

Atenquique's environmental and economic development shrinkage in globaliztion era

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Abstract

This paper focuses on the effects the transfer of ownership from a state-owned Paper Mill Company to a corporate private ownership has had on environmental and economic shrinkage in Atenquique. This transfer was the result of the ongoing economic process of globalization, after the industrial boom of the paper mills during the second half of the last century. The paper also focuses on how the employees of this Paper Mill Company live and how they have been affected by globalization and how they feel about their paper mill's new corporate owners. The methodology used was descriptive and exploratory. A sample of ten workers at the company who lived in Atenquique was chosen for an interview. After being inhabited the town of Atenquique developed in terms of population, society and economy. On the other hand the Industrial Company of Atenquique grew during the period when it was a property of the Mexican State. After the company's privatization, the town started to decline and shrink in three above-mentioned variables. The impact on the environmental and economic development has initiated the shrinking and declining of Atenquique and the surrounding cities and towns.

Key words: Atenquique, environmental development, economic development. Shrinkage, neoliberal model, globalization.

Resumen

Este trabajo se enfoca en el impacto de la declinación económica y ambiental que ha tenido la transferencia de la propiedad de una compañía papelería propiedad del Estado a una propiedad privada corporativa como un efecto de los procesos económicos de globalización, después de la bonanza industrial de la fábrica de papel durante la segunda mitad del último Siglo. El trabajo también se enfoca en cómo los empleados de esta compañía papelería que viven en un pequeño poblado han sido afectados por la globalización y cómo se sienten acerca de los nuevos dueños corporativos de la compañía papelería. La metodología usada fue descriptiva y exploratoria. Una muestra de diez empleados de la compañía que vivieron en Atenquique fueron seleccionados para una entrevista. El pueblo de Atenquique fue fundado y creció en términos de población, desarrollo económico y social en la misma proporción que lo hizo la Compañía Industrial de Atenquique durante el período que la Compañía fue propiedad del Estado Mexicano. Después de que la Compañía fue privatizada, el pueblo empezó a declinar en población, desarrollo económico y social y lo más desastroso, es el peligro ambiental. El impacto en el desarrollo ambiental y económico ha iniciado la declinación de Atenquique pero también de de las ciudades y pueblos que lo rodean.

Palabras clave: Atenquique, desarrollo ambiental, desarrollo económico, declinación, modelo neoliberal, globalización.

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1. Introduction

During the 1990s a period of restructuring in the paper mill companies started in México, a process that has been characterized by large corporate owned companies consolidating to become larger, more vertically integrated, more transnational, less diversified, and leaner. These changes and developments were caused by the long term trends toward economic process of globalization. As the economic processes of globalization continue, its effects on local communities are uncertain to their residents' perceptions (Brady and Wallace 2000:91). Global competition and capital mobility have changed the incentive of new corporate owners for community concerns (Miller, 2006).

A Mexican-based forest products private company recently purchased the paper mill in a paper mill town, Atenquique, a small community in the Southern region in the State of Jalisco. When the paper mill company was founded it was state-owned and financially supported housing, schools and other community activities for its employees and workers. However the state owned company was sold to a private corporation and after the transfer of ownership, employees had distrust and fear on the new corporate owners. In a similar way, it has been reported already by most of the literature about the effects of globalization focusing on how owned corporations are perceived as they take off state-owned companies.

It has been said that in Atenquique the inhabitants used to live like a great family. Family meetings were characterized by the warm environment of friendship, the spirit of solidarity at work and the affinity of aspirations. This unification and fraternity of Atenquique was the contribution and worrying of the Compañía Industrial de Atenquique, a paper mill factory, to provide the township with adequate infrastructure, buildings and installations to promote living together among the workers and their families. For this reason the company had restaurants, movie theaters, casinos and reading rooms. The company also offered swimming pools, football fields, basketball courts, gyms, etc., to foster sports among the population living in Atenquique (Medina Enriquez, 1988).

To develop social relationships among the population the company supported the formation of clubs and workers, employees and their families' membership to participate in contests of speech, poetry, conferences and theater performances. Attendance of famous writers, poets and intellectuals was encouraged as well as the performance of music concerts. Employees and workers formed the Mariachi Atenquique who used to perform every Sunday evening in downtown. Dancing schools received support. In sum,

Atenquique conducted intense social and cultural activities as part of better life quality. It was the time when the economic and environmental development of Atenquique was at the rise.

Compañía Industrial de Atenquique was one of the showcases where the emergence of economic institutions structured under the dominant ideological paradigm of the Mexican revolutionary State concerned for the welfare of employees, workers and all the stakeholders. In fact, the company was public and state-owned enterprise, and concerned about creating sources of employment and welfare for the post-revolutionary generations of Mexicans living in the southern region in the State of Jalisco. However, this situation doesn't exist anymore. The economic and environmental development of Atenquique and the surrounding Region of Southern Jalisco is shrinking and the main turning point was the privatization of the Compañía Industrial de Atenquique as a result of undergoing processes of economic globalization.

2. Materials and methods

The methodology used was descriptive and exploratory. A sample of ten workers at the company who lived in Atequique was chosen for an interview. The sketch of the interview had five questions:

- 1) Since when do you live in Atenquique?
- 2) Since when do you work in Atenquique?
- 3) What are the most important changes that you have lived in Atenquique?
- 4) What are the most important labor changes that you have had in your work?
- 5) Have these labor changes affected you positively or negatively?

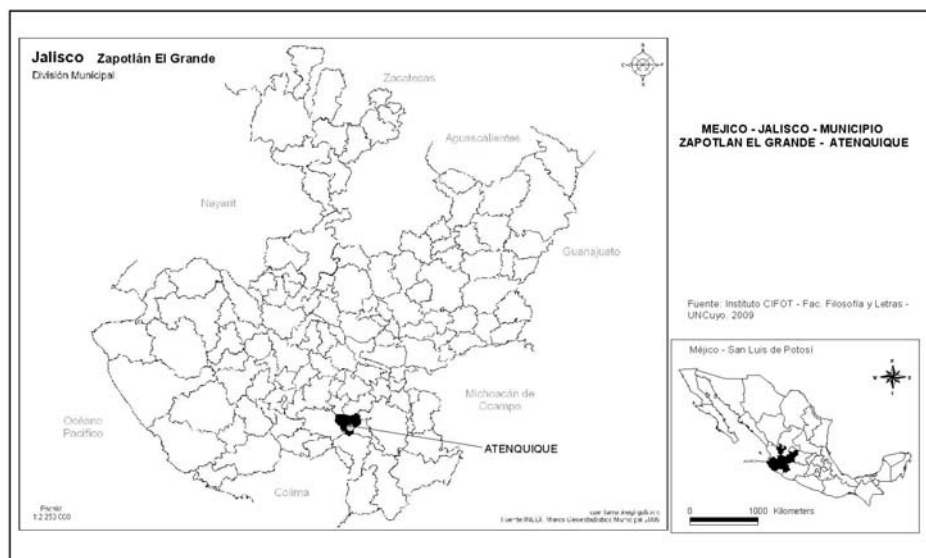
All the selected people to be interviewee had provided valuable information.

3. Location of the Village of Atenquique

The village of Atenquique (19°32'N 103°30'W), is located South of the State of Jalisco, at the East foot of the Colima peaks, over the middle of the ravine of a precipice at 1030 meters above the sea level. The precipice of Atenquique is 24 kilometers large, located in the East bank of the Volcano Nevado of Colima together with other precipices The Plátanos and Arroyo Seco, form the Atenquique Basin. The Atenquique basin has a form of long funnel West-East oriented joining the Tuxpan River. Atenquique is located 7 m (11.3 km) west of Tuxpan, on Mexico Highway 54 (Fig. N° 1)..

The Volcán Colima is a decadent volcano and the most active in Mexico. Currently it is approaching its climactic phase and a major eruption could occur in the next decade. Volcanic debris flows are likely to occur in the two major drainages to the east and west of the volcano, Rio Tuxpan and Rio Armería respectively. Unfortunately, as a large lumber-producing town, Atenquique is at high risk for moderate to large lahars because it is near the volcano and at the bottom of a deep canyon. At this location the hydraulic radius of the largest model lahars (10^8 m^3) would be about 75 m and that of the intermediate flows (10^7 m^3) would be about 40 m. Atenquique would be inundated and devastated by such mudflows (Sheridan, Michael f., Hubbard, Bernard, and Hooper, Donald, no dated) The largest lahars (10^8 m^3) would have a peak depth of about 60 m and a run about 120 km, reaching the sea. The smallest lahars examined (10^5 m^3) would have a peak height of about 7 m and would only reach about 15 km distance. These models should be helpful for a risk planning at Volcán Colima (Paul and Sheridan, no dated.) Atenquique is a lumbering center, soda and wood-pulp mills.

Fig. Nº 1 México, Jalisco. Localization of the Village of Atenquique



Source: Instituto CIFO, Dpt of Geografy, Facultad de Filosofía y Letras, UNCuyo, Mendoza, Argentina

4. Brief history of the town

Atenquique was the site of battle of Atenquique in 1858. Before the construction of the paper company in Atenquique, this village only had 50 inhabitants. The village was created in 1946 as the consequence of installation of a paper mill named Compañía Industrial de Atenquique, S.A. (CIDASA) as a strategic point to capture the water of two

rivers, Atenquique and Tùxpan, vital for the industry. The Compañia Industrial de Atenquique was inaugurated in October, 1946 and became the largest in the Southern Region of Jalisco. Immediately after the establishment of the company, Atenquique had more than 4, 000 inhabitants. Since then, the labor force comes from the neighboring cities and towns being thankful to this employer.

On the 16th of October, 1955, an intense storm of 140 mm that lasting 3 days, suddenly originated a series of fluxes of rubble and debris devastating almost the whole Village of Atenquique. On the 16th of October, 1955, a strong current and flooding from the Atenquique Creek caused the death of tens of persons and destroyed the church, a school, business and shops buildings and around 20 homes. The issue was that a slope of high inclination collapsed near the village which was enough to cover some meters of the church that today only shows the highest part from the central garden. It also affected the industrial plants and killed 23 persons and some people saved their lives in the campanile of the church. The flooding left desolation and affected the operations of the paper company for 2 Months, railroad and other roads were truncated and the material damages were estimated in 10 thousand million Pesos at that time. This catastrophic event obliged to make new plans for Atenquique (Redacción Del Sur, 2005). The inhabitants helped to repair the damages of the Company.

After installation of the paper Company in the locality of Atenquique, which was only a camping spot, the population had duplicated in only 20 years from 1950 to 1970, consolidating itself as a pole of regional attraction. Atenquique grew larger until it reached a peak of 291 households with a population of 1,645 in 1990 as it is shown in table 1 that takes account of the larger localities out of 82 in the municipality of Tùxpan (Fig. N° 2)

Fig. 2. Population for the years 1990 and 1995 in the main localities of the Municipality of Tuxpan

Name of localities	Population (Year/inhabitants)	
	1990	1995
Cabecera Municipal	25,895	26,219
Atenquique	1,645	1,237
La Higuera	1,479	1,410
San Juan Espanatica (El Pueblito)	908	792
Pozo Santo	868	
Platanar		582

Source: INEGI (2000).

For the case of Atenquique, it can be determined that there were 1,645 inhabitants in 1990 while there were only 1,237 in 1995, marking a trend towards a shrinking population (Fig. N° 3).

Comparing the population that had Atenquique in 1988 and the Population Atenquique has in 2007, the results are:

Fig. N° 3. Population of Atenquique

Year	Population attending school	Total population
1988	750	3700
2007	139	310
	-611	-3390

Source: Own estimations after counting and taking a census.

5. The history of the Company

Although the area of the Nevado de Colima was declared "protected zone" in 1934 and considered national park in the times of President Lázaro Cárdenas, the decree was modified two years later in 1936 to give opportunity to the company in Atenquique to exploit the forest. The 3rd of August of 1936, by decree was created the National Park El Nevado after the visibility of strong interests for the forestry wealth existing in the area.

The land reform implemented in México during the 30s and 40s gave shares of communal land (Ejido) to poor peasants (ejidatarios) of expropriated land from large states' private owners, generally called haciendas. In order to exploit their land, the ejidatarios cleared the forest and leveled the ground through irrational felling of large forest surfaces.

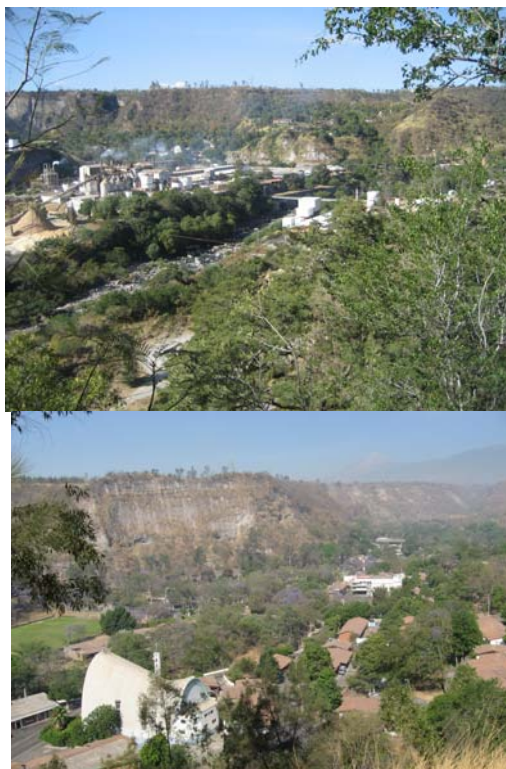
The large owners of property organized in the enterprise Unión Forestal de Jalisco y Colima in 1940 to maintain control of forest resources and protect against possible risks. Union Forestal de Jalisco y Colima was formed on the 14 of September, 1940 with the association of the larger landowners of the Southern Jalisco who controlled the forests not only of the Volcanoes of Colima but also the Mountains of Sierra del Tigre, El Halo y la Leona.

On the 26th of November 1940 the decree was modified again and on September 7, 1941, the Compañía Industrial de Atenquique, S.A. (CIDASA) was founded to take advantage of forest resources in the Southern Jalisco. The decree established the concession for forest exploitation in the Southern Jalisco for 50 years in favor of CIDASA for the elaboration of chemical celluloses, mechanical past, paper, synthetic fibers and diverse plastic materials.

The paper company in Atenquique was created by local investors and promoted by a German military. The Mexican federal government granted one million eighty thousand hectares in a free concession for a free exploitation during 50 years. This extension represents 1.7 of the forests in all the Mexican territory.

The Industrial Company of Atenquique, was a state owned paper mill enterprise. Since the beginning, the Company had been benefitted by fiscal incentives. The Company diversified its productive activities in a conglomerate integrated by the lumber exploitation cellulose extraction, and packing manufacturing.

The 22nd of March, 1945, an industrial forest exploitation unit was created in favor of CIDASA with a concession for exploitation of timber on a surface of 225,000 acres. This area was distributed in 17 municipalities in the Southern region of Jalisco, with an annual production varying between 60 and 70 percent of the global production of the State. On the 27th of March, in 1945 the Industrial Unit of Forest Exploitation (Unidad Industrial de Explotación Forestal or UIEF) was created by decree to consolidate control of forests adoption a legal regime. In 1945 it the Dirección Técnica Forestal (Technical Forestry Direction) was created with employers paid by CIDASA, thus, being the organization in charge of technical surveillance of exploitation on the payroll who takes advantage of the forests. Between 1946 and 1948, the first forest inventory named General Project of Ordination was carried out (Fig. N° 4).

Figure 4. Partial view of Atenquique

Source: José Vargas

There was a world crisis of paper in 1954 that benefited the expansion of CIDASA. Because of that the forest exploitation was consolidated as the main economic activity given the potential and magnitude. In 1963 and 64 the CIDASA plant was modernized and amplified. Between 1964 and 1968 the second forestry inventory took place. As an immediate consequence of these agreements, the exploitation of the forest resources was accelerated. By 1969 the modernization of the plant was already consolidated incorporating new techniques and processes.

In 1971, CIDASA became a parastatal enterprise due to financial problems. In 1972, another decree widened the uses of the exploited lumber by the UIEFA (Unidad Industrial de Explotación Forestal de Atequinque). At the beginning, it was allowed to be used for the elaboration of cellulose, cardboard and paper. Later, it would be used for wood, triplay and other products. Later, a manufacturing plant of triplay was installed although the Oyameles were scarce after a fierce exploitation.

Relationships between inhabitants of neighboring municipalities, more specifically between the cities of Tuxpan and Cd. Guzman were considered familiar communion because the company was "the heritage of our fathers". General wages were at the rank

between 150 and 160 pesos (15-16 US Dollars) per day, although some workers earned more than 300 pesos (30 US Dollars) justified by the high productivity and personal qualifications.

GIDUSA was founded in 1980 and has been the only one producer that integrates vertically the whole productive process of cardboard and packing from the lumber exploitation, cellulose, manufactured paper and products. After the Mexican economic and financial crisis of 1982, the economic policy addressed the problem gradually dismantling the State, selling and privatizing public enterprises, merging, transferring, canceling and settling down major companies and taking out from the parastatal sector's minor companies. After the end of the exclusive concession to Atenquique in 1990, the Company was sold to the Durango Group.

Under the ongoing structural reforms and privatization programs, the Industrial Company of Atenquique, a conglomerate producing paper and the most important in Latin America, was sold to the is the Grupo Industrial Durango. The firm provided 65 percent of packing of cardboard utilized by the Mexican export sector, 80 percent of Mexican packing utilized by the Maquila (in bound industry) sector and 40 percent of the packing consumed in the country. In 1987, the government sold the conglomerate to the Grupo Industrial Durango, S.A. de C.V. (GIDUSA) that belongs to the Rincón Arredondo family.

The company was an economic empire in the southern region of Jalisco because it used resources conceded by decree that belonged to Ejidatarios (Holders of one right to exploit a plot of land) and small property owners. GIDUSA is the major lumber Company and the major manufacturer of brown papers and packing of cardboard in Latin America. It also owns 26 manufacturing plants in México and 5 more in United States. Nowadays, the Industrial Company of Atenquique is one of the subsidiaries of Grupo Industrial Durango.

Also, Grupo Durango owns Productora e Importadora de Papel (PIPSA), that controls 90 percent of the newspaper paper in the national market. In 1998, Bancomext gave 80 million US Dollars to GIDUSA in order to pay its debts to the banks after shopping PIPSA. The federal government remitted their debts for the acquisition of PIPSA, although it was sold off at half its value (Proceso, 1999).

The problem initiated the third week of April, when 97 workers out of 650 were fired because their contract was rescinded without any reason and later another 30 workers

more. On the 21st of April, after the Company stopped production due to maintenance, it declares that it is not competitive. At that time, the workers went on strike outside the facilities of the Company waiting a solution for the conflict.

The firm shut down operations on the 26 of April, 2001 firing employees and workers. The company of paper Kraft was closed due to the increase of production costs, and more specifically the labor costs. After half a Century of operating, the Industrial Company of Atenquique closed the doors. It transcended that the Company had taken out equipment of the plant, which in turn had motivated protests of employees.

Under the argument that the Company was operating with high costs, the plant was shut down and 900 employees were fired. It was quite difficult to think that an Industrial Group like this had economic difficulties. Actually, the main reason to close Atenquique was its high cost of manpower (Milenio, 2001).

There were two different versions of the company closing: The workers argued that the ambition of shareholders and managers from the Grupo Durango was the main cause. The Union strategy was to avoid the definitive closing down of the plant.

The second version argues that a weakness was the traditional collective contract of labor signed 55 years ago with an addendum of benevolent clauses that benefited the employees and workers as the result of negotiations between the labor union in one side and in the other, the representatives of the state and the company. However, it was argued that higher labor costs were the result of the lack of flexibility to change labor culture. The owners argued that in Atenquique the oldest and least competitive labor contract in the national paper mill industry exists. The firm declared that the collective labor contract includes clauses, terms and benefits difficult to understand (Milenio, 2001) in an economy of high competitiveness and open borders to imports.

The company argued that the lack of profitability was due to high labor costs. Therefore the origin of the conflict was to eliminate the collective contract and to hire personnel under a new scheme of labor conditions designed to lower the labor costs. However, the Company accepted that the main problem was the age of workers, who were older than 35 years old. The threat was to locate the plant to a place where the Company could achieve higher profitability. The message was clear: to suspend the labor contracts that threatened the principles of productive efficiency. The closing of Atenquique meant that

labor rights achieved in half a Century can be nullified by management and fired 650 union workers, 120 employees of trust and 130 eventual workers.

The collective contract set a daily production limit of 240 tons of paper while before the strike the production was more of 350 tons.

During the visit of the Governor of the State of Jalisco to Tamazula de Gordiano, a neighboring city to Atenquique, Guillermo Legarret González, and General Secretary of the National Union of Paper industries exposed this situation of the workers at GIDUSA. The Governor dialogued with the workers of the firm and offered support to solve the conflict (Comunicación Social (2001)). During the labor conflict, the Municipal President of Tuxpan, Tranquilino Rúa Laureano, affirmed that the workers had his moral support to find out the way out of the conflict.

On May 16, 2001, The State Congressman Ramón León Morales submitted an agreement point to the Permanent Commission of the Congress which was turned to the Social Welfare and Labor Commission. The mandate of this point of agreement was to find a solution to maintain the source of labor and respect the labor and contractual rights of employees and workers.

However, after having several meetings between the managers and the employers to settle down the amount to be paid to the fired workers as liquidation, they did not reach any agreement. After the paper plant closed and fired all the workers and employers, it was announced that the Economic Promotion Secretary of the Jalisco State Government would sustain the economic reactivation programs to create employment in the Southern Jalisco after the closing of the GIDUSA plant.

In meetings between the Secretary of Labor, leaders of the Union, and representatives of the Village of Atenquique, the Company accepted to pay for maintenance of primary services. They also agreed to review the collective labor contract to settle benefits to workers in order to reduce the costs of paper production. Also, the Company agreed to sign a new contract hiring all the employees. The Company and workers accepted the commitment, although the Company decided not to accept it. The Secretary of Labor had to intervene to reach the agreement after the workers had to agree on receiving only part of the benefits as part of the deal to settle the collective labor contract.

The labor conflict in the paper GIDUSA plant was part of the strategy of the Company to overcome the labor collective contracts to reduce labor costs. All the workers and employers were fired ending the collective labor contract that had been enforced for 55 years, with an estimated cost of 160 million pesos. Once settled this collective labor relation, Atenquique could open the plant without the heavy burden of the payment of labor benefits.

On the 3rd of September, 2001, GIDUSA declared it was ready to open again (El Financiero, 2001) investing 50 million dollars (Rodríguez, 2001). The Company was named Compañía Papelera de Atenquique S.A. de C.V. The new company began operations in September 2001 with around 50 percent of the labor force. Since then management of the firm has been requesting new attitudes toward the multifunctional job assignments, supported by programs of training and productivity. Overall, salaries are lower than before. Starting on February 2007, the firm changed its name again to ATENSA, S.A. de C.V., Empaques de Carton Titàn, S.A. de C.V.

6. Results and discussion

Reviewing the data from the individuals living in Atenquique and working at the company reveals that 90 percent of them began living and working there before the crisis. Regarding the question “what are the most important changes?” from those interviewee who had lived in Atenquique, it is quite interesting to find that 100 percent reported that these changes are related to facts of the Company’s cycle life, such as change of ownership in 1987 when it was privatized and sold to the Grupo Durango. The older interviewee commented that they started to work in the Company or other companies clustered such as Unión Forestal de Jalisco y Colima, Aserraderos Tècnicos, etc.

Another important change commented was the closure of the Section XI of the Union Workers in the year 2001, when most of the workers were fired. In order to cancel the workers Union, the Company closed operations and declared bankruptcy. Only part of the union workers were hired under contract, just to find that after the end of this contract they would be transferred to other clustered company with the same terms and conditions of a new contract.

Answers to question 4: “what are the most important changes they have had in their work?” implied explicitly the time when the interviewee began to work for the Company and the required competencies to for a good performance and higher productivity at work.

Other answers reported that the most important changes for the employees and workers who lived in Atenquique were the adjustment and adaptation to the work, job promotions in the company, changes in the information and data systems, personnel reduction and new hires.

It is interesting to find that all the interviewee agreed that the turning point was marked on September 2001 when after the crisis, the Union was eliminated and the new named company began operations again hiring workers without experience and without fringe benefits and job requirements. The pressures were higher on efficiency, productivity, with less resources and new challenges. The employers kept the same wages while the workers have lower salaries and fewer fringe benefits than when the company was owned by the Mexican State.

They also agreed that there's been more pressure and the labor environment and labor climate are tense and stressful in contrast to the times when the company was owned by the Mexican State. Employees and workers had a more relaxed environment, less pressure on assignments and more personnel assigned to perform the same duties. Now under the new management the stress increases when the employees and workers are required to take care of resources and some fringe benefits such as tires for cars, gas bonuses, profit sharing, etc., have disappeared.

One of the interviewee captures the situation stating that during that time supervision was difficult because the operative personnel with Union membership were lazy and negligent. When the new Company started in September 2001, after the declared bankruptcy and crisis of the former Company, all the personnel with union membership were fired, some of them were hired but most of the personnel were new hires.

The responses to the last question "have these labor changes affected you positively or negatively?" answers can be also analyzed in terms of their personal job experiences at the company, more participation of workers, earning more money, more labor options, learning more, and the opportunity to have a job. Most of them declared that the labor changes at the company have favored them because they have received more training. One of the respondents concluded that he has been more motivated by all the events caused by the globalization changes, commercial treaties, and unemployment have caused that people value the sources of jobs more and the struggles for the company to survive in the Southern Region of Jalisco.

Other interviewee reported that labor changes have benefited him because he has achieved promotions in rank and salaries. Furthermore, other interviewee declared that although the labor changes are more stressful and with more pressure, however, he perceived that the changes have been positive. He also argued that because of the devaluation of the acquisitive power of wages, he needs to achieve the goals to keep the job. In general terms the employed people at the Company perceived that since they started to work they have improved attitude and productivity of personnel which is positive. Personnel have acquired more abilities and became multifunctional: a mechanic now knows welding, painting, etc. Before, he worked always with a partner, and now he works by himself.

Among the negative impacts of the labor changes at the company reported by all the interviewee persons, are that they work under more pressure, more time than the ordinary labor day of eight hours, without receiving overtime payment or negotiation of worked hours in exchange of more flexible time when required for personal problems such as health attention, etc. Other effects are the lower salaries and less employees and workers. An interviewee declared as the negative effect the job pressure and stress when achieving productivity goals, better results with less costs.

Another negative aspect reported by an interviewee was that labor environment is heavy and stressful. The managers of the company are obliged to have profits alongside pressing and obliging personnel to get better performance. He states that "it has been managed psychologically to make us believe that we are the owners of progress and we are responsible of good results". It is a scaling upwards objective, always improving productivity.

A. Economic impact

Once the "economic motor of Southern Jalisco for more than 55 years closed the doors, the labor conflict was a social and economic conflict not only in the region of South of Jalisco, but also at the level of the State of Jalisco started. The labor conflict had not only an economic impact, it had an affective implications. 95% of the workers of the Company in Atenquique were from Tuxpan, a municipality that had 33 thousand inhabitants. The main economic activity of Tuxpan is the agriculture of sugar cane and vegetables.

From March 1995 to December 2000, investments in the Southern region of Jalisco added 55 million US Dollars, which represents 98 % of the total in the State of Jalisco. (Secretaría de Promoción Económica del Gobierno del Estado de Jalisco, 1995-2001).

The company provided more than 1,000 direct employments and more than 4, 000 indirect employments which had an economic impact not only in Atenquique but the neighboring cities of Tuxpan and Cd. Guzmán and the towns of Zapotiltic and Tecalitlán. It was calculated that the economic spill over was around 150 pesos daily per employee as an average which amounts to a total of 750 thousand pesos per day or 22'800,000 per month.

650 workers plus 300 employees were affected by not earning their salaries with an impact on the living standards of 4, 750 inhabitants. It was estimated that 4 out of 10 families of the municipality of Tuxpan depend on the Atenquique worker's income. More than 600 families were directly damaged in their income. The immediate impact on local economy of Tuxpan was the falling down 60% of sales and consequently less than this percentage, although it was not estimated, on the falling down of sales in the regional market of Cd. Guzman.

An study of the State Legislatura concluded that the multiplication effects of the salaries spill over were estimated around 800,000 pesos per month only in the municipality of Tuxpan, but should consider as an impact on Mazamitla, Tecalitlán, Tamazula de Gordiano, Tolimán, Zapotiltic, Zapotlán el Grande and other locations in the State of Colima, limiting consumption and eroding the living conditions.

The economic effects of the labor conflict were visible at the Tianguis (the street market) on Sunday, where fewer customers than before had gone to buy. The earned wages as the direct economic sustainability of families and also indirectly were dependent of the labor conflict. For example, as a consequence of the labor conflict, it was estimated a reduction of around 40 percent in income of restaurants.

Seniority average of workers and employers was around 20 years of service who had a legitimate aspiration to achieve pension. Most of these workers had not any other opportunity to be employed or to start their own business because of the backward economic development of the region. For this condition the region has been fiscal favored.

The social impact in the analysis of the State Legislature implied that the closing of the Company could origin familiar disintegration, health, nutrition, education, migration and criminal problems. The Economic Promotion Secretary announced that they have a diagnostic to find solutions and economic alternatives to the problems derived after firing the workers.

The municipal President of Tuxpan suggested that some corrective measures were taken in order to attract more investments to the municipality just to avoid being highly dependent on one Company. Korean entrepreneurs involved in the metal mechanics industry pretended to establish a plant in the municipality of Tuxpan. It was viewed as an alternative to create employment, but unfortunately, the negotiations went wrong. In Fact, the municipal President Rúa Laureano had bet to the Korean investment which should have generated 3,000 employments in the short term and 10,000 in the long term, although women were to be employed. This plant could interrupt the trend toward migration of young generation that leaves behind towns without young men.

b. Environmental impact

Starting the second half of the past Century, the environmental degradation on the area has been significant and has reached to alarming dimensions and has surpassed the natural capacity of natural regeneration of forest communities. The most serious problem of the Southern Region of Jalisco has been the irrational deforestation which has started since the beginning of the CIDASA, today GIDUSA. The Federal Government also modified the limits to shrinking the protected area, from 2,300 meters above the sea level to 3,000 meters. Besides the limits were never well defined which have always been confusing.

Thus, the Company took advantage of the National Park and ruined the forest resources of the Nevado of Colima's area brutally. When the Company started to exploit the forest, it had the capacity to transform around 200 thousand cubic meters of lumber per year, which represented an enormous quantity of falling trees.

The abundant ecological resource supply without almost any restrictions motivated that the company overexploited more than 230 thousand cubic meters of lumber annually, above the sustainable capacity of regeneration of forests. In this way, Atenquique raised its production to more than one million cubic meters of lumber, five times more than the capacity of regeneration of the forest. This caused an ecological debacle of the forest.

After 50 years of forest exploitation the outcomes are the secondary vegetation and deforested areas utilized for agriculture and cattle, infrastructure and commercial exploitation. The company subutilized the forest resources not having any planning of byproducts derived from lumber. The Company exploited the pine for manufacturing paper and the holm oak for the furniture industry, but never exploited hundred of tons of shaving that were spoiled. Besides, the interests have been for other local communities who have taken advantage. There is not other form of getting away but to maintain a client relationship with the lumber industry that manages the forest.

Many owners of forest decided to exploit the resources on their own springing up and proliferating sawmills around Cd. Guzman, where more than 25 are operating and exploiting with no reason the forests, argues García de Alba, (2004). This irrational exploitation of forests is the cause that hills collide originating in a sudden manner the fluxes of rubble and debris. After the natural forest disappears, the roots of the trees can not retain and compact the ground. Because the high slope of the hills, the water erodes the ground and cause the removing of materials.

Several systems of forest management had been implemented according to the needs, such as the Mexican Method of organizing irregular forests (Método Mexicano de Ordenación de Bosques Irregulares or MMOBI), Forestry Development Method (Método de Desarrollo Silvícola or MDS), Jalisco Coastal Plan (Plan Costa de Jalisco), Integral Management Plan for the Region of Atenquique (Plan de Manejo Integral para la Región de Atenquique or PMIFRA), Forestry Conservation and Development (Sistema de Conservación y de Desarrollo Silvícola, or SICODESI), Integral Management System (Sistema de Manejo Integral or SIMANIN). However, the results of implementing these plans are not positive.

After the earthquake of Armería on 21 January 2003; the geomorphology dynamics of the Atenquique basin has been accelerated. This dynamics can generate flows of detritus in the short term as it had occurred in October 1995 that had destroyed a great part of Atenquique. It is necessary to incorporate in the urban development plans the risks by flows of detritus in the locality of Atenquique. Natural phenomena, such as the crawling of hills and solifuction when de materials suddenly and fast split apart as flood, cause these natural disasters.

The other area of high landslide concentration was along a 6-km stretch of the Barranca de Atenquique, a deep, steep-sided canyon cut into the eastern flank of Nevado de Colima. On the south flank of Volcàn de Fuego and along several smaller canyons south of the Barranca de Atenquique, moderate landslide concentrations evidently involved similar materials to those along the Barranca de Atenquique.

GIDUSA spill over the sewage on the river Tùxpan polluting the running waters pitting at risk any forms of living.

Recommendations

At macro level, it is necessary to change the existing framework of the Mexican Constitution and the regulatory national and state laws regarding the environmental and natural resources sustainability issues, and more specifically the law concerning the conservation of forest, in such a way that the exploitation of lumber should be more rational and under principles of community sustainability. New legislation and the creation of new institutions to foster the sustainable development of forests and jungles are needed.

Forest has been raised to the category of national security issue with full recognition of its implications on economic development and under the banner the federal government took up the Forestry National Plan. However, there are evidences proved by different studies against the official figures that the forest issue has fallen to priority number 40 or more under the federal government leading forest and jungles to total extinction. The causes of forest and ecological deterioration and its implications on economic growth and social development is linked to the application of inappropriate public policies. Public policies are desperately needed to improve the economic growth and social development of the communities that have depended largely on natural resources at protected natural reserve areas.

The government budget for forestry needs to be increased from 0.01 percent of the overall budget and support programs are also required to be targeted broadly to forest areas. Finance to bring change is lagging far behind. PROFEPA, the Federal Agency for Natural Resources Protection has the duties of environmental surveillance and auditing, industrial inspection, managing denounces and implementing revisions of legal dispositions, faces many challenges in the procuration of environmental justice and has been charged of corruption. Corruption is endemic among officials because of the low salaries of the

inspectors, thus to cut down corruption activities is required to raise wages. Illegal activities in timber extraction in forest communities cause deterioration of forests and disrupt the community life. The new measures on over regulated activities have proved to be more harmful to community practices for sustainable management and use of natural resources.

Deforestation will remain a large problem in Southern Jalisco with serious consequences in the soil erosion, which in turn threatens the biodiversity life, disappearance of natural habitats and change of microclimates. A number of initiatives are required to resolve the problems of illegal activities in timber extraction such as illegal wood cutting, from protected forest land areas. The forest around the cities, townships and villages had been devastated by small scale logging concessions. Actions aimed to slow down deforestation and to increase reforestation should be encouraged and taken by local governments but also by communities and small private land owners and holders of communal land (ejidal). Local governance, forest management programs and an incentives plan to foster the sustainable use of natural resources is required for the practice of community forestry. In places where community forestry is practiced, local governments and landholders tend to protect natural resources.

Communities in the Southern Jalisco, such as Atenquique that had been depending on forestry and lumber before for income need desperately to diversify economic activities such as environmental and rural tourism to take advantage of the surrounding nature treks. Forestry can be linked to ecotourism and other environmental activities and non-timber products such as botanicals, art crafts, etc. Besides, local government should promote alternative employment programs on sustainable management of natural resources.

An integral perspective of the implications that natural resources management such as forest and economic and social development should be the foundation for any strategic planning of regional development involving all the actors and agents to generate the appropriate conditions for community's welfare.

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Detritus. Mimeo, no publicado.