

ROADMAP			
TITLE OF THE INITIATIVE	Communication on Sustainable buildings		
LEAD DG – RESPONSIBLE UNIT	DG ENV C1	DATE OF ROADMAP	11 / 2012
<p>This indicative roadmap is provided for information purposes only and is subject to change. It does not prejudice the final decision of the Commission on whether this initiative will be pursued or on its final content and structure.</p>			

A. Context and problem definition

- (1) What is the political context of the initiative?
- (2) How does it relate to past and possible future initiatives, and to other EU policies?
- (3) What ex-post analysis of existing policy has been carried out? What results are relevant for this initiative?

The EU2020 strategy from 2010 sets the course for the European economy for the following ten years and beyond by focusing on three main priorities; smart, sustainable and inclusive growth. Within this context, seven flagship initiatives were identified, one of them being the "Resource Efficient Europe". In September 2011, the Roadmap to a Resource Efficient Europe¹ was adopted by the European Commission. It outlines the key challenges and opportunities and it follows three action lines; transforming the economy, addressing the natural capital and tackling key sectors. It points to the fact that, in industrialised countries, nutrition, mobility and housing are typically responsible for 70-80 % of all environmental impacts.

It concludes that existing policies for promoting energy efficiency and renewable energy use in buildings need to be complemented with policies for resource efficiency which look at a wider range of environmental impacts across the life-cycle of buildings. Furthermore, such policies would contribute to a competitive construction sector and the development of a resource efficient building stock. The Roadmap defines milestones for 2020 and sets out actions to be carried out by the European Commission. It includes that a Communication on Sustainable Buildings should be put forward in 2013, which will contribute to achieving the milestones of the Roadmap. This strategic Communication will propose actions to improve resource efficiency in the construction sector, where the scope will go beyond energy efficiency.

Existing policy initiatives related to the improvement of the environmental performance of buildings have largely targeted energy efficiency. The *energy performance of buildings directive*² obliges Member States to apply minimum requirements on the energy performance of new and existing buildings when undergoing major renovation. *The directive covers all buildings irrespective of size and both residential and the non-residential sector.* It requires that *all new buildings must fulfil a near zero-energy standard by end of 2020 and public buildings by end of 2018.* Moreover, the draft energy efficiency directive³, the eco-design directive⁴ and the energy labelling directive⁵ all target the energy consumption of buildings in the use phase.

The initiative will complement the future *Communication on "Strategy for the sustainable competitiveness of the construction sector and its enterprises"*, which is currently being developed by DG Enterprise and Industry with the aim of adopting it in the 2nd half of 2012. It will identify the main challenges that the sector faces up to 2020 in terms of investment, human capital, environmental requirements, regulation and access to markets, and proposes initiatives to support the sector for this purpose. It identifies some of the problems in relation to resource use but does not go on to discuss and assess the impact of options. The present initiative on Sustainable buildings will do so and will furthermore set out concrete actions to improve the resource efficiency of the sector.

The *construction products regulation*⁶ lays down harmonised conditions for the marketing of construction products in order to remove barriers to trade that might otherwise be created by specific national legal requirements. The regulation aims at providing information on product performance and this is done by converting performance requirements of buildings, so called basic working requirements, into product performance and technical standards which are prepared to provide common measuring and reporting format. *This regulation so far does however not push businesses towards resource efficiency.*

The only initiatives aiming at a more holistic approach regarding resource efficiency in the building sector are a *set of voluntary instruments*: Eco-label and Green Public Procurement criteria for office buildings and Eco-Management and Audit Scheme sectoral reference documents for construction. The related criteria are currently all under development with the aim of improving the communication, management *and uptake* of sustainable buildings and construction. However, experience with other sectors show that these voluntary instruments still have limited impact in bringing about the substantial changes in resource use for the sector that the Roadmap to a Resource Efficiency Europe calls for.

The Communication on Sustainable Buildings will build on the *"Single Market for Green Growth" initiative*, which

is planned to be adopted by the end of 2012. This Communication will aim at unlocking the potential of the European Single Market for green growth and will build on the 2008 SCP/SIP Action Plan⁷, its mid-term evaluation which highlights the importance of reliable data and of harmonised rules for the declaration of the performance characteristics of construction products⁸, as well as taking a first step towards implementing the relevant actions in the Roadmap to a Resource Efficient Europe. It will propose more ambitious actions relating to sustainable consumption and production, going beyond the approach of the SCP/SIP Action Plan and as such, will include actions that are closely relevant to the construction sector.

There is no existing policy at the EU level on resource use of buildings (apart from energy efficiency) but there are national initiatives, and these will be further looked at in the impact assessment.

What are the main problems which this initiative will address?

The main policy problem that the Communication will address is the *large quantity of resources used and the inefficient use of these resources in the construction sector*. Given that energy efficiency of buildings in the use phase is addressed by existing policies, the initiative will cover resources such as materials, water, embedded energy⁹ and land. It will address resource use and environmental impacts all along the life-cycle of buildings, from the extraction of building materials to the demolition and recycling of materials (end of life). Residential and commercial buildings will be covered, however not industrial ones. The latter represents less than 1% of the buildings and less than 11% of the total surface. They moreover have a highly varying use and, thus, very varying performance requirements, which makes it less obvious to discuss suitable policy options.

The significance of the resource use linked to the sector is highlighted by the Roadmap to a Resource Efficient Europe: "Construction and use of our buildings in the EU influence 42% of our final energy consumption, about 35% of our greenhouse gas emissions, more than 50% of all extracted materials and 30% of our water consumption". The sector further gives rise to about 35% of total generated waste. Important differences can be noted throughout the EU, e.g., sand and gravel intensity per m² varies with about a factor 6 and the iron intensity per m² with about a factor 3 between Member States, not including the extremes. As regards recycling, some Member States reach over 90% while the majority are far from reaching the 70% as stated in the waste framework directive. The massive resource use is naturally related to important environmental impacts. EEA in its revised State and Outlook 2012 states that if the pressures caused by the product categories associated with housing are added up, use of housing is estimated to cause 31% of GHG emissions, 20% of acidifying emissions, 21% of tropospheric ozone precursors and 22% of material resource use activated by public consumption. It is to be noted that housing only a sub-category of buildings. In an on-going study commissioned by DG ENV named Assessment of Scenarios and Options towards a Resource Efficient Europe¹⁰, it is stated that, at the EU level, the construction work sector contributes with 9% of total GHG emissions, 7% of acidification, 12% of human toxicity and 15% of photochemical ozone creation potential (summer smog).

As already adopted legislation on energy consumption in the use phase comes into force and we use less and less energy for heating etc, other resource use becomes relatively more important. E.g., until recently, about 80% of the carbon emitted from buildings was associated with energy consumption in the use phase and about 20% with embedded energy, but this is changing with increasing energy efficiency in the use phase. It has been noted that, for an average building in the UK, the numbers are becoming closer to 60:40 and the embedded energy will most likely become the dominating factor in the future.

In spite of the extent and significance of the resource use and related environmental impact, there is no existing policy at the EU level addressing resource use in the building sector and there are only a limited number of Member State and business initiatives addressing the problem. Therefore, it is not expected that significant improvements will be achieved in resource efficiency with the current policy context.

Moreover, in the lack of a coordinated approach, emerging Member State initiatives mean *increasing compliance costs for businesses and result in the fragmentation of the internal market*. For example, the Netherlands and France will shortly have legislation in force requiring certain methods and indicators to be used when reporting the environmental performance of construction products and buildings (*reporting* in this context covers communicating environmental indicators in B2B relations or towards governments). The requirements will however be different both in terms of when and how to report environmental performance. More Member States are preparing for initiatives in this area but these initiatives are generally not coordinated and require calculation and reporting on the basis of different standards, which result in an increased administrative burden and cost as well as the fragmentation of the internal market as businesses have to comply with different requirements in different member states. This development is a major concern for the construction industry. In addition, voluntary assessment schemes have been developed for the assessment of the environmental performance of buildings, but their coverage is usually limited to one Member State and use different methodologies. Therefore, their results are not comparable and the emergence of a range of schemes results in a complex and costly business environment.

In addition, there is a *lack of awareness and demand for sustainable buildings*. While low-energy residential and commercial buildings are gradually penetrating the market, there is much less interest in resource efficient practices and technologies. One of the underlying problems is the lack of comparable and easily accessible data

and assessment methodologies, which would enable businesses, governments and the general public to be more aware of the opportunities and environmental improvement potentials linked to sustainable buildings.
Who will be affected by it?
Businesses in the construction sector would benefit financially from more efficient use of resources and also from a more coherent policy approach across Europe, e.g. in relation to assessment and reporting of environmental performance. In addition, they would benefit from an increased demand for resource-efficient construction products and buildings, with potentially higher value added. Even if certain short term costs might be incurred, it is expected that the overall economic impact, also in the short term, will be beneficial for most businesses. Society as a whole would benefit from a more efficient use of resources in this major sector <i>which by its sheer size has a great impact on any country's resource use and environmental impact</i> . Governments would benefit from reduced environmental costs linked to excessive use of resources.
Is EU action justified on grounds of subsidiarity? Why can Member States not achieve the objectives of the proposed action sufficiently by themselves? Can the EU achieve the objectives better?
Some Member States are considering and acting in the area but this is still a minority. These initiatives result in a fragmented market, which may lead to difficulties for businesses operating in more than one country. Member State actions could be efficiently supported by actions on the EU level as a common vision and joint actions would lead to a bigger potential for improved resource efficiency, competitiveness and environmental improvements for this sector with its major resource use and for which even relatively small improvements could bring lots of benefits.

B. Objectives of the initiative

What are the main policy objectives?
The general objective is to <i>improve the resource efficiency of a sector with one of the highest resource uses</i> and, thus, <i>improve the related competitiveness</i> and <i>reduce the environmental impacts</i> of the sector, in line with the EU2020 objectives. Policies would allow for a holistic approach regarding resources and life-cycle impact of the sector, which follows the ideas of the Resource efficiency roadmap and the initiative on "Single Market for Green Growth". This would be achieved by the following specific objectives: <ul style="list-style-type: none"> • Reducing the fragmentation of the market and reducing administrative burden on companies by proposing an effective way of assessing and reporting the environmental performance of construction products and buildings. • Raising supply and demand for sustainable buildings.
Do the objectives imply developing EU policy in new areas?
Yes, as there is no existing policy on the EU level on resource use in buildings other than for energy efficiency.

C. Options

(1) What are the policy options (including exemptions/adapted regimes e.g. for SMEs) being considered? (2) What legislative or 'soft law' instruments could be considered? (3) How do the options respect the proportionality principle?
As part of the Impact Assessment process, a wide range of policy options will be identified and analysed, including possibly policy options in the following areas: <ul style="list-style-type: none"> • Assessment framework for the environmental performance of buildings <ul style="list-style-type: none"> ○ Establishment of a European scheme to be applied on a mandatory basis ○ Establishment of a European scheme to be applied on a voluntary basis ○ Development of European harmonised standards, through EU standardisation bodies (Eurocodes) ○ Guidance to schemes used in member states on resource use areas to include and possible indicators to use for that purpose ○ Business as usual, with existing schemes developing independently and in an uncoordinated way • Assessment and reporting scheme on the environmental performance of construction products and the establishment of a database

- Mandatory requirements to provide environmental product declarations (EPDs)¹¹ for all or certain products placed on the market
- Incentives to provide EPDs on a voluntary basis for all or certain products on the market
- Business as usual, with some companies and some member states using EPDs
- Measures to stimulate demand for resource efficient buildings
 - Green Public Procurement (GPP)
 - Extend mandatory GPP as in the energy performance of buildings directive to more resources and for all or certain type of buildings
 - Incentives to use GPP for all or certain type of buildings on a voluntary basis
 - Business as usual
 - Financial incentives (to clients), including low interest loans
 - Business to business (B2B) and business to clients(B2C) information
 - Increasing the use of EPDs and software tools to provide information to architects and builders
 - Increasing the use of building assessment schemes to provide information to clients
 - Involve architects to help clients understand options
 - Awareness raising campaign
- Measures to stimulate supply of resource efficient buildings
 - Financial incentives for construction companies to trigger resource efficiency in buildings and in construction supply chain
 - Non-financial incentives for construction companies to trigger resource efficiency in buildings and in construction supply chain.

D. Initial assessment of impacts

What are the benefits and costs of each of the policy options?

To be determined through the results of the impact assessment study. It is likely that action at EU level would result in a clearer framework for businesses operating in several member states and a higher level of resource savings and environmental protection across the EU. The simplification of the assessment and reporting scheme for the environmental performance of construction products and buildings is expected to result in reduced administrative burden on the construction industry.

Could any or all of the options have significant impacts on (i) simplification, (ii) administrative burden and (iii) on relations with other countries, (iv) implementation arrangements? And (v) could any be difficult to transpose for certain Member States?

To be determined. The measures that will be considered have the potential to simplify obligations of economic actors and remove fragmentation in the internal market created by national measures. Due consideration will be given to the EU's commitments on administrative burden reduction (including the use of the EU Standard Cost Model, if deemed necessary) and simplification.

- (1) Will an IA be carried out for this initiative and/or possible follow-up initiatives?
- (2) When will the IA work start?
- (3) When will you set up the IA Steering Group and how often will it meet?
- (4) What DGs will be invited?

An Impact assessment will be carried out and the work started in June 2012. A steering group will be set up and will meet three times starting in September 2012. The following DGs will be invited to participate to the Steering Group: ENTR, ENER, SANCO, MOVE, TRADE, SEC GEN, JRC, CLIMA, MARKT, TAXUD, RTD.

- (1) Is any option likely to have impacts on the EU budget above € 5m?
- (2) If so, will this IA serve also as an ex-ante evaluation, as required by the Financial Regulation? If not, provide information about the timing of the ex-ante evaluation.

To be determined. At this stage no measure having the budgetary impact of €5M or higher is foreseen.

E. Evidence base, planning of further work and consultation

- (1) What information and data are already available? Will existing IA and evaluation work be used?
- (2) What further information needs to be gathered, how will this be done (e.g. internally or by an external contractor), and by when?
- (3) What is the timing for the procurement process & the contract for any external contracts that you are planning (e.g. for analytical studies, information gathering, etc.)?
- (4) Is any particular communication or information activity foreseen? If so, what, and by when?

Fragmented data on resource use and on environmental impact is available. Information is even more scarce when it comes to national or regional policies in the area. The following studies provide relevant information:

- Resource Efficiency in Europe – Policies and approaches in 31 EEA member and cooperating countries (EEA Report No 5/2011)
- Housing Assessment by EEA/ETC (2012)
- Material resources and waste – 2012 update to the European Environment State and Outlook 2010 thematic assessment (June 2012)
- IA support study on water performance of buildings (2012)
- On-going study on Assessment of scenarios and options towards a resource efficient Europe, strategies for decoupling – options to consider in the field of buildings and infrastructure

Further information, in order to complete knowledge gaps and in particular to expand the knowledge on policies and the experience of their use will be gathered in a separate study to support the impact assessment. The study should start in early autumn and is foreseen to last 12 months. It will be performed by an external contractor, the call for tenders will be launched end of July, within the study framework of ENV.F.1/FRA/2010/0044.

Which stakeholders & experts have been or will be consulted, how, and at what stage?

All relevant stakeholders will be invited to participate and provide information to the process, through meetings and workshops. A dedicated public consultation will be launched autumn 2012. Many stakeholders, mainly industry but also member states representatives and researchers, are already informed and have been given the opportunity to provide direct opinions to our process.

¹ COM (2011) 571 final; http://ec.europa.eu/environment/resource_efficiency/pdf/com2011_571.pdf

² Directive 2010/31/EU; <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32010L0031:EN:NOT>

³ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52011PC0370:EN:NOT>

⁴ Directive 2009/125/EC; <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009L0125:EN:NOT>

⁵ Directive 2010/30/EU; <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32010L0030:EN:NOT>

⁶ REGULATION (EU) No 305/2011; <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:088:0005:0043:EN:PDF>

⁷ The Action Plan on Sustainable Consumption and Production and Sustainable Industrial Policy details the list of actions: Ecodesign standards for a wider range of products; improved energy and environmental labelling; incentives rewarding eco-friendly products, including green public procurement; work with retailers; support to environmental industries; promotion of sustainable industry internationally.

⁸ ECORYS, Mid-term Evaluation of the Sustainable Consumption and Production and Sustainable Industrial Policy Action Plan Under the Framework Contract ENV.G.1/FRA/2006/0073, Final Report, September 2011. See Annex 1

⁹ energy use linked to the manufacturing of construction products

¹⁰ http://ec.europa.eu/environment/funding/calls2011_en.htm

¹¹ An EPD is an Environmental Product Declaration, a tool which companies use to communicate in business to business relations. It reports on the environmental performance or impact of a product. This is generally a voluntary tool, for which companies in most cases can choose the indicators to work with. It does not contain any kind of judgement of the environmental performance, it simply lists a set of indicators related to environmental impact which the production of this product has resulted in. This kind of environmental reporting is becoming more and more common and member states have started to set up certain requirements linked to its use.