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Conclusions

ENGLISH VERSION

ENKRATEIA PROJECT
European Observatory on Fracking and TTIP

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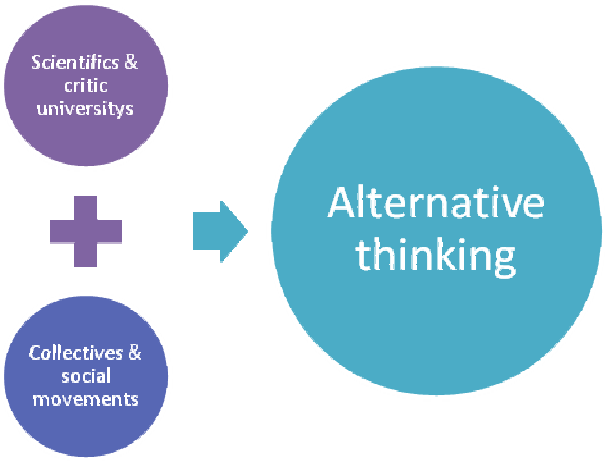
1 Introduction

"…but, I believe that we also have the obligation to take some of the things we are thinking about and present them in a more comprehensible fashion to a wider public. We should think about how people will read this and how they will draw their own conclusions. I don't believe that those of us that work in universities know the world any better than anybody else. When I work with social groups I notice that they know what they want and that they are better at getting it than I am. It's not my job to tell them what to do — I wouldn't dream of doing that for a second! But perhaps I can be useful when they want to know how what they are doing is related to what is occurring in capitalist societies. Or what the relationship is between what they are doing and the struggle against capitalism. If they want to reflect on this relationship, we can sit down together and try and understand what they are doing in terms of wider-ranging questions and practices. I believe that in the universities we try to develop a panorama about how economies work, or how politics can be applied in practice. And at times, this is useful for political organizations and social movements. Thus, I feel that it is necessary to create spaces in the universities for progressive ideas and establish closer links with social organizations so that we can learn from them and they from us regarding how to carry out the political struggle."

Interview with David Harvey (2014)

Harvey gives an everyday view of the alliance between social movements and science that is characteristic of the socio-environmental conflict that is taking place at the end of the 20th and beginning of the 21st century. "Sit down together and try to understand". This situation has been repeated hundreds of times over the last 25 years — local people, social activists, ecologists, experts and intellectuals have sat down at the same table to debate, exchange ideas and generate new ways of doing things that will benefit the common good and social majorities.

Modernity and technical progress have turned our societies into complex structures and knowledge of how our world works has become an essential and strategic need. Socio-environmental movements not only question unfettered development models but also act as outlets for alternative proposals regarding how the world should be run if we are to ensure an adequate standard of living for all on an inhabitable planet.



We must go further and, as Harvey says, revolutionary scientists and experts must also make the links that connect all the resistance to this uncontrolled development model more patent, and help understand how things work, the capitalist socio-economic system based on continuous growth and expansion, and the accumulation of capital in just a few hands. Beyond the capital-labour contradiction appears the contradiction between capital and the land – or even between capital and the planet – in which the natural environment is seen as a simple resource to be used to feed the motor driving an irrational model that gives priority to the accumulation of wealth by a few over the common good.

In this dialogue between science and social movements the inputs come from both sides. Scientists provide activists with knowledge on which to base their criticisms and struggles, as

well as rational and possible alternatives. Likewise, popular mobilizations act as transmission belts that convert critical knowledge into a specific political programme that can act in a particular territory. These movements also help experts understand what social demands should be transformed into lines of scientific investigation and how we can improve our democracies by popularizing the ability to take decisions on complex subjects.

Thus, we believe that the socio-environmental conflict has helped democratize our societies. Knowledgeable popular pressure groups have arisen that are made up of people who are worried about the future of their immediate surroundings. These people are no longer willing to allow social and political elites to decide what – supposedly – is good for local people.

Even so, the influence that these new social groups have is still unconsolidated and dependent on the local context, and the powers-that-be work to reduce their influence (local autonomy is questioned when town councils are overruled by governments at higher administrative levels).

Nevertheless, and beyond the simple profit motives that are behind the promotion of so many questionable projects, we are witnessing a clash between different ways of seeing the world. Despite the fact that more and more people are now aware that the uncontrolled velocity that our civilization has attained could lead to a total collapse, the majority of people still believe in the myths of progress and unlimited growth.

Even so, the dominant oligarchies still link their development projects that have such high environmental and social costs to increased material well-being and the creation of employment.

Thus, it is very important that, when we think of social alliances, we pay special attention to the trade unions. Their views on the politics of unchecked growth are an essential part of the struggle given that they have tens of thousands of members in workplaces. Winning the battle of ideas on this particular stage will be fundamental. Social movements and political organizations must opt for constructive dialogue with the unions involved in the struggle. We must give priority to the alternative proposals that include as a non-negotiable condition the need for ‘fair change’ in which workers will not have to pay the price of any transformation towards a more rational socio-ecological model.

These new realities will also affect current scientific models. Science will have to leave the supposed neutrality of its ivory towers and bring science and learning to society and, in doing so, improve our democracies.

A paradigm of all these reflections is the fracking conflict. The alliance between science and social movements, clear talking and the vast fund of knowledge that experts have provided the local people who are up in arms about the impact of this aggressive extractive practice have helped make more people more aware of what is going on. Even at local level, political groups that are ideologically in favour of greater development have come out decidedly against fracking. This dialogue has enabled us to go even further and incorporate the values of a new energy culture into our societies.

Yet, it is not enough to simply oppose abusive extractions in our local areas since we must also work towards a new social model based on efficient alternative energy sources that will substitute fossils fuels. We must leave this blind dependence on oil and other fossil fuels that we have had for 150 years and move towards a type of society that has much more respect for our planet.

2 Informative conference

The conference in Barcelona and Riudaura was attended by a total of 70 people from Finland, Poland, Denmark, Bulgaria, Romania, Greece, Croatia, Germany, France, the United Kingdom, Switzerland, Scotland, Catalonia, Spain and, indirectly via French collectives, Morocco and Algeria.

“We live in a predatory economic model. To continue existing, we are increasingly transforming our surroundings” Àlex Casademunt CST.

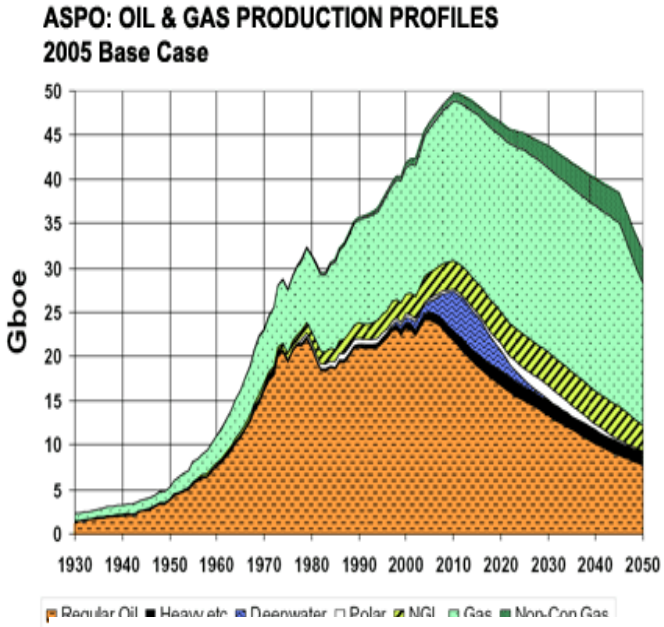
3 Fracking: the background

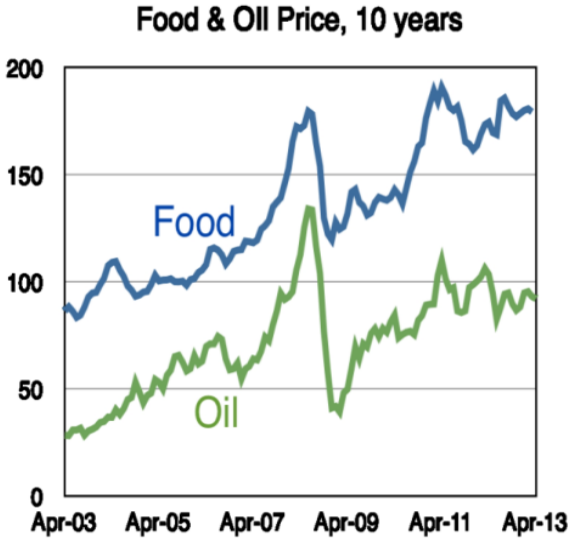
3.1 Energy crisis

The use of fracking is a direct consequence of the exhaustion of the conventional oil reserves that have been exploited since the 19th century. Since 1920s, these fossil fuels have enabled industrial society to grow as they permit the expansion of transport systems and the access to cheap and efficient energy resources.

Currently, it is calculated that easy-to-extract oil – that is, the cheapest oil – is running out, a situation that has led to price rises that have made techniques such as fracking economically viable despite the large financial investment required and the low energetic return (i.e. the difference between the energy used during the extraction process and that derived from the extracted oil).

The upsurge in fracking is further proof that we are reaching the limits of our planet's geological and ecological resources. The capitalist logic of profits and the fact that there is no need to reflect any ecological impact in a company's financial statements mean that serious social and environmental damage is inflicted on various parts of our planet. There is an urgent need to change the current model and substitute it with one that is environmentally and socially more just. Nevertheless, the direction that this systematic crisis is heading would seem to suggest that fracking is not the way forward — indeed, the reverse is true and the struggle to extract the few natural resources that the planet has left (above all, oil) is merely enabling a rich elite to perpetuate itself and provoking conflicts throughout the planet. Those who have monopolized the world's riches are happy to see 99% of the world's population living in poverty, only consuming a small part of the planet's ever-shrinking resources; this is preferable to doing what is really necessary, i.e., socialize the world's resources to begin to decelerate growth and to use the remaining resources in a more sustainable and equitable fashion.





3.2 Oil dependence and capitalist speculation

The current neo-liberal phase of capitalism is based on the ability of capital to make huge profits selling illusions and impossible projects rather than worthwhile ideas that could actually be fulfilled. These illusions are generated unethically by playing with the needs of a particular region or territory — for example, the need for jobs or improved energy supplies. Fracking forms part of this process and could one day become one of the most dangerous of all fictions created by this economic model, since its implementation will postpone the taking of important energy-related decisions.

Currently, there are hundreds of potential fracking concessions scattered throughout Europe and the planet as a whole. This technique is highly aggressive and guarantees no more than poor energy returns. These concessions are usually awarded despite strong local opposition to the potential threat to a region and its ways of life. Many analyses have already described why we have reached this impasse regarding the extraction of fossil fuels, which can be summarized as follows: we are at the end of a cycle due to an energy crisis provoked by the rise in fossil fuel prices (above all, oil) caused, in turn, by the exhaustion of easily extractable – and, thus, profitable – deposits.

If these potential concessions for fossil fuel exploration were geologically viable, the problem would be to decide whether or not to award such licences based on socio-environmental criteria and with the participation of local people. Yet, today's neo-liberalism does not bear current realities in mind since they do not generate profits and so projects are sold whether or not they are viable, and money is made via deceit (i.e. speculation) that give rise to false expectations. The organization of a large-scale spectacle is thus commonplace even when it is known in advance that the project will not be viable. This fiction aims to convince other people, private investors and investment funds to assume the risk (profit for a few, risk for many). These economic bubbles are complicit with the credit rating companies who, in the case of fracking, qualify fracking concession packets for companies as a good risk without studying whether they are geologically viable or not. This process is inherently risky, just like the sub-primes in the crisis of 2008.

Thus, it is essential to study fully whether projects are possible or are just fictions; and if they are false, then they should be denounced and a law created that penalizes legally these purely speculative projects.

Nevertheless, what is truly important is to find alternatives to current models. As an alternative to fracking, we should be looking to renewable energy sources, the socialization of energy and the creation of an energetically much more efficient society (i.e. collective transport, cooperative housing, etc.). Thus, we must incorporate scientific culture into anti-fracking social movements so that protests can wield arguments against speculation and promote alternative projects.

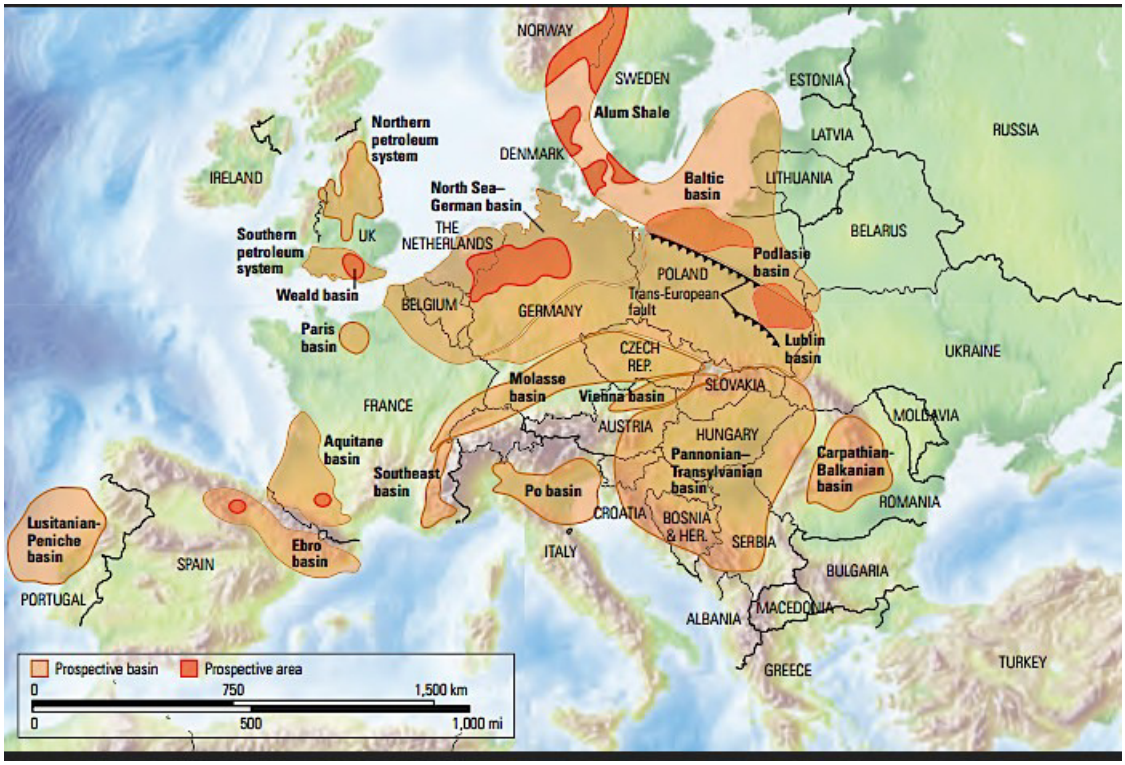
3.3 Hydrocarbon geology in Europe

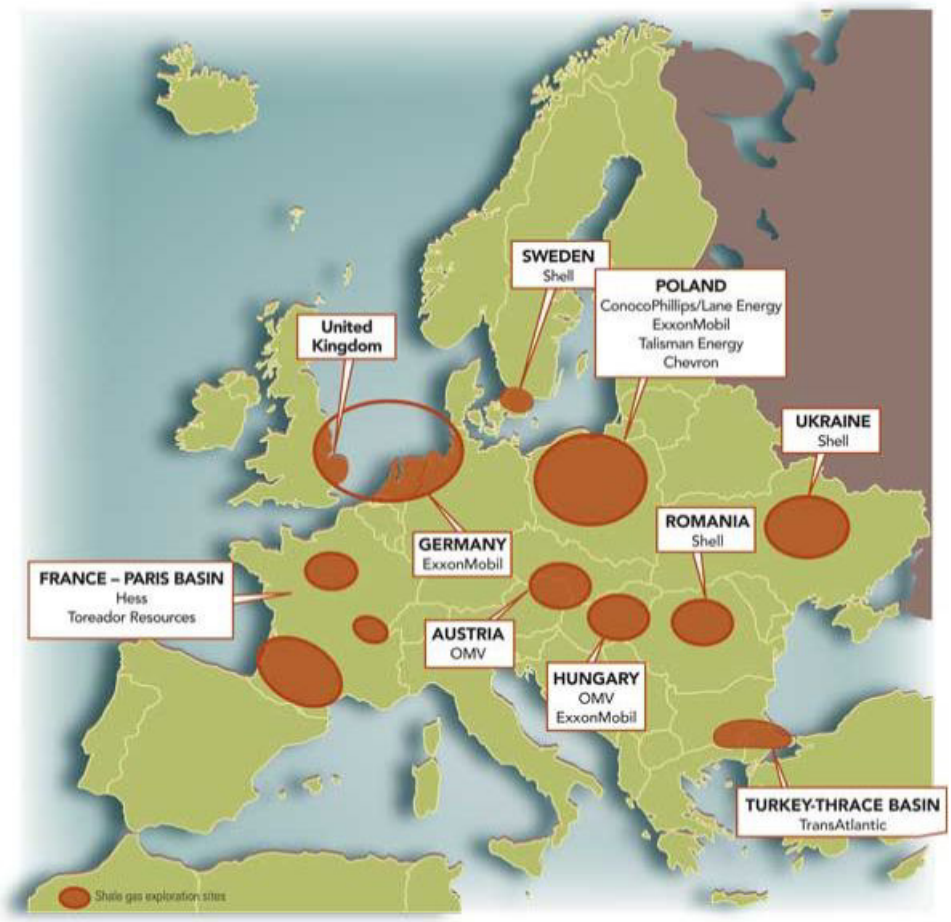
Not all of Europe is geologically appropriate for the existence of oil and gas reserves or even for reserves whose exploitation is economically viable (above all, gas).

In an article in *Nature* in February 2013, Dave Hughes explained that shale gas is not economically viable; indeed, it is a simple case of “a financial bubble orchestrated by Wall Street", in the words of Deborah Rogers from the Energy Policy Forum. What about oil in only slightly porous rock? This type of deposit has not been found in Europe, where only shale gas is talked about. This is because there are fewer deposits of this type and they are more expensive to exploit given the associated geological and social realities. What is known as shale oil is only marginally profitable and, unlike shale gas, the majority of whose deposits are economically unviable, it can generate moderate profits in a few cases where deposits contain liquids that will make commercial exploitation worthwhile. Nevertheless, the perspectives for shale oil production are poorer than for shale gas and even the International Energy Agency recognises that production of shale oil will always be at best marginal.

To date, shale oil resources have only been extracted by fracking in the USA due to the strength of its economy, the grants that the industry have been awarded and limitless stock-market speculation. Such a system would be far from viable in Europe.

Increasingly distant from the decadence of this type of exploitation in the USA, lobbies in Europe still blindly talk of the profits to be made. Meanwhile, dozens of groups of local anti-fracking activists, ever better prepared and coordinated, are mobilizing to try and stop the awarding of exploration licences. The battle is becoming entrenched but it is clear that there will be no winners and the most likely outcome is that everyone loses — unless, that is, common sense prevails in the search for a true alternative energy policies.

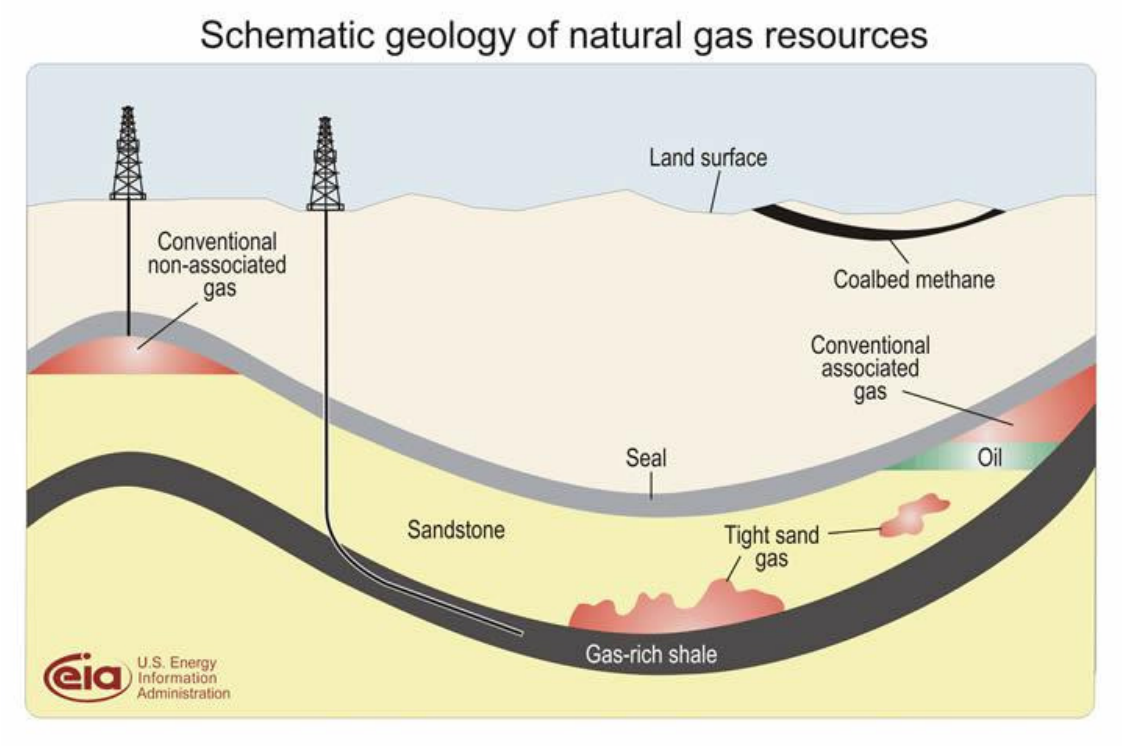




3.4 Hydrocarbon exploitation

To date, fossil fuel extraction has involved the exploitation of 'conventional' hydrocarbons (oil or gas); however, modern fracturing techniques aim to extract 'non-conventional' hydrocarbons. The difference between these two types of fuels is pertinent: 'conventional' hydrocarbons are stored in porous or permeable subterranean reservoirs out of which the oil or gas will flow to the surface if the reservoir is breached or perforated. This 'ease' of extraction means that the exploitation of hydrocarbons up to the present has been focused almost exclusively on extracting 'conventional' reserves where the fuel is stored in the pores or open spaces between the rocks.

The 'non-conventional' hydrocarbons encompass a large and heterogeneous group of hydrocarbon deposits that include: (a) gas hydrates also known as clathrates that are generated and stored in deep marine sediments deposited on the seabed; (b) oil sands, or sand with bitumen (a mix of heavy hydrocarbons) that fills the pores; (c) coal bed methane (CBM), natural gas, methane, associated with coal seams. The gas is retained in fractures and, essentially, absorbed in the rock matrix (coal); (d) tight gas: natural gas retained in very compact rocks, sandstones or limestones, with very low permeability; and (e) shale oil and shale gas (the object of this report), hydrocarbons stored in lutites and other rocks. These types of lithologies represent the mother rock of the hydrocarbons: rocks with very fine grains, rich in organic material and with very low porosity and permeability. In other words, shale oil and shale gas are hydrocarbons, gas or oil, that are stored in the mother rock in which they were generated. Shale oil and, above all, shale gas are non-conventional types of hydrocarbon deposits whose exploration/production has undergone a boom in recent years, a fact that has generated considerable media attention. The world's gas reserves associated with these type of deposits are highly significant.



3.5 Fracking

Hydraulic fracturing entails the drilling of a vertical shaft down to the normally permeable target rock layer. The perforation consists of a steel pipe, covered in cement to protect the surrounding groundwater from the chemicals that are added to extract the oil.

When the shaft reaches the rock layer that stores the hydrocarbons, the perforation then continues in a horizontal direction through the target bedrock. This well can run for anything between 1 and 3 km. Explosives are used to create small fractures and then thousands of tonnes of water, mixed with sand and chemicals, are injected at very high pressure. This high-pressure mix fractures the rock and liberates the gas it harbours, which then returns, together with the water, sand and chemicals, to the surface (a return of 15–80% of the total injected fluid).

The well is fractured in 8–12 stages, which means that the shaft is subject to great pressure with the consequent risk of damaging its cement housing. The chemicals that are added to the water include benzenes, xylenes and cyanides, in total up to 500 different products, some of which are known carcinogens and mutagens. Many of these chemical substances have not even been classified and so the risks that their use implies is totally unknown.

The return fluid also brings with it to the surface other substances that may be present in the target rock layers. These rocks often contain heavy metals (mercury, lead), as well as radon, radium and uranium, all radioactive elements that would also be brought to the surface. This return fluid is stored in decantation pools. All in all, fracking is a technique that, despite recent improvements, cannot be fully controlled or guaranteed as safe since there is no way of knowing in advance how the rocks to be exploited will react.

This technique is technologically very advanced but implies a series of high environmental and social risks:

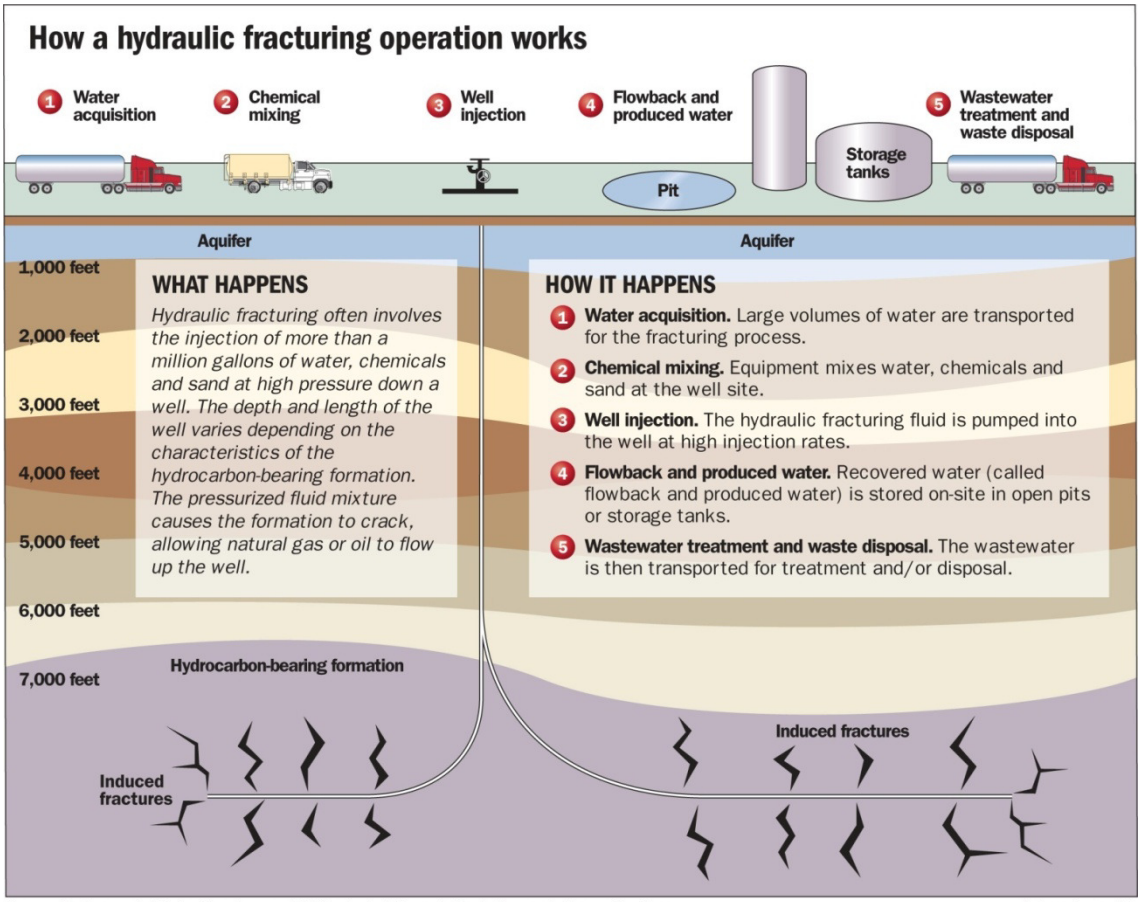
a) Danger of contamination of the groundwater due to the use of chemical products. A part (20%) of these chemicals will not return and will be left in the subsoil. This could lead to contamination of the deep and superficial groundwater if the perforation shafts are not properly installed.

b) Over-exploitation of the groundwater given that this technique uses a lot of water. Injections of 12,000–24,000 m^3 are habitual and equivalent to 12–24 Olympic swimming pools.

c) Traffic and noise associated with heavy industry. These exploitations are essentially heavy industrial installations, which implies an intense transit of heavy vehicles in rural areas with consequent negative affects on local quality of life and health.

d) Impact on the landscape due to the large size of these installations, which occupy a surface area greater than a football pitch. In a rural area, this will have a serious impact on the landscape and be a visual blot on the landscape that will be multiplied throughout the exploited territory.

e) Small earth tremors provoked by the injection and extraction of water if there are fault systems in the area.

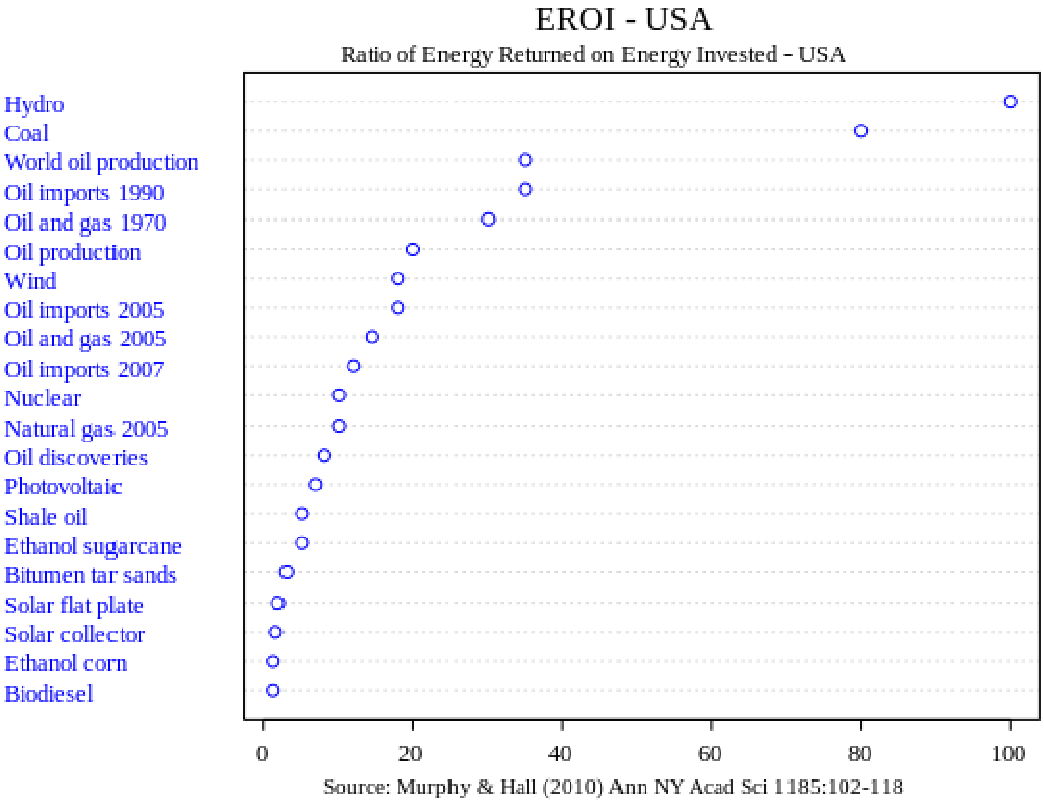


Source: Environmental Protection Agency, LSU Geological Survey's Basin Research Energy Section

Advocate graphic

3.6 The EROEI of different sources

For any given energy source, the EROEI is the quantity of energy returned in relation to the amount of energy expended to obtain that energy. In order to obtain energy from a particular source, amongst other factors, it is necessary to (a) build and operate machines to search for the energy; and, in some cases, (b) perforate rocks, (c) process the extracted material before they are refined or purified, and (d) prepare the terrain and construct infrastructures for their subsequent use. A good energy source is one that, aside from other properties, can be exploited on a large scale without causing serious environmental impact, which thus will have a high EROEI. Examples of EROEIs in the USA:



4 Fracking conflicts in Europe

Poland

Over the last five years 25 perforations have been made in Poland using fracking techniques and so there many places where we will have to fight. One of the companies involved in exploiting fossil fuels is Chevron. It seems that pressure from anti-fracking platforms has been successful and that the local governments have taken sides with the activists. This is one of the reasons why the national government has revoked some of the licences. However, the situation will become more complex in 2015 since the Polish government aims to pass a new law on hydrocarbons that will foment hydrocarbon exploitation and effectively provide *carte blanche* for investors. It is a very dangerous law because it empowers a representative of central government to take decisions at local scale without allowing local communities to have a say. Local regulations will no longer have any teeth or any function.

Bulgaria

Fewer fracking licences have been issued in Bulgaria than in Poland but local anti-fracking activists must not drop their guards. In 2011, the national government awarded a perforation licence to Chevron that will enable it to carry out extractions in NE Bulgaria, an area with a great richness of hydric resources and underground lakes. Popular protests began almost immediately and a number of people began to work to avoid the destruction of part of this natural area. In 2011, a platform was set up to begin an awareness-raising programme. There were few protestors initially but after a few months activists were able to convoke a demonstration that was a success throughout the whole country. Even people living abroad such as students have joined the struggle.

Greece

There is no real threat from fracking Greece at the moment, although there is an area near the Turkish border where the possibility of awarding a licence is being studied.

England

The United Kingdom is one of the most worrying cases since dozens of licences for extracting minerals using fracking techniques have been awarded to a number of different companies by David Cameron's government. According to Cameron, this type of extraction will enable the country to reduce its energetic dependence on other countries and create employment. Many licences have been handed out and the number could grow if the Conservative government approves all the applications that have been made. Over half of Great Britain (64% according to the British government) harbours important mineral deposits in the subsoil. The most important natural shale gas deposits are in the centre-west of the country at a depth of one kilometre.

The government is favourable to non-conventional extraction methods and the fight is very difficult. The government claims that fracking is well regulated but the truth is that legislation on the question is being toned down, For example, the waste generated by depredatory fracking will not have to be removed from the local area and perforations will be permitted in protected areas and/or natural parks.

Scotland

Scotland has also been the subject of applications for fracking licences. There are fewer difficulties for anti-fracking campaigners than in England, although there are areas in which a number of companies are interested in drilling to extract fossil fuels using fracking. "To win over local opinion, these companies have said that they will ensure that 2% of the profits made in an area will be given to local businesses", explains a Scottish activist, making it very clear on which side of the question s/he stands. The people of Scotland say "Extractions are not viable. There are few resources in this area. There is no sense in allowing companies to drill there. We need sustainable development and cannot continue growing with limit".

The possibility that fracking would be permitted in the region has mobilized a number of groups of people. One of the successes of their fight is to have persuaded the Scottish government to protect an area of 2 km^2 in which fracking activities will never be able to be carried out. The aim of these collectives is to hold popular votes and thus let local people give their opinions. A territory must have participative planning in which local communities can choose what elements – tangible and intangible – must be protected at all costs. Thus, Community Charters have been drawn up, which represent a true declaration of intentions, to which local councils and communities can adhere if they wish. It is not just a question of energy but of local democracy. These activists are carrying out awareness-raising tasks aimed at getting the maximum number of people actively involved, and at putting pressure on the Scottish executive to make it more aware of the need to protect the territory.

Romania

Like other countries, Romania depends on gas imported from Russia for its energy supplies. Nevertheless, its dependence is somewhat less than neighbouring countries as it has its own energy resources, above all in the Black Sea region. Yet, this has not prevented the Romanian government in recent months from awarding a number of fracking licences to companies such as Chevron.

In light of the real danger of the spread of fracking in this country, activists have begun to mobilize. It has not been easy to get people involved and during the first activities few people were present. Nevertheless, bit-by-bit the work of environmental groups is beginning to bear its fruits.

The affected people and towns live off agriculture and will be seriously affected if the companies that aim to carry out fracking extractions contaminate the subsoil. Scientists have helped activists in transmitting important technical knowledge to society in general.

Catalonia

The intention to carry out prospection in rural areas of central Catalonia, the Ebro valley and the along the Mediterranean coast was announced in 2012. At that point, we had no idea of what the word ‘fracking’ meant but once we found out and realized just what impact it could have on our country and population we decided to start mobilizing.

Thus, the anti-hydraulic fracking movement *Plataform Paremos El Fracking* was born in 2012. Its initial strategy was to attempt to forge alliances with local groups and local institutional representatives. The pressure finally paid off and the Catalan government banned all extractions of this type in the country.

However, our celebrations only lasted a little while since the Spanish government appealed to the Spanish Constitutional Tribunal (TC), claiming that the Catalan government had gone beyond its legal prerogatives. The TC temporarily suspended the Catalan law banning fracking whilst it debated a more definitive position. Finally, the TC has accepted the Catalan government’s posture and, after the lifting of its temporary suspension, the Catalan law is back on the statute books.

The main media sources are clearly influenced by the energy lobby and the Spanish government has attempted to bribe certain town councils into accept fracking within their municipal boundaries.

France

There is no danger from fracking in France since on 13 July 2011 the French government passed a law that prohibited this type of extractive activity throughout the whole of the country.

The law was greatly celebrated by activists and hit the companies that had previously been awarded perforation licences hard. One of these, the Texan company Schuepbach, who had been awarded licences to explore in Nant (Aveyron) and Villeneuve-de-Berg (Ardèche), decided

to take this change in legislation to the French high court. However, in record time, the French Supreme Court resolved the four appeals that had been presented in favour of the French government.

The highest French court decided that the government had acted correctly when implementing a moratorium on fracking. In this way, all previously awarded prospection licences that implied the use of fracking technology were automatically revoked.

Denmark

The Danish government has awarded a number of licences permitting perforations, which has caused a wave of protests. The French company Total (which is also active in the UK) is one of the companies that aims to extract shale gas using hydraulic fracturing, specifically on the Jutland peninsula in northern Denmark. The protest actions include the establishment of a camp near the one of the prospection sites, where anti-fracking platforms have been set up and protests organized throughout the country. As well, the activists have created a press department that will enable them to be present in the local media and therefore increase the number of people they reach.

Germany

A number of multinational companies are interested in investigating and exploiting some of the reserves that exist in northern Germany. However, the Germany government does not seem very willing to allow them. The government has said that it will defend above all the environment and underground water supplies, and that any law passed will be very restrictive regarding the use of hydraulic fracturing. It is likely that one of the limitations that will be imposed will be on the depth: fracking will only be possible in areas where deposits lie at over 3,000 m below the surface. This clause has irritated some of the companies that want to invest in the country since they claim that the largest reserves are 1,000–2,000 m below the surface. Fracking will be prohibited in sensitive regions such as protected areas and/or natural parks, and areas where there are aquifers that supply cities with drinking water. The new law has provoked some protests by certain sectors and opposition politicians in some of the country's federal *Lände*.

Valencia (Castellón)

For the time being only one company – Montero Energy, a subsidiary of the Canadian company R2 Energy – has taken any interest in possible fossil fuel reserves in the Valencian Autonomous Region. The regional government has not opposed the Canadian company's proposal (as is to be expected) and has no intention of preventing explorations. Nevertheless, the possibility that fracking may be permitted has created a serious outcry.

The most affected area is the province of Castellón, where Montero Energy wants to carry out a number of explorations to determine whether or not there are sufficient reserves in the subsoil. The affected territory covers 200,000 ha in 41 municipalities, in which the company aims to obtain exclusive rights to undertake exploratory drilling.

Local activists have mobilized and have created a platform to coordinate the struggle. At the moment they are organizing information sessions in the affected towns and have sent a petition to the European Parliament.

Switzerland

Fracking did not reach Switzerland until 2013 but soon set the alarm bells ringing in environmentalist circles. During the following year, a number of companies came to the country with the aim of being granted licences by regional governments (in Switzerland the authority over the subsoil lies with regional and not central government) to begin explorations. Businesses immediately began to negotiate with local officials. But local people in affected areas got together and sent a number of petitions to the regional authorities. The most important request is that the administrations protect the water in the subsoil, a measure that would halt all prospections and explorations.

Cantabria

Cantabria stands out as the first autonomous community in Spain to ban fracking activities. After a series of demonstrations, in April 2013 the regional parliament approved unanimously to prohibit hydraulic fracturing. However, as happened subsequently in Catalonia, the joy did not last long. The Spanish government appealed to the Spanish Constitutional Tribunal (TC) claiming that the Cantabrian regional government had encroached on the competencies of central government. The TC passed sentence a year later on 24 June 2014, declaring that the regional government's law was unconstitutional and that energy policy – including gas extraction – depended on central government.

The Tribunal did, however, leave the door open to local regulations in Cantabria that would take into account 'the singularity of the territory'. Taking into account the way forward suggested by the different people, the region is currently debating a new law that will establish specific protection areas.

CEE Bankwatch

The public institutions that participate in the funding of fracking in Europe include the European Investment Bank and the European Development and Reconstruction Bank. They are both run by neo-liberal sympathisers and, via the concession of credits to multinational companies working in the fossil fuel extraction sector, are facilitating the spread like an oil stain of hydraulic fracturing throughout in Europe.

To change this situation, greater control is needed over these entities and a limit must be put on the amount of fossil fuel extraction that they can finance. Another important task is to make public how the European Development and Reconstruction Bank awards credits to companies in a very unaccountable fashion to avoid both any public outcry and any calls for these public banks to act for the general good and not just for private interests.

The situation in the North Africa

It is very difficult to identify all the operators that are working in gas extraction in Algeria (one such company is Repsol), and it is possible that some companies are using hydraulic fracturing without any type of licence. Algeria is one of the world's principal gas producers and exports 68% of its production, almost exclusively (90% of its total exports) to European Union countries.

Like Algeria and Morocco, Tunisia is an ideal area for experimenting with fracking since there is no effective environmental legislation and businesses are very secretive about how they operate. These countries' governments need the funds that fossil fuel extraction can provide and are happy to open doors to foreign investors by offering all kinds of fiscal advantages to multinationals. These companies will then take all of their profits produced by the activity out of the country. One of the areas most affected by fracking is southern Tunisia, an area where extraction has traditionally being carried out and for where the government has been awarding licences since 2012.

In Tunisia it is known that some companies are conducting fracking operations illegally. It is essential that the lorries and machinery that go to extraction areas be monitored in order to discover what kind of techniques are being used.

Fracking engineering

Fracking consists of injecting liquid into the subsoil. This liquid contains water and sand, as well as other chemical products. The probability that fracking has negative effects on the environment are high. The chemical additives are the most dangerous part of the process, even once the well or exploitation has been closed. Those that defend fracking say that there is no possibility of contamination since once the extraction is finished, the wells are closed off with a concrete seal. But, the concrete does not close all of the fracture and leaks can occur that will cause surface contamination. Explained rather more graphically, fracking is like scraping out the remains from the bottom of the bucket!

5 Problems for local communities

5.1 Democracy – no communities are consulted (anywhere in Europe)

The administration that decides on fracking must be rooted in the 21st and not the 20th century and so when it comes to awarding licences it must act transparently and encourage participation, and avoid acting in an opaque and/or authoritarian fashion. Thus, the following criteria must be fulfilled when decisions have to be made: (a) transparency: new digital technology ensures that all documentation generated by official reports can be published on the Internet; (b) communication of and response to social demands: experts and mediators must be available to visit the territory to explain and listen to local reaction to projects, and must act in a transparent fashion, be knowledgeable about the subject and be committed to their task; (c) technical evaluation of the project: the administration must seek expert evaluation based on data and facts of technical aspects of the project and the company involved.

5.2 Environmental impacts in rural landscapes

a) Danger of contamination of groundwater supplies due to the use of chemical products. It is calculated that a part (20%) of these products cannot be re-extracted and remain in the subsoil. This can lead to the contamination of both the deep and surface aquifers if the perforations are not carried out properly.

b) Overexploitation of the aquifers given that fracking requires large amounts of water. Typically, injections of 12,000–24,000 m^3 are necessary, the equivalent to 12–24 Olympic swimming pools.

c) Traffic and noise associated with heavy industry. These exploitations are essentially heavy industrial installations, which implies intense transit of heavy vehicles in rural areas with consequent negative affects on local quality of life and health.

d) Impact on the landscape due to the large size of these installations, which occupy a surface area greater than a football pitch. In a rural area, this will have a serious impact on the landscape and be a visual blot on the landscape that will be multiplied throughout the exploited territory.

e) Small earth tremors provoked by the injection and extraction of water if there are fault systems in the area.

5.3 The rural economy in danger

Hydraulic fracturing is not compatible with other economic activities such as agriculture and tourism and so it is essential to analyse whether the loss of income in these sectors will be compensated for by the profits from the mining activity.

In certain countries there are regions that appreciate that their principal attraction is the peace and quiet they offer and their landscapes. Thus, they restrict certain types of harmful economic activity that will damage the quality of their regions. Most of the fracking concessions are in areas that can boast tranquillity as a one of their principal attractions.

5.4 Saving peaceful places

The quality of calm experienced in places with mainly natural features and activities, free from disturbance from man-made disturbances, should not be underestimated.

Europe needs to promote policies that will defend the right of people to live in a healthy environment and so the protection of the environment in which people live should be declared as of public interest. As well, we should flee from the anthropocentric view of rights and accept

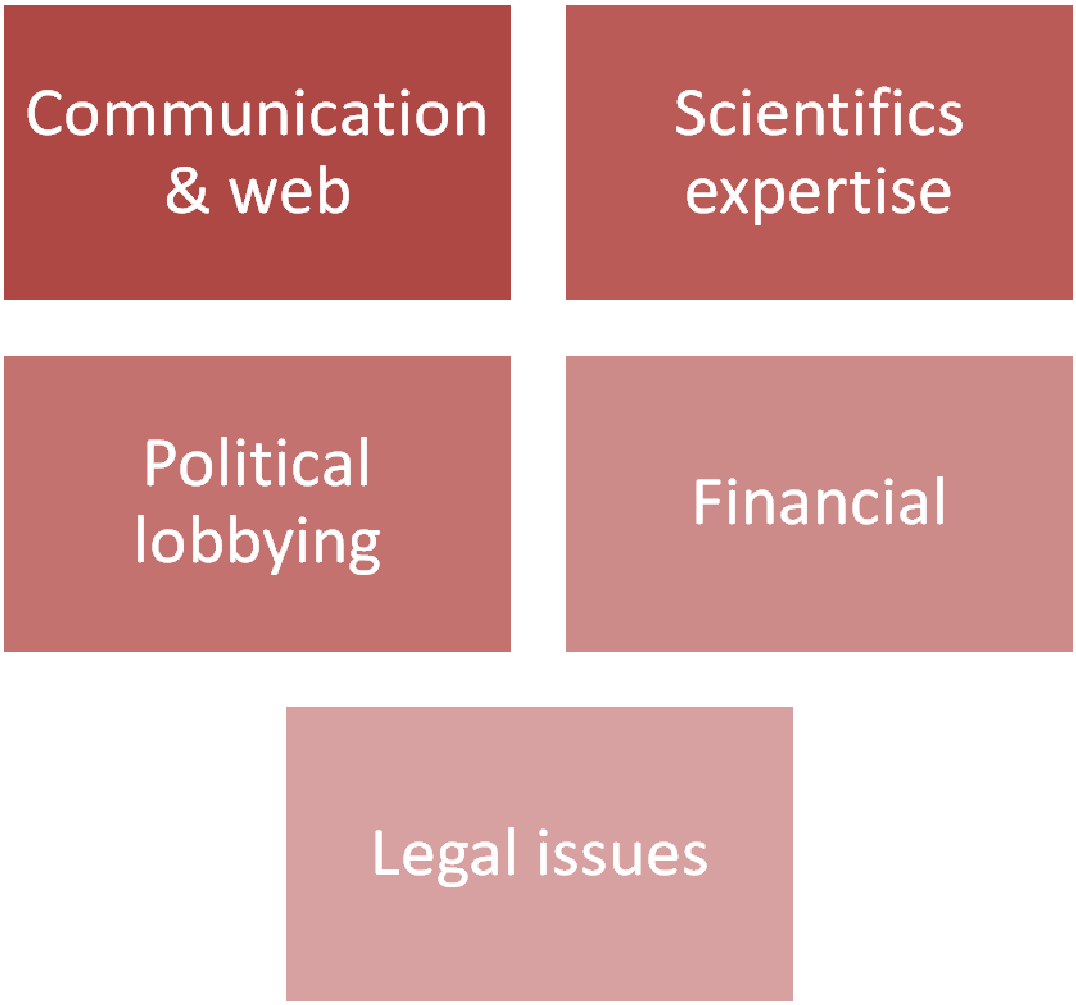
that nature too has rights, whose observance can be demanded by any person, people, community or nationality. One of the rights of nature is the application of “precaution and restriction measures in all the activities that can lead to the extinction of species, the destruction of ecosystems or the permanent alteration of natural cycles”. Hydraulic fracturing must be subject to these considerations — and not just because some of the concessions currently being mooted lie within areas that are part of the Natura 2000 network of protected areas.

The defence of intangible values such as silence is important in a society in which the health of local inhabitants and the environment should be a priority. We will create unhealthy societies if we fail to conserve these values.

6 Conclusions

6.1 The common project and work groups

The collectives working to combat fracking are organized into these four work groups:



6.2 Actions

6.2.1 Creating a Community Charter for all anti-fracking municipalities and other municipalities and official bodies

Creating a Community Charter helps give your community a powerful say in its future. We'll help you map and name the things you value, to protect and sustain your local economy and ecology in the long term. http://www.communitychartering.org/

6.2.3 Sign the Kobach Resolution

http://www.resolution-korbach.org/

6.2.4 Support the anti-TTIP and anti-TAFTA campaigns

The new strategy of the companies that extract shale gas in the USA but lose money selling gas locally at low prices. These communities don't believe that they can stop the spread of hydraulic fracturing in their regions. Moreover, the fall in gas prices provokes a loss in annual income. Today, the law in the USA states that exports of hydrocarbons can only be made to countries that have signed a free-trade agreement with the USA. Taking advantage of the conflict in the Ukraine and arguing for an end to dependence on Russian supplies, companies in the USA (and the administration) are putting great pressure on the UE to sign as soon as possible the TTIP/TAFTA; gas liquidification installations are already being built on the east coast of North America.

We must oppose this dangerous and manipulative strategy by:

- working together with the American anti-fracking groups to stop the exploitation and exportation of shale gas to the UE;
- demanding that decision-makers in the UE and members states accelerate the transition to new renewable energy sources and promote energy saving.

The European Network against the TAFTA/TTIP agreement is very active and includes over 200 organizations. A day of action is to be held on 18 April 2015. Our collective should take part in this event. The informal ICE TTIP has been set up with the aim of collecting two million signatures by October by promoting the campaign in those countries that have collected enough signatures: Poland, Bulgaria, Romania, Czech Republic, Slovakia, Estonia, Latvia, Lithuania, Sweden, Denmark, Greece, Italy and Portugal.

The International Platform against the TTIP expresses its opposition mainly through the ISDS (Investor State Dispute Settlement). The specificity of our mobilizations against extreme hydrocarbons; we must oppose the TTIP in all its facets and, above all, emphasize the danger that this free-trade agreement supposes for the principle of precaution and REACH (Registration, evaluation, authorization and restriction on the fabrication and import of chemical products in the UE).

The World Social Forum will be held in Tunis (24–28 March 2015) (https://fsm2015.org/) and includes many activities related to shale gas, extraction and corporative impunity.

Three workshops will be organized by Attac Francia, Friends of the Earth Europa, Frack-free Europe-Francia Group and Tunisian Eco-Conscience and Alternative Youth Networks

- Resistance to multinational extractive oil, gas and mining companies;
- The shale gas industry in the world: inventory by global citizen networks;
- International anti-fracking network for COP21 in Paris.

November 2015 - COP21: Climate Summit in Paris:

How can we link our anti-fracking movement to climate change? The weekend of 30–31 May is the first day of international demonstrations. All local initiatives are possible.

Organized by:

. Plataforma Aturem el Fracking de Catalunya
. Riudaurajunts
. Centre per la Sostenibilitat Territorial
. Alba Sud

supported by:

. Diplocat. Public Diplomacy Council of Catalonia
. Transform
. ESF
. Barcelona City Council
. Riudaura Village Council
. CCOO (Catalonia)

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. Fundació Alternativa
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. Unió de Pagesos
. No TTIP Catalunya
. ATTAC