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**COMMISSION STAFF WORKING DOCUMENT  
SUMMARY OF THE IMPACT ASSESSMENT**

**Accompanying document to the**

**Proposal for a**

**DECISION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

**establishing the first radio spectrum policy programme**

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# IMPACT ASSESSMENT EXECUTIVE SUMMARY

## 1. GENERAL BACKGROUND

Radio spectrum is essential to develop the digital society and fast wireless services, promote economic recovery and growth, and ensure quality jobs and long-term EU competitiveness. Spectrum policy orientations and objectives must notably be seen at European level in the context of the Digital Agenda for Europe and of Europe 2020, a European strategy for smart, sustainable and inclusive growth.

The proposed radio spectrum policy programme (RSPP) sets out policy orientations and objectives for strategic planning and harmonisation of spectrum use in the EU, as called for in the regulatory framework for electronic communications revised in 2009<sup>1</sup>. The first programme will span the period 2011-2015 to ensure convergence and consistency of policies in the EU and allow sufficient flexibility to cope with technology and market developments during that period.

Most RSPP elements were identified at the Spectrum Summit where the Parliament and the Commission gathered most stakeholders in March 2010. It is also based on a public consultation and on the Opinion of the Radio Spectrum Policy Group (RSPG).

## 2. PROBLEM DEFINITION

Spectrum is a scarce resource whose use is limited by physics and technology. Demand for quality and cost-effective spectrum often exceeds availability, in particular when new technologies and applications emerge. Scarcity can also result from inefficiency in spectrum regulatory management or technical spectrum use.

Scarcity limits economic and social benefits and causes a mismatch between growing demand for new wireless services and spectrum availability. This creates additional costs, wastes business opportunities, stifles innovative technologies and services and prevents certain public and commercial services.

### 2.1. Sub-optimal spectrum use

Spectrum use efficiency is influenced by the:

- risk of interference between users and the extent of possible harm;
- level of equipment and networks efficiency;
- regulatory management of spectrum, which influences the ‘intensity of use’; this includes frequency allocation models (administrative, market, collective use), use of technologies allowing effective spectrum sharing (e.g. cognitive radio), and incentives to invest in more efficient infrastructures (e.g. administrative incentive pricing), also in the public sector, which is a substantial spectrum user;

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<sup>1</sup> Article 8a(3) of the new Framework Directive.

- consistency of spectrum access conditions throughout the EU and in non-EU neighbouring countries.

## **2.2. Coping with the increasing reliance on applications requiring spectrum**

Given the scarcity, access to spectrum depends on priorities and choices. While certain choices can be left to market (e.g. auctions), certain priorities e.g. for life safety purposes, have to be set by public authorities.

Spectrum management decisions can influence or distort competition when changing the role or power of market players e.g. by giving incumbent users undeserved or unwanted competitive advantages. Consequently, policy choices must ensure that legacy rights are respected and do not distort competition.

## **2.3. Advantage of EU action**

Radio transmissions do not stop at borders and incoherence between national approaches can hamper spectrum usage.

Insufficient coordination may have other negative effects:

- fragment the internal market, preventing economies of scale, thereby increasing costs;
- cross-border interference preventing most efficient spectrum use by all Member States;
- less effective international spectrum coordination outside EU as there is no ‘common voice’;
- missed opportunities for boosting innovation at European level and possible delay in strategic investments.

Both the new ECS regulatory framework and the Radio Spectrum Decision reflect the benefit of EU coordination in the limits of existing national prerogatives on spectrum (e.g. military, culture).

## **3. OBJECTIVES**

The first RSPP will outline how spectrum use can contribute to main EU political objectives until 2015 and will generally envisage how to enhance social, economic and environmental benefits of spectrum access.

Considering the problems described above, the following objectives can be identified:

- Support, through spectrum policy, the wireless broadband objectives set in the EU2020 Strategy and the Digital Agenda for Europe;
- Promote spectrum use efficiency in EU policies, in particular by fostering flexibility and competition;
- Promote innovation at European level;

- Address weaknesses in spectrum management in EU competence areas;
- Support objectives for combating climate change and promoting energy efficiency as set in the EU2020 Strategy and the Digital Agenda for Europe;
- Protect European policy interests in international arenas and support Member States in dealing with third countries;
- Contribute to promoting the internal market in equipment, services and networks.

#### **4. POLICY OPTIONS**

Policy options were selected based on the potential added value of further EU harmonisation and coordination and based on the type of measures that could increase spectrum efficiency and bring economic, social and environmental benefits.

The impact assessment (IA) envisages three scenarios for the RSPP:

- spectrum management continues under the current framework without further policy orientations and objectives under a strategic policy programme;
- limit the RSPP to the Framework Directive scope i.e. electronic communication services (ECS);
- address all areas where spectrum use influences the single market.

The IA also evaluates, for each thematic area, the appropriate strategic level:

- no strategic objective to be addressed under the first RSPP;
- identification of a strategic objective to be further analysed with interested parties;
- identification of a strategic objective to be followed by concrete actions re. content or procedure.

#### **5. ASSESSMENT OF IMPACTS**

As the RSPP is a high-level, strategic instrument, a fully detailed analysis of each potential impact or the proportionality of each option was impossible. This IA therefore delineates the areas corresponding to each option and assesses whether EU intervention would add value and be more efficient than action at national or local level. As the IA, like the draft RSPP, are at strategic level, it verifies that the proposed legislative measure is in line with the proportionality principle; this reflects the need expressed in the regulatory framework and by stakeholders, to identify the strategic direction to be given to spectrum policy at EU level, as EU policy actions can no longer be decided on an ad hoc basis given their impact on a number of sectors and domains with varying degrees of EU competence.

## **5.1. Impact of options at first level**

### *5.1.1. No RSPP*

This would foreclose the benefits described in the other two options and contradict the legislator's desire.

### *5.1.2. RSPP limited to electronic communications services*

This would allow developing EU policy priorities with greater transparency and predictability. Extensive consultations would also add opportunities to collect information on future demand and obstacles facing stakeholders. Explicit endorsement by Member States and European Parliament would corroborate subsequent initiatives.

Preparing the programme does not create significant costs apart from normal administrative work by EU.

### *5.1.3. RSPP extending beyond electronic communication services*

Public consultations and spectrum summit demonstrated that key issues often extend beyond electronic communications across several sectoral interests (e.g. ECS broadcasting, transport, military, public use, environment, space). A broader information base will better balance the RSPP and consider all current and potential spectrum uses. Spectrum sharing opportunities can be expanded by considering all users while respecting national competences. Stakeholders clearly called for the widest possible scope.

## **5.2. Impact of options at second level**

Policy objectives may address policy content or process/methodology and address electronic communications or go beyond. Five themes were identified.

### *5.2.1. Contributing to the European Digital Agenda*

'Europe 2020', in its flagship initiative 'A Digital Agenda for Europe', intends to deliver sustainable economic benefits from a Digital Single Market based on ultra-fast internet and interoperable applications. Contributing to the objectives of broadband access for all by 2013 and access to internet speeds above 30 Mbps by 2020, with 50% European households having internet connections above 100 Mbps.

Wireless services can contribute to this objective by complementing wired infrastructures which cannot cover the entire territory. Wireless broadband services would also complement fixed access and allow mobility of use.

Policy options considered:

- No objective defined in first RSPP: this would allow Member States to adopt diverging wireless broadband deployment strategies and create confusion in EU.
- Identification of objective to be followed by further analysis/study: allows better informed policy choices thanks to more complete data; the potential role of each delivery platform needs in particular to be better understood.

- Identification of concrete measures from the outset: Possible measures include:
  1. at short term make more spectrum available for broadband by enforcing assignment of spectrum already allocated for that purpose and ensuring that all citizens get broadband at sufficient speed by 2015;
  2. designating harmonised spectrum for satellite broadband services;
  3. ensure coordination of digital dividend: set common date for 800 MHz Decision implementation, ensure that digital dividend is fully used to improve broadband access in sparsely populated areas and for socially vulnerable groups.

Any other specific measure would first require more understanding of likely market and technology trends.

#### 5.2.2. *Facilitating easy and equal access*

Easing spectrum access requires removing regulatory barriers (creating flexibility) which stifle innovation and market entry such as service and technology restrictions, and allow spectrum trading. Equal spectrum access requires an effective competitive environment and competitive distortion avoidance when existing usage rights are reassigned (refarmed).

Policy options considered are:

- No objective defined in first RSPP: this assumes that sufficient flexibility is already achieved at EU level.
- Identify objective to be followed by further analysis/study: some support this option but numerous technical and economic studies are already available and it is not clear what additional research would be needed. The real issue is Member States' political will to effectively implement market-based mechanisms.
- Identification of concrete measures from the outset: main measures considered are the development of common guidelines for authorisation conditions and procedures, to improve usage flexibility and avoid competitive distortion, and identification and allocation of additional spectrum under harmonised technical conditions for innovative applications under general authorisations. This would significantly benefit the economy and innovation.

#### 5.2.3. *Enhancing spectrum use efficiency*

Efficient spectrum use is a principle of the Framework Directive and the Radio Spectrum Decision. Three options range from no action to actions targeting specific applications (e.g. more efficient sharing to facilitate coordinated spectrum use for public protection and disaster recovery). The medium option calls for an inventory of current spectrum use and further analysis and studies to prepare regulatory initiatives for more spectrally efficient technologies.

#### 5.2.4. *Contributing to combating climate change*

EU 2020 aims at a sustainable growth and sustainable, resource-efficient and competitive economy. Spectrum based applications can contribute to these objectives mainly in two areas:

smart grids to cut energy consumption and intelligent traffic management systems to reduce carbon emissions.

A 'no action' option is incompatible with the high EU political priority of the topic. Undertaking further studies and analysis is limited to intelligent transport systems. The third option would be to move ahead with concrete measures, but such measures have not yet been clearly identified.

#### *5.2.5. Improving external relations*

Under the new regulatory framework, the Commission can propose to Parliament and Council common policy objectives for international spectrum policy coordination. Most immediate applications relate to ITU World Radio Conference 2012 where topics with direct impact on EU spectrum policies will be negotiated. The RSPP would be most appropriate to set objectives to defend EU policies at international level.

First option, or status quo, would create no benefits or risks. Second option would be to limit RSPP external relations aspects to electronic communications. This would address only part of the key elements of the international agenda. The third option which also goes beyond electronic communications would best cover all sectoral policies of EU interest.

#### *5.2.6. Assessing administrative burden*

Although RSPP benefits and costs vary significantly depending on initiatives and options, in all cases examined benefits would clearly outweigh additional administrative costs. This should be further evaluated once concrete measures are proposed.

## **6. COMPARISON OF OPTIONS**

### **6.1. Comparison of options at first level (RSPP strategic scope)**

The best option for the first RSPP scope is to extend under option 3 beyond electronic communications, as widely supported by external stakeholders.

### **6.2. Impact of options at second level**

#### *6.2.1. Contributing to European Digital Agenda*

For broadband access by terrestrial wireless services, option 3 best reflects Europe 2020 priorities and stakeholders' wish (measures outlined in 5.2.1).

For satellite broadband services, option 2 is recommended as, before concrete measures are taken, additional studies must assess the feasibility and cost for consumers of ensuring widespread access via satellite at a set speed.

#### *6.2.2. Facilitating easy and equal access*

Although the IA identifies binding coordination as best option (wide coordinated introduction of market-based approach ensuring harmonised flexible usage conditions), only voluntary coordination is supported by Member States. However, the Commission considers option 3 as



the only one feasible and will propose steps towards improved coordination without impeding national flexibility.

#### *6.2.3. Enhancing efficiency of spectrum use*

Option 2 (further studies) is preferred option as all proposed subjects must be further investigated before regulatory action. This will also allow consensus building among actors in particular the public sector.

#### *6.2.4. Contributing to combating climate change*

Option 1 for ‘intelligent transport systems’ is retained as the main spectrum allocation decisions have been taken recently. However, the Commission would continue its monitoring.

On energy efficiency, more analysis is needed before concrete proposals can be developed, and option 2 is chosen.

#### *6.2.5. Improving external relations*

Option 3 is recommended. As most international agreements apply over a long time-frame, European interests must be safeguarded and agendas ‘future-proofed’ to address spectrum requirements of important policies. Beyond electronic communications, relevant EU policies include sustainable development and climate change. The legislator seeks more EU coordination in international spectrum negotiations.

### **6.3. Conclusion on follow-up impact assessments**

As follow-up measures of significant impact must have separate impact assessments, the IA already lists follow-up measures for which an IA is obviously needed.

A communication is planned on collective spectrum use. Once more information is available, an IA will be drafted to accompany further measures on authorisations and collective spectrum use.

Technical harmonisation measures were not subject to IAs in the past. The RSPP might require such measures for specific types of spectrum use, which would be subject to an IA if their impact is sufficiently significant and if the decision making process (involving stakeholders, CEPT, RSPG and Radio Spectrum Committee) does not sufficiently justify the measure.

Where option 2 is chosen, the need for further IA will be examined based on Commission guidelines and on preparatory work and identification of the form of possible action.

## **7. MONITORING AND EVALUATION**

Given the RSPP general strategic nature, evaluation and monitoring should equally remain at general strategic level. Further concrete measures to be adopted following the RSPP will be evaluated individually in due course.

Monitoring specific EU policy indicators will benefit from more detailed evaluation in individual sectoral policy initiatives e.g. in energy efficiency, space policy or Digital Agenda.

In cooperation with RSPG, the Commission will also monitor whether technological and regulatory national and international developments influencespectrum demand and use.