

**FOR-MOLDOVA Project**

**TERMS OF REFERENCE**  
FOR THE ELABORATION OF THE EVALUATION REPORT  
„THE CURRENT MODEL OF SCIENCE GOVERNANCE IN THE  
REPUBLIC OF MOLDOVA”

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**EXECUTIVE AGENCY FOR HIGHER EDUCATION,  
RESEARCH, DEVELOPMENT AND INNOVATION FUNDING**

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## DOCUMENT CONTENT<sup>1</sup>

*The Terms of Reference (ToR)* will serve as the basis of the contractual agreement between the Academy of Science of Moldova (ASM) and the expert group responsible for carrying out the work of evaluating the current model of science governance of the Republic of Moldova (RM), in the framework of the FOR-MOLDOVA foresight project.

This document follows the guidelines of the European Commission standards for Terms of Reference writing, and contains the following sections:

1. EXECUTIVE SUMMARY
  2. THE CONTEXT OF THE PROJECT
  3. AVAILABLE KNOWLEDGE – GENERAL FRAMEWORK
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- 4. STRUCTURE AND THEMES OF THE REPORT**
  5. MAIN USERS AND STAKEHOLDERS
  6. RESOURCES AND REQUIRED QUALIFICATIONS
  7. TECHNICAL AND ADMINISTRATIVE ISSUES

The elaboration of the ToR for evaluating the science governance system of the RM represents the contribution of the Romanian Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI) in the framework of the FOR-MOLDOVA project implementation. After the validation of the English translation of the ToR by the ASM, the document will be used as it is, while any further amendment will be discussed and operated with the agreement of both parties.

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- The sections 1-3 provide contextual information needed for the elaboration of the evaluation report;
- The sections 4-5 provide guidelines on the way to structure the knowledge for the development of the evaluation report
- The sections 6-7 provide technical and administrative information needed both for the evaluation experts and the project implementation team in charge with carrying the work for writing the evaluation report.

## 1. EXECUTIVE SUMMARY

### Clarifications on the purpose of the report:

The objectives of the report ("Report") that will be elaborated based on these ToR are:

1. Evaluation of the current model of science governance in RM (through an exploratory analysis of the policies, instruments, structures and institutional functions in the science and innovation sector);
2. Identification of the instruments and mechanisms of science governance that could foster the construction of an efficient policy mix in terms of quality and quantity of the public R&D investment;
3. Identification of the characteristics of a desirable and functional new model of science governance in RM.

### Clarifications on the context of the report:

- The Report will be elaborated within the framework of the "FOR-MOLDOVA – National Foresight Exercise for the Research-Innovation Sector of Republic of Moldova" project implementation. The project is being co-financed by the Romanian Ministry of Foreign Affairs through the United Nations Development Programme Romania and the Government of Republic of Moldova, implemented in partnership by UEFISCDI and ASM. The project will be implemented over a period of 5 month, between 11/24/2011 and 04/13/2012. The activity of elaborating the Report is planned to complete by **01/23/2012**.
- The Report will be later discussed within a workshop for consensus building over the characteristics of the future model of science governance in RM.

### The European legal framework of the science governance system in RM:

The main normative references in the sector of science and technology governance are:

- Europe 2020 Strategy

[http://ec.europa.eu/europe2020/index\\_ro.htm](http://ec.europa.eu/europe2020/index_ro.htm)

- European Action Plan, Policy Initiatives, Funding Schemes, Coordination of Policies, Monitoring

[http://ec.europa.eu/invest-in-research/index\\_en.htm](http://ec.europa.eu/invest-in-research/index_en.htm)

The national legal framework of the science governance system in RM:

- *Code of the Republic of Moldova on science and innovations, No 259-XV, dated 15.07.2004.*

The main normative references in the sector of science governance can be found at:

[http://www.asm.md/?go=cadru\\_normativ&new\\_language=1](http://www.asm.md/?go=cadru_normativ&new_language=1)

Similar studies and main information sources:

- ERAWATCH website (evidence-based platform for European R&D policies)

<http://erawatch.jrc.ec.europa.eu/>

- Pro INNO EUROPE website (monitoring innovation measures and policies in Europe)

<http://www.proinno-europe.eu/trendchart>

- “Policy Mix” national reports of the EC

[http://ec.europa.eu/invest-in-research/monitoring/document\\_en.htm](http://ec.europa.eu/invest-in-research/monitoring/document_en.htm)

- EC CREST report

[http://ec.europa.eu/invest-in-research/pdf/download\\_en/crestreport.pdf](http://ec.europa.eu/invest-in-research/pdf/download_en/crestreport.pdf)

- OECD “Innovation Policy” reports

[http://www.oecd.org/topic/0,3699,en\\_2649\\_34273\\_1\\_1\\_1\\_1\\_37437,00.html](http://www.oecd.org/topic/0,3699,en_2649_34273_1_1_1_1_37437,00.html)

- Background paper: *Global Science and National Policies: the Role of Academies* (4-5 Mai 2007), Chisinau, RM, event organized by UNESCO and ICSU;
- *R&D in the Republic of Moldova. Problems and Options*, Popa Ana (2011), Expert Group; (Romanian version)
- *Science and Education Policies in Central and Eastern Europe, Balkans, Caucasus and Baltic Countries*, (2010), UNESCO;
- *EECA Research Inventories: RM* (17.03.2008).

*A set of normative documents, studies and thematic reports can be provided by the project implementation team of ASM.*

## **2. THE CONTEXT OF THE PROJECT**

The project FOR-MOLDOVA will carry out a national foresight exercise in the RM. Foresight exercises are tools for creating strategic visions for medium and long terms, understood as images of a desirable future that can be shaped through strategic decisions and actions implemented today.

In order to implement the FOR-MOLDOVA project, during September-December 2010, teams of experts from Romania and RM have participated in a preparatory project for developing the foresight methodology.

The FOR-MOLDOVA project will lead to the elaboration of a Research, Development and Innovation Strategy of RM at the time horizon 2020. The foresight exercise will allow the analysis of the long-term effects of adopting different models of science and innovation governance, and will offer support for decision processes in the Research, Development and Innovation (RDI) sector as well as in additional domains (economy, environment, transport, communications, education, health, culture, etc.). The participative process, specific to the foresight exercise, will lead to the development of innovation clusters which will include representatives from different social groups, offering support for implementing future public policies for the RDI sector and for consolidating the relations between researchers, business people and representatives of the public sector.

This first national foresight exercise in RM will also have a component of institutional development and will likely lead to changing the manner in which public policies are elaborated in other sectors (education, national security, etc.) – an extremely important aspect in the process of modernization and European integration of RM.

By implementing the FOR-MOLDOVA project, it will be created the Center for Prospective Research of the Academy of Sciences of Moldova.

### 3. AVAILABLE KNOWLEDGE – GENERAL FRAMEWORK

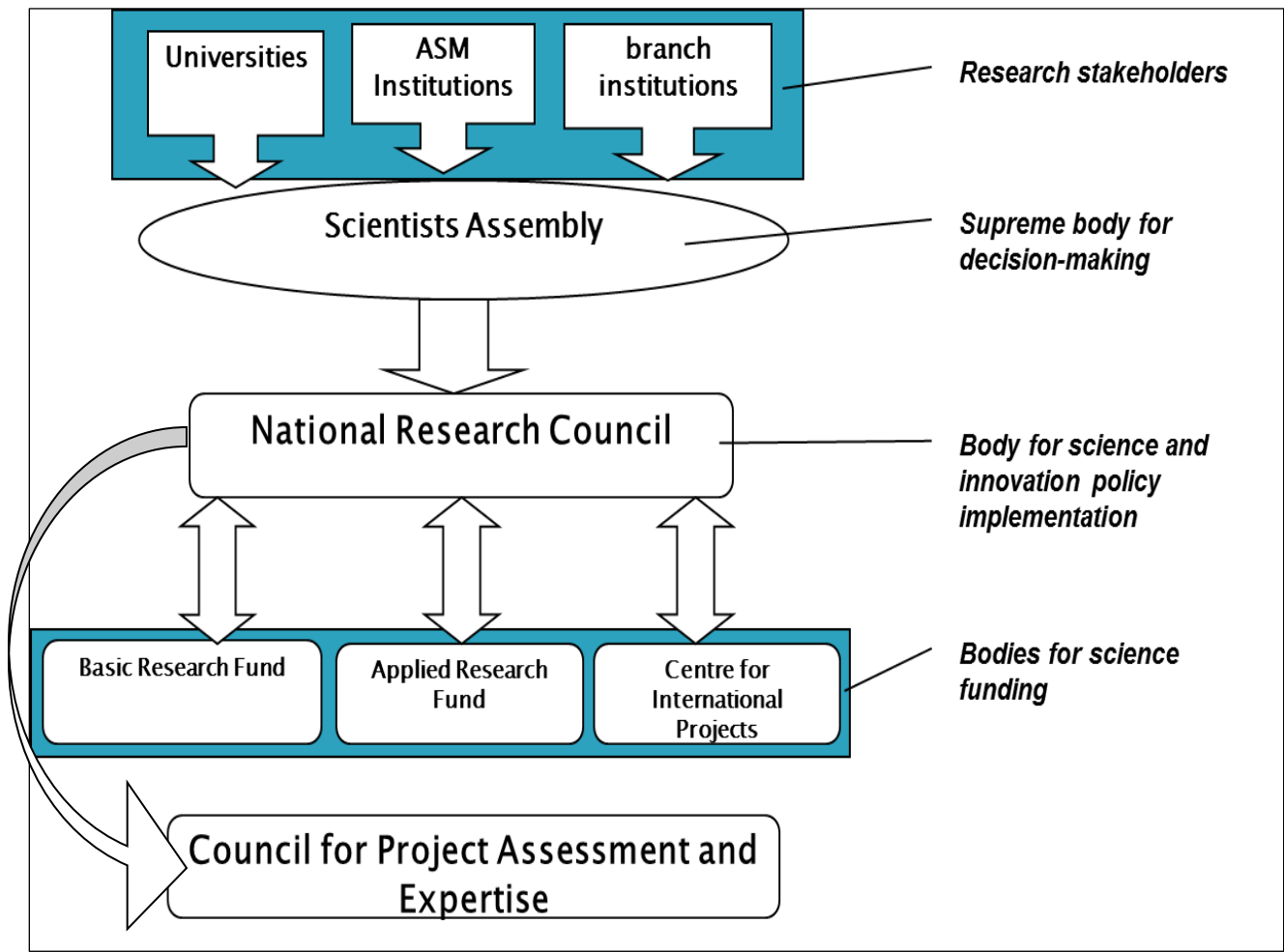
The action lines for the modernization of the R&D system in RM are included in the Governmental Programme “European Integration: Liberty, Democracy, Welfare”. The Programme offers the policy framework for the governance of RM for 2011-2014 and reform priorities for associating to FP7 and European integration.

Information on the current model of science governance, programmes and instruments for public R&D funding, and national innovation activities can be found on the website of ASM:

(Functions) [http://www.asm.md/?go=programe&menu\\_activ=321&new\\_language=1](http://www.asm.md/?go=programe&menu_activ=321&new_language=1)

(Structure) [http://www.asm.md/?go=sectii&new\\_language=1](http://www.asm.md/?go=sectii&new_language=1)

The institutional scheme of the science and innovation system in RM:



#### 4. STRUCTURE AND THEMES OF THE REPORT

We recommend that the structure of the report and the analytic scheme should follow the sections hereinafter:

**Section 1:** In order to place the combination of existing policy instruments (policy mix) in context, the **general challenges** faced by the National Innovation System (NIS) are to be analyzed by the expert group.

The context will encompass all the conditions that directly or indirectly affect the functioning of the NIS and R&D expenditures. The section will also focus on the challenges with regard to raising R&D investments.

The contextual conditions are very important for the further discussion of the relevance of the policy mix, and can be addressed based on a SWOT analysis.

**Note:** The NIS system is usually referred in RM as the Science and Innovation System; the R&D investments are referred as Science Funding.

It should be taken into account that the term R&D is used in this document with reference to the broad meaning of RDI (Research, Development and Innovation), considering the importance of strengthening the links between the research sector and the industry while enhancing the innovation and technology transfer culture.

**Section 2:** will contain an overview of the **main R&D objectives and priorities** in RM. The section will include an evaluation of their evolution over the last 5 years. The analysis will be based on White Papers and official policy documents (to be provided by the project implementation team of the ASM).

This overview will provide the basis for the assessment of actual working of policy instruments (to be carried out and delivered in section 5).

**Section 3:** will provide a critical analysis of possible **gaps and convergences** between the challenges identified in section 1 and the main policy objectives and priorities of R&D policies stated in section 2.

**Section 4:** will present the **comprehensive composition of the policy mix in place**, *i.e. policy instruments affecting R&D activities in the private and in the public sector, either directly for*

*instruments from the R&D policy domain, but also indirectly for instruments outside the R&D domain which are of particular relevance to R&D activities.*

The experts will identify the **typologies of the existing instruments**, and will provide a **short description** of each instrument by time horizon, objective/ objectives, nature (general, sectoral, linkage, Intellectual Property, education, etc.), target group, and budget.

**Section 5:** will again provide a short critical analysis of possible **gaps**, this time between the main R&D policy objectives and priorities on the one side, and the instruments in place on the other side.

*If the ASM team will provide existing evaluations of programmes or policy instruments, their results will be used if they emphasize on the contribution of these instruments towards the policy objectives and priorities.*

**Section 6:** will discuss the **orientation of the policy mix**, in terms of priorities amongst **various possible routes** to increase R&D investments.

The policy instruments will be categorized under *6 different routes*<sup>2</sup> according to their relevance, while this categorization is desirable to be followed by a short discussion on the **range of instruments affecting each route, missing instruments, routes that are not addressed by instruments, possible redundancies or overlaps.**

*The (open) list of 6 routes refers to policies that: Promote establishment of new indigenous R&D-performing firms; Stimulate R&D investment in R&D-performing firms; Stimulate R&D investment in firms non-R&D-performing; Attract R&D-performing firms from abroad; Increasing extramural R&D carried out in cooperation with public sector; Increase R&D in the public sector.*

**Section 7:** will provide another view on the policy mix in terms of the **relative importance of each type of instruments.**

The relative weights of each instrument will be estimated based on their actual funding amounts by constructing a set of **relevant outcome criteria**<sup>3</sup>.

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<sup>2</sup> The routes suggested by the Policy Mix Methodology of UNU-MERIT.

<sup>3</sup> The criteria suggested by the Policy Mix Methodology are: overall contribution to increase private R&D expenditures; impact on specific aspects of the NIS ore R&D performers; public attention/ attention by policy makers; volume of public funding involved; beneficiary of a shift in public funding.



**Section 8:** From this point the report should focus on the **policy governance issues**.

This section will discuss the emergence of the existing policy mix through examining how the set of R&D policy instruments were placed, the rationale behind them, the driving forces behind their establishment. The authors should also focus on identifying possible interactions and conflicts in the case of establishing new, or suppressing existing instruments.

The section will try to establish **whether the policy design process is incremental or radical, analytical or non-analytical**. From this, the section discusses if the policy mix is a “construct” or an “ex post” reality.

**Section 9:** This section will analyze the **institutional actors’ involvement in the NIS governance** (elaboration, monitoring, implementation and assessment of R&D policies). The authors will carry a comprehensive analysis of the NIS institutional scheme by emphasizing:

- The institutional roles and responsibilities related to the elements of the existing policy mix;
- The key question of interactions, i.e. whether there is a form of co-ordination between R&D policy and policy instruments from outside the R&D domain, and the existing mechanisms that favor or hinder such interactions.

**Section 10:** will deal with the core questions of the **policy mix as a whole**:

- What are the interactions among the policy instruments in place and what are the effects (potentially positive or negative)?
  - o Did the instruments` interaction affected the achievement the NIS stated objectives?
  - o What are the interactions of the NIS policy instruments with other policy areas?
  - o How the interactions between policy instruments affect R&D expenditure?
  - o What are the effects of the policy mix and of the interactions among policy instruments on the objectives related to European integration.

In some cases, the analysis will take the form of hypotheses rather than hard evidence.

**Section 11:** In this final section, the authors of the report should provide **recommendations regarding the characteristics of a science governance model** in RM that can ensure the construction of an efficient policy mix for the next policy cycle, in terms of quality and quantity of public investment in science and innovation.

## 5. MAIN USERS AND STAKEHOLDERS

The Report will provide the input for the next step of the project – the workshop for constructing a medium- to long-term strategic vision for the Science and Innovation System of RM. The event will gather a wide range of representative from R&D and social-economic sectors (around 20 managers from the R&D system and 20 stakeholders).

The main users of the Report will be the participants of the workshop.

The Report should also be helpful to wider categories of users, including top and middle management personnel from the R&D institutes and universities, policy-makers and science and innovation policy experts.

*The Report approach should therefore consider the affected stakeholders as well as the groups involved in the FOR-MOLDOVA project.*

We recommend that the Report should be published and disseminated according to the communication strategy of the project. This will pave the way for the last stage of the project in which the robustness of the NIS vision will be tested through a focus-group research.

## **6. RESOURCES AND REQUIRED QUALIFICATIONS**

The authors of the Report will have access to the database of documents supplied by the project team.

It is desirable that the contracted experts have high qualifications in at least one of the following domains: political sciences, sociology, economic sciences. It is also desirable for them to have previously participated and contributed to studies on RDI governance systems, to have relevant experience with qualitative research methods and social studies.

The Report deadline will be settled by the ASM project team.

The internal work of the expert group will be organized and scheduled independently, as well as the authors` responsibilities and roles related to the tasks/ sections of the Report.

## 7. TECHNICAL AND ADMINISTRATIVE ISSUES

- The project activity for the writing of the Report is *A2.4. Reception of the evaluation report on the current model of science governance in RM.*
- The deadline for delivering the Report is **01/23/2012.**
- The Report should have no more than **50 pages**. The European good practices highlight a minimum of **20 pages**.
- The Report will be written in English; the ASM team will be responsible for the Romanian translation.
- The Report will be formatted with **Arial font, 11p, multiple line spacing of 1.15p.**
- The Report will be validated by the Steering Committee of the project and will further provide the basis for the workshop for consensus building over the characteristics of the future model of science governance in RM.
- During the activity of elaborating the Report, the ASM project team will provide technical support and constant feedback for the authors, in order to integrate possible suggestions preceding the validation of the Report.
- *The contact person responsible for the Report on behalf of the ASM team is Sergiu Porcescu, head of Unit for European Integration and International Cooperation of the ASM, Chisinau, Moldova, Blv. Stefan cel Mare nr. 1, phone: +373 22 233 367, email sergiu\_porcescu@yahoo.com.*