

ROADMAP			
TITLE OF THE INITIATIVE	<i>Environmental assessment framework to enable a safe and secure unconventional hydrocarbon (e.g. shale gas) extraction</i>		
LEAD DG – RESPONSIBLE UNIT	ENV.F1	DATE OF ROADMAP	11/2012
<p><b>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.</b></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?

Technological progress is opening up new possibilities to extract unconventional fossil fuels such as shale gas, tight gas, coalbed methane, or shale oil, from geological formations which were previously too complex or too expensive to extract. These unconventional fossil fuels could provide opportunities to diversify EU energy supplies and improve competitiveness in the EU. Close to half of all EU Member States have recently granted, or are expected to grant licenses to explore hydrocarbons, in particular in view of possible shale gas developments. A key component of these developments will be the use of hydraulic fracturing practices at a scale, frequency and complexity which differ from more limited past EU experiences with such operations. Public concern over potential health and environmental impacts related to hydraulic fracturing has caused several Member States to prohibit, or to announce the possibility to prohibit the use of hydraulic fracturing practices. The underlying question is whether the current legal framework is adapted for the use of these more novel practices in Europe, and whether it is fit to manage potential new environmental risks of unconventional fossil fuels projects. The International Energy Agency (IEA) has recently concluded that "governments, industry and other stakeholders must work together to address legitimate public concerns about the associated environmental and social impacts" of unconventional fossil fuels projects. A special report by the IEA stresses the need for robust and coherent measures, including: "full transparency, measuring and monitoring of environmental impacts and engagement with local communities; careful choice of drilling sites and measures to prevent any leaks from wells into nearby aquifers; rigorous assessment and monitoring of water requirements and of waste water; measures to target zero venting and minimal flaring of gas; and improved project planning and regulatory control" (IEA Press Release and Golden Rules special report, <http://www.iea.org/newsroomandevents/pressreleases/2012/may/name.27266.en.html>).

In view of potential economic and strategic benefits of domestic fossil fuels extraction, the European Council requested an assessment of "Europe's potential for sustainable extraction and use of conventional and unconventional (shale gas and oil shale) fossil fuel resources" (European Council of 4 February 2011). The European Parliament's Committee for Environment, Public Health and Food Safety (ENVI) adopted an own-initiative report on environmental impacts of hydraulic fracturing calling on the Commission to introduce an EU wide risk management framework for unconventional fossil fuels. A 2011 study commissioned by the same Committee has highlighted a number of potential drawbacks of the EU environmental legal framework applicable to unconventional fossil fuels projects.

The Commission has received numerous requests (a) to clarify the EU legal framework that is applicable to hydraulic fracturing in particular in the context of shale gas projects and (b) to conclude whether that framework is appropriate. Concurrently, a number of EU Member States have reviewed their legislation or started discussions on whether their national legislative frameworks are appropriate for hydraulic fracturing and contemplate the possibility to introduce specific requirements (e.g. UK, Poland, France, Germany, Czech Republic, Bulgaria, Romania).

In 2011, the Commission has carried out an initial technical and legal assessment of the EU environmental regulatory framework applying to shale gas practices. It concluded that the existing EU environmental legislation applies to shale gas projects from planning and until cessation. It found, however, that more information was necessary to determine whether or not the level of environment and human health protection provided by the applicable EU regulatory framework is appropriate. Three studies conducted on behalf of the European Commission and released in September 2012 sought to provide further information about potential impacts of EU shale gas developments on the EU's energy market, on climate change and on the environment. The study

<p>about environmental risks raises a number of questions regarding the adequacy of the EU regulatory framework that is applicable to shale gas projects. Currently, technical and regulatory aspects are being discussed with competent national authorities. The Commission aims also to launch a stakeholders' dialogue process by end-2012. Information on environmental regulatory practices and on technical aspects is being exchanged with US authorities.</p>
<p>What are the main problems which this initiative will address?</p>
<p>An initial Commission assessment of hydraulic fracturing practices in the context of shale gas developments has identified a number of environmental areas at potential risk from these practices, most notably water contamination and consumption, impacts to air quality, and land-take and habitat fragmentation.</p> <p>Relevant provisions of the Union's regulatory framework are contained in several instruments such as water, mining, nature and environmental impact assessment legislation which adds to the complexity. In 2011 the Commission has conducted a legal assessment of the current EU environmental regulatory framework. At that time, a number of knowledge gaps and technological uncertainties prevented the Commission from drawing definitive conclusions on the <i>appropriateness</i> of applicable EU environmental framework. A subsequent in-depth technical and regulatory study conducted on behalf of the Commission has identified a number of uncertainties and potential inadequacies as regards the applicable regulatory framework.</p> <p>The lack of full clarity as regards the appropriateness of applicable regulatory frameworks, coupled with diverging requirements in individual Member States can erode public acceptance, prevent optimal knowledge-based risk response strategies and affect operators' level playing field. As Member States are beginning to introduce specific measures in their national legislation to deal with shale gas projects, their approaches may differ. A patchwork of national policies could create difficulties for businesses operating cross-border, and distortions in competition within the EU.</p>
<p>Who will be affected by it?</p>
<p>The general public and the natural environment to the extent that environmental pressure is reduced. Member States, EEA governments and the energy sector operating in Europe to the extent that long-term clarity and predictability are provided and public acceptance is improved.</p>
<p>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?</p>
<p>EU action is justified, because impacts can be not only local and regional but also have cross-cutting, transboundary environmental implications: impacts to surface and groundwaters, as well as to air quality do not respect national borders so that impacts in one country can give rise to, or worsen pollution problems in other countries.</p> <p>Different requirements in individual jurisdictions increase the risk of deficiencies in transboundary environmental protection and can give rise to unlevel playing fields which would undermine the functioning of the internal market especially for SMEs. If Member States acted alone, the costs are likely to be unnecessarily high.</p> <p>Action at EU level, where deemed necessary, would ensure coherence of requirements set by Member States for their respective jurisdictions with reasonable EU-wide environmental risk management measures.</p>

## B. Objectives of the initiative

<p>What are the main policy objectives?</p>
<p>The domestic extraction of shale gas and of other unconventional fossil fuels represents an important area where the Commission sees a need to ensure a common approach from the onset which is clear, predictable and balanced and which leads to optimal decisions in an area where economics, finances, environment and in particular public trust, matter. To that end, the objectives of this initiative are:</p> <ul style="list-style-type: none"> <li>• To ensure that environmental risks arising from individual projects and cumulative developments are adequately identified and managed including, where possible, in relation to policy aims such as climate change mitigation and the protection of human health.</li> <li>• To help establish a common approach across the EU by providing maximum clarity, coherence and stability to market operators who wish to invest in unconventional hydrocarbons developments across the EU under comparable and coherent regulatory conditions.</li> </ul>
<p>Do the objectives imply developing EU policy in new areas?</p>
<p>There may be a need to propose new measures to adapt European law to the specificities of unconventional fossil fuel projects and in particular shale gas, notably to ensure coherent risk identification and characterisation, data collection, disclosure, transparency as well as adequate planning on the side of operators and competent authorities.</p>

## 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?

For (i) and (ii): it is too early to spell out in detail the possible options of a policy to provide legal clarity and predictability to market operators and to reduce environmental risks associated with unconventional hydrocarbons projects. Generally speaking, such options could refer to: (a) the no-action option, (b) an option looking at non-regulatory measures to support potential industry and/or national public authority initiatives (e.g. aimed at improving current practices); (c) regulatory options looking into achieving proportional improvements in environmental safety of operations across the EU.

For (ii) the following could be considered:

- A set of revisions and amendments to existing EU legislation to implement improvements of the regulatory regime in areas where EU legislation already exists.
- A comprehensive new legal instrument addressing also areas not currently covered in EU legislation.
- Commission Recommendations, guidelines, voluntary standards).

To ensure legal certainty for long term investment in the development of domestic shale gas and other unconventional fossil fuel resources, uncoordinated, voluntary approaches may not be appropriate.

Information is currently being gathered in order to identify the full range of possible policy options that will need to be commensurate to the identified risks. It is a fundamental part of EU law that measures should not go beyond what is proportionate in relation to the objective to be achieved. The process of impact assessment will ensure that any and all options which will be considered and ultimately proposed will be assessed against this criterion.

## D. Initial assessment of impacts

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

From previous policy initiatives aimed at ensuring appropriate environmental risk management at EU level the following positive impacts might be expected from environmental risk management measures:

Environmental benefits:

Avoiding risks of surface and groundwater depletion and contamination, reduced releases of pollutants and enhanced climate mitigation, reduced impacts on land and biodiversity and more sustainable resource extraction.

Social benefits:

Enhanced public and workers safety. Avoidance of community impacts by noise, traffic, accidents and scale and pace of developments. Enhanced public acceptance and more secure jobs allowing to fully reap social benefits of unconventional fossil fuel developments in Europe.

Economic costs and benefits:

Reducing the risk of accidents / preventing impacts along the exploration and production chain may impose new requirements on at least some national administrations (with enforcing the risk management measures) and industry (implementing these requirements), particularly those who will need to improve their operations (e.g. equipment, personnel) to meet requirements. Conversely, the development of cleaner technologies and processes can provide Europe with first-mover advantages and increase the EU's competitiveness in relation to other countries where such projects will also take place. It may also stimulate the research and development activity. A harmonised EU-wide approach would provide legal clarity and predictability and thus a long-term stable framework for investments, enabling companies, including SMEs, to compete across EU Member States under similar and coherent requirements.

A detailed assessment of impacts will be carried out at a later stage, in connection with individual options.

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

No impacts on third countries is expected other than possible enhanced cooperation on risk management measures of mutual benefit as well as the adoption of coherent risk management measures by other jurisdictions, e.g. the EU/EEA's neighbourhood.

<p>(1) Will an IA be carried out for this initiative and/or possible follow-up initiatives?</p> <p>(2) When will the IA work start?</p> <p>(3) When will you set up the IA Steering Group and how often will it meet?</p> <p>(4) What DGs will be invited?</p>
<p>(i) and (ii) In late 2012/2013 an impact assessment will be prepared.</p> <p>(iii) An Inter-Service Group has been established in March 2012 (inviting SG, ENER, ENTR, CLIMA, EMPL, SANCO, REGIO, MARKT, R&amp;I, JRC, AGRI, BEPA, COMP, ECFIN, ELARG, MARE, MOVE, TAXUD, TRADE, ESTAT). This IS group will become an IA SG by the time the work on drafting an IA is started.</p>
<p>(1) Is any option likely to have impacts on the EU budget above € 5m?</p> <p>(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.</p>
<p>No impacts for the EU budget are foreseen at this stage.</p>

### E. Evidence base, planning of further work and consultation

<p>(1) What information and data are already available? Will existing IA and evaluation work be used?</p> <p>(2) What further information needs to be gathered, how will this be done (e.g. internally or by an external contractor), and by when?</p> <p>(3) What is the timing for the procurement process &amp; the contract for any external contracts that you are planning (e.g. for analytical studies, information gathering, etc.)?</p> <p>(4) Is any particular communication or information activity foreseen? If so, what, and by when?</p>
<p>. (i) The IA will take into account the following information:</p> <ul style="list-style-type: none"> <li>• The Commission's initial assessment of December 2011, which identified a number of environmental areas at potential risk from hydraulic fracturing and which concludes on the applicable EU environmental regulatory framework.</li> <li>• The 2012 study on the identification of potential risks for the environment and human health arising from hydrocarbons operations involving hydraulic fracturing in Europe.</li> <li>• The 2012 study on GHG emissions related to hydraulic fracturing, carried out on behalf of DG Climate Action of the European Commission.</li> <li>• The 2012 study on energy market impacts in the EU, carried out by DG JRC of the European Commission.</li> <li>• The study on licensing and permitting procedures for shale gas in France, Germany, Poland and Sweden, carried out on behalf of DG Energy of the European Commission.</li> <li>• The impact assessment and evaluation work underpinning the Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide.</li> <li>• The impact assessment and evaluation work underpinning the Commission's proposal for a Regulation of the European Parliament and of the Council on safety of offshore oil and gas prospecting, exploration and production activities.</li> <li>• A substantial number of other studies and reports on hydraulic fracturing conducted by, or on behalf of EU Member States, US governmental bodies (US Environmental Protection Agency, Department of Energy, etc.), international organisations (e.g. International Energy Agency), etc.</li> </ul> <p>For (ii) and (iii): Two calls for tender to support the Commission in conducting the impact assessment mentioned in parts A-D were launched, as follows:</p> <ul style="list-style-type: none"> <li>• A call for tender for a service contract aimed at providing support especially socio-economic and legal, for the preparation and the development of possible Commission initiatives on managing potential impacts and risks of unconventional gas extraction in Europe.</li> <li>• A call for tender for a service contract aimed at identifying and assessing environment- and health-related regulatory provisions applicable to unconventional gas in eight selected EU Member States (Bulgaria, Denmark, Germany, Spain, Lithuania, Poland, Romania and United Kingdom). This contract aims to help the Commission to identify potential best regulatory practices or limitations in environment- and health-related regulatory provisions applicable to unconventional gas in these respective Member States.</li> </ul>

The time limit for receipt of tenders or requests to participate for both the above calls is 23 July 2012.

Further information will be gathered through contacts with stakeholders.

(iv) Information on the impact assessment as well as relevant studies and documents will be made available to the general public via the following dedicated webpage:

[http://ec.europa.eu/environment/integration/energy/unconventional\\_en.htm](http://ec.europa.eu/environment/integration/energy/unconventional_en.htm).

Please refer as well to the next section for information activities dedicated to Member States and stakeholders.

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

All relevant stakeholders will be consulted. Member States and third countries will be consulted through the established Technical Working Group on environmental aspects of unconventional fossil fuels and in particular shale gas. The hydrocarbons industry, industry associations, NGOs and the general public will be consulted in parallel at all stages of the work. An internet-based public consultation will be launched towards the end of 2012 to gather a wider input from the interested public and the expert practitioners across the EU. A further stakeholder meeting regarding possible directions/outcomes of the work has been foreseen for spring-2013.