



# EUROPEAN POLICY BRIEF



## Accessing Oil, Gas and Minerals in a Changing World

*POLINARES is an EU-funded research project exploring global challenges in the competition for natural resources and proposing new approaches to collaborative solutions.*

Final Policy Brief

January 2013

## INTRODUCTION

The overall objectives of the POLINARES project were to identify the main global challenges relating to competition for access to oil, gas and mineral resources, and to propose new approaches to collaborative solutions for the various policy actors, including the EU. This final Policy Brief summarises the key findings of the project.

The world is changing from a regime characterised by liberal market principles to one in which state capitalism is more prevalent than in the 1990s. This transition is occurring at the same time as demand for energy and mineral resources is rising. The result is a greater degree of unpredictability and volatility in international commodity markets.

It is increasingly apparent that a discontinuity exists between the EU's underlying principles and the normative values of many international actors. In order to ensure continued access to oil, gas and minerals, the EU may need to take a more pragmatic approach in its dealings with other important actors, such as China and Russia in the context of energy and mineral transactions.

Looking ahead to 2040 and beyond, the future geometry and balance of global political and economic power is quite uncertain, as is the nature of international commodity markets. In response, the EU would be well advised to develop a variety of policy instruments which can be deployed in different situations to ensure access to key energy and mineral commodities.

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## KEY OBSERVATIONS

### A changing world

The last few years are reminiscent of the resource ‘crisis’ of the 1970s in many ways, with high energy and mineral prices, fears over the exhaustion of these resources and the re-emergence of state capitalism and resource nationalism. In addition, the economic circumstances of many OECD countries are currently as difficult as in the 1970s. Yet today the world is rather different and it is well known that the worries of mineral depletion were very much overstated. New actors such as China, India and Brazil now play an important role on the international stage both as engines of demand and also leading producers of minerals and energy resources. Russia and other countries which emerged from the break-up of the Soviet Union are also significant forces in the oil, gas and mineral markets. Whilst international energy and mineral markets have grown and matured greatly since the 1970s, climate change and other environmental threats have become important considerations in energy and resource policy-making.

During this new period of concern over resource supplies, the EU’s dependence on imported energy and mineral raw materials has continued to grow despite substantial shifts in the structures of the economies of Member States and efforts to improve energy and resource efficiency. The main threats to energy and mineral supply lie not in the geological availability of the primary resources, inside and outside of the EU, but rather in political and economic factors, which may either promote or obstruct the free flow of investment in and trade of energy and mineral commodities. Unfortunately for the EU, the capacity of Europe to play a major role in setting global economic norms and in promoting the role of market mechanisms is limited. This may further stimulate inward-looking attitudes in these important issues of international economic relations.

It is widely recognised, not just by POLINARES, that the world is currently in transition from a political and economic regime in which liberal market values were prevalent, even if not dominant, to one in which State Capitalist values appear to be gaining more adherents. A consequence may be that energy and mineral prices will be volatile, that markets will be fragmented, or that partial supply interruptions will occur for some actors, even though there will be no absolute shortage of resources. Nonetheless, we believe Europe can rely on properly monitored and standardised market infrastructures to source the oil, gas and bulk mineral supplies it needs, though markets for certain technology minerals may remain less liquid.

### Economic engagement with State Capitalism

Democratic countries with liberal market economies may wish to see State Capitalist governments adopt certain criteria and principles in their policy approaches to encourage cooperation in the exploitation of natural resources. There is a mismatch between this set of criteria and principles as put forward by such countries on the one hand, and the values and priorities of State Capitalist governments on the other hand. This mismatch creates tension in political and economic

relations.

A more constructive approach could be to build a policy framework around elements of the enlightened self-interest of those governments displaying features of State Capitalism, such as China. In the case of some countries which are part of a transition from the Liberal Capitalist to the State Capitalist regime, and only so far display limited State Capitalist tendencies, it may even be feasible to arrest those tendencies by pro-actively pursuing mutual interests on a country-to-country basis. In any case the pursuit of mutual self-interest appears more promising than a reliance on international or even regional multilateral organisations. This would imply, for example, a higher than hitherto level of joint investment, accelerated adoption of common technical, legal, commercial and market standards, and a concentration on truly open trade based on mutual understanding and advantage, rather than on a culture of complaint and counter-complaint.

The objective of this possible approach is not to sidestep, nor to ignore the policy criteria and principles underpinning the EU's own development. We are looking, rather, at means to compatible ends. The pursuit of mutual self-interest should result in more secure or more dependable access to oil, gas and minerals. That of itself, of course, does nothing to ameliorate the human rights, access to justice or environmental sustainability credentials, for example, of a State Capitalist government. However, the building of trust and understanding which economic and commercial collaboration brings in its wake may provide a channel through which a Western democratic country could then pursue appropriate policy initiatives to foster such principles.

The pursuit of policies and the promotion of ventures conducive to the joint exploitation of resources, to greater mutual trade in commodities and to related inward and outward investment, can be implemented, notwithstanding a need to respect the axiomatic principles of EU policymaking and policy implementation.

In the mineral sector, opportunities to increase production and knowledge *within Europe* have not been taken at all. Rather the opposite has occurred. This branch of industry has been suppressed and ignored and still there is a serious lack of understanding in Brussels and in many EU countries, albeit the situation is slowly changing. The international approaches should be supplemented by fostering a European minerals industry and R&D community in this field.

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### Engagement at the strategic level

Nonetheless, a policy to allow or favour co-investment indicates a corresponding need for the EU to engage at a strategic level, to make sure that, for example, the Chinese government is aware of shared concerns in Europe about oil production from marginal reserves, oil stocks, emergency simulations, or access to iron ore and copper. A strategic engagement will indeed help set the scene for corporate engagement and cross-investment. Chinese assent to a more transparent market for iron ore forwards and futures is a recent example of an indication of willingness to engage.

An example of an organisation which is beginning to show promise of adaptation to the challenge of the hydrocarbon export and import strategies of State Capitalist governments is the International Energy Agency (IEA). Partner countries like China can (and China does) take part in the IEA's Standing Group on the Global Energy Dialogue (SGD). Cooperation through the SGD includes the organisation of joint seminars, exchange of information and policy debate. In addition to participation by partner countries in these institutions, an increased institutionalisation of the ties between IEA and partner countries is sought for through the 'association initiative'.

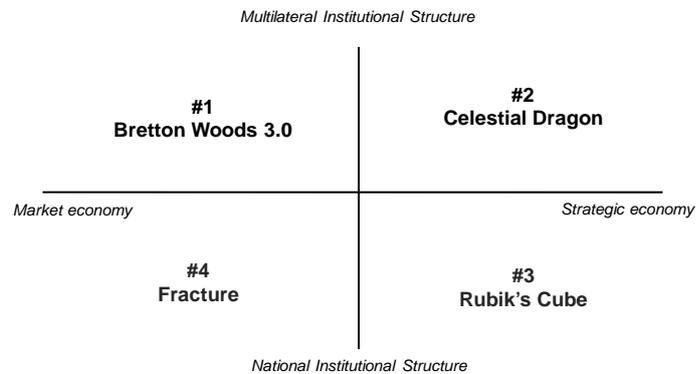
At least it is worth looking at how the IEA, the International Energy Forum and the G20 could be driven further in the direction of defining and launching initiatives to turn energy interdependence to positive effect. This could even afford one avenue for the pursuit of climate change projects and schemes for mutual support and trade regarding renewable attributes of some forms of energy production.

### Envisaging an Uncertain Future

Looking ahead to 2040 and beyond POLINARES elaborated four alternative Future World Images (see diagram below). These images build on the contrasting state of the world economic system (dominantly market vs. dominantly strategic or corporatist) and the world political system (dominantly multilateral institutional structures vs. dominantly national institutional structures):

- Quadrant #1, Bretton Woods 3.0: In this world the major powers have converged on a new set of rule-based multilateral norms which emphasize the role of markets and where balance of payments equilibrium (trade and financial flows) is central to managing rebalancing in an orderly fashion.
- Quadrant #2, Celestial Dragon: China has become the largest economic power, and has slowly replaced the US as the main player, and a more managed world is introduced. The norms and rules which underpin multilateral collaboration reflect those of China and its allies, and thus involve greater state participation in trade and investment.
- Quadrant#3, Rubik's Cube: The world has aligned itself in various competing blocks, where trade, investment, and financial markets are governed by rules of the group rather than by a global system. Governments and national companies are very strong.
- Quadrant #4, Fracture: The world is struggling with the serious erosion of the rule of international law, underinvestment, the weakness of the nation state in some parts of the world and the complete integration of the state and economy in others. Large private conglomerates compete with state companies for scarce resources and markets.

### The four Future World Images



The two cooperative images are not without tension and conflict but they do have mechanisms to balance diverging interests and prevent conflicts from escalating into violence. Image #1 represents the “success case” for the principles put forward by the EU, the US and other OECD nations. Price and volume risks remain, but will be at a relatively low level as international markets will be operating with a relatively high degree of effectiveness. In Image #2, political risk rises and competition for resources with China will be a main theme. The liquidity of some resource markets will decline, as NOC-NOC cooperation becomes a leading structure and as trade flows are more ‘organised’ along national structures.

In the two less cooperative images the hierarchy of states, firms and other organisations or groups is more pronounced than in the cooperative worlds. In other words, the distinction between rule setters and rule followers is greater, creating a situation where tension and conflict arise easily. Moreover, these two images fail to provide the generally accepted mechanisms to defuse conflicts peacefully. Price and volume risks are high. In Image #3, the world becomes much more regionally organized, and the importance of alliances for access to resources is crucial. In Image #4, many risks will be internalized along the value chain within corporations, but with the consequence that many citizens could become excluded from the communities of corporations.

## RECOMMENDATIONS FOR POLICY-MAKERS

### Adapting Policies to a Changing World

To address its energy and mineral needs, and in recognition of the changing nature of the world, the EU should take a more pragmatic and less idealistic approach to external relations with major resource producers and users, and should no longer insist that acceptance and application of its values (economic, political, social and environmental) are conditions of doing business. These new strategies should incorporate the following priorities:

- Letting commodity markets work, subject to checks and balances and backed by mutually consented institutions;
- Fostering co-investment and technological collaboration;
- Diminishing dependence on primary and non-renewable resources within the EU;
- Reinforce emerging mechanisms to monitor materials trade flows and fostering re-use or recycling where appropriate;
- Securing regional supply lines.

Whilst advocating that the EU should take a more pragmatic approach, we do not imply that it should abandon its core principles. Rather the EU should take a longer-term view by asserting these principles (such as promoting human rights, the rule of law and sustainability) by example and through successes, rather than just through advocacy, diplomacy and enforcement of international norms. Further, it should continue to take opportunities for multilateral legislation, harmonisation and standard setting as they present themselves, though without placing undue reliance or *sine qua non* conditions on their succeeding.

Such an approach to addressing international energy and resource challenges will require from the European External Action Service (EEAS) a reduction in the explicit deployment of values and norms in its external diplomatic engagements, and a much closer integration of energy and resource issues into its diplomatic strategies. This in turn will probably require the EEAS to grow in capacity and authority.

### Preparing for an Uncertain Future

The distribution of global political and economic power in the decades beyond 2020 will have a strong influence on the nature of energy and mineral markets and on the balance between cooperation and conflict in these markets. At the same time as the EU's import dependence for energy and minerals grows, its ability to influence the nature of these markets may decline. In all but one of the Future World Images (Image #1), the prevailing market norms will be quite different from those favoured by the EU today, and the challenges faced by the EU in securing access to oil, gas and minerals will be significantly greater than they are today.

As a consequence of the uncertain nature of these future challenges, the EU would be well advised to develop and pursue a range of strategies so that it is able to react flexibly and deploy whichever selection of policy instruments are needed to address emerging threats. At the same time, the EU should collaborate with the US and other OECD nations in their efforts to engage with new actors (nations and corporations) in order to reinforce market-based institutions in the energy and mineral sectors.

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## RESEARCH PARAMETERS

### Introductory Statement

POLINARES (Policy for Natural Resources) aimed to identify the main global challenges relating to competition for access to oil, gas and mineral resources, and to propose new approaches to collaborative solutions for the various policy actors, including the EU.

### Objectives of the research

The objectives of the research were :

1. To develop a better understanding of how global interactions and interdependencies relating to oil, gas and minerals have been changing and are likely to change, and what their implications are for global economic, social, institutional and security relations.
2. To identify principles which can underpin the development of new policies, new policy-making processes, and new networking systems which, in turn, can assist in promoting an appropriate balance between competition and collaboration with respect to access to oil, gas and minerals in a manner which minimises conflict and promotes sustainable economic development.

### Scientific approach / methodology

The work plan for the research was structured in such a way as to combine both theoretical and empirical analysis in order to enhance our understanding of the challenges and of how they may be addressed. POLINARES examined historical experience going back as far as the 1920s and looked forward to the year 2040. The research was inter-disciplinary, drawing on the fields of international relations, economics, law, political science, geology, resource evaluation, and technology. The project employed both qualitative and quantitative methodologies. Whilst the analyses had strong academic foundations, the outputs highlighted the policy implications.

### Appendix 1: Key research outputs from the individual Work Packages of POLINARES

#### Work Package 1 (WP1)

The aim of the first stage of this phase of the project was to provide an analytical framework for the rest of the project. This research combined an empirical analysis for the period back to the 1920s with a more forward-looking theoretically-based analysis. The research outputs include:

- Historical analyses of the oil, gas and minerals industries;
- Technical and economic analyses of resource depletion;
- Theoretical political and economic analyses of the oil, gas and mineral industries and markets.

#### Work Package 2 (WP2)

The aims of WP2 were to carry out a critical assessment of various market variables influencing supply and demand for oil, gas and minerals, to develop supply and demand scenarios for these

resources and to identify possible supply risks, in order to refine and calibrate the theoretical models and assist in the identification of sources of possible future tension and conflict by Work Package 3. The research outputs include:

- A quantitative analysis of future availability and demand for oil, gas and key minerals;
- Analyses of different aspects of Europe's import dependence;
- Examination of emerging changes in global markets for raw materials;
- An analysis of the concept of critical mineral raw materials.

#### Work Package 3 (WP3)

The aims of WP3 were to examine the current and recent practices and strategies of key actors for their use of, demand for, access to, supply and husbanding of these resources, and to identify and assess the major future risks for tension and conflict relating to oil, gas and minerals, through integration of the assessments of future supply and demand with the understanding of the behaviour of actors and the interactions and interdependencies between them. The research outputs include:

- An analysis of five themes relating to recent trends and actor strategies,;
- The elaboration of four Future World Images;
- The identification of possible sources of tension and conflict;
- Six case studies of different regions and issues.

#### Work Package 4

The aims of WP4 were to establish a set of criteria for evaluating past, current and possible future policy approaches and solutions and to understand how different approaches have been and can be used to address the identified risks and challenges relating to access to oil, gas and minerals. The research outputs include:

- A framework which includes an examination of State Capitalism, criteria for evaluating policy approaches, and a taxonomy of risks;
- An examination of different frameworks for access to natural resources;
- Nine case studies of different regions and issues.

#### Work Package 5

The aims of WP5 were to establish a set of policy approaches and options which will address the main anticipated sources tension and conflict relating to oil, gas and minerals, and which have the potential to create a more appropriate balance between competition and collaboration; and to identify the roles which the EU can play in promoting such policy approaches and options.

**PROJECT IDENTITY**

<b>Coordinator</b>	<b>University of Dundee, Scotland</b> <hr/>
<b>Consortium</b>	<b>Clingendael International Energy Programme, Netherlands</b> <b>Bundesanstalt für Geowissenschaften und Rohstoffe, Germany</b> <b>Centre National de la Recherche Scientifique, France</b> <b>ENERDATA, France</b> <b>Raw Materials Group, Sweden</b> <b>University of Westminster, United Kingdom</b> <b>Fondazione Eni Enrico Mattei, Italy</b> <b>Gulf Research Center Foundation, Switzerland</b> <b>The Hague Centre for Strategic Studies, Netherlands</b> <b>Fraunhofer Institute for Systems and Innovation Research, Germany</b> <b>Osrodek Studiow Wschodnich, Poland</b> <hr/>
<b>European Commission</b>	Domenico Rossetti di Valdalbero e-mail: <a href="mailto:domenico.rossetti-di-valdalbero@ec.europa.eu">domenico.rossetti-di-valdalbero@ec.europa.eu</a> <hr/>
<b>Duration</b>	1 January 2010 – 31 December 2012 (36 months) <hr/>
<b>Funding Scheme</b>	FP7 Socio-economic Sciences and the Humanities, topic SSH-2009-4.1.1 'Competition and collaboration in access to oil, gas and mineral resources' <hr/>
<b>Budget</b>	EU contribution: 2,678,642 € <hr/>
<b>Website</b>	<a href="http://www.polinaires.eu">www.polinaires.eu</a> <hr/>
<b>For more information</b>	<a href="mailto:polinaires@dundee.ac.uk">polinaires@dundee.ac.uk</a> <hr/>