

## **A European Research Agenda for Shale Gas**

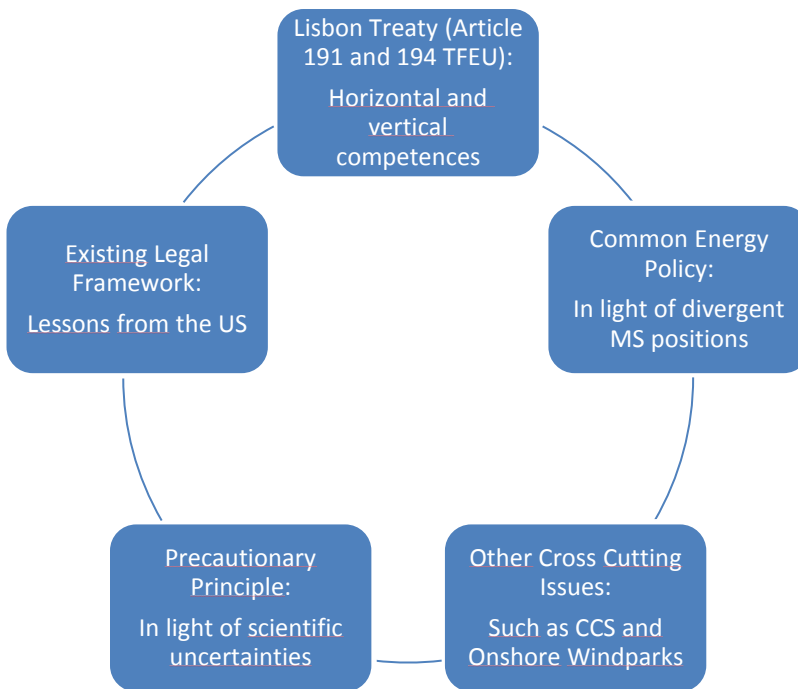
In the United States the extraction of shale gas has been hailed as a “game changer” and has restructured the country’s energy landscape. The United States is by far the biggest producer of shale gas and has the longest history of extraction. The method of releasing hydrocarbons from the ground through hydraulic fracturing is however also increasingly also debated in the European Union as a possible response to both increasing energy demand in the European Union and dependence on gas imports from third countries such as Russia.

The large scale and manipulative nature of hydraulic fracturing techniques elicits a mixed response due to a large realm of unknowns, not only about externalities but also concerning the ability of the technology to deliver. Characterised by uncertainties and promises to address climate change, shale gas extraction raises several technical, ethical and legal issues. Recent media coverage of shale gas has in the European Union focused on the geo-political impacts, rather than on the regulatory site.

Member States have quite divergent opinions on the issue, ranging from complete opposition and banning the activity (France and Bulgaria) to full political but also legal support mechanisms (UK and Poland). This is especially interesting in the light of the fact that the inclusion of the new title XXI on energy in the Lisbon Treaty changed the Union’s competences and the legal basis to act in this regard. It still has to be seen if this new constitutional setup is better suited to combine energy supply security on the one hand and environmental protection concerns on the other. Shale gas exploration inherently has to two different angles to it: one of energy exploration, and the associated external policy implications; and one of environmental concerns. Within the EU, these twin aspects cause particular challenges. They put to the test the synergy, or lack thereof, between two distinct titles of the relevant Treaty. Questions relating to subsidiarity and proportionality, Member States’ sovereignty, Union’s competences and the Member States right to determine their own energy mix complicate the legal discussion of whether and how to regulate shale gas exploration and extraction on a European wide basis.

Therefore it is needed to (a) test the new constitutional setup on the basis of this challenging case study, (b) assess the Union’s quest for a common energy policy in the absence of a Treaty provision and (c) further analyse other cross cutting issues subject to the environmental and energy supply security challenge, as well as (d) analyse the status of the precautionary principle in European (Environmental) law and (e) assess the existing legal framework on a Union level, taking into account the regulatory experience gained in the United States.

The graphic below illustrate these challenges to a coherent regulation of shale gas in the European Union.



**Fig.1:** Legal challenges for regulating shale gas extraction in the European Union