal of the Ministry of Education and Culture for the subsidizing the purchase of a laptop computer for all the students of the second class of the Lower Secondary Education. For the school year of 2008-2009 the amount approved was €400 and referred to second grade students attending public educational institutions. For the following school years 2009-2010 and 2010-2011 the amount approved was €300 and concerned all second grade students of public and private educational institutions.

**d) To identify and develop the scientific applications necessary for sustainable solutions to ensure the right of everyone to have access to safe nutritious food access to potable water and sanitation, and to address climate change?**

The MOEC has set Environmental Education high in its agenda. Through the interdisciplinary teaching methodology various environmental education programs such as the European program "Ecological Schools, the Greek-Cypriot cooperation "Golden- Green Leaf" and the program "Seed- source of Life" were implemented at many schools. Furthermore the environmental Education Centres of Pedoulas, Athalassa and Akrotiri, under the responsibility of the Pedagogical Institute, are being fully utilized by giving the opportunity to students to achieve empirical experience and develop correct attitudes towards the environment.

Moreover, under the framework of promoting health education programs, the MOEC, has developed a long-term strategic vision. The basic aim of the policy is to provide the necessary support to the school units in developing and implementing action plans for the promotion of health being.

The MOEC supports financially actions regarding the following:

- **The "MENTOR" Health Education Program:** an education program aiming at the prevention of drug use and addiction by providing information, developing and implementing social skills and enhancing self esteem,
- **European Network of Health Promoting Schools:** The program aims towards the empowerment of people and the creation of such conditions, in order to enable a bigger percentage of the population to reflect on their health, make right decisions related to health and welfare support.

**2. What are the key challenges faced in your country in undertaking research at the domestic level and ensuring access to scientific developments and its applications particularly for the marginalized groups?**

With Cyprus being a mainly small, services-oriented economy with lack of industrial base, the main drivers of growth are its labour force and productivity. Investing in improving the country's Innovation and ICT capacity, infrastructures, productivity and labour would facilitate Cyprus restructuring and transition to diversified and higher value added activities.

Restructuring the economy by shifting emphasis from low to high-skilled jobs and increasing labour productivity is an important challenge requiring investment in new technologies and a more efficient utilization of the highly qualified human capital thereby producing attractive jobs for university graduates.

Improving quality of public finances could create the space for pursuing growth-friendly policies, while supporting social cohesion, and ensuring a smooth adjustment.

**Scientific responsibility, safeguards and remedies**

3. **What legal, administrative and policy mechanisms exist or are planned in your country;**
- a) **To regulate and monitor scientific research and its applications in the private and public sector so as to provide safeguards against any infringement upon the full enjoyment of human rights? In particular to safeguard the human rights of participant in research activities and applications by public and private scientific institutions (e.g. rights to information free and informed consent)?**

Not applicable for the MOEC.

- b) **To protect the rights of indigenous peoples and local communities whose traditional knowledge is utilized, in the development, dissemination and commercialization of scientific information and knowledge?**

Not applicable for the MOEC.

- c) **To provide effective remedies and safeguards for any human rights violation related to scientific research or the application of science or technology? (e.g. judicial review, national human rights institutions or ombudspersons and other administrative arrangements)**

The MOEC respects the opinion of the ombudswoman, usually in the form of reports with specific recommendations for policy adjustments. In numerous cases the Ombudswoman's Reports were the starting point for more inclusive policies with specific emphasis on the respect of every person's unique identity and dignity.

**The rights of scientific collaborative work**

4. **What measures have been put in place to recognize, respect and protect the rights of scientists:**
- a) **To freedom of expression, information and association?**

Cyprus fully abides by and promotes international principles, as they are set forth in the International Declaration of Human Rights and the European Convention for Human Rights which form part of the Acquis.

- b) **To collaborate with colleagues nationally and internationally, including through sharing data, samples, research findings, and other information, by travelling freely within and outside the country, and conducting joint research programs?**

The MOEC, on behalf of the Government of the Republic of Cyprus, aims at strengthening the cooperation of Cyprus and other countries in the fields of education, culture and science by signing bilateral agreements and memorandum of understandings with other fellow countries, and international organizations, including within the framework of the European Union, United Nations Educational Scientific and Cultural Organization (UNESCO) and the Council of Europe.

5. **What legal, administrative policy or other measures have been adopted under consideration to eliminate barriers to scientific communication and collaboration such as censorship restrictions on access to the internet or on free availability of scientific literature and journals.**

Please note that all academic institutions in Cyprus are autonomous and therefore have freedom in forming collaborations with other institutions in Cyprus as well as abroad.

**Participatory decision-making and transparency**

6. **What measures are put in place to ensure dissemination of information about ongoing scientific research and its applications to the public at large?**

Not applicable for the MOEC, but under the jurisprudence of The Research Promotion Foundation.

7. **What opportunities exist for meaningful public participation in decision making about existing and new developments in science and technology?**

Not applicable for the MOEC, but under the jurisprudence of The Research Promotion Foundation.

8. **What steps have/ are being taken to promote quality science education at all levels for all in particular for girls, rural populations and the poor?**

Please refer to the information provided in the first paragraph of the current report as to the implementation of the new upgraded and modernized national curriculum.

**International cooperation, achievements and challenges**

9. **Is the development and application of sciences and technology integrated in international cooperation policies, such as direct development assistance programs? If so, please provide details.**

Please refer to information provided in paragraph 4b of the current report.

10. **What are the key obstacles to international cooperation and what steps have been taken to address these? Please provide details.**

Fiscal consolidation including expenditure control in an effort to stabilize the economy at times of economic crisis can be identified as a key obstacle in the promotion of international cooperation.

11. **What are the achievements in the field of scientific progress and its applications? Please provide details.**

Detailed and specific information should requested form The Research Promotion Foundation.