

## Are we asking the right questions?

### A critical assessment on climate change sociological enquiry

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**Abstract:** An international sociological assessment of public perceptions on climate change and public compliance with policy objectives. Climate change emerged as a global scientific phenomenon in late 1980s, after scientific assessment provided recurrent, believable evidence of the impact of human activities on regional and global climatic conditions. Consistency of such scientific arguments led the United Nations Development Program and the World Meteorological Organization to jointly create the Intergovernmental Panel on Climate Change (IPCC) in 1988, with the aim of providing periodic state-of-the-art scientific evaluation. Shortly after its creation, the IPCC realized that traditional scientific approaches to environmental issues would not contain a problem of such dimension. The scale, complexity and interconnectedness of the causes of climate change, as well as their consequences, confronted scientific and political institutions with the need to build effective policy answers. As response, three working groups were created, providing regular assessment on climate change phenomena (WG I), their environmental and economical impacts (WG II) and the formulation of response strategies (WG III). Among these assessment efforts, the need to measure and critically analyze public perceptions on climate change was recognized as a central issue, especially when compliance with policy objectives among stakeholders and citizens needs to be achieved. In this sense, the scientific community has generated empirically-grounded sociological knowledge on public awareness of climate change phenomena, its causes and consequences, as well as willingness to change behavioral patterns. This paper contains preliminary results from an ongoing research project focused on innovation possibilities in empirical sociological assessment of climate change public perceptions, and the willingness to participate in policy initiatives.

**Key words:** Climate Change, Public policies, Eurobarometers Pools, and Empirical sociological assessment

#### 1. Framing Science, Knowledge and Politics

Climate change emerged as a global scientific phenomenon in late 1980s, resulting from scientific assessment providing reasonable evidence on the impact of human activities on regional and global climatic conditions (IPCC, 2004). Consistency of such scientific arguments led the United Nations Development Program and the World Meteorological Organization to jointly create the Intergovernmental Panel on Climate Change (IPCC) in 1988, with the aim of providing periodic state-of-the-art scientific evaluation.

Shortly after its creation, the IPCC would realize that traditional scientific approaches to environmental issues would not suffice to contain a problem of such dimension: scale, complexity and interconnectedness of the causes of climate change, as well as its

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consequences, confronted scientific and political institutions with the need to build innovative policy answers. As a response, three working groups were created (Jasanoff et al, 1998), providing regular assessment on climate change phenomena (WG I), their environmental and economical impacts (WG II) and the formulation of response strategies (WG III).

Nevertheless, and despite the United Nations' enormous efforts and achievements towards the integration of climate change scientific assessments within the global political agenda, the dynamics of knowledge and politics were not clearly synchronized with 'real time' policy initiatives at different scales of policy decision-making. In fact, the Rio 92 Conference was a major step forward addressing climate change as a global environmental political issue, but its recurrently announced policy objectives were diluted among endless negotiation processes that have rarely achieved their most beneficial and desired goals. In this sense, the Kyoto Protocol (1997) was far behind the expectations. But most of all, these efforts seem to have contributed to build a global discourse, with its distinctive semantic repertoire, on environmental issues.

Global discourses should not to be underestimated. Not only do they desirably contribute to influence global agenda setting processes, but they also play a significant role on the process of building political identities people can attach to. In times of shifting political preferences, when politics are even regarded with a certain cynicism, environmental discourses may provide significant guidance to collective change, when and if policy design and implementation processes do achieve a triggering effect (Hajer, 2003).

But can we reduce global political discourses to the single purposes of 'guidance' and 'motivation'? What will happen if global policymaking does not achieve its most significant and expected goals? Just a few months ahead of the next global negotiation round on climate change (Copenhagen, 2009), there is still no credible consensus on how the world's most industrialized countries will agree on a practical commitment to reduce CO<sub>2</sub> emissions. Despite the notorious discursive shift on US Energy Policy after the election of Barack Obama (see the "American Clean Energy and Security Act", signed in June 2009), some of the most significant global actors are still lagging behind the effort (namely China, Russia and India).

Believing that the locus of environmental policies resides at the local level, Elinor Ostrom has been supporting that view with empirical research on common pool resources around the globe, over the last decade: the local scale is where environmental policies derive their emotional force from people's attachments to particular places, landscapes and livelihoods, and to an ethic of community living that supports regimes capable of protecting, sustainably using and interacting with natural resources (Ostrom, 1990).

Exclusive claims for local politics, however, seem a bit naïve. Despite our fanciful desires, we still live in a world of constitutional politics (Ackerman, 1992). Not that the 'local politics' argument is entirely implausible. Classical-modernist political settings do increasingly "have to compete with open-ended, often unusual, ad hoc arrangements that demonstrate remarkable problem solving capacity and open up opportunities for learning and change in exactly those circumstances where classical modernist institutions have failed to deliver." (Hajer, 2003:3).

Maarten Hajer goes a step further, suggesting that deliberative policy-making processes do have the potential to create political communities. Functioning as a public space in which people of various origins deliberate on their future, policy design and implementation processes have become a potential 'social stage' for "reflection on the preferred future of a particular region. Referring to specific empirical case-study analysis, the author claims public policy initiatives to have "led people to reflect on what they actually valued, who they were, where they came from and where (if anywhere) they wanted to go to collectively" (Hajer, 2003:95).

But using such evidence is not the same as denying previously established, long-lasting patterns of governance. Concepts such as the "local" and the "global" depend on the ways knowledge has been produced and how it interacts with power (Jasanoff, 2004). Built upon scientific knowledge and systematic engagement with the natural world, "polities define and refine the meanings of citizenship and civic responsibility, the solidarities of nationhood and interest groups, the boundaries of the public and the private, the possibility of freedom, and the necessity for control" (Jasanoff et al, 2004:14).

In short, science and technology operate as political agents that must be accounted for, among the myriad of significant actors implicated in the processes of scientifically assessing climate change and providing viable policy answers. But what is the locus of such action? In other words, where does ‘power’ and ‘knowledge’ come from?

Framing science, knowledge and politics within these boundaries does call for an in-depth sociological assessment of climate change, capable of integrating most of the discipline’s conceptual and methodological tools into a larger policy analytical setting. It also calls for a compelling acceptance that knowledge, sociological or not, may have an objective purpose: ultimately, to promote the innovation of political communities.

In this sense, either when trying to interpret facts and contexts or intending to measure, monitor and critically analyze public perceptions, opinions and social action, sociological approaches to climate change issues should be able to provide valuable answers to policy challenges. And a way to accomplish such achievements is by starting addressing the most basic, yet highly significant, challenge: are we asking the right questions?

Within this ‘work-in-progress’ article, we will present actual results from an ongoing assessment on the significance of sociological enquiry regarding climate change policy design and implementation processes. Firstly, we will present a thorough analysis of Eurobarometer enquiries concerning climate change and climate change-related issues: which questions are being addressed within this sort of public opinion polls? Secondly, we will provide preliminary reflection on yet unaddressed policy issues within these polls: what significant / relevant policy perspectives have been missing within this polls. Finally, we will present preliminary reflections on the need to contextualize polls within other relevant sociologic methodological tools available.

## **2. Climate Change within EB polls**

The creation of the IPCC in 1988 was, undoubtedly, a fundamental landmark in the emergence of climate change within the global political agenda. Four years later, at Rio 92, an international treaty would be signed (UNFCCC – United Nations Framework

Convention on Climate Change), defining what could be done to reduce global warming, and setting an overall framework for intergovernmental efforts to tackle its challenges. Recognizing that the climate system is a global shared resource whose sustainability has been affected by growing CO<sub>2</sub> emissions all over the globe, the convention would be ratified by 192 countries accepting the compromise to gather and share information on GHG (Green House Gases), national policies and best practices, and launching national strategies for mitigation and adaptation options, including the provision of financial and technological support for developing countries.

Coming into force in 1994, the UNFCCC goals would be regularly assessed within the Conference of the Parties (the Convention's prime authority), meeting annually for a period of two weeks to evaluate the status of climate change and the effectiveness of the treaty, examining the activities of member countries. Furthermore, in 1997, an essential addition to the convention would be signed – The Kyoto Protocol – setting binding targets of GHG reductions for 37 industrialized countries and the European Community. Recognizing that developed countries are the most responsible for current levels of GHGs in the atmosphere, the Protocol would place a heavier burden on developed nations under the principle of “common but differentiated responsibilities”.

These two landmarks – the UNFCCC and the Kyoto Protocol – have consistently paved the way for climate change policies all over the globe and, most of all, for its recurrent discussion within the global political agendas. Moreover, they contributed to a growing awareness on behalf of the public opinion, which has been monitored through the Eurobarometer in each European member state.

Despite its significance, and the correspondent growing concern among European citizens, climate change has not been a consistent and clearly focused issue among Eurobarometer public opinion polls and their respective addressing questions. Integrated within other environmental polls and issues for quite a while, climate change has been overlapped by other conceptual and enquiry choices and only got specific attention in 2008, with the EB 69.2 poll.

The first polls entirely devoted to the environment within the EU were applied in 1983 and 1986, precisely when the environmental politics were gaining momentum, and

shortly before the creation of the IPCC. “Green Parties” were emerging in some of the most industrialized countries as a political response to environmental problems at the national scale, and an international political effort would gain consistency within some of today’s most representative NGOs (Greenpeace and WWF). In 1987 the Bruntland Commission would publish its well-known report (“Our Common Future”) introducing the expression “Sustainable Development” that, despite its diluted nature, would revolutionize the basic semantics of environmental policies all over the globe.

The end of the 1980s also witnessed a strong mediatization of global problems (especially ozone layer depletion, but also acid rains and the greenhouse effect), bringing a new perception of a world with no safe places or immunity to environmental crisis. Some years later Climate Change would become an ‘anchor issue’, given its global scale as well as the urgency of transversal measures - from changes of individual behaviour to international agreements, as the one on Rio Conference 92.

Not by chance, that same year, 1992, saw the launch of two great surveys entirely devoted to environmental issues – one applied to 24 countries in different continents and with different levels of development (Gallup Institute), and another at the EU scale (a special EB37 – The Europeans and the Environment, 1992).

Curiously, it was the analysis of the results obtained by Gallup that challenged the conventional idea according to which populations in poor countries are less concerned with the environment than those in rich countries. The Gallup survey showed that populations in lower GDP countries had levels of environmental concern similar or superior to those in rich countries – if nothing else, because many of the rich countries were already experiencing processes of environment regeneration (Dunlap, 1998). In fact, when we compare public concerns towards different environmental problems, we see that populations in the poorest countries tend to resent environmental degradation the most. However, when questioning people about the relevance of different problems in terms of environmental damages and risks, we notice a tendency on behalf of those countries (those with less GDP per capita, and with the lowest HDI) to dramatize most problems, from pesticide use to water pollution, including air pollution by industry and automobiles (Schmidt and Valente, 2004).

It is apparent, then, that environmental issues have globally become a fact of public concern, part of political agendas even in developing countries.

In the European Union, with environmental policies officially on the agenda, after 1992 public opinion surveys became regular. Every three years, right until 2008, Eurobarometers (which, as we'll see, gradually included questions about climate change, though in a subordinate and punctual way) have been carried out (see Table 1).

EB - The European Public Opinion and the Energy Problem	1982
EB - The Europeans and their environment	1982
EB - Public Opinion in the European Community on Energy	1984
EB - Public Opinion in the European Community on Energy	1986
EB - Les Européens et leur environnement	1986
EB - Public Opinion in the European Community on Energy	1987
EB - Les Européens et leur environnement	1988
EB – Public Opinion in the European Community on Energy	1989
EB 35 - European Opinion and Energy Questions	1991
EB 37.0 - The Europeans and the Environment in 1992	1992
EB 39.1 - European Opinion and Energy Matters	1993
EB 43.1 - Europeans and the Environment	1995
EB 46.0 – European Opinion and Energy Matters	1997
EB 47.0 – L'Europe des consommateurs : Les citoyens face aux problèmes d'environnement	1997
EB 51.1 - Environnement? Ce que les Européens en pensent	1999
EB 57.0 - Energy: issues, options and technologies Science and Society	2002
EB 58.0 - Attitudes of Europeans towards environment	2003
EB 64.2 - Attitudes towards Energy	2005
EB 62.1 - The Attitudes of European Citizens towards environment	2005
EB 65.2 - Energy Issues	2006
EB 65.3 - Energy technologies: knowledge, perception, measures	2006
Fash EB 206a – EU Energy Policy	2007
EB68.2 - Attitudes of European Citizens towards the environment	2008
EB69.2 - Europeans' attitudes towards climate change	2008
EB70 - Europeans' attitudes towards climate change	2009

The energy surveys, given their direct implication with climate change, also started to broach the subject, though only later relative to Environmental surveys. Actually, the energy issue has been an object of great strategic concern across Europe for decades at various levels. Given to the regularity and frequency with which barometers about it have been applied – almost annually since the beginning of the 80s - energy questions are obviously a core political issue permanently monitored in its various aspects.

Only recently have barometers reflected concerns with energy efficiency and conservation and endogenous resources, with a question or another about climate change. In fact, if in the 80s and the first half of the 90s Eurobarometers about energy issues still didn't consider climate change, from the end of the 90s onwards the theme

emerged and asserted itself. This actually fits current EU policy, which combines Energy and Climate inseparably, both for environmental reasons and for reasons of strategy and security.

As for climate change, the first Eurobarometer totally devoted to the issue appears only in 2008 (EB69.2 – Europeans' attitudes towards climate change), in the aftermath of the triple coincidence of Al Gore's film and book (*An Inconvenient Truth*), The Stern Report, and the IPCC results (Schmidt 2008). Between 2006 and 2007, Climate Change acquired media projection on a global scale, becoming part of "agenda-setting" in Eurobarometers themselves.

This late thematization of climate change in Eurobarometers highlights a time gap between instruments for measuring public opinion and European policies to combat climate change. Though the European Climate Change Program dates from 2000 and subsequent national plans to combat climate changes in most European countries were approved in the second half of the decade, the Eurobarometer Special Surveys on Climate Change only appeared in 2008. Which means that policies were conceived and carried out long before public opinion was consulted about a subject with numerous implications in the structure of the daily life of European populations. Moreover, the body of scientific knowledge generated in a quasi-consensual way around the phenomenon was not enough to force the entry of the climate change subject in an autonomous capacity in Eurobarometers. Scientific and political discourses, in this case, moved ahead of the media discourse and the general public's (Lorenzoni, 2006).

### **3. Climate Change - Classifying questions**

Analysing the type of questions proposed in the aggregate of Eurobarometers presented in Table 1, we notice how questions about climate change may be divided in three large categories: "Public Perceptions / Social Representations"; "Action and behaviour" and "Policy Issues" (see Table 2).

Questions related to "Public Perceptions / Social Representations" have two sub-dimensions: a) Attitudes towards Climate Change (awareness; future perceptions;

Seriousness; images) and b) Information / knowledge (about solutions and causes; lack of information; sources of information).

In the case of the “Action and behaviour” dimension, questions may be grouped in two other dimensions: a) Individual actions e b) Willingness to change behaviours and willingness to pay or to buy.

Lastly, questions about “Policy Issues” are subdivided in three dimensions, a) Accountability (individual/collective; political scales (local/global); agents; market); b) Institutional Trust (governmental, non-governmental, scientific, private corporations, media) e c) Public Participation (collective action).

**Table 2 – Dimensions of question classification**

<p>1 Public Perceptions / Social Representations</p> <p>a) Attitudes towards Climate Change (Awareness; Future Perceptions; Seriousness; Images)</p> <p>b) Information / knowledge (about solutions and causes; lack of Information; sources of information)</p>
<p>2) Action and</p> <p>a) Individual actions</p> <p>b) Willingness to change behaviours, willingness to pay, to buy</p>
<p>3) Policy Issues behaviour</p> <p>a) Accountability (individual/collective; political scales (local/global); agents; market)</p> <p>b) Institutional Trust (governmental, non-governmental, scientific, private corporations, media)</p> <p>c) Public participation (collective action)</p>

It must be noted that, in most questions, the theme of climate change is not directly addressed, since the Eurobarometers are about Environment and Energy. However, as we’ll see, the subject appears, either as part of multiple choice lists or in response options indirectly having to do with climate change problems.

1. Specifically, when we analyse the content of **Environmental Eurobarometers** in reference to climate change questions, we notice that in a first moment (1982-1988) the questions asked seem to imply that climate change is still a doubtful phenomenon: *“How worried to or concerned are you about...possible changes in the earth’s climate due to carbon dioxide from combustion of coal and oil products”*. This question, first asked in 1982, would be repeated in 1986 and 1988, always in a hypothetical tone which underlined doubt.

In this period, the other question directly related to climate change has to do with individual actions and willingness to act -- for instance, to *“equip your car with equipment to limited the amount of carbon dioxide in exhaust gases”*. This question was repeated in 1986 e 1988.

From 1992 onwards, climate change is assumed in Eurobarometers as a pressing concern which effectively exists, not a mere possibility. Since then, the phenomenon emerged under the “Global Warming” or/and “Greenhouse Effect” headings, keeping that name in the 1992, 1995 and 1999 Eurobarometers.

Climate Change also appears in these surveys as one of the images/perceptions associated to “*serious damages to environment*” (together with forest destruction, ozone layer depletion, etc.).

An exception to that rule in the 90s is a question directly related to ECO 92, where it was asked what priority issues the Summit should deal with: “*Global Warming*” appeared among the list of 6 other global problems (“*The preservation of endangered plants and animal species; Protecting the florests; Pollution of the sea; Helping Third World countries to protect their environment; Encouraging industrial development in Third World countries which protects the environment*”).

Regarding individual actions and willingness to act in the 90s, we can find more actions related with climate change. Once again, whether to equip one’s car so as to reduce pollution, but also the option to use public transport, as well as energy savings in the domestic sphere.

Environmental surveys made during the 2000-2008 period frame the issue once and for all under the heading “Climate Change”. For the first time, Climate Change appears in the context of other problems people are invited to rank, which means a definitive assumption of the existence of the problem (and its “public promotion”). Here is a type of question that has been constant in Eurobarometers throughout the 2000 decade.

**From the following list, please pick the five main environmental issues that you are worried about?**

- |   |   |   |
|---|---|---|
| - Agricultural pollution (use of pesticides, fertilizers, etc.);  | - Growing waste   | - Man made disasters (major oil spills or industrial accidents, etc.) |
| - Air pollution   | - Impact of current transport modes (more cars, more motorways, more air traffic, etc.) | - Natural disasters (earthquakes, floods, etc.)                       |
| - Climate change  | - Loss in biodiversity (extinction of species, loss of wildlife and habitats)           | - Noise pollution   |
| - Depletion of natural resources                                  | - Urban problems (traffic jams, pollution, lack of green spaces, etc.);                 | - The use of genetically modified organisms in farming                |
| - Water pollution (seas, rivers, lakes and underground sources)   |   | - Our consumption habits  |
| - The impact on our health of chemicals used in everyday products |   |   |

Climate change also emerges whenever there is a list of environmental issues about which people say they lack more information.

**From the following list, please tell me the five main issues about which you feel you lack information in particular?**

- |   |   |   |
|---|---|---|
| - Agricultural pollution (use of pesticides, fertilizers, etc.);  | - Growing waste   | - Man made disasters (major oil spills or industrial accidents, etc.) |
| - Air pollution   | - Impact of current transport modes (more cars, more motorways, more air traffic, etc.) | - Natural disasters (earthquakes, floods, etc.)                       |
| - Climate change  | - Loss in biodiversity (extinction of species, loss of wildlife and habitats)           | - Noise pollution   |
| - Depletion of natural resources                                  | - Urban problems (traffic jams, pollution, lack of green spaces, etc.);                 | - The use of genetically modified organisms in farming                |
| - Water pollution (seas, rivers, lakes and underground sources)   |   | - Our consumption habits  |
| - The impact on our health of chemicals used in everyday products |   |   |

As for the usual questions in environmental surveys about individual actions or willingness to protect the environment, almost all of them with direct climate change implications – CO<sub>2</sub> reductions are at stake – the list keeps growing over time.

Recently, for example, there were questions about means of transportation, reductions in car and plane use, as well as savings in domestic energy consumption.

**a) Which, if any, of these things have you ever done?**

**b) And which of these things would you be prepared to do more often or to do at all if you have never done them?**

**c) And finally, if we accept that we should adapt our behaviour and expectations for the sake of future generations, which other of these things would you be willing to do?**

- Avoid dropping papers or other waste on the ground
- Save tap water
- Not make too much noise
- Have your car fitted with equipment to limit the pollution such as for example, a catalytic converter
- Be a member of an association for the protection of the environment
- Financially support an association for the protection of the environment
- Sort out certain types of household waste (glass, papers, motor oil, batteries, ...) for recycling
- Take part in a local environmental initiative for example, cleaning a beach or a park
- Demonstrate against a project that could harm the environment
- Buy an environmentally friendly product even if it is more expensive
- Use less polluting means of transport (walking, bicycle, public transport) than your car, whenever possible
- Go on a type of holiday that is less harmful to the environment
- Save energy, for example, by using less hot water, by closing doors and windows to save heat

Finally, in one of the questions already asked in 2002 and 2004 with several alternative answers relative to social representations of the environment - *“When people talk about ‘the environment’, which of the following do you think first? – ‘Climate Change’ is included as answer option for the first time in 2008, reflecting the growing preponderance of the subject as a ‘key’, ‘fit-all’ environmental issue in Europe.*

2. Likewise, the **Energy Eurobarometers**, being at the central axis of climate change, have started to include specific references to the subject, though late when compared with environmental surveys.

For decades, the energy issue has been a motive of great strategic concern at different levels: political, social, economic, and that of defence. So shows the regularity and frequency with which Eurobarometers on the subject have been carried out: almost annually since the beginning of the 80s. The oil crisis of 1973-74 and 1979-80, the Middle East conflict and the nuclear issue have justified over the past three decades, with different intensities, a political effort within the EU to legitimize and frame decisions within strong public opinion tendencies in the member countries.

In the 80s, and specifically after 1982, energy surveys centred essentially in the question of industrial risk, and energy production using nuclear technology. The potential use of renewables as energy solutions already appeared, though timidly and under a generic formula, with no differentiation among them, thus showing how little relevant they were in the context of European energy policy at the time. As for the questions touching of citizens' daily practices, they were limited to home heating and lighting, as well as cut-downs in car fuel.

In the 1989 Eurobarometer, two new questions appear. The first has to do with the perspective of an Energy Single Market (to be created in 1992). The second introduces the environmental question around three global problems -- 'greenhouse effect', 'acid rain', and 'destruction of the ozone layer' – evaluating the perception of their existence, the seriousness attributed to them, and their causes. This last issue will be replicated in the Energy Eurobarometers up to the end of the 90s, together with the usual questions about practices.

The 1997 survey, last of the decade, the penalization of energy consumption through taxes is for the first time broached. However, it would be only after 2002 that concerns about saving energy and energy efficiency fully entered these surveys. Questions are asked, for example, about energy efficiency as criterion for buying a number of electrical devices, and the list of actions and willingness branches into several headings:

1. Cut down on heating and/or air conditioning
2. Cut down on lighting and/or the use of domestic electrical appliances
3. Insulate(d) my house (walls, windows, etc.)
4. Taking initiatives to save energy at work
5. Reduce(d) travel
6. Cut down on fuel used in my car, e.g. by using the car less, driving more slowly, etc.
7. Buy a car which uses less fuel
8. Use public transport more

These questions emphasize market solutions to change habits and levels of energy consumption.

In 2002, precisely the year of the Johannesburg Conference, some questions articulate climate change with emissions generated by a plurality of sources, deepening the treatment of the subject and its causes.

**For each of the following, please tell me if it is the case, or not?**

1. Global warming and climate change are serious issues which need immediate action
2. The use of fossil fuels (coal, oil, gas, etc.) contributes significantly to global warming and climate change
3. Nuclear power contributes significantly to global warming and climate change
4. Transport is largely responsible for global warming and climate change
5. The use of fossil fuels adversely affects air quality
6. The use of natural gas contributes to environmental problems, but less than oil

It is even asked in which areas (climate change among them) investigation about energy will have greater impact:

**On which of the following areas do you think energy-related research and development will have a strong impact?**

- Social and economic development
- Quality of air, soil and water
- Reduction of greenhouse gas emissions that contribute to global warming and climate change
- Employment
- Reducing bills for electricity, gas, etc.

From 2005 onwards, the issue of climate change is taken as a definite problem to be faced, requiring civic action: *“As you may know, we are facing new energy challenges (like high energy prices, international obligations to reduce CO2 emissions) that could imply efforts from citizens...”*

In fact, if during the 80s barometers about energy matters did not even consider climate change, from the end of the 90s and especially in the following years the issue emerged and asserted itself. This actually fits current EU policy, which combines Energy and Climate inseparably, for environmental and strategic reasons, and also reasons of security.

We should mention that starting in 2005 all varieties of renewable energies appear discriminately. The nuclear risk, in turn, vanishes from energy Eurobarometers, becoming the subject of its own. As for the willingness to pay more for renewable energy, and to accept fossil fuel taxes, they are themes which apparently have come to stay.

**Would you be prepared to pay more for energy produced from renewable sources than for energy produced from other sources? How much more would you be prepared to pay?**

Yes, I would pay up to 5% more  
 Yes, I would pay 6 to 10% more  
 Yes, I would pay 11 to 25% more  
 Yes, I would pay more than 25% more  
 No, I am not prepared to pay more

One of the more recent Flash Eurobarometers (2007) - *Attitudes on issues related to EU Energy Policy Attitudes* – reflecting the above-mentioned mediatization of climate change, (via the Al Gore, Stern e IPCC events triad), evaluates the concern with climate change in the context of its direct connection to production and use of energy. It thus seeks to integrate these two subjects and bring clarity to their articulation in the context of public opinion surveys. Besides questioning the level of concern with climate change, questions focus also on the connections between the ways energy is produced and used in each country and their contributions to climate change and global warming.

**Do you think the way we in [COUNTRY] produce and consume energy has a negative impact on climate change and global warming?**

Yes, it has a big negative impact  
 Yes, it has some negative impact  
 No, it has almost no negative impact  
 No, it has no negative impact at all

In respect to perceptions about future consequences of climate change, there is a prospective question about the impacts climate change may have on the way we consume energy ten years from now:

**What effects do you think the ongoing climate change will have on the way you consume energy in 10 years time? Do you think you will ...**

a) have to change your everyday energy consumption habits to consume less, e.g. switching off the lights more often, or heat/cool less, or use the car less often?  
 b) have to change how you heat, light and cool your house or apartment, by installing equipments that save energy?  
 c) have to pay much more for the energy you use?

This question unequivocally expresses how Energy and Climate are inextricably enmeshed, both in individual and collective behaviour, as already happens at the level of European policy.

In sum, though climate change is today the great thematic ‘hat’ of environmental issues, this relevance is not reflected in the thematic structure of Eurobarometers about the Environment and Energy. In fact, given how pressing the issue is, both from the environmental point of view and in relation to its articulations and energy implications, the way climate change is framed in these surveys is rather incipient. With the dimension the problem has acquired at several geographic scales, as motto of crucial public policies with direct effects on citizens’ daily lives, it is surprising that only in 2008 there was an Eurobarometer specifically devoted to the subject.

3. The first **Special Eurobarometer on Climate Change**, in 2008, reveals by itself the importance finally acquired by the issue at the level of public opinion, as it already had at the political and scientific ones. There is a noticeable gap between the almost consensual scientific discourse about man-made causes of climate change and public opinion in many countries, which for long voiced uncertainties about the problem (Brechin, 2003).

Analysing the questions asked, we could fit them into the three categories of chart 2: “Public Perceptions” in the context of other world problems, “Awareness and seriousness” in the present, to find out if people are more or less committed, and whether they believe more or less in current capacity to solve the problem.

At this level, there are also questions about the degree of information about causes, consequences and ways to fight Climate Change.

Another dimension, about “Actions and behaviour”, mentions a series of individual actions, so as to understand what people already do. These actions have to do with reductions in fuel and electricity consumption, both at home and in transportation, as well as choice criteria for electrical appliances and other products. The willingness to pay more is also examined.

A third group of questions has to do with “Policy issues”, now specifically placed in the orbit of climate change (and not from the point of view of the Environment or Energy). “Accountability”, “trust” “collective action” questions appear with reference to different levels of political action, from the citizen to the European Union. In this context, there’s an attempt to understand whether people consider viable the goals set by the EU for reductions of greenhouse gas emissions (30% in 2020) and production of renewable energy (20% in 2020).

Still within “Policy issues”, some questions aim to evaluate whether the way people look at the fight against climate change has more economic motivations (“*Fighting climate change can have a positive impact on the European economy*”; “*You think that taking these actions will save you Money*”) or environmental motivations (“*You think that it is your duty as a citizen to protect the environment*”; “*You are very concerned about the world that you will leave for the young and future generations*”). In 2009, some of these questions are repeated in the context of the Special Survey, in a logic of monitoring some of these points, in particular the seriousness of the problem, the degree of information, and the degree of scepticism regarding solutions to the problem.

### **3. Final Remarks**

In this “work-in-progress” paper we tried to address the ways Eurobarometer polls define their thematic structure around the issue of climate change, either as an environmental phenomena, or as a theme justifying individual attention. Furthermore, our analytical focus is mostly concerned with the ways these polls identify most significant questions to be answered, more than answers by themselves. Advancing such an analytical approach seems purposeful if we wish to address the possibility to innovate within sociological enquiry. On the other hand, this approach may hopefully lead us to build a useful critical analysis of the issues most frequently addressed within EB polls concerning climate change and its relation to policy design and implementation processes.

Clearly enough, EB polls have been structured around three central issues that may express what basic EU concerns revolve around when it comes to assess public perceptions among European citizens over climate: what do EU citizens know about climate change and how do they build a personal opinion about it? What do they do, or

intend to do, concerning adaptation and mitigation options? Who do they trust the most concerning political initiatives, design of adequate policy responses or even information (scientific or not) about climatic phenomena?

Building upon such themes, and proposing an initial reflection on its groundings, we suggest that such questions do not address some of the mainstream sociological literature claims we initially proposed about the effectiveness of policy efforts concerning environmental issues and policy design<sup>2</sup>.

In fact, policy design and implementation processes on climate change have had a strong reflection on international and national political institutions, with a late correspondent attention within the media and local political institutions. Nevertheless, there is well-grounded sociological evidence that global policy initiatives can only accomplish its purposes if they are complemented by corresponding efforts on behalf of local authorities, stakeholders and citizens in general. Which is to say that any effective political initiative must span the continuum between global politics and local politics, and build integrative policy initiatives at both ends of this equation.

Summing up the concerns over the need to implement collective action processes, some of the most significant political statements have considered this fundamental argument, and subsequent policy initiatives, namely Agenda 21, have been implemented at the local scale, all over the globe. We will build upon sociological theoretical and conceptual frameworks in the future in order to provide solid interpretation on how collective action processes could be improved in the future.

Strictly concerning sociological enquiry, and critically analyzing EB polls, we should highlight the fact that they do not consider some critical variables considering the implementation of collective action processes at the local scale.

In the first place, and considering basic sociological assumptions, we would suggest shared meanings over scientific diagnosis and policy options at the local scale among European citizens as a basic preliminary assessment need in public opinion polls: do

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<sup>2</sup> Initial references are just a small account.

citizens have a clear perception of local scale impacts, mitigation and adaptation policy options under discussion? How well informed do European citizens feel about the interconnectedness between policy and individual options concerning climate change at the local scale? What do European citizens consider to be essential factors to get involved within policy initiatives at the local scale? To what extent do EU citizens feel they have a role to play on local initiatives?

Secondly, there is a lack of sensibility within EB polls concerning a necessary emotional attachment / commitment within local politics and the environment. Assuming a sense of belonging is an essential prerequisite for collective action, EB polls should find ways to integrate such variables into plausible questions: What is the knowledge concerning the impacts of climate change on local landscapes, patrimony and infra-structures (houses, roads, gardens, buildings, etc.)? What are the concerns about health impacts of climate change in their local communities (from the elder and the younger)? In what ways do they believe local institutions are capable of building consistent policy answers? How could those institutions be further empowered to fulfill such efforts?

Finally, there is a lay knowledge issue concerning local politics and policy issues: do EU citizens feel they have effective ways to communicate and build upon the knowledge provided by any other sources? Do they feel they may have a valid contribution to make on policy matters? What communication and information sharing mechanisms are they aware of in order to express their statements? Do they use them regularly, if any are available? What other ways to deliver a message would they consider effective or desirable? Establishing networking among actors across pre-defined policy, thematic and territorial boundaries is obviously enough a necessary step towards collective action. Nonetheless, communication, as distinct from information sharing, has not been a key issue within EB polls on environmental issues, or climate change if we prefer.

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