

H2020 PSF Specific Support to Armenia



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Deputy Chairman

SCIENCE COMMITTEE
MINISTRY OF EDUCATION AND SCIENCE

KICK-OFF MEETING, BRUSSELS, APRIL 16, 2019

OUTLINE



- R&D - Short Description:
 - Legal Basis and Key Players
 - Structure and Human Resources
 - State Funding and Programmes
 - Research Output and Ranking
 - International Cooperation
 - Evaluation of S&T&I System
- PSF Support: PSF-AM
- Next Steps

R&D: Key Players-Policy



POLICY

- Science Committee:
 - To address the fragmented character of policy-making
 - To improve policy-making and coordination
 - Responsible for development and implementation of RTD programmes
 - Responsible for state budget on R&D
- Government resolution (2015):
 - Science Committee was recognized as authorized body responsible for development of policy in the field of scientific and technological expertise

R&D: Key Players - Performers



PERFORMERS Involved in State Funding

- National Academy of Sciences
 - Main R&D Performer
 - 33 Research Institutes
 - Official scientific consultant to the highest governing bodies
- Branch State Research Organizations – 23
- State Higher Education Institutions – 13
- Other Organizations involved in Topic and Target Funding schemes (2018) – 14

R&D: Legal Basis



- **Laws:**

- Law on the Scientific and Technical Expertise (April, 2015)
- Law on the National Academy of Sciences of RA (April, 2011)
- Law on the Scientific and Technical Activities (December, 2000)

- **Government Resolutions:**

- Action Plan on the Development of Science for 2017-20 (17.08.2017, N 35)
- Science and Technology Development Priorities for 2015-19 (25.12.2014, N 54)
- Strategy on Development of Armenology for 2012-25 (12.01.2012, N 1)
- Action Plan on Development of Science for 2011-15 (17.06.2011, N 23)
- Program to Promote the Development of Social Sciences for 2011-15 (18.03.2011, N 10)
- Science and Technology Development Priorities for 2010-14 (27.05.2010, 640-N)
- Strategy on Development of Science for 2011-20 (27.05.2010, N 20)

R&D: Action Plan for 2017-20

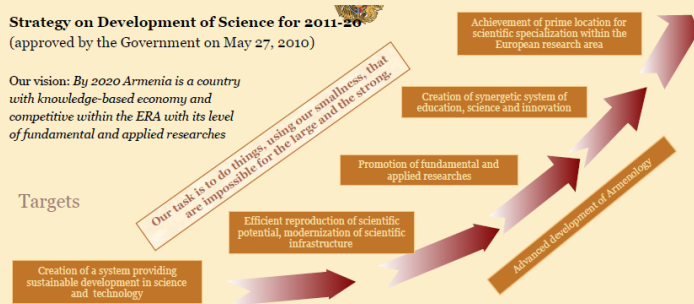


Action Plan on the Development of Science for 2017-20 (approved by the Government on July 17, 2017)

Strategy on Development of Science for 2011-20
(approved by the Government on May 27, 2010)

Our vision: *By 2020 Armenia is a country with knowledge-based economy and competitive within the ERA with its level of fundamental and applied researches*

Targets



VISION: *By 2020 Armenian R&D sector is internationally competitive and ERA-integrated system promoting excellence in fundamental and applied research, and contributing in economic competitiveness, security, social and cultural progress of the republic.*

OBJECTIVES:

- Improving the S&T management system
- Introduction of an effective system of reproduction of personnel in R&D sector, modernization of research infrastructures
- Promoting fundamental and applied research, including knowledge used in economy and/or of dual importance
- Establishing preconditions to form synergistic system of education, science, technology and innovation
- Promoting research of Armenian studies
- Development of international cooperation in RTD, ensuring smart specialisation in ERA

R&D: Priorities for 2015-19



- Science and Technology Development Priorities for 2015-19
(approved by the Government on December 25, 2014)
 - Armenology
 - Life Sciences
 - Secure and Efficient Energy
 - Key Enabling Technologies, Information and Communication Technologies
 - Space, Earth Sciences, Sustainable Use of Natural Resources
 - Fundamental Researches for Key Problems of Scientific and Socio-Economic Development

R&D: Structure



STATE RESEARCH ORGANIZATIONS AND UNIVERSITIES - BASELINE FUNDING - 2019

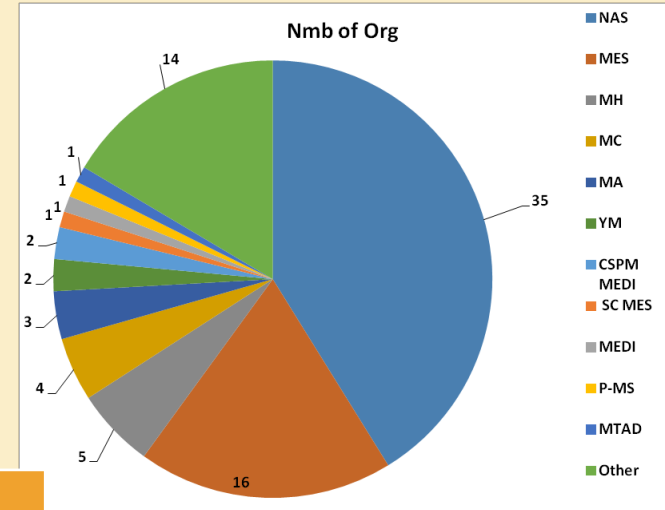
NAS/Ministries	Research Organizations	Higher Education Institutions	Total
National Academy of Sciences	33		33
Ministry of Education and Science	4	12	16
Ministry of Healthcare	5		5
Ministry of Culture	4		4
Ministry of Agriculture	3		3
Committee of State Property Management	2		2
Yerevan Municipality	2		2
Science Committee	1		1
Staff of the Prime Minister	0	1	1
Ministry of Economic Development and Investments	1		1
Ministry of Territorial Administration and Development	1		1
Total	56	13	69

R&D: Structure&Employees



Total, 2018, December

- Employees: **6057**
- Researchers: **3951**
- Researchers with Acad. Degree: **2573**



NUMBER OF EMPLOYEES

Total	Researchers		Researchers with Academic Degree	
	Total	65 and above	Total	65 and above
6057	3951	1115	2573	911
	(65.2% of Employees)	(28.2% of Researchers)	(65.1% of Researchers)	(35.4% of Research. with AcDeg)

Source: <http://www.scs.am>

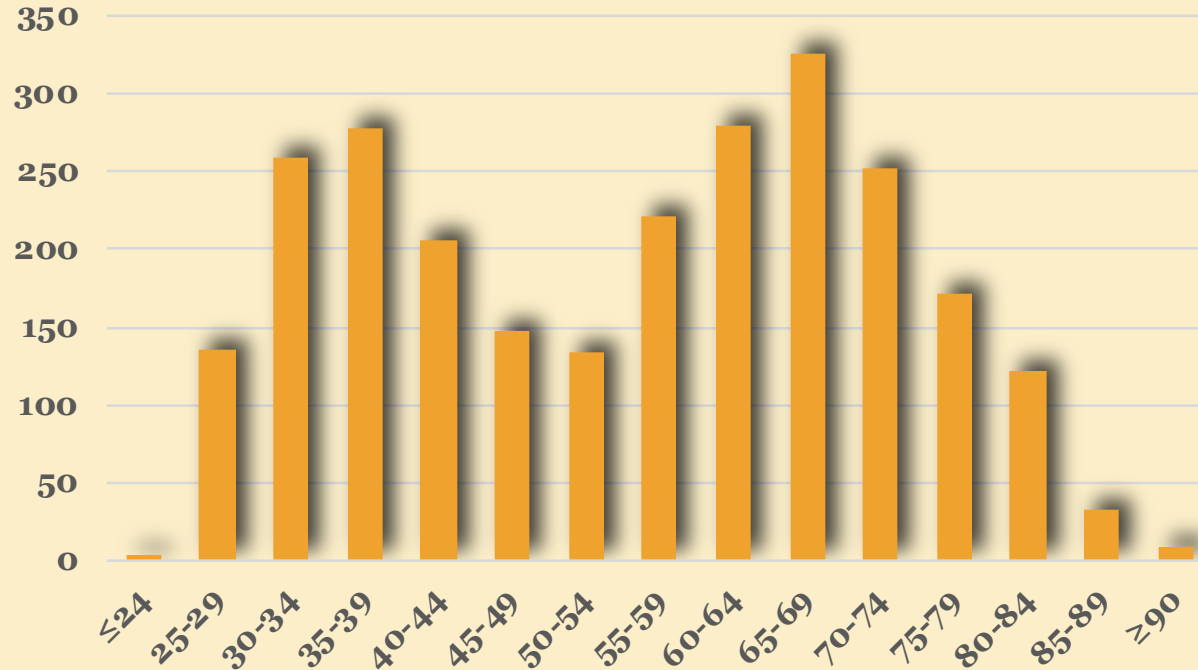
December, 2018

R&D: Age distribution



- Age distribution (2018)

Researchers with Academic Degree in State Programmes

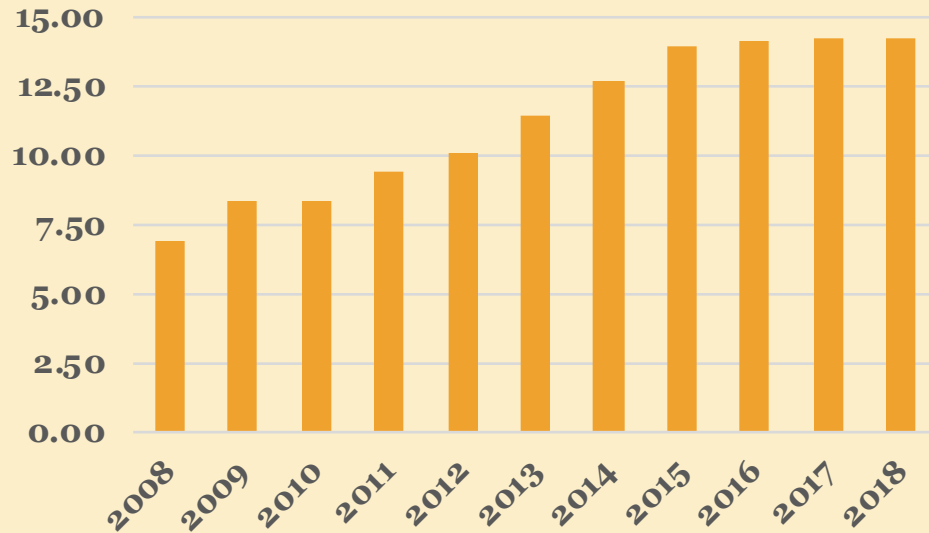


R&D: State Funding

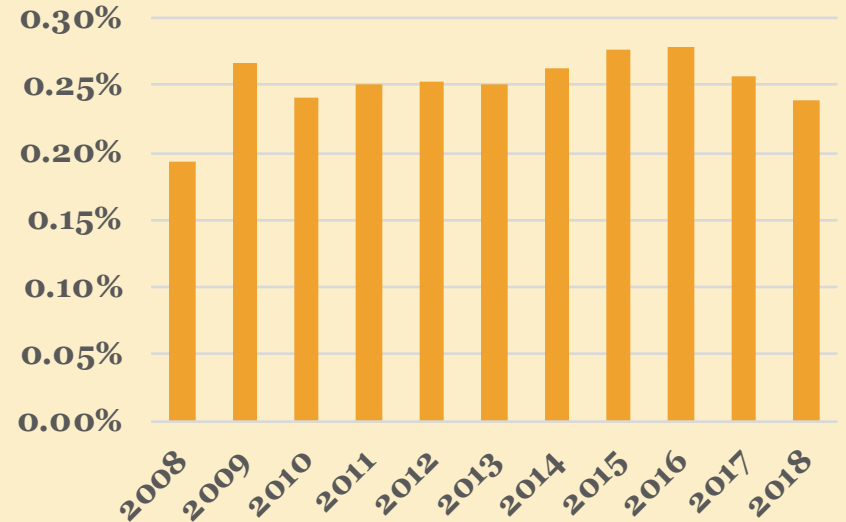


- Science Budget (2008-18)

Science Budget, bln AMD



Science Budget as % of GDP



R&D: State Funding Mechanisms



R&D is financed from the state budget through the following measures (Law on the Scientific and Technical Activities)

- Base (Baseline) funding:
 - fundamental and applied research
 - maintenance and development of research infrastructure
 - maintenance of research objects of national importance
 - support for PhD students
- Targeting funding (National research and development programmes)
- Topic funding (Grant programs)

R&D: State Funding (2014-18)



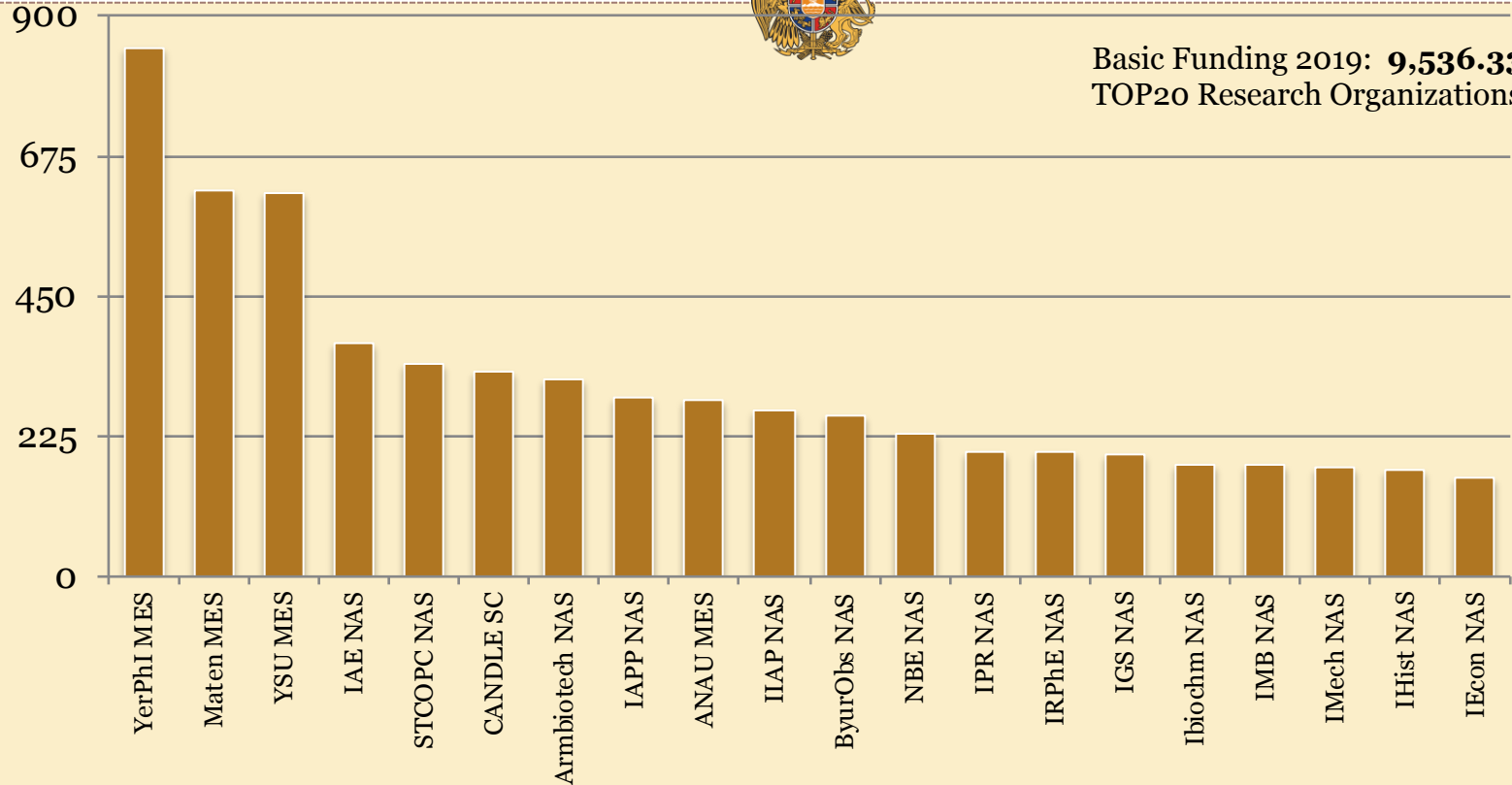
State Expenditures: 2014-18, AMD mln

	2014	2015	2016	2017	2018
Institutional (Basic) funding	9,025.45	9,811.01	10,004.56	10,065.43	9,588.4
Share of total funding	71.28%	70.47%	70.69%	70.50%	67.16%
Target funding	1,675.27	1,839.41	1,848.06	1,848.06	2,568.46
Share of total funding	13.23%	13.21%	13.06%	12.94%	17.99%
Topic (thematic) funding	1,515.69	1,333.01	1,359.17	1,523.02	1,306.69
Share of total funding	11.97%	9.57%	9.60%	10.67%	9.15%
Bonus payments to scientists with academic degree	446.4	938.7	941.7	840.3	812.42
Share of total funding	3.53%	6.74%	6.65%	5.89%	5.69%
Total funding	12,662.81	13,922.12	14,153.48	14,276.81	14,275.97

R&D: State Funding-Baseline Funding-2019



Basic Funding 2019: **9,536.33** AMD mln,
TOP20 Research Organizations by Funding



R&D: State Programmes-2019 (March)



Institutional (Basic)
Funding

Public (State) Research
Organizations and Universities

164 - Inf+F&A
87 - Int Bilat RP (De, Ru, By, Euras)
1 - Joint Lab with De
5 - Objects of Nat Importance
ICRANet - Arm Int Center
ICTP Affiliated Center

Target Funding

Public (State) & Private Research
Organizations and Universities

11 Programmes

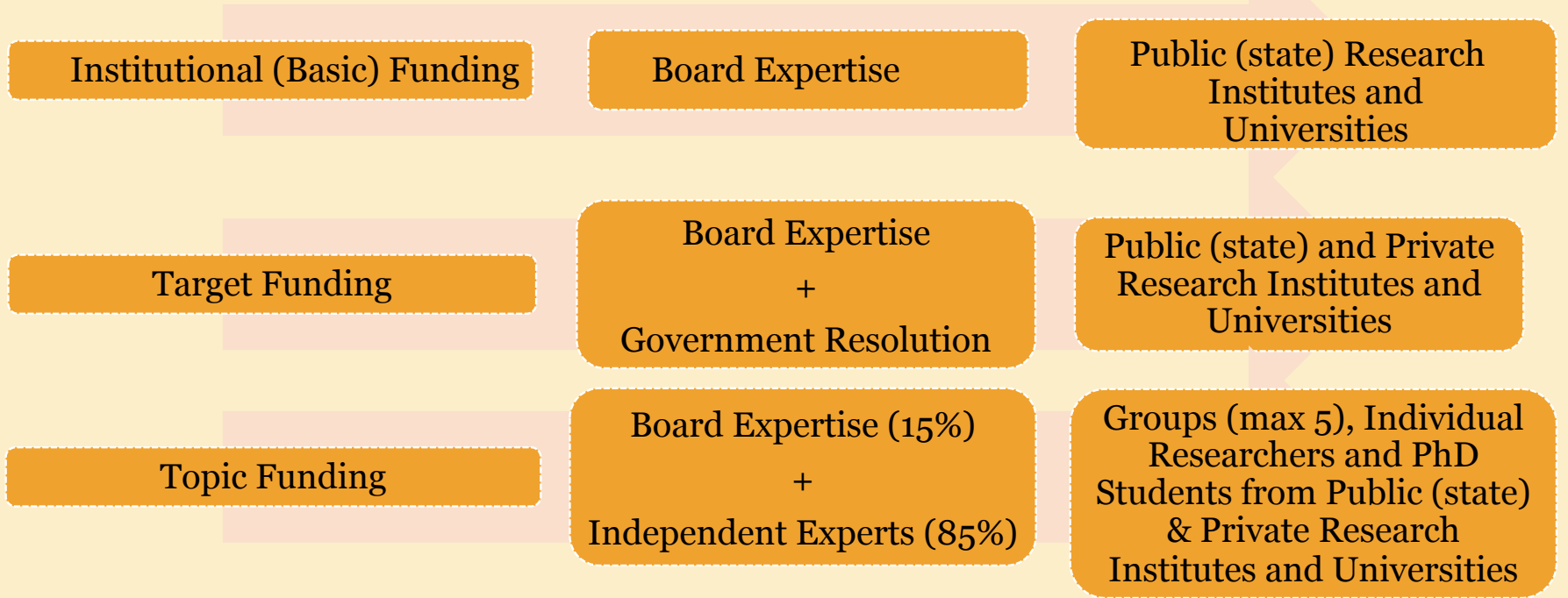
Topic Funding

Research Groups (max 5), Individual
Researchers & PhD Students from
Public (State) & Private Research
Organizations and Universities

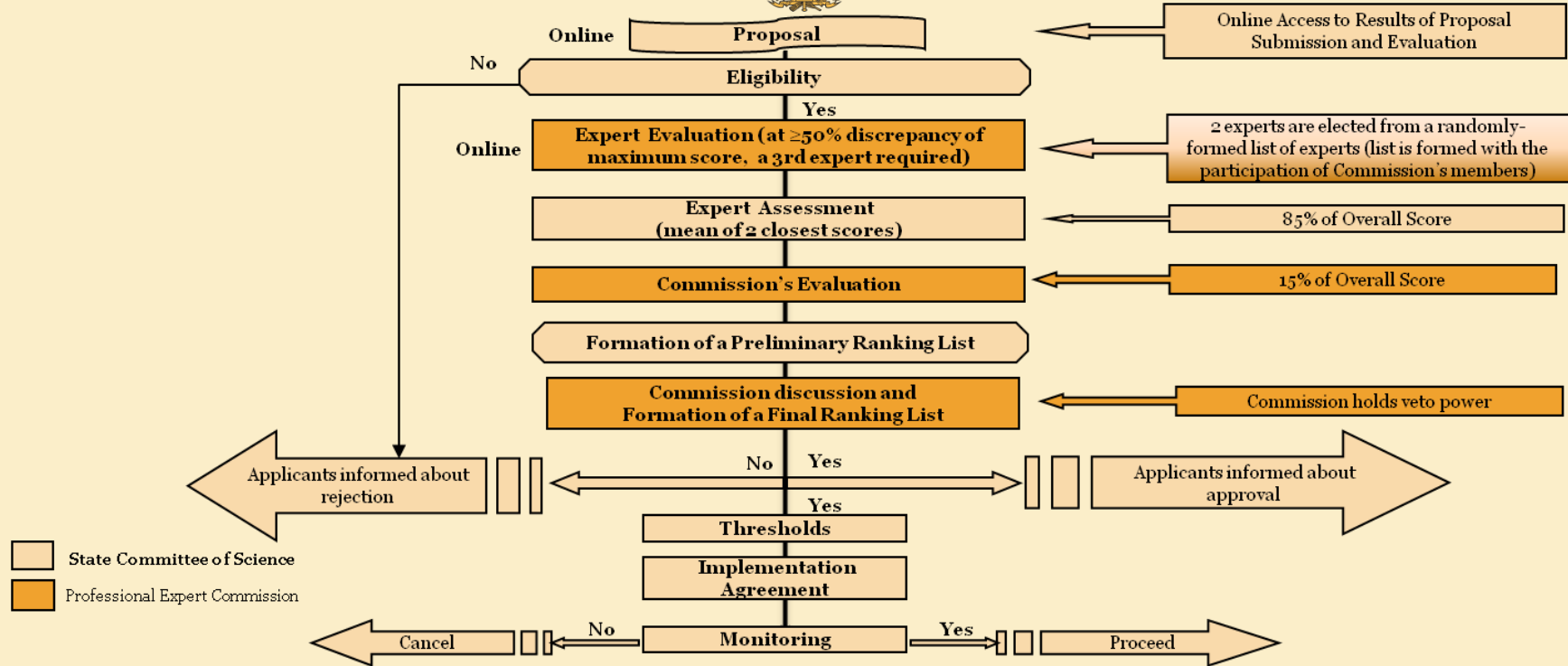
Is open for researchers from abroad

182 - Programmes (≤ 5)
30 - App with Private Sect, Regional...
36 - PhD Students
99 - Productive Researchers
22 - Young Productive Researchers

R&D: Scientific Expertise



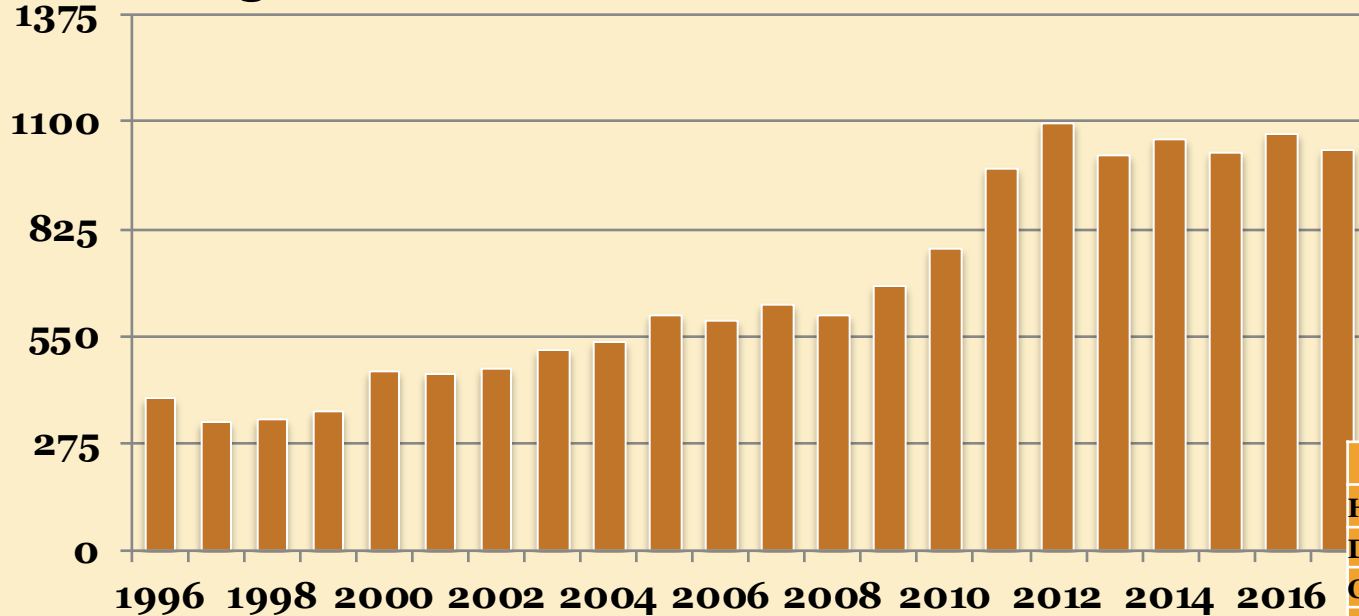
R&D: Evaluation of National Grants Proposals



R&D: Research Output



● Scimago- Citable Docs (1996-2017)

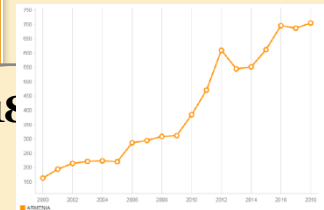
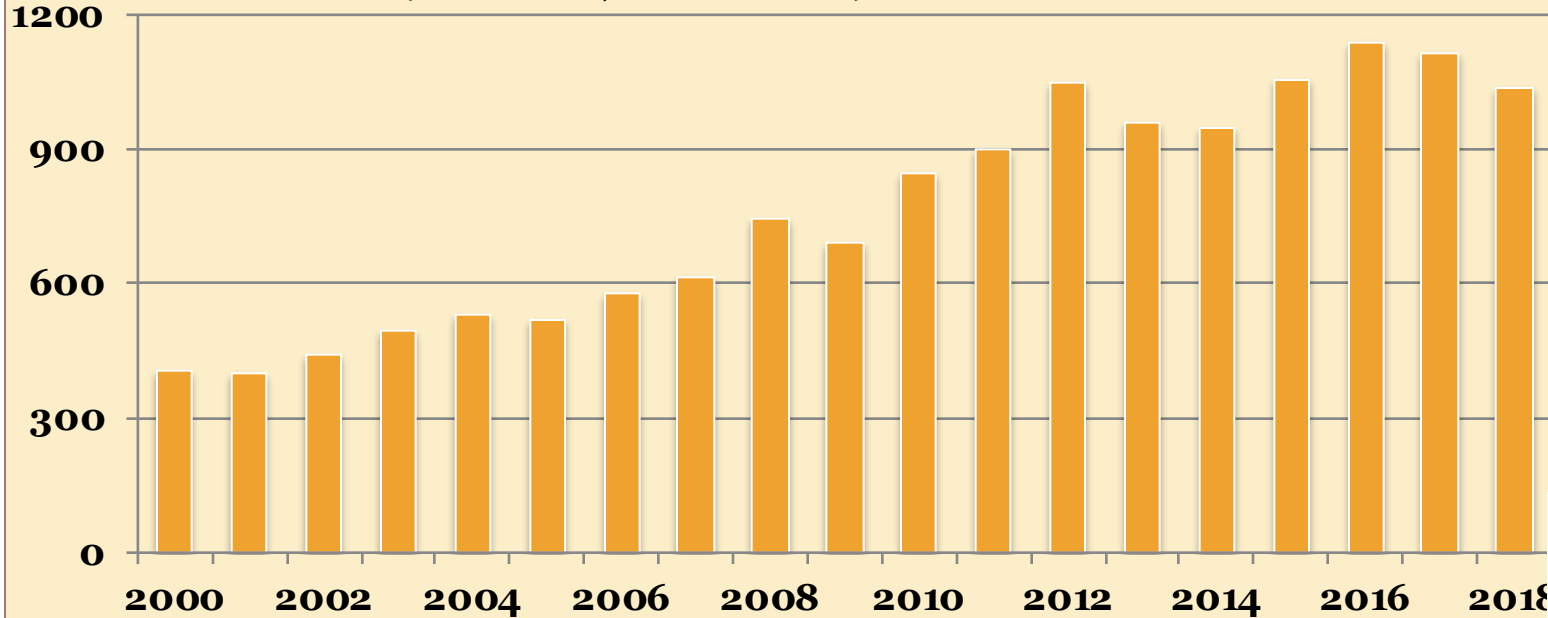


Total	1996-2017
H Index	160
Documents	15450
Citable Documents	15008
Citations	193973
Citations per Doc.	12 .55

R&D: Research Output



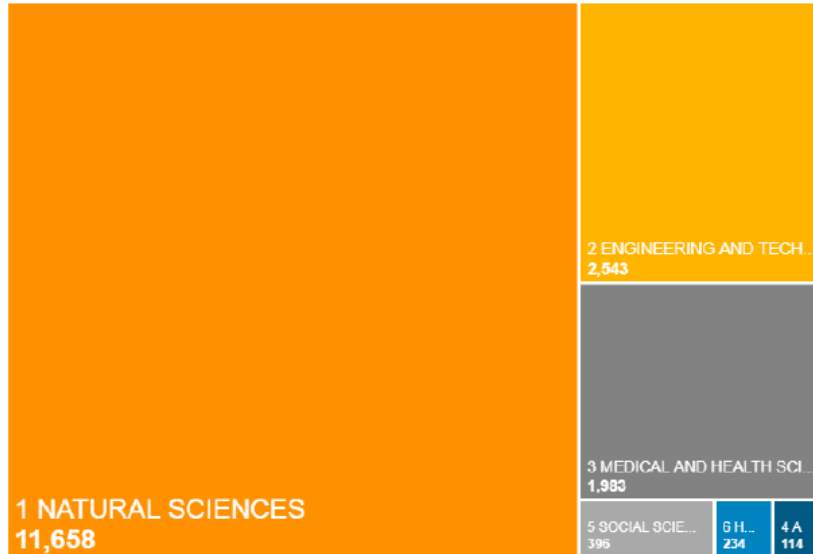
● WoS -Total (InCites, 2000-18)



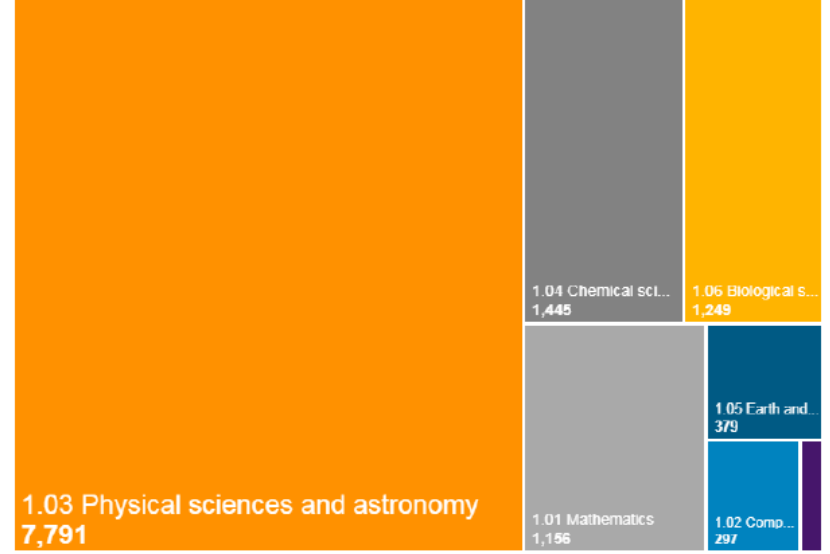
R&D: Research Output



- WoS: Research Areas and Fields in Nat. Sc (InCites, Total, 2000-18)



Indicators: Web of Science Documents. Schema: Oecd. Research Area: 1 Natural Sciences, 2 Engineering And Technology, 3 Medical And Health Sciences, 4 Agricultural Sciences, 5 Social Sciences, 6 Humanities. Location: Armenia. Time Period: 2000-2018. InCites dataset updated Mar 29, 2019. Includes Web of Science content indexed through Mar 1, 2019. Export Date: Mar 29, 2019.

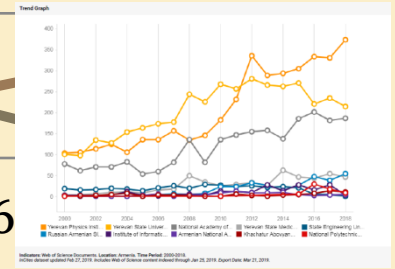
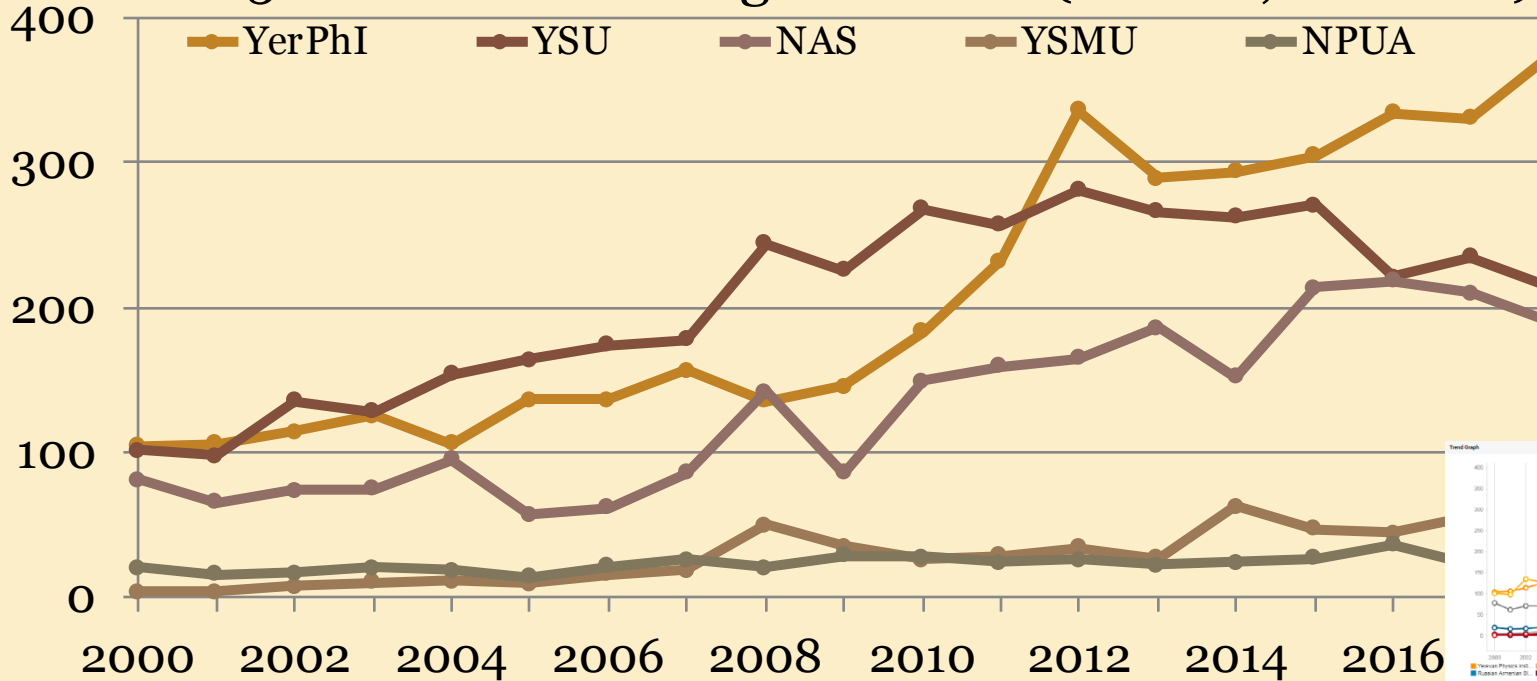


Indicators: Web of Science Documents. Schema: Oecd. Research Area: 1.01 Mathematics, 1.02 Computer And Information Sciences, 1.03 Physical Sciences And Astronomy, 1.04 Chemical Sciences, 1.05 Earth And Related Environmental Sciences, 1.06 Biological Sciences, 1.07 Other Natural Sciences. Location: Armenia. Time Period: 2000-2018. InCites dataset updated Mar 29, 2019. Includes Web of Science content indexed through Mar 1, 2019. Export Date: Apr 4, 2019.

R&D: Research Output



WoS: 5 TOP Research Organizations (InCites, 2000-18)



R&D: Research Output



- WoS: TOP10 Collaboration Countries (InCites, 2000-18)



TOP 10 COLLABORATION COUNTRIES BY NUMBER OF JOINT PUBLICATIONS

SCS: CNRS (Fr), BMBF (De), RFBR (Ru), FFR (By), MST(Cn), ICTP (It), etc.
NAS: AS of Ru, Cn, Ua, Ro, Md, By, Ge, Hu, etc.
Cooperation with major European Research Centers & Universities on Institutional Level
Cooperation within large scale scientific collaborations and experiments: LHC, DESY, JINR, HESS, MAGIC, CEBAF, etc.

R&D: International Ranking



- Scimago Institutions Rankings-2018: EaP Countries

Methodology		EaP Rank	Global Rank	Country	Title
Factor	Weight	1	488	UKR	National Academy of Sciences
Research	50%	2	637	ARM	A.Alikhanyan National Laboratory
Innovation	30%	3	658	BLR	Belarusian State University
Societal	20%	4	686	UKR	Taras Shevchenko National University of Kyiv
		5	705	BLR	National Academy of Sciences
		6	706	UKR	Institute of Physics National Academy of Sciences
		7	718	UKR	Lviv Polytechnic National University
		8	719	UKR	G. V. Kurdyumov Institute for Metal Physics National Academy of Sciences
		9	720	GEO	Ilia State University
		10	725	UKR	National Technical University of Ukraine - Kyiv Polytechnic Institute
		11	730	GEO	Ivane Javakhishvili Tbilisi State University
		12	731	UKR	Ivan Franko National University of Lviv
		13	734	UKR	Odessa National I.I. Mechnikov University
		14	735	BLR	Belarusian National Technical University
		15	737	UKR	V.N. Karazin Kharkiv National University
		16	739	UKR	Institute for Scintillation Materials National Academy of Sciences
		17	740	UKR	Sumy State University
		18-19	741	ARM	Yerevan State University
		18-19	741	UKR	National Technical University - Kharkiv Polytechnic Institute

R&D: International Ranking



- Scimago Institutions Rankings-2018: EaP Countries

EaP Rank	Global Rank	Country	Title
20	742	MDA	Academy of Sciences
21-22	743	UKR	V. Ye. Lashkaryov Institute of Semiconductor Physics National Academy of Sciences
21-22	743	UKR	Kharkov National University of Radio Electronics
23	745	BLR	Belarusian State University of Informatics and Radioelectronics
24	746	UKR	Kiev International University of Civil Aviation
25-26	747	AZE	National Academy of Sciences
25-26	747	UKR	Chernivtsi National University
27	748	UKR	National Science Center Kharkov Institute of Physics and Technology National Academy of Sciences
28-29	751	UKR	Institute for Single Crystals National Academy of Science
28-29	751	UKR	Bogolyubov Institute for Theoretical Physics National Academy of Sciences
30	752	UKR	Donetsk O. O. Galkin Institute of Physics and Engineering National Academy of Sciences
31	754	GEO	Georgian Technical University
32-33	755	ARM	National Academy of Sciences
32-33	755	UKR	Frantsevich Institute for Problems of Materials Science National Academy of Sciences
34	757	UKR	O. Ya. Usikov Institute for Radio Physics and Electronics National Academy of Sciences
35	762	GEO	National Academy of Sciences
36	764	UKR	B.Verkin Institute for Low Temperature Physics and Engineering National Academy of Sciences
37	766	UKR	H. V. Karpenko Physico-Mechanical Institute National Academy of Sciences
38	768	UKR	Institute of Nuclear Research National Academy of Sciences
39	769	AZE	Baku State University

R&D: Bilateral Programmes



● Bilateral Joint Programmes

**Science Committee
(SC, Armenia)**

**Centre National de la Recherche
Scientifique (CNRS, France)**

From 2009: 2 Joint Labs, 1
Joint Group, 20 Ann. Grants

**Foundation for Fundamental
Research (FFR, Belarus)**

From 2011: 30-34 Two Years
Grants

**Russian Foundation for
Humanities (RFH, Russia)**

From 2011: 10-12 Two Years
Grants

**Russian Foundation for
Basic Research (RFBR, Russia)**

From 2013: 40-42 Two Years
Grants

**Federal Ministry of Education
and Research (BMBF, Germany)**

From 2013: 10 Two Years
Grants

**State Science and Technology
Committee (SSTC, Belarus)**

From 2015: 4 Two Years
Grants

**National Science Fund
(BNSF, Bulgaria)**

From 2020:

**National Research Council
(CNR, Italy)**

From 2020:

2017:
2 Joint Laboratories and 1 Group
with CNRS
1 Joint Laboratory with BMBF
Int. Center ICRArNet-Armenia
ICTP Affiliated Center
2019:
1 Joint Laboratory with CNRS (under
discussion)
1 Joint Laboratory with BMBF
Int. Center ICRArNet-Armenia
ICTP Affiliated Center

R&D: International Cooperation



International RTD Policies

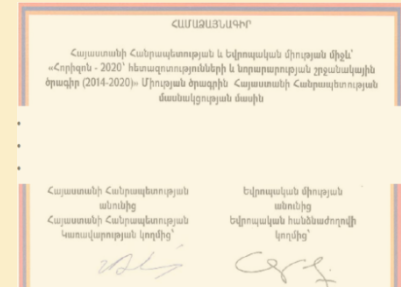
- All national policy documents prioritise international cooperation and integration into ERA
- Strategy of STI Development for 2011-20 and Action Plan for 2017-20 set ambitious targets for R&D sector: to support the development of knowledge-based economy in AM and be competitive in ERA through smart specialisation
- Promoting joint collaborative programmes, creation joint labs and research centres as precondition for networking towards EU programmes
- National project based funding scheme was opened for international partnership (funding of foreign experts travel to AM)

R&D: Association to H2020



- Steps to Association

Armenia: Horizon 2020 Association Agreement	
Official Application	August, 2013
First Round of Negotiations	February 10, 2015
Creation of Working Group by Prime Minister	February 12, 2015
Approval by Government	October 29, 2015
Second Round of Negotiations	October 30, 2015
Third Round of Negotiations	November 13, 2015
Signature of Agreement	May 19, 2016
Approval by Constitutional Court	September 13, 2016
Ratification by National Assembly	October 19, 2016
Enter Into Force	November 07, 2016



R&D: Participation in H2020



- Anticipations from Association

- Possibility of wider internationalisation of the RTD and being part of ERA and world-level research
- Access to state-of-the-art research facilities in EU
- Regional networking (joint activities with other ACs) to tackle regional problems
- Support to improving design & implementation of R&I policies via Policy Support Facility
- Additional funding for RTD activities



ARMENIA: 2014-16				
	2014	2015	2016	Total
Applications	27	42	22	91
Participations	2	4	6	12

+2 Twinning

R&D: Evaluation of S&T&I System



The *Innovation Performance Review of Armenia* was prepared by a group of international and national experts as well as staff of the UNECE Secretariat. The *Review* was the result of a collective effort in which the lead authors for each chapter were: Mr. José Palacin (Chapter 1), Mr. Rumen Dobrinsky (Chapter 2), Mr. Thomas Stahlecker (Chapter 3), Mr. Slavo Radosevic (Chapter 4), Ms. Annamaria Inzelt, (Chapter 5), Ms. Anna Kaderabkova (Chapter 6), Mr. Manfred Spiesberger (Chapter 7) and Mr. Christopher Athey (Annex). Ms. Julia Djarova, Mr. José Molero and Mr. Zhumatay Salimov reviewed the first draft of the *Review* and provided relevant suggestions. During the discussion at the Substantive Segment of the eighth session of the Committee on Economic Cooperation and Integration, Mr. Ashot Khandanyan, Mr. Mikayel Melkumyan and Mr. Gagik Makaryan presented comments and suggestions on behalf of the delegation of Armenia. Mr. Christopher Athey, Mr. José Palacin and Mr. Ralph Heinrich contributed to the overall editing of the publication.



Inco-Net EaP

S&T Policy Mix Peer Review Armenia

March 2015

Report on the review of the Armenian S&T Policy Mix

Drafted by a review team of international experts:

Azir Alin, Team Member, Advisor, Advisor to the Prime Minister of the FYR of Macedonia for Education, Science and Information Technology, Macedonia

Krzysztof Gulda, Team Member, Advisor, Member of the Science Policy Committee - Advisory Body to the Minister of Science and Higher Education, Poland

Gerold Heinrichs, Team Leader, Head of Department Asia America Oceania, International and European Cooperation, Project Management Agency at the German Aerospace Research Centre(DLR-PT), Germany

Johanna Ringhofer, Team Member, Deputy Head of Unit, Unit of EU Research Policy and Coordination, Ministry of Science and Research, Austria

Thomas Reineke, Assistant to the Team, Senior Scientific Officer, Unit CIS, International and European Cooperation, Project Management Agency at the German Aerospace Research Centre (DLR-PT), Germany

R&D: Policy Mix Peer Review Armenia-2K15



- The review was undertaken at the request of the ***State Committee of Science*** in the frame of the ***IncoNet EaP***, a project funded by the EU FP7 Programme
- The aim was to critically examine the existing S&T policy mix in Armenia and to provide policy advice from peers in EU and Eastern European countries
- ***Five issues were considered:***
 - (i) overall environment for RDTI***
 - (ii) structural, strategic and legal framework for RTDI***
 - (iii) financing of RTDI***
 - (iv) human resources***
 - (v) international cooperation***



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R&D: Recommendations and Implementation PMPR



1. Analysis of the RTDI Environment

The National Statistical Service (NSS) should increase their work in scope and depth in the RTDI sector, following international examples.	<i>The data on RTDI will be collected by SC and transferred to NSS.</i>
Approach to become a “bridge”: The idea of becoming a bridge between EU and EAEU in certain areas has merit, though is not really outstandingly new.	<i>A long term problem.</i>

2. Structural, Strategic and Legal Framework for RTDI

Better coordination at different levels and with different goals ...	<i>Included in Action Plan on Development of Science for 2017-20.</i>
The role of SCS in the system might be assessed and further clarified, the mandate updated, redefined and widened. The position of SCS within MSE and its visibility against other ministries should be strengthened. SCS could be fully integrated within the ministry or even get a ministerial status itself.	
Better marketing of Armenia’s intention to regain its role as S&T power house.	<i>A long term problem.</i>
Merging S&T and higher education – actors...	<i>New law on Higher Education and Research should be presented to the Government during 2019.</i>
Reliable and detailed indicators and data: Establish an up-to-date process to obtain statistical data describing the key RTDI figures and support the NSS in becoming more efficient. ...Work closely with OECD and EU statistical methodology.	<i>The data on RTDI will be collected by SC and transferred to NSS. OECD and EU statistical methodology is not implemented yet.</i>
Commercialization of NAS RA. ... process should go through clear separation/division of research and production facilities.	<i>Still is a big question.</i>
NAS RA’s Educational Centre... should develop a systematic approach to collaborate with existing universities ...	<i>Will be considered in the model of HEI&RO network.</i>
Evaluation of R&D performers... The PMPR team proposes SCS as an organizer for the evaluation processes.	<i>Corresponding solutions are under discussion.</i>
Support for knowledge transfer: the PMPR team recommends increasing the number of “transfer office” ...	<i>Several transfer offices are already created.</i>

R&D: Recommendations and Implementation PMPR



3. Financing of RTDI

An annual budget report should verify all different aspects of funding research and tertiary education to increase the efficiency...	<i>From 2019 programme based scheme for the state budget (not only for R&D) is implemented.</i>
Increase competitive funds. As a first step, the “Most Productive 100” could be extended (e.g. up to “Most Productive 200”).	<i>Competitive funds are increased and “Most Productive 150” programme is introduced from 2016.</i>
For the distribution of basic funding, the strategic decisions of the government should be taken into account.	<i>The evaluation of RO should be finished till the end of 2019.</i>
The Armenian tax system might readjust its regulations regarding RDTI performing institutes.	<i>???</i>
Tuition fee re-examination.	<i>Will be included in the Programme of MES.</i>
Expensive and inefficient research infrastructure	<i>Should be included in the R&D’s Optimization Programme.</i>
Large-scale infrastructure: A national R&D infrastructure roadmap process, connected to EU’s ESFRI mechanism or the GSF-forum of the OECD, might be helpful.	<i>The National Research Infrastructure roadmap should be developed after the optimization of R&D sector.</i>
High cost of fragmentation. Due to fragmentation of the S&T landscape, many smaller institutes (with in and outside NAS RA) end up facing high costs for administration and infrastructure.	<i>Will be included in the Optimization Program of R&D sector.</i>
Public support for private R&D.	<i>The problem is still actual.</i>

R&D: Recommendations and Implementation PMPR



4. Human Resources

Status of public RTDI personnel: The PMPR team recommends ... to develop a specific statute for this large group of individuals	<i>To be done.</i>
Career options in science, technology and education.	<i>Included in Action Plan on Development of Science for 2017-20.</i>
Leading positions in public science and research organisations should be given only on limited contracts. Only in exceptional cases a certain age limit should be exceeded	<i>New approach for administrative positions in RO and HEI is included in the draft of new Law on Higher Education and Research.</i>
Age: General permanent contracts might be limited up to a certain age, but opportunities provided to continue working beyond this age.	<i>From 2017 the age limit (under 70 years old) is introduced for the PI in the national grants.</i>
Strategy for Higher Education: ... including questions with regard to curricula, institutional financing, ... quality control, ... internationalisation of universities etc.	<i>During 2019 new Law on Higher Education and Research should be presented to the Government.</i>
Recent plans to support young researchers: The recent plan should be supported.	<i>Young Researchers Support Programme is continuing.</i>

5. International Cooperation

Reviewers on international panels: To enhance the internationalisation of Armenian researchers, they could be encouraged to serve as reviewers on international panels....	<i>Not enough measures are implemented.</i>
Interaction with Diaspora actors.	<i>The representatives of Diaspora are members of state grant's teams, different panels and projects, etc.</i>
H2020.	<i>Armenia is associated to H2020 since 2016 (agreement was signed on May 19, 2016). 2014-16: Applications-91, Participations-12 2019: 2 Twinning Projects.</i>
Regional cooperation: Armenia could develop close cooperation and exchange of views with other associated countries in Horizon 2020 from its region.	<i>The level of regional cooperation in South Caucasian region can be higher.</i>

Request for PSF Support: PSF-AM



- Armenian authorities requested PSF advice on three high-priority topics:
 - (i) support in the evaluation and the impact assessment of the public research organizations' performance*
 - (ii) proposal on implementation of the performance-based funding scheme for Research and Development sector*
 - (iii) measures for narrowing the gap between higher education and research*

PSF-AM: Evaluation of ROs



- Evaluation of public research organizations and universities

Current Situation:

State R&D Sector: RO&HEI

Public Research Organizations	56 (58)
Public Universities	13
Private Research Organizations	14

State R&D Sector: Employees

Employees	~6100
Researchers	~4000

Legal Basis:
1.Strategic Program
on Development of
Science for 2017-20

Necessary Step:
Evaluation of
effectiveness
of the research
activities of the
public RO&HEI

AIM:
**OPTIMIZATION/
CONSOLIDATION**

PSF-AM: Evaluation of ROs (2)



- Evaluation of public research organizations and universities:
FIRST APPROXIMATION OR ZERO PHASE

7 CRITERIA

35 SUBCRITERIA

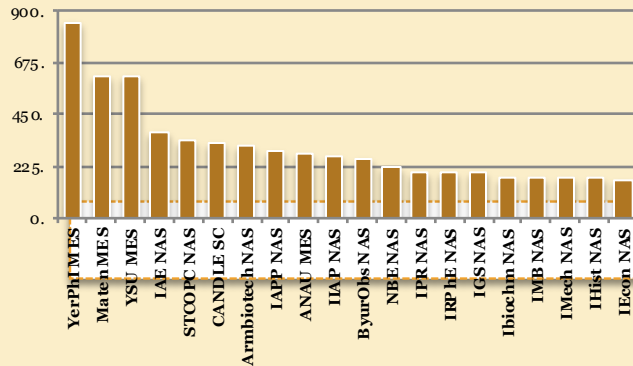
EVALUATION OF RO&HEI	
CRITERIA	WEIGHT
Research Output	??
Human Resources	??
Infrastructure	??
Integration with Int. HE&R Area	??
Integration with Rep. HE&R Area	??
Commercialization of Scientific Results	??
Financial Activity	??

PSF-AM: Implementation of New Funding System



- Implementation of Performance-based Funding Scheme for R&D sector

Current Situation: Research Organizations and Universities in Base Funding- 69



Legal Basis:
 1. Strategic Program on Development of Science for 2017-20
 2. Government Program for 2019-23

Necessary Step:
 Implementation of performance based funding scheme for state baseline funding mechanism

AIM:
 INCREASE THE PERFORMANCE

State R&D Sector: Org.- Share in BF

First10	47.3%
First20	68.8%
First 30	83.2%

PSF-AM: Cooperation of Higher Education and Research



- Designing measures aimed at bridging the gap between higher education and research

Current Situation:

State HEI and R&D Sector

Public Universities (total)	21
Public Universities in State R&D sector	13
Public Research Organizations	56 (58)

Legal Basis:
1. Strategic Program on Development of Science for 2017-20
2. Government Program for 2019-23

Necessary Step:
Establishment of a network involving HE Institutions and Research Organizations

AIM:
NETWORK BETWEEN HEI&RO

PSF-AM: Cooperation of Higher Education and Research (2)



- Designing measures aimed at bridging the gap between higher education and research: 2 PILOT PROGRAMMES

Physics and Technology

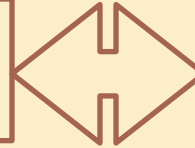
A. Yerevan State University
B. National Polytechnic University



A. Alikhanyan National Science Laboratory
B. Institute for Physical Research of NAS
C. Institute of Radiophysics and Electronics of NAS

Biology and Biotechnology

A. Yerevan State University



A. Institute of Molecular Biology of NAS
B. Institute of Physiology of NAS
C. Armbiotechnology RC of NAS

R&D: Next Steps



- Measures which should be implemented in 2019-20:
- ✓ **Program on Creation of Network of Research Organizations&Universities**
- ✓ **Young Researchers Support Program and Action Plan**
- ✓ **Evaluation of Research Organizations**
- ✓ **Implementation of Performance Based Funding Scheme**
- ✓ **Development of Roadmap for Armenia's Integration into ERA: ERA-AM**
- ✓ **Harmonization of R&D Statistics with International Standards**
- ✓ **Development of Roadmap for National Research Infrastructures**
- ✓ ...

Science Committee



“Quand tu veux construire un bateau, ne commence pas par rassembler du bois, couper des planches et distribuer du travail, mais reveille au sein des hommes le desir de la mer grande et large.

If you want to build a ship, don't drum up people together to collect wood and don't assign them tasks and work, but rather teach them to long for the endless immensity of the sea.”

● — **Antoine de Saint-Exupéry**

Thank you for your attention!

For more information: www.scs.am