Joint Research Centre (JRC)

The future of foresight and related forward looking activities: Shared visions & research agendas of the future & requirements

Fabiana Scapolo
Vienna, 14-15 June 2010

Outline

- **What is the JRC and its new strategy**
- **European Foresight: achievements, open issues and challenges**
- **Future Foresight activities in the JRC**

What is the JRC and its new strategy

JRC Mission

The Mission of the Joint Research Centre

… is to provide customer-driven scientific and technical support for the conception, development, implementation and monitoring of EU policies. As a service of the European Commission, the JRC functions as a reference centre of science and technology for the Union.

Close to the policy-making process, it serves the common interest of the Member States, while being independent of special interests, whether private or national.

The structure of the JRC

7 Institutes in 5 Member States

IE - *Petten, The Netherlands / Ispra, Italy*
Institute for Energy

IRMM - *Geel, Belgium*
Institute for Reference Materials and Measurements

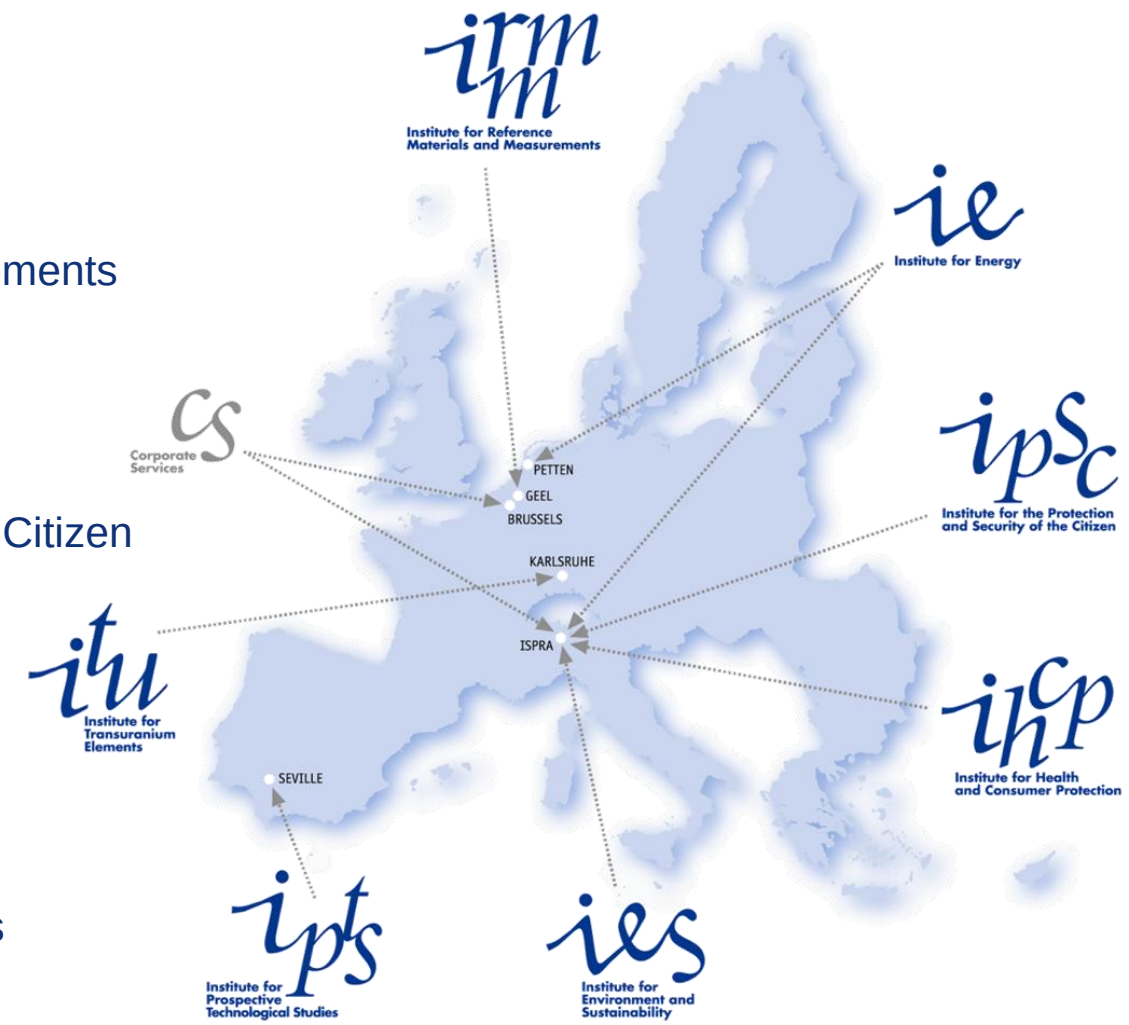
ITU - *Karlsruhe, Germany*
Institute for Transuranium Elements

IPSC - *Ispra, Italy*
Institute for the Protection and Security of the Citizen

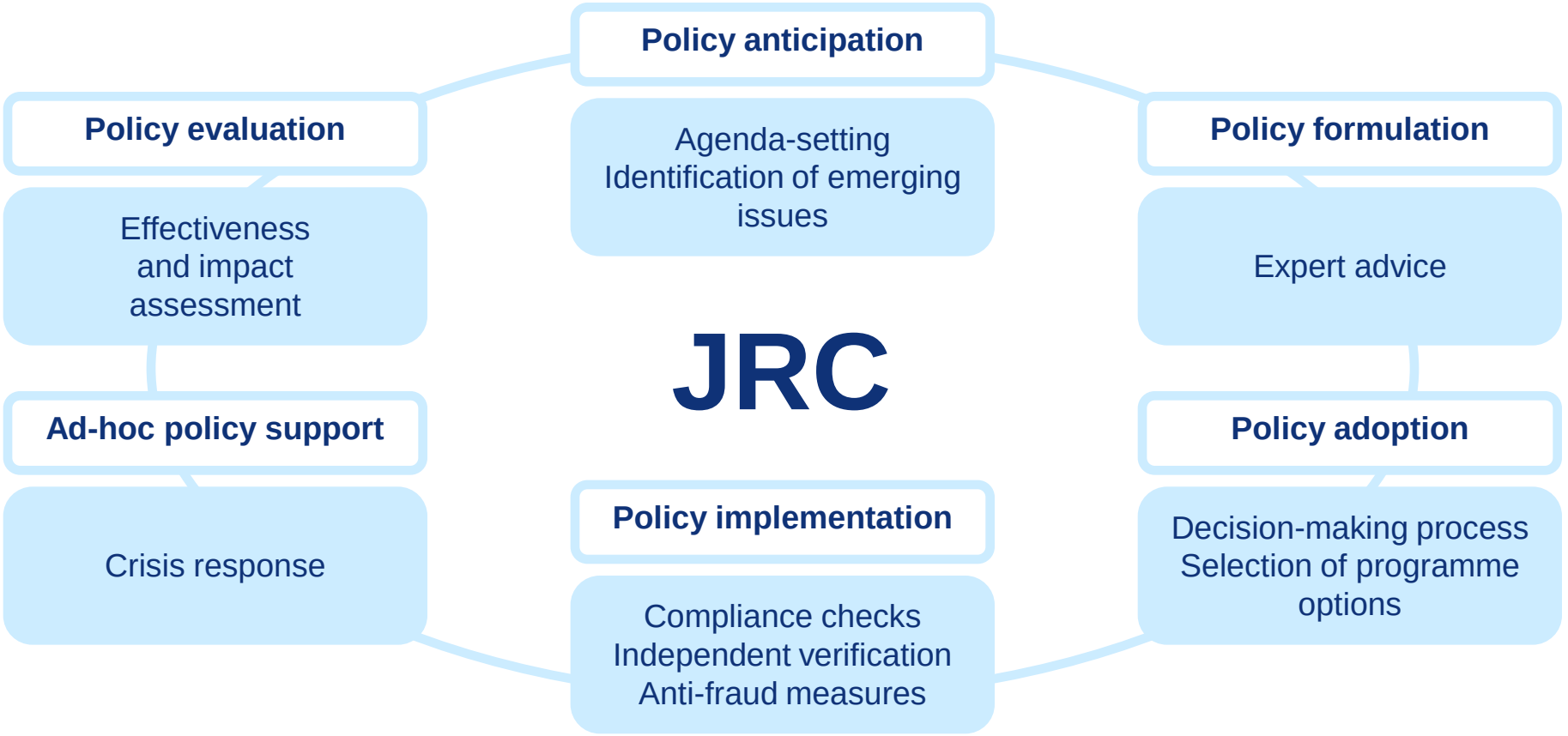
IES - *Ispra, Italy*
Institute for Environment and Sustainability

IHCP - *Ispra, Italy*
Institute for Health and Consumer Protection

IPTS - *Seville, Spain*
Institute for Prospective Technological Studies



Implementing the JRC Mission in the Policy Cycle



JRC's new vision for the future

JRC Vision

JRC reaffirms its mission, indicating its raison d'être to support the EU policy process, and will adopt a new forward-looking vision to set its future direction:

"to be a trusted provider of science-based policy options to EU policy makers to address key challenges facing our society, underpinned by internationally-recognised research"

The pillars and the development of the new JRC Strategy

The Pillars of the JRC Strategy

- Provide integration across policy areas to address societal challenges
- Avoid duplication of activities
- Avoid silos across JRC Institutes
- Meeting customers needs

The Process: combination of top-down and bottom-up process

- Involvement of twelve Expert Working Groups composed of 150 scientific and administrative staff across the JRC representing core competence areas
- Consultation with stakeholders and customers (the Cabinet, DGs, European Parliament, the JRC Board of Governors)
- Staff consultation

Criteria for selection of future priorities

The JRC will focus on challenges:

- Which have an EU-wide/global dimension
- Which support Europe 2020 flagship initiatives or other key EU objectives
- Which address needs of JRC key customers
- Where existing JRC competences are relevant or where we have a capacity to develop needed competences
- Treaty and other obligations

JRC Thematic Areas

Towards an open and competitive economy

Reference materials and measurements

Development of a low carbon society

Joint Research Centre 2010-2020 strategy

Security and crisis management

Sustainable management of natural resources

Safety of food and consumer products

Nuclear safety and security

European Foresight: achievements, open issues and challenges

Some meta-principles for Foresight

Foresight requires a careful configuration which cannot be found in any formula of good practice

- Contextualised: Foresight needs to be rooted in the context in within which it should be implemented (be it national, regional, sectoral, corporate, etc.)
- Credible: produce robust evidence, outcomes should be credible
- Diversed: keep an eye to unpopular views, not rush to consensus; relevant (and less relevant) stakeholders should be engaged wherever possible
- Systematic: follow a systematic approach that can be replicated; the methods applied should allow comparison, benchmarking and create re-producible results
- Far-sighted: keep a creative element that should be future oriented

JRC
EUROPEAN COMMISSION

What Foresight can do

Structured stakeholder dialogue on the future

produces

changes

Insights
About the future

- Dynamics of change
- New perspectives
- Future risks & opportunities
- Strategic options
- System capabilities
- Stakeholders views

Relations
With respect to future

- Networks
- Linkages
- Common ground
- Shared perspectives
- Joint visions

Attitudes
Towards the future

- Long term thinking
- Awareness of challenges
- Foresight & learning culture

Being better prepared for the future

European Foresight: when did it start?

In 1996* a collaborative study carried out by an international team (sponsored by DG RTD)

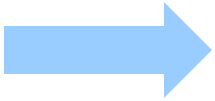
- **Objective: setting out possibilities for Foresight activity at European level based on:**
  - Overview of concepts and methods used in Foresight programmes
  - Explored the possibilities and advantages of international cooperation
  - Provided analyses on how Foresight can help to improve the formulation of science and technology policy in Europe

- **Potential contribution of Foresight to European RTD policies**
  - Advancement of priority setting
  - Create a reference base of long-term technology trends to inform for decision making process (e.g. ICT, biotechnologies, etc.)
  - Contribute to the coordination and improvement of Member States RTD policies
  - Develop a capability for integrating the intersections between social, technological, economic ecological and political spheres
  - Facilitate the creation of a Foresight culture in Europe

*From 'Technology Foresight: Perspectives for European and International Co-operation' Final Report, PREST, The University of Manchester, April 1996

European Foresight: what was achieved

- **The European Commission has stimulated Foresight and forward looking activities across successive Framework Programmes:**
  - Development of a Guide for Foresight at Regional level
  - European Foresight Monitoring Network – monitoring and mapping of past, ongoing Foresight activities in Europe and the world
  - FOR-LEARN - enhance mutual-learning amongst practitioners and users and development of Foresight online guide
  - ERA-Net ForSociety
  - Foresight on specific domains (e.g. FISTERA Foresight on Information Society Technologies in the European Research Area, Future of European Manufacturing)
- **Example of Foresight and forward-looking practices at European and international level**
  - European Technology Platforms apply Foresight in the definiton strategic research agendas
  - Standing Committee of Agricultural Research (SCAR)
  - European Science Foundation Forward Looks - to develop medium to long-term views and analyses of future research developments with the aim of defining research agendas at national and European level
  - OECD International Futures Programme
  - UNIDO training and Foresight guides (mainly Eastern, Baltic and NIS countries)
  - UNESCO Foresight Programme on possible evolutions and trends in education, the natural sciences, the social and human sciences, culture and information and communication.



Facilitation and the creation of a Foresight culture in Europe and in Member States

Open issues on European Foresight

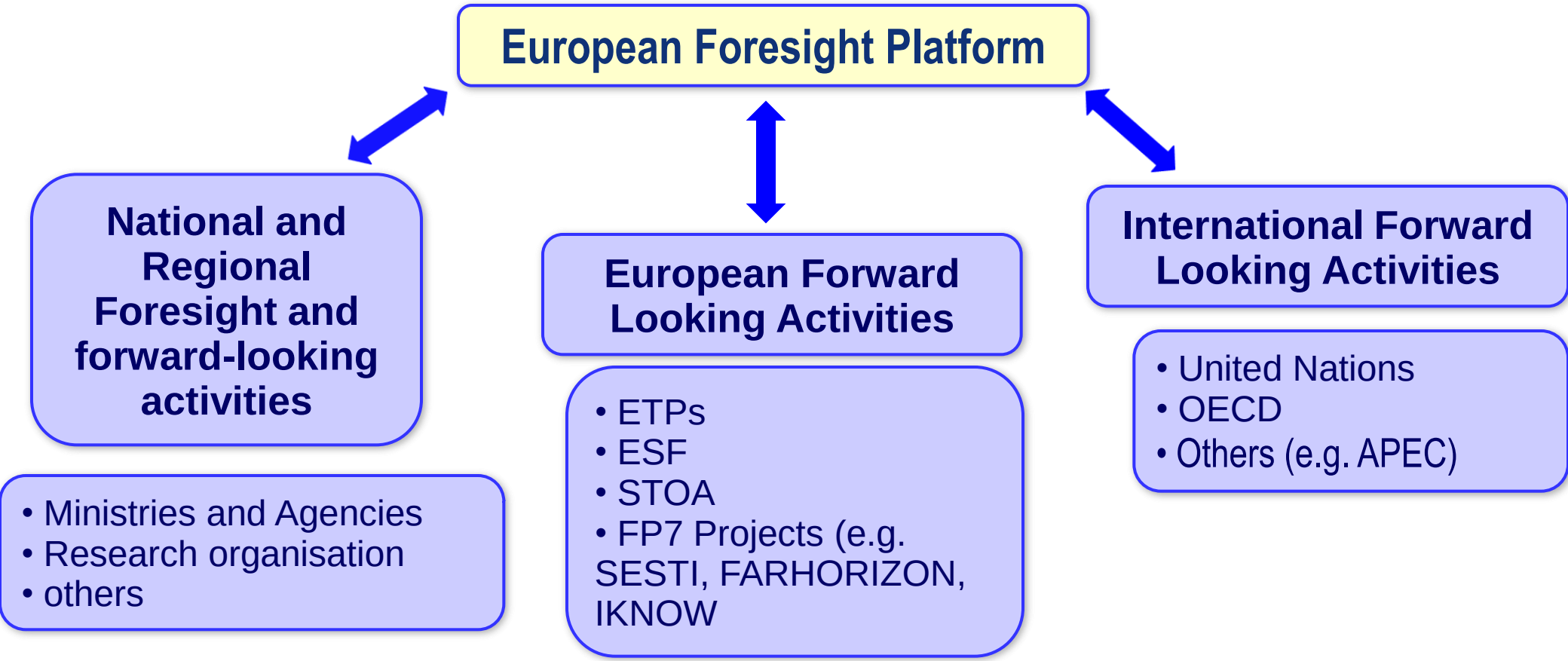
- **The EU decision-shaping and decision making processes makes it difficult to envisage a centralised omni-comprehensive Foresight process**
- **It is realistic to imagine a well organised distributed system of forward looking activities conceived as a continuous process rather than a one-off holistic exercise**
- **European level Foresight and forward looking activities should be able to gather the results of national, regional and sectoral studies**
  - Ability to transfer knowledge resulting from Foresight exercises into present and forthcoming actions
  - Deliver practical indication
  - Not duplicate efforts but add the European dimension
- **Engagement of stakeholders from all Member States is complex and might be unbalanced**

Open issues and challenges of Foresight

- **The mismatch between short-term, agenda-specific drivers of policy and the longer-term, futuristic range of possibilities offered by foresight projects**
  - Hit the policy agenda by understanding the policy priorities and the right time for action
  - Translate outcomes into knowledge that can be easily implemented by policy makers
- **Provide evidence of Foresight impacts**
  - Need to develop metrics and indicators to evaluate impacts and provide sound assessment (e.g. take-up rate of policy recommendations included in Foresight analyses)
- **Provide integrated set of actions on Foresight results**
  - Dissemination and communication need a more systematic follow-up by Foresight organisation and practitioners as part of Foresight process
  - Strengthen connection with stakeholders
  - Ensure quality of outputs (based on high quality analysis)
- **Explore the added value of combining modelling and more traditional Foresight techniques**

JRC
EUROPEAN COMMISSION

Possible role for the European Foresight Platform



Build a common repository of knowledge and practices

Future role of Foresight at European level

Foresight can be used to identify Grand Challenges in the context of Joint Programming Initiatives

- **The European Foresight Platform activities could contribute to:**
  - Selection of Joint Programming activities through the information collected and analysed in its database on Foresight and Horizon scanning projects in Member States, Europe and around the world
  - Provide good practice of the use of foresight in tackling similar issues
  - Act as a network of networks that can bring together relevant stakeholders by connecting

Foresight can be used as one contribution in the definition process of selection of priorities for FP8

- The European Foresight Platform could propose to the European Commission to organise a policy workshop with contribution of Member States that have permanent function on Foresight and forward looking activities

Future Foresight activities in the JRC

Anticipation and Foresight at JRC

The Background

From D. King's report:

"The European Commission would benefit from receiving proactive unbiased scientific advice from the JRC, identifying future problems, opportunities and needs of our societies, picking up signals from the scientific community using horizon scanning procedures based on the current state of knowledge from science, technology and the social sciences…."

From JRC Strategy 2010-2020

"In order to be more pro-active, the JRC will develop its capacity to anticipate future policy-relevant areas potentially requiring action. The JRC will therefore initiate a corporate capacity to provide horizon scanning and foresight intelligence…

This capacity will support the further development of the JRC, consequent work programmes and where relevant provide input to other Commission services."

Anticipation and Foresight at JRC

Objectives

- **Development of corporate intelligence, related to the study of technological and societal trends and events which may affect European Union public policies with a view to shaping the JRC's scientific strategy development**

- **Provide the early identification of S&T and societal issues and events which are believed to require attention by the Union Institutions for possible policy and/or regulatory intervention.**

The activity is based on

the expertise available in JRC Institutes and customer DGs

close cooperation (through partnerships) with networks of experts based in MS (e.g. Academies of Sciences, Foresight Offices, Policy centres).

Anticipation and Foresight at JRC

Implementation Model

A. **Horizon Scan** (regular briefing notes on S&T developments relevant to EU policies and feeding candidate list for Anticipation and Foresight)

- **Literature search**
- **Contacts with networks of experts**
- **Input from private professional services identifying and mapping new opportunities based on emerging technologies (e.g. Strategic Business Insights)**

Permanent function

B. **Anticipation (**short projects looking at discrete issues **)**

- **Selection (through Horizon Scan and consultation) of potential 'anticipation' topics (2-3 topics per year)**
- **Preparation of background material**
- **Submission to group of experts**
- **Organisation of specialised workshops**
- **Production of Reports**
- **Presentation to stakeholders/public in "JRC Science and Policy Encounter on …"**

duration : 12 months

C. Foresight (in-depth studies examining major issues)

- **Identification of Foresight topics with stakeholders (DG services) (e.g. one topic per year)**
- **Setting up of foresight partnership**
- **Analyses, meetings with stakeholders**
- **Reports, presentation, follow-up**

duration: 15-24 months

Criteria for selection of topics

1. Potential relevance for European Union Policies and therefore potential impact on European policies and regulations

2. Competences in JRC Thematic Areas

3. Urgency of issues

JRC
EUROPEAN COMMISSION

Joint Research Centre (JRC)

Robust science for policy making

Thank you for your attention!