



# Impact of Catarman Oil Mill, Incorporation (COMI) Production in Barangay Aguadahan, San Jose, Northern Samar

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## Authors' contributions

*This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.*

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## ABSTRACT

This study followed the descriptive method of research, and conducted to assess the impacts of Catarman Oil Mill, Incorporation's production in Barangay Aquadahan, San Jose, Northern Samar. It identified the possible environmental impacts, socio-economics impact, and on health and safety impacts of the production operations of the company. The barangay officials, barangay health workers and other interested groups particularly focused on the discussion on the environmental impact, socio-economic and health impacts associated with the oil mill in the area. Participants to the FGD were residents of the studied barangay and were enumerated within the 1 kilometer radius from the location of the company. Thus, the results of the study revealed that the Company is not involved in community promotion-related activities and that there is a growing health concerns that the community and people have attributed to the operations of the COMI. There is an unpleasant odor coming from the company which causes health concerns among the community people that most of the children and the elderly experiences from mild to severe headaches, asthma, allergy and other unnecessary illness. It was also found out that the company do not hire residents for permanent employment in the establishment least they would only hire a few of them only on contractual basis. On the environmental impact as a whole, there seems to be no evidence that the company is creating any alarming effect to the environment least the complaint of flooding in the area that most respondents attribute to the plant.

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## 1. INTRODUCTION

The cost of industrialization to people and communities can never be equated to how the environment can suffer in such a way that human habitation can be threatened in extreme events as we see changes in weather patterns and in other manifested conditions, Industrial activities can indeed contribute to the destruction of the environment as a result of mixed factors ranging from pollution as the least identified problem going up to serious problems such as the mishandling of wastes and the heavy use of fuels that results in emission of deadly gases to the atmosphere and disposal to water bodies [1-3].

As it is indispensable to human development, industrialization contribute to the problem in greater proportion that in the end, according to scientific studies, humanity and all living creatures can be immensely affected. Thus, this problem has become obviously a concern of everyone beginning from the household and extending to all sectors where activities to push for the development of the whole human community as a whole can never be denied [5,6].

Development is necessary for humanity to advance itself but it should also recognize that anything coming in rapid movement or flow may just have to be counterproductive insofar as our existence is concerned [4,7,8]. Besides we have our own responsibilities to protect and preserve the environment by refraining from destroying it. We cannot be caught off guard and we have to be uncompromising to allow mother-nature to sustain itself through time.

One such way is to make sure industrial plants and companies are made to understand their role in the wider scope that largely they are the ones which contribute to pollution and other undesirable problems. Every industrial plant must adhere to environmental standards to minimize the effects they bring forth to the environment and the communities around them [9-13].

In this study, it assessed the various parameters attributed to possible impacts of the environment along with other aspects that may have not just to the environment but to every community where they are operating.

The Catarman Oil Mill, Incorporation, an entity that is engaged in the manufacture of oil and its

by-products for profit. This study was conducted to help us relate the issue of industrialization to the environment and to the people who live within it. A pattern of studies like this will eventually help us take a positive perspective on the benefits of industrialization and development in such direction as sustaining the environment and keeping a balance between nature and that of economic development.

### 1.1 Objectives of the Study

This study aims to:

1. Identify the possible environmental impacts, in terms of the following:
  - a. Water use
  - b. Water depletion
  - c. Water contamination
  - d. Increased occurrence of flooding
  - e. Air quality degradation
  - f. Nuisance due to noise generator
2. Identify the possible socio-economic impacts in terms of the following:
  - a. Enhanced employment/ livelihood opportunities
  - b. Increased revenues for LGU/IPAF (Integrated Protected Areas Fund)
  - c. Disruption/competition in delivery of public services, education, peace and order
3. Determine the impacts on community health and safety.

## 2. METHODOLOGY

### 2.1 Locale of the Study

The municipality of San Jose, formerly called "Carangian" is a fifth class municipality in the province of Northern Samar, Philippines. It is located at the North Central part of the province, about 19 kilometers West of Catarman. It has a total land area of 2, 985 hectares. San Jose is politically subdivided into 16 barangays; Aguadahan, Bagong Sabang, Balite, Bonglas, Dao, Gengarog, Geratag, Layuhan, Mandugang, P. Tingzon, San Lorenzo, Tubig Danao, Barangay North, South, East, West. Barangay Aguadahan is the Central barangay where the project is situated named as the Catarman Oil Mills Inc.

The descriptive type of research was utilized and uses the survey questionnaire to gather relevant data and information. Focused Group discussions were made to complement the results.

## 2.2 Research Design

The descriptive type of research was utilized in this study and uses the survey questionnaire to gather relevant data and information from the different stakeholders in its aim to determine both the socio-economic and environmental impacts of the project.

## 2.3 Research Instrument

Participatory Resource Appraisal (PRA) in gathering the data and validation was used.

## 2.4 Data Gathering Procedure

**Formal interview:** The researcher sought the permission from the different stakeholders of the community and the Catarman Oil Mill Inc. The distribution and answering of the questionnaire was done with the major key informants of the barangay through random sampling that is directly affected by the project.

**Focused Group Discussion:** Focus Group discussion (FGD) was conducted to help the researcher verify the individual responses of the survey results to confirm its veracity. Guide questionnaire was used in gathering responses.

## 3. SUMMARY OF RESULTS AND DISCUSSIONS

On environmental impacts, the following results were derived:

On water source, most residents attested that their water were taken from deep well and a few of them source out heir water from the public faucets;

On Water depletion, no one responded to that question which only means that water source is not affected.

On water contamination, on the element of taste, most of them said that it is still good for all users;

On color of water, they maintained that the whiteness or clarity of water in the area remained unchanged;

On the increased occurrence of flooding, all respondents were on the same observation that flooding still exist especially during heavy rains which is not associated by the Oil mill.

On the air quality, they were on the observation that a foul odor comes from inside the plant and this was happening frequently at times the plant is on extended operations especially during coconut oil mill production times.

On nuisance due to noise generator, four indicated that noise is heard from 100 meters, 15 meters and 80 meters away from the plant;

On the economic impact of the manufacturing plant they responded that they have not seen any employment opportunity as host community of the project.; On the company granting livelihood opportunities to the community people, they confirmed that there was none whatsoever; On the social responsibility that COMI initiates activities on a regular basis, it was learned that no such initiative to conduct such activity were done or instituted.

On the delivery of basic services, there is a functional elementary school that caters to grade one to six pupils however no secondary school in the barangay, as the response of the respondents revealed; health center is the one offering the regular function and COMI for that matter is doing little to nothing in terms of helping residents with their basic health issues; This observation is also true with those working to preserve peace and order in the community with the respondents saying that no assistance is being extended to the barangay tanods relative to their work; COMI is not providing social services that will allow the community to enjoy in terms of scholarship and other activities and programs where it is expected as in other cases as a matter of social responsibility.

On health issues, the respondents made complaints about some of them experienced health problems that they attribute to the smell or bad odor that comes out from the plant especially during coconut oil processing operations.

## 4. CONCLUSION

### 4.1 The Following Conclusions were Derived from the Study

The odor coming from the company every time it proceeds with its manufacturing operations, and

this causes health concerns among the community people that most of the children and elderly often suffer from mild to severe headache that is believed to have been a consequence from the foul odor that is emitted from the company.

In terms of water use/source, it was found out that there is an available source of safe drinking water and that the water from deep wells in the barangay is not contaminated; the sourced drinking water's taste is described by the residents as good and safe for all. It was also found out that the occurrence of coconut oil bad smell through their air emissions from their plant is associated with some diseases and ailments by the residents.

The socio-economic impact of the establishment is not favorable to the residents since COMI has very little economic contributions to the development of the community in terms of work opportunities and even in the access of localized fishing activities in the vicinity areas of the Oilmill since it is prohibited.

The Catarman Oil Mill, Inc. has no clear community services, because the company exclusively work as its policy assure only the benefits of their workers and safety of their company.

## 5. RECOMMENDATIONS

From the conclusions of the study, the following recommendations are presented and advanced:

1. The barangay residents with the support of the municipal government of San Jose should ensure that the company gives the community what is due them in terms of services and other collective benefits such as on employment, medical and other socio-economic opportunities;
2. The Protected Area Management Board regularly monitor its operations so that unwanted pollution can be avoided especially in water and air environment.
2. The Catarman Oil Mill, Inc. should implement national policies in compliance to environmental laws and local legislations and that it should work closely with the barangay officials to provide

livelihood programs to benefit the families in the community.

3. COMI should provide an alternative public services to the community as part of their social responsibility.
4. Conduct study on Air quality to determine the presence of any unwanted pollutants associated with the unwanted odor emissions and possible thermal pollution where the waste water from Catarman Oil Mill, Incorporation is disposed.
5. Results of this study be presented to the community in Barangay Aquadahan, San Jose, Northern Samar, in a simple but formal manner and that a copy of this work be furnished to the management of the Catarman Oil Mill, Inc., and the Local Government Unit for awareness and become part of the Policy decision of both parties.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

## REFERENCES

1. Available:<http://www.insiht.som.ale.edu/insi-hts/how-does-the-changing-price-of-oil-affect-economics-around-the-World,2017-2018>.
2. Available:[http://www.nbpol.com.pg/wp-content/uploads/downloads/2011/02/Environmental\\_Impacts\\_of\\_Oil\\_Mill\\_palm.pdf](http://www.nbpol.com.pg/wp-content/uploads/downloads/2011/02/Environmental_Impacts_of_Oil_Mill_palm.pdf).
3. Available:<http://Sciencedirect.com/science/article/ii/SO717345814001420>, 2012.
4. Available:<http://www.resonse.restoration.noaa.oov/al-and-chemicalspills/oil-spillhow-oil-harm-animals-and-plantsmarine-environmnets-htm>, 2017.
5. Available:<http://www.oilcase.or-uk/what-we-do/im-acts-of-oil-2015>.
6. Available:<http://www.throuhtco.com/environment-conse-uences-of-oi1Spills-1204008>, 2017.
7. Available:<http://www.google.com>
8. Available:<http://www.thefreedictionar.com>
9. Available:<http://www.investoedia.com/terms/i/industrialization.as>
10. Available:<http://www.en.wikiedia.or/wiki/socio-economic>

11. Available: <http://www.scirio.org/journal/article/information.aspx?oaerID=58405>
12. Available: <http://www.slideshare.net/chinweeze/effect-of-oil-effluent-on-soil-samples-on-the-environment>
13. Available: <http://www.investopedia.com/terms/d/depletion.asp>

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