

Science, technology and innovation (STI) gap assessment of the SPECA countries

Outline of an analytical study

1. Introduction: objectives and scope of the study

The main purpose of the study is to reveal and analyse some of the main existing problems in the current state of STI development in the region and identify key STI challenges and gaps hindering innovation as well as to undertake a needs assessment of some common needs of the SPECA countries. The analysis will serve as a basis to formulate recommendations about possible long-term and short-term solutions and policy measures for closing or reducing the existing STI gaps, while drawing on opportunities provided by economic sectors with high innovation potential in the countries and existing good practices in the region and the world. The study will also serve a basis for discussion on specific key performance indicators (KPIs) to help tract the strategy implementation drawing from relevant KPIs of the UNECE SDG Dashboard and SDG Index and Dashboards Report (Bertelsmann Stiftung and Sustainable Development Solutions Network) where possible and be complemented with additional KPIs from other sources as appropriate. The KPIs should include a baseline (current status), milestones, objectives, and sources of verification. These KPIs will serve as the basis for an evaluation of progress in strategy implementation planned for 2022.

2. Comparative empirical assessment (benchmarking) of SPECA countries' STI performance in an international perspective

This will be done by the international consultant on the basis of available analytical and statistical publications produced by international organizations and NGOs such as: WIPO's *Global Innovation Index*, WEF's *Global Competitiveness Report*, World Bank's *Doing Business*, the *SDG Index and Dashboards Report* (Bertelsmann Stiftung and Sustainable Development Solutions Network), UNCTAD's *World Investment Report*, ITU's *Measuring the Information Society Report*, UN's Global SDG Indicators Database, UNIDO's *Competitive Industrial Performance Index*, EBRD's *Business Environment and Enterprise Performance*

Survey (BEEPS), World Bank's Open Data – World Development Indicators, UNESCO's S&T Statistics Database, UNDP's Human Development Index, ISO Database.

The comparative empirical assessment will provide insights to the SPECA countries' STI performance by input and output indicators such as (the list is only tentative):

- Gross domestic expenditure on research and development (GERD)
- Expenditures on education
- Quality of education
- Number of researchers
- Quality of scientific research institutions
- Capacity for innovation
- Technological readiness
- Business sophistication
- Availability of latest technologies
- Innovation performance by different indices
- Patent and trademark applications
- Industry-science collaboration in R&D
- ICT access and use
- ISO certificates
- High-technology exports

Such a benchmarking exercise should reveal:

- The relative standing of the SPECA countries vis-à-vis each other by the different STI input and output indicators;
- The relative standing of the SPECA countries vis-à-vis selected comparator countries;
- The size of the existing STI gaps vis-à-vis selected comparator countries by the different STI input and output indicators.

3. Current state of STI governance and policy making in the SPECA countries

This analytical assessment will be made on the basis of country studies for each SPECA country which will be undertaken by local consultants on the basis of a uniform model and

methodology to ensure cross-country comparability. The country studies will in general cover the following issues:

Part A. Overview of some main aspects of national STI management

This will be an analytical document based on factual information and its critical assessment. It should cover the following main aspects:

- National STI priorities (in accordance with existing official documents);
- Key STI policy documents: laws and similar, strategic policy documents, governmental ordinances, regulations, etc.;
- STI governance structure: main governance bodies and their functional responsibilities;
- Description of the process of formulation of STI policy: how the main policy documents governing STI are being shaped;
- STI policy instruments, policy implementation and coordination mechanisms;
- Insights on the impact of COVID 19 pandemic on the ST&I development in the sub-region: how the pandemic influenced the ST&I policy (state of art and forecasts) and how ST&I was able (or not) to provide solutions to tackle challenges related to the novel coronavirus.

Part B. Key challenges and problems in fostering innovative development

This part will be based on the results of a **stakeholder survey** with key national innovation stakeholders covering all main stakeholder groups: government officials and experts; experts from the academic community; representatives of the business community; representatives of civil society. The survey should cover some **10-15 stakeholders** from different groups. The surveys in each country should be organized and conducted by the respective local consultants either through an interview with the stakeholders by through a questionnaire to be filled by the stakeholders (or a combination of the two). The interview/questionnaire should cover the following main issues:

- Opinion about the economic sectors with high innovation potential in the country;

- Appraisal of the effectiveness of STI policy and the policy instruments supporting STI development and the relevance of the current STI governance and management relative to the economic sectors with high innovation potential;
- Appraisal of the framework conditions and business environment in the country: to what extent they are conducive to innovative development; appraisal of the system of private funding of STI in the country;
- Opinion about the key existing problems hindering innovative development in the country;
- Opinion about the most important changes (in legislation, in policy making and implementation, in framework conditions, etc.) that need to be introduced in order to invigorate innovative development in the country.

The local consultants will be expected to prepare an analytical overview note summarising the results of the survey. The source information of each interview/questionnaire should also be attached to the note.

4. Main conclusions and recommendations

This part will seek to summarise the overall results of the study and reveal the main common issues and problems for the SPECA region as a whole with a view to providing some general recommendations for further action. These conclusions should help to identify main aspects of possible future cooperation among SPECA countries in areas of STI promotion and innovative development that are of common interest to all countries. In particular, these results should inform and support the joint efforts of the Governments of the SPECA countries in developing an Action Plan for implementing the SPECA Innovation Strategy for Sustainable Development and identifying a set of KPIs based on the UNECE SDG Dashboard and SDG Index and Dashboards Report (Bertelsmann Stiftung and Sustainable Development Solutions Network) to track the strategy implementation where possible and be complemented with additional KPIs from other sources as appropriate. The KPIs should include a baseline (current status), milestones, objectives, and sources of verification. These KPIs will serve as the basis for an evaluation of progress in strategy implementation planned for 2022.