



NEWSLETTER



GLAWCAL

Issue 5, 2014

Focus on

*UK Air Pollution; UK Environmental Policy;
A Worldwide Overview on Shale Gas.*

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Focus on

UK AIR POLLUTION; UK ENVIRONMENTAL POLICY; AN OVERVIEW ON SHALE GAS.

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his issue will begin with a focus on the UK environmental situation: the country is facing severe levels of air pollution (both from domestic agents, like diesel engines, and external causes, like dust and sand from the Sahara desert), while the government, despite mild proposals (a series of incentives to switch to renewable alternatives, for example), finds itself far from the 2020 environmental goal. Finally, the newsletter will take a closer look on the shale gas and fracking phenomenon, this time analyzing from a global point of view. While the environmental concerns remain strong and the related risks cannot be underestimated, many European politicians and leaders are looking at this new source of energy as a way to reduce the traditional dependence on Russian oil and gas.

First, we have to find a common vocabulary for energy security. This notion has a radically different meaning for different people. For Americans it is a geopolitical question. For the Europeans right now it is very much focused on the dependence on imported natural gas.

(Daniel Yergin)

UK Air Pollution

SAND AND DUST FROM THE SAHARA DESERT ARE INCREASING THE LEVELS OF AIR POLLUTION

Studies Show How Dust from the Sahara Desert Combined with Strong Winds are Causing an Increase in the Levels of Air Pollution, a Big Environmental Health Risk

One of the years' worst smog was registered this week in London. The alarming record was announced by the Met Office. The high levels of pollution forecasted are determined by a combination of strong winds and dust storms from the Sahara desert that have deposited fine red dust in southern England. Streets and cars in London were covered with thin dust. This event is expected to increase the bad quality of air. The Department for Environment, Food and Rural Affairs (DEFRA) has a 10-point scale for measuring air quality, with one meaning that there is a low level of pollution and ten warning of very high risks. The levels of air pollution hit the peak of ten in north-west Norfolk on Tuesday and are expected to reach 8 or 9 points in other parts of England during the week. According to DEFRA's research, very high levels of pollution are expected in East Anglia, in south-east England and around the Humber. Moderate to high air pollution levels are also forecast for large parts of southern and central England. Large parts of Wales, areas around Wirral and Merseyside, as well as Devon will be affected by moderate pollution levels. Studies show how these high levels of polluted air are caused by light winds and dust from Sahara, allowing the heap of pollution

Moreover, the Met Office's analysis reports that these kind of event happens when strong storms from Sahara coincide with intense winds that brings dust away. In this way dust and sand particles from the desert could easily swept away and hauled thousands of miles across the globe.



Dust from the Sahara Deposited on Cars in Canterbury, UK

In this manner, the dust gets captured in rain drops in clouds, and falls to the ground with rain. After the water evaporates, a fine layer of dust remains, and it can also create lively sunsets.

The situation is particularly exacerbated by the peculiar characteristics of the Sahara desert: it is the world's greatest expanse of sand and it can experience winds so strong that they are able to carry the dust even 5,000 miles away. According to these data, the Met Office advises that adults and children with lungs problems and people with heart disease should reduce strenuous physical exertion, particularly outdoors. In this frame, air pollution is considered a clear and serious issue. The government has the important duty to inform people about the high risks of pollution, Clean air campaigners say.

The environmental groups complain that the authorities are not doing enough, suggesting to follow the French example to offer free transport in order to reduce the pollution's impact on health. The World Health Organization has recently indicated air pollution as the world's single biggest environmental health risk, causing around seven million death a year.

To address this alarming and increasing problem, the European Commission has launched legal proceeding against the UK for its failure to cut excessive levels of nitrogen dioxide air pollution, mostly from traffic, despite fifteen years of EU warnings, extensions and postponements. In this context, the increasing levels of air pollution due to several factors have become a central issue, so it is necessary to adequately inform people about health risks, in a similar way to the serious warnings for floods and heat waves.

UK Air Pollution

DIESEL CAR EMISSIONS AS THE MAIN CAUSE OF THE ALARMING LEVELS OF POLLUTION

According to the Current Environmental Situation Characterized by High Levels of Pollution, Diesel Engine Emissions Represent the Most Dangerous Element for People's Health, Experts Say.

This week's alarming pollution is caused by dust from the Sahara desert combined with strong winds, without a doubt. However, experts show that the main threat is represented by the increasingly noxious pollution emitted by vehicles and industrial plants. Moreover, researchers have warned that the smog-like conditions will constantly increase with an expanding use of diesel cars. According to this, diesel engine emissions are considered the greatest public health challenge for UK cities.

Air pollution determined by vehicles, factories and homes has already reached high levels: this situation is also exacerbated by storms that have hauled sand from Sahara and by strong pressure over northern Europe, that is a perfect condition for air pollution. In this way, studies reveal that the pollution is a mix of traffic and power station emissions and dust from the desert. Thus, this situation is characterized by emissions from traffic and industry built up in the air and wind that has carried away more pollution from the industrial centres of continental Europe.

The pollution in the air is composed by tiny particulates, such as nitrates and sulphates, mixed with fine desert dust. The problematic situation is worsened by fine particulates coming from incomplete combustion processes, diesel engines, wear and tear from brake pads and tyres and construction sites. Dust from Sahara is blown in all directions. This represents a huge risk, due to the size of the particulates that directly influences their potential negative effects on human health. The most dangerous particulates are the smallest ones because they can easily deeply penetrate into lungs.



Tailpipe Exhaust of a Diesel Car, Emitting Black Carbon Soot



UK Air Pollution

Moreover, long-term exposure to these particles is linked to higher levels of heart and lung disease, including lung cancer, experts say.

Researchers of the Centre for Environment and Health had warned that the growing popularity of diesel cars will push air pollution levels even higher.

In this way the pollution levels are likely to rise in the coming months and years. Traffic emissions are a big and growing problem due to the alarming increase in diesel cars. The number of diesel cars have increased in Europe by 35% since 1990. Also, more than 50% of all cars in Britain are diesel ones, a huge increase from 23% in 2002. One reason for this is that cities and governments give incentives for diesels.

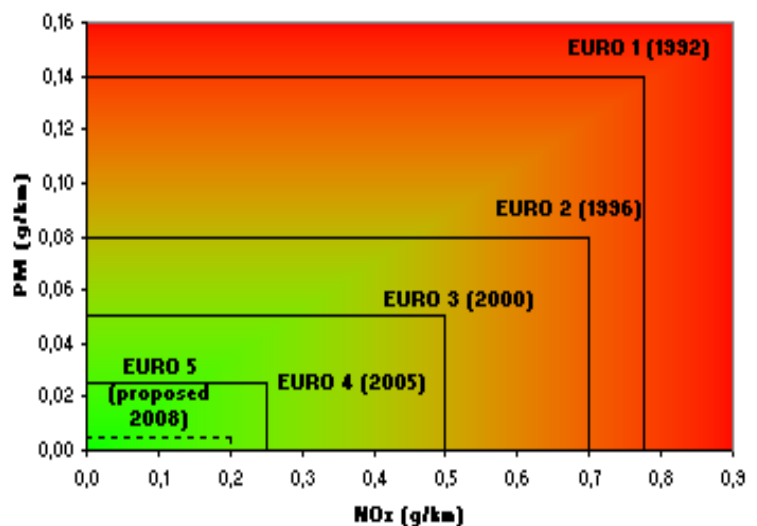
Following this, medical researches have highlighted the critical air condition: the air is now full of nano-sized pollution particles that interact with gaseous co-pollutants and penetrate the body.

This issue is one of the big challenges for public health within the urban environment.

Today there is a new kind of pollution, very different from the one of 70 years ago: now it is colourless, odourless and tasteless, and it can pass even through face masks. In relation to this, traffic is the main pollution source in cities, especially diesel engines.

Moreover, studies stress how the more air pollution from traffic is researched, the more dangerous it appears to be for human health.

NOx and PM emission standards for diesel cars



European Emission Standards for Diesel Cars

UK Air Pollution

NEW DATA SHOW DECREASING AIR QUALITY IN LONDON AND SOUTH BRITAIN

New Research Highlights that Air Pollution is Now Officially Considered the Biggest Public Health Risk after Smoking.

A new statistic published by Public Health England, an agency of the Department of Health, shows that London and south-east England have recorded the worst level of air quality in Britain, largely due to severe traffic. This study informed that, in London, 3389 people died of air pollution and 41404 "life years" were lost in 2010, while in south-east England, 4034 people died and 41728 life years were lost. Moreover, these new data highlights that Kensington and Chelsea are the most polluted areas, with more than one in twelve of all deaths attributable to tiny particles of soot largely emitted by diesel engines.

The study stresses that Scotland has the best air quality of Britain, thanks to its areas with few cars and the prevailing wind blowing off the Atlantic. To explain this situation, data indicates that only eight deaths in the Outer Hebrides, six in the Orkneys and six in the Shetland Islands, were attributable to air pollution. Additionally, Moyle was the cleanest borough in Northern Ireland and Gwynedd in Wales. Cumbria, Northumberland and Cornwall were the regions with the lowest percentage of deaths caused by air pollution in England.

The study, based on the work of the Committee on the Medical Effects of Air Pollutants, has outlined how the long-term exposure to air pollution causes 28,869 deaths per a year and 306,835 life years to be lost. According to these findings, air pollution is now officially considered the biggest public health risk after smoking.

This study is the result of the analysis of the annual average concentrations of minute man-made particles of less than 2.5 microns in diameter, known as PM2.5, and their impacts on health. These particles, above all emitted by diesel engines, cause the reduction of the visibility. In this way, the air appears hazy when levels are high. Because they are so small, they can travel deep into the lungs and cross into the bloodstream, provoking heart and lung disease, cancer, and aggravating asthma. These previsions are calculated for long-term exposure to particulate air pollution. An example of that is the situation caused by the combination of dust from the Sahara mixed with local air pollution, experienced in South Britain last week.



Air Pollution in London.

UK Air Policy

The UK is respectful of the agreed international targets for particulate pollution. On the other hand UK is being taken to court by the European Commission for consistently missing targets for another air pollutant: NO₂. This represents another strong health risk, interacting with particles and other chemicals in the air. It is known that diesel fumes are more damaging to health than those from petrol engines.

Additionally, researches show that the health problems caused by diesel cost the NHS more than 10 times as much as comparable problems caused by petrol fumes. According to the UN's World Health Organisation, diesel exhaust is one of the main cause of cancer and was comparable in its effects to secondary cigarette smoking.

Following this, it is shown that levels of particulate air pollution in the UK create a significant impact on the life expectancy of the population. To face this situation the UK government has to tackle measures to reduce pollution at 15% by 2020.



The Purple Area Shows "Very High" Levels of Pollution Recorded at Monitoring Stations.



UK Environmental Policy

FINANCIAL INCENTIVES TO SWITCH TO RENEWABLE ENERGY ALTERNATIVES.

The Government has Announced a Plan to Give Incentives to Homeowners in Order to Support the Use of Renewable Energies.

The UK government has announced its intention to offer payments of thousands of pounds to homeowners who choose to follow renewable energy alternatives, leaving the use of expensive, dirty oil for heating.

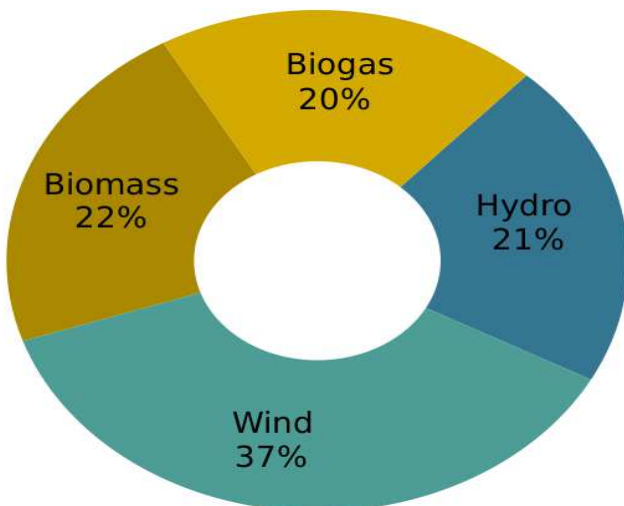
This proposal is included in the government's most extensive program which has the goal to cut the carbon emissions from heat. It represents the first strategy in this field.

The domestic renewable heat incentive's program was meant to launch in 2012 but has been repeatedly delayed, until now. It offers financial incentives for low carbon heating technologies, including boilers that burn wood pellets.

According to the Climate Minister, this innovative project shows the UK's commitment in the fight to climate change, at the forefront in the clean energy sector. In this way, people will have the benefit of warmer houses and cheaper fuel bills. Moreover, they will receive payment to install new technologies, reducing carbon emissions. This program is included in a long-term economic plan that will generate growth and support jobs, opening up a market for the supply chain, engineers and installers.

The government will give incentives for various technologies such as biomass boilers, solar thermal systems providing hot water, ground source heat pumps which draw heat from warmth underground and air source heat pumps extracting heat from the air outside a home.

The project has been strongly endorsed by the renewable energy industry and rural groups. The installation of low carbon heating technologies into energy efficient homes represents the best solution to achieve a cheap, affordable and clean energy, the Sustainable Energy Association says. Additionally, as the Country Land and Business Association has outlined, this plan will guarantee the possibility to reduce the heating bills safeguarding the environmental safety at the same time.



UK Renewable Energies' Policy



UK Environmental Policy



Some of the Incentives Concern the Installation of Solar Panels or Solar Thermal Systems which will Provide Hot Water.

These incentives are different from the 2010 feed-in tariffs for solar panels, paying just for heat generated for use at home.

The main global purpose of the program is to create an adequate renewable heating system able to compete at the same level played by fossil fuel. The payment will be issued every seven years and will compensate the owners, including the costs of borrowing money to pay for the installation. In order to obtain the incentives, citizens will have to verify that the technologies used will be appropriate for their property: heat pumps work at much lower temperatures than a standard boiler, so they are most suited to insulated buildings, ideally with under-floor heating. For instance, the biomass boilers are bigger than an oil boiler, requiring more space to store the fuel, which must be kept dry. Solar thermal panels are not useful with electric showers, since most of the generated hot water won't be used.

In this frame, these financial incentives for homeowners off the gas grid will play a central role in order to switch to technologies such as biomass boilers.



UK Environmental Policy

CAN GM CROPS ADDRESS UK RISK OF FOOD SUPPLY?

UK's Official Science Adviser Suggested to Rethink EU Regulations on GM Crops as a Challenge to Guarantee Food Supply for the Future

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We take it for granted that because our supermarket shelves are groaning with food, there are no problems with the food supply, but there are". With these words, the UK government's chief scientific adviser has encouraged to modify the restricted EU regulations on GM crops that could put at risk future food supplies.

David Cameron's official science advisers suggested to change EU regulation for the use of GM crops as a forefront solution to face problems such as rising global population, limited farmland and climate change that are now the main threats for the UK food supply.

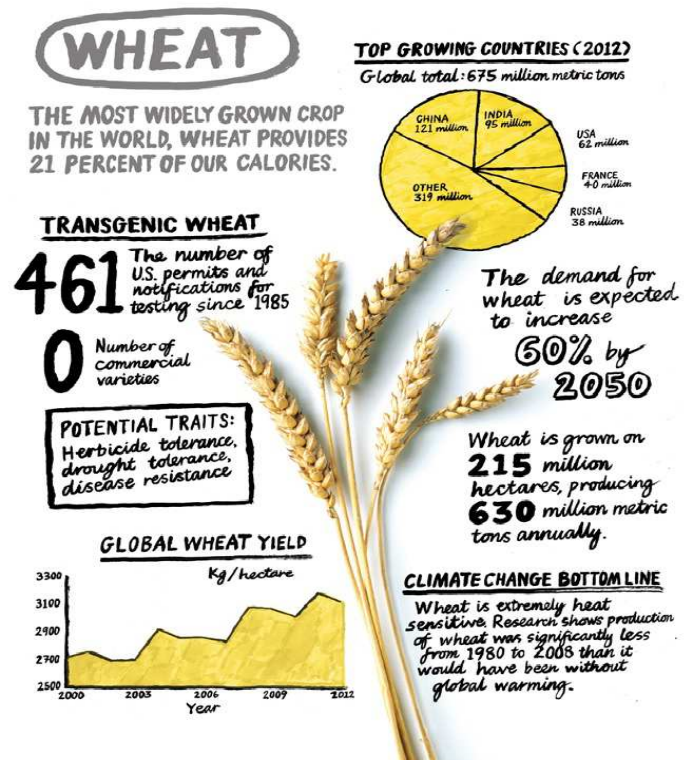
According to extensive studies, science experts argued that genetically modified crops could be more nutritious than naturally produced and that there is no scientific evidence suggesting that such crops are dangerous to humans or the environment. Scientists could add nutrients to the genetic make-up of plants, making them even more beneficial to health.

In this way, scientists recommended that farmers should start planting GM crops to strengthen secure future food supplies, creating a benefit to UK's economy. Moreover, making plants more resistant to many types of diseases, will reduce the need for pesticides and will be positive for the environment. Even if only one GM crop has been approved in Europe since 1998, other regions are planting more GM crops each year. Most of the world's cotton and soy are genetically modified and other crops including papaya, maize and rapeseed are benefiting from this new technology.

Scientists suggesting the use of GM crops highlight the contradictory fact that Europe has been significantly importing GM animal food, meaning that animals are safe eating GM food, unlike humans who don't get this option.

On the other hand, despite encouraging scientific reports that express the lack of risks for humans, part of the public opinion still have doubts about the benefits and the possible damages for health.

To discourage this skepticism, scientific promoted a global strategy for agriculture to integrate the best of biotechnology with traditional elements, to account the needs of large and small farmers and to stay open-minded to address future problems of food supply in the specific climate situation of the UK.



Info about Transgenic Wheat



UK Environmental Policy

EUROSTAT SHOWS HOW BRITAIN IS FAR FROM ITS 2020 RENEWABLE ENERGY TARGET

According to the Eurostat's Report, the UK is One of the Lowest Producers of Renewable Energy in Europe, Far from Achieving its Goal for a Green Growth.

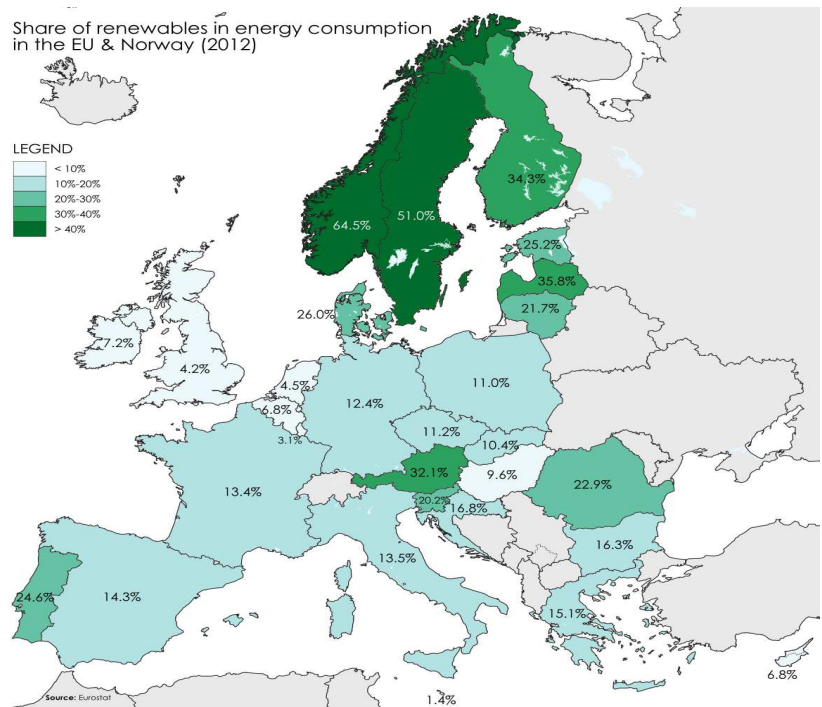
A recent study, published by the European Commission's statistical body Eurostat, has shown that Britain is the third lowest producers of renewable energy in Europe, far from its sustainable energy targets for 2020. This study considers the use of renewable energy in a time frame between 2004, when the aim were decided, and 2012, when the first data were available to be analyzed.

This report highlights that Britain is the third least producer of renewable energy within the 28 European states involved to reach the green energy targets established for 2020.

According to Eurostat's analysis, the UK generates just 4.2 per cent of its energy from green sources. Data shows that only Luxembourg and Malta are experiencing worse results.

Following its policy, Britain has strengthened its commitments increasing the contributions from 1.2 per cent to 4.2 per cent over eight years but still leaving a great 11.8 per cent to overfill before 2020.

The Department of Energy and Climate Change (DECC) has reaffirmed the purpose to achieve a cost-effective renewable energy and also a secure, balanced and low-carbon energy mix. Moreover, the Government has explained its plans to reach the 2020 renewable energy target. According to that, data shows the UK has already exceeded its interim goals to generate renewable energy and that it is on the right way to achieve the target of 5.4 per cent for 2013/2014.



Share of Renewables in Energy Consumption in UE

Despite this improvement, the UK continues to be far away from its 2020 goal. To achieve the established objectives, the DECC has distributed £40 million in funds to help the green energy production. A better situation has been recorded in countries as France and Germany with contributions of 13.4 per cent and 12.4 per cent, ten times better than Britain's one.

In spite of the efforts to tripling its commitments for sustainable energy and for a green economy, and the attempt to reach a long-term decision in the fields of environment, climate change and energy, the UK is still below its target of a 15 per cent of all energy created with renewable means.

To conclude the analysis of the European energy consumption, Eurostat reports the praise worthy situation of countries like Bulgaria, Estonia and Sweden who have already reached their goals for 2020, also showing how Norway with its 64.5 percent of energy produced sustainably is the leading nation in the frame of a green growth.



An Overview on Shale Gas

SHALE GAS RESTRICTIONS NOT INCLUDED IN NEW EU DIRECTIVE: SIGNS OF A SETBACK?

The Decision of Excluding Shale Gas has Raised Different Answers in the Way to Reduce the Negative Effects of Climate Change on the Environment



EU Commissioner Janez Potočnik in Vilnius: No Shale Gas Ban Under Discussion

On Wednesday, March 12th, the European Parliament approved a new Directive on Environmental Impact Assessment (EIA) that impose tougher rules for oil and conventional gas exploration to reduce the impact of climate change, in particular on biodiversity.

This decision represents a significant headway in the fight of climate change's negative effects. It establishes specific rules on biodiversity and climate and imposes greater transparency in the procedure to facilitate public participation through the creation of a central portal and new rules on conflict of interest. Moreover, this new assessment creates penalties for violations of the rules resulting in a stronger limitation of the possibility of use exemptions.

This proposal has been welcomed by the industry because it allows more flexibility and avoids unnecessary restrictions on the imminent projects.

In the same way, Shale Gas Europe's spokesman said that "Shale gas could potentially play an important role in meeting Europe's acute energy challenges."

On the other hand, Green politicians disapproved immediately. The decision to leave out shale gas as a negative step backwards would not only open the way to the acceleration of the fracking process but would also be a great risk for health and the environment. In this sense, the environmental impact assessment procedure must be the absolute minimum at the forefront in the environment safeguard.



An Overview on Shale Gas

NEW PERMIT CONDITIONS TO AVOID TREMORS CAUSED BY FRACKING

Geologists Highlight for the First Time the Link between Drilling and Small Earthquakes Recently Registered in Ohio.

In Ohio, it has been announced for the first time the link between earthquakes and fracking. This finding comes from state geologists who have connected earthquakes in a geologic formation deep under the Appalachians to gas drilling. Following this result, the state has established new permit conditions in certain areas, permits that are among the nation's strictest. A state investigation has analyzed five small earthquakes happened last month in the Youngstown area, in the Appalachian foothills. The injection of sand and water that accompanies the fracking in the Utica Shale may have increased the pressure on small tremors, said the State Oil & Gas Chief, who defines this link "probable".

Previous researches had explained that earthquakes in the same region were caused by deep-injection wells used for disposal of fracking wastewater. This study makes a breakthrough: for the first time, tremors in the region have been directly tied to fracking.

The oil and gas drilling targets are widely different due to the various rock formations around the nation. Additionally, the types of earthquakes connected to the industry are generally small and not easily felt. However, these findings could have great importance and influence the public perception of fracking's safety.

The fracking's process involves pumping huge volumes of water, sand and chemicals underground to split open rocks allowing oil and gas to flow. An improved technology has allowed energy companies to gain access to huge sources of natural gas but has also raised widespread concerns about the risk of groundwater contamination and earthquakes.

Seismologists confirmed the link between quakes and fracking. In addition to this, a deep-injection wastewater well in the same region was found to be the likely cause of a series of quakes in 2012.

Ohio's new permit requirements, probably the most cautious, put in place in the nation, established that all new drilling sites within 3 miles of a known fault or other seismic activities of 2.0 magnitude or higher will be required to install a sensitive seismic-monitoring equipment, and the results will be directly available to regulators. In this way, if a seismic activity of 1.0 magnitude or greater is recorded, the drilling will be suspended for evaluation: if a link is found, the process will be halted. According to the director of Ohio's natural resources department, although there is not an absolute certainty that the fracking activities are linked to a seismic events, the government should plan strategies in order to protect human health, safety and the environment.

The Ohio's authorities have also imposed an indefinite drilling moratorium at the site of the recent quakes, allowing oil and gas extraction to continue at five existing wells.

Although the seismic activity connected to the drilling has been defined "extremely rare", these new rules imposed by the government have been positively endorsed by the industry group Energy In Depth as adequate measures to prevent similar future earthquakes in Ohio.



Environmentalists Fear that Fracking Could Cause More Quakes if it Expands to California.



An Overview on Shale Gas

PROPOSAL TO CREATE FRACK-FREE ZONE TO PROTECT UK ENVIRONMENT

Conservation Groups Suggest to Safeguard Some Areas from Shale Gas Extraction Considered a Cause of Water Pollution

Conservation groups suggest to create "frack-free zones" to protect the environment from shale gas extraction, to preserve rivers from pollution and valuable wildlife sites. The report commissioned by the National Trust shows how more than 500 sites designated by the government for their importance to wildlife are located within areas currently under licence to fracking companies and others will be affected in the next licensing round. The question about the hydraulic fracturing or fracking is quite controversial because there is little knowledge about its full consequences on underground or surface waters in UK. The technique of fracking involves pumping sand, chemicals and water underground to extract shale gas trapped in rocks. An alarming result of this practice could be the contamination of water and ground due to the leakages of methane caused by the failure. Shale gas extraction could add to the current problems of water pollution. Moreover, this situation highlights a lack of regulation on shale gas exploitation calling for a more stringent control on industries. Researchers say that commercial-scale fracking would threaten wildlife and the water environment. They report the lack of significant government decision to face these risks, with a great impact on climate, countryside and wildlife. For these reasons they suggest to create protected wildlife areas, nature reserves and national parks, to safeguard the environment from pollution caused by fracking, as was reported in the US.



Brent Friends of the Earth's Protest against Fracking Outside Willesden Green Station.

Although UK government says that current laws are strong enough to address the risk, there are special favours granted to the industry, including tax breaks, a quick route through the planning process and no requirement to take out insurance against pollution that make easier for industry to surpass environmental rules.

To address these critiques, the chief executive of the UK On Shore Operators Group proved how US has managed to cut emissions and energy prices maintaining investment in low-carbon technologies such as renewables and increasing investment in manufacturing industries.

Environmental friendly groups specify that the use of water in the UK shale gas industry could worsen pressure on rivers and wetlands, threatening also fish populations. The only way to avoid these risks is to strengthen the environmental protection and regulatory frameworks before the water pollution and groundwater contamination become irreversible.



An Overview on Shale Gas

THE OTHER SIDE OF THE COIN: NEXUS BETWEEN FRACKING AND THE USE OF WATER

The US Experience Can Show us the Way to Follow

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owadays the fracking industry is experiencing a widespread development, especially in US.

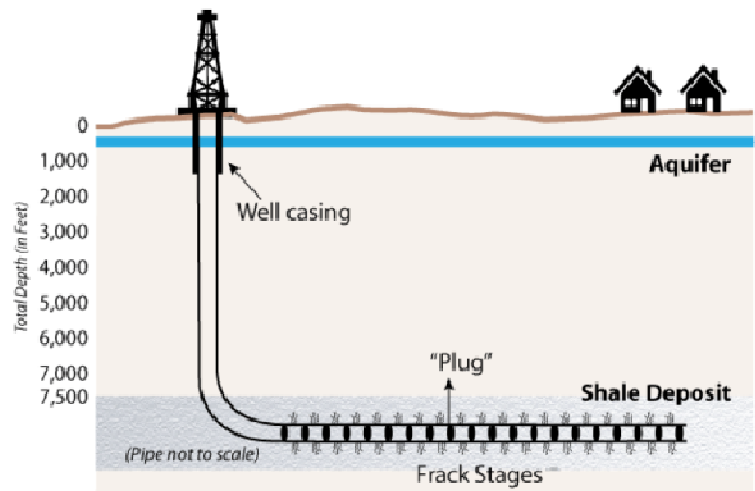
For this industry water represents a key resource, at the same time raising debates for its crucial role.

The theme of fracking and its impact is often mentioned by media, but is still uncertain and not well understood by policymakers, the business community, and other stakeholders who are affected by the industry's widening presence. While countries in Africa, Asia, Europe and the Middle East are analyzing their shale energy resources' viability, issues as water sourcing and pollution still represent an increasing problem for the environment and the industry's viability, too.

Data shows that more than 60% of the countries with the largest shale oil and gas reserves as China and South Africa are placed in areas with medium to extremely high competition for water resources. In this frame, oil and gas companies, regulators and NGOs can learn from the US shale gas experience.

First of all, the main question is related to the use of limited water resources for the fracturing process. Secondly, the risks of surface and groundwater contamination from surface accidents, and spills and poor wastewater management play a significant role. The specific location, the sources and the competing uses of water highly influence the importance of these matters.

The fracking industry has rapidly developed in the US. Despite stringent regulation about shale gas and oil, water use effect represents a central theme, above all in arid areas with competition for limited water.



Any Breach of the Well Casing Would Endanger the Aquifer.

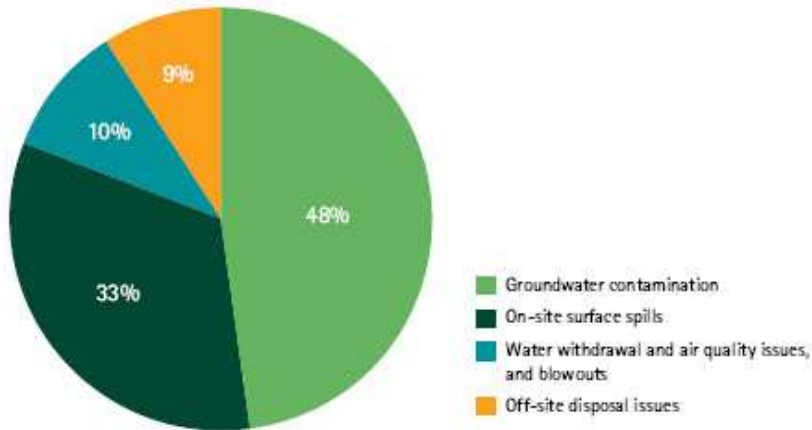
In this way, the questions of the industry's interest should be related to the needed quantity of water and its origin, and trying to find a way to recycle it. Moreover important issues should be related to the use of alternatives sources and, most important, to the impact on local hydrology and also to the effects on water users. Recent researchers highlight challenges from the US experience that regulators and stakeholders can learn from.

Fracking and subsequent oil and gas extraction produces a great volume of contaminated wastewater, so disposal represents a key question. In the US, most of the wastewater returning to the surface is released into streams after treatment, injected into federally regulated disposal wells or recycled, a popular strategy due to its low cost.



An Overview on Shale Gas

Figure 2. Chart of water contamination incidents related to gas well drilling.



Source: Massachusetts Institute of Technology 2011 Gas Report.

Some of the Water-Related Dangers Connected with Shale Gas Exploration

In UK and EU, the coexistence of the EU directives and the possibility of an "unconventional fuels directive" may preclude such low cost and speedy disposal of large quantities of oil and gas wastewater. In addition to this, another significant challenge is the loss of groundwater resources: studies have shown that groundwater levels are falling and that recharging those aquifers can take years. Moreover, localised impacts are another concern: in the US the actual extraction is well concentrated in some counties, avoiding the dispersion of sites.

Thanks to the US example, co-operation to scale and increase regional recycling operations and using non-potable water resources, management about differences in site geology and hydrology represent the way to follow and the objectives to achieve.

In conclusion, as the fracking industry is globally expanding its presence, it is essential that water security continue to stay under the spotlight as a precious commodity for everyone to preserve.



An Overview on Shale Gas

SUPPORT OF THE UK GOVERNMENT TO SHALE GAS EXPLOITATION TO ACHIEVE ENERGY INDEPENDENCE

The UK Prime Minister Has Explained the Benefits of Shale Gas in Order to Reduce Europe's High Energy-Dependency Rates

The UK Prime Minister David Cameron has again re-emphasized policy of support to the development of shale gas industry in UK, underlining the lack of a full understanding of the phenomenon at the base of the opposition to this policy. Energy security is one of the most significant geopolitical challenges of our time.

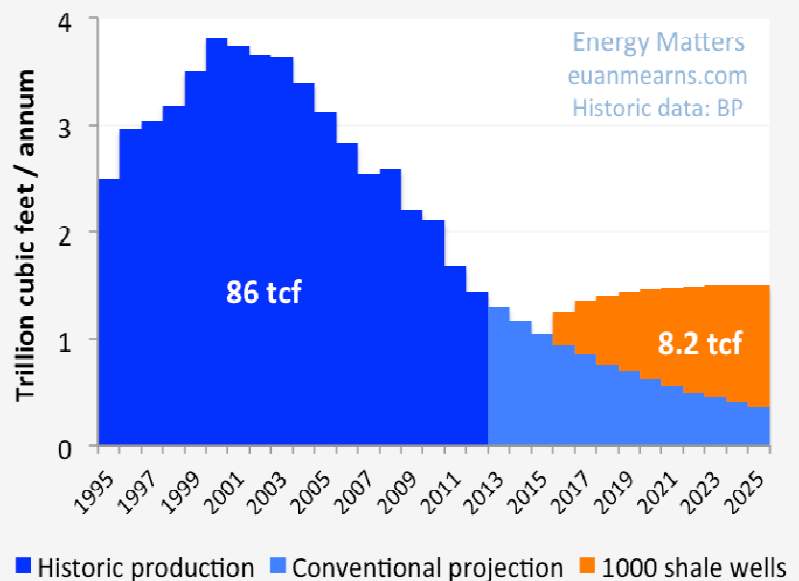
Cameron has highlighted that the use of shale gas reserves could significantly reduce the European reliance on exports from Russia. The current Ukraine crisis has shown that it's very urgent and fundamental for Europe to find alternative sources of energy, also in light of Russia's great influence on oil and gas supplies for the continent.

According to Cameron's view, UK will become more energy-independent with the exploitation of shale gas reserves. Moreover, functioning shale gas wells will be able to address people's worries about shale gas effects, directly involving the local communities, showing them that shale gas could be a good technology for the country and explaining the correct process of fracturing and its results.

The European Union has affirmed its intention to create a stronger policy for energy security, in the wake of Russia's actions in Ukraine.

According to this, the UK government has specified its aim to achieve the energy independence and to complete the goal of better conditions for a single energy market, important for Europe's global competitiveness.

UK shale gas production scenario, 100 new wells / year



UK Shale Gas Potential and Perspective

Although Britain is not totally reliant on Russian gas, some countries are almost 100% reliant on Russian reserves. To reach this objective, the UK government has also pointed up that many areas as in south-east Europe and potentially in Poland and the Baltic states have good quantity of this unconventional gas.

Dependence on foreign energy is a broader challenge that, as in the case of Ukraine, can have very tangible consequences for Europe.

In relation to this, Cameron has indicated that the energy independence and the use of different sources of energy is an absolute primary aim in the agenda, in order to reduce Europe's high energy-dependency rates.



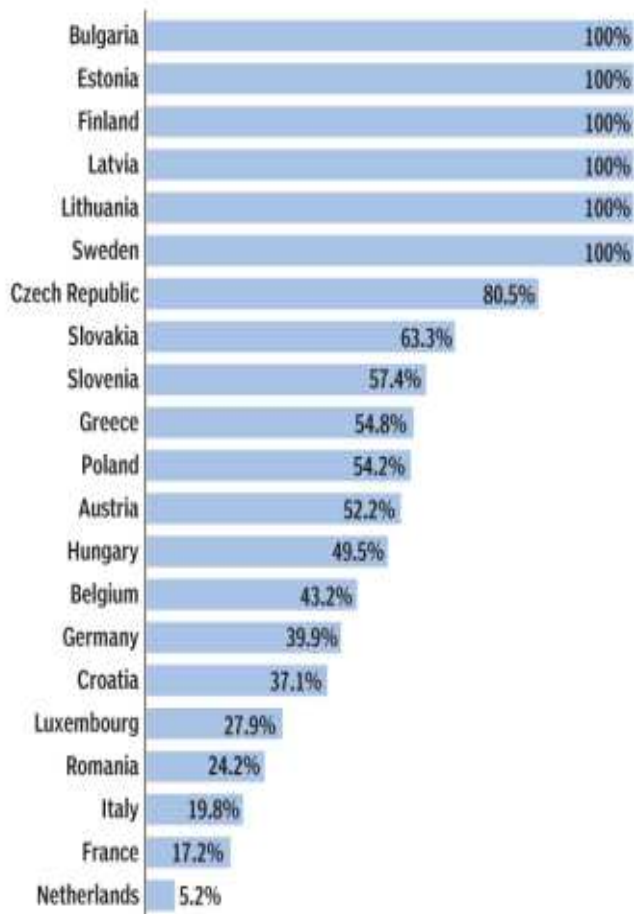
An Overview on Shale Gas

AMERICAN SHALE GAS FOR EU AS A WAY TO REDUCE THE DEPENDENCE ON RUSSIAN OIL AND GAS

In the Frame of the Controversial Ukraine Crisis, President Obama Has Announced the Willingness to Export Shale Gas in Europe.

EUROPEAN UNION DEPENDENCE ON RUSSIAN NATURAL GAS

PERCENTAGE OF NATURAL GAS CONSUMPTION DERIVED FROM RUSSIAN NATURAL GAS



SOURCE: CONGRESSIONAL RESEARCH SERVICE

ANDREW BARR / NATIONAL POST

P

resident Barack Obama has announced a free trade agreement to promote American export of gas to Europe, in order to reduce the energetic dependence on Russia. The energy and gas itself represent important issues in the current geopolitical context. Moreover, according to the US policy, energy is a central topic due to its significant impact on the global economy.

The Energy Ministers of the G7 have pledged to find a way to diversify the energy sources of the European Union to cope with the difficulties related to crisis in Ukraine; in addition, US president Obama has highlighted the willingness to export shale gas to European countries, to limitate the current dependency on Russian oil and gas.

Regarded to that situation, the US and EU have decided to discuss stronger sanctions against Russia in case of further incursions into Ukraine; they have affirmed that the annexation of Crimea has violated the principles of international law.

Moreover, president Obama has expressed his favor of the European sanctions, including visa bans and frozen bank accounts, previously taken against Russia and number of Russian officials. These consequences were taken after Russian forces moved in to annex Crimea: accordingly, Russia should be penalized again with deeper sanctions in case of other similar events.

In the turbulent frame of Ukraine crisis, the US and EU have agreed on a strong, robust and powerful package of trade, economic and financial sanctions, creating a collective defense to tackle the controversial matter of energy.

The Chart Shows Europe's Severe Dependence on Russian Gas.

gLAWcal activities

Conferences and Workshops

Paolo Farah has presented a paper on “**New Offshore Natural Gas Resources in the Levantine: a Legal, Geopolitical and Economic Perspective in the Light of the Constantly Changing Energy Relations Among Europe, China and Russia**”, Paper presented at the Conference “*Stormy Waters, Bright Horizons? China and Europe’s Changing Roles in the West Asia / Northern Africa Region*” organized by the Woodrow Wilson International Center for Scholars (Washington, D.C.), Torino World Affairs Institute (Turin, Italy) and Ministry of Foreign Affairs in Italy and Turkey, held at University of Turin, Turin, Italy, 27-28 June 2014

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WHO ARE WE

gLAWcal is an independent non-profit research organization (think tank) that aims at providing a new focus on issues related to economic law, globalization and development, namely the relationship between international economy and trade, with special attention to a number of non-trade-related values and concerns.

Through research and policy analysis, gLAWcal sheds a new light on issues such as good governance, human rights, right to water, rights to food, social, economic and cultural rights, labour rights, access to knowledge, public health, social welfare, consumer interests and animal welfare, climate change, energy, environmental protection and sustainable development, product safety, food safety and security.

All these values are directly affected by the global expansion of world trade and should be upheld to balance the excesses of globalization.

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