

Study on Changing Raw Food Markets in Sylhet town maintaining Social Distance Preventing from Covid-19 like Infectious Diseases

Shah Md. Hasin Shad

Abstract

Throughout history, humans have faced various infectious diseases that caused numerous global pandemics like the covid-19 virus which caused the recent pandemic. It made the world suffer for two years, from 2020 to 2021. As there was no medicine or vaccine for it, the social distance was the only option to control its spreading. So, Bangladesh government declared a lockdown to control this virus. Still couldn't stop this virus from spreading because some of the amenities couldn't be shut down: one of these amenities is food that people buy from the raw food market. The Raw food market must be kept open to fulfill people's basic food needs. As most of the existing food market is not designed in a process to keep social distancing, the raw food market was one of the places where covid-19 spreads. So, some solutions should be needed for the future as there is a chance of this kind of outbreak again. This article suggests places where the existing raw food market can be shifted during the pandemic to secure social distancing. Three markets of Sylhet town were taken for the study. This article also suggests how the place will be selected for the market. The School field was found to be the suitable place for it.



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Introduction:

Human being has a history of 2 million years (History,2020). Since then, humans have developed themselves in various sectors like science, medicine, agriculture etc. People have the solution to most diseases but every now and then there are some diseases still emerging that people need time to contain. Throughout history, there were some diseases that spread quickly and created a global pandemic (Jernigan, 2017). In most of the cases, it was found that the pandemics which were caused by germs (viruses, bacteria or other pathogenic microbes) were the reasons of Infectious Respiratory Illness (DoH,2022). 2019 Novel Coronavirus (2019-nCoV), Diphtheria, Enterovirus D68, Influenza (flu), Haemophilus influenzae type b are these kind of diseases (Epton et al., 2022). The recent pandemic was caused by 2019 Novel Coronavirus or Covid-19 (Shafi et al., 2020). In October 2019, the Covid-19 virus outbreak broke in China and spread throughout the world in 2020 (Grinberga-Zalite et al., 2021). It was considered that the origin of the virus was a sea food market (Wu et al., 2020). Some also said it came from the bat (Shereen et al., 2020). The World Government had declared it a global pandemic (Kharroubi & Saleh, 2020). It is a contagious disease which spread through humans close to close contact (Shammi et al., 2021). The Government of different countries have to go into total lockdown to stop the spreading of this covid-19 virus (Fabeil et al., 2020) because distance of 3 ft or 1m from human to human can slow down the spread of this virus (S. Mahmud et al., 2021). Bangladesh is a vast, densely populated country. In March 2020, the first patient was found who was covid-19 positive in Bangladesh (Crisis24,2020). On 26th March Government went into total lockdown of the whole country (Betterwork,2020). Everything was closed except necessary items like groceries shop, raw food markets, dispensaries, hospitals etc (Kamruzzaman,2020) but unfortunately these were the places responsible for spread of the covid-19 but government could not control it because these items are needed to survive (Kuhangana et al., 2020). Sylhet is a divisional city of Bangladesh (SFD,2022), it has a population of 928,000 (Macrotrend,2022). In March, with the government's declaration, Sylhet went into total lockdown like all other cities. Though all were closed, the government couldn't close the raw food markets and other shops. As the raw food markets of Sylhet's are in unhygienic and congested areas, the 3ft or 1m distance cannot be maintained here and it became a vital spot covid-19 spreading. That is why three markets of Sylhet have been studied to shift provisionally during this type of pandemic and whether it will be helpful or not in this kind of situation has been discussed.

Literature Review:

The plant and animal-based foods are called raw food and these are the main ingredient of all foods. The types of raw foods are vegetables, fish, meat and other agricultural products (CIN7, 2020). The market where these items are sold is called the raw food market. The products of this market are essential in day-to-day human life. These markets are the source of raw materials for the other food product industry (Alocilja & Radke, 2003). The fruit and vegetable industry is the fastest-growing and largest sector of the world agriculture production market (Del Rio Osorio et al., 2021). Usually, a raw food market is a very wet and unhygienic place (Tilaki et al., 2021). As everyone cannot buy raw foods from the supermarket, the government must keep these markets open in any situation. It is important to keep raw markets in action because food security is the most important issue in developed countries like Bangladesh (Mizik, 2021). In the Covid-19 pandemic, the market couldn't be closed. During the covid-19 time to contain the spreading of this virus, commercial activities and mobility were limited (Sarkodie & Owusu, 2021). But people have to go to the raw food market for fresh food. The covid-19 have made huge changes in nutritional behaviors (Rodriguez-leyva & Pierce, 2021). During this pandemic, the nutrition sector was hampered greatly (A. Mahmud et al., 2021). As covid-19 belongs to highly contagious respiratory pathogens (Gkiotsalitis & Cats, 2021). It

spreads through droplets and saliva when people cough or sneeze (Ahmed et al., 2020). To control the spreading of corona virus, social distancing is very important (WHO,2022). It is important to create a hygienic market because it has been thought that the covid-19 virus originated from the fish market in china(Sukhwani et al., 2020)

Research Methodology:

At first, the three raw food markets were selected considering the different kinds of customers and the documentation of the existing conditions in these markets was done through a field survey. Face-to-face Interviews were done with the shop owners and the customers. There were two types of questions asked to the shop owner, the question were "Was that social distancing was possible during the lock down?" and "Was the flow of customers decreased?". The question about social distancing was asked to customers as well. A literature review was done for some basic understanding.

Findings:

Existing Condition of 3(three) Markets:

The Bandarbazsar, Rikabi bazaar and Subidbazaar market are very important for the contexts of Sylhet. They are used by different type of people. The locations of these are also in the vital points of Sylhet. (Fig-01)

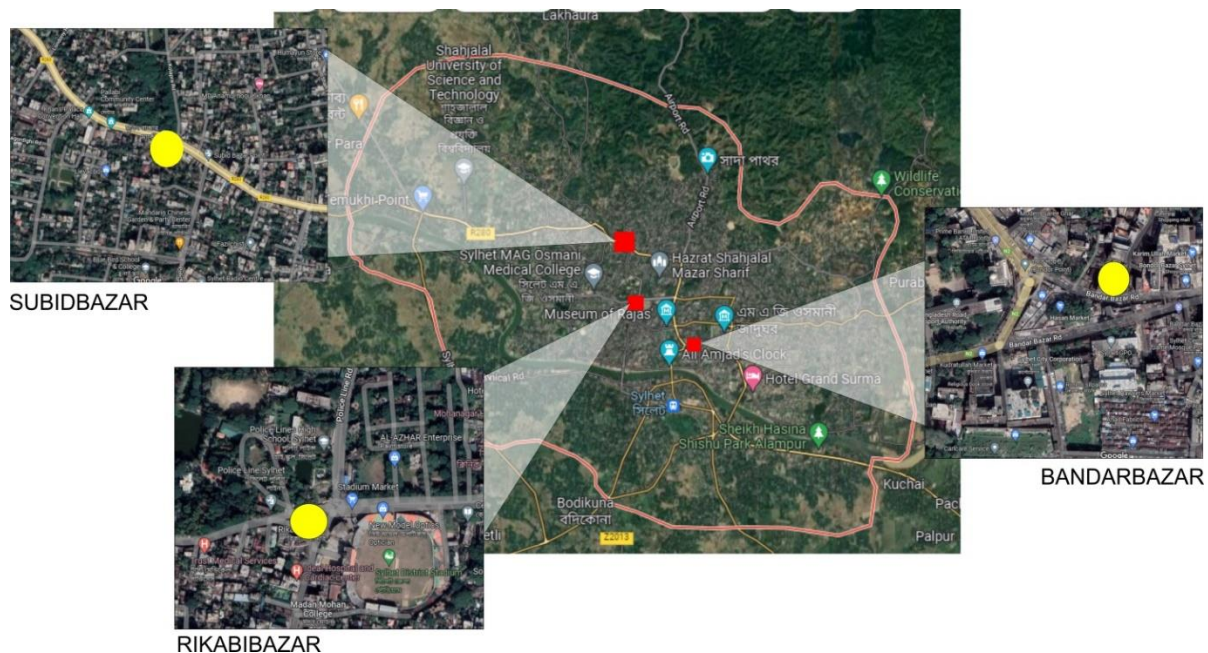


Fig 01: Position of three markets in Sylhet Metropolitan area.
Source: Google map (modified by author)

Bandar Bazar Market:

It is also called the Lal bazaar. It is mainly famous for its fish and meat. There is little provision for vegetables. Inside the market, it can be seen that 40% of sellers are selling fish and 30% are selling chicken. (Fig-02) The corridors are very narrow in front of the shops. They are 4ft wide which cannot ensure social distance. There are 20-25 fish, 15-18 meat and 3-5 vegetable sellers. There are also three fish cutting shops. On Friday and in the evening most of the people shop here. They come from different areas of Sylhet. The market is very unhygienic and very few sunlights insert the market. (Fig-03)

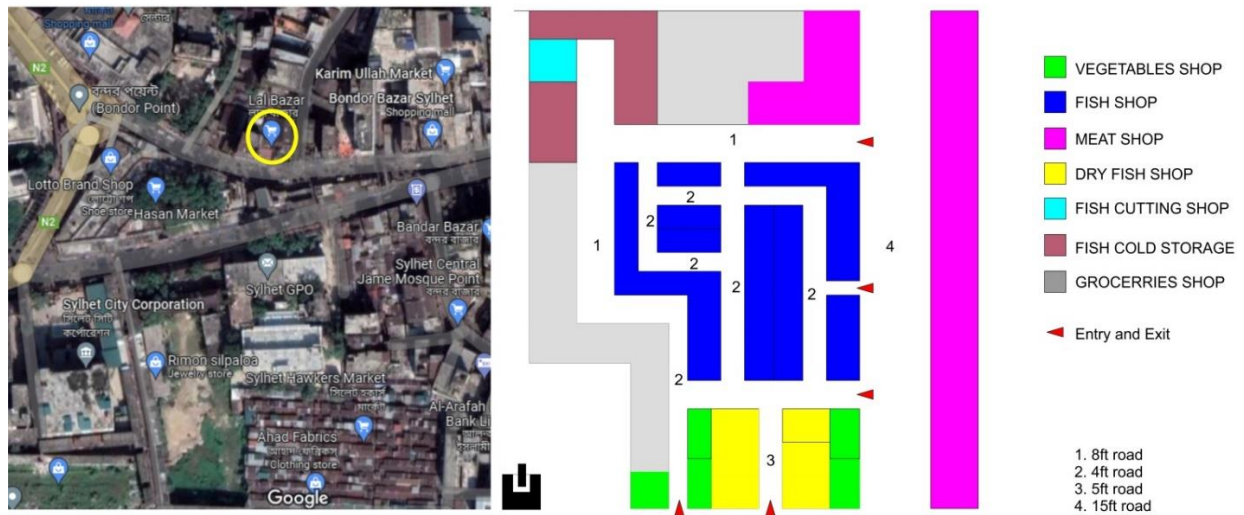


Fig 02: Layout plan of different shops in Bandar Bazar.



Fig 03: Existing Condition of Bandar Bazar.

RikabiBazar :

Three roads surround the Bazar. The vegetable shops are outside in a semi-outdoor environment, the meat shops are on the footpath and the fish shops are in the indoor environment with no light and ventilation system. Their customers are mainly doctors and patients because the Bazar surrounds many medical clinics. The walking corridor is around 4-6ft wide inside the market. There are 12-14 vegetables, 18-20 fish and 7-8 meat sellers. (Fig-04) There are also two fish cutters working here. The vegetable and meat shops can get sunlight but the fish shops are in a very gloomy and wet environment. They cannot provide a physical distance of 3ft. (Fig-05)

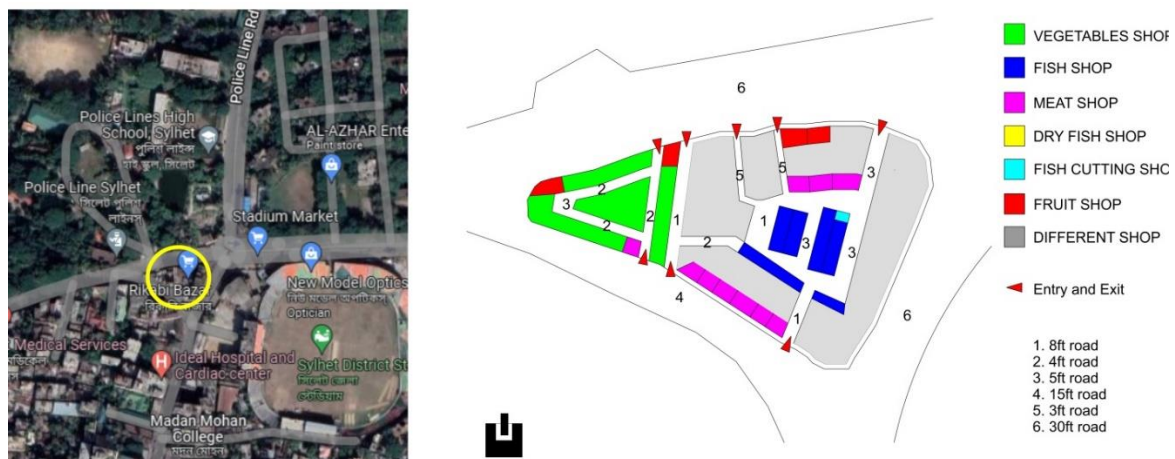


Fig 04: Layout plan of different shops in Rikabi Bazar.



FISH



MEAT



VEGETABLE

Fig 05: Existing Condition of Rikabi Bazar.

Subidbazar :

This Bazar mainly supports the residential areas of subidbazar, bankalapara, pathantula and sagordighipar. There are six fish sellers, four vegetable sellers, three meat sellers and one fish cutter. (Fig-06) The walking corridor is 6ft -8ft in width. It is a very congested Market and social distancing cannot be maintained here. (Fig-07)

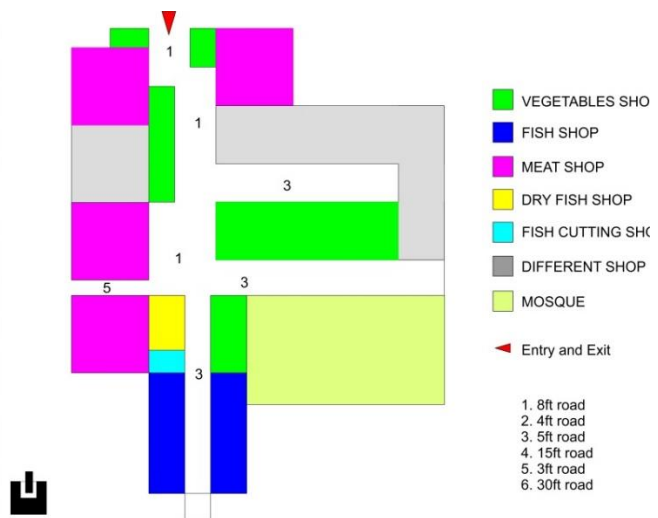
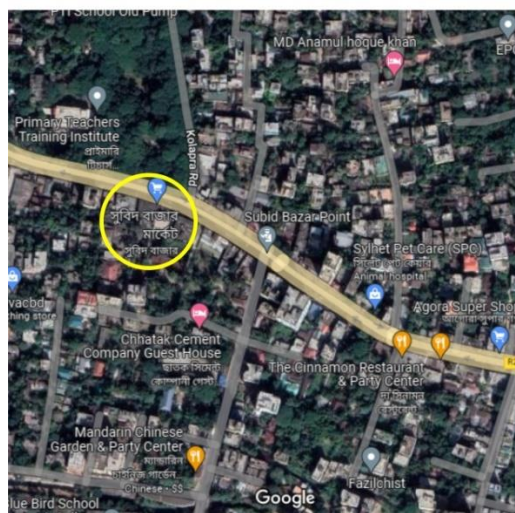


Fig 06: Layout plan of different shops in Subid Bazar.



FISH



MEAT



VEGETABLE

Fig 06: Existing Condition of Subid Bazar.

Sellers opinion:

During the pandemic, the total sales of these three markets were down. But this does not mean that the people were coming less in the market. They have come regularly but bought fewer fresh items than they bought before. Accordingly, 90% of sellers agree that their markets are not suitable for maintaining social distancing.

Buyer's opinion:

During the lockdown, most people had free time and remained at home. They had free time to go to the market frequently and buy fresh fruit, vegetables and meat. To keep themselves healthy, they choose fresh food items. It is also seen that the pandemic has changed people's perspective regarding food consumption (Grunert et al., 2021). They also agree that these markets are not suitable for social distancing.

Discussion:

From the above study, we can see that people's flow to the raw food market did not decrease at the time of lockdown. As a populated country it is hard to main the social distancing. The over density of population also helped to increase number of Covid patient (Kadi & Khelfaoui, 2020). The three markets which have been studied didn't have the space to maintain social distance. The People leave the market from the same direction as they enter and goods enter the same direction. As huge amount of waste is coming from Agriculture materials and the raw market (Kaltalioglu & Soytas, 2011).. There is a need for bigger space where each market can be shifted during the lockdown. The space must be near the existing market so that the local customers can easily locate it. It must be within a 500m radius of the existing market. The space can be a field or open space where sunlight can enter. Because in research, it has been found that sunlight demolishes covid-19 virus quickly (Efstratiou & Tzoraki, 2021).

Recommendation:

The solution can be divided into two parts: one is where the market will shift and another is how it will shift.

Findings the places:

During a lockdown, everything will be shut down as well as the schools. Most of the schools have an open field so the market can be shifted there.

- 1) Near the bandarbazsar, there is field of a school named Durga Kumar Government Primary School. The Bazar can be shifted there. If there are a large number of sellers, some can be moved to Raja Chandra secondary school field. (Fig-07)

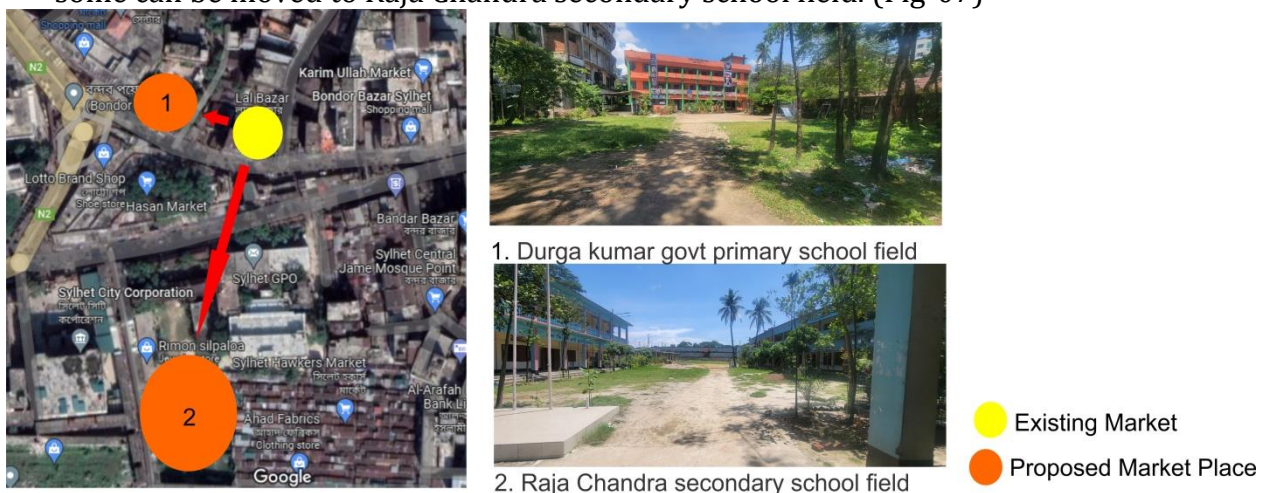
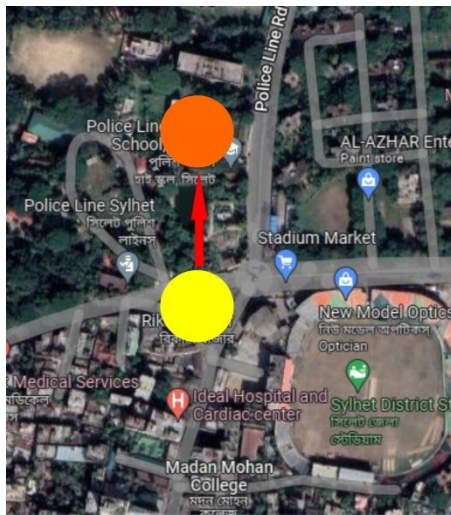


Fig 07: The proposed place for portable Bandarbazsar market

- 2) There is a school near Rikabibazar with a big field, it is the police line school. The market can be shifted there easily. (Fig-08)



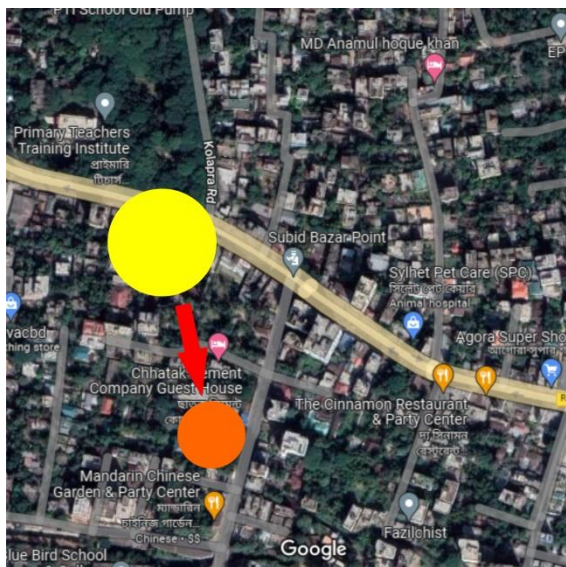
Policeline high school field

● Existing Market

● Proposed Market Place

Fig 08: The proposed place for portable Rikabi market

- 3) Near subidbazar market, there are two places with open spaces. One is in the Primary Teacher Institute (PTI) and another is the Bluebird School Primary Section. After studying both, Bluebird School Primary Section field is more appropriate than the PTI. (Fig-09)



Bluebird School Primary Section field

● Existing Market

● Proposed Market Place

Fig 09: The proposed place for portable Subidbazar market

How can it be shifted:

The new market will be established for a certain amount of time. That's why the solution should be portable. There are vast numbers of sellers selling vegetables and fruit in Van, which can be moved from one place to another easily. In a van, sellers can keep 180 kg amount of materials and it cost 15000 BDT to buy a van. (Fig-10) If we set the vans in a linear position, more than 3 ft distance can be ensured. (Fig-11)



Fig 10: Van for selling goods

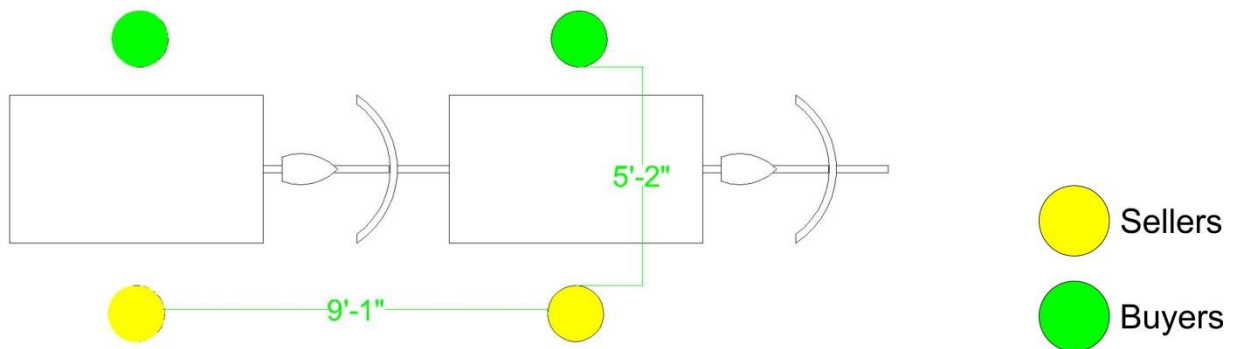


Fig 11: How social distance can maintain

Conclusion:

The spreading of the virus must be limited to support the health care system during the covid-19 type of pandemic. The last lockdowns showed that all could be shut down except the food market. This was a problem for all the countries in the world. This paper tried to find a solution for markets in the Sylhet Metropolitan area, which will help to limit the spreading of the virus. It will also help create a hygienic market for people during a pandemic time. This paper studies only three major raw food markets of Sylhet. It does not give a detailed solution, this paper only answers how a market can be shifted to a nearby place and what can be the process to choose the place. The paper tries to give solution considering the local context of the study area, also how can sellers and buyers easily adapt it.

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