



**Thematic Evaluation of the JRC's  
Activities in the Area of  
“Contribution to the Lisbon Agenda”**

(FP7 Interim Evaluation, 2007-2010)

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The members of the Panel jointly assumed the role of rapporteur by distributing this responsibility according to their background and involvement in the evaluation of Joint Research Centre (JRC) activities.

## **Disclaimer Note**

The contents of this Evaluation Report is the entire responsibility of the authors.

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## Executive summary

### *Goals*

The Panel has conducted a thematic evaluation of the JRC activities in the field of "Contribution to the Lisbon Agenda" as part of an overall EC FP7 interim evaluation of the JRC's direct actions. Several units of the Institute for Prospective and Technological Studies (IPTS) of the JRC in Seville and the Econometrics and Applied Statistics Unit (G09) of the IPSC-JRC in Ispra were evaluated.

The evaluation was conducted by analysing the extensive documentation provided by the JRC. In addition, a set of Panel meetings and interviews was organised with the Director and project officers in the Institutes related to the actions under evaluation and the JRC DG in Brussels. Furthermore, key representatives from DGs and cabinets from the European Commission involved in the Lisbon Agenda also gave their views about the JRC's contribution to the Lisbon Agenda and possible reorientation and improvements for the future. A number of questions specified in the terms of reference for the Panel guided the Panel in their thematic evaluation.

### *Summary of conclusions*

The general conclusion of this Thematic Evaluation is that the JRC units related to Lisbon (IPTS/Ispra), both within the FP7 context being evaluated and generally, are as important and relevant for the Europe 2020 strategy as it had been previously for the Lisbon Agenda, and they are of comparatively good to very good, often even excellent quality.

Their maintenance, preservation of integrity and cohesion, expansion and support is most strongly recommended in the interest of high-quality science-based European policy-making. A set of activities have obtained significant relevance and impact in EC policy design and should continue in the future.

The problem is therefore not with what IPTS/Ispra are producing currently, which they do in a cost effective manner. The problem rather lies in what they do not do. Particularly, the lack of *pro-active* and *prospective* science-based policy advice jeopardises the relevance of the IPTS for European Union (EU) policy-making. Redressing this requires a more balanced set of activities and resources covering social, technological and economic perspectives. This also requires a closer interaction with high-level policy makers on agenda setting. To realise this realignment, a more effective governance structure that is more reflective of the longer-term policy interests is a necessary condition.

The transition from the Lisbon Agenda to the Europe 2020 strategy constitutes both a challenge and an opportunity for the JRC. It represents an opportunity to get overall and long-term agreements with clients and to define future activities based on such agreements. For IPTS/Ispra specifically, the Europe 2020 strategy presents a unique chance to make a more pivotal contribution to the European project and also to reposition itself more centrally within the JRC, crucial as their thematic area is for the future of Europe and its citizens.

### *Recommendations*

The Panel distilled two sets of recommendations. The first set includes specific recommendations that follow more closely from the analysis of the evidence addressing the specific questions set out in the terms of reference for this exercise. In addition, the Panel, in order to increase the impact and relevance of the JRC units involved in this thematic evaluation, has extracted a set of overall recommendations. These are based on the analysis of the Europe 2020/Lisbon Actions evaluated in this exercise, the assessment of the interviews with clients and the new JRC 2010-2020 strategy.

### **Specific recommendations**

1. IPTS/Ispra should derive an overall strategy for the thematic field of "Contribution to the Lisbon Agenda", avoiding an ad-hoc supply or solely customer-driven approach. Some of the responses to demands from clients within the Commission obviously fit within the Europe 2020 Agenda. But some of these responses do not. IPTS/Ispra should not just react to specific ad-hoc customer demands but also anticipate customers' longer-term needs.
2. The direction of IPTS/Ispra should balance the type of results from its units between scientific outputs and policy impact with more emphasis on the latter.
3. Cross-cutting contributions from several units should be encouraged. Coordination between units within the IPTS, between the IPTS and G09 and across the JRC generally through multi-disciplinary and multi-policy teams should be encouraged and enforced.
4. IPTS activities should preserve a wider view about their mission and usefulness than the relatively narrow scope offered by FP7.
5. The planning of its human resources should be adapted to a more strategic and pro-active vision.

6. The IPTS should be ready to develop its competences and research infrastructure for tackling the social dimensions in the policy agenda.
7. Cost-effectiveness should be assessed against the role to be played by the IPTS and the work load. A continuous monitoring of the allocation of resources to added-value activities is necessary.
8. The IPTS should increase its links to and cooperative research with other international policy organisations.
9. The IPTS should further increase its participation in researcher mobility schemes in cooperation with academic entities from Member States.
10. A consistent strategy for participation and partnership in FP7 calls should be defined and made visible. The participation in FP7 calls cannot constitute an objective in itself: it should be an instrument to fulfil the IPTS/Ispra goals. IPTS/Ispra should look to promote further cooperation with other entities participating in those networking activities.
11. The IPTS should reformulate its strategy to be more involved in societal, education and cohesion policies only marginally covered today.

### **General recommendations**

1. The JRC should preserve and increase the techno-socio-economic analysis capabilities in relation to its thematic area, rather than curtailing them.
2. The JRC management should ensure a right balance between activities reacting to demands by clients and pro-active activities towards future needs.
3. The IPTS should increase the active presence in Community bodies' decision-making processes.
4. Cooperation between the relevant units in Seville and Ispra, such as through concrete joint projects and professional interactions, should be fundamentally increased through developing the proper incentives to do so.
5. The IPTS should commit more resources to the development of capacities for technological assessment and prospective analysis on relevant thematic areas.
6. The IPTS needs its own governance structure with an external advisory board and its own strategic plan.

## 1. Mandate

The Panel of independent experts was created by the JRC of the European Commission (EC) in the context of the interim evaluation of the European Commission Seventh Framework Programme (FP7) (2007 to 2013).

The Panel has conducted a thematic evaluation of the JRC activities in the field of "Contribution to the Lisbon Agenda", which in essence is the heading given to the group of those JRC activities not primarily concerned with the "natural sciences", as part of an overall EC FP7 interim evaluation of the JRC's direct actions. Several units of the Institute for Prospective and Technological Studies of the JRC in Seville and the Econometrics and Applied Statistics Unit (G09) of the IPSC-JRC in Ispra were evaluated. All the units involved will be labelled in the report under the heading of IPTS/Ispra.

The terms of reference received by the Panel stipulates:

The ex-post FP6 evaluation already pointed out that the policy-theme structure that FP7 uses for the JRC work programme is not appropriate for a thematic evaluation. Moreover, it strongly suggested that the JRC should make 'smaller, competence or sector-oriented external evaluations.' The JRC decided to follow this recommendation and introduced the term 'thematic evaluations' for these smaller evaluations, to indicate a distinction from 'programme evaluation.' Together with the other thematic evaluations this evaluation will be subject to a meta-evaluation that will allow the European Commission to assess the continued relevance of the framework programme's objectives, and to review initial outputs and the early effects of the programme.

Within this context, the Panel of experts has analysed the "Contribution to the Lisbon Agenda" activities of the JRC as part of one of the "thematic evaluations" of the meta-JRC evaluation. It provides an evaluation of the actions within the theme of "Contribution to the Lisbon Agenda", a general evaluation of the overall contribution and a set of conclusions and recommendations.

The evaluation theme comprises the JRC scientific Actions indicated in Table 1 and included in the terms of reference.

**Table 1. Actions evaluated under the theme "Contribution to the Lisbon Agenda"**

(situation mid-2010)

Action	Acronym	Title
11202	FINEPRO	Analytic Methods for Financial and Economic Protection
11301	SIPA	Statistical Indicators for Policy Assessment
11303	IRI	Industrial Research and Innovation

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11401	EIPPCB	European Integrated Pollution Prevention and Control Bureau
11402	SUSPROC	Sustainable Production and Consumption
12002	ERA-Policies	European Research Area (ERA) Policy Mixes, Joint Programming and Foresight Action
12004	ERA-Analysis	ERA Analysis
14001	ICTAS	Information and Communications Technology (ICT) applications for society
14002	ICTIN	Role of ICT industry in the evolving Knowledge Economy
14003	TEFIS	Techno-economic Foresight for the Information Society

### Associated action(s)

1310810	ETEA	Energy and Transport Economic Assessment
2200511	ENSURE	Assessment of European Waste and the Sustainable Use of Resources
2400511	ICPA-SEI	Integrated Climate Policy Assessment: Scenarios and Economic Impacts

The JRC work in this theme is largely concentrated in the Knowledge for Growth Unit (Head of Unit: Xabier Goenaga), the Information Society Unit (Head of Unit: David Broster), the Sustainable Production and Consumption Unit (Head of Unit: Luis Delgado) and in the Econometrics and Applied Statistics Unit (Head of Unit: Andrea Saltelli). The first three units are located at the IPTS in Seville and the fourth at the Institute for the Protection and Security of the Citizen (IPSC) in Ispra. (Note that *infra*, the report will refer by "IPTS/Ispra" to those units and actions as covered by the mandate. "Ispra" is generally used interchangeably with "Unit G09", while "IPTS" may refer either to the institute as such or to the respective units and actions only, according to context.)

In order to focus the evaluation on specific issues, the terms of reference for the Panel included the following set of questions:

### *Rationale/Relevance*

- i) To what extent are the objectives and the approach of the activities in this thematic area pertinent to the needs and problems of European policy makers?
- ii) To what extent is the policy support work based on relevant, sound and innovative science results?
- iii) To what extent do the JRC activities in this area provide added value towards the Lisbon Agenda?
- iv) How does this added value compare to the baseline options (i.e. no EU-policy/no change from FP6 to FP7)?

### *Implementation*



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- v) To what extent does the JRC have the competences required for achieving its objectives in this thematic area set in the context of the EC FP7?
- vi) Is the balance between the different activities in this area appropriate and is the level of funding adequate to achieve the objective set in the context of the EC FP7?
- vii) Are the facilities of the JRC appropriate for achieving its objectives in this thematic area set in the context of the EC FP7?
- viii) To what extent does the JRC run its activities in this thematic area in a cost-effective manner?
- ix) Are the arrangements for planning, monitoring, reporting and evaluation appropriate and effective? Are they transparent?
- x) To what extent does the JRC give a follow-up to the recommendations of the JRC FP6 Ex-post evaluation ("King Report")?

### *Achievements and performance level*

- xi) What are the indications in the early outcomes of the activities that the overall and specific objectives of the EC FP7 can be met?
- xii) Referring to the consideration of the Council Decisions ("whereas" clauses) to what extent do the JRC's FP7 direct actions in this area:
  - a) Provide customer driven support to European policy makers?
  - b) Engage in international cooperation activities for the purpose of implementing the JRC programme?
  - c) Promote the integration of New Member States'/Candidate Countries' organisations and researchers in its activities in particular on the implementation of the S&T components of the *acquis communautaire*?
- xiii) To what degree do the JRC activities in this thematic area support the creation of the European Research Area, e.g. through provision of access to JRC's facilities and contribution to the mobility and training of (young) researchers?
- xiv) To what degree did the JRC participate in networking activities under the indirect actions of FP7 and what is the level of the network partners?
- xv) From an expert point of view, how does the work in this thematic area compare to similar work done at top organisations in the relevant fields?

### *Forward looking*

xvi) What options should be explored for the future orientation of this thematic area of the JRC in view of the Europe 2020 strategy?

The Panel has interpreted these questions in a broader sense, looking for overall impact and synergies. Several of the questions are closely related and can be addressed jointly.

## 2. Working procedures

The evaluation was conducted through a set of Panel meetings and interviews with the Director and project officers in the IPTS and USPC Institutes related to the actions under evaluation and the JRC DG in Brussels. Furthermore, key representatives of some DGs and cabinets from the European Commission involved in the Lisbon Agenda also gave their views about the JRC's contribution to the Lisbon Agenda and possible ways of reorientation and improvement for the future.

The Panel also accessed and analysed the extensive documentation provided by the JRC officers coordinating the activity.

The following set of meetings took place:

1. Kick-off meeting in Brussels (25 May 2010), mainly devoted to interpret the terms of reference for the Panel and to establish the working procedures and calendar.
2. Presentation of JRC activities and strategy and a first series of interviews with cabinets of Commissioners and DGs relevant to the Lisbon Agenda (Brussels, 22 June 2010).
3. Interviews with involved units in IPSC (Ispra, Italy, 11 June 2010).
4. Interviews with involved units and the direction of the IPTS (Seville, Spain, 30 June, 1 July 2010).
5. Final Panel meeting in Brussels to refine and approve the Final Report (14 September 2010).

The Panel distributed the work between its members. Individual contributions were assembled and extensively discussed in order to extract a set of recommendations for the future.

Within the given time span and scope, it was not possible to make a thorough evaluation of each individual action. The evaluation exercise needed to be broad-based across different actions.

In addition, Panel efforts to evaluate the actions on the basis of the outputs generated in these actions took into account that the evaluation period (until April 2010) does not correspond to any specific visible milestone. On the contrary, in many cases, the Panel found many ongoing activities with expected results at the end of this year or in 2011. Furthermore with the new JRC 2010-2020 strategy being launched during the evaluation exercise, a forward-looking perspective, taking into account the implications of the new strategy for the actions, was unavoidable.

### **3. Structure of the report**

The main body of this report is divided in two parts:

- Answers to the evaluation questions provided by the European Commission and included in the terms of reference. This part (section 4) presents the views of the Panel on each question based on the documents analysed, presentations to and interviews with the Panel and discussions amongst the Panel members.
- Recommendations. This part is split into 2 subparts. It includes a number of specific recommendations that follow more closely from the analysis of the evidence for the specific questions set out in the terms of reference (section 5). In addition, the Panel considered it necessary to extract a set of general recommendations, which provide a more strategic evaluation of the present and future JRC activity in the evaluated area of the Lisbon Agenda. These recommendations are more ambitious (section 8). They are aimed at increasing the relevance and impact of the activities of the JRC and IPTS/Ispra in the long run.

Preceding these general recommendations are two sections which support the more forward-looking exercise of the recommendations. The first section (section 6) reports insights from our Brussels interviews on future perspectives for IPTS/Ispra. The second section (section 7) discusses the recently launched 2010-2020 JRC strategy and its implications for IPTS/Ispra.

Finally, some general conclusions of the evaluation exercise are presented.

A short executive summary at the beginning of the Report collects the relevant information for those readers interested in obtaining an overview of the main findings.

## 4. Evaluation of individual questions

### *Rationale/Relevance*

#### **1. To what extent are the objectives and the approach of the activities in this thematic area pertinent to the needs and problems of European policy makers?**

The involvement of the IPTS/Ispra units related to Lisbon Agenda issues provides a sound basis for decision-making in Community bodies. They have historically addressed a set of policy aspects directly linked to the implementation of knowledge policies and scientific assessment of policy options in the Lisbon Agenda.

The Panel also considered their contribution to the definition of current policy development in the context of the Europe 2020 strategy. The Europe 2020 strategy sets the priorities for the present Commission. It is aimed at turning the EU into a "smart, sustainable and inclusive economy delivering high levels of employment, productivity and social cohesion". Seven flagship initiatives are defined within the Europe 2020 strategy which together meet the overall objectives:

- Innovation Union
- Youth on the move
- A digital agenda for Europe
- Resource efficient Europe
- An industrial policy for the overall globalisation era
- An agenda for new skills and jobs
- European platform against poverty

IPTS/Ispra is set to be in line with these policy objectives. As stated by its Director, "the IPTS has evolved into a policy studies institute providing economic and policy research and analysis needed to support evidence-based EU policy making especially in the frame of the Lisbon/Europe 2020 Agenda".

IPTS actions contribute to all of these Europe 2020 flagship initiatives with a special emphasis on "Innovation Union", "A digital agenda for Europe" and "Resource efficient Europe".

There are several aspects related to Europe 2020 which are only thinly covered by IPTS/Ispra activities, although they are close to the IPTS/Ispra mission and capabilities. Examples are the areas of mobility, education, the social agenda and industrial policy. Closer involvement in these areas is needed for the future in order to increase the relevance of IPTS/Ispra in the Europe 2020 strategy. In the absence of a clear strategic plan for IPTS/Ispra, it seems that the activities deployed respond more to historical involvements, supply-driven desiderata and/or ad-hoc external demands (cf. *infra*).

As an example, some technical activities related to the definition of BREFs [BAT Reference Documents] for some industrial processes and their maintenance are relevant from the technical perspective to define regulatory processes but they are not necessarily linked to main policy issues on the Europe 2020 agenda. In this case, the IPTS has accumulated experience in the follow-up of some environmental directives with a clear interest for DG Environment. The unit behaves like a "technical support unit" for DG Environment. Although this nevertheless gives rise to a better insight in policy relevant issues in this matter, the Panel nevertheless believes that an internal strategic assessment for these types of action would be appropriate, aimed at improving the support to the broader Europe 2020 agenda.

## **2. To what extent is the policy support work based on relevant, sound and innovative science results?**

In its new 2010-2020 strategy, the JRC's vision is "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*". IPTS/Ispra is fully in line with this JRC vision.

Quality scientific research is rightly viewed as an important basis of the JRC's reputation and service delivery. However, delivering innovative science should not be seen as the main objective of the JRC. Rather, scientific research should serve to support and improve policy and should therefore be evaluated in its capacity to contribute to better policy support.

The IPTS units involved have produced a considerable set of documents (many of them of an academic nature, even doctoral theses or journal articles). Incentives for scientific output are provided internally, reflecting the increasing importance IPTS/Ispra attributes to this dimension. The unit KfG (Knowledge for Growth), for

instance, has a specific internal policy to increase the number and impact of its publications.

The visibility of outputs in public repositories or scientific journals will contribute to the diffusion of this output to the scientific world, as will participation in international scientific conferences by IPTS/Ispra researchers and the organisation of their own conferences. They also contribute to an increase in the recognition and reputation of individual researchers and of IPTS/Ispra and the JRC institutes more generally. This makes those places more attractive for junior and senior scientists as temporary work places and/or collaborative ventures.

The scientific approach to conducting the work is very diverse across the actions under evaluation. In some cases, it is a natural consequence of the skills and backgrounds of the people involved; in other cases, they correspond to the availability and exploitation of models or databases.

Some of the modelling activities performed in the IPTS are scientifically excellent, and they should be consistently exploited. For example, the scientific achievements of the Unit G09 upon which their policy support is based are generally of a very high quality, state-of-the-art, which is evidenced by close cooperation with science institutions, strong participation in scientific conferences and scholarly feedback in general. The presence of a science theory unit has also ensured an unusually high level of reflection and self-questioning.

The impact of IPTS/Ispra's scientific approach on policy, which is the most relevant measure for IPTS/Ispra output, is unfortunately more difficult to evaluate. This is reflected in a lack of indicators to monitor and evaluate this performance dimension, as compared to scientific publications, which are easier to measure. This introduces the risk that what can be more easily measured and monitored will be over-incentivised to the detriment of the more difficult-to-measure but more relevant policy-impact dimension. There is some evidence that the internal metrics used by the IPTS to measure success might be incentivising the wrong kinds of behaviours and outcomes. As one prominent expert testified to the Panel, "the IPTS should be a policy support organisation using science and not the other way around. They have an internal prize for best paper; but there is no internal prize for best policy support."

In all units visited, the Panel encountered a strong focus on science itself as an end rather than a means to policy support, which is encouraged by the JRC's incentive system and organisational culture. There seems to be reluctance to be dragged too much into policy, as mentioned in one of the meetings. The Panel feels that such a focus is, for the JRC's social science units, always in danger of leading to self-referentiality. While a continuous balance is to be maintained between the goals of scientific progress and policy relevance, given the choice, especially the more policy-focused IPTS must in the end usually err on the side of the latter.

The Panel would like to add that the science focus, to the extent that it is necessary for staff maintenance, credibility and seriousness of advice, should be evaluated according to contemporary modes of measuring science, not merely according to the fact of publication in scientific journals. Impact, as for instance measured through citations of the respective scientific publications, should be included in the metrics.

The Panel considers that the effort towards a relevant IPTS/Ispra participation in the preparation of specific Commission communications (COM series) or Commission service-support documents (SEC series) should be increased. From the information analysed by the Panel, they only appear in a couple of cases; this is less clear in other cases, where accidental or secondary mentions were noticed (i.e. footnotes referring to the support from the IPTS in other Commission policy documents). Closer collaboration of this type on flagship projects would require greater communication at a strategic level between the EC and the two research sites, along with more policy-relevant "out of the box" thinking from the IPTS itself. A stronger lead from the IPTS in policy-relevant areas that affect Europe 2020 could improve the overall policy-making environment by informing a better public debate in Europe and helping the EC lead intellectually regarding prospective policy issues.

### **3. To what extent do the JRC activities in this area provide added value towards the Lisbon Agenda?**

While the Lisbon Agenda has been a moving target and has changed shape considerably between 2000 and 2010, its minimum goal was the improvement of the EU's competitiveness in order to preserve and even expand the European social model in the short, mid and long run. Support for policies of this sort is crucially based on the kind of research the IPTS/Ispra units can provide.

A comparison of outputs in terms of publications shows that the total JRC publications remained quite stable, from 737 in 2008 to 726 in 2009, while those related to the Lisbon Agenda grew from 45 to 76.

The assessment of the value added to the core Lisbon policies of the EC executed by IPTS/Ispra needs to go beyond scientific output, however, and must include policy impact.

This policy impact cannot be evaluated from an overall perspective by analysing individual Actions. The Actions linked to the Lisbon Agenda are too separated (and isolated) to contribute even individually. Conducting some key activities of the IPTS from an independent (and technology-ideologically neutral) and cross-disciplinary, cross-policy perspective is a must.

IPTS/Ispra's impact on the Lisbon Agenda could have been greatly improved if it had been organised in cross-cutting teams and with stronger cross-DG coordination among its policy customers for Lisbon policy actions. This approach would reduce internal fragmentation, while taking advantage of the expertise of different units.

In key policy areas related to the Lisbon Agenda and Europe 2020, IPTS/Ispra is underrepresented. Examples include innovation indicators (where work at the IPTS is only beginning); internal-market analysis (despite clear community competence in this area); and the policy framework for future technologies, such as nanotech and biotech (which seem to be seen by the JRC largely as public-health issues and not as strategic areas where good framework conditions could help establish European leadership in research and development). In some cases (e.g. biotech) existing capacities with high-quality output at the IPTS do not seem to be further developed.

**4. How does this added value compare to the baseline options (i.e. no EU policy/no change from FP6 to FP7)?**

A deeper interest in the construction of ERA through closer partnerships with Member States has not been fully addressed by the JRC. Member States remain on the margin of the IPTS/Ispra agenda. Redressing this should imply the redefinition of partners for future research activities.

*Implementation*

**5. To what extent does the JRC have the competences required for achieving its objectives in this thematic area set in the context of the EC FP7?**

The personnel of the evaluated IPTS units have the competences to carry out those activities currently conducted. However, there are other objectives included in the thematic area of the Lisbon Agenda and Europe 2020 which are out of today's activity set. Some of these would require competences not found today in IPTS/Ispra.

The Panel did not find a comprehensive policy on human resources and long-term planning to address future needs from a strategic and anticipatory policy perspective. Examples include the lack of IPTS capacities to drive a European social policy or to propose policy options to deal with aging-related problems from the use of new technologies.

The potential competence problem comes from the intertwining between needs/demands and capacities. The Panel could not evaluate the activities which were rejected by the IPTS after being demanded by clients due to the lack of



experienced human resources to address them or because the reduced resources allocated to the activity could not allow it.

Having the right set of skills is of tantamount importance for an institution that has the mission to deliver science-based policy support underpinned by internationally recognised research. A continued challenge especially for the IPTS in its human resource management is therefore to have the right set of skills, most notably a good combination of

- economic, technical and social skills,
- scientific and policy support profiles,
- junior and senior levels,
- permanent and visiting staff.

As the "King Report" already highlighted, IPTS/Ispra and the JRC in general, confined to EC Human Resource Management practices, remains critically restricted in its recruitment procedures to attract the right mix of skills.

The ratio of temporary over permanent staff is higher at IPTS/Ispra than in other JRC units, due to its more recent growth, which has occurred mostly through temporary recruitment. If not met by an increase in permanent staff, this may become a bottleneck.

Finally, too much mobility of senior scientific personnel does not contribute to retaining key competences and to ensuring the IPTS as a reference point for future activities. The Panel wonders if a controlled intra-IPTS mobility policy for senior people could be used instead.

**6. Is the balance between the different activities in this area appropriate and is the level of funding adequate to achieve the objective set in the context of the EC FP7?**

The IPTS/Ispra total budgets are composed of dedicated institutional FP funding, FP funds through competitive bids, administrative arrangements with other DGs and third-party work.

Especially the IPTS – the issue seems much less pronounced in Ispra – is suffering two-fold funding stress. First, the use of "free" IPTS resources (coming from the institutional budget) is essential to cover its mission of anticipating policy problems when clients have not (yet) complained. In view of the strategic importance for the

IPTS of this part of the budget, this share should remain on a sufficient level to ensure the participation of the IPTS in pro-active policy work, such as technological foresight and exploratory policy analysis.

Second, the Panel noticed a pressure to obtain additional funds in order to be able to reduce its staff shortage and recruit extra temporary personnel (paid through competitive or demanded Research and Development (R&D) projects). This occurs through participation in indirect FP actions as well as through administrative arrangements with other DGs. This in turn further influences the balance between pro-active and re-active activities to the detriment of the former. The share of IPTS staff paid through competitive credits has increased from 21% in 2007 to 34% in 2010.

Although for the Unit G09, there is also a bottleneck in staff size, and the successive doubling of the permanent staff (and of the budget) would certainly yield further capacity, there are no economies of scale, i.e. the current unit's size is appropriate for what it does, and it does so efficiently and effectively.

#### **7. Are the facilities of the JRC appropriate for achieving its objectives in this thematic area set in the context of the EC FP7?**

The type of activities carried out by the JRC in the context of the Lisbon Agenda and further does not require the use of sophisticated equipment (apart from computing facilities). The use of specialised data bases (or even the support given to them, as the ERAWATCH case shows) is not different from the facilities used by socioeconomic researchers in Europe.

Due to the recent emphasis put on quantitative economics, the available "research tools" are: market modelling, econometrics, input/output accounting, scenario analysis, uncertainty/sensitivity analysis and cost-benefit analysis. Specific tools include:

*Scoreboard of Industrial Research Investment:* Annually analyses the performance of the world's top corporate investors in R&D.

*PREDICT:* Annually maps and analyses investment in R&D by Europe's ICT industry, benchmarking it against the US.

*ERAWATCH:* A web-based service to provide regularly updated policy-relevant information on the research systems of Member States, Associated States, and competitor countries.

Addressing some of the societal issues from the policy agenda requires the use of transnational social surveys. This is currently missing in the research infrastructure. If these policy issues are addressed in the future, these tools will need to be developed, perhaps most efficiently through subcontracting.

The management of office space should be addressed more seriously in the future from an efficiency perspective, especially when significant expansion is considered.

#### **8. To what extent does the JRC run its activities in this thematic area in a cost-effective manner?**

The IPTS currently employs about 250 staff members, of which almost 60% are on temporary contracts. The high ratio of temporary to permanent is partly a reflection of the recent growth of the IPTS.

The current distribution of resources in the different core activities is as follows:

Conducting policy studies ~45%

Providing policy intelligence platforms ~15%

Managing the techno-economic bureau ~15%

Building a Reference Centre for Economic Modelling ~25%

The size of IPTS units involved in Lisbon Agenda-related projects is well balanced with respect to its *current* set of activities. To accommodate future projects, a more flexible allocation of resources to activities is needed.

The current resource breakdown is adequate if the emphasis is placed on having the IPTS as a "policy Institute" with a solid basis in economic modelling. The danger is to lose the societal or the techno-social approach which complements economic analysis for policy design. Another danger in the current allocation *within* the different core activities is the allocation of resources to scientific versus policy support work and within the latter to pro-active versus re-active policy support work.

The effectiveness of the current resources is an issue which is difficult for the Panel to evaluate with the evidence it has. Data for comparisons with similar entities are not available to the Panel. Comparing the reported outputs with the inputs available suggests a high level of efficiency. In the available information, no relevant delays were reported.

As an example and according to its own calculations, averaged roughly over the period being evaluated (actually 2008-2010), the Unit G09 spent € 13,700 per institutional staff, which is significantly less than the IPSC's figure of € 17,000 (20% below average). As regards rough monetary input and science-based policy-advice output, the respective activities of the Unit G09 therefore seem to be carried out very cost-effectively indeed.

**9. Are the arrangements for planning, monitoring, reporting and evaluation appropriate and effective? Are they transparent?**

Monitoring and reporting follow the typical formal procedures for all the Commission's units.

From the planning perspective, the direction of the JRC and all its institutes have devoted a substantial effort in providing strategic plans. All IPTS units have regularly adapted their structure and work programme with successive FP programmes and policy programmes, the latest change being the Europe 2020 strategy and its Flagship Initiatives (cf. *infra*). Nevertheless, the basic elements of the work programme only change incrementally. This is related to budget allocations which also change only gradually. The changes in strategic planning are too re-active to current policy specifications, lacking a coherent pro-active perspective on future policy needs.

Since the JRC as well as the member organisations and themes are missing both a strategy unit that plans its actions in an appropriate manner and a governing supervisory body that monitors and indeed ensures the implementation of the strategy, there is a serious need for institutional reform on that level that would positively affect the work of the units.

With respect to the evaluation process, the answer depends on the type of evaluation. Formally speaking, IPTS units have been evaluated in terms of the activities carried out in all the Actions. A more strategic evaluation is less obvious.

**10. To what extent does the JRC give a follow-up to the recommendations of the JRC FP6 Ex-post evaluation ("King Report")?**

The call for *thematic views* expressed in the "King Report" were taken on board, particularly in the recently released 2010-2020 JRC strategy.

In terms of *strategic positioning*, the following recommendations from the "King Report" applied to the IPTS would require further action, as already discussed *supra* in this report (in questions 1 & 3).

On the need for a more pro-active stance:

In the Panel's view the European Commission would benefit from receiving pro-active unbiased scientific advice from the JRC, identifying future problems, opportunities and needs of our societies, picking up signals from the scientific community and using horizon scanning procedures based on the current state of knowledge from science, technology and the social sciences.

On the need for more strategy-development:

The Panel recommends that the JRC and its Institutes should establish a rolling five-year strategy, formulate a vision with clear goals, analyse its assets making a proper representation of policy support areas and competencies, and adopt criteria for accepting or not accepting tasks and apply them rigorously.

In relation to *human resources*, the Panel considers, in line with the "King Report", that career management for the JRC-IPTS cannot be exactly the same as in the rest of the EC (see also questions 5 & 6):

The Panel recommends that the Commission should grant improvements allowing the JRC to adapt hiring procedures and career management schemes in keeping with the skills required.

As an example, the specialised skills necessary for fulfilling some activities cannot be efficiently covered by "rotating officers" in the usual EC policy.

The *coordination of activities* as expressed in the "King Report" is still an issue.

Further integration of the thematic and methodological competencies of the JRC is possible. The principal role of the vertical, "hierarchical" structures is to maintain these competencies. However, much of the actual work should occur in horizontal actions and programmes put together in a flexible way, backed by adequate financial resources according to the needs of the customers and research questions. The Panel recommends that the JRC should continue building up efficient mechanisms for the coordination of the activities within the organisation.

The IPTS has recently started in-house multidisciplinary teams, mixing techno-, socio- and economic skills on issues like green buildings, e-health, strategic energy or active aging. These initiatives are still in their infancy. The Panel recommends that these initiatives be pro-actively developed and supported as future work models.

The Panel considers a better synergy between JRC units to be of great importance. Here, the structure and allocation of work is mainly "institute-driven" and not "theme-driven". A consistent coordination effort from this second approach should be pursued in the future.

*Achievements and performance level*

**11. What are the indications in the early outcomes of the activities that the overall and specific objectives of the EC FP7 can be met?**

Overall, the Panel is convinced of the good, and sometimes excellent, quality of the science and policy support delivered so far, and all activities seem to be on track to meet their stated objectives.

**12. Referring to the consideration of the Council Decisions ("whereas" clauses), to what extent do the JRC's FP7 direct actions in this area:**

**a) Provide customer-driven support to European policy makers?**

Customer-driven support depends on the unit. In some of them, like the KfG, IS or G09 units, this connection is clear. In other cases, like the activities on Integrated Pollution Prevention (IPPC), it is important but less evident.

**b) Engage in international cooperation activities for the purpose of implementing the JRC programme?**

There is a consistent effort to participate in international activities. Often, this is to present results. Also the organisation of their own international conferences mixing a scientific and policy profile (like CONCORD) is a relatively new initiative, to be recommended for establishing contacts and visibility in the relevant networks.

Outside European Policy circles, the IPTS is not a major player, but in view of its mission, perhaps it does not need to be. Nevertheless, even for the international dimension of European Policy issues, links to extra-EU relevant networks are important. Particularly contacts with other international policy support organisations such as OECD, UN or WTO are important and as yet underdeveloped, particularly at the institutional level.

**c) Promote the integration of New Member States'/Candidate Countries' organisations and researchers in its activities in particular on the implementation of the S&T components of the *acquis communautaire*?**

At the IPTS, especially the Unit IS had a pronounced role in incorporating NMS/CC ICT research, especially socio-economic and foresight, into the European mainstream, including work with CEE junior and senior people. This covered the

period before 2007, i.e. in the context of and up to the last enlargement round. This was before the period currently under review.

The Unit G09 organised several dissemination and training workshops – and participated in ones organised centrally by the JRC – specifically designed for the NMS, but NMS/CC promotion cannot be said to have been a focus of the unit's work (although especially in this area, even some synergy effects could have been envisioned).

Altogether, the promotion of the integration of NMS/CC organisations and researchers in its activities could very easily be strongly increased.

**13. To what degree do the JRC activities in this thematic area support the creation of the European Research Area, e.g. through provision of access to the JRC's facilities and contribution to the mobility and training of (young) researchers?**

There are several IPTS units receiving PhD students for limited periods of time; however, its interaction with doctoral programmes at European universities on a structural basis could be further increased.

The Unit G09's work with and inclusion of PhD students and the cooperation with universities such as Bocconi and KU Leuven as regards PhD theses appears successful. The unit's contribution to this aspect of ERA is certainly strong compared to other IPTS units.

A large multitude of instruments could be considered to support this mobility and training goal, such as the PEOPLE programme of FP7.

But rather than directly participating in ERA, the biggest contribution of the IPTS comes from its science-based policy work for ERA. In this respect, particularly contributions to indicators for measuring the progress and impact of ERA are underdeveloped, while there is a high policy need for them.

**14. To what degree did the JRC participate in networking activities under the indirect actions of FP7, and what is the level of the network partners?**

Networking should be a very relevant activity in the IPTS in order to improve its capacities to fulfil its mission. The way to do that could vary from the participation in FP7 indirect actions to other types of working groups in relevant international organisations.

Networking in FP7 through networks of excellence, ERA-Nets or project consortia exists, although not to a high degree. The frequency and impact of IPTS participation in these FP7 networks is difficult to assess with the available information.

The approved FP7 activities are clearly related to IPTS objectives, and the partners are relevant European entities. Nevertheless, the Panel does not have a clear idea about the participation strategy of the IPTS units in FP7 calls. This fact is related to the lack of an overall strategy. The IPTS leadership in the approved activities (projects or networks) is also very low in driving the interest of all partners to the IPTS interests.

The Unit G09 consciously refrains from participating in FP7 bids, which are regarded as inefficient and ineffective due to the programme's design and implementation compared to other options, so participation has been quite marginal. This seems to call for a thorough investigation of the obstacles in order to gather feedback for the further development of the framework programmes.

**15. From an expert point of view, how does the work in this thematic area compare to similar work done at top organisations in the relevant fields?**

The answer to this question depends on whether one judges "top organisations" by policy advice, scientific standing or a combination of the two, but as regards the combination – which would be what a JRC unit should look like – there are not many organisations with which one could compare them, reflecting the unique position the JRC and the IPTS have with respect to providing science-based policy support to EU policy makers. While for instance the OECD has a stronger policy-support reputation internationally, it is less EU-specialised.

Looking at the different work projects, relevance and scope of the actions, the work is good to very good and on occasion excellent. The final impact of its policy advice is on occasion restricted because it is not used in a better way by the Commission.

*Forward looking*

**16. What options should be explored for the future orientation of this thematic area of the JRC in view of the Europe 2020 strategy?**

As a general position, the Panel considers it necessary to increase the analysis of policy issues from the triple perspective: technical, economic and social. This forward-looking evaluation perspective will be further developed in the sections 6-8 of this report.



## 5. Question-based recommendations

Before presenting our general, more forward-looking recommendations, this section will report specific recommendations which follow from the questions addressed in section 4.

1. IPTS/Ispra should derive an overall strategy for the thematic field of "Contribution to the Lisbon Agenda", avoiding an ad-hoc supply or solely customer-driven approach. Some of the responses to demands from clients within the Commission obviously fit within the Europe 2020 Agenda. But some of these responses do not. IPTS/Ispra should not just react to specific customer demands, but also anticipate customers' longer-term needs.
2. The direction of IPTS/Ispra should balance the type of results from its units between scientific outputs and policy impact with more emphasis on the latter.
3. Cross-cutting contributions from several units should be encouraged. Coordination between units within the IPTS, between the IPTS and G09 and across the JRC generally through multi-disciplinary and multi-policy teams should be encouraged and enforced.
4. IPTS activities should preserve a wider view to their mission and usefulness than the relatively narrow scope offered by FP7.
5. The planning of its human resources should be adapted to a more strategic and pro-active vision.
6. The IPTS should be ready to develop its competences and research infrastructure for tackling the social dimensions in the policy agenda.
7. Cost-effectiveness should be assessed against the role to be played by the IPTS and the work load. A continuous monitoring of the allocation of resources to added-value activities is necessary.
8. The IPTS should increase its links and cooperative research to other international policy organisations.
9. The IPTS should further increase its participation in researcher mobility schemes in cooperation with academic entities from Member States.
10. A consistent strategy for participation and partnership in FP7 calls should be defined and made visible. The participation in FP7 calls cannot constitute an

objective in itself: it should be an instrument to fulfil the IPTS/Ispra goals. IPTS/Ispra should look to promote further cooperation with other entities participating in those networking activities.

11. The IPTS should reformulate its strategy to be more involved in societal, education and cohesion policies only marginally covered today.

## **6. The EU policy-making perspective on IPTS/Ispra**

The Panel conducted a set of interviews with key representatives from DGs and cabinets from the European Commission involved in the Lisbon Agenda. The interviews provided very valuable perspectives on the JRC's contribution to the Lisbon Agenda, particularly on possible reorientation and improvements for the future.

Interviewees generally evaluate the quality of IPTS/Ispra output positively. "They are helpful, quick to respond and cost effective, providing a highly reliable and speedy source of first-rate data on key questions, particularly economic modelling," noted one senior official within the European Commission. But – despite a clear consensus that the quality of the work they received from IPTS/Ispra in support of the Lisbon Agenda and Europe 2020 was first-rate – others felt IPTS/Ispra was not doing enough in all of the areas where the European institutions could use their help, particularly in anticipating future policy-making needs and creating an evidence base to help the Commission build cross-departmental and broader social consensus in key policy areas.

There may well be institutional reasons for this, namely an observable breakdown in communications at anything other than a working level between the European Commission and IPTS/Ispra. One top expert described the IPTS as "a black box", reflecting at best a lack of clear communication between key IPTS units and important European Commission DGs and cabinets. Another added, "it is hard to have a strategic discussion with them", echoing a general concern that the JRC/IPTS was good at responding to immediate requests, but fell short on long-term strategic thinking. Another expert concluded: "The areas where they are weak are the areas where they are most needed: impact, importance, relevance." Others stressed that the IPTS had not produced enough policy-relevant research on prospective technologies – part of its core mission – and still leaned too heavily on answering short-term Commission requests. "They need to differentiate themselves more from normal consulting work", the expert added.

In general, the Panel's interviews revealed a high level of respect and appreciation of the IPTS's/Ispra's scientific work. However, there is a clear desire to see IPTS/Ispra

cover areas where it provides little coverage at present – particularly in helping the European Commission better anticipate and be prepared for upcoming policy challenges. Somewhat surprisingly, the interviews also revealed a lack of strategic dialogue and sometimes even a shared sense of mission between policy makers and the JRC. As in any situation where dialogue and communication have become poor, one can blame either party or both of them for this. But the fact remains that many European Commission DGs would like to see IPTS/Ispra keep up the high scientific standards it has already established, but use its mandate to think more strategically about tomorrow's challenges – and help policy makers form timely, strategic responses to them.

## **7. IPTS/Ispra within the 2010-2020 JRC strategy**

During the course of the IPTS/Ispra evaluation exercise, the new 2010-2020 JRC strategy was launched. As this will have implications for the future developments of the institutes evaluated, it is unavoidable to precede our final more general and forward-looking recommendations with a short discussion on the new strategy and the role of IPTS/Ispra in it.

### *Mission*

The new vision of the JRC is 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."

This implies a number of strategic developments to allow the JRC to position itself to deliver policy support and policy options:

- Competences in economic and socio-economic research will be expanded and integrated with natural science and engineering-based approaches.
- Complex and long-term challenges will be addressed by multi-disciplinary research teams integrated across the JRC via thematic areas.
- Economic and policy analysis and related impact assessments will receive increased emphasis.
- The well-established customer-driven approach will be complemented by a strong forward-looking, horizon-scanning capacity.

The JRC's research programme will thus provide more integrated, cross-policy support on complex issues.

This new mission clearly postulates a more pro-active, multi-disciplinary, forward-looking, horizon-scanning, customer-driven approach.

When translated to IPTS/Ispra, the new mission is fully in line with this Panel's comments raised *supra*. Generally speaking, the new strategy seems to be appropriate and valid, especially in that it re-emphasises the future-oriented mission of the non-natural science units of the JRC, which is recommended in the "King Report" and also evaluated as the necessary "unique selling point" of IPTS/Ispra by the Panel and by the large majority of the Commission stakeholders interviewed by the Panel.

### *Activities*

In line with the Europe 2020 and the European Research Area (ERA) strategy, the JRC will concentrate on *seven thematic areas* in which the JRC will strive to be pivotal in the policy process:

1. Move towards an open and competitive economy
2. Development of a low carbon society
3. Sustainable management of natural resources
4. Safety of food and consumer products
5. Nuclear safety and security
6. Security and crisis management
7. Reference materials and measurements

A mapping of these thematic areas into Europe 2020 Flagship Initiatives (cf. *supra*) reveals the pivotal role of Thematic Area 1 (TA1) and also Thematic Area 2 (TA2).

The IPTS is the pivotal Institute in the JRC for TA1 and also plays an important role in TA2, as well as contributing to TA7. Overall, it strongly reinforces its position in the new JRC strategy.

### *Implementation*

#### **Management**

In developing these thematic areas, the JRC will follow a programme-oriented approach, with a management structure that fosters over-arching objective-setting.

Each thematic area will have a Lead Director and a TA Steering Committee (TASC) comprised of other Directors involved in the TA plus a Programme Manager and a representative of the Director of Programmes. Institute Directors execute the work programme, ensure quality and manage the staff.

This new structure should ensure more cross-disciplinary and cross-policy area coordination, which is needed to address the Flagship topics which are inherently cross-cutting. This high-level coordination should trickle through to establish real coordination on the floor. In addition, the policy-demand side should also be coordinated across policy areas and DGs to be effective. The JRC will probably have to play a more pro-active role here in developing and supporting this cross-DG coordination.

### **Resources**

The JRC will prioritise its resources to achieve its strategic objectives across the thematic areas as a service to its customers.

TA1, which is pivotal for Europe 2020 and its Flagships, and the IPTS is the pivotal unit, is projected to receive a mere 8.7% of the total JRC staff by 2015 (compared to 6.2% in 2010). TA2 increases from 12.8% to 16.5%. TA7 remains stable at around 5%.

The increased demands for science-based policy support work from IPTS/Ispra seems not matched with a corresponding increase in resources. In order to meet the new demands, this will require an increase in efficiency of the resources. Given the already high level of efficiency of the current allocation in IPTS/Ispra, this can only be done by prioritising activities inside TA1 by IPTS/Ispra. This prioritising will need to come from a strategic exercise (cf. *supra* and *infra*). In addition, it will be of tantamount importance that the staff that is to be allocated is of the highest of standards. This puts even more demand on a human resource management that needs to be allowed to deviate from the typical EC HRM.

The JRC will also engage in new and emerging areas of research driven by scientific and technological advances, the emergence of societal issues or new policy developments whose selection will be based on horizon-scanning activities carried out in close collaboration with customers.

To this end, 4% of the total resources will be gradually re-allocated to new and/or emerging areas. This low allocation of resources seriously tampers with the ambition to be a genuine forward-looking mission of the JRC.

### **Governance, Infrastructure, quality management, knowledge management**

The JRC's new strategy document is not very elaborate on governance, management and infrastructure, which are, however, important for the implementation of the strategy. It does for instance not mention any plans to tackle infrastructure issues like the IPTS-Ispra coordination, nor the IPTS-Brussels coordination.

The new strategy does not suggest any advances in monitoring and evaluation, beyond current structures and practices for this. These are very much business-as-usual with internal customer surveys and external reviews as part of the mid-term and ex-post evaluations mandated by the FP and Financial Regulations. It only mentions, on top of this usual process, an external Panel of experts to review the achievement of objectives of the strategy in the period 2017-2018. There is also a lack of discussion regarding the governance of the JRC. Regarding both IPTS/Ispra specifically and the JRC generally, the Panel will outline some suggestions for those crucial issues *infra*.

## 8. Overall recommendations

In order to increase the impact and relevance of the JRC units involved in this thematic evaluation, the Panel has extracted a set of overall recommendations. These are based on the analysis of the Europe 2020/Lisbon Actions evaluated in this exercise, the assessment of the interviews with clients, and the new JRC 2010-2020 strategy. It repeats and re-emphasises some of the recommendations from part 5 *supra* that are of particular overall and longer-term importance.

### 1. Technology, economy and society

The Lisbon agenda and the Europe 2020 Flagship Initiatives imply a multi-policy and multi-disciplinary approach to be effective. As a consequence, JRC units involved in this thematic evaluation should preserve the techno-economic and social perspective to increase its impact. In fact, the "unique selling proposition" of the IPTS is in its name, i.e. prospective technology studies, with an emphasis on techno-economic and social analysis, as scientifically based policy advice. This is of crucial importance for the EU and its development, both within the context of the Europe 2020 strategy and generally, especially as no other institution within the EU can and does provide this kind of key service.

From the analysis carried out based on documents and interviews, the Panel observed a recent refocusing on economic analysis, or even more quite specifically economic modelling, leading to a weakening of the technology part, a de-emphasising of the social dimension and a bias against past capabilities to conduct a

more comprehensive policy prospective analysis, taking into account a fully dynamic perspective.

This bias is reflected in the profile of key scientific personnel and the type of activities presented during the Evaluation, and also in the new label "Towards an open and competitive economy". This is a trajectory, both in thematic and staff development, that the Panel considers should be rebalanced if the IPTS is to fully and adequately address the policy priorities in its thematic area.

**Recommendation No. 1:** The JRC should preserve and increase the techno-socio-economic analysis capabilities in relation to its thematic area, rather than curtailing them.

## 2. Prospective and pro-active work

The Panel noticed a clear interest in some "policy DGs" to use the knowledge available in the IPTS and Ispra institutes in order to cover their specific needs. This "client orientation" approach contributes to financing activities and providing a clear focus of the actions.

Nevertheless, reactivity to demands from clients should be well balanced with pro-activity. JRC management should ensure the availability of enough resources to anticipate future policy needs even when no specific demands for them exist at the moment. As a rule of thumb, at least one-third of the total resources should be allocated to these exploratory activities.

**Recommendation No. 2:** JRC management should ensure the right balance between activities reacting to demands by clients and pro-active activities towards future needs.

## 3. Coordination with Brussels

Many of the concurrent activities performed in IPTS/Ispra are relevant during the decision-making processes as an evidence base or because they provide sound analysis for policy options. To be effective, this information should arrive on time and with the flexibility to adapt to changing contexts.

The prospective and pro-active work of IPTS/Ispra, while necessarily independent from day-to-day Commission administration and EU politics, also needs close interaction with policy makers in Brussels (i.e. to be able to anticipate what might be policy relevant in a year or a decade). Both sides need to have the right incentives to interact.

Both for the re-active and the pro-active activities, the very distant locations of the IPTS and Ispra are disadvantageous. In order to compensate for it, IPTS/Ispra should increase its active and continuous presence in Community bodies' decision-making processes and this already in the early preparatory phases of the policy cycle.

The exact format in which this can be realised is left open by the Panel. Nevertheless, the Panel emphasises that in any case, these contacts need to be stepped up to a high effective level and not merely be an additional bureaucratic layer.

**Recommendation No. 3:** IPTS/Ispra should increase the active presence in Community bodies' decision-making processes

#### 4. Coordination between Seville and Ispra

- a) While both in Seville and Ispra, one can hear a lot about the differences in theoretical foundations, science and policy foci, organisational culture, etc., between both entities, the fact remains that the units in both places within the TA offer strong synergies, especially because the excellent theoretical research regarding modelling done in Ispra complements Seville very well, especially as this is the new focus of IPTS activities (which, as is stated *supra*, should be rebalanced, but which should and will not be abandoned). There seems to be a virtual lack of communication between the units in the two places, which should be mitigated by more frequent interactions of researchers (through shorter and longer visits, the use of e-tools such as those now being developed at the IPTS, etc.).
- b) This, however, does not mean that the physical moving-together of the two units, which in effect would mean moving the Unit G09 to Seville, has to or even should take place. The organisational and science culture of both places is so solid, and the specificity and local embeddedness of the team in Ispra so strong, that such a physical move would put a highly important and productive unit at risk of destruction due to the assumption of efficiency gains which very easily might not materialise.
- c) For creating synergies between the units at the two places, the creation of Thematic Actions that unites them, as has been done and is even more emphasised in the development plans of the JRC, may seem like an obvious solution. However, this also entails the creation of a new level of bureaucracy that could in the end be detrimental to the quality of the work of all units and the JRC generally. Much more important is the creation of genuine incentive



structures for cooperation through projects involving senior researchers from both locations.

**Recommendation No. 4:** Cooperation between the relevant units in Seville and Ispra, such as through concrete joint projects and professional interactions, should be fundamentally increased through developing the proper incentives to do so.

## 5. Areas of competence and engagement

The present IPTS technological capabilities are centred on ICT, environmental and materials (partially) technical areas. Other scientific and technical areas relevant for policy design are not covered but should be.

Perhaps partially for reasons of a science focus mentioned *supra*, the IPTS work programme as evaluated does not address the assessment of policy impacts from key future technologies such as nano- and biotech, although there is a very good track record of related projects carried out about a decade ago. In fact, even the nanotech units at Ispra are more concerned with technology assessment and development of materials than with nanotech policy, which is a crucial task of the JRC.

In order to facilitate the support given to future policies in some scientific and technological areas relevant for Europe's future development (i.e. on biotechnology, nanotechnology, convergent technologies), the IPTS should have, and that currently means develop, research groups with experience in them. These activities could have a pro-active approach until they attract the interest of clients.

**Recommendation No. 5:** The IPTS should commit more resources to the development of capacities for technological assessment and prospective analysis on relevant thematic areas.

## 6. Governance, strategy and implementation

One of the main problems of the units in Seville and Ispra observed by the evaluation team relates to the organisational structure of the JRC generally and the area under review specifically.

The JRC is missing a governing supervisory body that adequately reflects the funding and customer structure of the JRC. Compared to the current Board composition, the European Commission should be adequately represented at a high strategic level.

The JRC is also missing a strategy unit that plans its actions in an appropriate manner that monitors and indeed ensures the implementation of the strategy (the existing units that could potentially achieve this task in fact do not appear to do so), so there is a serious need for institutional reform on that level.

To the extent that the JRC's units are heterogeneous, as is the case of the IPTS, there should also be a decentralisation of decision-making power to the individual institutes and/or thematic areas, with their own governance structure, including their own external advisory board, advising them on strategy development and evaluation, beyond the mandated exercises.

**Recommendation No. 6:** The IPTS needs its own governance structure with an external advisory board and its own strategic plan.

## 9. Conclusion

The general conclusion of this Thematic Evaluation is that the JRC units related to Lisbon (IPTS/Ispra), both within the FP7 context being evaluated and generally, are as important and relevant for the Europe 2020 strategy as it previously was for the Lisbon Agenda, and they are of comparatively good to very good, often even excellent quality.

Their maintenance, preservation of integrity and cohesion, expansion and support is most strongly recommended in the interest of high-quality science-based European policy-making. A set of activities has obtained significant relevance and impact in EC policy design and it should continue in the future.

The problem does therefore not lie in what they are producing currently, which they do in a cost-effective manner. The shortcoming is rather in what they do not do. The lack of pro-active and prospective science-based policy advice jeopardises the relevance of the IPTS for EU policy-making. This would require a more balanced set of activities and resources covering social, technological and economic perspectives. This would require a closer interaction with high-level policy makers on agenda setting. To realise this realignment, a more effective governance structure, more reflective of the longer-term stakeholders' interests, is a necessary condition.

The transition from Lisbon Agenda to the Europe 2020 strategy constitutes both a challenge and an opportunity. The JRC and more specifically the units involved in this evaluation, as well as the European Commission, should seriously consider the role they would like to play. From the Panel perspective, this is also an opportunity to get overall and long-term agreements with clients and define future activities based on that.

For IPTS/Ispra specifically, the Europe 2020 strategy also presents a unique chance to make a more pivotal contribution to the European project and also to repositioning itself more centrally within the JRC, crucial as their thematic area is for the future of Europe and its citizens.

Given the scope of the challenge, the recommendations included in this report should be followed up by an institutional response from the IPTS specifically and the JRC more generally. Those recommendations accepted by the European Commission should be monitored annually in order to evaluate the progress and to assess the difficulties found.

Finally, the Panel considers that the Evaluation Report should be made public.

## 10. Evidence base

### *General information concerning*

- The baseline against which the assessment will be made (Framework Programme, Specific Programmes, Multi-Annual Work Programme)
- General reports on progress (e.g. Annual Reports, Annual Activity Reports, results of Customer Surveys)
- Reports of previous FP Evaluations and Commission replies
- Relevant figures on human resources and budget implementation
- "Europe 2020, A strategy for smart, sustainable and inclusive growth"

### *Specific information*

- Action reports with achievements of each "Contribution to the Lisbon Agenda" action in the JRC work programme during the reporting period
- Statistical information on the implementation of the research activities (i.e. publications, patents, etc.)
- Detailed publication data from the JRC's corporate publication repository (PUBSY)
- Synthesis Report on the JRC Infrastructures, JRC internal report
- JRC strategy 2010-2020

The following list includes the documents made available to the Panel by the JRC for this thematic evaluation.

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- "JRC Customer Satisfaction Survey 2008." Technopolis/EPEC, 28 September 2008.

- "Activities of the Joint Research Centre with regard to the 'Contribution to the Lisbon Agenda' under the Seventh Framework Programme of the European Community for research, technological development and Demonstration activities (2007-2013)." JRC, May 2010.
- "Facts and Figures – Activities of the Joint Research Centre with regard to the 'Contribution to the Lisbon Agenda' under the Seventh Framework Programme of the European Community for research, technological development and Demonstration activities (2007-2013)." JRC, May 2010.
- "MAWP of the JRC for the years 2007-2013." JRC, May 2010.
- "Administrative information for the period 2007-2010 – Unit G09." Unit G09, 27 May 2010.
- "Publications of Unit G09, 2007-2010." Unit G09, 27 May 2010.
- Ppt presentations of Unit G09, 11 June 2010.
- "JRC strategy 2010-2020: Integrating robust science for policy making." June 2010.
- Evaluation Panel meetings with JRC G09 and IPTS Commission clients, Brussels, 22 June 2010, 8.30-17.30 h.
- Ppt presentations of the IPTS. 30 June-1 July 2010.
- Saltelli, Andrea et al., "Indicators for European Union Policies. Business as usual?", *Social Indicators Review*, MS (accepted), 2010.
- "JRC Multi Annual Work Programme 2007-2013."

## List of abbreviations

BAT:	Best Available Technique
BREF:	BAT Reference Documents
DG:	Directorate General
EC:	European Commission
EIPPCB:	European Integrated Pollution Prevention and Control Bureau
ENSURE:	Assessment of European Waste and the Sustainable Use of Resources
ERA:	European Research Area
ETEA:	Energy and Transport Economic Assessment
EU:	European Union
FINEPRO:	Methods for Financial and Economic Protection
FP:	Framework Programme
ICPA-SEI:	Integrated Climate Policy Assessment: Scenarios and Economic Impacts
ICT:	Information and Communications Technology
ICTAS:	ICT applications for society
ICTIN:	ICT industry in the evolving Knowledge Economy
IPPC:	Integrated Pollution Prevention
IPSC:	Institute for the Protection and Security of the Citizen
IPTS:	Institute for Prospective and Technological Studies
IRI:	Industrial Research and Innovation
JRC:	Joint Research Centre
KfG:	Knowledge for Growth
R&D:	Research and Development
SIPA:	Statistical Indicators for Policy Assessment
SUSPROC:	Sustainable Production and Consumption
TA:	Thematic Area
TASC:	Thematic Area Steering Committee
TEFIS:	Techno-economic Foresight for the Information Society