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## Eastern Europe

# UNESCO Science Report (2021)

The race against time for smarter development

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# Eastern Europe: fostering an innovation culture

## Common goals:

- **Improve conditions** for researchers and investment climate for business
- **Support innovation**
- **Support transition** to green and digital societies

**Improving the investment climate** for business: better intellectual property protection, more favourable tax regimes, more venture capital.

- Azerbaijan created an Innovation Agency in 2018 that provides venture capital to innovative businesses, including start-ups.
- Albania and Serbia have established innovation funds. Serbia has opened three tech parks since 2015.
- No tax for the next 30 years for companies registered in the Belarus High Technologies Park, which specializes in information technology.



# Eastern Europe: Digital economy and e-governance

**Governments across the region are embracing the digital economy and e-governance.**

**Russian Federation:** a new economic model to benefit from Fourth Industrial Revolution through 13 large-scale, mission-oriented national projects with a focus on science–industry collaboration.

Priority areas of National Project for the Digital Economy include quantum tech and artificial intelligence.

**Growing number of tech-oriented start-ups**

**Example:**

- Information technology accounts for 40% of Ukrainian exports of services



*Employees of software development services provider N-iX work in the company's Lviv office. 18 information technology companies operating in Ukraine figure on list of top 100 tech firms in the world, according to the 2018 listing by the International Association of Outsourcing Professionals. © N-iX*

# Eastern Europe: a place-based approach to innovation

A new **place-based approach to innovation in priority fields** in Southeast Europe and the Russian Federation to support regional development

... and **strengthen links** between the research and economic sectors.

**Russian National Project for Science:** world-class research and education centres will be established in selected regions; they will work with local companies and develop co-operation with other regions.

**Smart specialization strategies** for Albania, Bosnia & Herzegovina, Montenegro, North Macedonia and Serbia.



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*Potential applications of quantum optics include components for quantum computers, which consume much less power than traditional computers. Pictured is the Ultrafast Laser Spectroscopy Lab at the Quantum Optics and Nanophotonics Joint Department of the HSE in Moscow and the Russian Academy of Sciences' Institute of Spectroscopy in Troitsk.*

# Eastern Europe: a vocational crisis in research

**Russian researcher** numbers, 2014–2018: -9.5%

Government has fulfilled pledge to raise remuneration of researchers by 2018. This is helping to attract more researchers under the age of 39 years to the profession.

**Educated youth planning to leave Southeast Europe** in next couple of years:

32% =Albania and Bosnia and Herzegovina ,30% = North Macedonia,

25% = Serbia (*Serbia close to target of spending 1% of GDP on research.*)

Governments in **Central Asia** trying to improve conditions of researchers through pay rises, competitive research grants, modern research equipment and joint research projects with international partners.

## Example

- Uzbekistan's Ministry of Innovative Development has tripled the size of the average grant for research projects. The government has also raised university teaching salaries and student scholarships since 2018.



# Eastern Europe: the green transition a common priority

**Southeast Europe's** transition to a low-carbon and climate-resilient energy sector guided by *Sustainability Charter* (2016).

**Russian Federation:** major energy companies have signed up to National Project for Ecology by investing in green technologies. Consumption of coal and petroleum products, as a share of the fuel and energy balance, declined slightly over 2015–2018.

**Central Asia** faces growing energy demand and ageing energy infrastructure. Governments are investing in green finance with international partners like the Green Climate Fund, World Bank and European Bank of Reconstruction and Development.

## EXAMPLE:

Uzbekistan is working with foreign companies to develop solar energy; Tajikistan is building the Rogun Dam.



*People charge their phones on a solar-powered smart bench in Belgrade, designed by the Serbian start-up Strawberry Energy. It provides users with free Wi-Fi and battery-charging services, as well as data on air quality, air temperature and noise levels.*

*© Strawberry Energy*