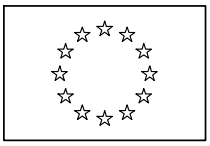

EUROPEAN COMMISSION

Brussels, 15.12.2011
SEC(2011) 1598 final

COMMISSION STAFF WORKING PAPER

SUMMARY OF THE IMPACT ASSESSMENT

Accompanying the document

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

Innovation for a sustainable Future - The Eco-innovation Action Plan (Eco-AP)

{COM(2011) 899 final}
{SEC(2011) 1599 final}
{SEC(2011) 1600 final}

Disclaimer: This executive summary commits only the Commission's services involved in its preparation and does not prejudge the final form of any decision to be taken by the Commission.

BACKGROUND

The Europe 2020 Flagship Initiative "Innovation Union"[1] (IU) announces an Eco-innovation Action Plan (EcoAP) to focus on specific bottlenecks, challenges and opportunities for achieving environmental objectives through eco-innovation. The IU also announced that EcoAP will promote eco-innovation in technologies, business processes and organizational change to address the challenges of resource[2] scarcity, air, water and soil pollution, water efficiency and also provide growth and jobs. Its role is where general innovation policies are insufficient to promote eco-innovation. It will take forward existing experiences in promoting the development and uptake of eco-innovation, in particular the Environmental Technologies Action Plan[3] (ETAP).

EcoAP will also help to deliver the objectives set out in the Europe 2020 Flagship Initiative on "A resource-efficient Europe"[4], that established resource efficiency as the guiding principle for EU policies on energy, transport, climate change, industry, commodities, agriculture, fisheries, biodiversity and regional development. Eco-innovation is one way of improving the resource efficiency of the economy.

PROBLEM DEFINITION

Eco-innovation is one way of improving environmental protection and of improving the resource efficiency of the economy and so contributing to competitiveness.

This can be achieved by developing new technological and non-technological solutions, new approaches to the way we run business or the way we consume and use goods and services. However, the current rate of eco-innovation is sub-optimal, and there is the potential to increase eco-innovation to boost resource productivity, competitiveness and help to safeguard the environment.

Achieving a safe and healthy global natural environment necessitates significant involvement of partners outside the EU. However, eco-innovations and environmental technologies are currently developed, for the most part, in developed countries, and they are not being diffused in the world economy at sufficient speed and scale.

ANALYSIS OF SUBSIDIARITY

Eco-innovation is at the crossroads of articles 173 and 191 of the Lisbon Treaty, and is a shared responsibility between MS and EU. In the field of innovation the EU coordinates, supports and supplements the innovation policies of the Member States, but cannot replace them. The need for a coordinated policy approach able to address eco-innovation failures requires intervention at the EU level and cannot be achieved by individual EU Member States alone.

EU level action is also necessary to respond to the increasing geographic complexity of innovation that requires increasing cooperation with actors outside the territory of an individual Member State. Therefore the European added value of an eco-innovation initiative is evident.

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[1] COM (2010) 546 final, Europe 2020 Flagship Initiative "Innovation Union"
[2] Resources include raw materials such as fuels, minerals and metals but also food, soil, water, air, biomass and ecosystems.
[3] COM (2004) 38 final, Communication from the Commission to the Council and the European Parliament, Stimulating technologies for sustainable development: An Environmental Technologies Acton Plan for the European Union
[4] COM(2011) 21, "A resource-efficient Europe"

OBJECTIVES OF EU INITIATIVE

The problem analysis has underlined that improving Europe's eco-innovation performance must be tackled from both the supply and the demand side in an integrated approach. The EcoAP will accelerate the development and uptake of eco-innovation by tackling eco-innovation specific barriers, with an overall objective of:

- Increasing the rate of eco-innovation and its uptake in Europe and in so doing deliver efficient solutions for environmental problems, and boost the resource efficiency of Europe and its competitiveness.

Specific objective 1: to apply the principles of the Innovation Union Initiative to eco-innovation. This will be done through the following operational objectives:

- Putting in place an eco-innovation friendly environmental regulatory framework
- Integrate eco-innovation concerns into relevant policies and initiative, in particular in the innovation policy field
- The European Commission will in 2012 make proposals for better targeting of EU funds on eco-innovation as part of the next EU financial perspectives

Specific objective 2: to promote eco-innovation in Europe. This will be done through the following operational objectives:

- Strengthen eco-innovation capacities of SMEs through increased networking and the spread of best practice (2011 onwards)
- Increase the market credibility and investment readiness of emerging eco-innovations (2011 onwards)

Specific objective 3: to improve global markets for eco-innovation. This will be done through the following operational objectives:

- Open up global markets to eco-innovation
- Improve global capacities for eco-innovation, in particular in developing countries

POLICY OPTIONS

Option 1 is a baseline option whereby EU policies that already exist or are under development are implemented but there are no additional policies on eco-innovation. It provides the baseline against which the other options are compared. Option 2 is the simple continuation of ETAP. Option 3 looks at a basket of actions to take forward the Europe 2020 Flagships. Option 4 looks at a number of SME eco-innovation specific actions, while Option 5 sets out more wide ranging regulatory intervention in support of eco-innovation.

Option 1: Discontinuation of ETAP

Under this option, several instruments and policy directions will continue, at least for a limited period – but the focus on eco-innovation may be limited or abandoned. In particular, eco-innovation would be taken forward through:

- the Europe 2020 flagships, including the Innovation Union, Industrial Policy for a Globalized Era, A Resource-Efficient Europe and the Agenda for New Skills and Jobs,
- environment policy will continue to create markets and set incentives for eco-innovation,
- funding for innovation from CIP and LIFE+.

Option 2 Continuation of ETAP

The current Action Plan consists of 29 actions, including 9 priority actions (PA) (see Figure 1). The option would see a continuation of the current four main domains. Firstly, promoting "green" research while attracting private and public investment. Secondly, tackling the unfavourable conditions faced by eco-innovators in the market. Thirdly, promotion of environmental technologies abroad and lastly, governance and networking of stakeholders (public institutions, enterprises, researchers, financial institutions, etc.).

Continuation of ETAP would have a strong focus on technology (excluding social and organisational eco-innovation), and a "light" governance (through the HLWG).

Figure 1: Actions under the ETAP option

A1	Increasing and focusing research, demonstration and dissemination. Improving co-ordination of relevant programmes
A2	Establishing technology platforms
A3	Establishing European Networks for technology testing, performance verification and standardisation
A4	Developing and agreeing on performance targets for key products, processes and services
A5	Mobilising financial instruments to share the risk of investing in environmental technologies
A6	Encouraging systematic internalisation of costs through market-based instruments
A7	Encouraging procurement of environmental technologies
A8	Raising business and consumer awareness
A9	Supporting eco-technologies in developing countries, and promoting foreign investment

Option 3: Taking forward the Europe 2020 Flagships

Option 3 would involve doing what is promised in the context of the Europe 2020 for the area of eco-innovation, in particular the review of environmental legislation, inclusion of eco-innovation aspects in the Innovation Partnerships or supporting the development of green skills. Whilst there is a commitment to these actions already, this option would provide firm ownership for them.

Option 3 builds on ETAP lessons learnt, by expanding from green technologies to eco-innovation, and providing a more efficient structure for the Action Plan.

Option 4: SME-targeted actions

In order to seize the emerging opportunities SMEs must become active developers and users of eco-innovation[5]. Option 5 focuses on SME eco-innovation needs, expands the scope of intervention to also include non-technical eco-innovation, emphasizes the global dimension and networking. The actions are in two broad areas: additional actions specific to eco-innovation and going beyond the Europe 2020 flagships and global actions.

Option 5: Wide EU eco-innovation policy

This option consists of actions that can be implemented in addition to (and not only instead of) the other options. It is characterised by a higher level of ambition, more regulatory approach and a more long-term view. However, it is also of a 'general principles' nature, rather than of the operational bent of options 3 and 4. Reflecting this, the measures involved would be the responsibility of a wide range of levels of government and actors.

[5] The 8th ETAP Forum Declaration, June 2010, "Fostering eco-innovation in SMEs"

ANALYSIS OF IMPACTS

A comparison of the options was carried out according to their adequacy in delivering the objectives, their expected impacts and their feasibility.

Option 1: No ETAP

This option assumes the termination of ETAP. Ongoing policies in innovation, environment and other areas continue without specific inputs from the eco-innovation point of view.

Additionally with the suspension of ETAP current activities on the definition of an EU framework for the **verification of environmental technologies**, developed under the ETV pilot programme and associated research and pilot activities, would no longer be supported at EU level. National programmes would probably be developed and tested, potentially resulting in divergent programmes without mutual recognition and with practically no impact on the promotion of green technologies outside national markets. International co-operation would likely lead to an international standard on ETV procedures, but without involvement at EU level. There is a risk that EU policy and industry characteristics would not be taken into account. The overall impact would be missed opportunities for the marketing of EU environmental technologies.

Also in terms of financial support to eco-innovation, although it is expected to continue in the next financial perspective, the discontinuation of ETAP would probably result in less focussed financial support due to a lack of a deep understanding of the European eco-innovation system, which is one of the priorities of ETAP.

Overall, the rate of eco-innovation and the degree of policy integration of eco-innovation would fall as compared to the existing situation. This option is the baseline against which other options are compared.

Option 2: Continuation of ETAP

The impacts of ETAP are indirect: ETAP is not a distinct programme with a budget. It is an umbrella pulling together different intervention instruments and influencing the direction and size of other, often broader and non-environment specific programmes and schemes.

The continuation of ETAP would lead to continued attention for environmental technologies and will have positive effects on innovation in the area of environmental technologies, competitiveness of the eco-industry (and related employment) and positive impacts on the environment and on health. Direct administrative burden, as ETAP actions are voluntary and reporting requirements minimal, would be limited and mainly consists of human resources to carry out the actions.
Option 2 covers most of the specific objectives, however, the adequacy of response is relatively low notably due to the scope being limited to environmental technologies, failure to refocus action in line with the lessons learnt and not corresponding to the new political objectives.

Option 3: Taking forward the Europe 2020 flagships

The shift from environmental technologies to eco-innovation will contribute to a competitive advantage for industrial sectors and can lead to positive environmental, economic and employment impacts. Improving resource efficiency will also help combat climate change and

boost economic growth. Furthermore an EcoAP with a strong focus on resource efficiency would be consistent with the strategy set out by the Europe 2020 initiative. As for social impacts, in addition to the expected positive impacts on health (i.e.: less environmental impacts generated by more sustainable solutions) positive impacts are expected in terms of employment.

Administrative burden may increase marginally, for example if voluntary Roadmaps are provided.

Option 3 provides a comprehensive policy response to specific objectives and complements well the Innovation Union initiative. The adequacy of response is high.

Option 4: SME-targeted actions

The Option will adequately target the needs of eco-innovative SMEs by highlighting networking and better preparing them for exploiting the available market opportunities (by, for instance, increasing their market readiness).

Option 4 provides a policy response targeting well the needs of eco-innovative SMEs. The adequacy of response is high.

Option 5: Wide EU eco-innovation policy

Systemic eco-innovation requires coordinated action by research actors, economic stakeholders and political decision-makers. This option strives for establishing prices, which reflect environmental impacts and so improve market conditions for eco-innovations. Option 5 addresses underlying drivers for high consumption of resources and energy and high levels of emissions and waste. It takes a radical approach directed at root causes expanding beyond traditional environmental policy. The necessity of the described actions have neither been contested in literature nor during the stakeholder consultation connected to this Impact Assessment.

The Option will carry significant long-term effects. Social impacts will be considerable: industry structure may change with related shifts in employment; effects on competitiveness may be large (when EU is not taking possible trade effects into account).

COMPARISON OF OPTIONS

The figure below presents an overview of overall scores for policy options taking into account their expected wider impacts and the feasibility of their implementation.

Figure 2. Comparison of policy options against Option 1

Overall table and ranking criteria

		Option 1*	Option 2	Option 3	Option 4	Option 5
Adequacy	**Adequacy in terms of meeting specific objectives**	**N/A**	**medium**	**high**	**medium/ high**	**high****
Impact	**Impact on innovation system**	**N/A**	**+**	**+++**	**++**	**++**
	Impact on environment	**N/A**	**+**	**++**	**++**	**+++**
	Impact on competitiveness	**N/A**	**+**	**++**	**+++**	**-/++ *****
	EU value added	**N/A**	**++**	**+++**	**+++**	**+++**
Feasibility	**Contribution to the achievement of wider impacts**	N/a	**++**	**+++**	**++**	**+**
	Timing of actions (mean)	**N/A**	**< 2 years**	**< 2-5 years**	**< 2-5 years**	**> 5 years**

* The exact degree of negative impacts of discontinuation of ETAP depends on other EU interventions that may subsititute ETAPactions

** Option 5 is assessed as highly adequate notably in the field of improving market conditions in a long term

*** Effects on competitiveness may be negative in the short term (e.g. resource taxes may hamper competitive position of resource-intensive industries)

Summing up the different elements, when considering the urgency for a focussed and improved eco-innovation policy initiative, as well as the feasibility of its implementation in a reasonable range of time, Option 3 appears to respond better to the new political environment. Option 4 on the other hand targets directly SME-specific problem drivers. Option 5 represents a longer term vision to achieve a radical transition to a resource-efficient, competitive and sustainable economy. Thus **a combination of Option 3 & 4 is deemed to be most appropriate by shaping the policy agenda for eco-innovation in the medium term and responding directly to the eco-innovation needs of the SMEs.** Options 3 and 4 also combine well, complementing each other and there are no negative trade-offs between them. The combined actions respond best to the identified objectives and problem drivers.

In addition, combining Option 3 & 4 responds well to the arguments raised during the broad public consultation, for instance by focusing on SME needs, in terms of financing, training and networking (Option 4). The business sector and the Member States called for action on the framework conditions for eco-innovation (Option 3). A reinforced governance structure (Option 3) with greater emphasis on policy learning, coordination, and agenda setting has received broad support both during the HLWG meetings and stakeholder consultations. Stakeholders have endorsed a targeted approach in relation to foreign partners for eco-innovation (Option 4) and acting through established networks and channels to avoid overlap.

MONITORING AND EVALUATION

EcoAP, being a broad "policy framework", presents a challenge for monitoring and evaluation. Furthermore, the selection of indicators will need to recognise its enlarged scope. Therefore, especially evaluation of wider effects will rely on proxy indicators (due to the limited access or lack of suitable data) or qualitative assessments.

The monitoring activity can be performed on two levels:

- reporting on activities performed by EcoAP, such as Eco-innovation fora, the HLWG, participation in inter-service consultations, specific studies ("internal reporting"), and
- collection of key monitoring indictors on the implementation of all EcoAP actions in collaboration with implanting bodies ("external reporting").

The evaluation activity will encompass:

- collection of quantitative and qualitative evidence of the progress towards achieving goals of all individual actions of Eco-AP (whenever possible, the evaluation of Eco-AP will rely on dedicated evaluations performed for individual actions);
- analysis results and effects of activities performed by Eco-AP team (attribution analysis of the value added of Eco-AP in achieving the goals).

In order to improve the quality of evaluation it is proposed that the EcoAP will be evaluated both internally and externally. In this regard the Eco-innovation Observatory will be highly useful, by gathering data on markets and trends. The previous experience of ETAP showed difficulties in attributing effects to ETAP actions. An ongoing internal evaluation will gather useful evidence