

# Discourses and values underpin public debate on fracking in Spain: a case study at the crossroad

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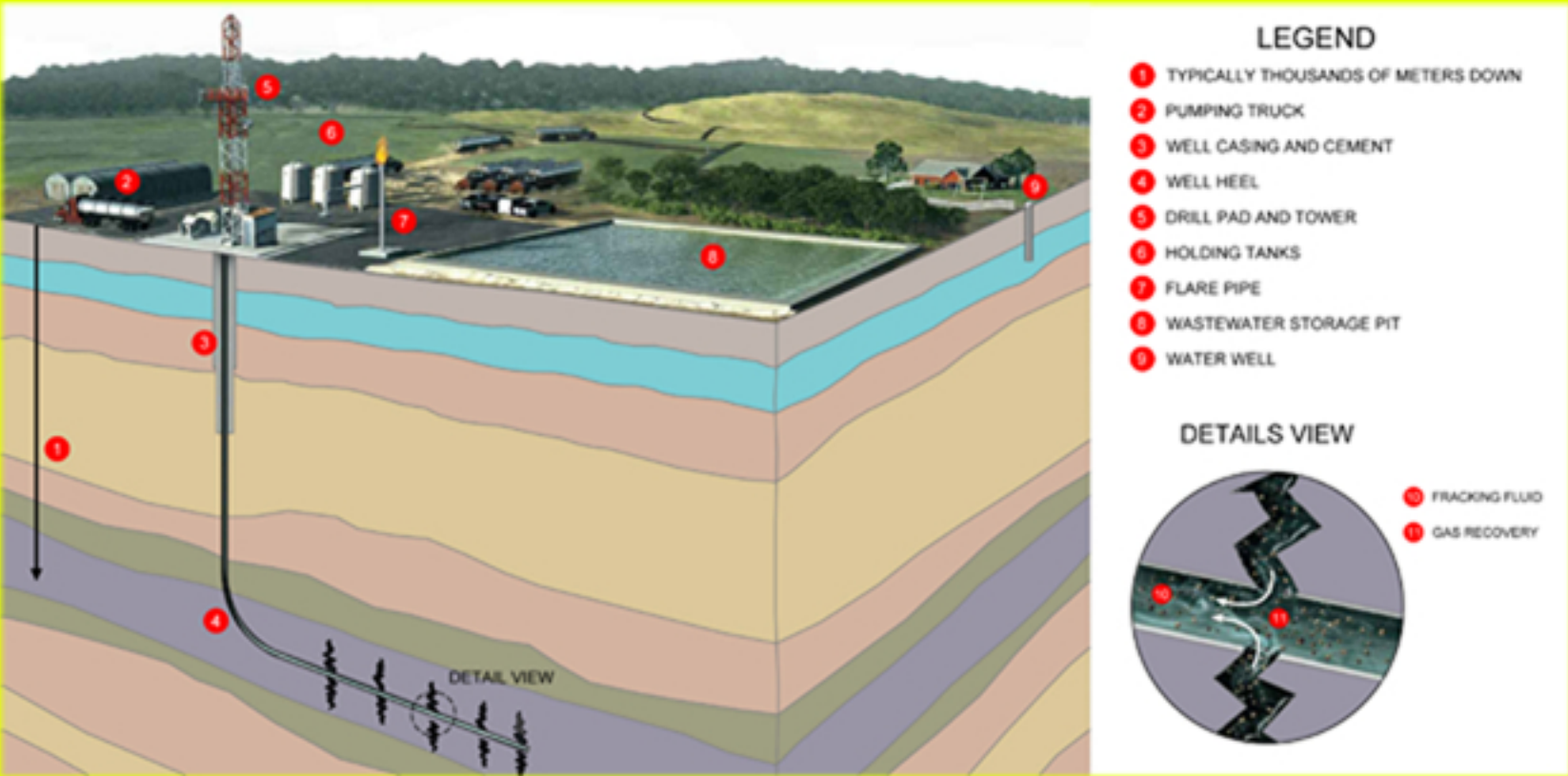
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## I. Introduction, theoretic frame and objectives

In the EU context extraction of shale and oil gas using hydraulic fracturing (fracking) method differs from country to country in terms of regulation, implementation and public acceptance. While the access to no conventional fossil fuel thanks to this drilling technology is welcome and widely accepted in Poland, German and French governments have adopted respective moratoria. This study is focused on exploring the discourse and values surrounding the contested public debate on fracking in Spain from the theoretical perspectives of inter-ethics (Muñoz Ruiz, 2014) and post-materialism (Inglehart, 2008).

### Theoretic framework: inter-ethics and post-materialism

In order to improve knowledge on how to address these controverted situations from the own engineering context, Higher Technical School of Mine and Energy Engineering at UPM in Madrid (Spain) has been carrying out a transverse program to teach values and ethics. Over the past seven years, this pioneering experience has shown the usefulness of applying a consequentialist ethics -instead of utilitarian ones-, based on a case-by-case approach and costs-benefits analysis both for action and inaction. As a result of this initiative a theoretical concept has arisen and crystallized in this field: Inter-ethics (Muñoz Ruiz, 2014). This theoretical perspective can be very helpful in complex situations, with multi-stakeholders and plurality of interests, when ethical management requires the interaction between the respective ethics of each group; professional ethics of a single group is not enough.



Outline of a standard fracking installation

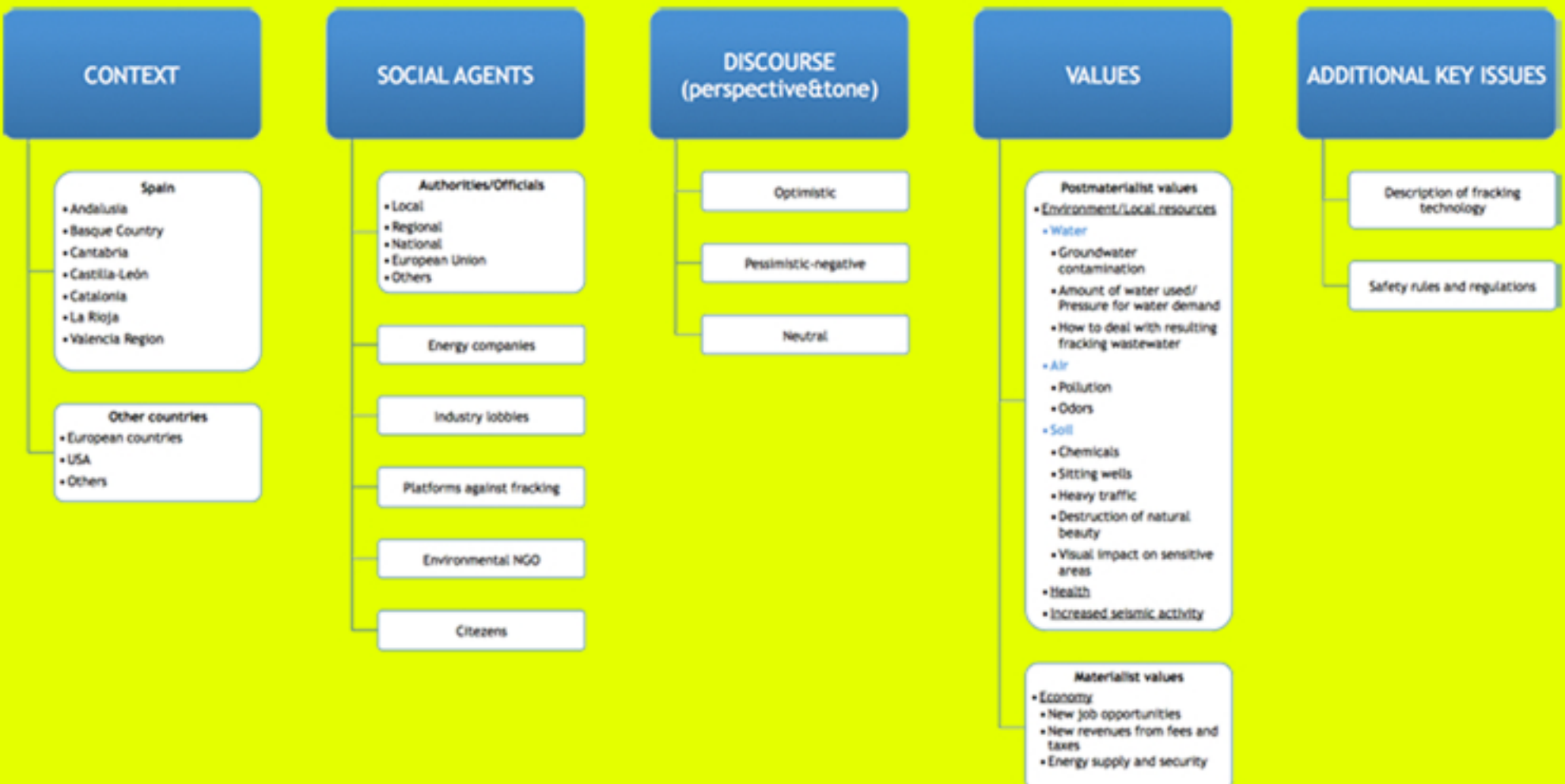
### Objectives:

1. Timeline of the development and adaptation of the regulatory framework to implement fracking method in Spanish territory.
2. Quantitative evolution of media attention to fracking issue in Spain in the timeframe 2013-2014.
3. Assessment of the tone/perspective of the fracking discourse in the press coverage.
4. Analysis of the geographical distribution of “hot spots” in fracking debate at regional level.
5. Study of the values underlying public debate and social agents involved.
6. Comparative analysis of media attention to environmental worries and health concern (risks/costs) versus economy enhancements and energy supply and security (benefits).

## II. Method

**Data collection:** We selected the leading Spanish general information newspaper EL PAÍS in the time frame 2013 and 2014. The press coverage analytical corpus was formed with 94 news stories collected from the virtual newspaper library -www.elpais.com-. The search criteria used as keywords were “hydraulic fracturing” or “fracking”, some of which had to be appear somewhere in the text. All opinion stories were excluded.

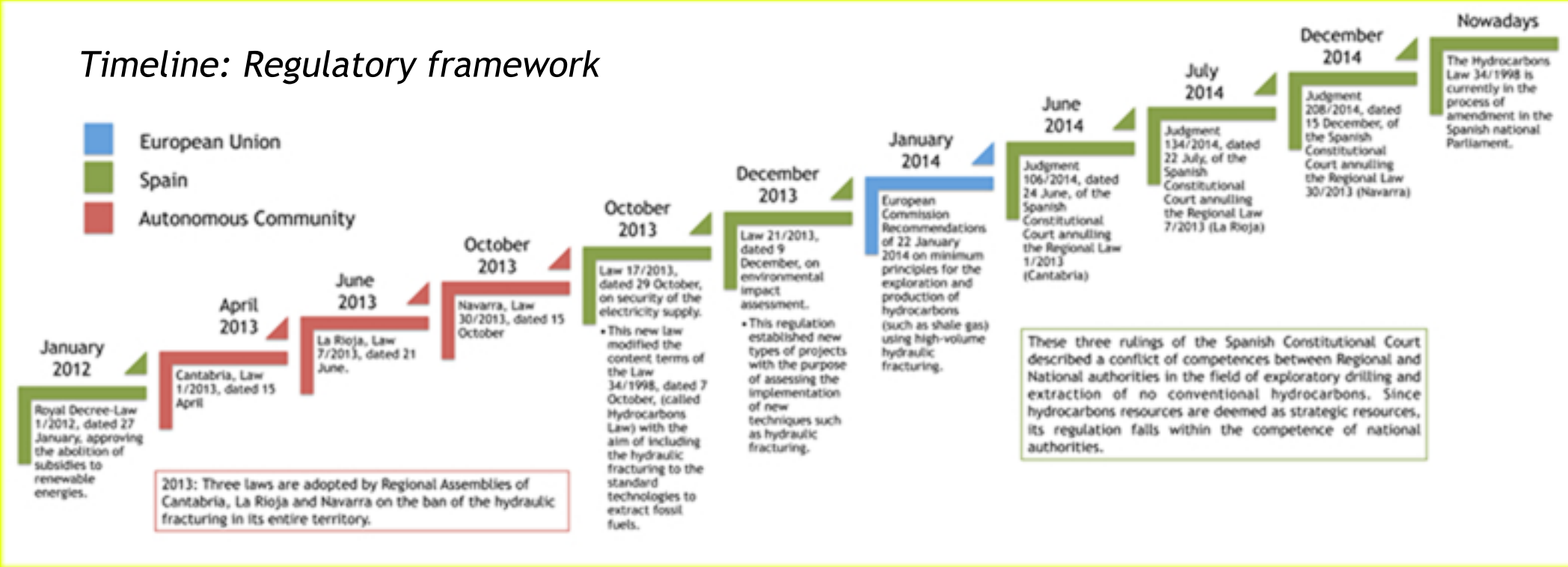
**Content analysis:** A content analysis was applied to the selected corpus in order to obtain information about the variables included in the coding sheet: Context, social agents, discourse (perspective/tone) and values.



Coding sheet

## III. Results

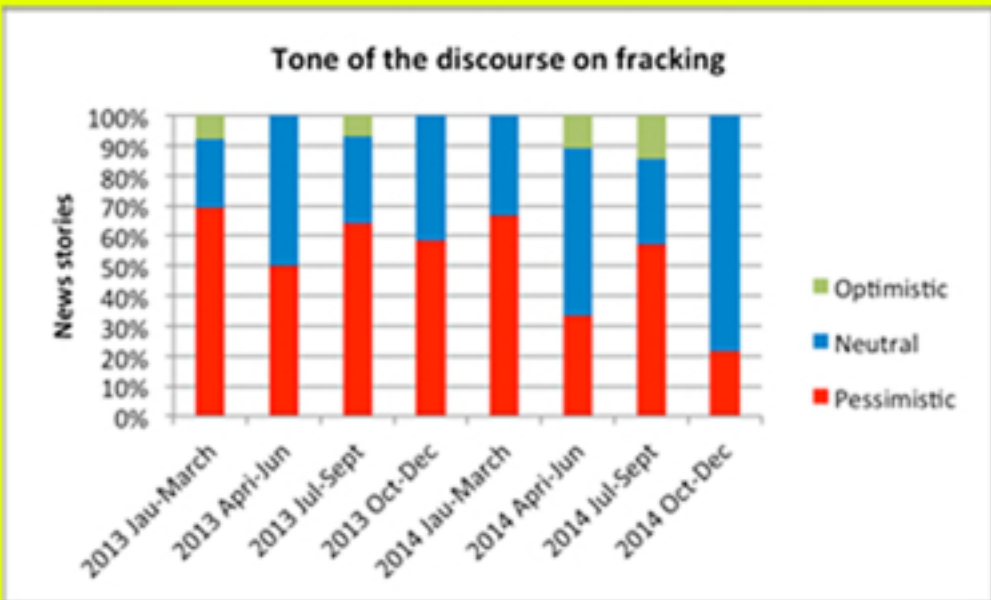
1. **Regulatory framework.** A timeline was displayed as a way of giving at a glance a chronological overview of the main regulatory framework developed to support and manage the hydraulic fracturing extractive technique in EU and Spain at national and regional levels. As it can be seen, the subject matters of the laws started with the abolition of the subsidies to renewable energies and it also included new laws on the security of energy supply and environmental impact assessment. The rulings of the Spanish Constitutional Court annulling regional laws on the ban of fracking activities in its territories were also pointed out.



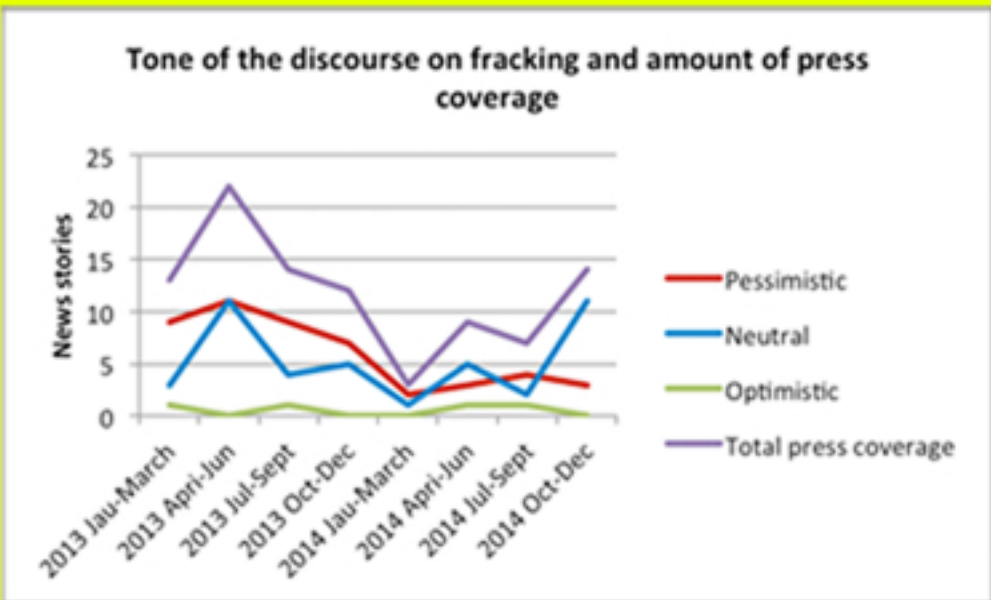
### 2. Public debate on fracking in Spanish press coverage.

#### Media attention

Tone of the discourse on fracking and press coverage on a quarterly basis (Graphics 1 and 2). Public discourse evolved from a scene mainly dominated by pessimism concerning the viability of fracking -representing the technology as a danger rather than as an alternative source of energy- in 2013 to an increase of news stories with neutral tone in 2014. It was also found that optimistic approaches were scant compared to neutral and pessimistic perspectives. Possible side-effects such as seismic activity were mentioned as well.

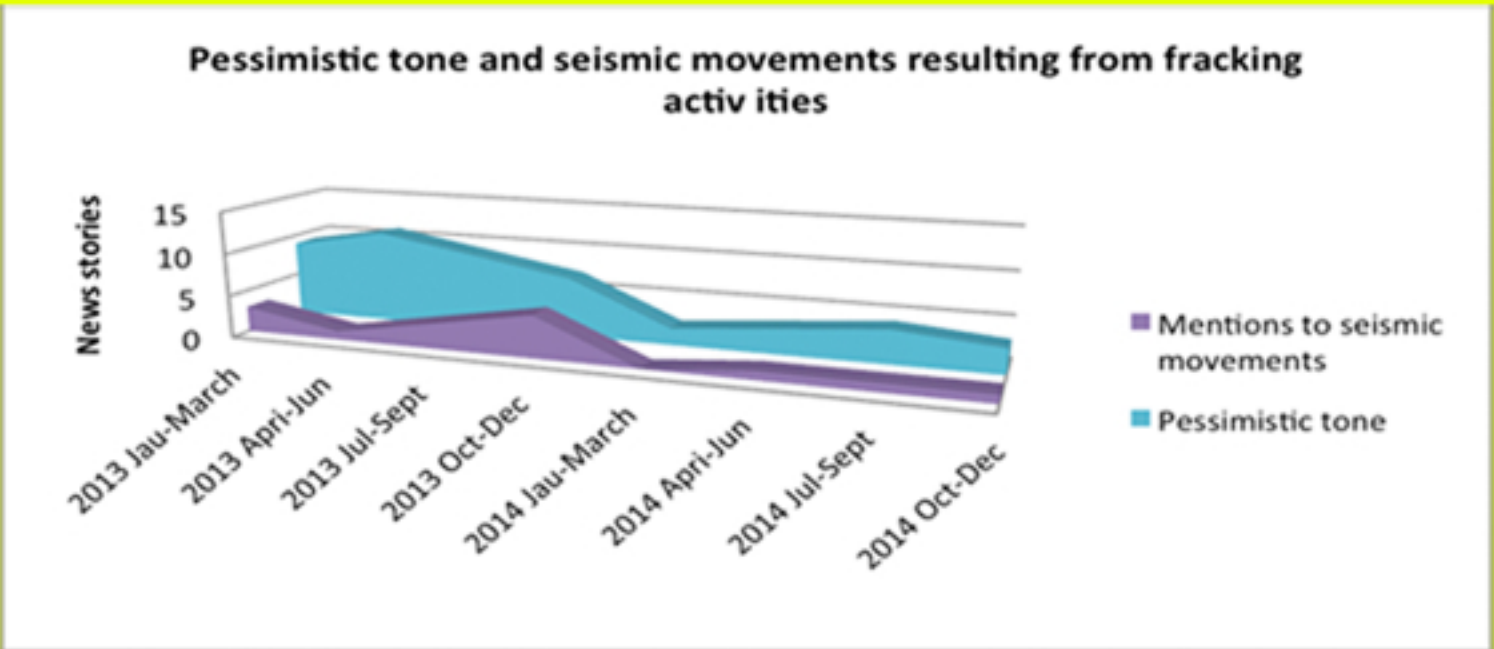


Graphic 1



Graphic 2

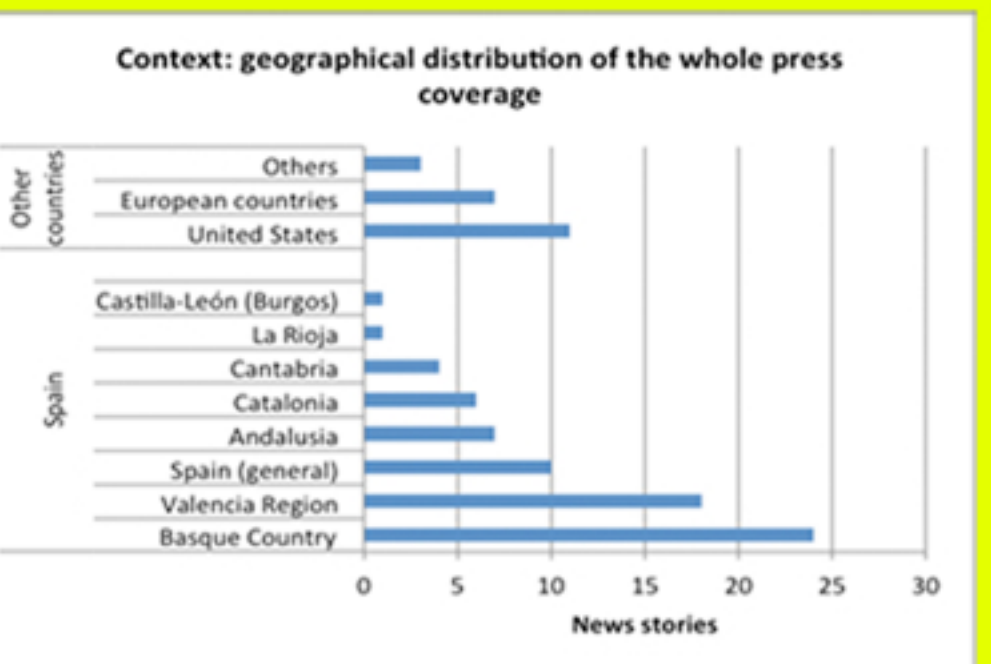
The link between fracking and seismic movements was made not just describing the tremors occurred abroad -Lancashire (UK) and Oklahoma (USA)- but also in Spain (Graphic 3) due to a project to store injected natural gas using the old facilities of an oil exploitation in Ampos-ta (called Proyecto Castor).



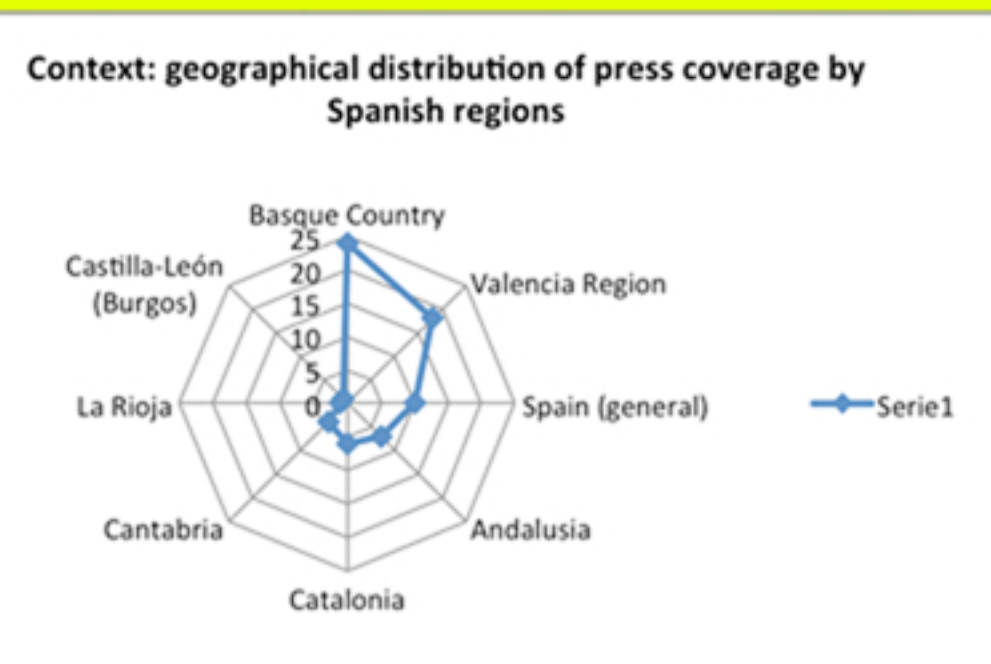
Graphic 3

### Context and social agents

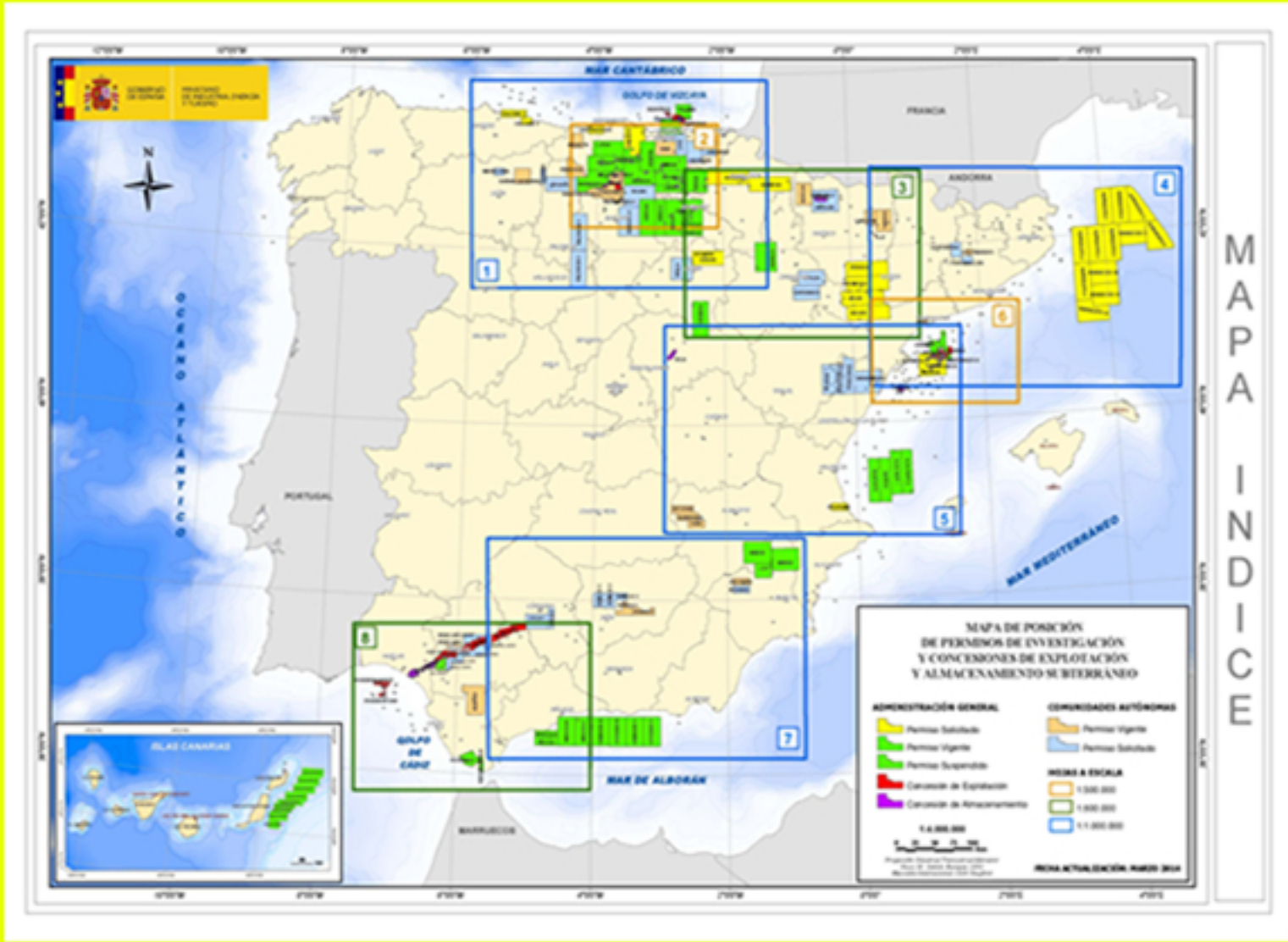
Graphic 4 represents how the press coverage on fracking in Spain was distributed geographically showing “hot spots” where the public debate is alive. Most of the news stories were focused on the issue of fracking in Spain compared to United States or other European countries. By Spanish regions (Graphic 5), Basque Country, Valencia Region and Andalusia along with Catalonia and Cantabria attracted media attention. This results falls in line with the map published by the Spanish government identifying the country areas where research and exploration permits have been granted to shale gas and oil industry.



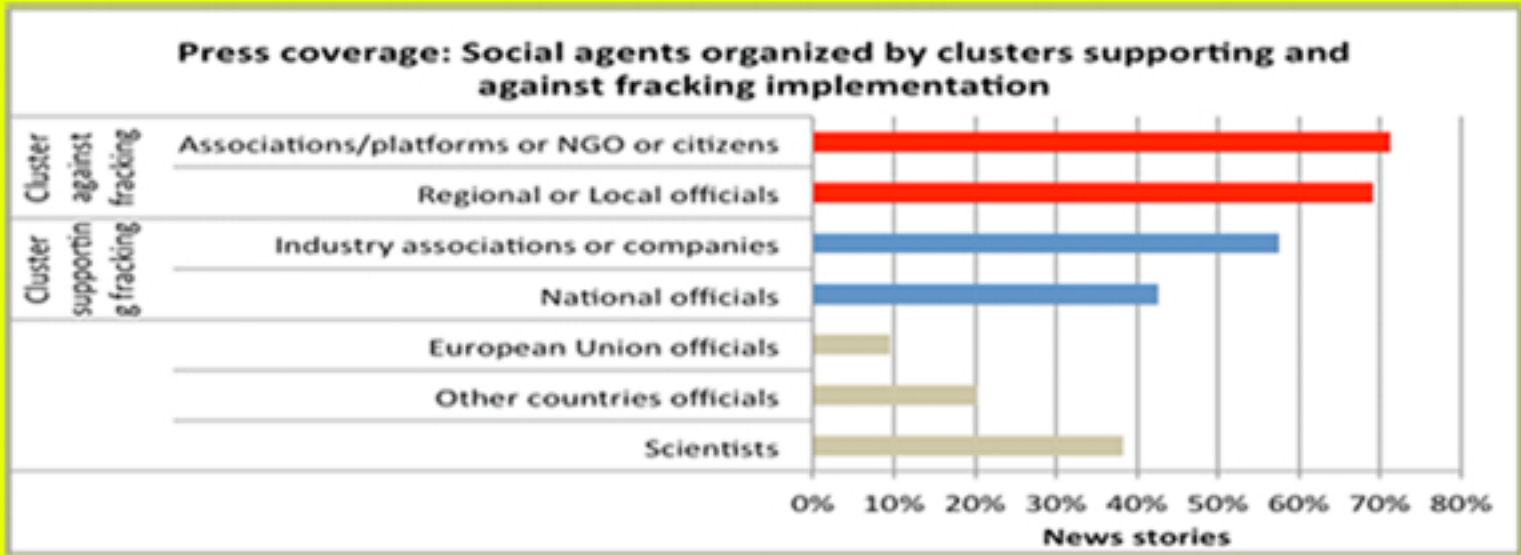
Graphic 4



Graphic 5



Two big clusters of social agents (Graphic 6) can be distinguished according to their angle with respect to the practice of fracking: Those refusing this technology (cluster against fracking) and those defending it (cluster supporting fracking).



Graphic 6

### Values

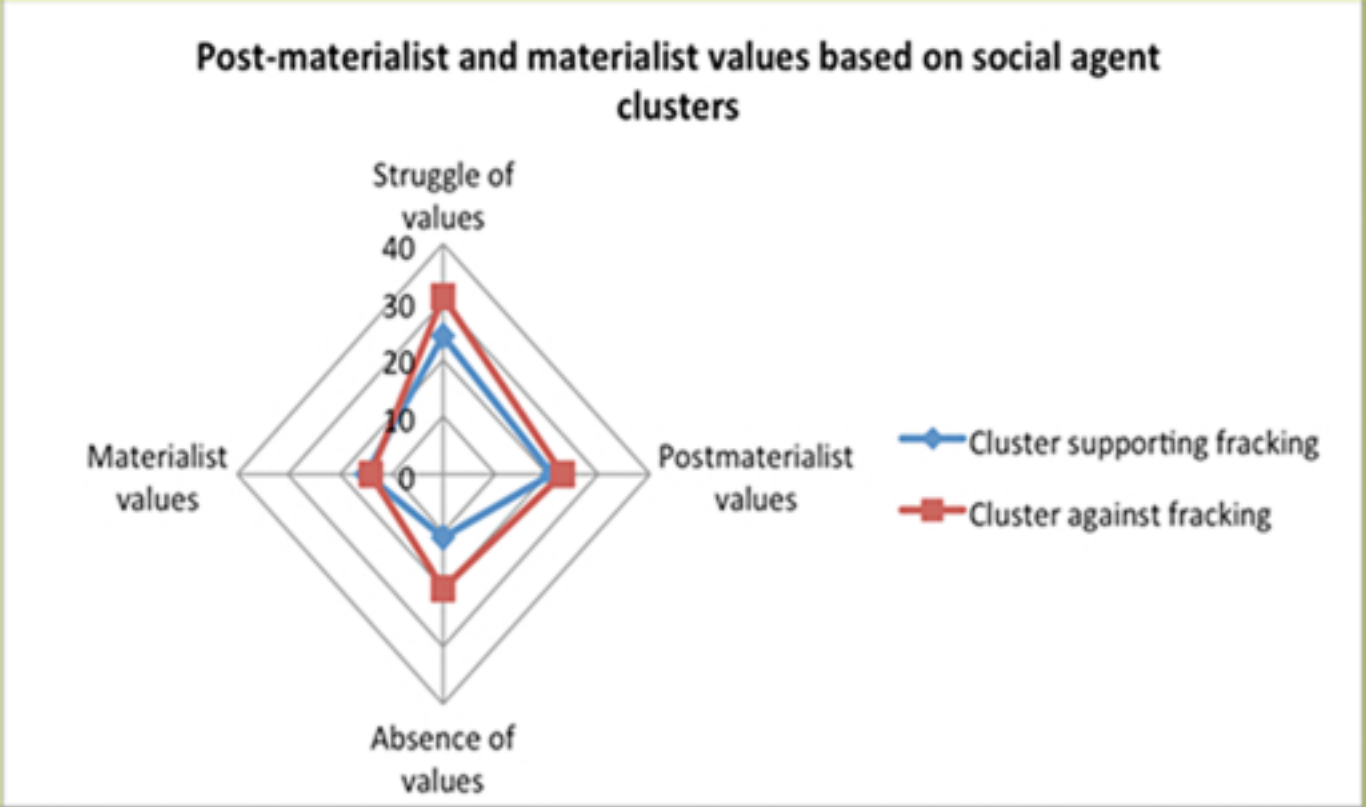
Previous studies analysing representations of fracking on Youtube videos from a cost and benefits angle (Jaspal, Turner and Nerlich, 2014) identified threats to environmental, human and economic values. Social and psychological impacts on small communities were highlighted as well. Furthermore, Jaspal and Nerlich (2014) examined fracking discourses in UK press paying special attention to the emergence of inter-relation between competing social representations.

Based on the sociological theory of post-materialism (Inglehart, 2008), it is assumed that Western societies have been gradually switching from materialist values, which underlie economic development, to a new group of post-materialist values which emphasizes non-material goods instead. While claims for a clean and healthy environment are deemed as a part of the post-materialism, materialism features economic growth heavily articulated by the energy supply and security.

From this materialist and post-materialist theoretic view, we examined the type of values associated with fracking deployment in Spain as well as what set of values was invoked by each social agent cluster supporting or refusing this technology.

In an attempt to apply consequentialist ethics (Muñoz Ruiz, 2014) to the case study of the public discourse on fracking in Spain, the emergence of post-materialist and materialist values have been examined in the press coverage. This analysis of values was based on social agents supporting and refusing fracking.

Graphic 7 shows the results. Most of the press coverage featured what we called “struggle of values” since both materialist and post-materialist arguments were taken into account although social collectives against fracking received a slightly higher attention. Separately, the references to post-materialism values in order to ban fracking attracted more media attention than the references to materialist ones, regardless of the kind of social agent cluster.

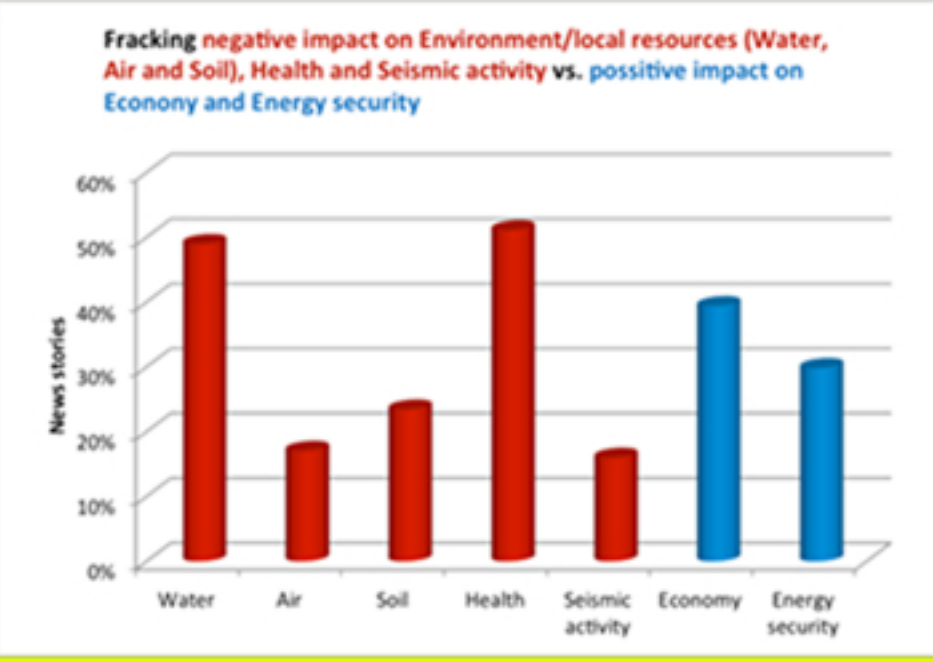


Graphic 7

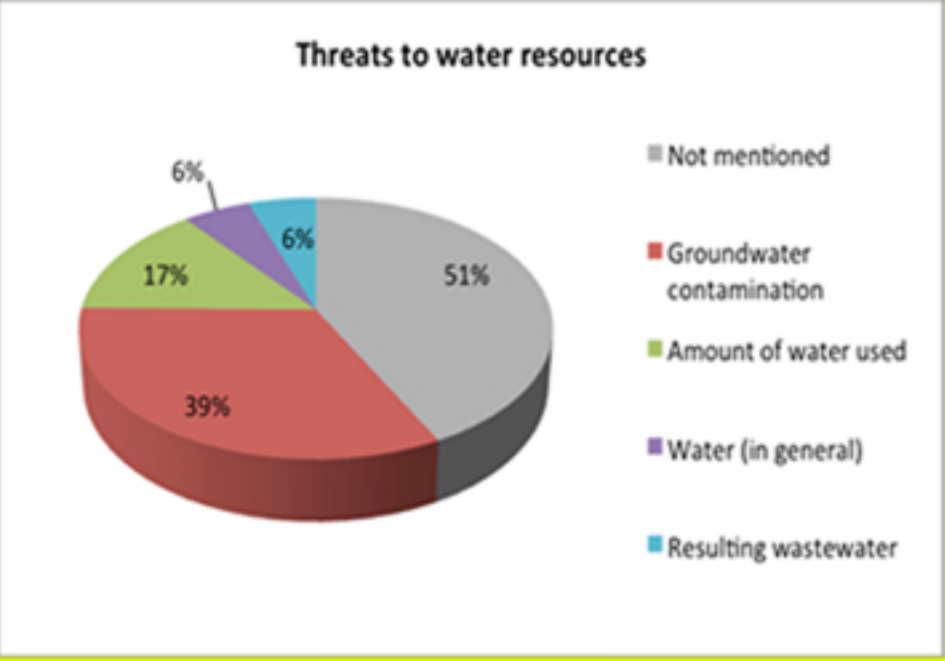
According to these findings, it can be argued that there is a tendency for press coverage in Spain to represent fracking as an environmental rather than an energy issue. This results falls in line with the obtained by David and Fisk (2014) when analysing public attitudes toward fracking use and policies in the United States.

Materialist and post-materialist values have been constructed attending to the defence of certain resources or interests (Graphic 8) and following these criteria they have been broken into other categories such as follows:

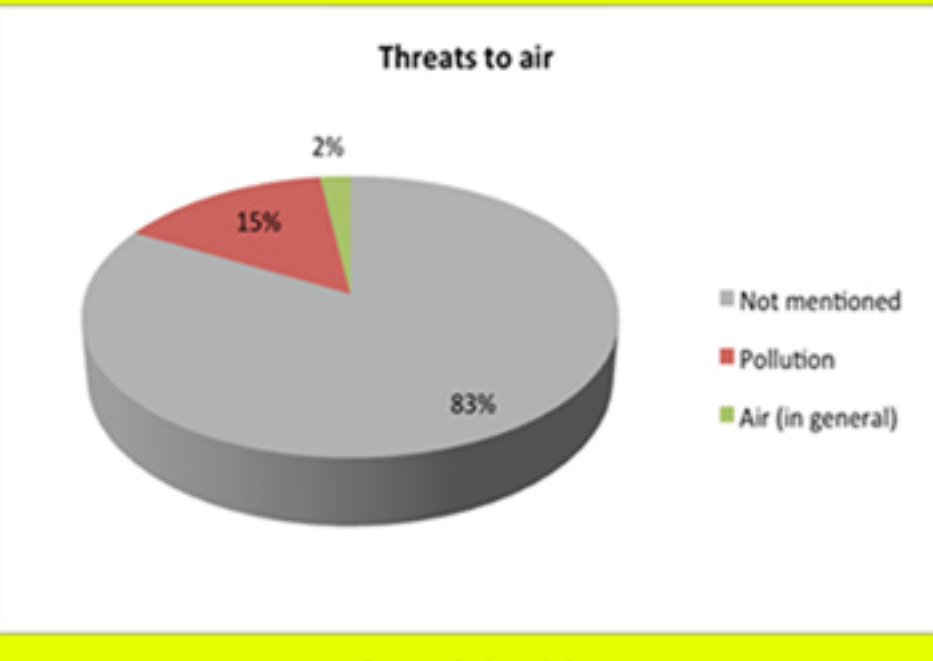
- Post-materialism: Water (Graphic 9), air (Graphic 10), soil resources (Graphic 11); health safety (Graphic 12); seismic activity concern (Graphic 13).
- Materialism: Economy and energy security.



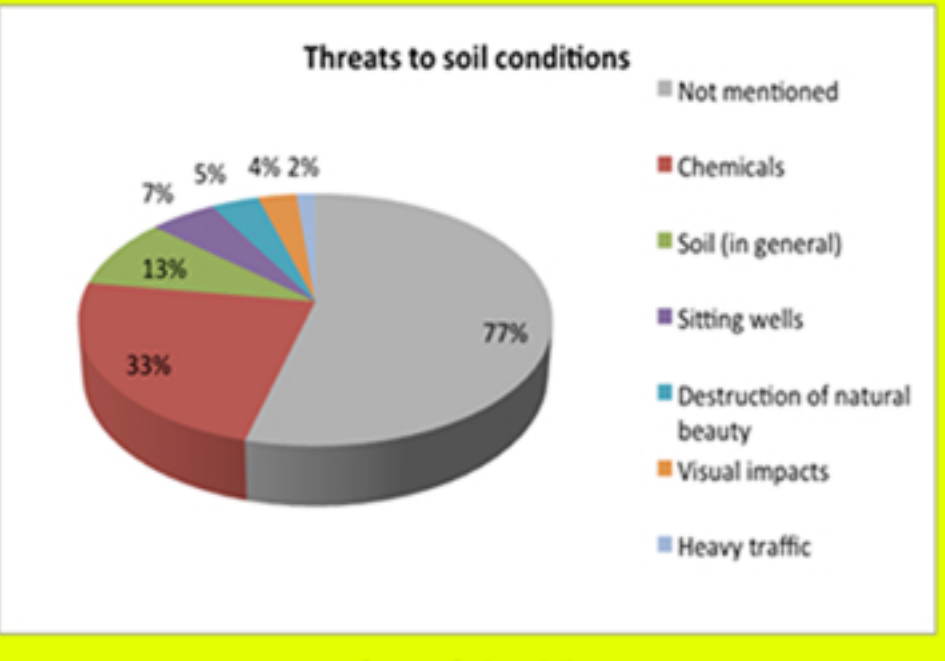
Graphic 8



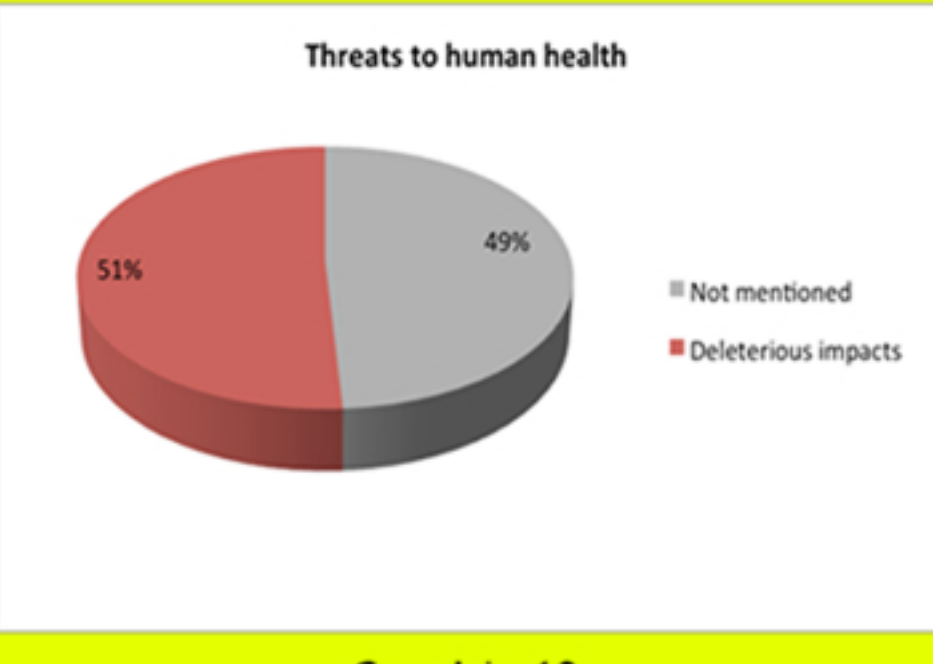
Graphic 9



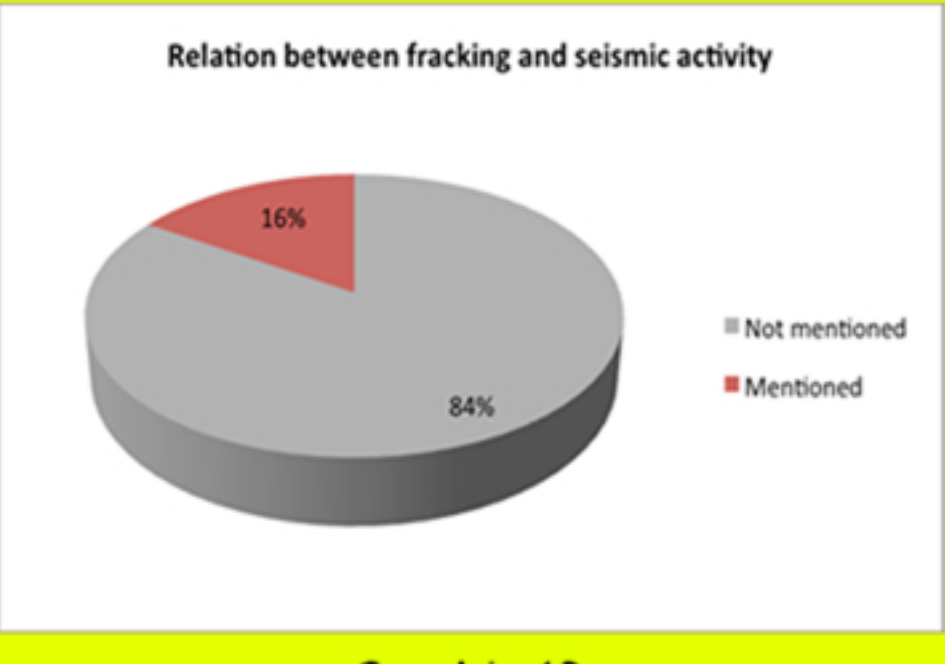
Graphic 10



Graphic 11



Graphic 12



Graphic 13

## IV. Conclusions

- Overall, the study found that the public debate in Spain on the extraction of shale gas and oil using hydraulic fracturing was articulated representing this drilling method as a threat to the environment and health (post-materialism) rather than a benefit in terms of economic growth and energy supply and security (materialism).

- Furthermore, post-materialist values are highly appreciated from a local view (regional and local authorities) while materialist ones tend to be considered as a large-scale benefit (national authorities).

- Since energy is deemed as a strategic resource under Spanish national law, regional regulations to ban fracking in local territories are not allowed.

- The development and adaptation of the regulatory framework to introduce the fracking in Spain have been carrying out without taking into account local and regional claims against this extractive technology.

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