

United Nations Economic Commission for Europe

**INNOVATION
FOR SUSTAINABLE
DEVELOPMENT REVIEW
OF KYRGYZSTAN**



UNITED NATIONS
Geneva, 2019

NOTE

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

ECE Information Unit
Palais des Nations
CH-1211 Geneva 10
Switzerland

Tel.: +41 (0)22 917 44 44
Fax: +41 (0)22 917 05 05
E-mail: info.ece@un.org
Website: <http://www.unece.org>

ECE/CECI/25
UNITED NATIONS PUBLICATIONS
Sales number E.19.II.E.5
ISBN 978-92-1-117183-9
eISBN 978-92-1-047487-0

Copyright © 2019 United Nations
All rights reserved worldwide
United Nations publication issued by the Economic Commission for Europe

FOREWORD

Innovation is central to the United Nations 2030 Agenda for Sustainable Development and to economic development across the world. One of the most open and democratic countries in the region, with a strategic location, educated work force, strong legacy of applied research, competitive wage levels, ample natural resources, and vibrant and growing links with the neighbouring region, Kyrgyzstan is well positioned to benefit from untapped potential for innovation-led, sustainable growth.

This UNECE Innovation for Sustainable Development Review takes an in-depth look at a range of important factors that enable and promote innovation – including innovation performance, the economic structure, and relevant laws, policies, instruments, and institutions. In doing so, the review puts sustainable development front and centre, exploring how innovation can contribute not only to long-term economic growth, but also help address pressing social and environmental concerns. This includes building on a wide range of opportunities for Kyrgyzstan to catch up with more developed economies while avoiding, mitigating, or compensating for the risks and challenges that positive structural transformations in the economy will entail.

Innovation is a complex process that requires multi-stakeholder involvement in policymaking. UNECE advisory work in this area draws on longstanding engagement across the region. The present Review is the seventh in the UNECE Innovation for Sustainable Development Review series, after reviews of Belarus (twice), Kazakhstan, Ukraine, Armenia and Tajikistan. The Reviews take a comprehensive approach, with strong country involvement and peer review of preliminary findings. UNECE would like to thank the Government of Kyrgyzstan and the national stakeholder community for the excellent support provided throughout this project. UNECE is committed to working with the Government to assist in the implementation of the policy recommendations of the Review and to promote innovation for sustainable development.



Olga Algayerova
Executive Secretary
United Nations Economic Commission for Europe

PREFACE

The practical work on the *Innovation for Sustainable Development Review of Kyrgyzstan* began in December 2016 with a preparatory mission to Bishkek by representatives of the UNECE secretariat to establish contact and discuss the structure and content of the *Review* with the national Government institutions and other stakeholders. The main project mission took place from 30 March to 7 April 2017 with the participation of a team that included representatives of the UNECE secretariat as well as international and national experts.

This *Review* reflects the outcome of a series of consultations and discussions between the *Review* team and policymakers, Government officials, representatives of academic institutions and the business community, and other innovation stakeholders of Kyrgyzstan.

The draft text of the *Review* was submitted for comments to the authorities of Kyrgyzstan and to a group of independent international experts who had not participated in the field mission. The main outcomes of the project, including its main conclusions and recommendations, were presented and discussed during a Regional Workshop “Making innovation work for the Sustainable Development Goals” held in Bishkek from 22 to 23 June 2017 within the activities of the Working Group on Knowledge-based Development of the United Nations Special Programme for the Economies of Central Asia (SPECA). Participants included the members of the *Review* team, external reviewers and high-level representatives of the Government of the Republic of Kyrgyzstan, as well as delegates from other SPECA countries and United Nations member States.

Valuable feedback on policy recommendations was also provided by participants at the tenth session of the UNECE Team of Specialists on Innovation and Competitiveness Policies, held in Geneva from 19 to 20 October 2017. The findings and recommendations were endorsed by the UNECE Committee on Innovation, Competitiveness and Public-Private Partnerships, held in Geneva from 26 to 28 March 2018.

The final text of the *Review* was prepared for publication by the UNECE secretariat reflecting the outcome of these discussions as well as other comments and suggestions from various stakeholders.

ACKNOWLEDGEMENTS

The Innovation for Sustainable Development Review of Kyrgyzstan was prepared by a group of international and national experts as well as by staff of the UNECE secretariat. The Review was the result of a collective effort in which the lead authors for each chapter were: Mr. Anders Jönsson, Mr. Christopher Athey and Mr. Slavo Radosevic (Chapter 1), Mr. Rumen Dobrinsky (Chapter 2), Mr. Thomas Stahlecker (Chapter 3), Mr. Slavo Radosevic (Chapter 4), Ms. Helena Forsman (Chapter 5) and Mr. Ralph Heinrich and Mr. Yoram Krozer (Chapter 6). Ms. Meerim Karybaeva served as national consultant and provided excellent support to the fact finding mission. Mr. Rafis Abazov, Ms. Anna Pobol, Ms. Yelena Shevchenko, Mr. Vusal Suleymanli and Mr. Igor Yegorov reviewed the first draft of the Review and provided detailed comments. Mr. Christopher Athey and Mr. Ralph Heinrich led on the development of the conceptual framework of the Review and overall editing of the publication, with Ms. Ludmila Boichuk providing technical assistance. Ms. Sara Sanseverinati provided valuable research assistance.

The smooth work throughout the project was largely facilitated by the helpful support and cooperation of the State Service of Intellectual Property and Innovation under the Government of the Kyrgyz Republic “Kyrgyzpatent”, which was the lead national partner of UNECE in implementing this project. In particular, the support of Ms. Dinara Moldosheva (Chairperson, Kyrgyzpatent) and Mr. Samat Baizakov (Deputy Chairperson), as well as the International Relations Division and Innovation Division of Kyrgyzpatent, were very much appreciated.

During the discussions at the Regional Workshop, “Making innovation work for the Sustainable Development Goals,” in Bishkek in June 2017 within the activities of the Working Group on Knowledge-based Development of the United Nations Special Programme for the Economies of Central Asia (SPECA). Mr. Dosaly Esenaliev (former Chairperson, Kyrgyzpatent) and Mr. Eldar Abakirov (Deputy Minister of Economy of the Kyrgyz Republic) presented comments and suggestions on behalf of the delegation of Kyrgyzstan.

UNECE would like to express its deep gratitude to the Government of the Russian Federation for its generous financial contribution, which made possible the implementation of the project *Innovation for Sustainable Development Review of Kyrgyzstan*.

We are also grateful for the assistance provided by the UNDP Office in Bishkek at various stages of this project.

CONTENTS

Foreword	iii
Preface	iv
Acknowledgements	v
List of tables	ix
List of figures	xi
List of boxes	xiii
Abbreviations	xiv
Executive summary	xvii
 Chapter 1 Recent economic and innovation performance.....	1
Chapter 2 Innovation governance: Framework conditions, policies and instruments.....	19
2.1 Innovation in the context of Kyrgyzstan	19
2.2 Innovation policies and institutions in Kyrgyzstan	22
2.3 Framework conditions	31
2.4 Innovation governance	32
2.5 Assessment and conclusions	36
2.6 Recommendations	39
Chapter 3 Knowledge generation and diffusion, industry-science linkages and innovation financing	43
3.1 Legal framework and policy priorities	43
3.2 Public financing of education, science and R&D	44
3.3 Role of universities and research centres	46
3.4 Role of the enterprise sector: intramural R&D and human resources.....	50
3.5 Industry-science linkages	54
3.6 Innovative entrepreneurship and financing.....	57
3.7 Business services and innovation intermediaries	59
3.8 Recommendations	62
Chapter 4 Innovation capacity from an international perspective.....	65
4.1 Understanding drivers and enablers for innovation-led growth.....	65
4.2 Enablers of innovation-led growth in Kyrgyzstan	68
4.3 Potential drivers of innovation-led growth.....	84
4.4 Recommendations	88
Chapter 5 Innovation in the enterprise sector.....	91
5.1 Conceptual framework	91
5.2 The enterprise sector and entrepreneurship in Kyrgyzstan	92
5.3 Innovation in firms	97
5.4 The external innovation landscape	103
5.5 The internal innovation landscape.....	108
5.6 Innovation inputs.....	111
5.7 Innovation process.....	113
5.8 Internal and external learning process.....	116
5.9 Innovation output	117
5.10 Innovation outcome.....	120

5.11	Key obstacles to innovation and growth	122
5.12	Recommendations	123
Chapter 6 Innovation for sustainable development		125
6.1	Sustainable development in Kyrgyzstan – gaps and priorities.....	127
6.2	Challenges and opportunities for innovation-led sustainable development.....	131
6.3	Policies promoting innovation for sustainable development	140
6.4	Recommendations	148

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_1168

