IIMS ERAWATCH

State programmes for research and development
SUPPORT_MEASURES
Moldova

Title in English

State programmes for research and development

Full name in national language

Programe de stat de cercetare-dezvoltare

Keywords

Research Programme; Stimulation of R&D; Strategic Priorities; Competitive Grants

Overview (nature, main goals)

The **State programmes for research and development**
(R&D) are the main instrument for implementing government policies in support of R&D, in accordance with the existing legislation (Code on science and innovation, No.59 of 15.07.2004). This measure was inspired by the need to focus the scientific potential and resources on priority fields of R&D. The main goal is to effectively support R&D in the scientific fields of the highest relevance for Moldova. The specific goals of each programme aim at generating new theories and concepts, developing and implementing new techniques, technologies, materials and scientifically and technologically competitive products, which contribute to social and economic progress.

The list of State programmes is determined by the Moldovan Government
and the Moldovan Academy of Sciences (ASM), in the framework of a partnership agreement. The Academy of Sciences is the principal management authority for state programmes and is responsible for organising the competition, the monitoring and final evaluation of the programmes.

State programmes provide support for a limited number of scientific and technological projects. Projects are implemented by project executors with specified dates for completion. The maximum duration of a programme is four years and for a project supported under the programme ? two years. The support is provided in the form of competitive grants.

Only the entities accredited by the National Council on Accreditation and Attestation (NCAA)
are eligible to undertake projects. Most project are oriented towards solving practical tasks and hence involve applied research.

Since the start of the measure in 2004 and to date (autumn 2010) 26 programmes have been implemented, in the framework of which 271 R&D projects were funded. A total of ?5.3m was allocated in this period from the State budget.

Background and rationale

The introduction of state programmes for R&D was driven by the need to concentrate intellectual and financial resources on priority research areas, which would contribute to solving the most pressing problems of the country. Based on a debate involving public, academic and business sectors, the programme logic is a mix of bottom-up and strategic priorities, in that research themes are proposed by the scientific community for a decision by the central authorities. Secondly, the programme is designed to promote a more competitive funding stream in that the projects should be executed by the best national researchers, regardless of the organisation they are affiliated to.

Before 2004 nearly all public R&D and innovation funding was allocated in the form of institutional funding, without competition between institutions or relevant criteria for the distribution of budgetary resources. The State programmes for R&D introduced an alternative source of funding on a competitive basis, which was important for reforming the national R&D system. State programmes should also contribute to the issue of priority setting. Previously research themes were proposed and defined only by each R&D institution. Conducted research was therefore not always directed towards economic and social needs of the country, and similar research topics were investigated in different research units.

As early as 1998, a reform of the R&D policy was approved (Decision of the Parliament No.115-XIV of 29 July 1998), followed a year later by the adoption of the Law on state policy in the R&D sphere (Law No. 557-XIV of 29 July 1999). These documents stipulated that the state programmes for R&D should constitute the main form of Government support for R&D. However, it was only in 2003 that financial resources were allocated and a regulatory framework for conducting the programmes was adopted (Government Decision No.1339 of 07.11.2003 on the elaboration and implementation of state programmes in R&D).

Following a competitive call, the first seven state programmes were selected (Government Decision No. 1349 of 11.11.2003 on approving the list of state programmes in R&D). These programmes were launched in 2004 and 44 projects were selected for funding. Under the new legislation, approved in the framework of the Code on Science and Innovation (Law No. 259 of 15.07.2004), State programmes remain the main instrument of national science policy. Thus, in 2006 12 programmes were implemented and 66 projects funded; in 2007 14 programmes and 109 projects; in 2008 15 programmes with 111 projects; in 2009 12 programmes with 96 projects; in 2010 10 programmes with 71 projects.

Policy Priorities

The following policy priorities apply for the measure:

Main policy

/system/categories/List_of_Policy_Priorities/Governance_horizontal_research_and_innovation_policies/Research_and_Innovation_strategies/Strategic_Technology_policies

Other policy priorities

- 2.1.2 Public Research Organisations

Targeting specific sector

- 0. No specific sector

Targeted research and technology fields

No specific thematic focus

Selected Targeted research and technology fields

- No specific thematic focus

Addressing Lisbon guidelines

- Encouraging public procurement of innovative products and services

Start date

2004

Expected ending

No end date planned

Novel Measure

- Yes

Replacing existing measures

Novel description

- Inspired by national policy debate

Inspired by

In the context of the transition from a socialist to a market economy the necessity for reforming the national R&D system has been widely discussed in society. In line with the conclusions of this debate, the R&D system should serve the economic and social needs of the country following the principles of an open society. For implementing this policy it was decided that at the national level the State programmes for R&D shall become the key tool for transforming the R&D sector.

Geographic coverage

National ? covering the whole country.

Targets or beneficiaries

- All companies
- Higher educations institutions research units/centres
- Other non-profit research organisations (not HEI)
- Technology and innovation centres (non-profit)

Elegible for funding

- Higher educations institutions research units/centres
- Other non-profit research organisations (not HEI)
- Technology and innovation centres (non-profit)
- Other: research organisations (accredited by NCAA)

More detail

Only research organisations accredited by the National Council on Accreditation and Attestation (NCAA)

If more than one

- Other: Co-operation among several actors of the scientific community is mandatory for establishing a State programme for R&D. But projects submitted to a call under these state programmes and which are selected for funding subsequently can be executed by a single institution.

Aspect of innovation process addressed by the measure

Type of Research Activities targeted

Type of Research Activities targeted (AdditionalComments)

State programmes support R&D projects at different stages of research: basic research; applied research; and technological development, with a majority of applied research projects.

structure of the measure

The ASM

Sub-measure structure

According to the Partnership Agreement between the Government
and the ASM for 2009-2012 (Decision of Government No. 27 of 22.01.2009), research projects were carried out in the following state programmes in 2010:

- Cantemir dynasty: scientific and artistic aspects (two projects);
- Research and management of water quality (13 projects);
- Basic and applied research in mathematics (five projects);
- Sustainable economic development and increasing competitiveness in the context of a knowledge-based economy, globalization and regional and European integration (three projects);
- Development and implementation of new pharmaceuticals based on local raw materials (seven projects);
- Hepatitis and cirrhosis, prophylactics and advanced methods of treatment (eight projects);
- Creation of varieties and development of advanced technologies for cultivation and processing of aromatic and medicinal plants (five projects);
- Electronic Engineering and Technologies for economic recovery (seven projects);
- Nanotechnologies and nanomaterials (11 projects);
- Recovery of renewable resources in the Republic of Moldova and development of Moldovan Satellite (10 projects).

Management structure

State R&D programmes are developed by the Supreme Council for Science and Technological Development (SCSTD)
, which is an executive body of the ASM. Its role is to provide leadership and monitor the programmes. SCSTD decisions on funding from the state budget of the state programmes and the respective projects are approved through an Annual Protocol, which is part of the Partnership Agreement between the ASM and the Government.
After adoption of the annual protocol, SCSTD
signs, within one month, contracts on R&D projects for that year, stipulating the conditions of implementation and funding. ASM transfers to the contractor, within 30 days after the date of approval of the financial plan, an advance amount for activities related to the implementation of project.
Within the ASM one of the vice presidents and a consultant from administrative staff are responsible for supervising the programme activities.
Each state programme has a scientific council, consisting of the chairman of the council (leader of the state programme), scientific secretary of the council, managers of projects within that programme, as well as representatives of the beneficiaries. The scientific council establishes, in accordance with the programme concept, the structure and implementation procedures of the state programme. It monitors the implementation of projects within the programme and assesses the research results.
Each state programme has a programme leader who is responsible for the full accomplishment of the programme and shall:
- participate in finalising the composition of the scientific council and the development of the implementation structure of the programme;
- monitor the activities of the programme;
- manage the financial resources;
- propose the inclusion and exclusion of projects in the programme, propose modifications to the goals, procedures and deadlines.
Each of the projects included in the programmes has a project leader who is responsible for daily activities and the execution of the project.

Review of progress

Project leaders have to prepare an annual report on the results of scientific research as well as at the completion of an intermediate stage. Reports are submitted to the scientific council of the programme for evaluation and approval.
If the research results meet criteria for scientific quality and contribution to competitiveness, the scientific council approves the report. The decision on approval is then submitted within 15 days for confirmation to one of the three scientific sections of the ASM
, which coordinates the scientific field corresponding to the theme of the programme. Each scientific section is headed by a vice president of the ASM, who have amongst their responsibilities the performance monitoring of state programmes. After confirming the research results the scientific section submits them for approval to SCSTD. In addition to approving the final results, SCSTD

Selection criteria

Priority is given to proposals which will lead to co-financing and involvement in the activities of a wide range of organisations. The following criteria are used:
- correspondence of the objectives and results of investigations of programme / project to the strategic directions of science and innovation;
- the scientific level of the programme / project, the competitiveness of planned results;
- scientific objectives;
- applicability and economic potential of the results;
- composition of the project team, including participation of young scientists;
- competence of personnel;
- material and technological basis of the involved organisations;
- project management;
- social and economic effects of programme/project implementation.
NCAA

Openess to EU

Participation of EU researchers or organisations in projects supported by state R&D programmes is possible, but without funding. Only research organisations accredited in Moldova can receive funding under this support measure.

Openess to third

Participation of researchers or organisations from third countries in projects supported by state R&D programmes is possible, but without funding. Only research organisations accredited in Moldova can receive funding in this support measure.

Selection process of projects / participants

The approval of a state programme begins with a competition for concepts for state programmes submitted by scientific organisations. Competitions are organised regularly by the SCSTD

. The last call took place in March 2009 (see, in Romanian, http://asm.md/index.php?go=concursuri_detalii&m=1&n=85&new_language=0). ASM scientific sections and the ASM consultative council evaluate the proposed concepts for state programmes. SCSTD approves the concepts and organises once per year a competitive call for project proposals for all programmes. The last call was launched in September 2010 (http://asm.md/index.php?go=noutati_detalii&n=3230&new_language=0 ? in Romanian). The deadline for applications is within one month from the publication of the call.

Evaluation of projects submitted within a certain programme are carried out by the ASM consultative council, in accordance with the Regulation on expertise of programmes / projects (annex to Partnership Agreement between the Government and the Academy of Sciences of Moldova for 2009-2012).

Expert committees in specific scientific fields formed for this purpose, with the possibility for researchers from abroad to be involved in the project evaluation. Experts evaluate programmes / projects through an online system by awarding points. The final conclusion on a programme / project must include the strengths and weaknesses, and reasons for recommendation or rejection of funding.

The results of the expertise are transmitted to SCSTD

which approves projects that will be included in the state programme. Projects financed from the state budget are included in the State Register of science and innovation projects and are published in the Official Monitor of the Republic of Moldova

What State Aid framework is applied to the measure?

Not applicable.

In what form is funding provided?

- Grants

What are the eligible costs, where direct funding is provided?

- Equipment
- Labour costs (including overheads)
- Other
- Training (including study trips)

Sources of financing (other than national public sources of funding)

- Co-financed by the private sector
- Other: extra-budgetary sources of universities and public institutions, e.g. sources from rent, contracts etc.

Overall budget in EUR

?5.3m (2004-2010)

Exchange rate used

1EUR = 16Lei

Overall budget in national currency

MDL85.4m

Year

Further Information

The overall budget includes funding for the years 2004-2010. It only reflects the funding provided for state programmes from the public budget. There is no accurate data on co-funding from the private sector and from own (extra-budgetary) resources of organisations, participating in the programmes. Co-funding is often provided as a service, such as usage of equipment, etc.

Ex-ante Indicators

- Yes

If Yes

State programmes and projects include a section on expected results of R&D activities, expressed in practical and financial parameters and / or social effects.
On submission of annual and final reports the leaders of state programmes have to fill in a special form with indicators on the activity of the programme and on each project as follows:
Funding:
The volume of funding; the share of allocations for fundamental research, for applied research, for travel and for equipment.
Staff:
Total number of project participants; members of ASM; scientific researchers; habilitated doctors in science; doctors in science; scientific researchers up to 35 years; PhD students.
Scientific results:
total; monographs in international editions; articles in journals with impact factor greater than one; articles in journals with impact factor 0,1-1.0; articles in other journals published abroad; monographs published in the country; articles in national journals, classes A, B and C; participations in scientific conference and their collections of publications, patents, copyrights certificates.
Products, new technologies:
total number.
Implementation of results:
total number.
Aggregated indicators:

On-going/Mid-term

- Yes

Final/Ex-post

- No

If the programme was evaluated, what were the main findings?

At the end of each year SCSTD
organises hearings and discussions on state programmes, attended by representatives of ministries and beneficiaries. Upon completion of some programmes there were presentations and discussions within the parliamentary commissions, the government and public central authorities: Ministry of Economy, Ministry of Information Development, Ministry of Environment, Moldovan Wine Agency, Moldovan water agency etc.
SCSTD
publishes annual activity reports, which include separate section on the activities of the state programmes. These reports include an analysis of calls for programmes / projects, financial allocation, the scientific results obtained in relation to the purpose and objectives of the programmes and proposals and recommendations for implementation. In annex to the report, indicators of activity for state programmes concerning financing, human potential, scientific and innovation results are presented based on information from programme managers.
These reports and subsequent hearings assess the scientific results, not the effectiveness of the measure. There is no comparison of the results of the state programmes with those of other measures and proposals to change the implementation of the measure are rarely discussed.

If no official evaluation has been undertaken is there any evidence which allows an appraisal of the success of the measure?

In April-May 2009 a competition for concepts of state programmes took place, and in August-September the call for projects under the programmes. The evaluation of proposals took place within a month. The project contracts were concluded within one month of the funding decision.
In 2005 five programmes out of 18 submitted concepts of programmes were approved and 34 projects selected for funding out of 62 submitted proposals;
in 2006 five programmes out of 27 concepts ? and 74 projects out of 108 proposals;
in 2007 five programmes out of 14 concepts ?and 40 projects out of 97 proposals;
in 2008 five programmes out of 23 concepts ?and 76 projects out of 132 proposals;
in 2009 two programmes out of 12 concepts ?and 13 projects out of 31 proposals.
The state programmes have in certain scientific areas enabled the creation of knowledge networks in Moldova and some excellent results have been achieved.
The main problem within the state programmes is to attract project partners and funding from the private sector and the implementation of the achieved results. There is still no significant co-funding from industry and only limited tools are available to stimulate its participation in projects. Since practically only public R&D units are eligible for funding (one private university is accredited, but it did not yet participate in state programmes), it is difficult to achieve one of the main goals of the programmes, which concerns developing competitive technologies and their implementation in industry. In addition there is no clear mechanism that regulates how benefits and intellectual property rights of authors are shared, in case of co-financing from the private sector.
Funding levels of state programmes are relatively low, even if they are supposed to be the main form of government support for R&D. The funding of the programmes did not exceed 3.5% of budgetary allocations for R&D in 2010. Other grant based competitive funding is distributed through Innovation and Technology Transfer Projects, projects for young researchers and for infrastructure support, but most of R&D funding is still institutional funding. The maximum period of the project (two years) and programmes (four years) is for some research subjects rather limited to achieve the goals set.

Results

Since 2006, the exploitation of the results of the programmes is presented according to a special statistical reporting form. In 2006 and 2008 results were summarised separately for the state programmes. Thus, in 2006 obtained results include 493 scientific publications, 51 patents, 44 products and technologies, and 18 implementations in business/industry; in 2008: 494 publications, 75 patents, 50 products and new technologies, and 27 implementations. In other years the results of state programmes are presented together with scientific results obtained in other measures.

Further development

Sometimes, the research from completed programmes can be continued in new similar programmes or are recommended to be funded as technology transfer projects. Also, results of some programmes are included in the offers of ASM

Website

http://asm.md/?go=programe&n=4&new_language=0

Relevant further information

Annual reports of scientific activities are published by SCSTD, which include a section devoted to state programmes. They can be found at
http://asm.md/?go=activitatea&activ1=1&csdt=15&new_language=0 (in Romanian)

Legal

Regulation on organisation and implementation of the competition of state programmes (annex 3 to the Partnership Agreement between the Government and the Academy of Sciences, approved by Decision of Government No. 27 of 22.01.2009) - http://lex.justice.md/index.php?action=view&view=doc?=1&id=330544
(in Romanian and Russian)

Agency Administering

Academy of Sciences of Moldova (ASM
)

Manager(s) responsible for the measure

Academy of Sciences of Moldova (ASM)

Last update

19/07/2011