

***How to enhance the framework for  
EU-Russia S&T cooperation:***

***Recent analytical results and recommendations***

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### **Content**

- 1 Sources of information
- 2 Empirical findings on the state of the art of EU-Russia cooperation
  - from the scientific perspective
  - from the policy perspective
- 3 Analytical findings: Drivers, trends and room for improving the framework
- 4 Policy recommendations

# 1. Sources of Information



## A) SCOPE EAST (1.01.2007 - 30.06.2008)

### **SCENARIOS FOR A CO-ORDINATED APPROACH TO SUSTAINABLE S&T- COOPERATION WITH THE EASTERN NEIGHBOURS OF THE EU**

Funded under the 6<sup>th</sup> EU RTD Framework Programme

Aims: - analysing the state of the art of S&T cooperation (Russia/Ukraine)



- analysing the policy framework

- developing policy recommendations to enhance the S&T cooperation

- preparing the ground for continuous dialogue among relevant stakeholders



# Framework for EU-Russia Cooperation



## SCOPE EAST (2)



### Consortium Members:

- International Bureau of the BMBF, Germany - coordinator
- Higher School of Economics, Russia
- CNRS, France
- National Information Center for Ukraine-EC S&T cooperation, Ukraine

### Deliverables:

Summary of Conclusions and Recommendations

<http://www.scope-east.net>



### B) CREST-OMC Working Group „Internationalisation of R&D“

CREST = Scientific and Technical Research Committee

OMC = Open Methode of Coordination

**Scope:** **Mutual policy learning** and preparing **recommendations** addressed to **Member States** and the **EU Commission** in order to better implement the Lisbon strategy and to realize the European Research Area

**WG-Members:** Experts from 21 Member States / Associated Countries and EU Commission (1st phase: 2007)  
Experts from 22 Member States / Associated Countries and EU Commission (2nd phase: 2008)  
EU Commission

CREST OMC Working Group (2)

- ... at the examples of S&T cooperation with Russia, India and Brazil
- ... with an emphasise to identify **synergies through coordinating measures of MS and the European Commission** to undertake and facilitate joint or complementary activities at national and European level

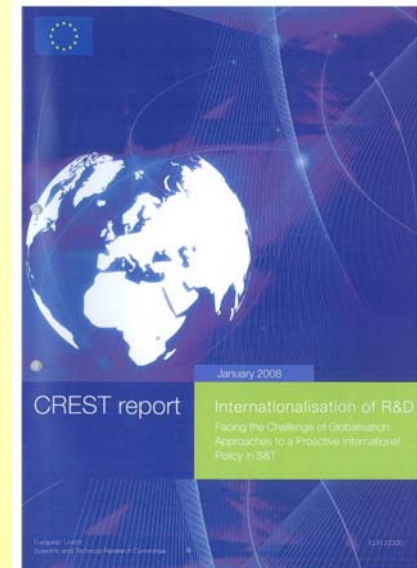
### CREST OMC Working Group (3)

#### **Deliverables:**

Report of 1<sup>st</sup> phase “Facing der challenges of globalisation: Approaches to a proactive internationalisation policy in S&T”,

Brussels, January 2008

[http://ec.europa.eu/invest-in-research/pdf/download\\_en/kina23330enc\\_cover\\_txt\\_web.pdf](http://ec.europa.eu/invest-in-research/pdf/download_en/kina23330enc_cover_txt_web.pdf)



Special report on “Exploring synergies through coordinating policy measures between the EU Member States, Associated Countries and the European Commission – An element of the ‘New Partnership’ for ERA governance”, Brussels, December 2008

3 Country reports: “An Analysis of EU-Russian/Indian/Brazilian Cooperation in S&T” including recommendations for enhancing the cooperation”, Brussels, December 2008

# 2. Empirical findings on the state of the art of EU-Russia cooperation – Scientific perspective

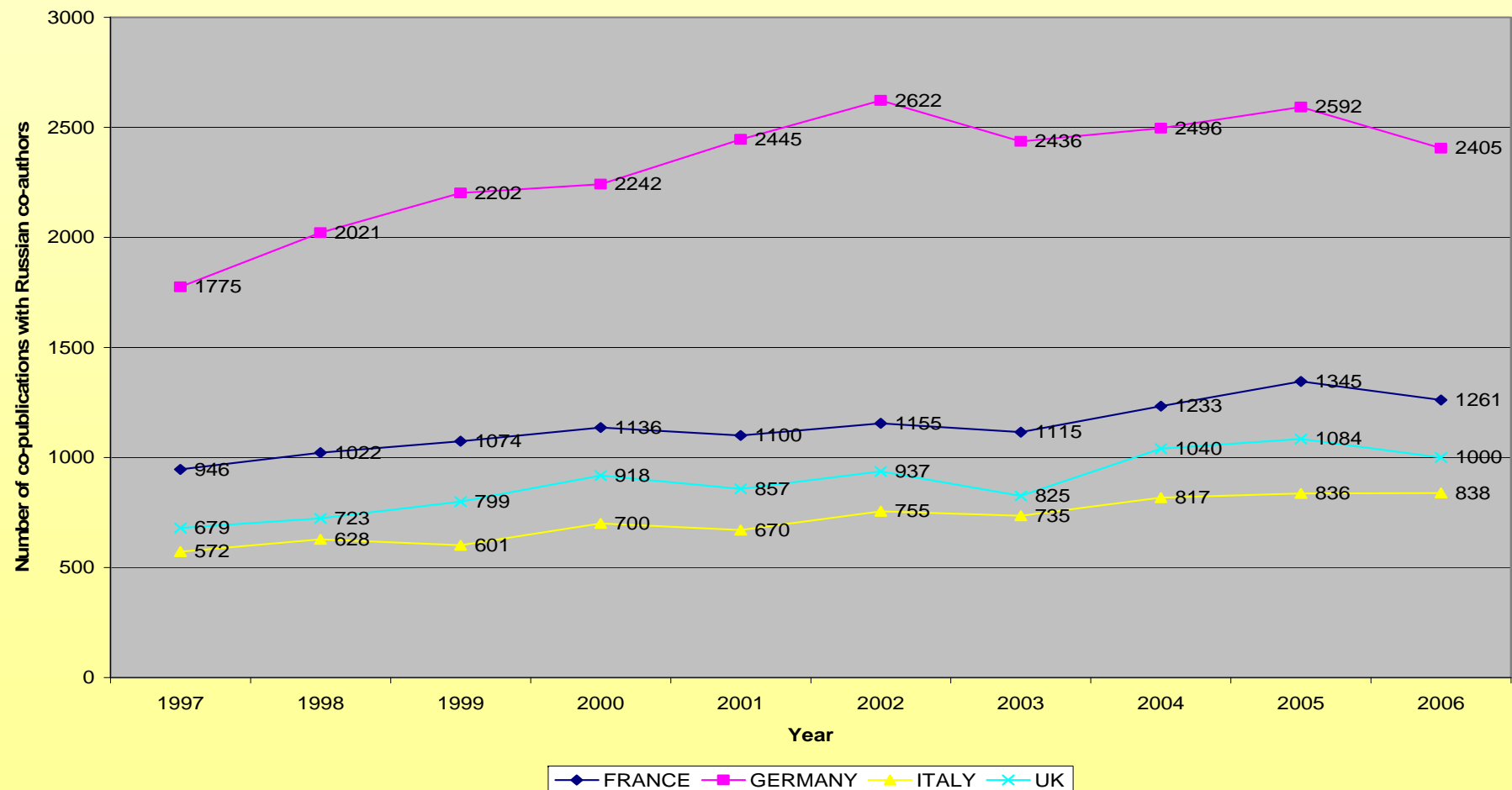
### Bibliometrics (I)

Continuous increase  
in Russian co-publications  
with EU countries:  
- 17% (1997) - 26% (2006)  
- 4700 (1997) - 6030 (2006)



## Bibliometrics (II)

Majority of co-publications with Germany, France, UK, Italy



### Bibliometrics (III)

**50%** of all co-publications with EU-scientists **in Physics** with **emphasis on basic science** (“Blue Sky Science”)

THEMATICS	%
PHYSICS, CONDENSED MATTER	11,1%
PHYSICS, MULTIDISCIPLINARY	10,6%
PHYSICS, PARTICLES & FIELDS	7,8%
ASTRONOMY & ASTROPHYSICS	7,7%
PHYSICS, APPLIED	6,6%
MATERIALS SCIENCE, MULTIDISCIPLINARY	6,5%
CHEMISTRY, PHYSICAL	6,3%
PHYSICS, NUCLEAR	5,1%
PHYSICS, ATOMIC, MOLECULAR & CHEMICAL	4,9%
BIOCHEMISTRY & MOLECULAR BIOLOGY	4,6%
NUCLEAR SCIENCE & TECHNOLOGY	3,7%
OPTICS	3,7%
... Continued	

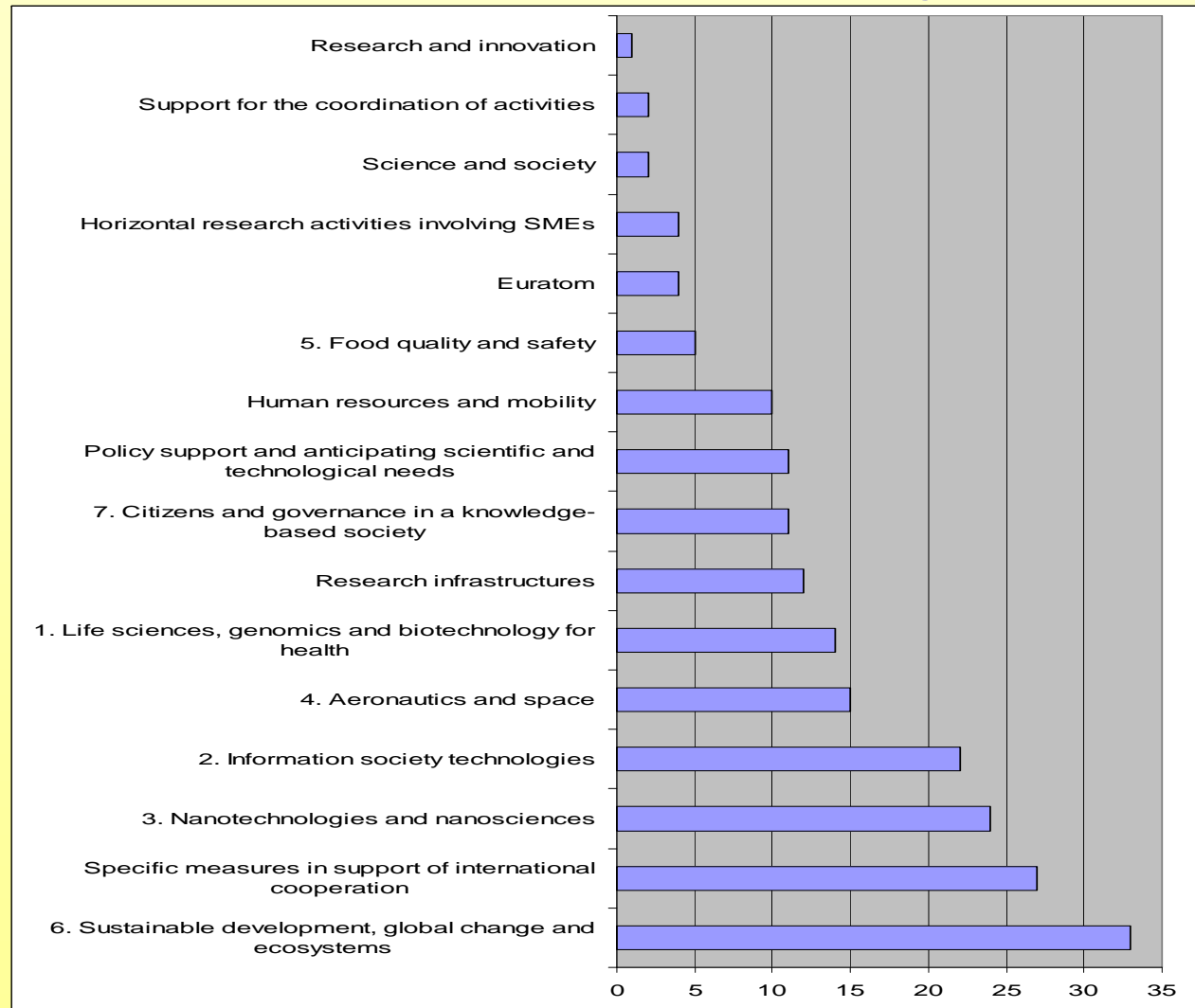
## Participation in the 6<sup>th</sup> EU RTD FP (195 projects)

### Main Areas:

- Environment
- Nano
- ICT
- Aeronautics/Space
- Life Sciences



- 470 participations
- about 50 Mio €



## Participation in INTAS

Participation in 2.909 out of 3.300 projects (1992 – 2006)

Top 10 research fields of Russian participation in INTAS projects:

- Mathematical analysis
- Nuclear, Hadron and Elementary Particle Physics
- Theoretical Physics
- Astronomy and Astrophysics, Condensed Matter Physics
- **Optics**
- **Acoustics**
- **Electromagnetic**
- **Materials** (Physics, Chemistry, Biomedicine)
- **Physical and Analytical Chemistry**
- **Molecular Biology**

**2. Empirical findings on the state of the art of EU-Russia cooperation – Policy perspective**

**Cooperation Agreements on S&T with Russia**

***signed before 2005:***                      ***AT, CZ, DE, ES, FR, GR,  
IT, PL, UK, NO***

***recently (2005-08) signed/renewed:***      ***DK, FI, SI, UK, TR***

***under negotiation:***                      ***DE (renewal)***

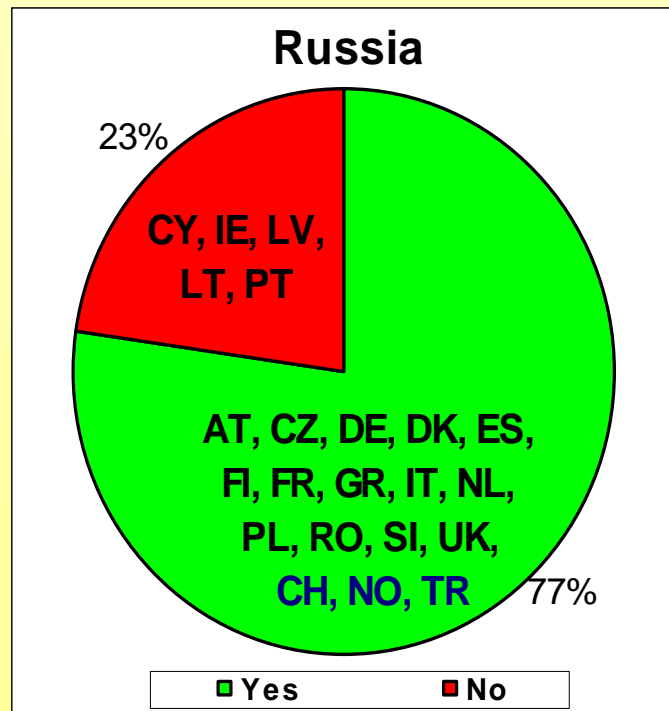
***inactive or awaiting ratification:***              ***RO***

Source:      *Responses to CREST Questionnaire on S&T Cooperation with Russia, 2008, N = 21*

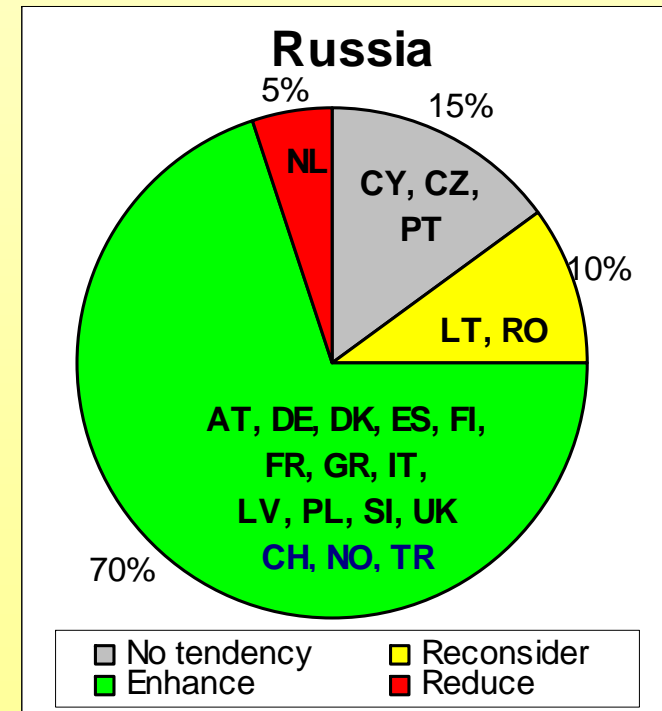


## Policy approaches to S&T cooperation with Russia: The perspective of EU Member States / Associated Countries

### Present policy promotion of S&T cooperation with Russia



### The look forward: Tendencies of S&T cooperation with Russia



Source: Responses to CREST Questionnaire on S&T Cooperation with Russia, 2008, N = 21

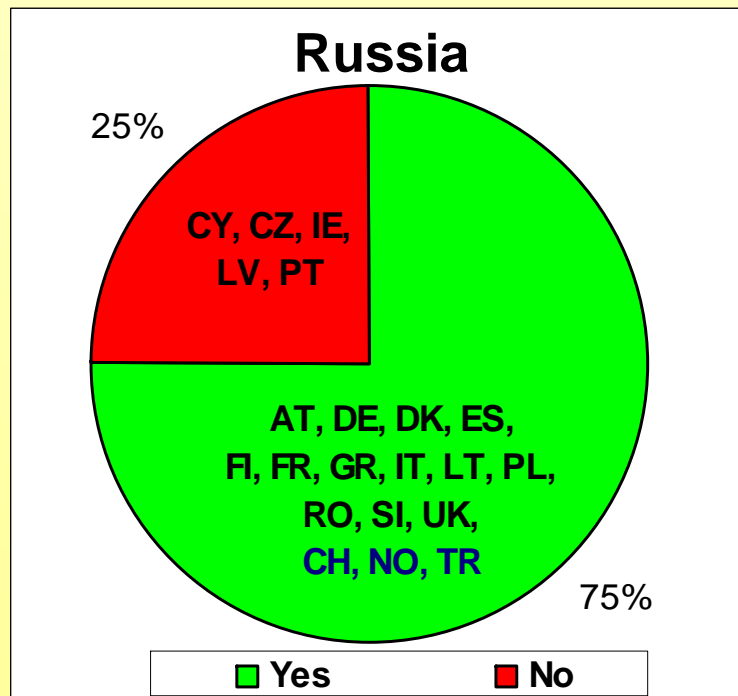


# Framework for EU-Russia Cooperation

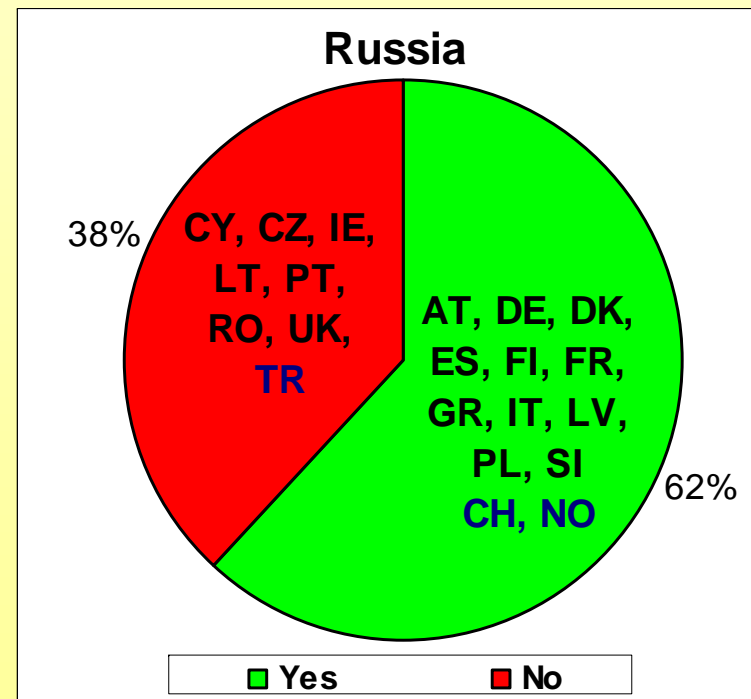
## Strategic initiatives to strengthen the S&T cooperation with Russia:

### The perspective of EU Member States / Associated Countries

over the past 3 years



in the coming 5 years



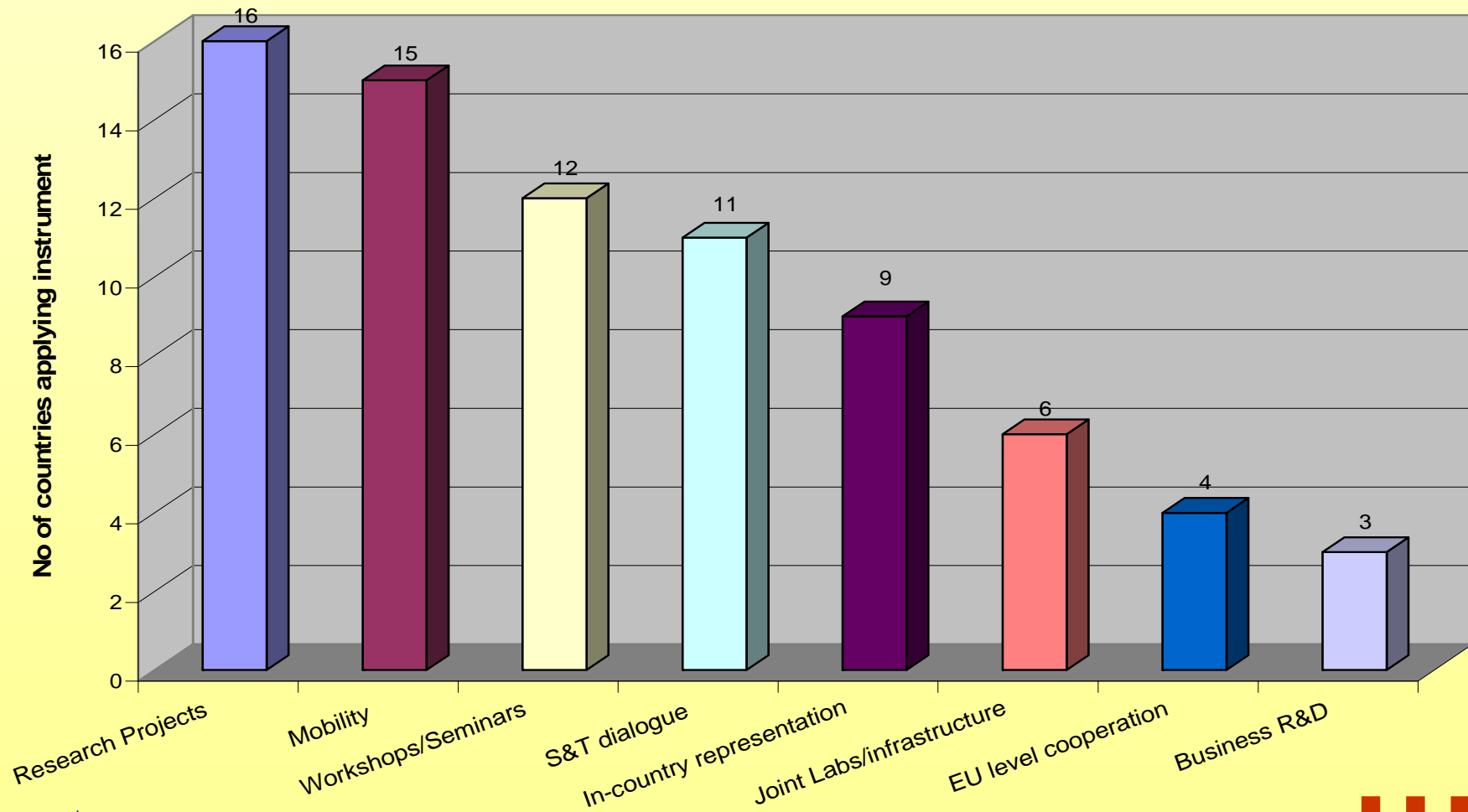
Source: Responses to CREST Questionnaire on S&T Cooperation with Russia, 2008, N = 21



# Framework for EU-Russia Cooperation

## Instruments for the S&T cooperation with Russia:

### The perspective of EU Member States / Associated Countries

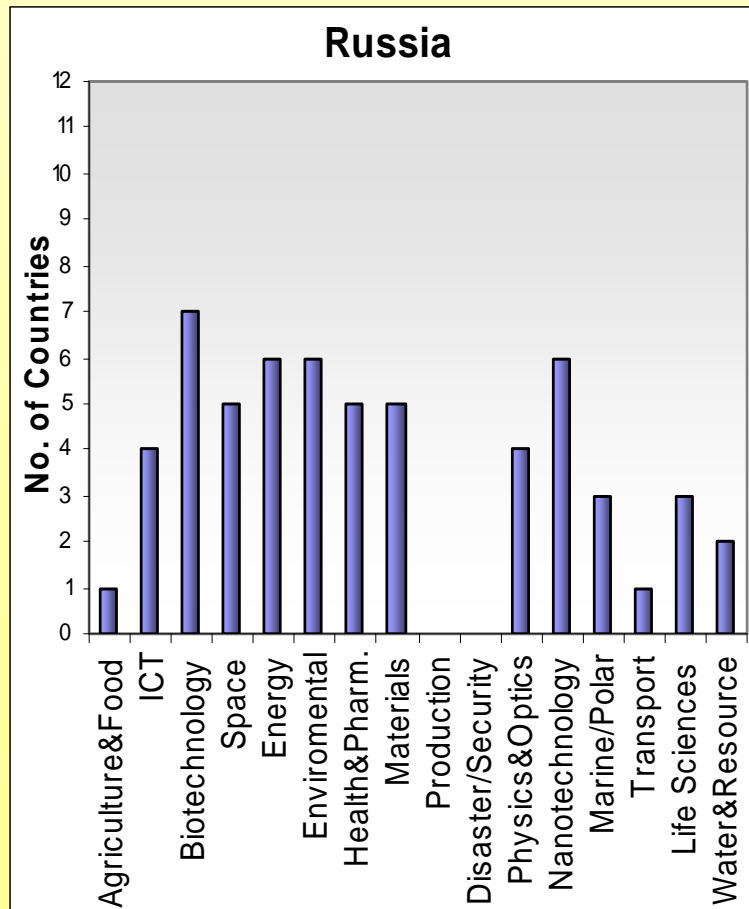


# Framework for EU-Russia Cooperation

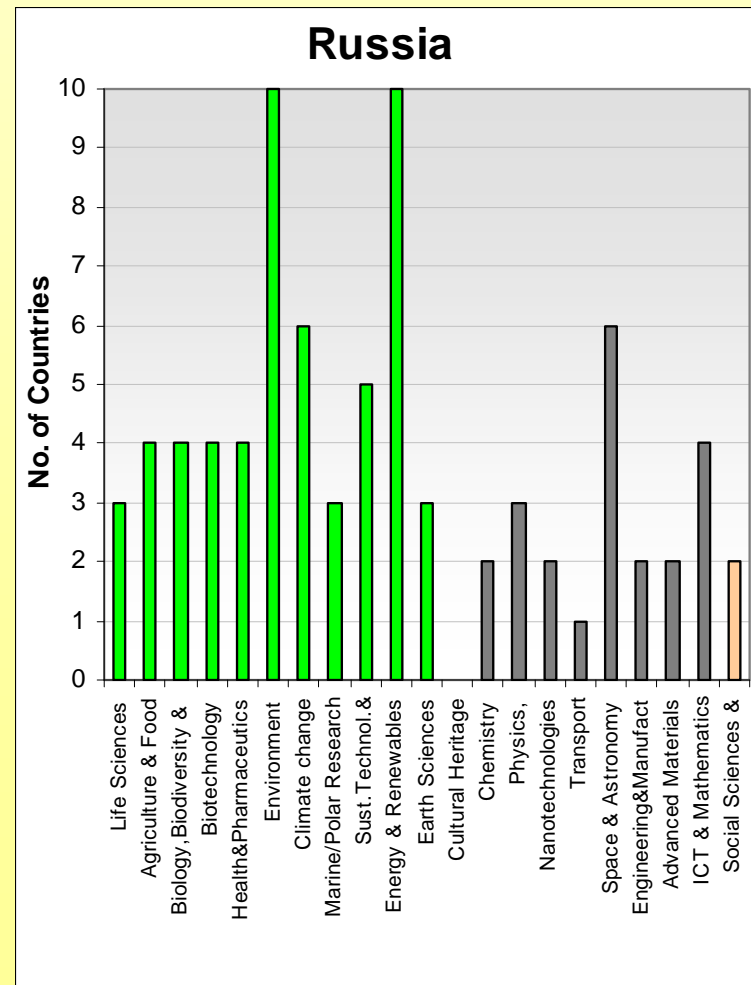
## Priority fields for the cooperation with Russia:

### The perspective of EU Member States / Associated Countries

#### Present priorities



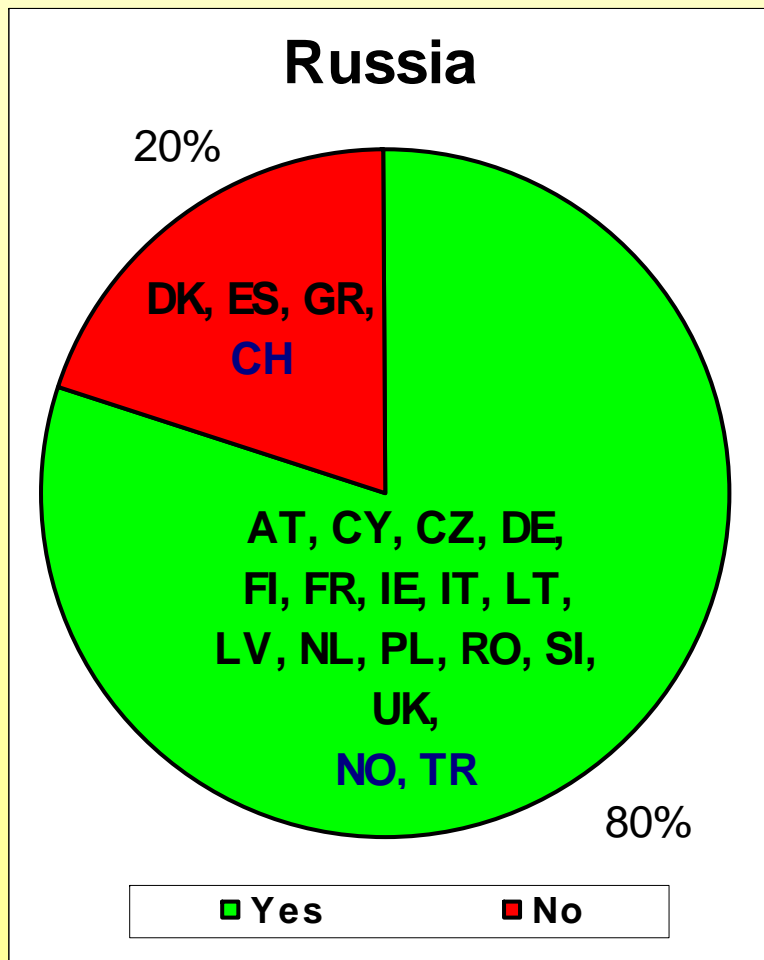
#### Interest in policy coordination



## Framework for EU-Russia Cooperation

### Interest in enhanced policy coordination of activities:

#### The perspective of EU Member States / Associated Countries



Source: Responses to CREST Questionnaire on S&T Cooperation with Russia, 2008, N = 21

### 3. Analytical findings: Drivers, trends and room for improving the framework

#### Drivers and trends of S&T cooperation with Russia

- to increase the quality and absorption capacity of European S&T through partner-ships with leading Russian S&T institutions allowing **access to scientific workforce** (approximately 30% of the EU R&D workforce potential), **complementary knowledge** (excellency in basic sciences) and **S&T resources** (respecting mutual benefit!)
- to build **new partnerships in geosciences for conventional energy resources** research, especially for the oil drilling surveys **and** in **energy security** (link to European Union's SET plan on energy security)
- to gain **access to new markets** (in Russia and in traditional partner countries of Russia) and to increase the EU innovation system's competitiveness

### Drivers and trends of S&T cooperation with Russia (cont.)

- to **solve global problems in Partnership with Russia (G8, ...)**, which cannot be tackled individually in an efficient way
- to build on **Russian S&T policy** which **is strengthening excellence** through competition based funding allocation as well as through evaluation principles, which correspond to EU practice (Targeted Programmes, RFFI, FASIE, Coordinated Calls with EU, ...)
- to build on **Russian STI policy** which **is strengthening the innovation sector** (Targeted Programmes, innovation infrastructure incl. ROSNANO, ROSTECH)
- to benefit from a joint policy framework: Russia and the EU share a **unique joint policy framework of Four Common Spaces**; Russia joined the **Bologna Process**; Russia expressed interest in an association to the EU-RTD Framework Programme

### **3. Analytical findings: Drivers, trends and room for improving the framework**

#### Room for improving the framework

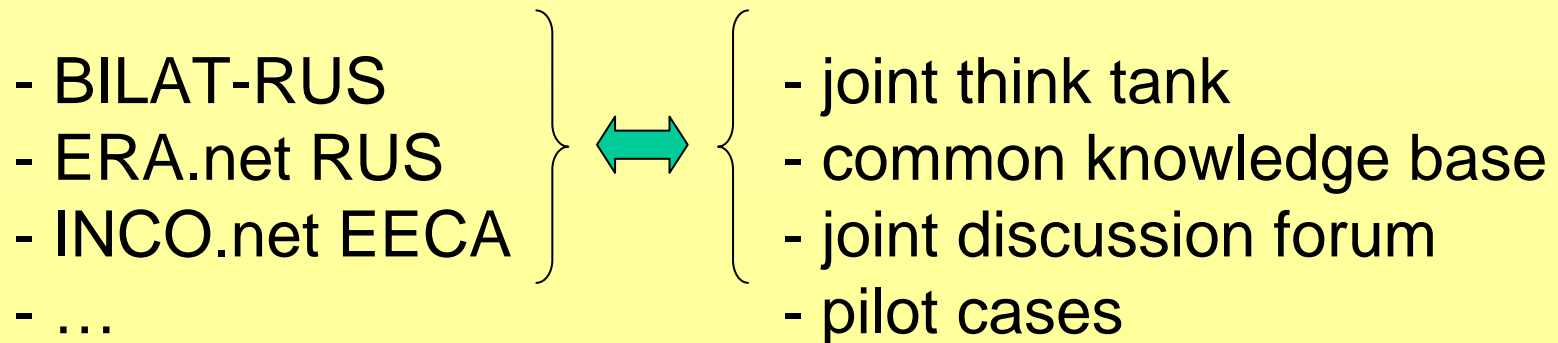
- deepening the **mutual knowledge base** on S&T and S&T policies
- going beyond traditional cooperation patterns (basic sciences) – exploiting **new options for cooperation in applied sciences and in the innovation sphere incl. technology transfer**
- introducing **advanced cooperation instruments** building on good practice examples

### Room for improving the framework (cont.)

- overcoming barriers in the legal framework:  
**Consistent, transparent rules and regulations for**
  - **mobility** (VISA, social security system, ...)
  - protection and joint utilization of **intellectual property**
  - access to **S&T infrastructures**
  - exchange of **scientific material and equipment** (customs, ...)
  
- improving the **legal frame for Russian investments / participation in international S&T infrastructure**
  
- exploiting the **cooperation potential of the Russian regions**

### Room for improving the framework (cont.)

- exploiting opportunities of **coordinating policy instruments** between interested EU-Member States and Russia (variable geometries) – linking bilateral with multilateral schemes
- linking **bilateral activities** with EU-Russian **activities on Community level** (FP, Four Common Spaces)
- making optimum use of **EU-funded coordination projects**



## 4. Policy recommendations

### Fostering knowledge-based strategic agenda setting

- improve the **mutual knowledge base** on S&T activities
- complement the ongoing **S&T dialogue** between the European Commission and Russia with an S&T dialogue **between the EU MS (possibly AC) and Russia**

in order to

- identify joint interest beyond the themes of the EU RTD Framework Programme
- foster coordination of concrete implementation measures building on MS`(/AC`) instruments.

### Offering an optimum framework for S&T cooperation and removing barriers

- introduce **advanced funding schemes** for S&T cooperation with Russia, aiming wherever possible at reciprocity and building on good practices of EU Member States and the EU Community (using the ERANET scheme)
- move towards a **flexible, simplified and harmonized cooperation framework** through the EU-Russian S&T agreement
- stimulate a **dialogue between** EU and Russian **public and private S&T and innovation stakeholders**

### Putting emphasis on the “human dimension” through brain-circulation

- promote the opportunities, advance funding schemes and remove still existing barriers
- enhance **outward mobility** of EU-researchers from **to Russia** (issue of attractiveness and promotion)
- analyse the impact of the **EC-Russia Visa Facilitation Agreement** from 1 June 2007 and take necessary action (once appropriate) to further improve the framework
- analyse the impact of the **European Visa Directive** in order to prepare the ground for a better access of Russian scientists to the European Research Area

### Enhancing strategic S&T cooperation

- make better use of the Russian research potential through a **joint cooperation framework in basic sciences**
- develop a common framework through **joint innovation programmes**
- widen the scope of the S&T cooperation with Russia towards applied research and innovation through the **Community Competitiveness and Innovation Programme (CIP)**
- optimum **access to each others S&T infrastructures** and initiate joint agenda setting for upgrading and establishing medium and large scale S&T infrastructure (to be interlinked with the ESFRI process)

**Thank you.**

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