

## **Rural Development and Environment in the Municipality of Celaya, Mexico. A Sociological Approach**

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### **Abstract**

*In this paper, the social construction of rural development and the environment (urban sprawl and water issues) is addressed through a qualitative methodology that makes use of key informant interviews (businesspeople, the media, academics, university rectors, among others) in the municipality of Celaya, Guanajuato, Mexico. There is a social dimension to rural development processes and/or environmental problems. Namely, the lack of basic services in rural communities, the lack of organization of farmers, the urban sprawl into agricultural areas, overexploitation of groundwater, air pollution, loss of biodiversity or inefficient solid waste management, for example, have the same status of reality than those emerging from its physical dimension. From this perspective, a problem may have a physical existence, but if it is not socially perceived and accepted as such, it ends up being socially irrelevant. Sociological reflection of the complexity of rural development or the environment seeks to explain the social mechanisms that enable certain real issues to acquire a special sense and meaning that makes them appear in the public arena. We conclude that individuals, media, and social groups of various political leanings interact, negotiate, and reconstruct one or more versions of the definition and meaning that accompany the processes of rural development and the environment.*

**Keywords:** social construction of reality, qualitative methodology, rural development, environment.

### **Introduction**

The problems associated with the processes of rural development and the environment in the world today seem to be growing exponentially, and no municipality in the country can escape the complexity of such situations recognized as real, non-existent or of little public interest according to the social actor defining it. Governors and mayors also build public safety by denying drug, violence or femicide. Other social actors (victims and communication professionals, for example) offer another version of social realities, as well as the issue of water, air pollution, or the planting of transgenic corn. In that sense, the social sciences, particularly qualitative phenomenological sociology has implemented a series of methodological strategies that may be useful for sociological studies interested in analyzing the processes of social or media construction of the reality of a variety of public interest phenomena such as climate change, insecurity, and poverty.

This paper is divided into three sections. In the first section, we describe the methodology, assumptions, and basic concepts. In the following section; we explore some reflections on the media in Celaya about rural development and the environment. Also, we review the status of these issues in the municipal development plan (period August 2012-August 2015). In the second section we present the results of interviews with fifteen key informants; and in the third and final section, some conclusions on the subject in question are presented.

### **Methodology and framework**

This work is based on the results of the research project *Analysis of public policies and perceptions in the municipality of Celaya, Guanajuato* (funded by PRODEP SEP 2012). The program was aimed at "examining public policies implemented in the period 2012-2015 and the evaluation (perceptions) of other key stakeholders" under the guidance of a constructivist qualitative methodology.

The central hypothesis proposed in this research project originating in this paper argues that there is a social construction of rural development and the environment in the municipality of Celaya, Guanajuato, that can be reconstructed from the ways in which a variety of social actors perceive and build them.

Below, we describe the qualitative methodology. To test the central hypothesis; interviews were conducted with stakeholders that were considered key for their political, academic and media influence on society in Celaya. In this way, we interviewed local business representatives, media, civil society, academics and university presidents. The purpose was to reconstruct, through three questions, the way in which these actors conceived various aspects of rural development and the environment, with special emphasis on assessing the current PAN municipal government.

Qualitative methodology refers in its broadest sense to "research that produces descriptive data: people's own words, spoken or written, and observable behavior" (Taylor & Bogdan, 2010, pp. 19-20). Qualitative methodology is characterized by a holistic perspective, "Be understanding of the framework of the people; aim at what is meaningful and relevant to the participants; applied to studies at the micro level, as further research on the situation; consider all scenarios and people as worthy of study; and as a humanist"(Balcazar *et al.*, 2010, p. 22).

Some qualitative methods used by sociologists to collect information from the subjects and study scenarios are participant observation, focus groups, content analysis and discourse, case study, life history, and interview: structured, semi-structured group or in-depth.

*A structured interview, for example, is defined as:*

One in which interviewees are asked questions that are pre-determined in a form so that each individual is asked the same set of questions. The structured interview is applied to key informants, and its purpose is to identify only those individuals whose characteristics and social role can provide valuable information, limiting their sample and representativeness (Ortiz, 2007, p. 25) (Own translation from Spanish).

Here we describe some of the key concepts of this work.

*The Social Construction of Reality:* the sociological concept that suggests that people are interacting with each other and that they define the situation or the reality in which they find themselves. The idea of the social construction of reality is a fundamental part of the symbolic interactionism paradigm (Macionis & Plummer, 1999).

*Media construction:* sociological concept suggesting that the media (owners, managers, publicists, and reporters), interacting with other social actors (employers, governments, universities, civil society, citizens, among others), are defining the situation or the reality in which they find themselves.

*Environment:* refers to the earth's surface and the atmosphere including the various living organisms, the air, water, land, and other resources necessary for life to continue (Macionis & Plummer, 1999).

The theory of living systems uses the term environment as a fundamental concept; a definition in this line emerged from the working group of UNESCO, which defines it as a multidimensional system of complex interrelationships in a state of continuous flux. The environment is the framework or living environment in which the whole system of essential relationships between the individual and society develops. There are four current definitions of the environment: 1) a set of physical, chemical, and biological factors that act on a living individual; 2) a set of elements that can act on the individual; 3) a set of all forms or external conditions acting on an organism, a population or a community; and 4) a term used to define society and nature, habitat, cities, economy, institutions and culture (Boada & Toledo, 2003).

A key concept that has caused reflection in the social sciences and is linked to the environment is precisely the concept of "ecological crisis", since only two or three decades or so ago, environmental concerns were a minority issue. Today, they have spread widely throughout the world and are expressed almost daily in the pages of newspapers and on television screens. However, environmental issues still have little influence on policy and political decisions, and the social sciences often ignore and develop outside of it, as if the state of the environment has little or nothing to do with sociology, economics, anthropology, history, demography, or geography (Sempere & Riechman, 2004). The term environment, from the perspective of environmental science, has been gradually gaining ground in the social sciences. Over the years, an interdisciplinary hybridization has been taking place between the environmental and social sciences, ranging from environmental history to the economy and the natural environment, environmental anthropology, through to environmental sociology and political ecology.

However, anthropocentrism is still prominent in the social sciences, which is a limitation that continues to constrain inter-, multi- and trans-disciplinary collaboration between the social sciences and environmental sciences. Hence the importance of breaking with partial and/or disciplinary approaches to the study of the environment and rural development in the municipality of Celaya, where the environmental problems of the municipality (urban sprawl and industrial growth) cannot be decoupled from productive, socio-demographic, and environmental issues and neglect in terms of comprehensive public policy facing rural communities. In addition, the use of theoretical frameworks, such as phenomenological sociology, elucidates that the relevance or irrelevance that the environment acquires in the public conscience is not so much a function of how much damage environmental problems cause (air pollution, lack of green spaces, overexploitation of water, increased solid waste, among others) or the veracity of their presence or physical existence, but rather the way they are internalized in regulatory, cognitive, symbolic, and political areas by a variety of social actors.

*Rural development:* It is a concept that defines the economic and social process that takes place in traditional rural societies that tend to improve the welfare of the rural population through actions such as the introduction of modern technologies and the provision of social services (health, education, culture, drinking water, drainage, roads, and market centers, among others) in order to increase income (ratio between production and household consumption) and improve the quality of life of the majority of the rural population (Mata, 2002).

Also, rural development requires interdisciplinary and inter-institutional actions focused on a specific community and region, trying to influence the different aspects of the rural population, such as income, education, health, food, and housing. To achieve impact in these areas, community organization should be strengthened, so that actions or productive projects, education programs, projects for health care and programs that improve housing conditions are boosted (Lozano, 2008).

The definition of rural development –its breadth and meanings- depends on the geographical and cultural context of the social actors that define it, as well as the disciplines that study it, because economics, political science, demography, anthropology, and sociology do not use the same approach, nor is the perspective of countries such as the United States, Thailand, France, Brazil or Russia the same, nor from the institution (university, company, ministry of agriculture, social movement or civil society organization).

### ***Constructivism as an analytical sociological approach***

The common denominator of the different variants of the sociology of micro orientation lies in the creative dimension of everyday life. While this *externalist* paradigm recognizes the *objective existence of social reality*, it emphasizes the *subjective and constructivist dimension that makes stakeholders* of this reality. In that sense, the lines that follow will focus on the exposition of the constructivist focus as an analytical perspective of reconstruction of the problems associated with rural development and the environment of the municipality of Celaya.

The fundamental thesis of constructivist sociology argues that "reality is socially constructed", and that sociology must analyze the processes by which this occurs. The key terms of this thesis are reality and knowledge, They define reality as a quality characteristic of the phenomena we recognize as independent of our own volition, and knowledge as the certainty that that phenomena are real and that they have specific characteristics (Berger & Luckmann, 2003, p.11). (Own translation from Spanish)

For constructivist sociologists, society is an *objective reality* in which individuals, groups, and institutions are real, regardless of our perceptions of them. Society is also a *subjective reality* in which, for each person, other individuals, groups, and institutions are what that person perceives them as beings. The majority of the people are nice or nasty, members of the police are protectors or oppressors, corporations serve the public interest or selfish interests, these are the perceptions that people draw from their own experiences, and they become for them the way things are. This social construction of reality progresses as people define the feelings and intentions of others (Horton & Hunt, 1992, pp.16, 17). What is "real" or what a monk from Tibet "knows" may not be the same for an American businessman. The perception of air quality that the authorities of the city of Monterrey have may not match the perception of older people, artists, academics, and environmentalists. The perception and assessment of the environmental risks of transgenic corn that Greenpeace holds may differ from that of Monsanto executives. The negative perception that common landowners have in the municipality of Cortazar about threats to the expansion of the urban area to the *peasant way of life* differs from the perception of real estate entrepreneurs and municipal authorities of Celaya.

Whenever a government official, a businessman, a journalist, an academic or a citizen forms a set of perceptions on the issue of rural development or environmental degradation of a city, state or municipality we find a process of *social (or media) construction of rural development and the environment*.

In this carnival of social actors that interact defining, attending and ignoring certain situations as real or non-existent (poverty, drug trafficking, femicide or contamination, for example) the media always stands out. The *mass media* represents a key social actor to understand the socio-political structure of states and municipalities in the country; as well as shaping the processes of social, ideological and media construction of certain social situations, either reporting or ignoring the seriousness of matters of public interest as drug violence, political corruption and pollution of rivers by transnational companies.

Sociologists define the media as "print media and electronic messages that offer messages to wide audiences" (Schaefer, 2006, p. 133). Among the print media we include newspapers, magazines and books; electronic media includes radio, television, internet, and film. The municipality of Celaya has a variety of print media (*for example the newspapers El Sol del Bajío, am, Al Día, and E*) and electronic media (*Radio Tecnológico de Celaya* and TV channels such as *Vía* or *Así Sucede*). However, upon interviewing some of the reporters that work for these media channels we found that in the PAN majority region of Celaya there are still certain taboo subjects that are uncomfortable for the political and economic elites in the region. In the case of problems related to rural development and the environment, there is a perception by some reporters that the stories "do not sell" and are irrelevant or of little interest to the public.

However, with the arrival of spring (rising temperatures) or the increased price of certain basic commodities (tortillas or eggs, for example), rural development and the environment gain media interest. On the other hand, the sociological analysis (and the political economy of the media), that is, the analysis of the content and media constructions, as well as the political role of the owners of the media, shows that theoretically, all kinds of news (police, politics, sports, national, cultural, etc.) may be relevant to the public. However, these topics may not be relevant to the political elites that control the State and Municipal governments.

One function of sociology is to explore the complexity and what rural development or the environment means for people in different social groups<sup>1</sup>. In that sense, deforestation, overexploitation of aquifers, government abandonment of rural areas and urban sprawl in Celaya, for example, before being recognized as such, goes through a process of assessment, filtration, and social and media construction, anchored in a community of a symbolic and political relations, where it is not the same to recognize or define environmental degradation from the perspective of an automotive company, a public university, an environmental organization or PAN municipal development plan.

Since the last decades of the 20<sup>th</sup> Century, environmental issues burst onto the world stage as a watershed of the crisis of civilization, questioning the economic-instrumental rationality that gave impetus to the developmental and progressive paradigm. From the scientific literature and reports the environmental movement the effects of capitalist modernity on the natural environment were evident. In the context of a "development crisis" and its consequences contributed to promoting pro-environmentalist conferences, agreements, and conventions, laying the foundation for the construction of the new paradigm of sustainable development.

Meanwhile, the social sciences experienced a series of transformations in the way that we generate scientific knowledge. The crisis of progress and the positivist paradigm led to a theoretical and methodological pluralism that questioned the epistemological and axiological assumptions of positivist social science. The historical correlation between the environmental crisis and the crisis of positivism that is so instrumental in the development of new fields of study, i.e., no longer sought to analyze the interactions between human society and the environment partially or from an anthropocentric perspective.

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<sup>1</sup>Furthermore, sociology can show how human social patterns have caused increasing problems in the natural environment. That is, sociology can emphasize the connection between environmental problems, certain cultural values and forms of political and economic organization. On the other hand, sociology can monitor public reaction to many environmental issues and can report on the thoughts and fears (founded or not) people have around these issues. Moreover, sociology examines why some categories of people are inclined to one side or the other of the political debates on environmental issues. In that sense, in the municipality of Celaya, it is perceived that there are very marked differences between political parties, business organizations, academics and the media regarding environmental issues.

In that sense, interdisciplinary work between philosophy, the social sciences, and environmental sciences gave its first fruits, helping in the development of hybrid disciplines such as environmental philosophy, environmental ethics, ecological anthropology, the history of the environment, the environmental economy, political ecology, ecological or environmental law and environmental sociology.

In this regard, issues that in the past were considered the exclusive interest of ecology such as solid waste, pollution, acid rain, global warming and loss of biodiversity attracted the interest of many economists, anthropologists, historians, political scientists, geographers, and sociologists. As Leo Marx stated "all these problems arose from human activities; not due to the independent operation of the natural world. Therefore, these environmental issues are social issues"(quoted by Plummer & Macionis, 1999, p. 611) (own translation from Spanish). In this sense, sociology has summed, from different methods, the study of the processes of social, cultural and political reconstruction of environmental problems facing the states, regions, municipalities, rural communities, watersheds, coasts, and rivers of Mexico.

### ***Rural development and environment in the Municipality of Celaya***

According to Miguel Márquez Márquez, governor of Guanajuato, the state has become one of the safest in the country, and that is a factor of competitiveness; and its consolidation originates from uninterrupted PAN governments for 20 years, with a medium- and long-term vision, that is giving results, and has led to certainty and security for investors (Baeza, 2012).

In that vein, the governor's speech on agricultural activity is also triumphant because Guanajuato is the leading producer of broccoli nationally and occupies first place in lettuce, wheat, corn, barley, strawberry, pork products, sheep, and goats. The state also held the 8<sup>th</sup> place in the value of agricultural production and 5<sup>th</sup> in the value of livestock production in 2011. In 2011, the State recorded a volume of agricultural production of more than 8 million tons and livestock production of 465 000 739 tons.

The *Government Program 2012-2018* (2013) by Márquez Márquez, on rural development, calls to a) promote and implement production and financing for agricultural development in rural communities; b) promote food production, raw materials and agro-industrial products, and c) promote, foster, support and implement educational and technological development for small and medium farmers in the state.

For its part, the *Government Program 2012-2015* by Celaya mayor Ismael Pérez Ordaz, has three main objectives, actions, and strategies: to a) promote the economic development of rural areas through the integration of productive projects that promote sustainability, modernization and training of the rural population; b) articulate the productive capacities of rural communities by strengthening local agricultural trade; c) improve the quality of life for residents in communities by encouraging economic development, self-sustainability, and introducing technological equipment and working tools in the field and micro enterprises in the rural area through the implementation of productive projects, and d) improve, promote, and develop the infrastructure of communities, manage and execute high-impact works in strategic communities for the development of the municipality (Celaya Government Program 2012-2015, 2013).

However, Celaya has a complex problematic in rural development. Regarding the actions of the PAN municipal government, it has favored a kind of agribusiness that is highly wasteful of water and also highly polluting. State and local governments have neglected peasant agriculture to promote national and transnational agricultural and agro-industrial bourgeoisie. While Guanajuato and some municipalities have excelled in agriculture nationwide, its costs in social, environmental, and economic terms have been very high for farmers and their communities.

Moreover, with the arrival of foreign companies and the progressive increase of the urbanization of Silao, León, Irapuato, and Celaya, real estate developments have proliferated and have made land dispossession latent to the suburbs and rural communities that border these municipalities, and threaten a situation which benefited the "Brothers Bibriesca" during the government of Vicente Fox and was denounced by some media, particularly in Celaya.

In that sense, the PAN development project in the state has favored a development model focused on favoring real estate entrepreneurs and agribusinesses to the detriment of rural development and alien to the peasant agriculture sector of the marginalized Guanajuato society that is condemned to immigrating to the neighboring North Country. Moreover, the "triumphalist speeches" with a "human face" of government and municipal development plans, are still far from promoting sustainable rural development with a better quality of life for its inhabitants.

According to the *Census of Population and Housing 2010* (INEGI, 2013), Celaya ranks as the third most populous municipalities in the State of Guanajuato, with a population of 468,469 inhabitants (243,445 of which are women and 225,024 men), only behind Leon, with 1,436,480 and Irapuato with 529,440. Celaya has a population density of 835.10 people per km<sup>2</sup> and 65 rural localities.

Its main economic activities are manufacturing, trade and the service sectors, its main agricultural activities consist of the cultivation of corn, alfalfa, sorghum, cattle and goat rearing. Celaya is known as the *Golden Gate of the Bajío* thanks to the economic development in the Bajío region, due to its geographical location which links the cities of Queretaro, Guadalajara, and Mexico City. The industrial composition, its agricultural resources and communication infrastructure have attracted mechanical, appliances, steel, chemical, and food processing industries in recent years among which the following companies stand out: Honda, Mazda NKP, Yachiyo, Mabe, Whirlpool, Avon, Fertilab, Corporativo Bachoco, Capistrano, Gamesa, Golden Foods, Monsanto, Coca-Cola-FEMSA, among others.

On the other hand, since 2013, the installation of automakers such as Honda and its suppliers has led to a wave of immigration that has resulted in an increase in job applications from other municipalities and states of the country, as well as housing and other public services, as a response to the population boom involved the installation of the Honda automobile complex. The rise of industrial development that drives population growth and demand for services means that pressure on the environmental system of the municipality becomes acute, exacerbating the problems of soil and water pollution and contributing to the deterioration of air quality (Celaya government program period 2012-2015, 2013).

Evidently, the economic and demographic growth of Celaya will accelerate and translate into increased pressure on water consumption, expansion of urban sprawl, declining agricultural activity, privatization of neighboring common land, increased emission of pollutants into the atmosphere as well as the increase in industrial activity, the vehicle fleet and the volume of solid waste.

Moreover, the fifth axis of the municipal government plan, which is dedicated to sustainable environmental development, has recognized the following environmental challenges: 1) the use and availability of water; 2) land use change and land degradation; 3) air pollution and climate change; 4) disregard for and loss of biodiversity; 5) inefficient waste management; 6) lack of industrial environmental regulation and competitiveness; and 7) the neglect of the urban environment. The breakdowns of these environmental challenges are set out below:

- 1) The original agricultural vocation of the municipality has been changing for new housing developments and industrial parks that modify land use and in turn cause the expansion of the agricultural frontier into areas of vegetation, compounding the problems of deforestation and loss of productive land.
- 2) Celaya generated every day about 400 tons of municipal solid waste, which given the lack of programs for separation and recovery of materials are sent to the municipal landfill called Tinajit as that only partially meets environmental regulations. The potential for recovery of recyclable materials (metals, cardboard, paper, and plastics) is 30%, this means about 120 tons per day. Furthermore, the dispersal of populations and the great demand for garbage collection services in urban areas means that there are insufficient resources for providing a collection and transport service that is completely efficient, this promotes the generation of illegal "clandestine" dumping and burning of waste, exacerbating the problems of dispersion of pollutants in soil, water and air.
- 3) Regarding water, Celaya relies heavily on the supply of groundwater through the use of the Valle de Celaya aquifer which is shared with 6 municipalities. Due to the high demand for the resource and the inefficiency of its use, there is an alarming deficit between recharge and extraction of more than 200 million cubic meters annually causing water stress, the effects of this level of exploitation are manifested in the 11 faults affecting infrastructure in the center and in some communities.
- 4) Pollution of the River Laja. The river was originally a hallmark of the city, it is currently severely affected by pollution resulting from the obstruction of the flow and discharge of domestic and industrial wastewater.
- 5) Regarding air pollution and climate change, Celaya with over 120,000 registered vehicles, has one of the largest vehicle fleet of the center of the country with rates higher than larger municipalities such as Leon. This adds to the growing industry in the municipality, however, there is a network of air quality monitoring, so far there is no prevention and preparedness program for taking action on environmental contingencies.

6) Likewise, the loss of plant cover is a result of the advance of the agricultural frontier, the uses for firewood and other domestic use and overgrazing, resulting in soil erosion, loss and fragmentation of habitat, siltation of water bodies, dust devils in the municipality, among other impacts (Celaya Government Program 2012-2015, 2013, p. 135).

### **Results**

The methodology of this work was based on an open structured interview which was applied to 50 key informants in June 2013. Informants are representatives of the business sector, the media (reporters from newspapers and broadcasters), civil society, academics and university rectors. This section only presents some answers to three questions from an interview of 30 questions. The three questions whose answers are the subject of analysis in this article are: 1) How do you explain the expansion of the urban area and how is it affecting rural communities? 2) Have environmental problems in Celaya been resolved? 3) What problems arise with respect to water supply?

*A) Answers to the question: How do you explain the expansion of the urban area and how is it affecting rural communities?*

"There have been a lack of attention to communities, they have been forgotten, and they only run clientelistic social programs to have the captive vote of the citizens. Perhaps no more than the two or three largest are addressed, and the others are forgotten; they are in a terrible state because there are not many services, and don't even talk about infrastructure"(Representative of business organization, June 5<sup>th</sup>, 2013).

"Now what is coming with Honda involves a great economic development, I think the municipal government lacked planning in the sense of what will be done with agriculture if at a global, state or national level the number of cows is diminishing. The polygon where Honda installed itself does not look like a settled community. I think the government did not consult the farmers"(media representative, June 2, 2013).

"Urban sprawl, being disorderly, with no vision for the future and procured at a lower cost has been a continuous process of environmental damage and urban chaos. Generating a non-functional municipality, devouring communities. Nearby communities were affected even before the expansion of the urban area as a result of the abandonment of the countryside and the economic and ideological pressures of modern life with the transition from agricultural work to industrial activity, trade, and services "(Greenpeace representative, June 5, 2013).

"I believe that a lot has been invested in agriculture and livestock, at least in the large farmers and ranchers, they have been given all the support. As far as I know there is no rural development money for productive projects if people are not well structured. There are infrastructure and investments in the agriculture and livestock of the major exporting producers "(University Professor, June 15, 2013).

"There is no policy to support small farmers, who could solve the problem of supply of safe and affordable food products, thanks to production chains and controlled for the benefit of producers. Nor is there a plan to recover in the Bajío for the damaged soils and no training of farm workers, reduced to the elderly and women who can rarely make the small plots that they count on productive"(University Rector, June 5, 2013).

*B) Answers to the question: Have environmental problems in Celaya been resolved?*

"It is a debt that brings up the public administration. There is Tinajitas, they made it bigger, they started with a cell that is ancient and has already accumulated millions of tons of waste, even up until Gerardo Hernandez the third or fourth cell is already inoperable but does comply with an official standard. More waste has been accumulated, it is a source of terrible infection and odor "(Representative of business organization, June 5<sup>th</sup>, 2013).

"In the case of ecology, there is an outstanding debt that is the landfill that meets all official regulations. Another serious problem was that the Municipal Institute of Ecology has had low-skilled people for the position for example, we had people with different professional backgrounds to the area, the most talked about was the case involved a nurse who was president of the Institute Ecology, not to denigrate nurses, but we need specialists for these cases"(Media Representative, June 2, 2013).

"No, because it is evident that they have not solved the main environmental problems in Celaya (1) the Celaya Valley aquifer recharge deficit has not been addressed, (2) the rate of green spaces per inhabitant has not been increased to a healthy level, (3) the rate of trash accumulation per day has not been diminished,

(4) there have been no efforts to promote the practice of sustainable agriculture in the country, on the contrary, the government continues to change land use in favor of construction and industry, (5) the municipality does not have a plan of environmental education and communication at the height of the circumstances and (6) the lack of progress in the protection and conservation of natural areas of the municipality"(Representative of Greenpeace, June 5, 2013). "Caring for the environment has never had the importance it is due; the government failed to regularize a landfill in the community of Palma, shared between the municipalities of Celaya, Apaseo el Grande, Juventino Rosas, Villagrán, Cortazar, and Comonfort"(University Professor, June 15, 2013).

"In past terms there were attempts at reforestation, the director of ecology did a good job and this trickled down to the institutions and NGOs, but only in planting trees, no other activity transcended in that way form"(University Rector, June 6, 2013).

### **C) Answers to the question: What problems arise with respect to water supply?**

"Every day we have less, they are charging the service based on paying for consumption, which is great, but I think it should be a little more demanding. We know farming and industry are the most wasteful, and there has been no intervention, so no firm actions have been taken. It is a shame that the Laja River is so polluted, it has not been able to advance much because everyone pours their contaminated water, they do not care, no conscience, that is what I see "(Representative of business organization, June 5, 2013).

"While there isn't a critical shortage, there are always going to be problems in some neighborhoods, where the area is saturated, e.g. Norponiente, so much of the water is extracted from the depths, and so the water has many minerals, and it is not suitable for human consumption leading to investment in water treatment plants, but there is latent possible poisoning in the future, including wells that are not regulated by the JUMAPA (Municipal Board of Water Supply and Sewerage) and then the same extraction has given the tolled the death knell for the aquifers, consequently resulting in subsidence and affecting the heritage of the Celaya population"(Media Representative, June 2, 2013).

"The problem for me is the highest priority, and I consider it serious. Celaya faces countdown to the depletion of their primary source of drinking water: the Celaya Valley aquifer. Moreover, the dangerous increase in concentrations of heavy metals in said water in the prelude to the final exhaustion. The fate of a municipality without water is a ghost town"(Representative of Greenpeace, June 5, 2013).

"They are planning since the federation to bring water from the 'El Realito' Dam from San Luis Potosi to supply Celaya" (University Professor, June 15, 2013).

"No alternative measures have been taken, nor has awareness been raised among those facing water issues; Celaya wastes water without order and without considering that we will have problems in the future"(University Rector, June 6, 2013).

### **Conclusions**

The responses outlined above represent a sample of business, media, environmental organizations, academics and university presidents who asked for their names to be omitted if it was decided to publish their interviews. On the other hand, more quotes were not included because there is a moment in the process of analysis in which the social actors interviewed no longer provide innovative responses to the questions, a matter which is called "saturation point" that is, the answers of the respondents tend to be repetitive. Also, we stress that the quotes are "representative of the interviews a few key stakeholders" who do not respond to any statistical sample.

What methods and/or techniques accompanied this study? It has been said that the choice of frame work that conditions the choice of research methods. In that sense, qualitative sociology has developed numerous methodological strategies. Many of these methods used to "rebuild the social reality" have been included among theoretical schemes as symbolic interactionism, ethnomethodology or constructivist, and phenomenological sociology. The municipality of Celaya has been ruled by the National Action Party (PAN) for over fifteen years. Moreover, their rural communities still crawling problems such as environmental degradation, migration, poverty, marginalization, aging, political manipulation and lack of economic opportunities. On the other hand, the constructivist analysis of the responses provided by the fifteen respondent's shows that the complexity that comes with rural development and the environment (threats and expansion of the urban area to suburbs and rural communities, and water issues) before being recognized as go through an assessment process, filtration and social construction.

This process of acceptance, perception and recognition are given through experience, knowledge rules, ideological connotations, social norms and symbols. It is through these mediations that individuals and groups can "define", "know", or "ignore" on the processes and actors involved in the complexity of rural development and the environment.

Moreover, it is recognized that according to their experience and knowledge, individuals and social groups interact, negotiate and reconstruct one or more versions of the definition of "the harmful effects of urban sprawl in rural communities" or "scarcity, overuse, and pollution of water", that is, businessmen, journalists, environmentalists, academics, university rectors and the general public, parade in the carnival of the recognition, definition, denial or concealment of environmental crisis, the marginalization of peasant agriculture or sale of land adjacent to the municipality of Celaya.

However, we see that the following issues stand out as threats and problems in rural areas: a) the progress of urban sprawl due to real estate developments; b) the ideological pressure of modern life; c) the concentration of land ownership, which results in migration; d) the abandonment and neglect of rural communities by the municipal government's basic services and infrastructure; e) political manipulation during election campaigns through social programs such as PROSPERA and 70 and over; f) lack of planning and foresight of the municipal authorities before the arrival of multinational companies such as Honda, which poses a threat to natural resources (water availability and quality) of rural communities; g) the reduction of farmland and importing food from other regions of the state or country, h) the absence of public policy training for small farmers, as well as the lack of a recovery plan for damaged soils, and i) the absence of a policy of sustainable rural development that goes beyond speeches, campaign promises and good intentions of municipal development plans.

With regard to environmental issues, the current PAN Mayor, Ismael Pérez Ordaz, has identified six environmental challenges and a number of strategies to reverse them, however, the perception of social actors interviewed about the ability of municipal response is skeptical or even negative. The municipality of Celaya drags problems like garbage, lack of basic services, lack of green spaces and the absence of a land use plan to stop the advance of urban sprawl and reconcile the economic interests of industry and real estate development with environmental protection. In the hottest months of the year (April, May, and June), for example, the center of Celaya has a distinct odor due to evaporation arising from obsolete drainage. Any tourist who stays in Celaya and visits the city of Queretaro will notice the aesthetic, sociological and ecological difference between the two municipalities. Queretaro is enjoying a breakthrough in environmental awareness and quality of life. Of the entire state of Guanajuato, Celaya is the municipality with the fewest trees per capita: a negative indicator in a municipality that has only La Alameda and El Xochipilli parks for ecological recreation and outdoor sports.

Decisions made in the economic and political fields often have consequences for the environment. The evidence of degradation is perceived everywhere. Air, water, and land are being polluted in the state of Guanajuato, which goes hand in hand with urbanization, industrialization and favors a model of unsustainable agriculture or industrial corridors. Some authors have defined politics as an institution that distributes power and is an arena for conflicts of interest. In that sense, Guanajuato is a state that has been ruled by the PAN for more than twenty years, whose governments have favored economic development policies with high social and environmental costs such as poverty, marginalization, migration, environmental degradation and low quality of life. In fact, the political discourse of the "common good" PAN has only resulted in economic benefits for local political elites and corporations that have come to settle in Celaya and the Laja-Bajío industrial corridor. On the other hand, levels of citizen participation to solve the problems of the municipality are very low, that is, the population seems indifferent to the seriousness of environmental problems that society faces, and it is no wonder that environmental organizations define the average citizen of Celaya as apathetic and conformist.

Now, what is the contribution of this work to the cultivation of the sociological imagination? Before answering this interrogative we must first clarify two issues: first, there are so many stakeholders as social constructions of rural development or the environment, in that sense, this work lacks the inclusion of constructions by municipal officials, farmers' organizations, professional associations, political parties, trade unions, religious leaders, among others; and secondly, we believe the concept of *media construction of reality* as a construct of codes, interests, values and ideology of the owners and employees of the professional media, subject to the category of "*social construction of reality*" wider and plural, which encompasses the social constructions of other stakeholders and the media constructions of communication professionals.

Finally, the contribution of this work is that it allows sociologists to re-construct many social and media realities from a qualitative sociology of constructivist realities, as well as analyzing the indifference and ignorance of media professionals and other social actors define those social as irrelevant or outside the public sphere realities. On the other hand, if we use a framework of critical-Marxist analysis -exploring the values and beliefs of the owners of the media in Celaya, and their employees-, we would analyze to what extent the contents are in line with the dominant ideology and whether said ideology excludes other social constructions of reality, presenting itself as a hegemonic and counter version to the plural spirit that society demands of the media.

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