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Foresight experiences in Russia and applications to natural resource sector

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Content

- Foresight experiences in Russia
- Foresight applications to natural resources sector including forest sector
- Forest sector outlook
- Current instruments of policy and planning and role of foresight

Foresight in Russia

- Reforms - informed policy making - foresight methods
- Specialized research institutions. One of the leaders - Institute for Statistical Studies and Economics of Knowledge (ISSEK) at the Higher School of Economics in Moscow
- Foresight “users”: presidential apparatus, the prime minister, and by certain ministries

“A Foresight exercise for Russia’s science and technology towards 2030 is due to be completed. It highlights specific ways to both revitalise traditional sectors and penetrate into new high-tech markets...”

V. Putin

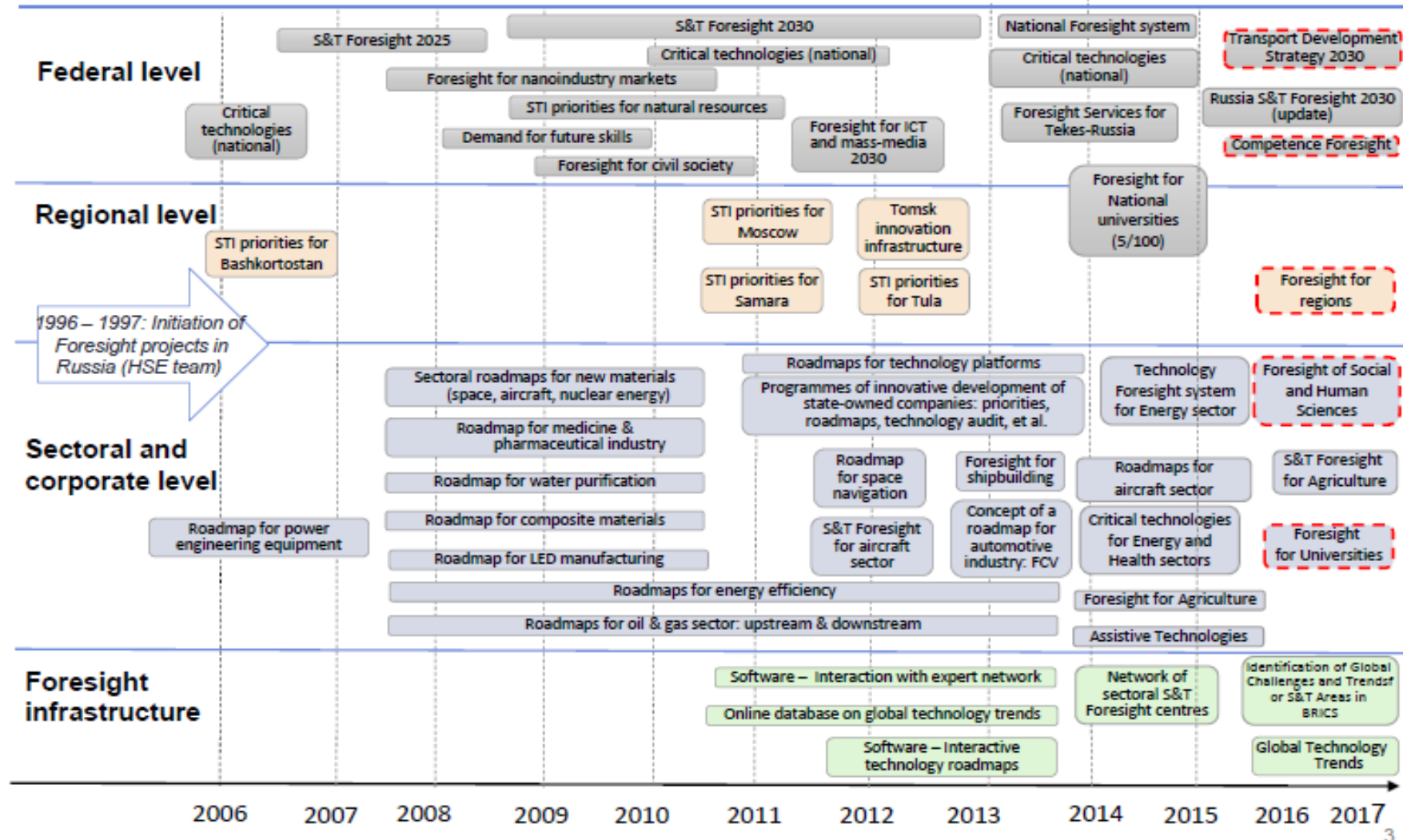
Presidential Address to the Federal Assembly
of the Russian Federation
December 12, 2012

Foresight in Russia (2)

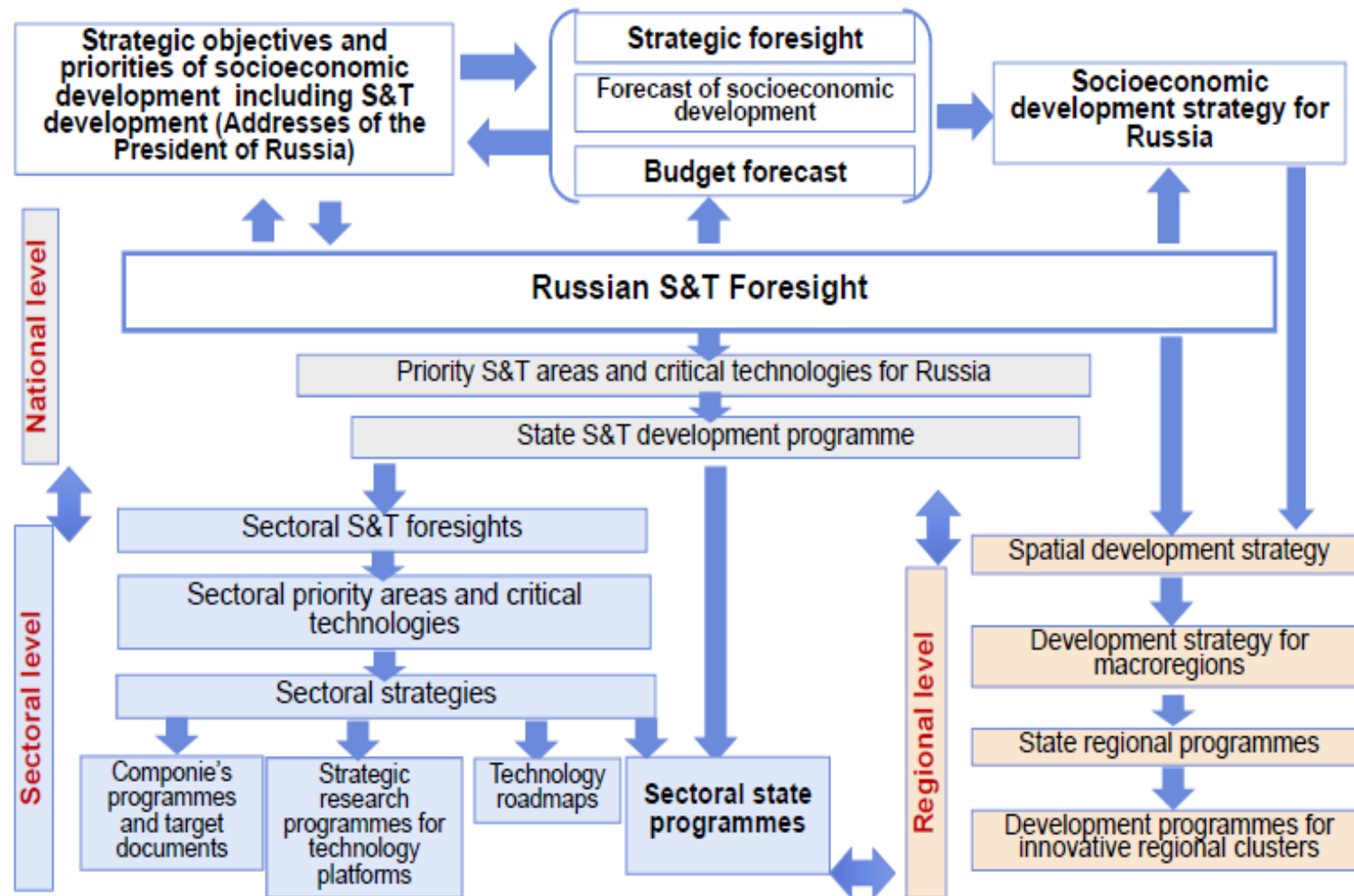
- **Specificity:** changing economic and technological frameworks and new challenges on national **science, technology and innovation (STI)**
- S&T Foresight 2030:
 - survey data: 2,000 experts in 15 countries
 - review: 200 int and nat foresight studies
 - analyses of statistical, bibliometric and patent data
- Results
 - set of global challenges, windows of opportunities and threats for Russia
 - breakthrough future technology
 - list of priority S&T areas



Dynamics of using foresight in Russia



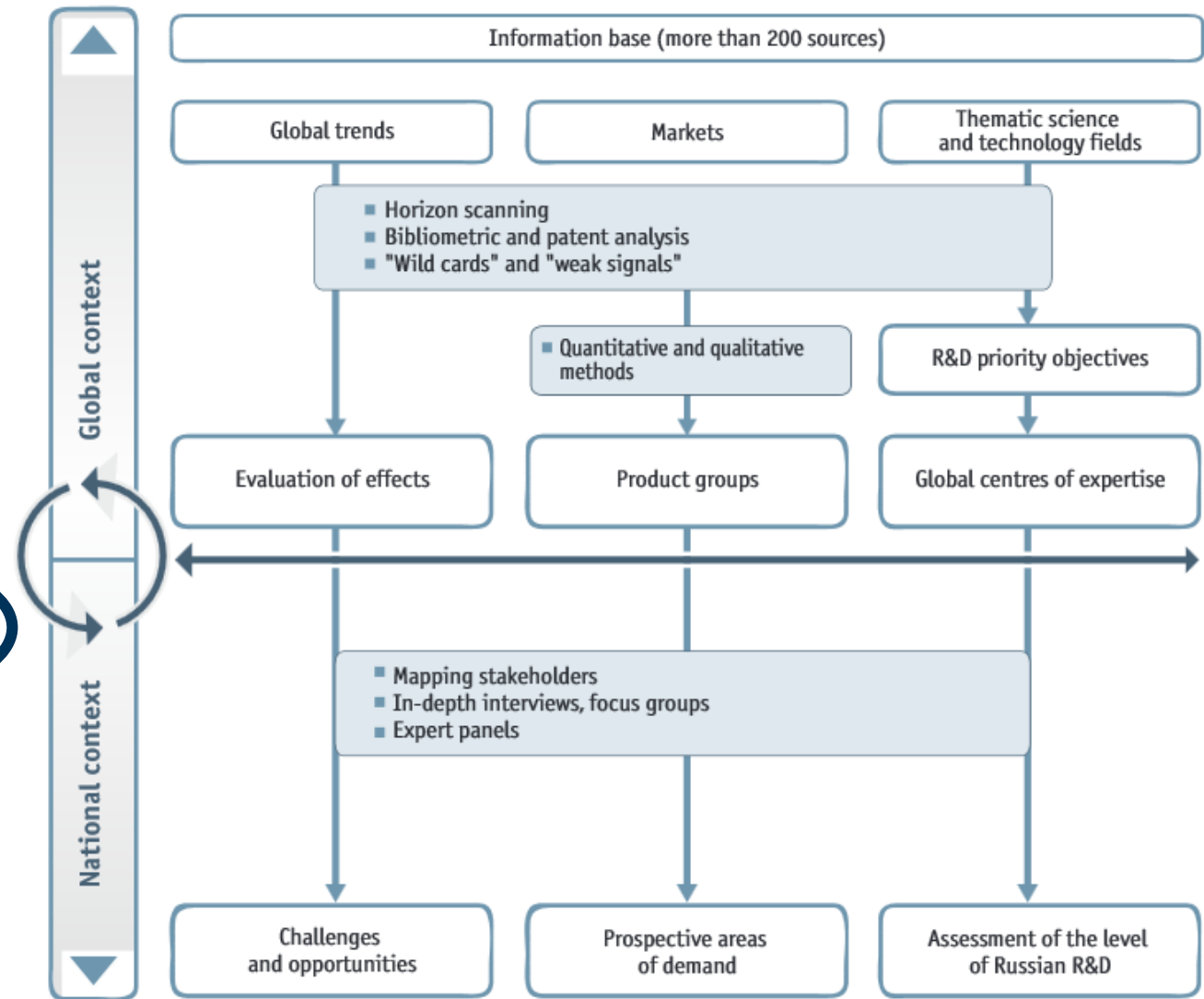
Foresight system technology in Russia



Organisational Design of “Russia 2030: Science and Technology Foresight (RSTF)”

Science and technology priority areas:

- information and communication technology
- **biotechnology** → **Forest is here!**
- medicine and health care
- new materials and nanotechnology
- environmental management
- transport and space systems
- energy efficiency and energy saving



Prospective markets and product groups for the BT priority area and place of forest

Markets

- industrial bioproducts
- biotechnological agricultural products
- biofuel and bioenergy
- edible bioproducts
- biological environmental systems
- biotechnological systems and products for the forestry sector
- aquabioculture

Groups of innovative products and services/ Methods to reproduce and protect forests:

- tools and methods to protect and reproduce arboreal genetic resources
- biotechnological tree forms with specified properties
- biological forest protection techniques
- microbiological conservation products (biofertilisation)

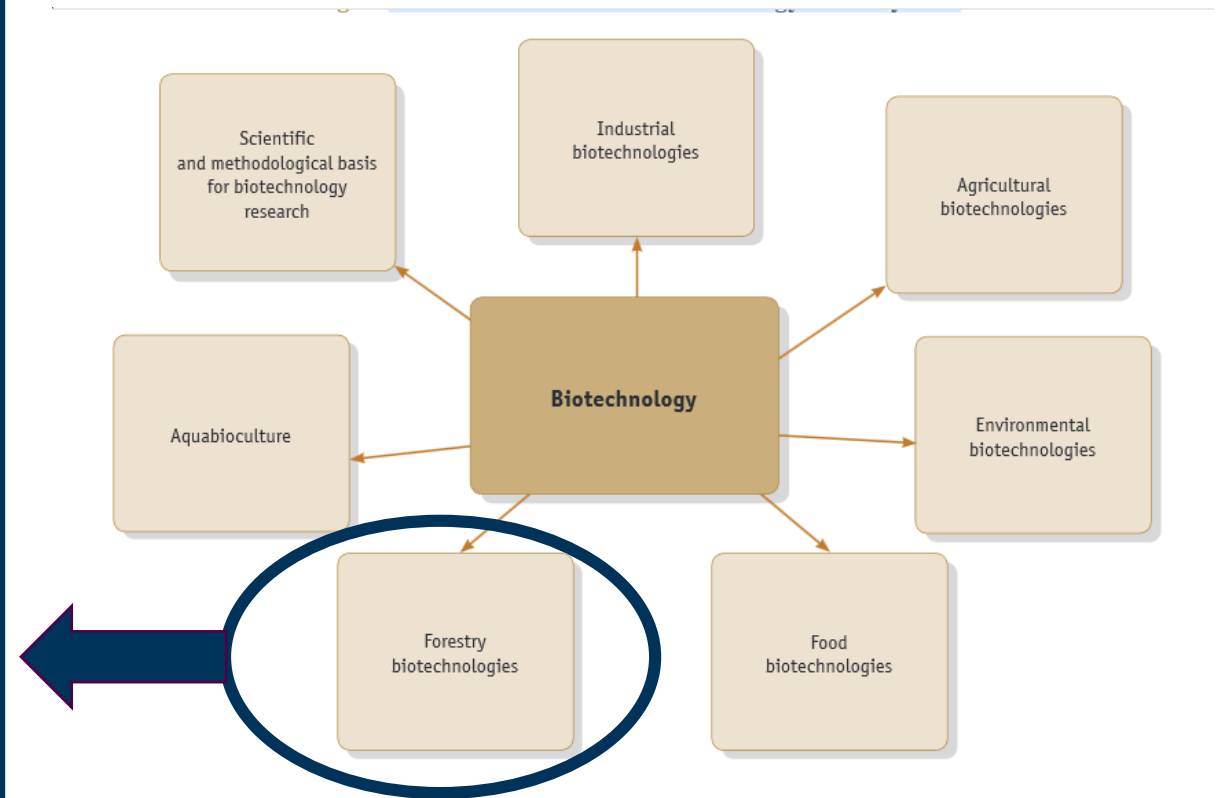
Characteristics

- Potential to reduce environmental costs
- Potential to increase the speed of forest reproduction
- Protecting biodiversity

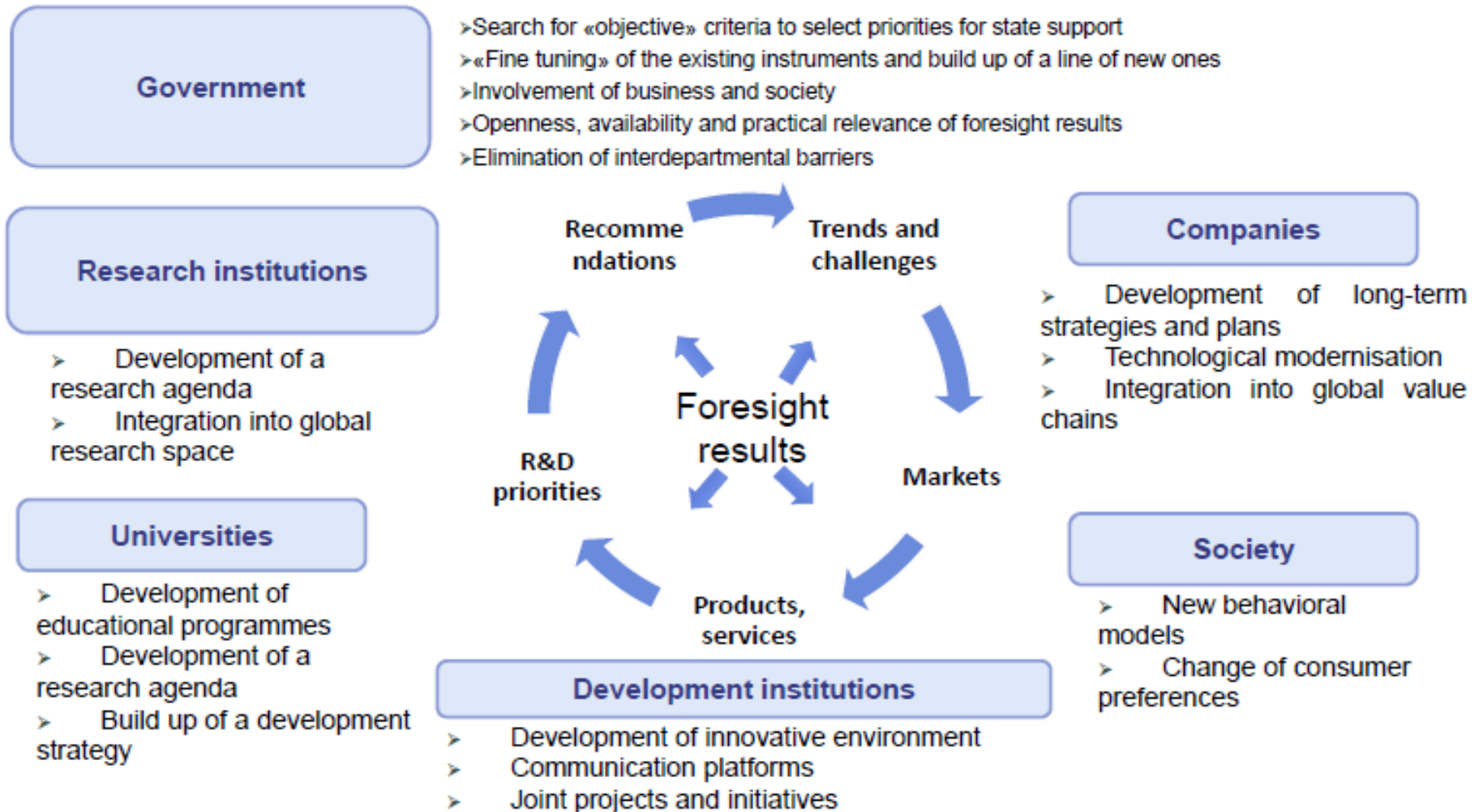
Thematic fields of the “Biotechnology” priority area applied research in forestry

Forestry Biotechnologies

- new forms of arboreal plants with specified properties, planting stock
- assessing quality of seed material
monitoring of the phytosanitary state of nurseries and forest plantations
- advanced forest plantation management system (including DNA labelling techniques)
- biological forest protection techniques
- technologies for deep wood processing and recycling of sawmill waste



Using Foresight Results for STI Policy



Recommendations on use of the results of “Russia 2030: Science and Technology Foresight”

- Important document in the government strategic planning system in the field of science, technology and innovation/setting national priorities
- Conclusions and recommendations can be used by various interested parties for different purposes:
 - federal executive bodies: strategic planning and state programmes
 - large public-owned companies; technology platforms; innovative regional clusters
 - higher education and research: priority areas and strategic development documents
 - private sector: research and production programmes and projects/ searching for new technology partners

Forest sector outlook studies (FSOS)

- FAO and UNECE
- Long history of the outlook studies: European, North American, Asia Pacific, West and Central Asia, Latin America, Africa





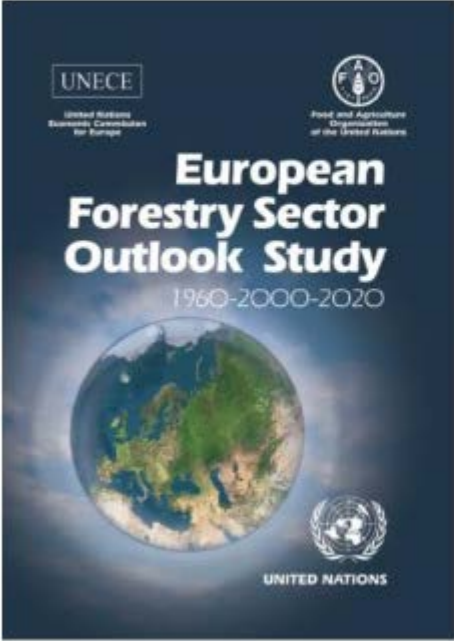
Russian FSOS (1)

- Previous Russian FSOS 2003: narrow in scope, big social and economic changes, 25% of the world forest, without Russia the global picture is not complete
- New Russian FSOS 2012
- Research goals:
 - (1) independent and objective analysis of the current state of Russia's forest sector over the last 20 years;
 - (2) proposals for the most efficient path of development for the next two decades;
 - (3) assistance to politicians in informed decisionmaking; and
 - (4) increase of openness, transparency and investment appeal of the Russian forest sector for national and foreign investors.

Difference between FSOSs

UNECE Timber Committee and FAO European Forestry Commission
UNECE/FAO Timber Branch

Download



The Study

- Analyses past trends and future outlook for the supply and demand of the goods and services provided by the European forests
- Provides a more detailed analysis of the outlook for the centrally planned economies, non-wood forest products and services, forest management and policy
- Special emphasis on cross-sectoral policy linkages
- Available in paper and on the web

- Russian outlook:
 - Lack of information available
 - Lack of understanding in terms of topics
 - Lack of national level experts
 - Limited involvement of experts
- BUT...
- In fact, the ONLY modern document on Russian forest sector
 - Source of information in Russia and in the world



Russian FSOS (2)

Approaches:

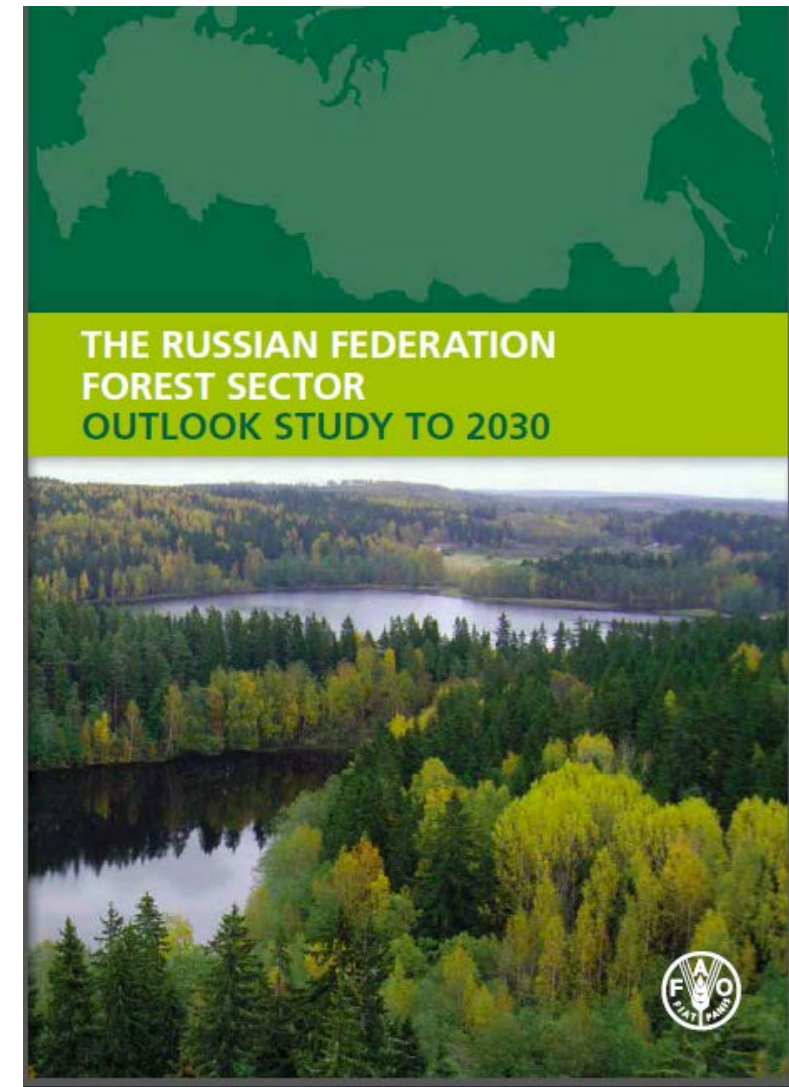
- Advisory Committee: federal authorities, business, research, NGOs
- 22 Russian experts, representing 11 research, education and NGOs
- official statistic by the federal authorities
- democratic procedures and freedom of discussions

Based on **three scenarios**: inertial, moderate and innovation:

- **inertial** based on past trends
- **moderate** presumes moderate economic development and represents progress from the inertial to innovation stages
- **innovation** represents the most favourable alternative

Inertial, moderate and innovation scenarios for:

- Forecast of forest resources
- Demand for wood products
- Forest industry sector development
- Forest regeneration, conservation and protection
- Forest resources and climate change
- Forest certification
- Illegal wood
- Forest ownership
- Forest policy
- Education and staff, science and technology



DYNAMICS OF FOREST SECTOR DEVELOPMENT, 2010-2030

№	Branches, indicators	2010		Percent to 2010		
		Unit	Volume	By inertia	By transition	By innovation
1.	Wood harvesting	Mln. m ³	174	133,6	149,0	173,1
2.	Sawngoods	Mln. m ³	19	149,0	208,5	268,0
3.	Plywood	Mln. m ³	2,7	149,2	182,6	205,7
4.	Particle board	Mln. m ³	5,5	158,8	202,8	214,2
5.	Fiber board	Mln. m ³	1,6	167,7	191,6	251,5
6.	Pulp for sale	Mln.t.	2,1	157,1	159,5	185,7
7.	Paper and paper board	Mln.t.	7,75	189,6	242,6	367,7
8.	Wood consumed to produce energy	Mln. m ³	32,0	146,3	182,5	233,1



Historical chance for Russian forest sector

- Twenty-year delay in the development
- Unique historical possibility for renovating/ reconstructing
- Introduction of breakthrough technologies and innovations
- Techniques, technologies, policy, institutions, science and education
- Integration into the global economy as a renovated, competitive and innovative segment
- Innovation development scenario: scientific backup, skilled staff, insight, forecasting of global market demand, stimulation of domestic consumption of forest products

Other types of documents

- Basics of Russian Forest Policy: “Basics of state policy in the area of use, protection and reproduction of forest in the Russian Federation up to 2030”, September, 2013
- Programme of Forestry Development up to 2020
- Russian BioTechnology Platform and State Programme up to 2020
- Russian Strategy of Scientific and Technological Development, September 2016
- Russian Strategy of Forest Complex Development, September 2018

Key messages

- Foresight is operational in Russia but it is mostly STI type
- In foresight on natural resources forest is presented though the angle of technologies/ not environmental part
- Bioeconomy is not considered/biotechnology in a focus
- Current strategic documents related to forest sector are not based on/interlinked with foresight outcomes



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Thank you!

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