

IncoNet EECA

Improving S&T Statistics Presentation of Results of INCO-NET-EECA

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Project Number: FP7 - 212226 • Project Acronym: IncoNet EECA • Instrument: Coordination and Support Action (CSA)



IncoNet EECA
<http://www.inco-eeca.net/>

S&T International Cooperation Network for Eastern European and Central Asian Countries

➤ Activities at both the policy and operational level to *structurally* strengthen S&T cooperation between the EU MS, ACs and the Eastern European and Central Asian countries:

- Policy aspects;
- Enhance participation in FP7;
- Analyses, Quality and Dissemination





WP 5: Analyses, Monitoring and Review

- Mapping of key Institutes
- Analysis of S&T cooperation patterns
- Improving S&T Statistical Systems
- Analysis of national policies towards global challenges

Rationale (1)

Reliable, valid and comparable S&T statistics are essential for assessing the S&T situation in the EECA and their performance, both for domestic policy-making purposes and for international comparative purposes (e.g. UN level; international policy dialogue on S&T).

Rationale (2)

- Relevant information for policymakers regarding their deliberation
- Indicate priority setting
- Provide knowledge which S&T policy can impact on the socio-economic objectives
- Reflect past trends, trends performance and current performance
- Contribute to understanding the current environment
- Guide the development of future STI and RTD policies
- Comparison according to the different goals...e.g. international comparison.....and so on.

Objective of the Study

Analysis of the structure and (in)compatibility of S&T statistical systems (including indicators) in EECA

- Based on the degree of implementation of the FRASCATI Manual;
- Identification of weak areas;
- Recommendations on improving S&T statistics and ways of adapting them to international standards;
- Elaboration of a generic proposal to be submitted for funding



Methodology

- Questionnaire to Statistical Offices (2008)
- Analysis of incompliance with OECD standards (2008)
- Expert workshop to discuss analysis (2008)
- Pilot case in Moldova (2008)
- Final baseline study on the state of S&T statistics in EECA published (2009)
- Generic proposal to overcome the deficits of S&T statistics in EECA elaborated (2009)

Countries and Partners involved

- Armenia (CIT)
- Azerbaijan (ANAS)
- Belarus (BelISA)
- Georgia (GNSF)
- Kazakhstan (InExCB-KZ)
- Moldova (ASM)
- Ukraine (NIP)
- Uzbekistan (IUCP-T)

No uniformity!

EECA are at different stages of transforming their S&T statistics to international standards

- **Russia already implemented OECD standards**
- **Belarus and Moldova show strong progress**
- **Ukraine, Kazakhstan and Uzbekistan are on track (with national variations)**
- **Others are still more distant to international standards**

Major Findings of the study

- **Governments of the countries under scrutiny place extremely high emphasis on S&T, maintaining control over managing and funding.**
- **The majority of the countries use international indicators.**
- **Regional comparisons and comparisons on global scale are believed to be of most importance.**

Main Hurdles

- **Partly still legacy of old Soviet S&T Statistical System**
- **Lack of qualified experts capable to introduce internationally harmonised indicators**
- **Not enough resources for modernisation and harmonisation**

Sectoral Coverage

- **Data about government sector and the higher education sector are best available;** Borderline problems with public enterprises, higher education institutes, hospitals, private non-profit institutes.; Institutional classification)
- **more differentiated data on the business enterprise sector is lacking in some countries** Borderline problems (public enterprises, institutes, science parks.; Industrial branch classification; Subsectors possibly not yet covered, i.e sector totals underestimated;. Minimum size of enterprises/firms for inclusion in survey's); Treatment of SMEs.)
- **private non-profit sector is the weakest covered sector;**

R&D Expenditure



- By source of funds:
 - **not all countries collect this kind of data across sectors;**
 - **most available information is about government appropriations to the different sectors of performance.**
 - **an obvious data problem as regards business source of funds, not only to the business enterprise sector itself but also towards the other sectors of performance.**
- It makes the development of more precise, more valid statistics on funding sources crucial.

R&D Personnel



- = most widely used group of indicators:**
- **Most serious data shortcomings:**
 - **Business Enterprise Sector**
 - **Private non-profit Sector**
 - **(e.g. R&D personnel by occupation; R&D personnel by gender ...)**
 - **R&D Personnel in FTE is not used sufficiently**
 - **R&D Personnel by Qualifications still differentiates between doctors and candidates of science**

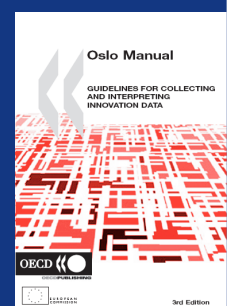
Further Issues (1)

- Only 2 of 8 countries use all classifications for the functional distribution of R&D
- Least used classifications are “product groups” (ISIC/NACE) and “Socio-Economic Objectives” (NABS)
- GBOARD related groups of indicators are scarcely used
- Regional differentiation could be enhanced



Further Issues (2)

- Moreover, all countries lack experience in **innovation related STI statistics**. This includes methodologies of sampling and data recording, indicators, production and analysis of innovation statistics and dissemination. Thus, it is recommended to start with first trial exercises in applying the Oslo Manual in EECA countries in practice.
- Finally, there is a need to develop R&D **statistical studies and statistical education and retraining** in EECA countries.



Conclusion of the Study

- Trend toward internationally accepted standards
- further development of national R&D statistics demands adjustment and improvement of existing methodologies for collecting and presenting R&D indicators to make them fully compatible with international statistical standards;
- need to develop R&D statistical studies and statistical education and retraining in EECA countries.

What was done since then in INCO-NET EECA?

- A generic proposal to improve S&T statistics in EECA was drafted and promoted (2009)
- IncoNet CA/SC and UNESCO:
 - Workshop in Almaty, 6-8 April 2011 to develop R&D statistical studies and statistical education and retraining in CA countries.
- IncoNet EECA:
 - Workshop Moscow 23-24 May 2011



IncoNet EECA

<http://www.inco-eca.net/>

EU-EECA S&T cooperation Web Portal

<http://www.increast.eu/>



"R&D and Innovation Statistics"
International Training Workshop, Moscow, 23-24 May 2011

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Thank you!

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Main Statistics Organisations on the Global Level for S&T statistics



- **OECD, Directorate for Science, Technology and Industry**
(http://www.oecd.org/department/0,3355,en_2649_33703_1_1_1_1_1,00.html)
- **UNESCO UIS, Science and Technology Statistics**
<http://www.uis.unesco.org/>
- **EUROSTAT, Science, Technology and Innovation**
<http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/>
http://epp.eurostat.ec.europa.eu/portal/page/portal/science_technology_innovation/introduction
- **UNECE -The United Nations Economic Commission for Europe (UNECE)**
<http://www.unece.org/about/about.htm>
- **UNCTAD – INSTI, UN International Network of Science and Technology Institutions**
<http://www.unctad.org>
- **UNIDO, Research and Statistics Branch**
<http://www.unido.org/index.php?id=4879>
- **THE WORLD BANK, World Development Indicators (WDI) – S&T Indicators**
<http://data.worldbank.org/indicator/>