Kaleidoscope

Rejuvenating Sewri Koliwada

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I. Introduction

Thesis Statement:

“Kaleidoscope” is a project that provides a sustainable strategy for economic development of Koliwada, a fishing village in Sewri, Mumbai. Kaleidoscope will turn the space-wasting and neighborhood-dividing reputation of Koliwada into a holistic vision of cultural, economic, and ecologically-friendly living and working environments with specific interventions and designs.

Introduction

The fishing industry plays an important role in the socio-economic development of India. The fishing industry is not only an important source of nutritious food and employment but also one of the major contributors of foreign exchange income. It is also the main source of living for the economically weak fishermen community of the country. Mumbai city and its suburbs alone contribute about 60 percent of total annual fish production of Maharashtra State (DOF, 2006). The fishermen community in Maharashtra is known as Kolis and the neighborhoods where they live are known as Koliwada. There are about 23 Koliwada in Mumbai city and its Suburbs (Ghatge, Biradar and Kumar). Rapid urbanization, overfishing and ecological degradation are affecting the fishing industry, hence this community. Decline in fish catch, underutilization of inherent skills and lack of resources resulted in lower economy which eventually affected the lifestyle of the Koli community. Due to decline in fishing activity, the waterfront is often used as a dumping and defecation spot which has resulted in deterioration of the mangrove ecosystem nearby. Therefore there is a need to sustainably revitalize Koliwada into a better socially, environmentally and economically living and working environment for the community. This study is focused on Sewri Koliwada, one of the
Koliwada on Mumbai’s eastern waterfront. This Study aims to contribute to the preservation of the Koli communities’ unique skills by providing short and long term strategies which will also act as a catalyst in revitalizing its surrounding areas.

**Scope and Methodology**

Kolis were the original inhabitants of Mumbai before it became a port city. This community still thrives in Sewri along Mumbai’s eastern waterfront. A preliminary discussion with the community showed that fish catch is continuously declining due to overfishing, chemical pollution of the coastal waters and environmental changes. On the basis of interviews and analysis with the community it was clear that underutilization of the inherent skills and lack of infrastructure has resulted in low employment which eventually leads to working in other fields than fishing and change in the lifestyle. An Interview was done with the community on June 27th in conjunction with Mr. Nitish Patil, the chairmen of the Housing Cooperative of local fishermen. The aim of the interview was to know about the strengths and weaknesses of their community and to learn what they envisioned for the future of their community. One of the major concerns of the Kolis is that their young generation wants to discontinue fishing activity and take jobs in other areas. They wish and hope that the government and other organizations will help them to safeguard their land, lifestyle and culture. For my capstone project, I aimed to use whatever I have learned here, in Pratt, to help nurturing the Koli community for the needs of the Kolis and to suggest alternative developmental scenarios that are in their best interest.

This study starts with a general overview about Mumbai. It will then analyze the social, economic, environmental and contextual components of Sewri Koliwada to understand root cause of
their problems. Strength, weaknesses, opportunities and threats (SWOT) analysis was done by telephonic interview and personal conversation (Mogal and Farooqui, 2012). in tandem with research on history, land use and existing conditions in housing and economic development to identify challenges and opportunities in front of the community. Finally a set of short and long term strategies will be recommended that will promote the economic development of the Koli community.

Regional and District Context

Mumbai is the capital city of Maharashtra state in western coast of India. It is India’s most populous metropolitan city with a population of approximately 20.5 million (Census India, 2011). As shown in figure 1, Mumbai is surrounded by Arabian Sea to the west and Thane Creek to the east.
The Greater Mumbai Region spans a total area of 603 sq. km and consists of two distinct regions i.e. Mumbai City and Mumbai Suburban district. It has a 180 km long coast line spread along the eastern and western side (Encyclopedia: Mumbai). As shown in figure 1, due to its peculiar geographical shape (surrounded by water on three sides), the continuous growth of the city, results in population moving in the north direction resulting in its suburban district and satellite towns like Thane, Navi Mumbai & Raigad. It has two waterfronts –East and West. There are ports, docklands and mangrove swamps in eastern waterfront and the west coast is used for commercial and residential purposes. Mumbai has two ports, Mumbai Port Trust and Jawaharlal Nehru Port Trust which handle around half of India's maritime cargo (Encyclopedia: Mumbai). Mumbai has three major train lines running between north and south of the city: Western line, Central line and Harbor line.

**History of Mumbai**

"The fishermen were here first ... when Bombay was a dumbbell-shaped island tapering, at the centre, to a narrow shining strand beyond which could be seen the finest and largest natural harbour in Asia" Salman Rushdie in *Midnight's Children* (Rushdie, 1980). Mumbai city was originally made from seven swampy islands- Colaba, Old Women’s Island, Bombay Island, Mazgaon, Worli, Mahim and Parel, composing mostly of mangrove forests and marshland separated by rivers and sea, as illustrated in figure 2. It was abode of the Kolis, whose patron deity Mumbadevi probably gave Mumbai its name. Many other places in Mumbai were also named after the Kolis like Colaba (Kol-bhat) which means Koli
estate, Palva Bunder was distorted to Apollo Bunder, Mazagaon (Machcha-gaun) which means fish-village and Parel (Padel) which means trumpet flower tree (Bunsha, 2008). Mumbai was ruled by different empires throughout its history, from being a part of Maurya Empire to various indigenous dynasties at different times before it became a part of Delhi Sultanate and ruled by various Muslim kings. Then it became a part of the Portuguese Empire in 1534 and finally it became a part of the British Empire in 1661. This land of Kolis offered a safe, natural harbor which gradually, under the British power, developed with the docks activity, contributing to the beginning of urbanization in Mumbai. In 1668, this natural harbor soon became the East India Company’s administrative and trading center on the coast (History of Mumbai).

![Figure 3: Evolution of Mumbai](image)

As illustrated in figure 3, a process of land reclaims and construction of causeways connecting the seven islands enhanced its advantageous position, but at the same time it marginalized the Kolis. In 1735, the construction of docks started on the eastern shore of Mumbai,
with a central access to all residents. The size of dockland was enlarged due to the growing maritime activities for trade with the Middle East, Africa and China. These were further enlarged and enclosed in 1805, hence the public access to such areas became redundant and the area detached from the public activities and accessibility. In 1873 “The Bombay Port Trust” (BPT) was formed to bring new developments in the area (Fahim, 2007). With the development of BPT, further land reclamation was done in order to enhance the port activities along the eastern waterfront. Development of Sewri Bay, Cotton depot, Charcoal & Grain depot and Unit -5 were a part of it. The increase in the charcoal industry started polluting the mangrove ecosystem in the Sewri Bay area which destroyed the fishing habitat in the study area. The Sewri bay was used as the landing quay for the goods and provided with the huge storage areas nearby. Amongst all the other development activities, the development of the Mumbai docks was the event that transformed Mumbai into an industrialized port city. This also provided a remarkable infrastructural grid consisting of docks, godowns, railroads and wide roads connecting the island city to the rest of the country. Mumbai grew with the people and their economic activities sustaining their livelihood. In its earlier growth, Mumbai showed a great increasing demand of services to handle the industrial and the construction developments of the city, in terms of infrastructures as well as manpower. Hence the British invited traders, bankers, artisans as well as workers to work in Mumbai. Gradually over the years, the new scale of maritime transportation transpired, increasing demand for storage of goods (container depots) and distribution had increased. This led to the formation of Jawaharlal Nehru Port Trust (JNPT) across the harbor, which, being the more developed port, has made the Mumbai port trust lose its edge. This situation left a significant portion of gradually degrading facilities and abandoned land in the port areas and jobless workers with no other alternative to sustain their livelihood. Due to the decline of port activities and the decentralization of the industrial activities,
BPT, who is the biggest land-owner of Mumbai till today, is now unable to maintain this vast land. 14 There are many discussions and debates on the redevelopment of EWF among the government, media, non-profit organizations and urban planners. According to the study conducted by UDRI and KRVIA these derelict spaces along the waterfront could be used efficiently to enhance the socio-cultural and recreational activities for the community and city (UDRI and KRVIA, 2004). 14 The Kolis community from Sewri Koliwada is one such community that has marginal access to social and physical infrastructure to improve their living conditions. This community depends on the coast for its livelihood as it is a main source of food and employment. Therefore this community should be included in the EWF planning, so that they are not further marginalized and displaced, as in the case of other redevelopment projects in Mumbai.

**Context of Sewri Koliwada**

Sewri Koliwada is located on the eastern shore of the Parel island, one of the original seven islands of Mumbai (Sewri). 15 As illustrated in the figure 4, It is surrounded by a harbor railway line and Rafi Ahmed Kidwai road on the west, the water edge, estuarine mudflats and mangrove on the east, the salt pan and Suman Nagar Informal Settlement to the north and the Cotton, Charcoal and Grain Depot to the south. The nearest railway station is Sewri on the Harbor Railway line. This area has historical, religious and ecological characteristics like the Sewri fort, Mosque, Christian cemetery and a mangrove ecosystem, which attracts a lot of tourists (Sewri). 15
This area has an approximate population of 1500 people living on 3,590 sq.mts with an average family size of 5 (SRA Development at Sewri). The population is comprised by 40% males, 35% females and 25% children (Mogul, 2012).

An analysis of various developmental, social, economical, political, and environmental concerns in Sewri Koliwada was done, in tandem with research on history, land use and existing conditions in housing and economic development to better understand the issues faced by the community. This analysis provide information for the latter part of this study, which includes recommendations and strategies for identifying the opportunities that can directly benefit the community and mitigate impacts from rapid urbanization, overfishing, and other aspects of modernization.

Development

As Shown in Appendix 1, the study area incorporates a mix of residential, industrial, manufacture, storage and cultural use. Majority of the area comprises of manufacturing like a petrochemical power plant and oil refineries (purple color) which discharge their chemical waste into the sea with minimal treatment. These chemical waste causes toxicity which in turn affects nursing grounds for fish and mangrove. There are also charcoal industries (purple color) that store their coal on open ground near the coast. Residue from the storage ground affects the wetland and mangroves, thus reducing the fish. The residential area contains government and private housing, Sewri Koliwada and informal settlements. The waterfront is often used as a dumping and defecation spot by the informal settlements which resulted in deterioration of mangrove (Mogal, 2012). As Shown in Appendix 2, majority of the storage and warehouses owned by BPT are either dilapidated or
underutilized. This opens up an opportunity to develop the land for the benefit of the Koli community. The Harbor Railway line, RAK and Mahul roads connect Mumbai city to its Suburbs. Due to its central location to Mumbai City, the government has made two transport proposals to enhance trade and transport between western and eastern Mumbai and Navi Mumbai. As shown in Appendix 3, the first proposal is a trans-harbor link from Sewri to Nhava Sheva. The other proposal is a water transport route that will increase connectivity between western and eastern Mumbai. If these projects are executed then the real estate price will increase which will attract developers to redevelop the area for higher section of the society similar to redevelopment of Mill land near the study area. This will further marginalize the community, by taking their land and will also affect the mangrove ecosystem.

Sociological

Mumbai’s name, culture and cosmopolitan nature have been inspired by the Kolis as they were the original inhabitants of this city. Kolis are easily distinguishable due to their hardworking nature, colorful dress, distinct language, food and customs. The Kolis are called the “Kings of the Sea” as it requires considerable courage and effort to go in the sea (Punekar, 1959). As per a conversation with the community, the males are engaged in occupations such as fishing, making and repairing nets, while the females handle the domestic labor as well as marketing, curing and processing of fishes. Hard working, aggressive and charming Kolis women get up early in the morning, finish all household chores, and then go to the market to sell their fish. After they finish selling their fishes they come back and sort, cure, dry and process the remaining unsold fishes. Since this community solely depends on fishing for their livelihood, decline in fish catch directly affects their income which in turn affects their life, health and education. As per a conversation with Deepa,
a Koli woman, she and her brother had to drop out of school and help her family with the fishing work, as her father did not have enough money to pay the fee, food and the costs involved in fishing (Mogal, 2012). But now with the changing condition like decline in fish catch, lack of resources and increase in risk at sea, the future generation cannot depend on fishing for their livelihood. Their education level is also low as there is only one Municipal school which is up to 7\textsuperscript{th} grade. Because of this some youth are turning to vocational training like commuter courses, ship repairing, seeking miscellaneous jobs. As per a conversation with Sagar Patil, a Koli who is working in an architectural firm as a draftsman, he is happy to get a job which is less stressful and has a secure future (Mogal, 2012). But on the other hand there are youths who want to continue with the fishing tradition, because of the strong culture and tradition and the poor salaries they get in other jobs.

Kolis are worshipers of Goddess Mumbadevi who still has its temple in South Mumbai. As per a conversation with Sagar Patil, about 60\% of the Kolis in this area are Hindu whereas the other 40\% are Christians that were converted under the British rule (Mogal, 2012). The Kolis are cosmopolitan in nature as people come from different religious and cultural backgrounds are living together. The most important festival is Narali Punaw in August, during this festival the Kolis offer coconut into the sea and prayer to the sea God to protect their fishermen from any calamities in the sea. Another important festival is Holi, which is a spring festival of colors. Kolis celebrate these festivals by music, dance and food which are an important part of their culture. Every aspect of their lives is inspired from the sea like their dress, dance and music.

**Economic**

Earlier the entire family was in the traditional fishing business. Traditionally, Kolis fished up to 5-6 km from the shore in the Thane creek using non-motorized wooden boats and got a good
quality and quantity of fish catch that would provide food and livelihood, as per the conversation with Liladhar Patil, one of the Koli. But with land reclamation done by the British and MbPT, the Kolis shifted to motorized boats as they had to go 25-50 km to get a good catch. The fish catch through motorized boats are of good quality as the ecological conditions in deep water are different as there is less pollution from industries. These fishes were in high demand in regional and international markets and were therefore sold on a premium price. As per a conversation with Liladhar Patil, their livelihood was affected drastically with the advent of trawlers, as they catch all the fishes and even kill the baby fishes. He also said that earlier their fishermen used to catch 3-4 baskets of good quality fish, but now either they return empty handed or with one small basket with small fishes. Due to the decline in fish catch, rising cost of fishing and low returns many fishermen have sold their boats. At present only 50 % of the population depends on fishing and fishery-related work for livelihood whereas the rest lives on BPT’s ship repairing, warehousing and truck activities, industrial and unskilled workers, along with other petty services(Author, 2012). Due to this the waterfront harbors desolate boats and fishing equipment. According to Dr. Vinay Deshmukh from Central Marine Fisheries Research Institute, Mumbai’s annual fish consumption is 1.5 lakhs tonnes and all this fish is 100% caught by the Kolis- fishermen living in Mumbai city. (CMFRI, 2010). According to one of the community members, the government does not give any scheme, incentives or loan facility to modify and preserve the traditional fishing industry.
Political

There are many stakeholders in this area because of development, social, economic, environmental and political reasons. As shown in Appendix 4, huge part of surrounding land is owned by the Mumbai Port Trust (MbPT) followed by Government of India, Government of Maharashtra and Defense Ministry. The lands owned by MbPT are further leased to private manufacturing and industries that are causing pollution of the coastal waters. The formal and informal settlements are owned by Brihanmumbai Municipal Corporation (BMC) and Maharashtra Housing and Area Development Authority (MHADA). Due to its strategic location there are various infrastructure projects proposed by Mumbai Metropolitan Region Development Authority (MMRDA). Government, Private and Non Government Organizations (NGO’s) like Bombay Natural History Society (BNHS), Conservation Action Trust (CAT), Soonabai Pirojsha Godrej Marine Ecology Centre (SPGMEC) and Vanashakti are few agencies working towards conserving the mangrove ecosystem. Fishermen, transporters, ice providers, godown owners are few other stakeholders of this place. Environmental degradation and economic development are the main issues faced by the Koli community. In order to address these issues all these agencies should work together. Even if lot of money is invested to restore the mangrove and nothing is done to control the pollution from industries and housing, these mangrove will destroy again. Therefore Koli community should be considered in policy and decision making of the area as their economy is directly affected by rapid urbanization.

Environmental

According to SPGMEC, Mumbai had over 37 sq. km. of mangroves in the early nineties. The city has lost almost 40 per cent of all its mangroves because of reclamation for housing, slums,
sewage treatment and garbage dumps (SPGMEC, 2012).\textsuperscript{24} Creek, wetlands, mangrove and estuarine mudflats have strong ecological characteristic in Sewri. The mangroves in this area are breeding grounds for a variety of fish, crab and mud skippers whereas the mudflats draws many birds like sandpipers, egret, tern, kingfishers, kites and flamingoes that make this zone their home for half the year between October to May (Sewri Mangrove Park).\textsuperscript{25} These mangroves also protect the community from flood and storms. However, rapid urbanization, domestic waste, industrial waste and coal storage on MbPT land are causing pressure on the mangrove ecosystem of this area, whereas the proposed Trans harbor link cuts across the habitat of migratory flamingoes. According to the Koli community, government and environmentalists should conserve these mangroves as they are the breeding grounds for marine organisms on which their income depends. Recently, BNHS has identified this area as a potential Ramsar Site which needs to be conserved (Rebello, 2012).\textsuperscript{26}

**Challenges of Sewri Koliwada**

According to the analysis of Sewri Koliwada it is clear that rapid urbanization, industrialization, pollution, ecological degradation, climate change and overfishing are creating pressure on the Koli community. Fish catch is reducing over the years due to intensive fishing by trawlers using high technology. It is difficult for the Kolis to compete with these trawler owners for fishes with their limited resources and technology. Decline in fish catch, rising cost of fishing and low returns have led to underutilization of inherent skills, underemployment and change of lifestyle of the community. All these challenges are evident and overlapping. The main challenge facing the community is to safeguard their tradition, lifestyle and culture. Lack of awareness about climate change impact on the fishing industry. There is a need of a proper infrastructure for harvest and post-harvest operations.
Opportunities of Sewri Koliwada

As per the conversation with the Community, due to its strategic location there is an opportunity to develop the fishery industry and thus improve the living standard of the Kolis. Its strategic location makes it an integral social component as well as the support system of thriving tourism and fishing industries. There is potential to retain their inherent skills by providing adequate vocational training to the young generation. There is an immediate need to preserve the mangrove in order to increase the fish count.

Objectives:

- To understand and analyze the root cause of community & surrounding environment’s specific problems affecting their community welfare.
- The main objective of this study is to rejuvenate the Koli community with new industry which will in turn help the community to preserve its unique skills, tradition and culture.
- Integrate the Kolis with the rest of the city by including cultural and recreational facilities that invite the citizens to the waterfront and create new job opportunities.
- Find out a solution that works in co-relation with its surrounding as well as existing functions of the site.
- The solution will also act as a catalyst in revitalizing Sewri.

Recommendations

After analyzing various factors which are affecting Koli community, it is my recommendation to focus on their economic development first as once their economy will improve it will help in resolving other problem like environmental, social, development(effect of industrialization and
infrastructural projects in surrounding area). According to the analysis, there is a need to upgrade the existing infrastructure and develop new revenue generating approaches. As per the conversation with the community, they do not have a cooperative/union that is taking care of their welfare or can represent their issues with government or other agencies. They need a proper organization who will think for their benefit. So this study recommends for the formation of Community Development Corporation (CDC). This corporation will include community members, professionals from various fields like environment, social, legal, finance, planning and educational institutions.

**Role of the CDC**

1. The primary role will be to identify the various issues which community is facing to identify the factors causing these issues.
2. Planning of solutions that address those problems in best possible manner.
3. Identify stakeholders related to the problem
4. Create a network of various governments and private institutions.

Through discussions with the community and analysis of the area, the following ideas have been explored about where the communities might start making improvements by developing new programs, initiatives and enhancing those that already exist. Short and long term strategies were created to implement these solutions.

**Short Term Strategies**

**Skill enhancement:** Organize education, training and workshops for the community specially the young generation and women to enhancement their local skills. Education program will create
awareness about the effects of climate change on their fishing activities and health. It will also educate them how to deal with these issues. It will increase their awareness about the modern technologies like GPS, aquaculture. Community is lacking skills related to facility management and marketing, training program will address these issues. These programs will eventually improve the socio-economic condition of the community. Invite research institutions who are working on technology to educate and train the community.

**Business incubator:** Community has suffered employment setback due to overfishing and lack of infrastructure. As per the conversation with Liladhar Patil, the community has a strong desire to start their own business (Author 2012). The Koli women are making food products from dry fish like salted fish, flavored fish and pickles which they sell in the market. This business program will be flexible and rewarding for females who are interested in creating job opportunities. It will help these women develop skills to start fish food business. It will also help the community with latest machinery, processing facility and start-up capital at very reasonable price. This project will help community with broader range of job opportunities related to fish. Along with advocating for skill enhancement and economic opportunities, this will provide support for those who prefer to explore the possibility of entrepreneurship. This will also help in minimizing their youth going for jobs in other fields.

**Economic Opportunities:** There are various issues that face this community and it will take time to mitigate these issues for the benefit of the community and its environment. Therefore there is a need to develop alternate economic activities related to fishing to create new employment opportunities and enhance income. According to Department Of Animal Husbandry, Dairying & Fisheries, India,
aquaculture is an important practice to generate employment and improve the socio-economic condition of the fishermen (DAHD, 2012).\(^{28}\) As per the conversation with Liladhar Patil, developing aquaculture hub in Sewri will provide new job opportunities and also promote their culture (Author 2012).\(^{27}\) Due to the strategic location, mangrove ecosystem and Sewri Fort there are many tourists attracted coming this area. This opens up the opportunity for tourism related micro businesses that will not only benefit the community but also help to conserve the environment, as said by Rajesh one of the Koli (Farooqui, 2012).\(^{29}\)

**Long Term Strategies**

**Site Program:** Lack of adequate infrastructure like chilling plant, weighing facility, post harvest activities, necessitates the need for a fishing industry. This area has a potential to grow as a fishing industry because it already has a jetty and fish market, as per by Rajesh (Farooqui, 2012).\(^{29}\) Therefore with the opening of MbPT land for redevelopment of the city, the community has the opportunity to develop this land for their benefit. Whole unloading and reloading activity in this industry will be governed and controlled by the administrative body, providing better solutions for trade. Every day markets and the restaurants specially known for various types of fishes will invite thousands of visitors and the place will be known for the activity.

**Government Policies:** Strict measures should be taken by government to stop overfishing, improve the mangrove ecosystem and promote sustainable practices. According to the community, government should not only regulate the number of trawlers but also restrict them from the fishing zone of the community. This will solve the issue of overfishing and promote sustainability. Government should also regulate industries like oil refineries and charcoal from polluting the coast
and mangrove ecosystem. These industries should be strictly monitored so that they don’t pump their waste into the water without treating them. Government should also make provisions to restore the mangroves and mudflats which will promote environmental sustainability.

Through discussions with the community and analysis of the area, there is a need for a fishing industry that will provide an infrastructure for post harvest fishing activities, which eventually would increase production and productivity. With the opening of MbPT land for city development and the change in Coastal Regulation Zone (CRZ) opens up the opportunity for the community to develop the land for their socio-economic benefit. Therefore the following proposal is made that could be incorporated in the Redevelopment of Sewri.

**Kaleidoscope**

This proposal is a rejuvenating plan which will turn the space wasting and neighborhood dividing reputation of Koliwada into a holistic vision of cultural, economic, and ecologically-friendly living and working environment. Based on the analysis of the community, this plan will address three main interventions- new fishing industry, housing and recreational facilities. The site will be developed by CDC, subsidizing the ongoing activity.

An analysis of the day to day activities of the community was done in order to form the program for the fishing industry. The project will continue in three phases based on the need of the community. The first phase will be fishing industry, which will strengthen existing infrastructure by upgrading the Sewri jetty for landing, unloading and reloading activities. Spaces will be designated for post harvest activities like sorting, cleaning, drying, packing and reloading for distribution. This industry will preserve and enhance the unique skills of the community by introducing programmed
spaces like education, training and workshop that will enhance their exiting skills. The Sewri fish market will be redeveloped to promote retail business.

The second phase will promote economic opportunities by creating waterfront recreational spaces for social, cultural and economic exchange. These spaces will be used to exhibit the history, culture and tradition of the Koli community. It will also provide platforms for the community to develop ideas and processes. This recreational space along with mangrove park and Sewri fort will generate tourism which will in turn create new jobs. These cultural and recreational facilities will reunite the community with the city.

The third phase will be developed as ground + 2 housing connected by common passage to maintain their open house concept. This will lead to ample public space that could be used to reinstate the community life within the housing. A system of green spaces, sidewalks and plazas will be created as a transition space between the housing, fishing industry and recreational facilities.

**Conclusion**

Environmental degradation and economic development are the two major challenges faced by the community due to rapid urbanization. In order to address these challenges the community has to work together with other stakeholders and ensure that their voices are heard in the decision making process. Therefore, a CDC is formed to provide a platform to the community where their challenges and opportunities can be discussed. With so many stakeholders involved, implementation is going to be a long-term process. Therefore this study suggests some short and long term strategies with well defined targets. The short term strategies will help the community to enhance their inherent skills and knowledge. It will also provide new economic opportunities relate to the fishing industry which will enhance their income and eventually improve their standard of living. The long term strategies will
provide the community with a fishing industry which will have better facilities for post harvest
activities and market management. It also suggests that government should make strict policies to
mitigate coastal pollution and mangrove ecosystem. Government should also give subsidies,
incentives and loans to improve the condition of this community.

Kaliedoscope, will be the first step towards rejuvenating the Koli community into a social,
economical and ecological living and working environment that will help safeguard their land and
tradition. It illustrates the potential of Sewri Koliwada and provides a context to make decisions on
its redevelopment plan. These recommendations will be adopted by the CDC as a framework for the
future redevelopment of the community. Thus this intervention will help in preserving Koliwada’s
unique skills by taking small steps to upgrade the current situation while also acting as a catalyst to
the growth of Sewri.
Appendix

Appendix 1: Zoning Map

Source: UDRI, KRVIA. "A Study of the Eastern Waterfront of Mumbai: A Situation Analysis".
Appendix 2: Building Use Map

Source: UDRI, KRVIA: A Study of the Eastern Waterfront of Mumbai, 2004

Appendix 3: Development in the area

Source: Author, 2012
Appendix 4: Ownership of land

Appendix 5: Site Images

Source: Farooqui Fahad, 14 July 2012
Appendix 6: Site Images

Source: Farooqui Fahad, 14 July 2012
Appendix 7: Site Images

Source: Farooqui Fahad, 14 July 2012

Appendix 8: Proposed Program

Source: Author, 2012
Appendix 9: Proposed Program

Source: Author, 2012

Appendix 10: Proposed Program

Source: Author, 2012
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