

## Service Learning through COP in Gumeng Village-District of Mojokerto

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### ABSTRACT

Gumeng is a beautiful village with prosperous land and well-mannered people inside. Being prosperous land, it has abundant clean water for support their daily needs and fertile soils that can easily grow various crop. Moreover there are also some buildings that support their daily life such as school buildings, policlinic, mosque and a community hall.

With the approach of using whatever the nature gives, it seems like they can do anything without awareness to maintain the surrounding environment. The villagers have a bad habit about littering everywhere and as well it is common for them to just burn the waste which causes air pollution. Other than that, it is clear that they have abundant clean water but however the main problem is in the way it distributed to each households and village facilities.

Through this service-learning program of COP, the participants have been able to help Gumeng village sorting out the problems by some projects such as building trash bins, installing pipes, building a gazebo, giving counselling sessions about littering habits and finally how to clean up the village.

**Keywords:** community outreach program, sanitations, water project

### INTRODUCTION

Gumeng is a village situated in Gondang a sub-district of Mojokerto. This particular village is built upon a mountainous region of East Java with an average altitude of 450 meters above the sea level. As a consequence of this high altitude the average temperature here is around 26 degrees Celsius, much cooler than those experienced in lower areas such as Surabaya. There are 150 households here, this population consist of 227 males and 194 females all of which are Muslim. They pray five times a day and participate in sunset prayer at the village mosque. The majority of these villagers are Javanese who speak a subtle variant of the Indonesian language called *Krama Alus*. Due to the Javanese culture, people in Gumeng are always full of respect, this is visible in situations such as greeting both fellow villagers and also newcomers. In addition to greetings, they also express their gratitude by sharing what they have such as food, materials and also tools. The main source of income is through growing crops and raising livestock resulting in low incomes.

Talking about the resources, Gumeng has prosperous land with fertile soils that can easily grow various crops such as vegetables, fruits and rice. In addition to the good soils, there is also adequate clean water allowing them to use the water for their daily needs without fear of running out, even in the dry season. Being located on an area of highland it has fresh air with little pollution compared to the big cities. Luckily for this village they are very confident in thinking that they will never lack of food and water. There are also some buildings that support their daily life such as school buildings, policlinic, mosque and a community hall.

With the approach of using whatever the nature gives, it seems like they can do anything without awareness to maintain the surrounding environment. The villagers have a bad habit about littering everywhere, on the street, in the gutters and also in the river. They have no idea about what to do with the garbage so it is common to just burn the waste which causes air pollution. It is clear that the natural water spring will never run out, however the main problem with this village in terms of water the way in which it is distributed to each of the different households and village facilities. They use hoses rather than pipes which are not properly organized and often break leading to water being wasted. Despite this problem, until now there has been no successful effort in managing the problem and to save water.

Within the COP (Community Outreach Program) there are many different participants of whom are studying different majors at their different universities. Each of these majors provide the participants with a range of different specialities in which they can bring to the village. Examples of the majors being studied by the participants in Gumeng for COP 2017 include Civil Engineering which can help when looking for ways to build things. Furthermore, Tourism can be useful in helping to manage the village’s development, those studying Financial Management can help to manage the cash flow of the project such as purchasing materials. Moreover, the Architects can help to design the mural program and those studying Geography can help to identify the impacts of the human population and the natural environment such as the burning of the waste and the impact this on the surrounding air. Finally, those studying Social studies can help in building relationships between the COP participants and the villagers.

Through this service-learning program of COP, the projects completed by the participants in Gumeng they have been able to successfully maintain the environmental sector of this small village through projects which include; building trash bins, installing pipes, building a gazebo, giving counselling sessions about littering habits and finally how to clean up the village.

**PROJECT PLANING AND IMPLEMENTATION**

We use SWOT methodology to analyses the village needs.

<b>Strengths</b>	<b>Weaknesses</b>
<ol style="list-style-type: none"> <li>1. There is an abundance of clean water easily available for the village</li> <li>2. The surrounding soil around the village is fertile, reliable crop yields</li> <li>3. Villagers are all relatively easy to contact and cooperate with</li> <li>4. Little air pollution from motor vehicles as the town only has around three cars and the rest are motorcycles</li> <li>5. There are many community facilities available for use such as a town hall, public washroom, policlinic, mosque, two playgrounds and an elementary school</li> <li>6. Reliable internet and electricity connection providing useful services for the village.</li> </ol>	<ol style="list-style-type: none"> <li>1. The abundance of clean water made the villagers waste the water</li> <li>2. Littering habits of the villagers made the pollution for the environment</li> <li>3. The road to the village is not safe because there are no lamp on the road</li> <li>4. Easily bored with the new innovation</li> <li>5. The marketing of the product is unreachable</li> </ol>

Opportunities	Threats
<ol style="list-style-type: none"> <li>1. Water pipes can be installed in order to ensure that water is being distributed effectively</li> <li>2. Trash bins can be made to provide a final destination for the inorganic and organic waste from the village</li> <li>3. Non-physical projects can be provided to both the adults and children of the village about arrange of different topics</li> <li>4. Cleaning the village with the villagers</li> </ol>	<ol style="list-style-type: none"> <li>1. The village is located in the mountains with limited transportation and infrastructure.</li> <li>2. There's no extracurricular activity in school.</li> <li>3. People are easily bored doing the same daily routines: go to the farm, and then go home.</li> </ol>

The first week, we started our projects on gazebo and trash bins as the physical programs. On the beginning, it was so hard to get help from the villagers based on there was an infrastructure development from government that just began couple days before we arrived, such as road pavement. After some conversation with the head village we could understand the situation so we just asked for help from the expert and they told us what to do. It took a lot of time for beginner like us. On the second week, we continued on water pipes. We first thought it was just digging job and the easiest thing to do than the others project, but there was a lot of rocks needed to be crushed and none of us could did it. Luckily, this week was better than the first week. There were some villagers from the area which we were digging helped us and made the work two times faster. They also served us some snacks and drinks as a gratefulness. For the last week, we worked up the mural and village signboard. Hand to hand with some villagers we scratched all over the policlinic leftside-wall.

For the implementation of the gazebo, we chose bamboo as the main material because cheaper than concrete. First thing to do was take the bamboo near the river and brought it to location. Then, we made the foundation, the column and the whole gazebo, with roof made of weeds. After the gazebo has finished, we made the small table with a hole inside and filled it with children's books. For the final touch, we paint the gazebo to increase the durability. This project took 7 days.

For the implementation of the trash bins we started by moving the materials we needed such as red bricks (about 525 bricks), sand and the cements to the location (there were three points). The first trash bin was built near the public bathroom, the second trash bin was built among the villager's house and the third trash bin was built on the main street near the entrance gate of the village. With the help of the worker we finished all the trash bins within 9 days. We mixed the sand with the cements and stacked the bricks then and built the trash bins which divided into two parts, the organic and non-organic. Next, we covered the bins with cements and waited for it to dry. After dry perfectly, we smoothed the concrete and covered it again with white cements and glue. Finally to mark sides off, we painted it with different colour (green for the organic and blue for non-organic) complete with our name.

For the implementation of the water pipes, majority we just dug all the path as long as 270 meters with 50 centimeters deep. We did it day by day with the villagers and after finished all the path, we put down the pipes, connected it one another and covered it up again. Along the way we

made 3 stoppage to plumb houses and school. We needed 10 days to finish the pipes project so the water can flow through the pipes into the villagers house.

For the implementation of the mural, the first thing to do was to clean the polyclinic wall. We only did the left side because it is the way where people walk by. After the wall was cleaned, we started to sketch the drawing and painted it beautifully. During 8 days work, largely we spent on clean the wall. We illustrated the sketch with some environmental awareness expecting the villagers could always keep clean surroundings.

For the implementation of cleaning the village, we asked the head village help to gather around all the villagers and do the cleaning together, and it was what we got. We cleaned all the main street, the village hall and also the river beside the public bathroom. We did separate between organic and non-organic waste in different bags, and we did this all afternoon.

For the implementation of organic and non-organic counselling, we separate into 2 different group according to the age. First counselling we gave to children in the school, and the second to adult in village hall. The purpose was to arouse villager's awareness so that they will keep continuing what we did for them and their village.

## **RESULTS AND DISCUSSION**

On the first week we started to build the trash bins and the gazebo, we built the trash bins because the village doesn't have final destination for the waste and most of them still do the littering habits, by built the trash bins hopefully they could get rid of old habits and start caring about surroundings. About the gazebo, we had considered to build it because children don't have desire to read a book or study together beside school time with excuse there is no place. So we provided place, and also books.

In these projects, we faced difficulties in seek for villager's help. As mentioned before, they had infrastructure development so they seemed so busy. The bamboos were too heavy and we were not used to make concrete, thought we need more advice. Because of that, we were so slow to do such things based on no experience. Besides, the streets were not adequate for big car (truck) to go by, so we must to replace the materials manually.





We still continued to build the trash bins and gazebo whereupon at the same time we started to install pipes with a prospect that every houses get the same amount of water (water distributed efficiently). After trash bins all built up, we gave counselling about organic and non-organic waste and soon implemented it. Hand to hand we cleaned the village and separated it.

What challenged us was digging is not as easy as we thought. There was a lot of big rocks that only mason can crush it and also a lot of plastic waste buried under the ground, so we must cleaned it up first. Furthermore, it was so hard to gather villagers around to give them counselling because they have mindset that it was too complicated to deal with the waste, so they just burnt it all.





## **Conclusion and Recommendation**

Because of COP has been done 3 times there, we find that Gumeng was enough in terms of environment developing. For the next COP, we expect that COP can be implemented to the village which need more help and further development. By helping the village that already developing, it's the same as thwart them to be independent.

Based on our 3 weeks in the village, it sums up that the enhancement of the village cannot be happened in a short term, notably the habits. We conclude that the main obstacle that will be continued is burning the waste. Why? Because even we already provided them trash bins, which is the "final destination" of all the waste, they still don't know what to do after. In a place where we live (city), there are persons who work for government (mention as a garbageman) and weekly they will take out our household waste and send it to be recycled. We just hope that the government pay more attention to minor segment that seems unimportant, but evidently reliable.