

# Research and Development (R&D) in the Republic of Macedonia

## Abstract

The scientific activities in the Republic of Macedonia are performed and organised by a network of scientific institutions comprising 3 universities: Skopje, Bitola and Tetovo, several research institutes active in various fields and R&D units in industry.

An important scientific organisation is the Macedonian Academy of Sciences and Arts, which goal is to stimulate the development of sciences and arts.

## 1. Policy Framework

### *1.1 Governmental Bodies*

According to the Constitution, the state has an obligation to encourage and support the technological development of the country. The governmental body in charge of R&D policy in the Republic of Macedonia is the Ministry of Education and Science which has the responsibility to organise, finance, develop and promote the science, technological development, technical culture, informatics and information systems as well as the international cooperation related to these issues. The competences of the Ministry also include issues related to all levels of education.

Within the governmental sector we should also mention the activities of the other ministries such as for Agriculture, Forestry and Water Economy, for Economy, for Health and Environment. Coordination of the foreign aid dedicated to R&D is carried out by the office of the Vice Prime Minister.

### *1.2 Legal Framework of R&D Sector*

Issues related to R&D are regulated by specific laws:

- Law on the Scientific and Research Activities,
- Law on Encouraging and Supporting the Technology Development,
- Law on Higher Education,
- Law on the Macedonian Academy of Sciences and Arts,
- Law on Industrial and Intellectual Property Protection, and several regulations and instructions.

The laws related to research arrange the system, principles, public interest, forms of organisation and management of this kind of activities as well as the ways of stimulating and supporting their development, scientific personnel and other issues

related to them. The system of scientific activities involves scientific research, qualification and training of personnel for research work and research infrastructure.

Basic principles of performing scientific activities are inviolability and protection of the human personality and dignity and they are also based on the following principles: freedom of scientific creativity, autonomy and ethics of researchers during their scientific work and use and application of the results, diversity of scientific ideas and methods, international cooperation.

These laws also define the public interest of the scientific research in the field of national and cultural identity of Macedonian people and others living in the Republic of Macedonia. It also determines research as a general condition for the economic, social, cultural and environmental development of the country. Research which is in function of increasing the scientific level and transfer of knowledge as well as in the field of defence and security is defined also. A five-year Programme for development of these activities is being prepared.

The law related to technology development stimulates and supports this kind of development in the country as well as the programming of this activity and its financing. This law defines the technology development as:

- development of own technologies,
- progress of the country upon the independent economic base,
- modernisation of the existing production capacities,
- establishing innovation and technology centers,
- building necessary technological infrastructure, transfer of knowledge through a continuous superstructure of the skills.

The number of researchers in 2002 was 1519. For their activities in last five years were spent 0.2% of GDP per year.

It is to be noted that the role and position of the industry has significantly decreased in the domain of research and development due to different reasons. Besides difficulties, yet the country has managed in achieving significant results in certain scientific areas, for example seismology.

## **2. Republic of Macedonia R&D Cooperation with EU**

In 2003 two very important conferences were organised in order to specify the instruments and mechanisms for support Western Balkan countries.

The first one was the Dubrovnik COST conference organised in May 2003 where European Scientific Foundation (ESF) as implementation agency of COST in FP6 was promoted. We consider COST as flexible instrument for intergovernmental cooperation in the field of S&T. Macedonia has been COST member since 2002 and started participation in few COST actions.

The second one was the European ministerial conference for S&T, which was held in Thessalonica in June 2003 where special Action plan for R&TD cooperation between EU and SEE countries was accepted.

Larger report in R&D in the Republic of Macedonia, is to be circulated by the Secretariat of the meeting.