

Romania

JPI Partner, EU Member State

Total estimated Water RDI Funding: | M€/yr

The National Authority for Scientific Research (NASR or <u>ANCS</u>) is the specialised organisation of the central public administration responsible for coordination and implementation of R&D activities in Romania. NASR is a public institution, financed from national budget. The rationale to establish the NASR emerged from the requirement to promote the development of the knowledge-based society. Given the relative large gap in research and technology development between Romania and the EU average, NASR assumed the mission to act as the executive manager of the Romanian government's decision to rapidly increase the public support for RTD towards the Lisbon "3% for RTD" ambitious goal.

The NASR's responsibility is to provide strategic and tactical planning and objectives, and to define, apply, monitor and assess all policies in order to reach the national objectives on scientific research and technological development.

NASR mission is to elaborate, apply, monitor and evaluate research, development and innovation policies in compliance with strategy and governing program, with the aim to ensure the enlargement of RDI national and international patrimony, sustainable development access on domestic, European, and global markets, realizing the knowledge base information society, satisfy citizens' needs and increase their quality of life.

The roles and responsibilities of NASR include the definition of a methodological, functional, operational and financial framework to apply policies; it also harmonises the national law with the EU and assumes the *acquis communitaire*. NASR ensures communication with the other public authorities in order to realize the coherence of the Governmental policies with the society and its citizens.

NASR operates under the following functions:

- Politic: to present and unify political points of view regarding research, development and innovation;
- Strategic: to plan strategically and ensure the basis and implementation of policies in the research, development and innovation field;
- Administrative: to foresee, plan, allocate, supervise and evaluate the use of resources for the implementation of policies in the research, development and innovation field;
- Policy monitoring, evaluation and control in research, development and innovation.

Regarding strategic documents, it has to be emphasised that the National R&D Strategy (2007 – 2013) was approved by Governmental Decision 217/2007. Its strategic objectives are:

- I. Promotion knowledge creation and S&T development, aiming at obtaining high level, internationally competitive, S&T results;
- 2. Increase the competitiveness of the Romanian economy, by strengthening the knowledge and S&T transfer towards companies;
- 3. Increase the quality of life, by development of S&T solutions with strong social impact.

The National Plan for Research, Technological Development and Innovation (PN II) is the main programme by which Romanian Government implements the National Strategy for RDI. PN II is implemented in the 2007-2013 period. The reason for choosing this timeframe was to overlap it with



the 7th Framework Programme of the European Union (2007-2013) and Structural funds which are carried out in the same period of time. It is for the first time ever that the R&D sector has a medium term guiding document which serves as basis for further development. Priority domains and research directions were defined as a result of a foresight exercise that has been carried out during 2006.

PN II aims to achieve the three strategic objectives of the National RDI System:

- 1. Knowledge creation, respectively to achieve leading edge scientific and technological results, competitive at global level, in order to increase the international visibility of Romanian research sector and subsequently to transfer results in economy.
- 2. Increasing the competitiveness of Romanian economy by innovation, with impact at company level and by transferring knowledge in economy.
- 3. Increasing quality of life, respectively to find technical and scientific methods which support social development and improve its human dimension.

PN II consists of 6 specific programs: Human Resources, Capacities, Ideas, Partnerships in priority S&T domains, Innovation and Supporting institutional performance. The total Programme budget is 15.000 M lei (approximately 4.800 M€), entirely covered by the national (public) budget. This budget is divided into a series of scientific priorities which comprise the water issues considered in the JPI, but do not assign specific budget for them. The programme manager for PN II is <u>UEFISCDI</u>, the Executive Unit for Higher Education, Research and Development and Innovation Funding.

The Core program (Nucleu – RO) has the main objective of funding participants' own R&D program, made up of several R&D projects that fit the overall strategy of each field of science. It ensures the basic funding for a limited number of national R&D organisations. Beneficiaries can be public research units which are part of the National R&D system. R&D project components of each Nucleus program cannot be submitted for funding to other programs. Each R&D unit eligible must submit only one Nucleus program. Eligible R&D units that are under the co-ordination of other ministries, have to submit their own programs only agreed by their coordinating ministries and approved by NASR. Within a year, the fund for Nucleus program of an R&D unit cannot be lower than 20% and cannot exceed 60% of their incomes from R&D activities during the past year expressed in real terms. The program has no specific duration; each project proposed by each institution can be annual or multiannual. This program is designed to ensure the basic funding of National R&D Institutes, without altering the principle of competition.



| Indicator ¹ | SRIA theme | Publications | | Patents | |
|---|---------------|--------------|---------------------|---------|--------|
| | | Romania | Europe ² | Romania | Europe |
| Raw data | QI | 303 | 33531 | I | 59 |
| | Q2 | 558 | 37391 | 3 | 855 |
| | Q3 | 1543 | 134254 | 4 | 759 |
| | Q4 | 214 | 15957 | 2 | 184 |
| | Q5 | 265 | 22514 | I | 329 |
| | ALL | 1908 | 142901 | 9 | 2256 |
| Increasing rate ³ | | 6.5 | 2.1 | | ١.3 |
| Patens per 1,000 publications | | RO: 4. | 87 ; Europe: | 15.78 | |
| Standardized by | QI | 15.1 | 53.7 | 0.0 | 0.0 |
| population ⁴ | Q2 | 27.9 | 59.9 | 0.1 | 1.4 |
| (10 ⁶ Inhabitants) | Q3 | 77.1 | 215.0 | 0.2 | ١.2 |
| | Q4 | 10.7 | 25.5 | 0.1 | 0.3 |
| | Q5 | 13.2 | 36.0 | 0.0 | 0.5 |
| | ALL | 95.3 | 228.8 | 0.5 | 3.6 |
| Standardized by | QI | 216.4 | 229.3 | 0.6 | 0.4 |
| GDP ⁵ (100 × 10 ³ M EUR) | Q2 | 398.5 | 255.7 | 2.1 | 5.8 |
| | Q3 | 1102.0 | 918.1 | 2.8 | 5.2 |
| | Q4 | 152.8 | 109.1 | 1.7 | 1.3 |
| | Q5 | 189.3 | 154.0 | 0.7 | 2.2 |
| | ALL | 1362.7 | 977.2 | 6.6 | 15.4 |

Table with publications and patents data

¹ All data correspond to the period 1999 - 2013.

² Considered as the 28 EU Member States plus the 12 Associated Countries.

³ Increasing Rate is the number of publications or patens in 2009-2013 divided by the number in 1999-2003 (considering ALL water topics).

⁴ Population obtained from http://en.wikipedia.org/wiki/List_of_countries_by_population ⁵ Gross Domestic Product (GDP), nominal, obtained from

http://en.wikipedia.org/wiki/List_of_countries_by_GDP_%28nominal%29



Tables on Funders and Performers obtained from publications analyses

| SRIA theme | Funding Institutions | Acronym | Intensity of citations |
|---------------|--------------------------------------|----------|------------------------|
| QI | ROMANIAN GOVERNMENT | | 100 |
| | EXECUTIVE UNIT FOR FINANCING HIGHER | | |
| | EDUCATION, RESEARCH, DEVELOPMENT AND | | |
| | INNOVATION OF ROMANIA | UEFISCDI | 57 |
| Q2 | EXECUTIVE UNIT FOR FINANCING HIGHER | | |
| | EDUCATION, RESEARCH, DEVELOPMENT AND | | |
| | INNOVATION OF ROMANIA | UEFISCDI | 100 |
| | ROMANIAN GOVERNMENT | | 91 |
| Q3 | EXECUTIVE UNIT FOR FINANCING HIGHER | | |
| | EDUCATION, RESEARCH, DEVELOPMENT AND | | |
| | INNOVATION OF ROMANIA | UEFISCDI | 100 |
| | ROMANIAN GOVERNMENT | | 51 |
| Q4 | ROMANIAN GOVERNMENT | | 100 |
| | MINISTRY OF NATIONAL EDUCATION OF | | |
| | ROMANIA | EDU | 17 |
| Q5 | ROMANIAN GOVERNMENT | | 100 |
| | PROJECT PROGRAM FOR POSTDOCTORAL | | |
| | RESEARCHERS IN SCIENCE EDUCATION | | 25 |
| ALL | ROMANIAN GOVERNMENT | | 100 |
| | EXECUTIVE UNIT FOR FINANCING HIGHER | | |
| | EDUCATION, RESEARCH, DEVELOPMENT AND | | |
| | INNOVATION OF ROMANIA | UEFISCDI | 93 |



| SRIA theme | Performing Institutions | Intensity of citations |
|---------------|-------------------------------------|---------------------------|
| QI | UNIVERSITY OF BUCHAREST | 100 |
| | POLYTECHNIC UNIVERSITY OF BUCHAREST | 48 |
| Q2 | GH ASACHI TECHNICAL UNIVERSITY | 100 |
| | POLYTECHNIC UNIVERSITY OF BUCHAREST | 84 |
| Q3 | POLYTECHNIC UNIVERSITY OF BUCHAREST | 100 |
| | GH ASACHI TECHNICAL UNIVERSITY | 71 |
| Q4 | GH ASACHI TECHNICAL UNIVERSITY | 100 |
| | ALEXANDRU IOAN CUZA UNIVERSITY | 70 |
| Q5 | GH ASACHI TECHNICAL UNIVERSITY | 100 |
| | ALEXANDRU IOAN CUZA UNIVERSITY | 66 |
| ALL | GH ASACHI TECHNICAL UNIVERSITY | 100 |
| | ALEXANDRU IOAN CUZA UNIVERSITY | 82 |