

Reducing Relocation Risk in Urban India Site Report for Urban Risks and Resettlements

Section II - Site Briefs

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Section II - Site Briefs

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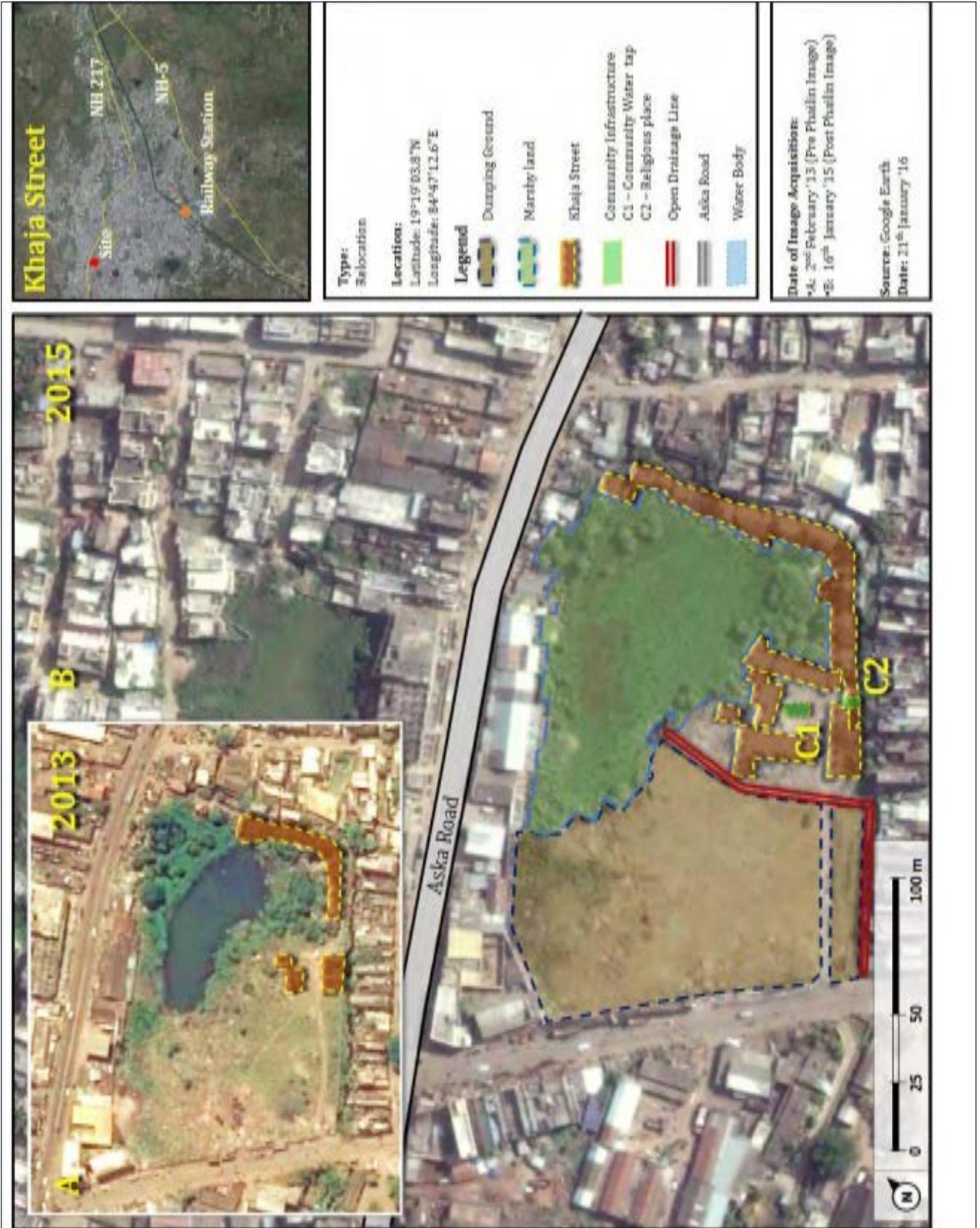
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Behrampur

Khaja Street



Summary of Settlement - Khaja Street		
A	Project level Characteristics	
A1.	Type of Project	Relocation (in planning stage) Under Rajiv Awas Yojana* (RAY) Phase VIII, the Khaja Street was identified for relocation.
A2.	Type of Risk Management	Corrective / Post impact (proposed) Even though RAY was launched before the cyclone Phailin, the site selection, beneficiary identification and socio-economic survey was conducted post Phailin, and the slums that were affected the were selected as beneficiaries for the project.
A3.	Nature of Planning	Planned with Risk Measures (Proposed) Under Slum Free City Plan of Action (SFCPoA) Khaja Street has been considered to be untenable and was suggested for relocation. Considering the proposed physical structure for relocation, the nature of planning has been considered "Planned with Risk Measures"
A4.	Level of planned participation	Part of long-term management post completion (Proposed) As per the project design, beneficiaries are part of the operation and maintenance of social infrastructure. Families are aware of the proposed relocation, but they are not part of the decision making process for selection of relocation site.
A5.	Motivation/Nature of Hazard	Post extreme climatic event
A6.	Level of attribution of CC to hazard frequency and intensity	Low
A7.	Primary Decision Maker	Government – Berhampur Municipal Corporation (BeMC)
A8.	Distance between old and new locations	1–5 km (Proposed) Based on the interview with Berhampur Slum Improvement Officer and Khaja Street Community Leader it was found that the Khaja Street slum is proposed to be relocated to Somnath Nagar which is less than 5 km from the site.
A9.	Time between decision and implementation	More than 2 years – The Project was launched in 2013 and is yet to be implemented
A10.	Time taken to complete the project	Not Applicable – Project yet to start
A11.	Age of the project (time since completion)	Not Applicable – Project yet to start
A12.	Size of the Project	Medium (242 HHs)
A13.	Nature of dividing the population	The whole population moved to one place (Proposed) All the households in Khaja Street are proposed to be relocated to Somnath Nagar. However, it is not known if the beneficiaries from other slums are also being relocated to the same site.

* Rajiv Awas Yojana was a central government sponsored scheme launched in 2011. The first two years of the project was designated as preparatory phase, and from 2013 onwards as implementation phase. The RAY projected envisaged 'Slum Free India' by 2022 by providing housing, infrastructure and social amenities. However, the project was discontinued in 2014 and a new housing for all scheme 'Pradhan Mantri Awas Yojana' was launched in 2015.

A14.	Financing Sources	Contribution of fund from different sources including the beneficiary
		RAY is a scheme sponsored by the central government with contributions from the state government and beneficiaries.
		The RAY project has been discontinued and new housing for all scheme— 'Pradhan Mantri Awas Yojana' has been launched by the new government in 2015. The funding pattern under PMAY is yet to be decided.
B	Original Settlement-level characteristics	
B1.	Type of land tenancy	No explicit/legal rights
		The site is located on government land.
B2.	Age of settlement (before the move)	More than 25 years (yet to be relocated)
B3.	Size of the settlement	Medium (242 HH)
B4.	Most dominant nature of livelihood options for HH	Mixed Nature of Work
		The families living here are involved in different livelihoods including rag picking, daily wage labour that involve work at home and travel to different parts within the city for work.
B5.	Level of Hazard Risk Exposure	High exposure to floods and cyclones
		All the houses here are temporary with asbestos sheet/ tin sheet roofs. This puts them at high risk to high wind speeds. With their location next to the tank, the families here are frequently affected by floods.
B6.	Type of Urban form	Organic growth
B7.	Levels of social infrastructure distinguished by provider	Poor with contribution from public funds
B8.	Strength of social networking	High
	Also comment on the nature of networking— language, caste, livelihoods, regional, etc.	During the site surveys and focus group discussions it was found that all the families living here are from a single community and show strong interconnectedness within the group. They are also supported by religious institutions and other networks.
B9.	Most dominant form of family structures	Nuclear family with a male or female family head
B10.	Use given to abandoned site	Currently, there is no use planned for the present site.
C	New settlement-level characteristics	
C1.	Level of hazard exposure	Not applicable
		Although the site has been decided for relocation, the level of hazard exposure is yet to be studied
C2.	Type of land tenancy	Not applicable – Project yet to start
		As per the project design, all the beneficiaries will be given patta to the new house.
C3.	Type of new Urban form	Not applicable
		From similar RAY projects, a standard design is generally followed in which G+3 housing and basic infrastructure facilities are provided
C4.	Level of planning and provisions (Good, medium, minimum, none)	Not applicable. Project is yet to be implemented

Profile

Population and Demographics: It is located in the central part of the city with proximity to several markets. Nearly 25 years ago a few families moved from different parts of the city and settled here. Based on the socio economic survey done as part of the RAY beneficiary selection process, the Khaja Street slum has a population of 922 persons, with 242 Households (HHs)(BeMC, 2014a). Most of the people in the slum are rag pickers, daily wage workers, household maids and sweepers and are dependant on the market nearby for their livelihood. The predominant religion of the people in the neighbourhood is Islam and the community is closely knit. . Khaja Street is located in Ward No.13 of Berhampur Municipal Corporation (BeMC).

According to Census of India (2011)

- The total population of the ward is 8987, and 1772 households.
- 14 per cent of the total population of the ward belongs to scheduled castes and scheduled tribes. 77 per cent of the ward populations are literates and 34.9 per cent of them are employed.
- 0.8 per cent of the houses have thatch/grass/bamboo/wood as the material of the roof, 2.7 per cent of the houses have handmade tiles as the material of the roof, 30.4 per cent asbestos, and 58.1 per cent have RCC roof. 79.8 per cent of the houses have walls made of burnt bricks and 11.7 per cent of the houses have walls with mud/unburnt brick.
- 24 per cent of the families have an average household size of four, and 21.2 per cent of families have an average of five members.
- 59.6 per cent of them own houses and 37.1 per cent of them are renters.
- 66.3 per cent of the houses have access to treated drinking water while 8.8 per cent have access to untreated drinking water. 8 per cent depend on tube well or bore well.
- 44 per cent of the total HHs have water sources within premises.
- 94.9 per cent of the houses have electricity connections.
- 77.4 per cent of the houses in the ward have latrine facilities in their premises, of which only 5.7 per cent of the houses are connected to pipe

sewer system and 47.9 per cent are connected to septic tanks. 8.6 per cent use public toilets

Under the Rajiv Awas Yojana, the slum has been identified for relocation to Somnath area, few kilometres from the current site. The families said that they are willing to relocate to the proposed site for better living conditions. There is a school located close to the site, and the Berhampur Government Hospital is located 3kms away from the site. The site is located next to a dumping yard and a water body. An open drainage channel passes through the site and drains into the water body adjacent to the site. The site has faced severe damages after 1999 super cyclone and 2013 Phailin. During Phailin, all the families here moved to the school nearby for safe shelter, and stayed there for nearly two weeks. All the families here have rebuilt their houses with the support from religious institutions.

Livelihoods: Most of the livelihoods here are informal. Men in the community work as rag pickers, daily wage labours, butchers, sweepers etc., and few others run their own food joints. Women mostly work as domestic help in the nearby localities. Primary survey showed that butchery, plumbing and IT related skills were predominant. On an average, working family members earn between Rs 150 and Rs 200 for a day's work. Women working as house maids earn between Rs 500 and Rs 1000 per month.

The families living here for more than 25 years have established strong relationships with the markets nearby. They are either directly or indirectly dependent on the markets nearby for their livelihoods. Only a few respondents said that they migrate for work to other cities. Most of the HHs do not have an alternate/additional source of income. Only 1 HH from the surveyed sample said that they have an alternative source of income. All the respondents have said that they faced work related losses after Phailin for a period of 2 weeks.

Social and Physical Infrastructure: All the houses in Khaja Street slum are temporary, with tin/asbestos/plastic sheets roofs and thatch/tin/plastic/mud walls. None of the houses have water connections or toilets in their house.

There are only two piped water connections in the neighbourhood, and all the families depend on them for drinking water and other purposes. They have applied for the water connection a year back and have collected money from all the households for installing a water pipeline. Before this they use to fetch water from the main road, 15 mins away from their location. When there is no water supply they depend on water tankers. Survey outcome reveals that water problems have reduced since connections were installed and the residents were happy with the quality of water.

Image 1: Living conditions in Khaja Street Slum

Although there are individual or community toilets in the site, everyone defecates in the open in the dump site adjacent to the site. They have mentioned that defecation during monsoon is a major problem because the dump site is infested with snakes and water logging.

The site is connected to the main road by a mud road, which passes through the dump site. People have to also cross the drainage line which passes through the site to access the main road. During monsoon, it becomes challenging for the families to reach the main road with slushy access roads overflowing drains.

The community also collected money for constructing a *madrasa* in the neighbourhood. *Madrasas* are educational spaces that are also used for community gatherings and discussions. NGOs' use this space for distributing medicines once in a few months.

All the houses have electricity connections. The community is located such that it is well connected to schools, hospitals and markets. The Berhampur Municipal Hospital is 3 kms from the site is easily accessible.

Socio-natural shocks: Khaja Street was completely damaged both by the super cyclone in 1999 and Phailin in 2013. After 1999, the community had to rebuild all their houses and it took them years to do so. After Phailin, the Muslim Trust provided money, material, and labour to rebuild all the houses. The community is still recovering from the losses after the cyclone. The local community leader said that they may not be able to recover in the case of another cyclone or government eviction.

The families stayed in the school for more than two weeks and returned after the flood water receded. The women who stayed in the emergency shelters were uncomfortable having to share a common space with the men, apart from this, residents complained of lack of

toilets and space for cooking food. Heavy rains during the cyclone, led to flood water mixing with garbage from the dump yard, this flooded the houses of the residents and it took weeks for them to clear the land for reconstruction. They complained that the stench lasted a few weeks after and of the illnesses that followed as a consequence. Frequent floods during monsoons create similar problems for them every year.

The families we spoke to also said that other people living around also dump their waste on their site and this had led to several fights, despite which the problem still continues. They say that there is garbage and dirty water all around the site which causes serious health issues like fever, malaria, typhoid and other water borne diseases.

Decision making process

After Phailin, the Berhampur Municipal Corporation proposed rehabilitation of the affected families under the RAY project. With the support from local NGOs, a city wide survey was conducted in all the slums to estimate damages and identify the number of beneficiaries. Slums that are most affected by the cyclones, slums located on government/private lands and slums that lack basic infrastructure were selected.

The Khaja Street slum is currently built on government land and is located in a hazardous site, which led to a proposal to relocate the slum to Somnath Nagar area, located a few kilometres from the site. The community supported by the Muslim Trust has met the Slum Improvement Officer, BeMC, and the decision about the relocation was communicated to them. Families also are willing to relocate for better housing and living conditions.

According to the initial project design, the housing units for all the selected slums were proposed under RAY,

whereas all the site and community infrastructure was proposed under the Odisha Disaster Recovery Project funded by the World Bank. However, due to a change in the party in power at the central government, RAY program was discontinued and the Pradhan mantra Awas Yojana, a new, housing for all, scheme was introduced. The beneficiary selection criterion and other project details are yet to be decided. With delays in decision making and project implementation, ODRP decided to operate on its own and now the project is proposed in another 84 slums in the city.

Beneficiary Selection: After the survey for beneficiary selection was done, there is an increase in the number of families living in the site. With the desire to get a new house, friends and relatives of the families living on site have moved, leading to an increase in the number of families. So, during the primary survey it was found that a list of beneficiaries are yet to be finalised and there are delays because of these differences in the total number of families.

Resettlement alternatives: In-situ development is not an option as the land is untenable and is in a hazardous location. However, families preferred being relocated to nearby places, to ensure that their livelihoods are not affected. All the families want to be relocated together in the same place as they are a close knit community.

Implementation challenges:

The project is yet to be implemented; however, following are the probable implementation challenges during the implementation phase.

- It was found that there is an increase in the number of families living on site after Khaja Street was selected under RAY. With delays in finalising the list of beneficiaries, there will be significant challenges later.

- Owing to the livelihood requirements of most people, their families need more space and this would be a problem in the proposed RAY design of four storeyed structures. Families would prefer to get allotted in the ground floors for extra space.
- Khaja Street was surveyed under the RAY project. It is still unsure if there will be a change in the selection of beneficiaries and if the project implementation will be same under PMAY.
- Whether the families who moved after the survey will be included in the list of beneficiaries is still unknown. Unless all the families are moved together, as one unit, there may be resistance from the community to relocate.
- The decisions on beneficiary selection and relocation should be conveyed to the community to get their acceptance. Forcing a decision on the community will lead to resistance to relocation.

Outcomes:

The outcomes of the project can only be measured after the completion of the project. As per the proposed relocation, some of the key questions and outcomes for inquiry are:

- Whether the families will be living in the relocation site or move back to the same location after allotment?
- What happens to the existing site after relocation? If all the families are not relocated or if other families are allowed to settle here, the same set of vulnerabilities and risks will be recreated.
- The predominant livelihoods of the families will require them to have more space for their work.

Image 2: (Left) Solid waste dump and; (Right) a main drain channel in the locality



The impact on the livelihood of people caused by relocation, especially for families who are allotted upper floors will have to be studied after the project is complete.

- After relocating to a different site, they may lose support from the Muslim Trust. Consultation with the community and the local NGO and involving them in the process may avoid this.
- With the provision of housing and tenure security to the families, it will have to be studied in the future whether they would be able to save money and invest in their livelihoods.

Site Survey Summary

A total of 5 households were interviewed and summary of key findings is as follows

- The average size of a household in the community is six.
- Three of the surveyed households have responded that the family takes major decisions together and two households have females at the helm of decision making.
- One from the interviewed sample has received primary education and one household has studied up to middle school and two others have not received any form of education. Out of which one person stated lack of finances as a reason for discontinuing her/his education
- Three households have two working members in their families and two households have only one working member in their families
- Only one household from the surveyed sample has reported of having an alternative source of income and the remaining four houses are dependent on one primary source of income
- Four out of the five respondents want their kids to be educated and enter the formal job sector
- Four out of the five respondents have stayed in the site for more than 10 years and one respondent has stayed in the current site for more than 5 years
- It is observed that all the surveyed households are staying in temporary housing structures, of which three houses are have asbestos as their roofing material and two houses have hay topped thatched roofs. All the houses were found to be having either plastic or asbestos as their wall material.
- Only one household from the surveyed sample uses a gas stove for cooking and all households possess some kind of furniture. From the survey it is seen that mobile penetration in the slum has been low with just one respondent owning a mobile phone. Two of the interviewed households own a cycle
- Three households from the surveyed population have responded of having livestock and one household has lost a goat during the cyclone Phailin
- All those who were surveyed said they need a new house, of which one person has preferred for in-situ housing and other four households have said that they are happy with both in-situ and relocation and said that their current houses are not strong enough and this is the reason for wanting a new house.
- All the four respondents who have opted for a new house have taken steps by approaching various authorities for requesting for a new house.
- All the surveyed respondents have a bank account out of which two have opened a bank account in less than 2 years under the Zero balance account scheme and two others have opened a bank account to avail compensation.
- When asked what are the three most important things the respondents require? The most common responses were: a strong house, piped water service and solid waste management.
- *Entitlements:* Two from the surveyed population have a voter card, two respondents have an Aadhar card, one respondent has a BPL card and one person is receiving pension and one woman respondent is receiving maternity benefits.
- Two from the surveyed sample mentioned suffering from vector borne diseases in the past and one person frequently suffered from the common cold and fever. Two of the surveyed spoke about high costs towards medical expenses
- Three from the surveyed are covered under life insurance schemes
- Three from the surveyed have a health card but have never used it.

- When asked what kind of shocks the community is facing other than cyclones one of the respondent mentioned health issues as a shock and one responded managing a house as a single women is problem other than cyclone
- *Loss due to cyclone:* All the respondents had received cyclone warning before the cyclone and two of them quoted TV as the source of information and two persons mentioned government announcements as the source of information for cyclone warning
- All the respondents claimed that their houses were completely damaged.
- All the respondents claimed to have received compensation after the cyclone and all of the surveyed samples have received universal compensation
- All the surveyed sample have faced issues with water services and open defecation after the cyclone.
- All the responded claimed to have faced losses in work after the cyclone for more than two weeks
- Four of the five respondents have asked for help after the cyclone and out of which three approached other institutions help in kind and one household has sought help from their relatives
- When asked what actions they would take if there's a cyclone in near future, three respondents mentioned that they will move to a safer location and two respondents said that they would stay in the same location under such circumstances.
- Three from the surveyed said that they secured their household items during of the disaster and two of them mentioned securing food for the future and one household said that they would secure their entitlements.
- When asked what are the problems of staying in the current location? One household has responded lack of proper livelihood opportunities and the others mentioned housing and lack of proper sanitation and water supply services as their main issues at their site.
- When asked about the benefits of staying in the current site, three households cited livelihood opportunities as a benefit of staying in the current site and also mentioned low rents in the neigh-

bourhood as a benefit of staying in the current site.

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Sriram Nagar



Summary of Settlement - Sriram Nagar		
A	Project level Characteristics	
A1.	Type of Project	Relocation (proposed) Sri Ram Nagar has been identified for relocation under Rajiv Awas Yojana*.
A2.	Type of Risk Management	Corrective / Post impact (proposed) Though Rajiv Awas Yojana program has started before Cyclone Phailin, the most affected slums were selected in the cyclone were selected as beneficiaries for the project.
A3.	Nature of Planning	Planned with Risk Measures (Proposed) Under RAY, Sri Ram Nagar has been considered to be untenable and was proposed for relocation. Considering the proposed housing and infrastructure for relocation, the nature of planning has been considered "Planned with Risk Measures"
A4.	Level of planned participation	Part of a long-term management post completion (Proposed) As per the project design, beneficiaries are part of the operation and maintenance of social infrastructure. The community is neither part of the decision making or the implementation process.
A5.	Motivation/Nature of Hazard	Post extreme climatic event
A6.	Level of attribution of CC to hazard frequency and intensity	Low
A7.	Primary Decision Maker	Government – Berhampur Municipal Corporation
A8.	Distance between old and new locations	Not Applicable - New site yet to be decided
A9.	Time between decision and implementation	More than 2 years – The project was proposed in 2013 and the beneficiary selection was completed in 2014. The implementation is yet to start.
A10.	Time taken to complete the project	Not Applicable - Implementation of the project yet to be initiated.
A11.	Age of the project (time since completion)	Not Applicable
A12.	Size of the Project	Medium (167 HHs) Total number of households to be relocated in the current site being 167 HHs, size of the project has been considered medium. The project may be combination of two or more slums too, in which case size of the project may vary.
A13.	Nature of dividing the population	Yet to be decided As per the present decision the two possible ways of relocating the population is (i) Whole population moved to one place (ii) All HH moved but spread in parts The decision may vary as per the implementation plan is considered. Therefore it is yet to be decided.

* Rajiv Awas Yojana was a central government sponsored scheme envisaging 'Slum Free India' by providing shelter, social amenities and infrastructure which ran between 2013-14.

A14.	Financing Sources	Contribution of fund from different sources including the beneficiary For projects under Rajiv Awas Yojana, funds are allocated partly by centre and state along with beneficiary contribution.
B	Original Settlement-level characteristics	
B1.	Type of land tenancy	No explicit/legal rights
B2.	Age of settlement (before the move)	More than 20 years (yet to be relocated)
B3.	Size of the settlement	Medium (167 HH)
B4.	Most dominant nature of livelihood options for HH	At home
		Travel 0–1 km for work
		Travel more than 5km for work
		Most predominant form of livelihood has shown a combination of work which required 1km to 5km or more to travel and some families work at home.
B5.	Level of Hazard Risk Exposure	High
		The site is located next to an open drainage line which swells during monsoons/heavy rains and flood the site. The houses are vulnerable to cyclones and high wind speeds. The open drainage line also poses health related risk to the community.
B6.	Type of Urban form	Organic growth
B7.	Levels of social infrastructure distinguished by provider	Poor with contribution from public funds
B8.	Strength of social networking	Medium.
	Also comment on the nature of networking—language, caste, livelihoods, regional, etc.	During the site surveys and focus group discussion it was observed that there are caste related issues within the community. But in the time of need and community related issues they all work together.
B9.	Most dominant form of family structures	Nuclear family with male family head
B10.	Use given to abandoned site	No use planned for the present site as of now
C	New settlement-level characteristics	
C1.	Level of hazard exposure	Not applicable
		As the new site is yet to be decided it is difficult to assess the exposure to hazard as of now
C2.	Type of land tenancy	Not applicable As the relocation project is in its planning stage and lack of information the same, it is difficult to assess the type of land tenancy as of now.
C3.	Type of new Urban form	Not applicable
		From similar BSUP projects a standard design is generally followed in which housing and basic infrastructure facilities are provided
C4.	Level of planning and provisions	None (Not applicable)
	(Good, medium, minimum, none)	Project is yet to be implemented.

Profile

Population and Demographics: Sri Ram Nagar is situated in ward number 12 of Berhampur Municipal Corporation. Currently there are nearly 167 households with 807 persons living in Sri Ram Nagar (BeMC, 2014a).

According to the Census of India (2011),

- Total population of the ward is 12482, and 2436 households.
- 17.3 per cent of the total population of ward belongs to scheduled castes and scheduled tribes. 78.4 per cent of the ward populations are literates and 33.8 per cent of them are employed.
- 2.6 percent of the houses have thatch/grass/bamboo/wood as the material of the roof, 0.3 per cent of the houses have handmade tiles as the material of the roof, 30.4 per cent asbestos, and 72.6 per cent have RCC roof. 90.8 per cent of the houses have walls made of burnt bricks and 4.5 per cent of the houses have walls with mud/unburnt brick.
- 26.5 per cent of the families have average household size of 4, 20.6 per cent of families have an average family members 5
- 59.1 per cent of them own the houses and 40.2 per cent of them are renters.
- 67.6 per cent of the houses have access to treated drinking water while 2.7 per cent have access to untreated drinking water. 4.5 per cent depend on tube well or bore well.
- 46.8 percent of the total HHs has water sources within premises.
- 98.1 per cent of the houses have electricity connections.
- 79.1 per cent of the houses in the ward have latrine facilities in their premises, of which only 7.1 of the houses are connected to pipe sewer system and 52.3 per cent are connected to septic tanks. 11.3 per cent use public toilets

Most of the families work as daily wage workers and are dependent on the nearby market for their livelihoods. All the houses are *kutcha* or semi *pucca* houses, and all of them faced severe damages by the cyclone Phailin. The community moved into a school nearby during the cyclone for safety. Most of the houses are still recovering from the losses due to the cyclone. Some of the respondents said they spent nearly Rs. 80,000 to reconstruct their damaged houses.

A few people in the slum also stay on rent and a few have built their houses. In one of the interviews it was mentioned that few years ago, the residents in the community have paid an undisclosed amount to the local ward member to stay in the community. After this,

Image 3: Typical housing typology of the site



Image 4: Temporary toilets and bathing spaces back of the house built on top of the drain

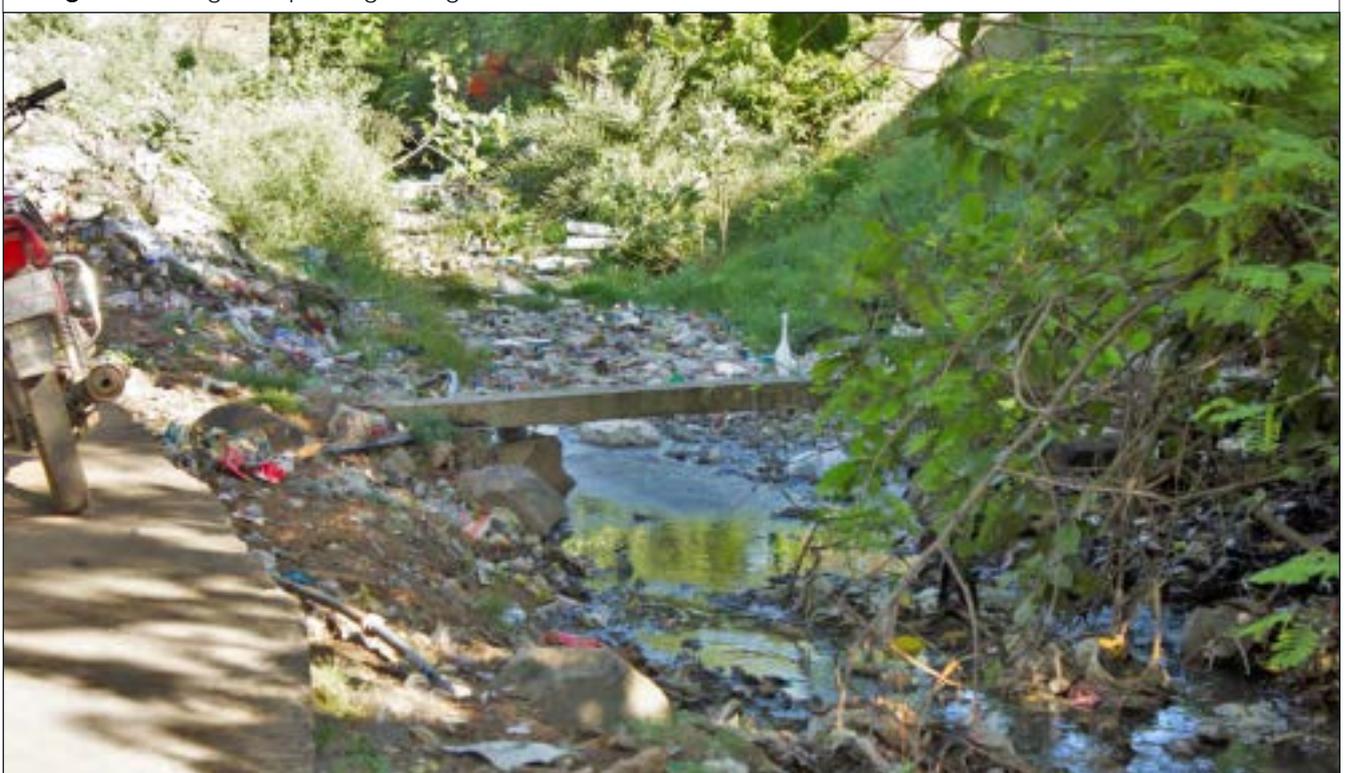


those families are under an impression that they own the land, but they do not have any documents proving their ownership. The proximity to the main market is one of the reasons for the community to live in the current site, which supports them in their daily livelihood.

Livelihoods: Most of the members of the community have received primary education and very few have been educated till matriculation. Most of the men in Sri RamNagar work as rickshaw pullers or unskilled labour in the nearby market. A few women run their own home based business like a grocery stores or stitch and sell plastic bags in the nearby market, while some women work as housemaids in the nearby locality earning nearly up to Rs 1000 per month. Some of the families own work related like rickshaws, sewing machines etc. During Phailin men took their rickshaws along with them to the school and tied them in the open ground, by which they could reduce damages to their rickshaws. Livelihoods in the community got disturbed for more than a month after Phailin. All the respondents in the community have said that they had taken loans after phailin and some of them are still repaying even after two years.

Social and Physical Infrastructure: All the houses are built with asbestos sheet roofs and burnt brick with cement mortar/mud walls. Some houses have made extensions to the houses with thatch roofs and walls. While some of them have high plinths, most of the houses have plinths at the road level. A few years back, the community has contributed money and got water connections. While some house have piped water connections in the houses, some of them depend on hand pumps for water. There is also a community well in the site. There are no individual or public toilets in the site. Most of them defecate in the open land next to the site. Some of the families have constructed temporary toilets on top of open drains. All the waste water generated

Image 5: Drainage line passing through the site



in the houses are let out in the open drain that passes through the site. There are no solid waste management systems, and all the waste is also dumped in the open or in the drain.

There is one mud road to access the site. However, within the site, access is a major problem. People living behind the site have to cross the drain along an uneven pathway built with mud. The access becomes a major issue especially during the monsoons, where the drain swells and the mud roads become slippery. It was reported that few years back a kid died by falling into the drain.

Market and schools are at an accessible distance. Most of the households depend on government or private hospital for their medical needs. The Government hospital is located within 5kms from the site. There is one temple which was built few years back with contributions from the community.

Socio-natural shocks: There are serious caste issues within the community, because of which they don't have a strong community representation to the government or outsiders. One woman when asked about her experiences said –*'All of us were staying in the government school. While we were in the school one woman gave birth in the cyclone shelter. We didn't have any medical support at that time. Because she belongs to a low caste community, others were not willing to help her. Because I helped her, all the community boycotted me*

and my family. After we moved back to our homes, I gave shelter to that woman, rebuilt my own house and also her house. Even after two years we don't share good relationship with the community.'

All the houses were damaged in the cyclone Phailin. Families were shifted to a nearby school during the cyclone. Families during the surveys were saying that they face several challenges in the cyclone shelter. They were saying that providing shelter was not sufficient as they faced many challenges with food, water, toilets and medical services.

The drain passing through the neighbourhood is considered to be a major threat by the community as the drain swells during monsoons and at times the drain overflows into few households adjacent to the drain causing damages, contaminating the neighbourhood and increasing diseases burden to the residents. A few years back one kid in the community died falling in the drain.

Decision making processes

Berhampur Municipal Corporation proposed to rehabilitate the cyclone affected families after the cyclone Phailin under Rajiv Awas Yojana. All the slums in the city were surveyed with the support of local NGO's to identify most affected slums, & slums living in miserable conditions. Sri Ram Nagar is one of the 80 sites selected under the program. Because of the current site conditions, it was considered untenable & was proposed to relocate.

Image 6: Access between front and the back rows of houses



BeMC proposed to build the housing units under RAY funds and provide services under ODRP project. The World Bank funded ODRP aimed to provide city and site level infrastructure in the city of Berhampur. As of 2015, the RAY project was discontinued and the new government launched Pradhan Mantri Awas Yojana housing scheme. It is unsure whether the new program will have a similar site and beneficiary selection process and if Sri Ram Nagar will be developed as in-situ or relocated. However, because of the changes in the details of the relocation site were not communicated to the residents, when asked about whether they want a new house, all the families were favour of in-situ development. When asked about relocation, a few responded positively, and said that they wouldn't mind relocating for better housing, while others perceived it to be a threat as they feared that they may lose their livelihood opportunities if the relocation site is far from where they currently live. A few households are willing to accept relocation, provided it doesn't hinder their livelihood.

Beneficiary identification: Families do not know how many of them are part of the final beneficiary list and the plan for implementation of the project. During the survey, it was found that there are few households who stay on rent in the site. It is unknown whether the renters would also be eligible for new housing.

Implementation challenges

Social management: Caste hierarchies were found to be an issue with the community during primary survey. Therefore participation of the community can be a concern for relocation. A complete approval to relocate to another site is also not strongly seen can be a hurdle for the authorities for implementation.

The community has not yet been informed where they will be relocated to. Therefore, a sudden movement of people can be a shock to the community as it can disturb their current livelihoods. It will be the onus of the implementing agency to inform and negotiate relocation plans to the community so that the community may come up with other alternatives which can help them cope better with the relocation process.

Outcomes

Outcomes of the relocation are yet to be seen. However, some of the key question on inquiry are as follows

- Whether the rented households in the slum will be provided housing under the same relocation plan? If not, will they be allowed to stay in the same site or will they be evicted.
- Whether the social cohesion in the community can be a barrier in relocation of the community? It

will have to be seen whether families of one caste would like live with other castes considering the design of the proposed housing. It will also be a problem for long term maintenance of the relocation site with the differences in the community.

- How will the relocation impact livelihoods? Women rely on stitching and selling the bags in the nearby markets. Will they be able to continue their professions from the relocations site? Similarly for the rickshaw pullers, distance to the market will be an issue.

Site Survey Summary

- From the primary survey, two members have said that they have received secondary education (5th–7th) and two respondents have received education till matriculation and one respondent has received primary education. Financial reason is one the main reason for the respondents to discontinue education, followed by marriage and lack of interest.
- All the respondents work in providing informal services such as stitching and selling bags in the nearby market and livelihood activities related to hand pull rickshaws. Four out of five respondents were involved in the above activities and one person is involved in marketing. Two out of the five respondents were tailors and one had skills in construction, the two others were unskilled. Only one household from the surveyed sample from Sri Ram nagar has an alternative source of income.
- Three out of the five respondents have moved in to the slum in the past five years and one among them was a renter and two other respondents have been living in the slum for more than ten years.
- When asked about requirement for a new house, all the respondents said that they require a new house of which three of the respondents have opted for an in-situ upgradation and two respondents have opted for any house including relocation, in which case, the provision should be provided by *patta* and not disturb their livelihood options.
- When asked about problems in the current site, four respondents have said housing is a problem and two respondents have problems such as availability of drinking water, health issues and education at the current site. All the respondents have responded of having problems with lack of sanitation facilities in the current location. Two of

the respondents said that the main benefits at the current site are livelihoods option and low rent.

- Three families from the interviewed sample involve everyone in the family while taking major decisions and in one household, the woman is the main decision taker and in one household the male is main decision taker.
- All the respondents have faced partial damages to their houses after Phailin and all the respondents have moved to a government school during the Phailin as a safety measure from the storm. Of the five households surveyed, three household's roofs were completely damaged and two households faced partial damages to their walls. Two out of five respondents have spent Rs10,000 in reconstruction of their houses and one house spent Rs12,000. One of the respondents have spent Rs5000 towards reconstruction of his house which took nearly 6 months and another house took nearly 2 weeks to reconstruct. All the respondents from the surveyed sample have received universal compensation after damage assessment.
- All the households have responded of having trouble in collecting drinking water for more than two weeks and also faced issues in other services such as transportation and electricity.
- Two of the respondents have responded of facing damages to their assets of which one respondent suffered damages to this work related assets. Of the surveyed sample two members carried their important documents and three households carried food and clothes to the cyclone shelter.
- Post Phailin three of the surveyed have approached others for financial assistance and have borrowed loans ranging from Rs 40,000 to Rs80,000 of which two of them have borrowed money for an interest rate of 0.02 per cent.
- When asked what the respondents would do if there was a cyclone alert a week in advance, four out of the five respondents said that they would move to a safer location and carry important documents, food and clothes along with them. The site has very minimal asset holding in their houses. Out of the five surveyed houses, members from four houses own a cycle, three houses own a gas stove and people from three houses own mobile phones.
- Expect for one, all the respondents have a bank account of which two of them have zero balance accounts and one has opened a bank account,

specifically to gain access to the announced compensation. Only one respondent from the current site has saved money.

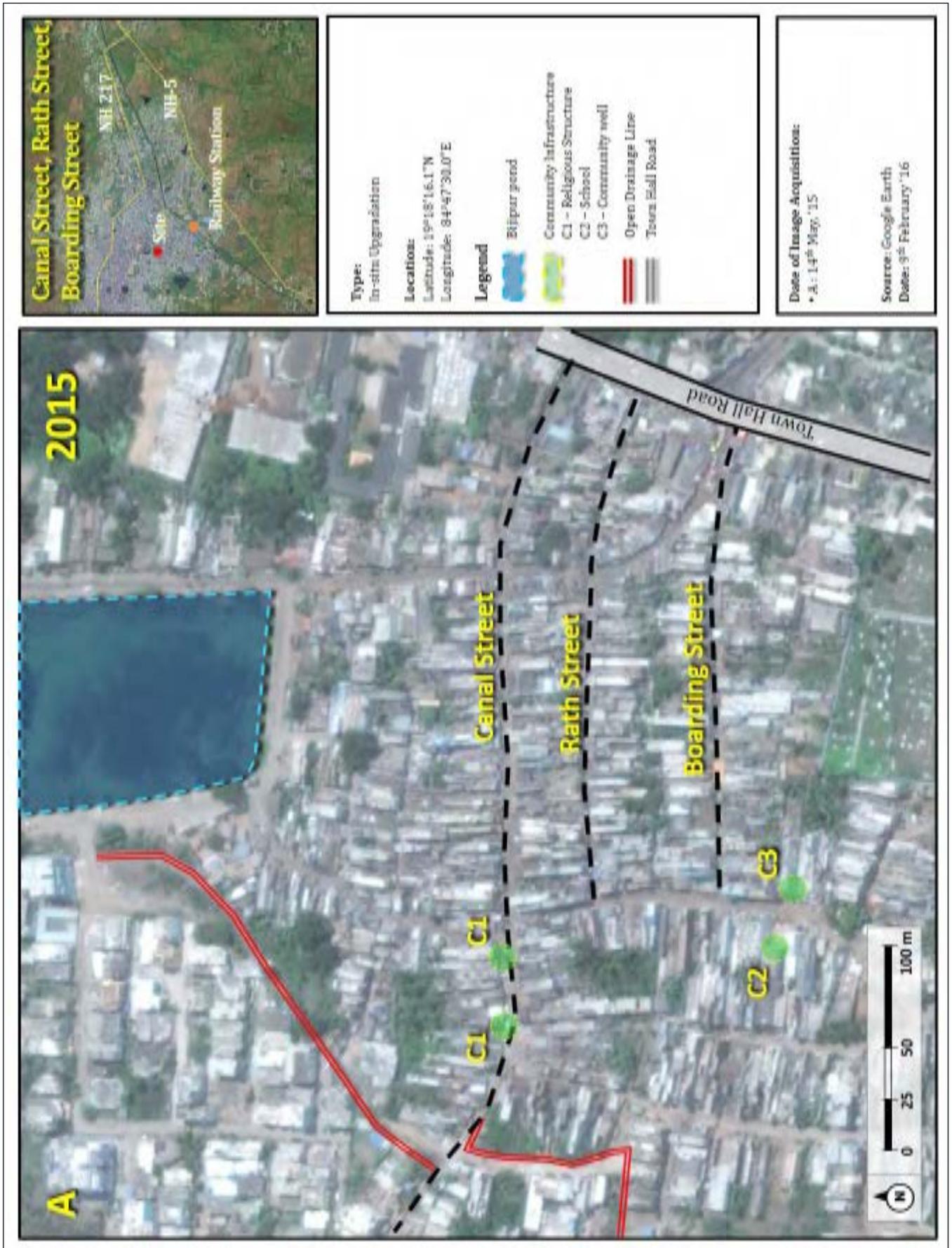
- When the respondents were asked to rank the three most important needs for their family, four of the respondents have ranked house title and one member has asked for a strong house. One person has asked for better draining and water supply system in the neighbourhood. Residents have also asked for health facilities, access to good education and work opportunities as their third most important need.

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Census of India. (2011). *Primary Census Abstract*.

Canal Street, Rath Street and Boarding Street



Summary of Settlement - Canal Street, Rath Street and Boarding Street		
A	Project level Characteristics	
A1.	Type of Project	Infrastructure up gradation
A2.	Type of Risk Management	Corrective / Post impact – Only limited to infrastructure up-gradation thereby reducing vulnerabilities
A3.	Nature of Planning	Planned with Risk measures
A4.	Level of planned participation	No Participation – At the time when primary work, residents were not aware of the project
A5.	Motivation/Nature of Hazard	Post extreme climatic event – Cyclone Phailin - 2013
A6.	Level of attribution of CC to hazard frequency and intensity	High - The location is at high risk from frequent floods, and majority of the houses were damaged by the cyclone Phailin -2013
A7.	Primary Decision Maker	A combination of Berhampur Municipal Corporation and World Bank – Location selected by Berhampur Municipal Corporation and project is funded by World Bank
A8.	Distance between old and new locations	Not Applicable – No relocation proposed
A9.	Time between decision and implementation	Not Applicable – Project yet to start
A10.	Time taken to complete the project	Not Applicable – Project yet to start
A11.	Age of the project (time since completion)	Not Applicable – Project yet to start
A12.	Size of the Project	Large (More than 500 HH)
A13.	Nature of dividing the population	Not Applicable – No relocation proposed, only infrastructure upgradation
A14.	Financing Sources	100 per cent lender (World Bank) funding for provision of infrastructure services
B	Original Settlement level characteristics	
B1.	Type of land tenancy	Owned
B2.	Age of settlement (before the move)	More than 10 years. Have been living for at least two generations
B3.	Size of the settlement	Large (more than 500 HH)
B4.	Most dominant nature of livelihood options for HH	Mixed Nature of Work - At home work and some travel 0–5 km for work
B5.	Level of Hazard Risk Exposure	High – Many houses have asbestos/thatch roofs that cannot withstand high wind speeds. Also located next to open drainage line, which overflows and floods the area every monsoon
B6.	Type of Urban form	Combination of Cluster and Row Housing – Low rise - high density
B7.	Levels of social infrastructure distinguished by provider	Good – provided by the government – Not all the houses have access to services direct to their houses and in areas with provisions, water supply and sanitation lines run next to each other with risk of contamination
B8.	Strength of social networking	Medium – not a very close knit community, but families with same livelihoods have strong networks
B9.	Most dominant form of family structures	Nuclear family with male or female family heads
B10.	Use given to abandoned site	Not applicable – only infrastructure up gradation is proposed

C New settlement level characteristics		
C1.	Level of hazard exposure	Not Applicable
C2.	Type of land tenancy	Not Applicable
C3.	Type of new Urban form	Not Applicable
C4.	Level of planning and provisions (Good, medium, minimum, none)	Not Applicable

Profile

Profile and Demographics: Canal Street, Boarding Street and Rath Street are located in ward No. 24 of Berhampur Municipal Corporation (BeMC). Canal Street, Boarding Street and Rath Street are three parallel streets located in the south of Bijupur pond in central Berhampur. Most of the families here are living here for generations. Predominant languages spoken here are Telugu and Odiya. It is a mixed community with different castes, religious backgrounds and livelihoods. There are families that own houses and there are also renters who have been renting for decades. The existing built form is low to medium rise structures (2–4 floors) with highly dense built-up and narrow streets.

According to the Census of India (2011),

- Total population of the ward no. 24 is 8833, and 1988 households.
- 12 per cent of the total population of ward belongs to scheduled castes and scheduled tribes.
- 73 per cent of the ward population are literates and 35 per cent of the total population are working.
- 7 per cent per cent of the census houses in the ward are used as residences. 8.2 per cent of the houses have thatch/grass/bamboo/wood as the material of the roof, 1 per cent of the houses have handmade tiles as the material of the roof, 24 per cent asbestos, and 61 per cent have RCC roof. 84 per cent of the houses have walls made of burnt bricks/concrete and 13 per cent of the houses have walls with mud/unburnt brick.
- 70 per cent of the families have average household size of four and above.
- 46 per cent of them own the houses and 47 per cent of them are renters.
- 41 per cent of the houses have access to treated drinking water and another 43 per cent depend

Image 7: Street View of the Canal Street showing damaged houses and narrow streets with open drainage



on water from wells, 6 per cent depend on tube well/boreholes. Only 71 per cent of the HHs have water sources within or near their premises.

- 91 per cent of the houses have electricity connections, 7 per cent depend on kerosene lamps and 2 per cent do not have lighting.
- 65 per cent of the houses in the ward have latrine facilities in their premises, of which only 8 per cent of the houses are connected to piped sewer system. 48 per cent depend on septic tank and 4 per cent on pit latrine. 35 per cent do not have latrine facilities in their premises, of which 4 per cent use public latrine and 31 per cent defecate in the open.
- 58 per cent of the houses let waste water into an open drainage and 30 per cent houses are not connected to drainage network.

Livelihoods: Livelihoods in these areas are mostly informal. The most predominant livelihoods are cattle rearing, daily wage jobs, house help and home based industries. Most of the working members are not educated beyond primary or middle level education. It is only the younger generation that are going to schools/colleges for higher education.

The livelihoods here are strongly linked with location. Cattle rearers sell the milk morning and evening in nearby areas. Families with home based industries,

making pots, or sweets for example, sell their products to the market nearby. It is also easier for them to access markets nearby for raw materials. Men and women who work as daily wage workers or contract labourers in the market. Some women work as maids in the nearby localities. It is closer and easier for people to access workplace on foot or by cycle, which saves them money spent on transportation.

For cattle rearers, there are no cattle sheds in the locality and usually leave cattle on the streets. For this reason, cattle rearers prefer to live in the houses on the main streets. Families who do not own house try and live on rent on the main streets, even though the rent prices are higher. They were also complains that as the cattle are unsheltered, the milk production is affected in harsh weathers, especially in summer and rains, which in turn affects their income. They also get challans from the municipality for leaving the cattle on the streets and in some times they take the cattle away and only released after the payment of fines.

Social and Physical Infrastructure: Only a few houses in the area have piped water supply and rest of them depend on a public tap or hand pump for water. As the public tap water supply is only for few hours during the day, households store water for their consumption.

Open defecation is still prevalent in the neighbourhood. There are no underground sewage networks in the neighbourhood. Very few households have toilets in the house and they are dependent on individual septic

Image 8: Cattle tied in front of the houses on the streets



Image 9: (Left) Hand pump next to an open drainage line, and a temporary toilet built on top of the drainage seen in the back. (Right) Open drainage along the street



tanks. All the wastewater generated is let out into the open drains. People know about the Swatchh Bharath Scheme, but they are under the impression that it is only meant for the rural areas.

All the houses have access to electricity. The households that do not have a connection draw a wire from the neighbour and pay a share or lumpsum for the electricity consumption. No proper health care facilities are available in the area. For everyday illnesses, they go to the local medical store and emergencies and serious illnesses they go the government hospital. The cattle rearers we spoke to said that the veterinary clinic is very far from their location and the services provided are not proper.

All the roads are paved with cement concrete and have open drains on either side. But with cattle and street parking, the roads get narrow and congested. All the households rely on private transport—autos two wheelers, cycle and some walk to reach their workplace or the market areas. There are no public transport facilities available. There's an *anganwadi* centre, primary school

in the neighbourhood. There are small temples in most of the streets in the neighbourhood which are also used for community gatherings.

Socio - Natural Shocks. Families suffered damages in both 1999 and 2013 cyclones. All the *kutcha* and semi *pucca* houses in the areas have been severely or completely damaged by the cyclone. Families living in *kutcha* or semi *pucca* houses have either taken shelter in the primary school or stayed with neighbours with *pucca* houses. The open drainage line which passes through the area swells during the every monsoon and cause floods. The open drains running in front of the houses also overflow in heavy rains. Drinking water and electricity supply was affected for more than a month. Schools were shut for more than two weeks. All the affected families have received relief compensation post cyclone and some of them were given after damage assessment.

Cattle rearers have suffered significant damages in both the cyclones and some of them have lost their cattle in the cyclone. In 1999 cyclone they have lost more cattle

Image 10: Small temple structures on the street, also used as community gathering spaces



Image 11: Government Primary School used as safe shelter during the cyclone Phailin, 2013



because they had tied them and the cattle could not go to safer places. In 2013, with early warnings from the government, as they government suggested, they freed the cattle and most of them survived. The cattle rearers we spoke to told us that the milk production has gone

done by 40 to 50 per cent because of the shock during the cyclone. The milk production gets affected in the harsh weather like peak summers where there is not enough water and shade available.

Image 12: Front part of the house collapsed during Cyclone Phailin, 2013



Of the total 20 families that were interviewed, 13 families have borrowed a loan after the cyclone and 11 of them are still repaying it even after 2 years.

Decision Making Process

Objectives and project components: In Ward No. 24, there are a total of six slums selected by the BeMC for infrastructure up gradation under ODRP project. Canal street, Boarding Street and Rath Street are part of selected six slums for infrastructure upgradation (BeMC, 2015).

The ODRP project in Berhampur has three main components. Component 1 aims to improve the living conditions of the slums in Berhampur by providing basic infrastructure including roads, water supply and sanitation lines, drainage and street lighting and thereby reducing vulnerability of people to floods in the future. Component 2 is aimed improving city level infrastructure, such as roads and trunk water supply. Component 3 ensures community participation for settlement level planning and component 4 provides support to BeMC for developing city level master plans.

As per the initial project design, ODRP project intended to improve infrastructure facilities in the housing colonies built under the RAY project. Nearly 80 slums of the total 164 slums, which are the most the affected and have very poor living conditions were selected under RAY program. It was proposed that housing units will be provided by RAY and the infrastructure under ODRP. With the delays in implementation of the RAY project, and with the limitations of project timeline for ODRP, it was decided that ODRP will be implemented in the other slums in the city for infrastructure provisions.

As per the revised proposal, a total of 84 slums in Berhampur, that are not part of the RAY project were selected by the ODRP project implementation unit and Berhampur Municipal Corporation for infrastructure upgradation. This decision was approved a month before the primary fieldwork was conducted. So the detailed project implementation plan for all the 84 slums in the city is yet to be prepared.

Berhampur Municipal Corporation (BeMC), and ODRP project implementation unit under BeMC are the responsible for the implementation of this project.

Implementation Challenges

The delays in the decision making process and approvals could impact the implementation of the project could reduce the implementation time with project ending in 2018. The Swatchh Bharath Abhiyan, which provides funding for construction of toilets is not linked with the

ODRP currently. So while infrastructure such as underground sewerage network is proposed, with few families having toilets in the house, many families will still have to depend on open defecation or public toilets. People participation is proposed in the project design, none of the families or local ward councillor have any information about the project. Promoting participation in the future without involving them in the process may be challenging in the future. In the three sites visited, enough investments were made especially on construction cement concrete roads. Provision of new infrastructure may damage the existing roads and services.

Outcomes

It will take many years to measure the outcomes of this project. However, with the proposed project design these are some the anticipated outcomes.

- The primary problems with these three areas are with quality of water supply, sanitation. Once the project is completed, it may have positive impact on the residents.
- As the floods are more frequent and damaging, better drainage network may reduce the risk of floods every year.
- The underground sewerage network under ODRP project and funds from Swatch Bharat Abhiyan for construction of toilets may motivate people to build toilets in the future.
- The lack of coordination delayed resulted in no action from the government. This definitely has impacted the life of the people. Quick implementation of the project could have had better outcomes in terms of improved access to services, thereby better quality of life. This is significant, especially in the post cyclone scenario.
- While the families with *pucca* houses have benefitted with infrastructure provisions, people whose houses were affected in the last cyclone are still vulnerable and are at high risk to the future events.
- No site specific infrastructure was proposed, like cattle sheds or a place where women can meet and work, which can support employment and improve their quality of life.
- Proper communication between decision makers, local leaders, *anganwadi* workers and community may motivate community participation and result in better outcomes.

Site Survey Summary

20 Households were interviewed in total in Canal Street, Rath Street and Boarding Street. Some of the findings from the interviews are

- Four members is the average HH size of the family.
- Of the total 20 households six are women headed households. Ten are men headed HHs and four HHs take decisions together as a family.
- Of the total family members in 20 HHs, 16 family members are illiterate, 17 persons have received middle school education, 17 of them have education till matriculation, and eight of them are graduates.
- 20 persons who have reported that they have dropped out of the school. 13 out of total 20 said they have dropped out of the school because of financial reasons.
- Average number of working members in a family are two persons and Rs.11,850 is the reported monthly average household income.
- Of the total respondents, six persons depend of selling milk, four have home based industries, and eight persons work as house maids. Some of the other reported livelihoods are daily wage workers in shops, construction labour, car, bus drivers, and rickshaw pullers.
- None of the households have reported that they have an alternate/additional source of income
- Of the total 20 respondents, seven of them wanted their kids to get educated and get a government job and one respondent wanted their kids to work in industries.
- 15 out of the total 20 respondents have told us that they have been living in the same house for more than 10 years, four of them said between 1–5 years and one HH started living in this area less than a year ago.
- According to the observations, six houses have reinforced cement concrete roofs, 10 houses are living in houses with Asbestos/thatch/ plastic as roof material. 12 houses have walls made with burnt bricks with cement mortar and six houses have mud walls. Nine houses have plinths above road level and five houses are at road level.
- Asset ownership: Out of 20 HHs interviewed, 17 of them mobiles, 9 of them have gas connections, 6 HHs own television, 5 HHs own two and four wheelers.
- Of the 20 HHs, when asked whether they want a new house from the government— 10 of them said that they want a house of any kind, either relocation or insitu, and 4 of them they only want the house if it is in situ. 6 of them said they do not want a house of any kind. One of the respondents who is cattle rearer said the houses provided are at the outskirts of the city and his livelihood will get affected if relocated, and that is why he does not want a new house. Four families who are renting said they need a house of their own and are ready to relocate. Eight of them said they want a house because the house they are living in is not strong enough.
- Two families have said that they approached government, but there was no action from the government.
- 19 out of 20 HHs are having bank accounts and 11 of them said that they have opened in the last two years. Five HHs have reported that they have opened after the government introduced the zero balance bank accounts scheme and five HHs have said that they opened bank accounts for receiving government compensation.
- Of the sample, when asked about the reasons for saving, five of them said they would save for kids education, six HHs said that they would save for health reasons, and four of them said they would save for future purposes.
- Cattle-shed in the neighbourhood, health care facilities nearby, adequate piped water supply, work opportunities nearby their houses, proper housing were the responses given, when asked about the most important things that the need.
- Of the total sample, four respondents said that they have voter ID, five respondents said they have Aadhar card, five respondents of them said they have BPL card and one HH has an APL card.
- When asked about the health issues, three families have reported that they face problems with regular fever and cold, four of them reported water and vector borne diseases, two of them reported body pains and arthritis, and two of them said they have BP, Diabetes, Gastric, Asthma, Cancer, Cardiovascular problems. One respon-

dent told us that their veterinary related health issues and is difficult to access to the medical facility.

- 15 out of 20 respondents said that the hospital is located within 5kms from their location and most of them walk to the medical facility.
- None of households have differently abled members in the family.
- Nine HHs have said that they have life insurance.
- Five HHs have health cards, and one HH told us that they used the health card before.
- Different types of shocks faced in the households were, deaths in the family, financial loans and high interest rates, weak or damaged houses and lack of work opportunities.

Findings related to effects of cyclone

- All the HHs interviewed during the survey said that they had early warning about the cyclone. 13 of them said they heard about the cyclone from either TV or radio, 6 of them got information after government announcement and 1 from their neighbours.
- 18 out of 20 HHs surveyed reported that their house faced damages in the cyclone.
- All the HHs interviewed said they got universal compensation of 500 rupees and few kilos of rice by the government. 14 HHs said they received money after the damage assessment.
- When asked about the problems faced by them after cyclone, 14 HHs reported problems for drinking water, 9 HHs reported problem regarding defecation/toilets. All the household have said their kids' education was affected after the cyclone, either because the schools were shut or because of access issues.
- 18 out of 20 HHs said they faced losses at work after the cyclone. Cattle rearers reported that the milk production had reduced because their cows got scared during the cyclone, Daily/regular wage workers reported loss of work days, and 14 respondents said it was affected for more than 2 weeks.
- Of the sample, seven HHs said they moved to nearby school for shelter during cyclone, another five HHs said they have taken shelter in

neighbours/friends' houses, seven HHs said they stayed in their own houses and didn't evacuate.

- 13 out of the 20 samples said they have sought some kind of help after the cyclone. Of the 13, 10 said they have reached out to friends/neighbours/family or other institutions.
- When asked about the actions people are likely to take if there's a warning of a cyclone in near future, 11 responded that they will move to safe shelter, 6 said that they will stay in the same house. In those 11 families who will move to safer shelter, 4 said they will take documents along with them, 7 said food and other HH items along with them.
- When asked about the actions people are likely to take if there's a cyclone every year/long term adaptation, two respondents said that they will move permanently to a safer location and 10 HHs have said that they will not move permanently.
- When asked about the problems faced in current location, six HHs said they have problems related to livelihoods/economic activity, four HHs said they face problems with rent, six HHs said they have problems with the housing condition, eight HHs complained about water availability and water quality, six HH's said they face sanitation related problems, five HH's said they have problems with electricity supply, six HHs said they have issue related with health. Open drainage line is main complaint with most of the families as it leads to water clogging, frequent flooding and also leading to health related issues.
- When asked about the benefits of staying here, five HHs said the location supports their livelihoods (cattle rearers said the wide roads allow them to tie cattle in front of their houses), two HHs said low rent prices is a benefit for them in this location. Only one HH responded positively when asked about water.

Key findings

- Families are highly dependent on their informal safety nets. Some of the respondent told us that they borrowed money from their employers after the cyclone. One female respondent who works as a maid in a doctor's house said that her employer gives free medicines to her and her 80 year mother every month. This is an additional support to her given by them along with a monthly salary.

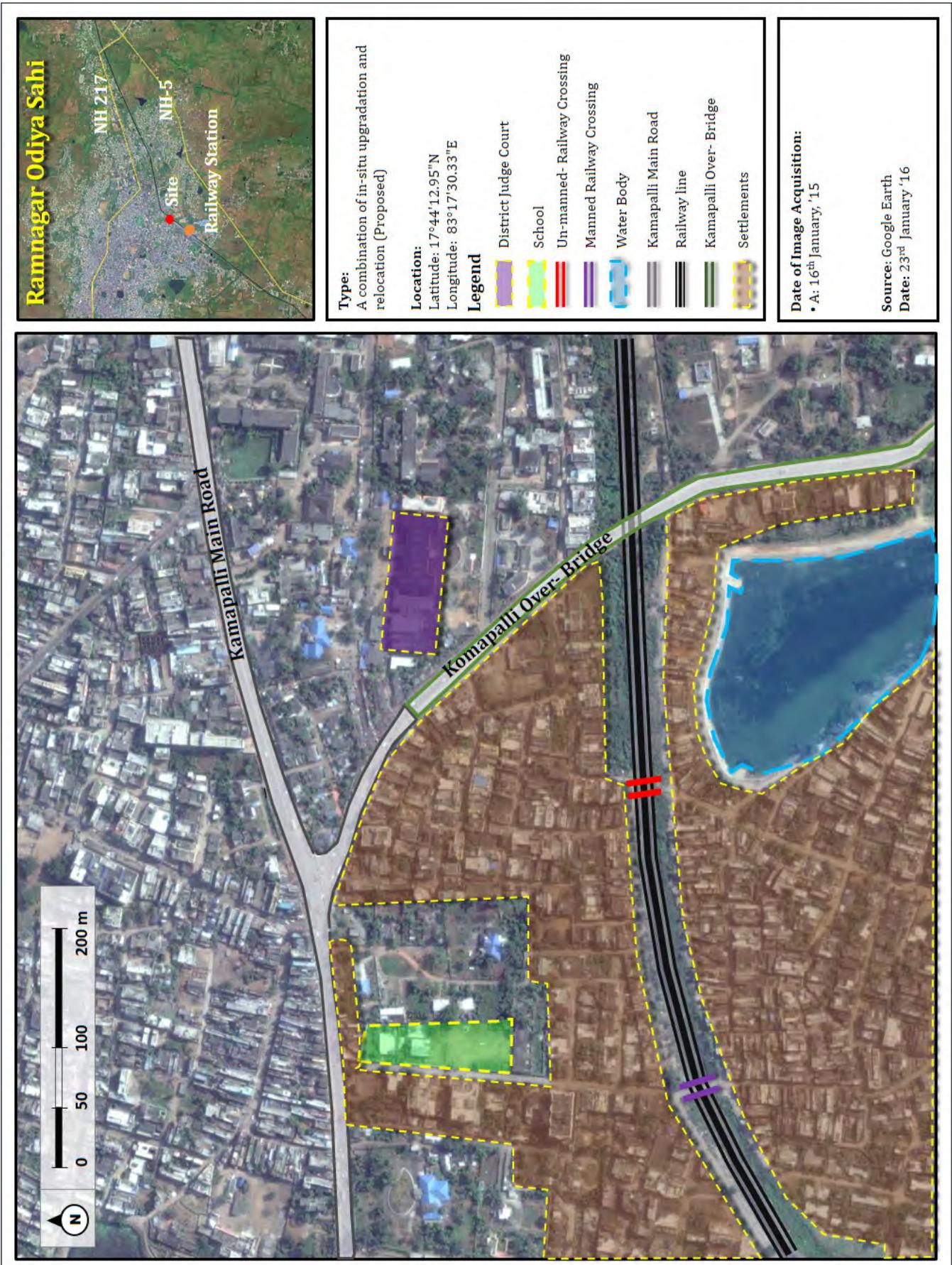
- From the discussions it was found that, even though BeMC notified that Canal Street is a slum, it was not included for development under RAY project because of the selection criteria. With the introduction of Hosing for All scheme, families may get housing in the future.
- For having quality outcomes, collaborations are required between government programs with similar objectives. For example between ODRP and Swatch Bharat Abhiyan. While the ODRP can provide community level infrastructure, HHs without toilets, new toilets can be funded under Swatch Bharat Abhiyan and connected to the drainage lines for better outcomes.
- With no proposal for infrastructure or housing post cyclone, decision of implementing the ODRP project is definitely an advantage for these 84 selected slums and a loss opportunity for the 80 slums under RAY. But without proper assessments, implementation plans, and community participation, the outcomes can be otherwise.
- From the surveys and interviews, it was found that those better relations with the ward councillor are getting extra benefits. This was mentioned in the context of post disaster relief distribution and damage compensation.

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Ramnagar Odiya Sahi



Summary of Settlement - Ramnagar Odiya Sahi		
A	Project level Characteristics	
A1.	Type of Project	A combination of in-situ upgradation and relocation (Proposed) There are a total of 102 beneficiaries among which 42 will be provided in-situ housing, while the remaining 60 will be relocated to New Lakshmi Nagar, Chanchada pathar, Military Padia.
A2.	Type of Risk Management	Corrective / Post impact
A3.	Nature of Planning	Planned with Risk Measures (proposed) With proposed housing and infrastructure in relocation and in-situ upgradation, families will be less vulnerable to cyclonic winds and everyday risks.
A4.	Level of planned participation	Part of long-term management post completion (Proposed)
		As per the project design, beneficiaries are part of the operation and maintenance of social infrastructure.
A5.	Motivation/Nature of Hazard	Post extreme climatic event (Phailin 2013) and development.
A6.	Level of attribution of CC to hazard frequency and intensity	High – frequently exposed by cyclones
A7.	Primary Decision Maker	Government – Berhampur Municipal Corporation
A8.	Distance between old and new locations	0 to 1 km (for families getting insitu upgradation) 1 to 5 km and More than 5 Km (for 60 families getting relocated to New lakshmi nagar, Chanchada pathar, Military padia.)
A9.	Time between decision and implementation	More than 2 years– Project was launched in 2013 and is yet to be implemented
A10.	Time taken to complete the project	Not Applicable – project yet to start
A11.	Age of the project (time since completion)	Not Applicable – project yet to start
A12.	Size of the Project	Medium (102 HH)
A13.	Nature of dividing the population	Part of HH moved and scattered in different locations. There are a total of 102 beneficiaries among which 42 will be provided in-situ housing, while the remaining 60 will be relocated to New lakshmi nagar, Chanchada pathar, Military padia.
A14.	Financing Sources	Combination of Central and State government funds including beneficiary contribution
B	Original Settlement level characteristics	
B1.	Type of land tenancy	A combination of government owned and railway land
B2.	Age of settlement (before the move)	More than 50 years Most families have been living in this location since their forefathers.
B3.	Size of the settlement	Medium (102 HH)
B4.	Most dominant nature of livelihood options for HH	Mixed nature of work – Includes work at home and travel for work to different location in the city The livelihoods includes security guard, auto driver, shop keeper, automobile mechanic, vegetable vendor and bus driver and many also do daily wage work. Women are also involved in various livelihood activities including selling milk, pressing clothes and other daily wage activities.

B5.	Level of Hazard Risk Exposure	High exposure to cyclones and medium exposure to floods
B6.	Type of Urban form	A combination of Cluster and Row Housing
B7.	Levels of social infrastructure distinguished by provider	Provided by the government– The area has good schools, anganwadis, hospitals and markets.
B8.	Strength of social networking	Low. Most people living here either belong to the backward caste or scheduled caste. The area has mixed income housing, people and aren't very cohesive with each other.
B9.	Most dominant form of family structures	Nuclear family with male family heads.
B10.	Use given to abandoned site	People are still living in the old site.

Profile

Population and Demographics: Ram Nagar Odiya Sahi falls under ward 28 of Berhampur Municipal Corporation located near the Berhampur Railway station, and has a population of 387. Of the total population, 218 belong to scheduled castes, 103 belong to scheduled tribes and 57 persons belong to general category (BeMC, 2014b).

The neighbourhood is more than 50 years old and it is dominated by Odiya speaking people with few Telugu speakers. The site is located on the either side of the railway tracks. Even though there are similar typology of housing and vulnerabilities on either side, only part of the areas located on the north of the railway line were selected under RAY project. It was observed that families do not have strong relationship with each other, may be

because of different income groups, castes and livelihoods that form a part of the locality. Most households have nuclear families with male house heads. Some families in this neighbourhood have their relatives living in the same locality.

Livelihoods: The neighbourhood has diverse livelihoods ranging from security guard, auto driver, shop keeper, automobile mechanic, vegetable vendor, breakfast centres and bus driver. Women are also involved in various livelihood activities including selling milk, pressing clothes and other daily wage work. Women we spoke to, expressed interest in skill development programmes to start their own small scale business at home. From our interviews, it was clear that in most families both parents work. All the families we spoke to said they work within the city and do not migrate to other places for

Image 13: Woman in the neighbourhood irons clothes for living



work. Most kids go to government schools which are located nearby. Most youngsters are willing to pursue education till post-graduation and want to get into government jobs. According to the socio-economic survey done under RAY, Ram Nagar Odiya Sahi has a literacy rate of 96 per cent (BeMC, 2014b). Among the 15 households that we surveyed, the house heads of 7 households are self-employed; they either have their own breakfast centres or petty shops, etc., house heads of 5 households worked as security guards and the remaining 3 households were involved in casual labour. According to the socio economic survey findings, 81 per cent of the population earns between Rs 2000 and Rs 5000 per month (BeMC, 2014b).

All the houses in Ramnagar Odiya Sahi have electricity connections. There are many schools and colleges in the vicinity. There is also an Industrial Training Institute (ITI) nearby and most youngsters train there.

There are three *anganwadis* in this neighbourhood and they are very active. Parents with kids below the age of 5 send their kids to *anganwadis*. In our interview with an *anganwadi* worker, she said that most parents are keen on sending their kids to the *anganwadis*. The timings of the *anganwadi* are 9 a.m. to 12:30 p.m. from Monday to Saturday. Every *anganwadi* has an *Anganwadi Worker* (AWW) and an *Anganwadi Helper* (AWH). The AWW follows a specific syllabus given by the State of Orissa.

Image 14: A resident of the neighbourhood owns a breakfast centre



Social and Physical Infrastructure: Out of the total housing units in Ram Nagar Odiya Sahi, 30 per cent of houses are *pucca*, 67 per cent are semi-*pucca* and 7 per cent of the houses are *kutcha* (BeMC, 2014b). The area is accessible by motor-able *kutcha* roads. People have to walk a kilometre to reach the main road to access public transport. Water services are very poor in the locality. There is only one common drinking water tap which the entire community uses.

Out of the 15 respondents, 10 complained about poor water facilities within the area. Most respondents complained about poor sanitation facilities here and the data from the detailed project report that 81 per cent of the population defecates in the open.

The children are taught various subjects like painting, numbers, Odiya, crafts, etc. Every *anganwadi* within the state follows the same syllabus. They also follow a timetable for daily meals. The *anganwadi* conducts a nutrition week and a breast feeding week for mothers twice a month. And once a month, the government provides ANM vaccination for measles and special immunisation for DPT, polio, etc. Every month, there is an Urban Health and Nutrition (UHNT) day, where there is a weight check-up for children and regular health check-up for pregnant women. Under the Momata Yojana Scheme, Chatuva is given to mothers from the 7th month till after the child is born. Then from 7th month till 3 years of age the child is given Chatuva and two eggs per week, and after the child is 7 months old, as a part of 'anna prashana' (first food eating ceremony) the child

Image 15: A photograph taken while interviewing an Anganwadi worker in the Anganwadi



tablets and post Phailin, a Diarrhea Prevention Program was conducted in the neighbourhood. The *anganwadi* bridges the gap between the government and the people.

There are both private and government hospitals within 5km from this site. five respondents from our survey said that the government hospitals are unclean and that the doctors do not come on time. There are several markets in and around the area. Vegetable vendors usually buy goods from these markets and sell it within the neighbourhood for living. 100 per cent of households in this area have electricity connections. Solid waste and open sewer is a cause for concern as open sewer lines run along the stretch of the street and people generally dump their garbage there.

Socio-natural shocks: Few respondents feel that living near railway tracks pose safety issues on the community especially for children and livestock. One of the respondents said that as there is no fence that separates the railway line from the area, her cattle was struck by a train. Most respondents fear floods and cyclones as majority of their houses got damaged by both 1999 super cyclone and 2013 Phailin.

was given a bowl and spoon which was discontinued later. Just before Phailin hit the state of Orissa, the AWW and AWH, Orissa Health Department (OHD) and ICDS are called for a meeting at the CDM office to warn them about the cyclone. The AWW passes on the information to the people. Before Phailin, people were given allergen

After Phailin, few people moved to a rented house until they reconstructed their damaged house. Respondents have also borrowed money from relatives to reconstruct their house and most of them are still paying debts. Loss of work and income added extra burden to the families. It was evident from our surveys that the amount of

Image 16: Houses situated beside the railway line



money people spent on recovery was more than that of the loss faced during Phailin.

Most respondents had issues accessing drinking water and electricity for nearly a month. Schools, colleges were shut down for almost two weeks. Only few markets were open and food prices had skyrocketed. Most respondents received the universal compensation of Rs 500 and 50 kgs of rice within a week after cyclone. Few among them also received extra money towards reconstructing their houses after damage assessment.

Decision making processes

This area was surveyed under RAY a year back. A total of 102 households identified as the beneficiaries for the project. Out of which, 42 HHs would be considered for in-situ upgradation, while the rest will be moved to New lakshmi nagar (18 HH), Chanchada pathar (39 HH), Military padia (03 HH)(BeMC, 2014b). Out of the 42 houses, 22 will retain *pucca* dwelling units, 10 households will be provided with *pucca* structures and toilets, and the remaining 10 households will be provided with *pucca* structures. 10 respondents among 15 prefer in-situ upgradation while the remaining 5 are willing to relocate.

Most people prefer in situ upgradation while the proposed plan says that 60 households will be relocated. The proposed RAY scheme has incorporated certain innovative techniques which are as follows :

- Provision of rain water harvesting system for all the clusters
- Solar panels to be used for street lighting, community halls, etc.
- Top soil of the site will be conserved and will be used for increasing green space.

It was evident from our surveys that there was no public participation throughout the process as none of our respondents knew about the proposed RAY scheme. As people were surveyed under RAY, it is unsure if the criteria under the new Pradhan Mantri Awas Yojana (PMAY) will be considered while allocating houses to the beneficiaries, and also it is unclear if there will be any change of beneficiaries with the new PMAY scheme.

There was a family in this area that lived in a semi *pucca* house before Phailin. After the house got damaged during Phailin, they reconstructed the house into a *pucca* structure, because they now own a *pucca* house, their BPL card has been cancelled. They are still economically poor especially after Phailin and the cancellation of BPL card has added to their burden now. So in this scenario, what will happen to the entitlements of the households that are to get in-situ upgradation?

Implementation challenges and outcomes

As the project has still not been implemented, the challenges and outcomes are yet to be seen. However, there will be different implementation challenges and outcomes for the relocation and in-situ upgradation projects. There are few questions that need to be addressed and they are as follows

Relocation

- What will be the use of abandoned site of those 60 families who are proposed to be relocated to three different sites?
- What will happen to the livelihoods of the relocated families? Were livelihoods of the families considered when identified for relocation to three different sites? As people have been living here since more than 25 years, relocating a few families might affect their livelihoods and disrupt social connections. As few people run petty shops and breakfast centres, will there be enough space to put them up in the proposed G+3 apartments the relocated sites?
- Whether families will be willing to relocate, if their friends or relatives getting in-situ upgradation and getting relocated to another site? And with the few families getting in-situ upgradation, families may resist the move to relocate in desire to get houses in-situ.
- Whether caste, religion, class are being considered when the families are proposed to relocate to three different sites? If relocated, the families may face social and cultural differences with families relocated from other sites. This could have either positive outcomes of improved social networks or lead to disputes with families from communities.

In situ upgradation

- From our surveys it was evident that majority of the families preferred in-situ upgradation.
- As mentioned in the decision making section, what will happen to the entitlements of the 42 households that are to get in-situ upgradation? With upgradation, will they lose their current benefits that they are entitled to?
- What are the proposed sites for transit housing? Will they be able to survive during this process?

Site Survey Summary

A total of 15 households were interviewed as a part of our field visit and some of the findings are as follows

- 4 is the average HH size of the family
 - Out of 15 respondents, 7 HHs are headed by men, 3HHs are headed by women, 2 HHs are male headed and the remaining 3HHs take decisions as a family
 - Of the total family members in 15 HHs, 6 family members are illiterate, 3 persons have graduated till middle School level, 3 of them have completed matriculation and 1 have education till graduate level.
 - Three out of six people have said that they have dropped out of the school because of financial reasons.
 - Average number of working members in a family is two persons and Rs.4000 to 5000 is the reported monthly average household income.
 - Of the total respondents, four people are self-employed, two work as auto drivers, one works as a security guard and another one works for a government agency. Some of the other reported livelihoods are shop keeper, automobile mechanic, vegetable vendor, breakfast centres and bus driver. Women are also involved in various livelihood activities including selling milk, pressing clothes and other daily wage work.
 - None of the households have reported that they have an alternate/additional source of income
 - Nine respondents wanted their kids to get educated and get into a better job
 - According to the observations, four houses have reinforced cement concrete roofs, 11 houses are living in houses with Asbestos/thatch/ plastic as roof material. 14 houses have walls made with burnt bricks with cement mortar. Seven houses have plinths above road level and four houses are at road level.
 - Asset ownership: Out of 15 HHs interviewed, 13 of them mobiles, eight of them have gas connections, eight HHs own television, four HHs own two wheelers and no one has four wheelers.
 - All respondents wanted better houses and 10 respondents among 15 prefer in-situ upgradation while the remaining five are willing to relocate.
- Two families have said that they approached government, but there was no action from the government.
- 10 respondents among 15 prefer in-situ upgradation while the remaining 5 are willing to relocate.
 - All respondents have bank accounts while three of them opened bank accounts as a part of Prime minister's zero balance account, two opened accounts for saving money and the rest two for receiving government compensation and one is a salary account.
 - Of the total sample, five respondents said that they have voter ID, six respondents said they have Aadhar card, one respondent said they have BPL card and none have APL card.
 - When asked about the health issues, four families have reported that they face problems with regular fever and cold, two of them reported water and vector borne diseases, two of them reported body pains and arthritis, and three of them said they have BP, Diabetes, Gastric, Asthma, Cancer, Cardiovascular problems and one was differently abled.
 - All the respondents said that the hospital is located within 5kms from their location and most of them walk to the medical facility.
 - Six HHs have said that they have life insurance and two HHs have health cards
 - Different types of shocks faced in the households were – deaths in the family, financial loans and high interest rates, weak or damaged houses and lack of work opportunities

Services

- Most people are facing difficulty in accessing water and sanitation facilities
- 100 per cent of households have access to electricity
- *Anganwadis* are very active in this area. Respondents who had children below the age of five send their kids to the *anganwadi*. Moreover the *anganwadi* workers communicate to people important information on availing any new government schemes, provision of aadhar/BPL card. The *anganwadi* clearly bridges the communication gap between the government and its people.

- There are many markets and hospitals in the vicinity. However a few respondents were unhappy with poor quality of government hospitals.

Livelihood/economic activity

- Most respondents are involved in casual labour while few are self-employed. In most cases, both parents work.
- Seven out of the eight female respondents are willing to take up skill development/government training programs in order to start their own small scale business and have asked for SHGs in this neighbourhood.
- There is a clear transition in kind of job that people take up; were older members are involved in casual labour while the younger generations are getting into government jobs.

Post cyclone

- All respondents faced losses at work post cyclone and it took almost a month for them to get back to work. Because of loss of income people had to borrow money. 7 out of 15 respondents have borrowed money from their friends/relatives to recover from losses faced during Phailin and most of them are still repaying their debts. As a result of this, people are unable to save as much money as they did before.
- A few respondents moved to a rented house post cyclone while reconstructing their damaged house which increased their expenses as they had reconstructions costs and also had to pay house rent.
- One respondent who rebuilt her *kutchha* house to *pucca* had her BPL card cancelled which has made her family economically poorer than before.
- 11 out of 15 respondents received universal compensation of Rs500 and 50kgs of rice, while three respondents received extra money for house reconstruction after damage assessment. A sum of Rs10,000–15,000 was given to people whose houses were completely damaged and Rs2000 for partial damage.
- This locality does not have a cyclone shelter and most respondents lived in their own house during cyclone.
- None of respondents had access to drinking water or electricity during and post cyclone.

Important things for the household/neighbourhood

- Three out of the eight female respondents have asked for jobs and SHGs. All of them have also asked for better housing and improved water and sanitation facilities.
- All the seven male respondents have asked for suitable/better job opportunities. Four out of the seven have also asked for *patta*, better schools.

References

BeMC. (2014). *Detailed Project Report on Slum Redevelopment Project under Rajiv Awas Yojana - Phase VIII*. Retrieved from

Bada Harijan Sahi



Summary of Settlement - Bada Harijan Sahi		
A	Project level Characteristics	
A1.	Type of Project	Combination of in-situ housing upgradation, relocation and infrastructure upgradation
A2.	Type of Risk Management	Corrective/Post impact
A3.	Nature of Planning	Planned with risk measures – RCC structures under RAY will prevent damage from high damage speeds during cyclones. Infrastructure like toilets, drainage networks, water supply will improve quality of life and thereby reducing vulnerabilities.
A4.	Level of planned participation	Part of long – term management post completion
A5.	Motivation/Nature of Hazard	Development – The project was planned before Phailin
A6.	Level of attribution of CC to hazard frequency and intensity	Medium – Only the housing and infrastructure is considered at risk. Most of the families are retained at the same location as part of the project.
A7.	Primary Decision Maker	Government and NGOs's – NGO's were involved for surveys and motivating people for accepting the housing provided by the government, but the primary decision maker is Government
A8.	Distance between old and new locations	0 km – In situ up gradation
		5–10 km for the families who are getting relocated to Dhimbira Bauri Sahi
A9.	Time between decision and implementation	More than 2 years – The project was initiated by Berhampur municipal corporation post 2013 cyclone Phailin and is yet to be implemented.
A10.	Time taken to complete the project	Not Applicable – not yet started
A11.	Age of the project (time since completion)	Not Applicable – not yet started
A12.	Size of the Project	Medium (194 HH)
A13.	Nature of dividing the population	Part of the HH are moved to different location – and rest of the families will be provided housing in the same location
A14.	Financing Sources	Contribution of funds from different sources – Govt funding under RAY scheme and beneficiary contribution.
		After the cyclone the project was planned in way that the housing units will be built with government funds and infrastructure under the World Bank funded ODRP scheme, but because of delay in implementation that was cancelled.
B	Original Settlement level characteristics	
B1.	Type of land tenancy	No explicit/legal rights
B2.	Age of settlement (before the move)	More than 10 years. Have been living for at least two generations
B3.	Size of the settlement	Medium (194 HH)
B4.	Most dominant nature of livelihood options for HH	Travel 0–5 km for work
B5.	Level of Hazard Risk Exposure	High – Many houses have asbestos sheet roof and cannot stand high wind speeds.
B6.	Type of Urban form	Row Housing – low rise – high density
B7.	Levels of social infrastructure distinguished by provider	Good – provided by the government, CC Roads, street lights and water connections are provided in the neighbourhood.

B8.	Strength of social networking	High – All the families are from the same community and have strong networks.
B9.	Most dominant form of family structures	Nuclear family with male or female family heads
B10.	Use given to abandoned site	Not applicable – in-situ up gradation
C	New settlement level characteristics	
C1.	Level of hazard exposure	Standard RAY housing - Low – with high plinth and RCC structure, the exposure to floods and cyclones will be reduced
C2.	Type of land tenancy	Standard RAY - Families will be given property rights once they beneficiary contribution is completed
C3.	Type of new Urban form	Proposed – Mixed- Both independent houses and apartment blocks – low rise – high density
C4.	Level of planning and provisions (Good, medium, minimum, none)	Proposed - Good – Housing, Water supply, sanitation, drainage, rain water harvesting and electrical services.

Profile

Profile and Demographics: Bada Harijan Sahi is located in ward No.19 of Berhampur Municipal Corporation (BeMC) and is on the banks of Golapalli Bandha tank. The families we spoke to told us that they have been living in the same house for generations. Bada Harijan Sahi is selected under Phase VIII of the Rajiv Awas Yojana programme to rehabilitate the cyclone affected families in cyclone Phailin. A total of 16 slums were selected as phase VIII of the project.

Based on the socio-economic survey conducted in 2013–14 by the Berhampur Municipal Corporation (BeMC, 2014b),

- There are a total of 686 people living in Bada Harijan Sahi, of which there are 337 male and 349 are female population. Of the total 686 people, 665 belong to Scheduled Caste and 21 people belong to General Caste. Harijan's, who are the Schedule Castes are the predominant population in the area.

Image 17: Street view in one of the streets of the Site. Also showing the only RCC house in the neighbourhood



- Bada Harijan Sahi has a literacy rate of 100 per cent.
- All the houses have toilet facilities in their houses.
- All the roads in the site are motor-able *pucca* roads
- 99 per cent of the house have electricity connection. 37 per cent of the total HHs have average monthly income of Rs.2000 or below, 38 per cent have average monthly income between Rs.2000–5000, and the rest 25 per cent of average monthly income of more than Rs.5000

Livelihoods: The households in Bada Harijan Sahi are involved in both formal and informal work. From the primary survey, we found that men and women work as unskilled labour like sweepers, helpers and attenders with local municipality, government hospital etc. Some of them work as maids in the houses nearby. Some work in small shops, private hotels as regular wage workers. A few households also have small shops in the neighbourhoods. Women in the family take care of the shops when men go for work during the day.

Social and Physical Infrastructure: According to the SE survey nearly 80 per cent of the houses are *pucca* and the rest belong to semi *pucca* or *kutchha*. Households here depend on the public taps for drinking water. As the supply is only for few hours during the day, they

store water for regular consumption. It is also reported that more than 90 per cent have access to toilet and bathroom facility. Some of the persons we spoke to told us that they go to the nearby tank for open defecation. There are no solid waste management facilities in the area. People tend to keep the front of the houses clean, and all the waste is thrown to the space between the two rows of houses. All the waste water from kitchen and toilets are also let into the open drains between the houses. Without proper maintenance this is a health hazard for the families living there.

All the houses have access to electricity and there are also street lights in the area.

Families depend on their own mode of transport for commuting. Most of the families work within 1–5 km distance from their houses. All the roads are paved with cement concrete and use them as gathering spaces and living spaces especially in the evening and nights.

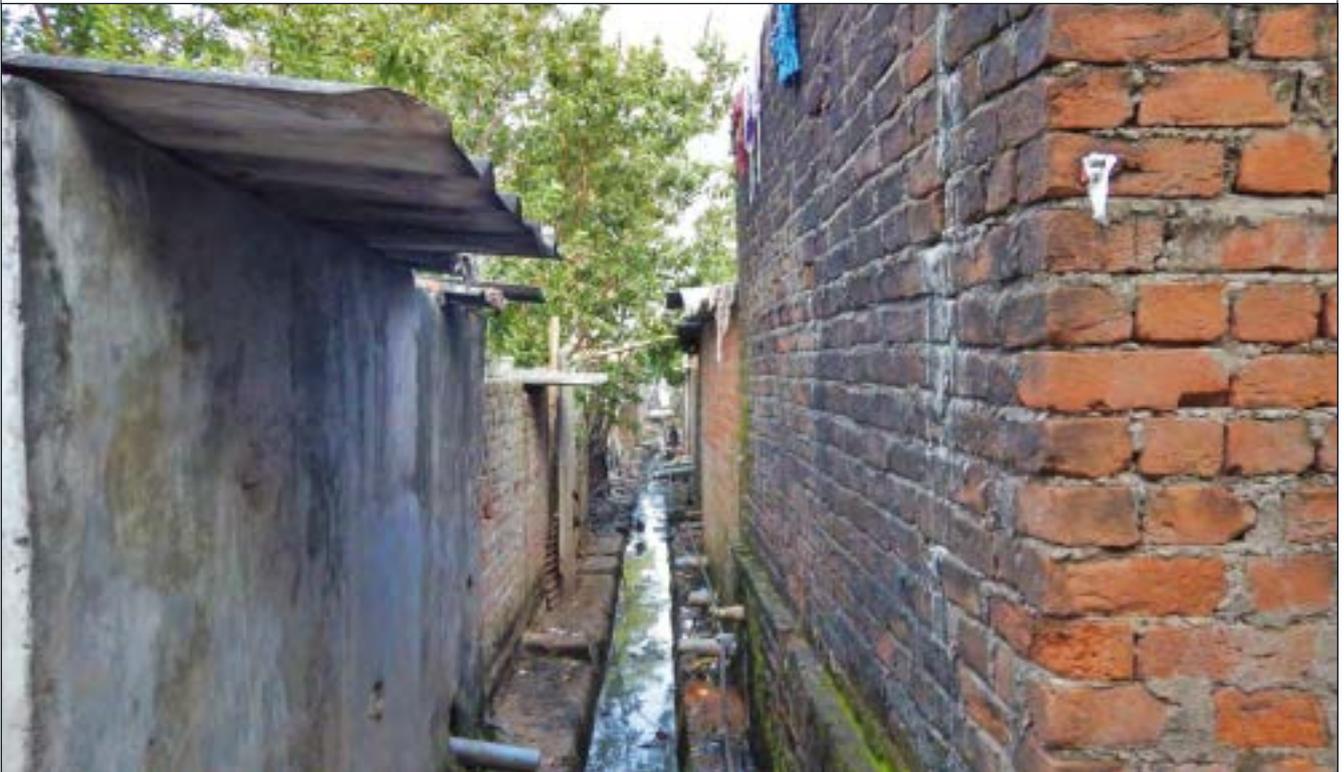
The city government hospital is less than a kilometre from here. Most of the families go there for treatment and the families who could afford prefer private hospital. Respondents from here told us that the treatment given in the hospital is not good and for serious illnesses and that they prefer private hospital or go to Visakhapatnam for treatment.

There is one temple and a community centre in the neighbourhood. Men play cards at the temple in the

Image 18: Temporary toilet constructed on top of the open drain. Hand pump located next to the toilet and the open drain is also seen in the picture



Image 19: Poorly maintained drainage lines between two rows of houses



evening. The community centre is a recent construction and was locked when we visited the site multiple times.

Socio - Natural Shocks: Most of the *kutchha* and semi-*pucca* houses were severely damaged by the cyclone. Some families ran to the cinema theatre nearby for shel-

ter during the cyclone and stayed there for a few days. Some families stayed with neighbours who had *pucca* houses. All the houses have got relief and damage compensation. Families who couldn't afford to reconstruct the house are still staying in the damaged houses with temporary arrangements. Water supply and electricity

Image 20: Space in front of the houses used for daily activities and gatherings



Image 21: Temple located in the site

services were disrupted for more than two weeks after cyclone and they were depended on water tankers. Kids' education and livelihoods were also affected for more than two weeks.

Decision Making Process

Objectives and project components: As per the project design, housing, tenure and infrastructure were proposed in 80 slums across Berhampur. Of the total 164 slums in the city, slums that are most affected by cyclone Phailin and the slums with unhygienic living conditions were selected to be rehabilitated under RAY project. As per the initial project design, housing units were proposed to be built under RAY program, funded by both the state and central government funds, and beneficiary contributions. The infrastructure will be provided under ODRP project funded by the World Bank. A total of 80 slums were selected under this program and were divided into 8 phases of implementation. Bada Harijan Sahi along with other 15 slums was included in the eighth Phase of the project. After the sites were selected, local NGOs were hired by the government for conducting the socio economic surveys and for mobilising community towards the acceptance of the project. Based on the number of beneficiaries and the condition of slums and tenability, either relocation or in-situ upgradation infrastructure upgradation was proposed.

The physical infrastructure services that were proposed under the project are power supply, solid waste management, roads, rain water harvesting, storm water

drainage system, sewerage and water supply system. The social infrastructure services were open spaces in the site and rent for the transit housing.

But due to the delays in decision making, tendering process and government approvals of the projects, the collaboration between ODRP and RAY project were cancelled and ODRP is proposed in the remaining slums of Berhampur. According to the RAY Phase VIII detailed project report, the Slum Improvement Program, there are four type of proposals for Bada Harijan Sahi.

- Retaining original dwelling units - 130 existing *pucca* houses will be retained as it is and will be connected to the proposed infrastructure.
- 30 *pucca* units will upgraded toilets and connected to the proposed infrastructures services.
- Newly proposed construction for 29 *kutcha* and semi *pucca* houses in the site.
- Relocating 5 households to another site named Dhimbira Bauri Sahi

As of October 2015, the timelines for the project were not decided yet. Berhampur Municipal Corporation is the primary decision maker for this project. According to the government officials the proposed design were done with consultations with the community. However, when we spoke to the families, they were not very sure about the proposed designs and the status of the project.

Some of them were under the impression that the government is planning to build apartments and use the rest of the land for other development purposes.

With the introduction of new housing for all scheme – Pradhan Mantri Awas Yojana, it is unsure if the project design and beneficiary criteria will still remain the same.

Implementation Challenges

There are four different kinds of proposals within one settlement, because of this there may be an issue with the community accepting the proposed designs as the benefits are different for different households. During the primary survey, none of the families we spoke to were willing to relocate and all of them preferred independent houses in the same site. So the families identified for relocation may not be willing to relocate to a different community. Rent for transit housing for the proposed new constructions part of the project. The delay in completion of the project will lead to increase in cost of construction.

Outcomes

The outcomes of the project are yet to be seen. Some key questions and observations are:

- With different proposals there can be different type of outcomes within one community. In the long term this could affect the cohesion of the existing community.
- Relocation of few households to other community will have severe impacts on the existing social networks, livelihoods in the current location. Resistance from these few HHs may impact the complete implementation of the project, which could also divide the community.
- With provision of tenure security and infrastructure, it would have to be studied in the future if HHs invest more in their houses.
- Lack of community participation in the project design could have negative impacts on long term operation and maintenance of infrastructure.
- Some families are still living in the damaged houses affected during Phailin. Information about the project design would have motivated them to invest in their houses.
- Immediate implementation of the project after the cyclone could have saved the investments of beneficiaries on building back their lives. This could also have been an opportunity for the government to gain the public support.

Site Survey Summary

A total of 10 HHs were interviewed during the primary survey and some of the key findings from the survey are

- The average HH size of the family is five members
- Of the 10 samples, three HHs are headed by women, six by men and one respondent said they take decisions together as family.
- Of the total family members in the 10 HHs, 19 per cent are illiterate, 17 per cent have education levels till primary level, 22 per cent have middle level education, 36 per cent are educated till matriculation level. Only 6 per cent have higher secondary/intermediate education and non-technical degree. None of them have graduate or higher level education.
- Of the sample, 16 members said that they have dropped out of school, of which 8 persons said they have dropped out because of financial reasons.
- Average number of working members in a family are two persons and Rs.14,150 is the reported monthly average household income.
- Of the samples, some of the livelihoods that were reported were sweepers in Government Hospital, Berhampur Municipal Corporation, Private Hotels, Household help/maid, Butchers, Small shops, construction labour, drivers.
- Four HHs have said that they have an alternate source of income.
- Three respondents said either themselves or one of their family members migrate to other places for work.
- Of the sample, when asked about willingness to migrate to other areas if given a chance, one respondent said that they are willing to move if there is work.
- Three respondents said that they want their children to get educated and get a job, and one specifically said a government job.
- Of the samples, seven HH's were living in the same city/town/neighbourhood for more than 50 years, 2 HHs between 10–50 years.
- Of the 10 HHs interviewed, one house is *pucca* with RCC roof and brick walls; 6 houses are semi-*pucca* with asbestos roof and brick walls, and

three houses are built with mud walls and thatch/plastic roof material.

- 9 out of the 10 surveyed, said they own gas stoves, only 2 said that they have TV and 9 of them said that they own a mobile phone. 5 HHs own a cycle, 2 HHs own a 2-wheeler, and 1 HHs has a 4 wheeler.
- Of the sample, when asked if they want a new house from the government, six of them said they only want if it is in-situ and two of them said they want a house of any kind—either in-situ or relocation. One HHs said they don't want a new house. One of the reasons for that were mentioned for wanting new house are that the current house size is not sufficient.
- 7 out of the 10 HHs interviewed said they have bank accounts, of which two of them said that they have opened bank account as part of the new zero balance account program—Pradhan Mantri Jan Dhan Yojana, one responded saying that they have opened bank accounts for savings and one said for receiving government benefits.
- Of the sample, when asked about the reasons for saving, four of them said they save for kids' education, two said for health reasons, and six of them said they are saving for future.
- Piped water and adequate water supply, drainage system, In-situ houses, health care facilities and work opportunities were some of the responses, when asked about the most important things needed for them.
- 7 out of 10 samples said that they have Voter ID and Aadhar Card, 1 HH has BPL card and 1 HH has APL card.
- Common cold and fever was reported by four HHs as the frequent health issues that they face. one HH reported of water borne diseases and one HH reported vector borne diseases.
- Two HHs were sampled with differently abled family members, and of those two, one HHs said they get pension for the differently abled family member.
- Only one HH said that they have life insurance. None of them respondents said they have taken either non-life insurance or the new Pradhan Mantri Bhima Yojana,

- Only one HH has a health card of total 10 respondents, but they have not used the card for treatment till now.
- Health issues and deaths in the family are reported as the main shock to the family. One respondent said that her husband had a major surgery to his neck recently and had to get admitted in a private hospital. She said they had to spend most of their savings for treatment and regular medicines. She also mentioned that they have bought a new water purifier just for his medical reasons. Another HH said death of one of his brothers was a major shock and they are still not able to recover from it. He said his brother had fever and when taken to the hospital, he didn't get good treatment and he died because of that.

Findings related to effects of cyclone

- All the 10 HHs surveyed said that they have received early warning about the cyclone. Of the total, nine HHs said they heard about the cyclone from TV/Radio and one HH said that they heard about the cyclone from neighbours/relatives.
- Eight out of the total HHs said that they have suffered losses during cyclone. two HHs reported complete damage to the house, four HHs said their roof was completely damaged and the walls were partially damaged, two HHs reported partial damage to the roof and the walls.
- When asked about compensation received post cyclone, all of them said that they have received standard compensation package of Rs.500 and 50 kg rice, 9 HHs said they have received goods like tarpaulin sheets, solar lantern etc., and none of them said they have received money after damage assessment or after perusal.
- After the cyclone, all the HHs interviewed reported problems with drinking water, 7 HHs said they had problems with defecation. All the families said that their kids' education was affected either because schools were shut or no transport access.
- 9 out of the 10 HHs said that they suffered work related losses after cyclone. Loss of work days because either their work place was shut for they couldn't find work. People who own small shops reported damages to the shop and goods and had to spend on repairing the shops and buying the goods. One HH who work as a sweeper in a government hospital said he has to work overtime and he didn't get paid for it, and he reported that as a loss.

- Four HHs reported damages to HH assets, and one HH reported damages to their work related assets.
- When asked about things that they carried, three HHs said they carried food and clothes to safe shelter when evacuated and one HH said they stayed in their house and didn't evacuate.
- Three HHs said that after cyclone they sought help from friends/relative/neighbours for money. Three HHs said that they borrowed loan and one of them said they are still repaying.
- When asked about actions they would take if there's a warning of a cyclone in near future, all the 10 HHs said they will move to a safe shelter.
- When asked about actions they would take there's a cyclone every year/long term adaptation, four HHs said they would still stay in the same place and will not move permanently.

Findings related to R&R

- All the houses are depend on public tap connection for water.
- Prevalence and use of toilets before and after relocation
- 5 out of 10 families said that they have *patta*/ certificate for their house. Of the total six, three of them were owned by men and two by women
- When asked what problems they faced with the housing, one HH said they face problems with condition and quality of housing in their current location, four HHs said they problems related to water, none of the HHs said they face problems related to sanitation/toilets, health, education, transport. Some of the HHs have reported that they face problems with cyclone, floods, heat summer.
- When asked about the benefits living in their current location, four HHs said living with the community is the main benefit. Their access to livelihoods, hospitals, markets were mentioned as the other benefits.

Key findings

- Communication between the government and the beneficiaries is critical. During the primary surveys, the families we spoke to have an impression

that Group/Multi-storeyed structures are being proposed in the site and they are against moving into a different house. But the project design is such that many of the HHs will retain their current housing and will get access to better services.

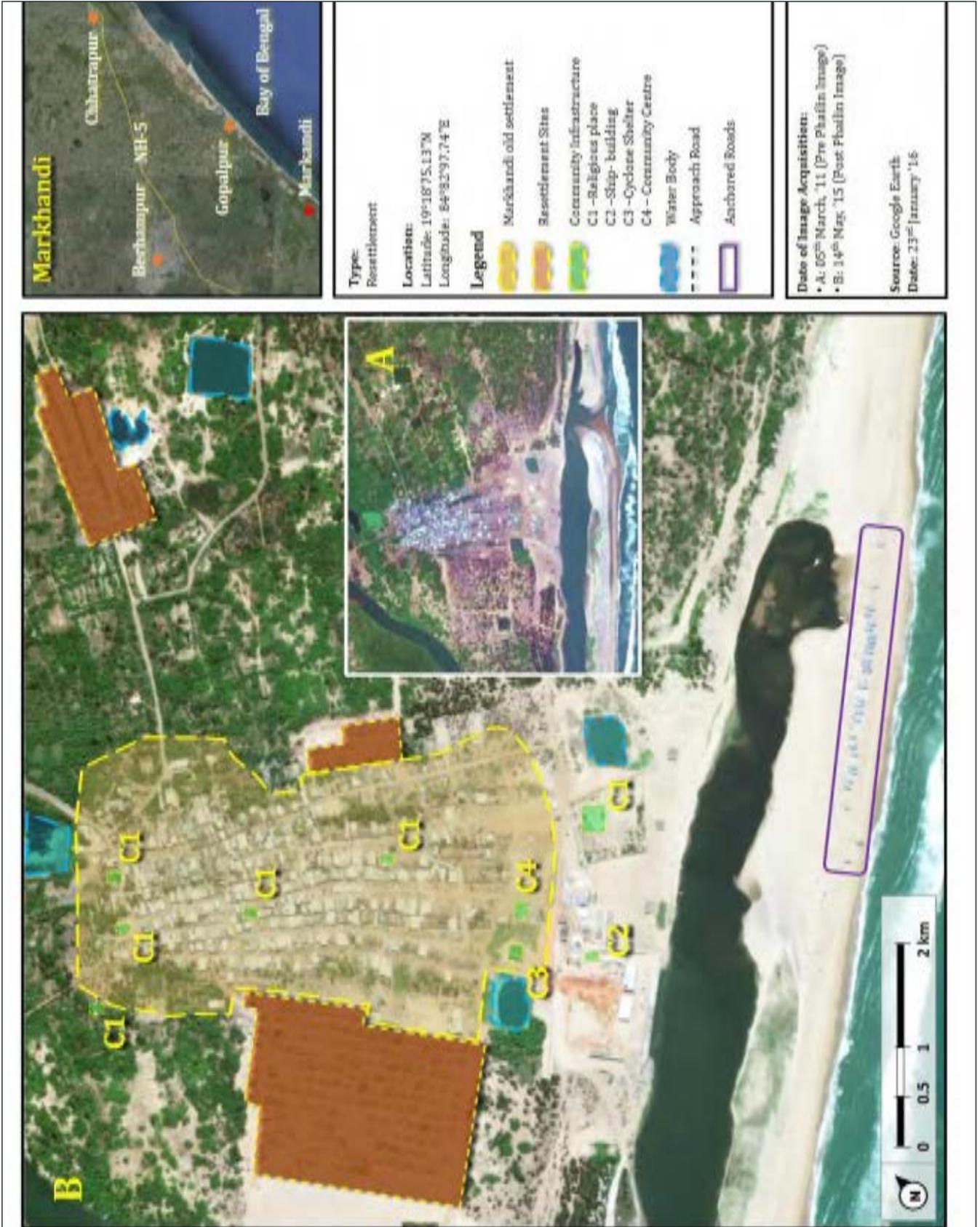
- All the families from the same caste have a strong networks and public representation. This is also helping them voice their demands to the government.
- During the interviews it was found that some families were allotted houses under IAY scheme. The inclusion and exclusion of the households for IAY project need further exploration.
- Some of the families interviewed have several HHs living in one house. Allotment of houses to such families, whether they get houses for each HH or whether all the family get one house is unclear.
- The selection criterion of the families for relocation and the selection of Dhimbira Bauri Sahi as relocation site for these families is unclear.
- There is a clear difference in the way a development related programs vs post disaster recovery projects are implemented. There are different funding sources and implementation agencies. With clear project implementation challenges and timelines, World Bank funded ODRP decided to move out of collaboration and provide services to other slums that are not part of the RAY project.

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BeMC. (2014). *Detailed Project Report on Slum Redevelopment Project under Rajiv Awas Yojana - Phase VIII*.

Ganjam Odisha

Markhandi



Summary of Settlement - Markhandi		
A	Project level Characteristics	
A1.	Type of Project	Resettlement
A2.	Type of Risk Management	Corrective / Post impact
A3.	Nature of Planning	Planned with risk measures – high plinth height to prevent damage from storm surge and RCC roofs to safeguard against high speed winds during cyclones. Although the location is still close to the coast (100 m) and remains exposed to cyclones and surge.
A4.	Level of planned participation	(a) Part of decision-making process
		(b) Part of planning process
		(c) Part of implementation
		(d) Part of long-term management post completion
		(all of the above)
		Residents were able to affect the location identification, separation by caste and profession. While most of them are getting the houses constructed by contractors, but are overseeing the construction quality closely, and many are also working as labour in their own houses. People have also made changes to the standard ODRP house design, by combining two adjacent houses with a shared wall, and making space to keep their fishing nets and boats. The Village Development Committee comprising of the residents is meant to take care of the long term maintenance of infrastructure.
A5.	Motivation/Nature of Hazard	Post extreme climatic event – the housing was part of the World bank funded ODRP project, post Cyclone Phailin meant to provide housing for the cyclone affected families only.
A6.	Level of attribution of CC to hazard frequency and intensity	Medium
A7.	Primary Decision Maker	(a) People
		(b) Civil Society (INGOs, NGOs, etc.)
		(c) Government
		(d) Combination
		It was a combination of the World Bank and the Odisha State Disaster Management Authority who came up with the proposition. Eventually, Gram Vikaas provided the technical and social engagement support, but critical decisions about locations and planning incorporated residents' inputs.
A8.	Distance between old and new locations	0 to 1 km
		The three new sites are all adjacent to the existing village.
A9.	Time between decision and implementation	1 to 2 years
A10.	Time taken to complete the project	0 to 2 years
A11.	Age of the project (time since completion)	Less than 5 years
A12.	Size of the Project	Large (more than 500 HH) [623 HH]

A13.	Nature of dividing the population	Part of the HH moved together to one place
		Part of HH moved and scattered in different locations
		Three communities (Agriculturists Reddy's, SC/STs Behra's and the fisherman castes) decided on three different locations as convenient to them. Those whose houses were damaged during Phailin were relocated together in these three sites, all very close to the existing village.
A14.	Financing Sources	Contribution of funds from different sources but none from the beneficiaries
		Primary sources of funds came from the World Bank (3 Lakh per beneficiary). Additional funds have been gained from the Swachh Bharat Abhiyaan from the Central government (12,500 per household) to build toilets. While the beneficiaries are motivated to invest more in these houses, but most have not made any additional changes as of yet.
B	Original Settlement level characteristics	
B1.	Type of land tenancy	A combination of owned/government land
B2.	Age of settlement (before the move)	More than 10 years
		Most families have been living in this location since their forefathers.
B3.	Size of the settlement	Large (more than 500 HH) [623 HH]
B4.	Most dominant nature of livelihood options for HH	Travel 0-1km for work (fisher-folks, agriculturists and horticulturists)
		Migrate seasonally to other locations for work (fisher-folks and agriculturists)
		Mixed nature of work (a sub-community also has people working in government jobs, and many also do daily wage work in the neighbouring fields)
B5.	Level of Hazard Risk Exposure	High
B6.	Type of Urban form	Cluster housing
		Row Housing
B7.	Levels of social infrastructure distinguished by provider	Good – provided by the civil society (donors, INGOs, NGOs, etc.)
B8.	Strength of social networking	High
		Three different communities live together in one village. It is fairly close-knit within and between each, and are seen sharing cultural festivities together. But still have chosen to stay separately in the new locations.
B9.	Most dominant form of family structures	Nuclear family with male or female family heads
B10.	Use given to abandoned site	No use planned
		The old sites will continue to remain in the ownership of the residents, if they previously had patta. Most of these households are hoping to keep these also as houses for their relatives/children.

C		New settlement level characteristics
C1.	Level of hazard exposure	Medium
		High plinth height to prevent damage from storm surge and RCC roofs to safeguard against high speed winds during cyclones. Although the location is still close to the coast and exposed to cyclones and surge.
C2.	Type of land tenancy	Owned
		But cannot sell or rent for the first 10 years. Have to show residence for these first 10 years.
C3.	Type of new Urban form	Similar but not exactly the same as before
		It was a combination of small clusters in a row earlier, with some temples and public platforms in key locations. But is a row format now.
C4.	Level of planning and provisions (Good, medium, minimum, none)	(a) Designed housing (Good)
		(b) Roads (to be made by the VDCs)
		(c) Public Transport (none)
		(d) Water and Sanitation (good. Toilets provided by the central government's Swachh Bharat Abhiyan and monitored by the OSDMA and Gram Vikaas. Water provided by the project.)
		(e) Electricity (Good)
		(f) Schools (Existing. Funding provided by World Vision)
		(g) Hospitals or health centres (Existing. Funding provided by World Vision)
		(h) Marketplaces (Minimum. Existing)

Profile

Population and Demographics: There are a total of 3210 people living in Markhandi (Census of India 2011), and most of whom have been living here for over a 100 years since their forefathers came and settled (as mentioned by the residents themselves). There are three distinct communities here—Reddys, who are traditionally land owners and agriculturists; Behera's who are the Scheduled Castes and predominantly work in government jobs or are involved in pisciculture; and a group of other lower castes all involved in fishing. Most people are not educated more than 7th grade. Most people living here speak Telugu, and the rest speak Odiya.

Livelihoods: The most dominant forms of livelihoods are fishing, pisciculture, agriculture (rice and other millets), and horticulture (fruits and flowers). But many of these agriculturists and fisherman also migrate during off seasons for work. While the fisherman seem to be travelling mostly for fishing to other coastal regions like Vizag, Goa, Mangalore, etc., agriculturists usually tend to go to neighbouring villages and towns as daily wage workers. The community uses larger boats here than those used in the neighbouring villages, and invest time and resources each year to dredge a canal after the rains for these boats. While the men are involved in

fishing, women are involved in other ancillary livelihoods such as fish drying, cleaning, selling, etc. Agriculturists are often observed to work in community or jointly owned lands. Women in agriculture based families also work in farms. Women from the lower caste work as a construction labour in the new settlement while their husbands migrate for work. Fisher-folks give high priority to the provisions of a canal and better boats (even more than houses). They would also want their children to follow the same professions as themselves, but with bigger and better boats and facilities. Most young men (aged 15 onwards) start getting trained on the boats, and join full time by the time they are 18 years old.

Social and Physical infrastructure: There are over 13 temples in the village and form the spine of the community. These are also used for larger community gatherings. Neighbouring villagers also visit these temples on regular basis, as well as for larger festivals. There is a small nursing home in the village, as well as a primary school (till class 7). They are both partly funded by the World Vision. The same NGO is also maintaining a water purification system in the village. There are currently no toilets, and there's prevalent open defecation. Many have heard of the Swachh Bharat Abhiyan for provi-

Image 22: One of the 13 temples in the village of Markandiopen drain is also seen in the picture



sions of toilets, but have not ventured out to avail that yet. Solid waste management is a concern, as much of the dump is left out on the beach. There is a decent road connectivity to the village and there are public and private buses that function over varying frequencies.

Yet, people do complain about education facilities within the village or nearby (not being English medium and limited to class 7) a reason why many girls are forced to drop out after class 7. Some boys move to neighbouring towns (Berhampur, etc.) for higher studies. While

Image 23: Cyclone shelter (under construction) on the coast, at a location that was close to the surge area during Cyclone Phailin



the nursing home in the village is sufficient for everyday illnesses, but for any big disease or illness, people have to travel over 20–25 km. Markets for fish selling and other daily needs are also within 5km from the site, but in many cases people travel to Vizag, Berhampur, etc., to sell larger catch. A new cyclone shelter is also being constructed next to the beach, with a capacity of 500–800 people.

Socio-natural shocks: Most people used to live in thatched houses, until there was a fire accident in the village in 1997. Many people took loans to rebuild their houses using asbestos sheets to prevent such calamities in the future. However, in the 1999 Super Cyclone many of these houses got damaged yet again, and left them worse off now with loans to repay. Many households took additional loans at this stage to make one room or so in concrete. However, with the ODRP allocation eligibility, they were excluded from the provisions of new houses. Although they may still be paying their loans, and have suffered damages during the cyclone, yet they may now be left worse off than most other people who did not take early action themselves. This may raise a question for increasing equity gaps within the community and also growing bitterness between individuals and families.

Decision making processes

Objectives and project components: Of these 717 households, 623 were identified as beneficiaries for the

ODRP relocation. The village now has three relocation sites one each for the Reddys, Beheras and the fishing community with 77, 36, 510 beneficiaries respectively. The three sites are marked in the map above. Allocation of new houses are based on caste and/or profession. The site which has 510 beneficiaries has a mix of both contractor based and owner based construction, while the others are contractor built.

The house allocation was done as part of the Odisha Disaster Recovery Project, after the Cyclone Phailin hit the region in October 2013. The identification of beneficiaries was done by a committee comprising of the local village leaders (*palli sabha* members), Gram Vikaas mobilisers, and the Mandal Revenue officers, in coordination with OSDMA. Soon after, the locations for reconstruction were identified, in coordination with the communities. The three communities had differential livelihood needs, and the siting was done accordingly. While the fisher folk preferred a site close to the sea, the agriculturists were allocated land more interior considering it safer. Wherever sufficient land was available, Beheras have been allocated houses next to their existing locations. However, relevant structural measures are taken to prevent any future calamities affecting the housing stock. The fisher folk's houses are raised by a few feet to safeguard them against storm surge, and the roofs for all houses are made from concrete with structural measures taken to prevent strong winds from damaging these houses.

Image 24: Evolution of the village drawn on a temple wall Cyclone Phailin



The house design provided is standard with each family receiving 3 lakh rupees and a 1000 sft land, for constructing 250 sft built and a toilet and bathroom in the same compound. In most cases, relatives have been allocated houses next to each other, which has led them to save some money by pooling in resources, as well as an attempt at sharing the middle wall. This has helped

them to make space between the houses for ancillary fishing activities, such as storing nets, drying fish, repairing boats, etc.

Institutional organisation: As part of the ODRP project, the funding is provided by the World Bank for constructing housing, in partnership with Odisha State



Image 25 (Top) and 26 (Bottom): Fishing Communities' housing site, where two houses have been joined to make space in the between for nets, fish drying etc.



Disaster Management Authority (OSDMA). OSDMA has brought in a local NGO Gram Vikaas as their socio-technical partner since they have been working in this region for over 35 years, providing support for water and sanitation, mason training activities etc. Some of their expertise has also been extended into this project, by providing mason training programme to 'select' villagers. This had a twofold motivation: to prepare additional set of masons that would be required to construct a large number of houses in a short amount of time, and to provide an alternate source of income to those who are currently involved in fishing and/or agricultural work only. Those villagers who are currently migrating on off season as migrant unskilled labour, could then go as skilled

are left ineligible in this project, even though the previously received funds were insufficient to build even a plinth of a house. Many want to return those funds and receive the houses under this project (which could be taken as a proxy of the acceptance of this project by the people at large). Those who were renters and those who had partly concrete roofs are also left out, despite multiple requests to the Palli Sabha. There is a four level grievance redressal system as part of this project, and many of the requests made through that are now being addressed and added in the list of beneficiaries when found worthy. Although the Palli Sabha head during the interview conducted by the researchers on site, denied such grievances.

Image 27: Tsunami Shanti Puja organised at the Village to appease the lords of the sea during October



labour and earn additional income in the long term. Besides, women are also encouraged to participate in this programme, to make them a part of the working population. Palli sabha has also played an important role, in site selection, beneficiary identification based on household needs, and motivating people to come forward in doing their own construction with approved standards. They will also be responsible for the long term maintenance of the new sites.

Although the verification process of the beneficiaries is made very rigorous, with the involvement of the Palli Sabha and verification by the OSDMA and Gram Vikaas community mobilisers, many people still felt left out for various reasons. Those who received Indira Awaas Yojna (IAY) scheme funds earlier (Rs35000–Rs75000)

Resettlement alternatives: A minimum of 1000 sft of land (with a minimum 25' front) was made mandatory under the policy for a dignified life. Wherever the households were found to own such land in the existing damaged location, in-situ housing was approved and same amount of money is provided under the ODRP. This maintains the original location, yet supports upgradation of physical structure.

Implementation challenges

Social management: People in the village have strong memories from the Super Cyclone in 1999 and then again from Phailin in 2013. In 2014, although Hud-Hud did not affect this region directly, fishing activity was made to stop for a while and has reduced substantially

ever since. However, this has left the people scared and superstitious about the month of October. Many people had paused construction for the tenth month, continuing to stay in the broken houses for longer, hoping to start again only after the danger has passed. This has delayed the construction. Adding to this fear, the local authorities announced a drill for tsunami to be conducted in the month of October, which left people assuming that an event was meant to occur. Many left the village at the beginning of the month, and a large 'Tsunami Shanti Puja' was organised to appease the lords of the sea. These perceptions and superstitions are hard to manage, despite many efforts made by the community mobilisers.

Mason training Programme: This programme has had a few challenges. To ensure equality, it was decided that no more than 50 villagers per village would be trained under this programme, this number is miniscule in this village as it's not proportional to the size of the village and the villagers are highly dissatisfied with the outcomes. Besides, it is a 30 day training, which may not be sufficient to make one a trained mason. Households have had concerns of getting these masons to build their houses. One way this has been overcome is by sending trainees from village to other villagers, where anonymity has helped, and quality has in turn been checked by the OSDMA and Gram Vikaas' Site Engineers.

Budget and resettlement costs: The costs of plinth construction for the fisher folks housing (closer to the sea) is much higher than that for the others, and they are facing some challenges for constructing higher levels. Many have taken loans to complete plinth, and then the future payments received are used to repay these loans instead of using it for construction. Although many have managed to complete the construction, they are now left with loans to furnish. There were no provisions made from transit housing in between the phases, which was particularly a problem for the in-situ construction. Many people started living on rent with their neighbours, and the project also provided this allowance to those who required it.

Outcomes

People are yet to move to the constructed housings, so the outcomes are yet to be seen, but some of the questions of enquiry could be as follows:

- Whether people continue to live in the existing houses? (as part of families, or extended families)
- Whether the existing plots are used for any other purposes other than living?
- Whether the social cohesion of the existing village varies over time? (i.e., three separate village identities or still as one)
- Whether people are able to save and invest more in their livelihoods overtime (canal building, bigger boats, storage infrastructure, etc.)
- Whether the mason training programme participants continue as masons in the long term and if there is a long term implication on their shifting of livelihoods? This is in particular for the women who participated.
- Long term implications for women in the resettled neighbourhood, particularly empowerment as land owners?
- What are the long term implications of the costs and benefits of these provisions, especially with regards environmental and equity outcomes?
- What are the long term social, environmental and economic sustainability outcomes of the project?

Summary of findings

A total of 18 households were interviewed. The construction is still under process and none of them have moved yet. The points below are the key findings from primary work.

- The average HH size of the family is four members.
- On an average, each family have two working members. The average household income is Rs.6000 per month.
- Of surveyed samples, six households have female as head of the family, of which two of them are single women headed families. Five households have male as head of the family.
- Of the total 79 members in 18 households, 24 per cent are illiterate, 9 per cent have primary education and 14 per cent of them have completed middle school. 9 per cent have completed matriculation and only 1.2 per cent are graduates.
- Of people who attended the school, 19 per cent of them have dropped out, because of financial reasons and few mentioned other reasons such as no interest and marriage.
- The nature of livelihood is informal. Of the total 31 working members, 10 of them are involved in fishing and 12 of them work as daily wage labour.

Three of them sell fish. One of them works as agriculture labour and, rest of them work as social worker, electrician, welding, and sell bangles. Five of them have an alternate source of income.

- Fishing is the major skill that they have and, some of them mentioned weaving, construction work, stove repairing and electrician work are the skills that they know.
- Of 18 respondents, 10 of them said that their family member/members migrate outside for work. They migrate to the cities like Goa, s, Mumbai, Vishakhapatnam and Bhubaneswar etc. Of 10 people, four of them are involved in fishing, five as contract labour and one engages in business.
- Of 10 people who migrate out for work, seven of them said that they have been migrating for work over five years. Three respondents said that they have been migrating outside after Phailin. With regard to the period of stay, seven of them responded that they would migrate for less than three months and three of them said that they would migrate for 1–3 months.
- Of the surveyed samples, nine respondents aspire that their children get educated and get a formal job. Two of them said that it's better to continue in fishing rather than any other job and one of them responded that they want their child to get married.
- Of the total samples, 14 of them responded that they have been living in the same city/town/ neighbourhood for more than 50 years. Of which, four of them said that they have been living in the village for 10–50 years.
- Of the total surveyed, 11 of them said that they have been living in the original house for 10 to 50 years. Only two of them said that they have been living in current house over 5 years.
- Of 18 samples, three households use gas for cooking. Eight households have furniture. Five of them own television. 15 of them use mobile phone. Two of them own two-wheeler. Only two of them own a cycle. None of them own furniture.
- Of the surveyed, when asked if they need a new house from the government, all of them said yes. Most of them responded that any kind of house is fine for them and three of them wanted to be relocated.
- Of the total respondents, except one everyone have bank accounts. They gave different reasons for opening a bank account. Those reasons are— to receive government benefits for work, to receive compensation, to save and opened as part of zero balance account under PMJDY government scheme. Among them, seven of them prefer to save for their children education and four of them prefer to save for health, house and future.
- Suitable work opportunities nearby, port dock opening, access to schemes—BPL, aged pension and health care facilities are the most important things for them at community level.
- Of the total surveyed, nine households have access to Voter ID and Aadhar Card. Four households have BPL card. Four of them receive aged pension. Two of them receive widow pension and, five of them received maternity benefits.
- 13 households have access to health cards, of which three of them have used it still now.
- Common cold and fever are the health issues reported by four HHs. One of them mentioned health hazards related to work and two of them mentioned water and vector borne diseases. Four of them mentioned BP, Diabetes, Gastric, Asthma, Cancer, Cardiovascular problems and one of them mentioned body pains and arthritis.
- Out of the 18 samples, 17 families have access to insurance, of which one of them have access to life insurance and Pradhan Mantri Bhima Yojana. 15 of them have access to non- life insurance and rest of them have access to life insurance.
- Six households use hand pump for drinking purpose. Three of them have piped water connection and rest of them use public tap water.
- Of the 18 families, only two families have household level toilet facilities and they depend on open defecation.
- *Problems living in the current location*— 13 of them said livelihood, three of them cited housing and water supply. Five of them mentioned sanitation. Four of them had issues with electricity and education. Seven of them had health issues. Six of them said community facilities. No access to sea with canal is one of the major problems.
- *Benefits of living in current location* - livelihood was the main benefit, as their house is close to shore. Some of them mentioned family networks and easy to find work (networks).

- Financial loans and high interest rates, accidents and fires, lack of livelihood options, safety nets and health issues are reported as the major shocks in respective families.

Findings related to effects of cyclone

- Of the total surveyed, 17 members said that they got early warning about the cyclone, of which, 13 of them mentioned government announcement as source of information and rest of them via TV/ radio as source of information.
- During Phailin, 14 households moved to government schools/government provided shelter. Three families stayed at private building/others place and rest of them stayed at their friend's or relative's place.
- Of the total surveyed, 17 of them faced losses during Phailin. Of which, Nine of them reported as partial damage to house and one of them reported as no damage.
- Of the 17 surveyed, 15 of their houses suffered complete roof damage, two houses suffered partial damage to the roof and one of didn't suffer any damage. With regard to walls—four of them mentioned that their walls were damaged partially, for nine of them, the walls were completely damaged and five suffered no damage at.
- Of the total surveyed, everyone received post cyclone compensation. Everyone said that they received a standard compensation such as money, rice and universal compensation such as goods like tarpaulin, solar lantern etc. Except one household, everyone got compensation after damage assessment.
- When asked about the services after cyclone – 12 households faced problems related to drinking water. None of the hand pumps were working so they got water from an open well. 14 households said they faced problems to defecate outside. Everyone said their kids' education was affected for more than two weeks.
- 12 respondents stated that they lost fishing related assets during Phailin. The average amount loss was more than Rs.20000 and the average amount spent on loss recovery was more than Rs.25000.
- With regard to other professions, eight respondents stated that they faced losses at work during Phailin. Most of them mentioned that they

couldn't work for more than two weeks and they had loss of income.

- 11 respondents reported about damage to household related assets.
- Of the total surveyed households, 17 households said that they have taken help from friends/relative/neighbours for money after Phailin and nine of them stated that they are still paying those debts.
- When asked about actions they would take if there's a warning of a cyclone in near future, 12 respondents said that they would move to a safe shelter. Two of them said they would stay in their own place and rest of them said that they would follow the others in the community.
- When asked about actions they would take there's a cyclone every year/long term adaptation, two of them responded that they would move permanently to a safer location and five of them said that they would still stay in the same place.

Relocation specific

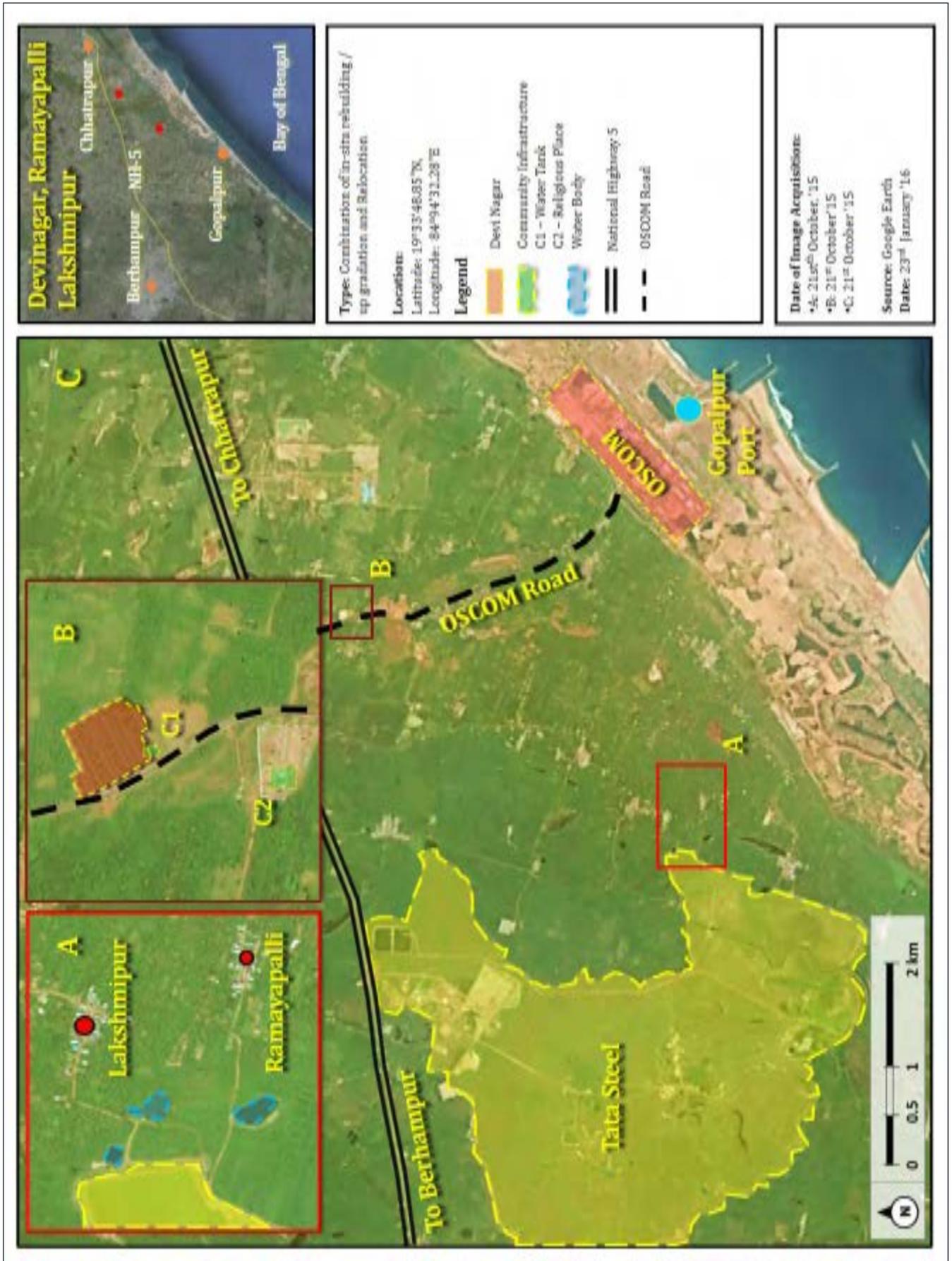
- All the families were relocated to less than 0.5 km from their original site.
- All the HHs reported no change in travel expenditure.
- Everyone said that they have their house legal certificate for their current house. Of which most of them said that they have either lease hold or free-hold house certificate. Of which six houses are in the name of a female member of the family.
- When asked about the reasons/motivation for relocation, almost everyone mentioned that no proper house which is safer from Cyclone/floods/ heavy winds.
- Having a house with either asbestos roof or thatched roof, dilapidated house and having received money for house construction through the IAY housing scheme by the state government were the various reasons given by respondents— when asked about what made them eligible for allocation.
- Three respondents said that they make extensions/modifications in the allocated house.
- Seven of them said that they have spent extra money on allocated house construction apart from money provided by the state government.

- Of total samples, seven of them said that they attended training for construction of houses under the ODRP program.
- All the beneficiaries, 10 of them said that their houses are constructed by private contractor and five of them constructed their own houses.
- Of all the HHs interviewed, three of them said that they received money from the government for toilets construction in allocated house.

Key findings

- Community participation at the time of planning itself has had significant impact on the outcomes of the project, with least damage to their existing livelihoods.
- Households say in the house design (joining two houses together, etc.) also seems to be leading to better outcomes for their functionality and financing.
- Managing people's perceptions of risks is an important task, and authorities need to be sensitive to the repercussions of the way certain information is conveyed (e.g., information of the drill in October shared on mobile phones in non-local languages)
- There are some lacunae in the beneficiary eligibility criteria, though the identification based on those criteria is made rigorous with very limited type 1 or type 2 errors. The grievance redressal system also seems to be working, although there may be some local caste politics that maybe hindering some people to gain benefits of this project.
- *One size does not fit all* – construction costs vary substantially across differing plinth levels, when they started construction (first movers get the advantage of available masons, material and lower costs), etc.
- Although beneficiaries are happy with the houses, most people (predominantly men) said they would have preferred getting a better canal system and invest in their boats rather than receiving houses. It may further need exploration, as to how can a project of that scale be customised enough for each location, for equitable and acceptable outcomes.

Devi Nagar (Ramayapalli and Lakshmipur)





Type:
Combination of in-situ rehousing / up gradation and Relocation

Location:
Latitude: 19°30'79.32"N
Longitude: 84°2'61.04"E

Legend

- Community Infrastructure
- C1 - Community Well
- C2 - Community Centre
- C3 - Kevda Industry

Date of Image Acquisition:
*A: 14th May '15 (Post Phadin Image)
*B: 14th May '15 (Post Phadin Image)

Source: Google Earth
Date: 19th January '16



Summary of Settlement - Devi Nagar (Ramayapalli and Lakshmiapur)		
A	Project level Characteristics	
A1.	Type of Project	Combination of in-situ rebuilding/upgradation and Relocation
A2.	Type of Risk Management	Corrective/Post impact
A3.	Nature of Planning	Planned with risk measures
A4.	Level of planned participation	Part of implementation and long-term management post completion
A5.	Motivation/Nature of Hazard	Post extreme climatic event
A6.	Level of attribution of CC to hazard frequency and intensity	Medium
A7.	Primary Decision Maker	A combination of State government (OSDMA) and the World Bank led project. People were involved, but mostly during implementation, and not so much during the decision making.
A8.	Distance between old and new locations	More than 5kms
A9.	Time between decision and implementation	0 to 1 years
		The process being quick, probably did not leave people with much choice in building their own houses, or to affect the location decisions, unlike some other sites that started later and had learnt from the mistakes at other sites under the same project.
A10.	Time taken to complete the project	0 to 2 years
A11.	Age of the project (time since completion)	Less than 1 year
A12.	Size of the Project	Small (1–100 HH)
A13.	Nature of dividing the population	Parts of different settlements moved together to one place
A14.	Financing Sources	100 per cent lender (World Bank) funded housing, with Central Governments funds for Swachh Bharat Abhiyan used to build toilets. People although are encouraged to invest in the housing to expand, but none have done do as yet.
B	Original Settlement-level characteristics	
B1.	Type of land tenancy	Owned
B2.	Age of settlement (before the move)	More than 10 years
B3.	Size of the settlement	Medium (101–500 HH)
B4.	Most dominant nature of livelihood options for HH	Travel 0–1km to horticulture and agriculture fields. Many work as daily wage labour at the nearby fields.
B5.	Level of Hazard Risk Exposure	High to cyclonic winds and extreme rains
B6.	Type of Urban form	Combination of cluster and row housing
B7.	Levels of social infrastructure distinguished by provider	Provided by the government and other civil society (Tata industries provided medical vans and also some solar street lighting)
B8.	Strength of social networking	High. Most people working on the kevda or other agriculture fields work together. Many lower castes also had strong networks and acted as important support systems for each other.
B9.	Most dominant form of family structures	Nuclear family with male family head
B10.	Use given to abandoned site	People are still using the old sites for residential purposes for part of their families, and not moving completely to the new but far away sites.

C	New settlement-level characteristics	
C1.	Level of hazard exposure	High to cyclonic winds and rains, but due to structural interventions, the vulnerabilities may be low
C2.	Type of land tenancy	Owned
C3.	Type of new Urban form	Similar but not exactly the same
C4.	Level of planning and provisions (High, medium, minimum, none)	Designed housing: high
		Roads: high
		Public Transport: None
		Water and Sanitation: high
		Electricity: high
		Schools: None
		Hospitals or health centres: None
		Marketplaces: None

Profile

Population and Demographics: The two neighbouring villages of Lakshampur (total population of 690 people according to the Census of India 2011) and Ramayapalli were also part of the larger region of Ganjam that got damaged during Phailin in 2013. While most of the households belong to various Scheduled Castes and Tribes (SC/STs) and Other Backward Castes (OBC), there were also some families who belonged to the lower castes (lower within the SC/STs). Of these families, only one seems to have moved to the new site. Untouchability is prevalent and is practiced in these regions, and this lone family of lower caste individuals were found to be facing serious social challenges, which are evidently affecting their lives, livelihoods, health and socio-economic outcomes.

Livelihoods: Most people living in these two villages had been either practicing traditional forms of horticulture (kevda, coconut, bananas and other fruits, etc.) or some form of agriculture on jointly used/owned land. Many also work as daily wage labourers in neighbouring farms. After moving to the new locations, most of these families are facing the challenge of continuing to work in these fields, because of the distances and lack of connectivity. They are either waking up much earlier in the mornings, or going to the farms on a bicycle; some are even considering getting daily wage jobs in nearby farms or the Tata factory. Women in particular are facing difficulty as they do not use either bicycles (for cultural reasons) or any other form of transport (for safety concerns), and are left to walk miles. Many are now choosing to stay in the old houses, even though they are damaged, while their husbands and/or sons are staying the night in the new site. Many have tried planting new fruit and kevda trees in the new site, but the ground is apparently not fertile or useful for the same. Those who were running local businesses or shops are continuing

to face similar problems, as the markets are now farther away, and their buyers have seemingly less economic capabilities to buy as they did before the cyclone. They are not able to establish new shops or businesses in the new site either, as it does not have enough people living there (at least yet).

Social and Physical infrastructure: While the existing sites had established connections with local schools and hospitals, the new site remains much further away. Many families with children still in school are also choosing to stay in older sites for the sake of their children's education. There were also local water bodies and wells as well as funeral grounds in the older villages that functioned as important cultural utilities. During focus group discussions, people mentioned they would need those built in the new site. Connectivity with markets is also a concern in the new site.

Socio-natural shocks: Most of them consider monkey menace as a bigger threat than cyclones. Their crops are regularly destroyed by monkeys, and this menace is increasing. This requires them to stay on site for as long as possible, but now having moved farther away, they have to leave from their homes before dusk and their produce is suffering. They have also reported safety and theft as issues in the new site, another reason for women to not stay there alone. Some people also mentioned that there's been water poisoning in this region of some kind ("ever since the coming up of Indian Rare Earth Institute"), and is affecting people's kidneys. Detailed studies need to be conducted to confirm this.. Many resettled families accepted that their 'previous houses were not safe for rain, but they would still prefer staying there, as these new houses are not safe for their lives and livelihoods'. When asked what they would do during cyclones now, most said they would not trust the construction of these new houses, and move away to

some other location instead like they did in the previous instances.

Decision making processes

Objectives and project components: Beneficiaries for the ODRP project were identified amongst those households where the houses were found to be fully damaged after Cyclone Phailin hit in 2013. 19 such households were identified for relocation in Lakshmipur and 22 households in Ramayapalli. These were combined to move to an alternate site a little over 5 km away from the existing neighbourhoods. According to expert interviews, no other vacant government land near the existing sites could be found, and which is why the new site identified was far. 11 households in Ramayapalli were also identified for in-situ development, as the families already occupied larger pieces of land (more than 1000 sft).

This was amongst the early sites identified and where work started early. Due to this there was very little time for people to participate and make alternate choices. Many of them were still struggling to get back to their work and fix their existing houses, because of which they could not participate in the mason training programme or in constructing their houses by themselves. All the houses are built by contractors, in what is now called Devinagar. Many wish they had also received in-situ housing, but since they didn't have enough land on which to build, they had no choice but to accept this relocation.

While non-beneficiaries can still apply through the grievance redressal system, due to lack of available land in this location, new additions are being restricted.

Institutional organisation: The design of the project, like other ODRP sites in rural Odisha, had the Odisha State Disaster Management Authority leading it. Funding was received by the World Bank, and the socio-technical partners involved were Gram Vikaas, a local NGO working in the region for over 35 years. The *palli sabha* (local village committee) was an integral part of identifying beneficiaries, reducing frictions between families and the authorities, and making sure there were minimum grievances across the villagers. A village Development Committee is also being set up to monitor and manage the services at the new sites in the long term, comprised of beneficiaries themselves.

Resettlement alternatives: Some families (11 in Ramayapalli) who had more than 1000 sft of land (40' x 25') and had faced severe damages during Phailin, were included as in-situ beneficiaries. Most of them are currently building their houses with the funds provided, and many also seem to have made significant departures from the proposed designs by combining two to three plots together, etc. The authorities are currently

considering an additional provision of 6–12 lakh rupees to the damaged villages, so they could invest in their own village level services and priorities (upgradation of existing schools and markets, solar lighting, covering of open drains, etc.)

Implementation challenges

Social management: The mobilisers came across many social challenges during the implementation of the site work. When families from Ramayapalli and Lakshmipur villages were to come together in the new relocation site, they could not reach a consensus on the name for the longest time. Even in the records, the name has been changed several times. By coordinating with a senior well respected member in the community, they managed to come to a conclusion that was well accepted by all.

Although caste issues are not as visible in these villages, it emerged as a challenge particularly for one family belonging to a lower caste relocated amongst the higher caste households. This family, in the case of an emergency in the family, did not garner much support from the neighbours. Even though the community mobilisers seemed to be trying everything to get other families to help this one family, the caste lines are so deep that people were not very forthcoming in breaching it.

Mason training Programme: Most people in these villages could not participate in the mason trainings, as their house allocation happened very early and construction on site were made to start right after. Most people here could not participate in the construction themselves in any way, either because of the distance from their existing habitations, or because they were still struggling to rebuild their broken homes where leaving work was an opportunity cost they could not afford. Quality of construction has also suffered to some extent, since it was completely contractor built as beneficiary families could not oversee their house construction.

Transit housing for the in-situ upgradation beneficiaries:

Those identified for in-situ upgradation also received rental allowance from the ODRP, to relocate temporarily. Many used this money to fix their broken houses, and used other parts of their land to build a completely new house as an annex to the existing yet broken one. This could be done partly because the land parcels people had were substantially large, or in some cases brothers living in adjacent plots got together and build their new houses together, but the provision of this financial support was appreciated by most. It remains a question as to how could these innovations be deepened and scaled, and within that how can the role of the state be framed?

Outcomes

Burdens and benefits: People, already under stress from monkey menace and post-cyclone losses to their agricultural and horticultural produce, found this relocation as an additional burden on their livelihoods. Apart from economic burdens, some socio-cultural burdens are also created for some lower caste communities. Families seem to have broken, with some members continuing to stay in previous sites for their children's education, connection with the neighbourhood, etc. Safety and security is also a growing concern, potentially due to vacant housing with not enough people living in them. Despite getting RCC framed housing, people still don't seem to trust the construction quality, and it may not be perceived as a benefit, unless it stands through the test of time or any future hazard. Toilets are constructed as per the norms, but many are kept shut as people do not find the doors very strong, or in some cases the pipes connecting the toilets with the soak pits have already started leaking.

Monitoring and evaluations: The Village Development Committees are being set up to manage the long term sustainability of new locations. The project lifecycle is meant to be only 4 years, further thought needs to be given to long term monitoring and evaluation of various aspects including social changes, impacts during next eventualities, everyday risks and effects on people's livelihoods. What are the real and perceived long term social, environmental and economic implications of this relocation on people but also on the two neighbourhoods? Further, if required, address the emerging issues and learn from these experiences for other interventions by the State, the World Bank, Gram Vikaas, or for other institutions across the region.

Site Survey Summary

20 households (5 Type 1: Non-beneficiaries, 5 Type 2: In-situ housing, and 10 Type 4: Relocated) were surveyed in detail over the course of the study. There were also two focus group discussions with the relocated families, and one at the site of origination with non-beneficiaries and those in process of relocation, apart from interviews of the community mobilisers and the village heads. These were some of the findings from the field:

Description: Average family size is four, of which on an average 1–2 people work. Two were women headed households, while 10 were clearly male headed. Eight said they took decisions as a family. 13 of the 20 respondents were educated below middle school (7th grade), and only one was a graduate. The stated incomes varied quite a lot across the households, from Rs.12000 per year to Rs.2 lakh per year. Six households were involved in some form of agricultural activity, 12 in Kevda and coconut plantation, all of who are dependent

on the common resources (land, trees, etc.) available in the vicinity. The remaining are either daily wage workers in the neighbouring fields, or involved in other livelihoods such as teaching or working in nearby factories. Six of the households also migrate during off season. Nearly 15 of the 20 also claimed to have additional sources of income apart from the main livelihoods, and primarily involved working in others' fields or growing some trees or local plantations. Breaking connections with those is being faced as an additional burden on the relocated families. Most families in the older sites had thatched roofs or in some cases plastic or asbestos. Very few (essentially non-beneficiaries) had RCC roofs in parts or in most of their houses. All the households said they had bank accounts, but claimed to not have any savings in them. Prevalence of voter IDs and Adhaar cards was much lower in these villages than the average sample. Insurance penetration is also very low, with only six families claiming to have some form of life insurance. ODRP beneficiaries were not aware of any multi-hazard non-life insurance for their houses. 9 of the 20 families said they had a health insurance card. 2 of the 20 households surveyed also had physically disabled family members, of which one of them was a non-beneficiary family (although when asked if they would have liked to get an ODRP allocation, they replied saying "We will not take poison even if it was free").

Shocks and damages: Everyone in the sample had found out about Phallin well in advance through TV and radio or through neighbours, and everyone except one non-beneficiary claimed to have had severe damages to their houses after the event. Everyone received the universal package of compensation (50kgs. rice and Rs.500) but only 10 claimed to have received additional money after damage assessments. 16 out of 20 HHs mentioned that they faced serious drinking water problems after the cyclone, but primarily because there was no power for a few days and they could not pump water. They used hand pumps and pond water during those days. Open defecation was prevalent, and people faced problems going to the fields soon after the cyclone. Schools were shut for two weeks after the cyclone. Everyone involved in horticultural activities said they faced serious losses after the cyclone, and their trees have not regained normalcy even after two years. Many claimed to have changed their primary work after those losses. While there were no major health issues mentioned by people that were prevalent, education and health were primary reasons quoted for the need to save. Most people mentioned monkeys as the biggest challenge they had to deal with on regular basis, and some even said it's worse than the effects of a cyclone. People also mentioned having suitable work opportunities nearby, roads and street lights, health facilities and schools as their other needs and priorities. In the relocated sites, people also mentioned having a funeral ground and a water tank near that as another need. Most people said

they would evacuate to safer locations, including the relocated beneficiaries, in case there was a warning in the near future, as they did not trust these new structures, but almost all said they would not take any long term action even if these cyclones occur every year.

Changes after relocation: The relocated site is about 5kms from the original habitations, and most people claimed to start early and walk longer now than they did to reach their work places. While this is not a monetary cost on them, it is an additional burden especially on those who are now not able to spend as much time on the fields as they did before. All the families interviewed had lived in the previous village for over 50 years (through generations), and were involved in the same form of livelihoods ever since. They all had non-alienable *pattas* to the previous houses and lands, and continue to hold those, in addition to the new house allocations which are also on non-alienable *pattas*. Although the previous *pattas* were in the name of male members, the new allocations are all in the name of female members (or joint). All the relocated households, despite the completion of the new houses, still continue to stay in their previous houses. Many families said they are finding challenges in reaching schools, safety, access, and social networks in the new location, and are not able to stay together as a family since the relocation. Most people have expressed improvements in water and sanitation facilities post relocation than they had before.

Key findings

- Relocating people more than 5kms away in a rural context where public transport is not available is likely to create burdens on people in the short and medium term. It is yet to be seen how they are able to adapt in the long term, or if there are any implications that may set them off in their development as against their non-beneficiary counterparts in the original village.
- Shocks other than cyclone are perceived as bigger burdens. Context specific interventions could have better development outcomes.

Vishakhapatnam

Sonia Gandhi Nagar



Summary of Settlement - Sonia Gandhi Nagar		
A	Project level Characteristics	
A1.	Type of Project	Combination of resettlement and in-situ upgradation.
A2.	Type of Risk Management	Corrective / Post impact
		This project is a post impact measure of damages caused by heavy rains and cyclones in late 90's.
A3.	Nature of Planning	Planned with Risk Measures
		Provision of RCC structures is a measure to protect from frequent damages to house due to cyclone, floods and heavy rains.
A4.	Level of planned participation	Part of decision-making process
A5.	Motivation/Nature of Hazard	a)Low-intensity High Frequency events
		b)Development
A6.	Level of attribution of CC to hazard frequency and intensity	Medium
A7.	Primary Decision Maker	Government and people
A8.	Distance between old and new locations	0 km - Same location
A9.	Time between decision and implementation	More than 5 years
A10.	Time taken to complete the project	More than 2 years
A11.	Age of the project (time since completion)	More than 5 years
A12.	Size of the Project	Small (less than 150 HH)
A13.	Nature of dividing the population	In-situ Upgradation
A14.	Financing Sources	Contribution of funds from the central and state government including beneficiaries.
B	Original Settlement level characteristics	
B1.	Type of land tenancy	State government land.
B2.	Age of settlement (before the move)	More than 50 years
		Residents have been living in this location since their forefathers.
B3.	Size of the settlement	Small (less than 150 HH)
		According to 2011 census, Sonia Gandhi Nagar consists of 143 households.
B4.	Most dominant nature of livelihood options for HH	Mixed nature of work
		Women are involved in various home based livelihood activities, here as men mostly travel to other parts of the city for work.
B5.	Level of Hazard Risk Exposure	High
		Houses had thatched roofs. Residents used to face frequent damages to house even due to heavy rains.
B6.	Type of Urban form	Cluster housing and Row Housing
B7.	Levels of social infrastructure distinguished by provider	Good – provided by the government and NGO.
B8.	Strength of social networking	Together before not after the project

B9.	Most dominant form of family structures	Nuclear family with either female or male as family heads.
B10.	Use given to abandoned site	In-situ upgradation – VAMBAY housing with G+3 structures.
C	New settlement level characteristics	
C1.	Level of hazard exposure	Low
C2.	Type of land tenancy	Right to occupy, beneficiaries will get the certificate once they pay the beneficiary contribution.
C3.	Type of new Urban form	Cluster housing
C4.	Level of planning and provisions (Good, medium, minimum, none)	(a) Urban form – Medium, G+3 tenements with high density
		(b) Designed housing – Medium, resident's find quality of house is not good.
		(c) Roads – Good , located along the national highway no-5
		(d) Public Transport – Medium, There is no change in the frequency.
		(e) Water and Sanitation – Good, everyone is using toilets but there no piped water connections to the units
		(f) Electricity – Good
		(g) Schools – Low, no private school close by, and have to walk long distances for school
		(h) Hospitals or health centres – Good
		(i) Marketplaces – Poor, no market place at walkable distance.

Profile

Population and Demographics: Sonia Gandhi Nagar (SGN) colony is located near Thatichetlapalem. The colony is just off the national highway and surrounded by Alluri Sitarama Raju (ASR) colony on the southern side.

In 2002, SGN area identified for VAMBAY housing project. The residents have been living in the original site over than 50 years. It was easy for the government to convince the colony members to undertake the slum upgradation program as the colony was on state owned land. At that time government had a policy of in-situ upgradation. In 2005, the state decided not to provide any land, individual housing or in-situ development in the city area. Since then housing schemes have been located 25 to 30 km away from the core city, which still within city boundaries.

Earlier this colony was a part of Alluri Sitarama Raju colony. The ASR colony was a located on combination of railway land and state owned land. None of the residents in ASR colony had any kind of ownership. Due to caste and other community conflicts families have separated and people who have been living on government land formed a new separate colony almost 10 years ago, which was named as Sonia Gandhi Nagar.

This VAMBAY housing project completed in the year 2008, this project is a combination of resettlement and in-situ upgradation. There are either people who have

been the residents of Sonia Gandhi Nagar or people who moved from different parts of the Vishakhapatnam city. There are three blocks in the site which were not occupied yet. There are families who are living in these unoccupied units illegally, but are not allotted to them.

Most of the families are nuclear, and women have control over the major decisions taken in family. Residents asserted that some of the houses are rented out and extended families and non-beneficiaries are staying on rent in these units. A major proportion of the families among the existing households belong to Other Backward Castes. Majority of the population speak Telugu here.

When spoke to families in the site, they said they wanted a house that is safe from floods and they agreed to new housing because of the in-situ upgradation proposed by government. Otherwise they said they would never move to other locations as their livelihoods would be affected. When asked about the benefits of living in SGN, most of them mentioned having a strong house in their original site, entitlement to their house and access to household level toilet facility as benefits. According to the respondents, job opportunities, household drinking water connections, school and market place nearby are the three most important needs at the community level.

Sonia Gandhi Nagar is located in ward no 34. According to 2011 Census data, below are the points shows demographic profile of ward no 34.

Image 28: A Mechanic shop

- The ward no. 34 consists of 24265 persons and accommodates 6113 households.
- Of the total population, 10 per cent of the people belong to Scheduled Castes and 4.5 per cent people belong to Scheduled Tribes.
- About 74.4 per cent of the total population are literates. Of which, 36.3 per cent of them are male working population and only 9.5 per cent are female working population.
- Of the total population, in the main-workers¹ category about 41.1 per cent of the population involve in other² income activities, 19.9 per cent of the people work as agriculture labours and 15.06 per cent of the people work as cultivation labourers throughout the year.
- About 39.3 per cent of the families have an average household size of four members.
- 51 per cent of the population live in a rented house & 45.5 per cent has an own house.
- According to the census on the type of house structure, 92 per cent of families live in a permanent structure, 3.3 per cent of them live in semi-permanent and 4.5 per cent of them live in temporary houses.
- *Drinking water:* 66.6 per cent of the houses have access to tap water connections and 20.8 per cent of the population rely on tube well or bore well connection.
- *Electricity:* 96.8 per cent of the houses have access to power connections.
- *Sanitation:* 10.2 per cent of the families don't have access to toilets and 89.8 per cent of the houses have access to a toilet facility, of which 64.9 per cent of the houses use septic tank and only 22.5 per cent of the houses have piped sewer system connection. About 7.1 per cent of them use public toilets.

Livelihoods: Most of the residents involve in informal income activities as daily wage labourers, construction workers and auto-rickshaw drivers etc. Some families involve in regular wage occupations like working in grocery store, welding shop, mobile breakfast shops and super markets etc. Women tend to practice household level income activities such as domestic work, laundry service, tailoring, running provision store, tea stalls, etc.

1 According to census 2011, people who have been involve in a particular income activity for more than 6 months.

2 According to census 2011, the definitions of type of workers under others category include those engaged in trade, commerce, business, government servants, municipal employees, teachers, factory workers, plantation workers, transport, construction, political or social work, priests, entertainment artists, etc.

Image 29: A person preparing breakfast

Many among working women are trained in construction work, tailoring, stitching etc. They are interested in learning various other skills and start women-collective income groups. Out of samples surveyed, most of the nuclear families depend on single working family mem-

ber. Self-employed people have their own work related assets and mostly rely on informal credit sources during off season and to make investments.

Many respondents claim that there are no job opportunities for educated people. In this regard, financial needs in their families would not allow many literate people to remain unemployed for long-time. As a result, there has been a pattern of graduates either getting involved in regular wage jobs irrespective of their education or get trained in skills that would help them to start their own business.

Social and Physical infrastructure: Access to social infrastructure services like a government school, hospital both private and government remained same as before. There is only one government school within accessible distance and a private school close by. Families mentioned that even though there are schools right across, but they are scared to send their kids as they have to cross the national highway. Even though it is far, they send their kids to a school that is on their side of the national highway. There is a private school behind the site, but it's unaffordable for the families.

Women mentioned the need for markets close by. There are private and government hospitals close by which are accessible by walk. They prefer to go to the private hospital in case of emergency or get medicines from local medical store without a doctor's prescription.

Image 30: Residents washing the clothes – as a part of laundry service

Image 31: Residents using space along the road to dry the laundry clothes



The pattern of housing is in a cluster and seems compact. Many people have been concerned about quality of the house in terms wall dampness and cracks. As this settlement is located along the nation highway, there are no problems with respect to access public or private

transportation facilities. However, many of them mentioned lack of frequency in public transportation service. The internal and approach roads are cement concrete, which is used for storing water, parking vehicles and other assets.

Image 32: Livelihoods of Sonia Gandhi Nagar residents – a basic provision store and auto drivers parked their vehicles



Image 33: Individual motors installed to pump water by residents living in top floor vehicles



Even after many years of construction and occupation, only few services are provided to the residents. The overhead water tanks are yet to be installed. Residents are still dependent on public tap and a hand pump for drinking water. Most households living on the top floors face problems in fetching water from the ground level. As a result they have made own arrangements for water. Families have fill water in drums on the ground floor and pump them water to upper floors using small pumps. Most of the HHs have these small pumps for water supply.

There are issues with overflowing sewage line and solid waste management. No efforts were made by the community to maintain these services. Residents stated that they now have access to power supply and toilets at household level, which wasn't available earlier. People noted that everyone started using toilets since they moved, particularly women and children.

Socio-natural shocks: Families moved to the allotted houses in the year 2008. Respondents said that they were not affected much during Hud-Hud. Except for the partial damage to the work related assets kept outside, no major damages to the houses or individuals. The major impact was on livelihoods as there was loss of work or no work for more than two weeks.

Much of the damage happened at the community the level viz, no power supply for more than two weeks, public hand pump got damaged etc. None of the com-

munity members mentioned much about their health problems. On occupying the *pucca* houses, they felt safe and better, as the disasters in the past have caused damage to their thatched roofs.

Families who didn't get houses were living in temporary shelter next to the site. They have occupied illegally the un-allotted houses few years after the project competition. A year before cyclone they have been evacuated by the government, and the officials said that they will be allotted houses after verification. But before the cyclone Hud-Hud, they have moved back into the units for safety and started living there. The families we spoke to said that they have filed a case in the court before the beginning of the project when they were not included in the beneficiary list and are still waiting for the allotment.

Decision making processes

Objectives and project components: Most of the residents are beneficiaries of in-situ upgradation. People who are eligible under the criteria of beneficiary selection were convinced by the government to vacate their land for in-situ upgradation. Identified beneficiaries were linked to banks to access formal credit at low rates of interest. The government preferred to issue house legal certificate in the name of the female head of the family. There isn't much information about public participation during the implementation process; this has been limited to the decision making process in the form of a public hearing.

Beneficiary selection: Inclusion of people with *kutch* houses, female headed families, aged people eligible for pension and people who stayed on rent. Although the mentioned selection criterion in the VAMBAY housing scheme was with respect to caste reservations, this eventually was not observed in the whole process. The living conditions, identification of inhabitants below poverty line and level of affordability were the key criteria which substantially determined the decisions taken by the authority. Residents were asked to submit ration card and Voter ID card to claim their identity in the city. However some families who were residents of the area didn't get allotment. Those families have filed a case in the court for getting houses after the beneficiary list was prepared. A few years later the government said they will give non-beneficiaries houses on the other site, but the families rejected and wanted a house in the same location.

Allotment of dwelling units was done on lottery basis. The allocation of ground floor was limited to families having aged as head or having differently abled persons. However, families with elder children as beneficiaries having aged ones weren't considered for ground floor allocation. Out of the samples recorded, many of them held house certificate in the name of the female family member. Till the repayment of loan, if any, the house allocated shall be mortgaged to the bank and government/concerned Urban Local Body.

Implementation challenges

Social management: This neighbourhood is socially cohesive. Here families follow decisions taken collectively at community level. Convincing people about in-situ upgradation was a key challenge for the project. Community consent was required for the project to be implemented.

Budget and resettlement costs: It took 3 years to complete the project. During this transition period, there was no transit housing given to the residents by the government. They said that much of their savings are just sufficient enough to clear their past debts incurred during the project period such as money spent on temporary housing during transition period and modifications in allocated house. This forced them to rely on informal credit sources and some of them are still repaying the loans. In the transit phase, people were cut off from basic services such as power supply connection, toilet facility and street lights. Women used to feel unsafe and insecure. Even after moving, power connections were not provided for longer time.

Outcomes

- **Social networks:** Families, who were earlier neighbours, have been allocated flats in different blocks within the site. This shuffling brought

Image 34: Residents drying clothes taken for laundry service along the approach road



some disturbance in their day to day life in many ways such as mutual help in looking after the kids after school, buying vegetables or paying bills etc. After the relocation, families have become more independent.

- **Economic outcomes:** Allocation has affected the saving pattern of people. Many of them are still repaying the loan taken for transit housing and modifications in allocated house. It has been eight years since they moved to new house. Collective saving groups are not active and women often engage in a closed group. There are no changes in the livelihood of people, food and non-food expenditure.
- In-situ upgradation benefited families. Among the respondents, most of them stated that they are not satisfied with the physical infrastructure services especially its maintenance.

Summary of Key Findings

The collected samples were limited to 4 households. As much of the living conditions of residents are similar. And, there isn't much variation seen in terms of livelihood activities, savings and expenditure pattern of residents.

- The average household size of an each family is four persons. With an average of one person as a working member.
- There are two women headed families and two male headed families.
- Of the total sample population, three of them completed middle level education (5th –7th class) and two of them completed matriculation level. Only one responded was illiterate. One of them has a non-technical diploma or certificate not equal to degree and, three of them are still studying.
- From the overall sample population, five members have dropped out of school. Of which, two persons mentioned financial issues as a reason to drop out from school. Lack of interest, marriage and need to work are some of the reasons mentioned by others to drop out from school
- Four respondents have been involved in informal income activities. Most of them would get paid in the form of regular wages.
- None of them have an alternate source of income.
- None of the respondents migrate for work.
- About two respondents aspire that their children to be well-educated and work in formal jobs.
- Of the four members, two of them said that they have been living in the SGN colony for over 50 years and rest of them responded that they have been living in the original location for more than 10 years.
- Most of them own assets like mobile, television, furniture and other electronic goods such as fan, mixer etc. Of the total households, two of them use gas for cooking. Also, two of them own two wheeler vehicles and work relates assets.
- Everyone has bank accounts which were opened as part of government initiated scheme (Jhan Dhan Yojana – financial inclusion scheme). Of which, one responded mentioned that he/she would save at home. Most of them would prefer to save for kid's education, health, kid's marriage and livelihood.
- According to them, house legal certificate, job opportunities for educated people and household level water connections are the three important things at community level.
- Of the surveyed families, only two families have identity cards such as Aadhaar card and Voter Id card. Only one family holds a BPL (Below Poverty Line) card out of those surveyed, and one respondent receives pension.
- Health issues: Three respondents cited common cold and fever and only one respondent mentioned vector borne diseases.
- Out of four respondents, one of them said that women face specific health issues.
- Of the total samples, one responded that he/she accesses the hospital by walk and rest of them use private transportation facility.
- None of them have life or non-life insurance.
- Out of the four households, three families have a health card, but, they have not used it till now.
- Types of shocks faced at the household level are a) women headed families and b) Financial loans and high interest rates.

Summary of findings post the cyclone Hud-Hud

- Of the total surveyed, two of them responded that the government announcement was the source of information about Cyclone/warning. One of the households mentioned television or radio.
- Everyone responded that there were no damages caused to their houses. Only one respondent mentioned that there was a partial damage caused to their house wall.
- Out of total respondents, three of them received universal compensation in the form of money and other goods such as tarpaulin sheets, solar lantern etc.
- Of the total households - everyone faced problem accessing drinking water, power supply and to commute. During Hud-Hud, none of them had access to power supply for more than 2 weeks. Two of them stated that they could not send their kids to school for more than two weeks due to lack of access to transportation facilities.
- None of them faced losses related to household assets and other assets. However, one respondent stated that there was a loss of income, as he couldn't go to work.
- Two respondents said that they would stay in the same place, if there's a warning of a cyclone in near future.

In-situ upgradation

- There isn't much change in travel expenditure after the in-situ upgradation.
- There is no change in income activities after the in-situ upgradation. However, those family members who were dependent on other members started working to balance their financial expenditure after moving to new house. Only one of them responded that there is a change in family contribution at the household level.
- Two of them responded that they are not satisfied with the space provided in a new house.
- Two of them responded that the need for a *pucca* house which is safer is the motivation to choose in-situ house and for one of them, lack of affordability to pay high rent.
- Land Ownership details of current residences – of the total respondents, two of them are living in a rented house and the other two respondents have

an occupancy certificate. According to them, none among them have started the payment process of instalments to get themselves a legal certificate for their respective allocated house.

- Of the two households, one house is in the name of female and other house is in the name of male.
- Land ownership before in-situ upgradation – None of them had any kind of ownership status.
- Everyone responded that hand pump and public tap have been the sources of drinking water even before and after in-situ upgradation.
- Prevalence and use of toilets before – of the four respondents, three of them said that they did not have/use toilets and everyone said that have/use toilets after re- allocation.
- Problems living in current location – one respondent said livelihood, two respondents said high rent, two respondents said quality of housing, everyone had an issue with the household level drinking water connections, one respondent said education, one respondent said disturbed community networks and two of them said insufficient room space.
- Benefits of living in current location- Two respondents said livelihood, one respondent said no rent/own house, Two respondents said living in a *pucca* house, two respondents said access to household level toilet facility, three of them said power connections, one said health and one said same community.
- Problems faced in the original location - one respondent said livelihood, two respondents said high rent, three respondents said housing, two respondents said drinking water supply and two respondents said open defecation.
- Two of them said that there are no changes in the older family members living together before and after.

Key findings

- According to the residents, in-situ housing helps earn an asset hitherto which they couldn't afford. The new house is safer from frequent damages caused due to cyclone.
- The project had little or no impact on their livelihood and there has been betterment in access to basic services and these are the specific reasons which motivated them to agree for the project.

- *Lack of space:* Post-allocation, the entire family of five to six people had to adjust in a small space this affected their personal space. After the project, older family members are excluded and compelled to work because their children who are adults left home after marriage due to lack of space in the allocated house.
- *Relocation costs:* Most of the families had to spend on transit housing and extensions or modifications in the new house. People who could afford, spent on construction of kitchen shelves and platform, flooring, painting and storage spaces.
- The dependent population started working after moving to the new site to balance their monthly expenditure. This pattern mostly affected the young population which led them to discontinue their education and to take up a job.
- Increased access to toilets at the household level controlled the practice of open defecation. However,, other services such as water supply, sewerage and solid waste management are poorly maintained.
- Fragmented social networks have been a cause of concern for people. There are no collective efforts made by people to save, resolve conflicts and address the maintenance issues at the community level unlike other sites. Respondents said that they rarely interact with their neighbours and there is no bonding with people in new housing.
- Migrants and people who used to stay as tenants have benefited the most due to the in-situ upgradation project.

The key questions arising out of the primary work:

- What would happen to the people's house entitlement if they can't repay the house loan?
- In case there is lack of maintenance of services creating hazard to health of residents and environment. Who would share the responsibility for maintenance of good environment in colony? Is it only the government or residents who would create the scenario?

ASR Nagar



Summary of Settlement - ASR Nagar		
A	Project level Characteristics	
A1.	Type of Project	Resettlement
		All families living in ASR nagar were offered housing in Kom-madi area under the VAMBAY Scheme . Of the people who moved, many of them came back to the original site after two years. This information drawn from the semi-structured interviews conducted with ASR colony residents. There is no secondary information available to verify the findings of primary work about new site. All the respondents interviewed are the residents of ASR colony and are non-beneficiaries.
A2.	Type of Risk Management	Is of corrective / post impact
		This project is a post impact measure of development and damages caused by heavy rains in late 90's.
A3.	Nature of Planning	Planned according to JNNURM standards
A4.	Level of planned participation	Only limited to people's choice to move
		Whether to move to new site from original site
A5.	Motivation/Nature of Hazard	Low-intensity High Frequency events
		Development
A6.	Level of attribution of CC to hazard frequency and intensity	Low
		Provision of pucca houses which are safer from heavy rains and cyclone.
A7.	Primary Decision Maker	Government
	In case of a combination, please describe in the note	
A8.	Distance between old and new locations	More than 20 kms
A9.	Time between decision and implementation	More than 2 years
A10.	Time taken to complete the project	No information available
A11.	Age of the project (time since completion)	More than 10 years
A12.	Size of the Project	Large (more than 500 HH)
		According to JNNURM housing – occupancy status of completed layouts. Kommadi 1 relocation site accommodates 736 households.
A13.	Nature of dividing the population	Part of the HHs moved together to one place
A14.	Financing Sources	Contribution of funds from the central and state government including beneficiaries.
B	Original Settlement level characteristics	
B1.	Type of land tenancy	Railway land and Government land
		ASR colony is a combination of Railway land and Government land. None of the community members have any kind of ownership of their land/ house.
B2.	Age of settlement (before the move)	More than 50 years
		Most of the families have been living in ASR colony for more than 50 years. A few families are migrants and have been living for rent in this location since 5–10 years.

B3.	Size of the settlement	Medium (more than 200 HH)
B4.	Most dominant nature of livelihood options for HH	Mixed Nature of Work – At home based and includes travel as well.
B5.	Level of Hazard Risk Exposure	High
		Houses are kutcha and semi pucca which cannot resist heavy winds and rains. Residents claim that they are exposed to frequent damages every year.
B6.	Type of Urban form	A combination of cluster and row housing
B7.	Levels of social infrastructure distinguished by provider	Poor – provided by the government: drinking water tap and water tank, power connections and anganwadi etc.
		Good – provided by the civil society (donors, INGOs, NGOs, etc.) : Community toilets and free milk distribution centre.
B8.	Strength of social networking	High
		Two different caste communities live together in one colony. Groups are active in supporting people in financials needs, representing and solving community level problems.
B9.	Most dominant form of family structures	(a) Nuclear family with either male or female as family head
		(b) Joint family with either male or female as family head
		More than two to three families live together separately in one house.
		Nuclear families mostly are migrants.
B10.	Use given to abandoned site	Not applicable

ASR Nagar

[Please refer to Sonia Gandhi Nagar Map for ASR Nagar also]

Profile

Population and Demographics: Alluri Sitarama Raju (ASR) colony is located near Thaticheltapalem, in ward number 34 of Greater Visakhapatnam Municipal Corporation (GVMC). ASR colony is a slum settlement situated off the National Highway 5, near the Railway Station. The colony is surrounded by Sonia Gandhi Nagar on the north, Railway staff quarters and Kendriya Vidyalaya School on the south. Residents have been living in this colony for over 50 years. Here, Chenchu is a most dominant community along with other Scheduled Castes and Tribes. These people are primitive tribal groups mostly involved in pig raising and rearing.

Though there are multiple families living in one house, they operate independently as nuclear families in terms of financial expenditure. This scenario is common among many households as they couldn't afford to stay in a rented house.

Water supply, access to government schools and livelihood opportunities were some of the benefits of staying in ASR Nagar. When asked about the three most

important things that they need as a community, they said a permanent house with tenure security, individual HH water connections and toilets for women..

There are a total of 278 households living in ASR Nagar. According to the Urban community Development Department report, all the families here were allotted housing to 10 different locations in the city(GVMC, 2015b). However, during the interviews with the families it was found that only few families moved to the relocated site and all of them moved back to ASR Nagar within 2 years. Families who relocated are now seen as outsiders and do not have good relations with the rest of the community.

ASR colony located in ward no 34. According to Census of India (2011), below are the points shows the demographic profile of ward no 34.

- The ward consists of 24265 persons and accommodates 6113 households.
- Of the total population, 10 per cent of people belong to Scheduled Castes and 4.5 per cent of the people belong to Scheduled Tribes.
- About 74.4 per cent of the total population are

Image 35: Auto drivers parked their vehicles along the internal road of ASR Nagar



literate. Of which, 36.3 per cent of them are male working population and only 9.5 per cent are female working population.

- Of the total population, in main workers³ category about 41.1 per cent of the population involve in other⁴ income activities, 19.9 per cent people work as agriculture labours and 15.06 per cent people work as cultivation labours throughout the year.
- The average household size of a family is four members.
- 51 per cent of the population live in a rented house and 45.5 per cent of them have an own house.
- *According to census* - the type of house structure - 92 per cent of families live in permanent structure, 3.3 per cent of them live in semi-permanent and 4.5 per cent of them live in temporary structures.

3 According to census 2011, people who have been involve in a particular income activity for more than 6 months.

4 According to census 2011, the definitions of type of workers under others category include those engaged in trade, commerce, business, government servants, municipal employees, teachers, factory workers, plantation workers, transport, construction, political or social work, priests, entertainment artists, etc.

- *Drinking water:* 66.6 per cent of the houses have access to treated water tap connections and 20.8 per cent of the population rely on tube well or bore well connection.
- *Electricity:* 96.8 per cent of the houses have access to power connections.
- *Sanitation:* 10.2 per cent of the families don't have access to toilets and 89.8 per cent of the houses have access to toilet facility, of which 64.9 per cent of the houses use septic tank and only 22.5 per cent of the houses have piped sewer system connection. About 7.1 per cent of them use public toilets.

Livelihoods: Traditionally the families were involved in pig rearing, but after government banned the activity within city limits, people shifted to occupations like auto driving, repairing gas stoves, making broom sticks, hair wigs, rag picking, selling utensils, groceries and fruits.

Families living here are all self-employed and highly dependent on local money lenders for investment on regular basis. They take credit on a daily basis for buying goods. They have to live on the money that is remaining after they pay back the loan at the end of the day. On an average the household size is 5 members and there are one or two working members. None of them have an alternate or additional source of income.

Men are involved in rag picking, gas stove repairing and rag picking. While women manage household work and are engaged in selling groceries, broomsticks and hair wigs. Pendurthi, Kancharapalem, Gopalapatnam, Anakapalli and Kothavallasa are the places that they rely on which are located 5 to 8 kms away from ASR Nagar.

These livelihoods are dependent both on individual households and market places. Families who make products at home either sell them to contractors, who come and collect from their colony or door to door sales in the neighbourhoods nearby going. Rag pickers sell their collected material to the shops in the nearby neighbourhoods.

For them, risk is all about managing their household expenditure and paying back money to lender, which is an everyday process as they live on daily wage income source. They depend on informal credit sources whenever their expenditure goes beyond their monthly income or during off season. Continuing to uphold the trust with creditor is important for these families. They need to repay money on time despite of any odds so as to have access for next time.

Social and Physical Infrastructure: The hospital and markets are accessible by walk. There is a private school (Kendriya Vidhyalaya) adjacent to the site, which is unaffordable for most of the families. There is only a government primary school next to the site. They do not

have access to schools above primary level, because of which children do not attend school and instead stay at home.

The site is a combination of cluster housing and row housing. All the houses were damaged in the cyclone and were rebuilt after. As part of relief material families were provided with tin sheets for the roof. But most of them made thatch houses or used old asbestos sheets as they couldn't afford to build under structure to fix tin sheets. Only four houses were rebuilt using the provided tin sheets.

There's one cement concrete road that passes next to the site. The road is used for parking vehicles—two wheelers, pushing carts, auto, and also storing household and work related assets. They also use the space on the road for working and household chores like bathing, washing clothes and utensils cooking and also for social gatherings. All the waste water from washing, bathing is let in to the open drain running next to the site.

Their livelihoods mostly do not require vehicular transport, because of which there not much expenditure on travel. Residents mostly use public transportation services for commuting if required.

The ASR colony residents have access to water tank, public taps and two hand pumps, which they use for

Image 36: A provision store in ASR Nagar which is located along the internal road



Image 37: Community Toilets

drinking purposes and other domestic purposes as well. Because the piped water supply is available for only few hours a day they take shifts as households to collect and store water which is mainly used for drinking and cooking. On other days they depend on water tank or hand pumps.

There is one paid public toilet in the site which was built in the year 2014 after Hud Hud by GVMC (Greater Visakhapatnam Municipal Corporation) and are maintained by a private contractor. Earlier, residents were defecating in the open. The toilets are not enough for all the fami-

Image 38: Women washing utensils in front of their houses

lies. Because of this, only women use these toilets and men still defecate in the open. And they also mentioned that user charges are high and they cannot afford if all the family members use it on daily basis.

All HHs have access to power supply and they have got the connections a year back. There is also free milk distribution centre in the site. Every morning a private NGO gives free milk and boiled egg to all the kids in the neighbourhood.

Socio-natural shocks: All the houses in ASR nagar were damaged in the cyclone Hud-Hud. It took more than two weeks for repair and reconstruction of the houses. The amount spent on reconstruction is more compared to the losses. Most of them are still repaying the money borrowed from lender for house reconstruction. Some of the problems faced by the families' post-Hud-Hud were:

- Either they didn't receive any compensation or given compensation was not sufficient for house construction
- They received compensation after three months of the damage assessment
- They faced losses to both household and work related assets
- No water and power supply for more than two weeks
- Schools remained closed for a week as there was no transportation services and
- Loss of opportunity to work for more than two weeks which worsened them economically.

ASR Nagar and Sonia Gandhi Nagar (current name) used to be a contiguous settlement 10 years back. The settlement was on government and railway land. During the VAMBAY housing project, the Government decided to build housing units to the families on the government owned land. As ASR Nagar is located in the railway owned land, government asked them to move them with other families. The families in ASR nagar refused to move into the new housing as they would lose their identity and wanted a separate housing colony built for them in-situ. As the government couldn't built on railway land, families living on the government land were provided with housing in -situ and ASR Nagar remained as is. Many years later, families from ASR Nagar were offered housing in Madhurwada 25–30 km away from the site. Most of the families refused this option as they would lose their livelihoods, but some families relocated to the new site. This created differences within community and

still continues even after the families moved back to their original location.

In their words *"we did not ask for allocation in that colony. That colony is different. That colony is of different caste and community. We want a separate colony for us as we don't want to live with them"*.

Image 39: Free milk distribution centre to infants which is funded and maintained by private NGO



When the settlement formed many years back, the families didn't know which part of the land belonged to the government and which part is owned by the railways. However, after many years, when the government provided housing only, a part of the settlement got proper housing and infrastructure and the rest still living in the same housing and with no amenities and families which didn't get any housing were further affected by the cyclone.

There are clear caste divides in the community. This divide has increased over time. The existing caste related issues associated with political nepotism led to conflict between both the communities. The allocation of VAMBAY housing to residents of Sonia Gandhi Nagar escalated the conflict between the communities.

Compensation after Hud-Hud. Particularly after Hud-Hud, the number of damaged houses and assets has been high. Compensation is usually given after a damage assessment, but many people claimed to have been left out from those, as they live as renters, or many households in one house. Residents also claim that the

Image 40: Temporary houses constructed after Hud Hud damage



damage assessment happened twice, as officers misplaced the first assessment information collected from affected families. As a result, they again conducted the second round of damage assessment after 2 months by which time most of them had already made temporary arrangements. Officers did not accept those as damaged houses, and eventually left out many from getting compensated.

Decision making processes

Housing allocation and non-beneficiaries: In ASR Colony either people are non-beneficiaries of any housing programme before, or those who were allotted some housing about 5 years ago, but eventually moved back here after a brief stint of staying in those far locations. Of the many reasons for many to remain outside the ambit of any housing schemes so far, constant change in government, political nepotism to some groups and priorities of residents were observed as some of the key ones. We were unable to document any of the of the people who relocated and returned, as they were scared to let us know about their previous status of being beneficiaries in government housing programmes and worried they may lose their chance of being a beneficiary of any housing in the future.

Land ownership: Originally, the entire neighbourhood was settled partly on railway land and partly on the state owned land. None of them have had any form of formal ownership on their houses. People who lived on the

state government piece were allocated in-situ housing, as part of the VAMBAY Housing scheme. It's been more than 5 years since this in-situ development now called Sonia Gandhi colony has come into being.

Another colony near ASR nagar, named Sevanagar, was also on railway land, and the residents were evicted earlier in 2011, and were made to move to Madhurvada. Sevanagar land was needed by the railway authorities to expand their stadium. ASR Nagar has also been facing threat of eviction for over 40 years, but since the railways had had no purpose for this sliver of land, they are allowed to stay here. Despite a change in government and local administration many times in the last 40 years, no political party has responded to these non-beneficiaries' demands for new houses.

After the railways built a wall next to this existing settlement, many residents now believe that railway has given up on the land. Since then, Residents started protesting for legal certificate for their house. After in-situ development in Sonia Gandhi colony, they have been demanding in-situ allocation as well.

While the government identifies them as a slum, they still have not been covered under any housing upgradation scheme. It is yet to be seen what action will be taken for them, or by the families themselves for longer term resilience to cyclone hazards, and other everyday risks they are exposed to.

Implementation challenges

Those who moved to relocation site, what happened to them? Why did they decide to move back? What happened to the people who remained as non-beneficiaries? Why didn't they move?

Relocating people: The major issue was motivating people to move to the identified relocation site several kilometres from this site. With negotiations, 150 families moved to Kommadi. These primarily comprised of families who used to stay either as renters or as part of houses with more than 2 or 3 families. These families who relocated belong to Scheduled Castes community who opposed the decision taken by the other community.

Most of them moved back to ASR Nagar within 2 years from relocation site. According to some residents, these people still have access to those allotted houses even though they lived there only for two years, and they continue to live there on and off. Respondents said that a few people rented those *pucca* houses and started living in ASR Nagar. Lack of opportunities to find work has been the major reason not to stay in Kommadi. They can't afford to travel for more than 30kms every day to access their workplace. They said that they couldn't survive because of security and safety issues.

Non-beneficiaries gave similar reasons as those who moved back. They believe that the kind of socio-economic networks they have and trust based connections with households and creditors they depend on for work, would get disturbed once they move from ASR nagar. Secondly, accessibility to social infrastructure services is a major concern to them.

So all of them—previous beneficiaries and non-beneficiaries—are awaiting some in-situ development similar to their neighbours.

Outcomes

Much of the outcomes are not yet noticeable as no action has been taken at this settlement itself, but below listed are the questions arise after the primary work:

- What would happen to the house entitlements of those who moved back to the original site? Would people continue to move to relocation sites on and off, if yes, then why? What could make them move to those constructed houses permanently? Who is accountable for long term sustenance of those new settlements after people have been given house certificate?
- When is allocation considered as just and equitable? Particularly when many households live in

the same house, but only the eldest receives the new house.

- What are the differential long term implications of three kinds of people who at one point lived together in one area—those who were evicted from the railway land as the land was needed, those who got in-situ housing on the state land, and these people who continue to inhabit ASR colony with almost no action taken by the city post Hud-Hud for their welfare.

Summary of findings:

About eight respondents were interviewed in ASR Nagar site. Below mentioned are the key findings of the primary work.

- Of the total eight samples, none of them have house allocation and are non-beneficiaries of JN-NURM housing project.
- Four respondents mentioned that their household size is of four members. Two families have household size of five members each.
- Of the eight surveyed, six respondents mentioned that men have major control in decision making with respect to their family. However, women are involved in providing inputs in household expenditure.
- Five respondents aged between 38 and 55 stated that they never attended school. Only two respondents, in their early 20's completed their higher education. In this regard, first, second and third generations never attended school, only the fourth generation children are attending the school.
- Five respondents said that they have two working members in their respective family. Two families have single working member. Only one family have three working members in their family.
- Of the total samples, six families are involved in informal income activities.
- None of the households have any alternate source of income.
- None of the respondents out of the eight migrate for work.
- One respondent expressed his unwillingness to migrate to other areas, if given a chance.

- Three respondents aspire that their children be well-educated and get jobs.
- Three respondents mentioned that they have been living in ASR colony over more than 50 years. Rest of them stated that they have been living in ASR colony over 10 years.
- Asset ownership of the total samples surveyed – everyone owns a mobile. Seven of them responded that they own a television as well. None of them own four wheeler vehicle and other electronics such as fan, refrigerator etc. Six households use gas connection for cooking. Four respondents mentioned that they have furniture. Six respondents out of the eight own a cycle, and, only two households own the work related assets.
- Most of them said that they need a new house but in-situ upgradation.
- Among the eight respondents, everyone have access to bank accounts which were opened as part of government initiated scheme (Jhan Dhan Yojana – financial inclusion scheme). Of which, there are people either use other sources such as friends and neighbours to save money or do not have capacity to save money. Most of them prefer to save for kid's education and health.
- Out of the surveyed families, everyone holds identify cards such as Aadhaar card, Voter Id, BPL (Below Poverty Line) card and five respondents receive pension, which are helpful to avail the benefits from the government.
- Three respondents mentioned water and vector borne related health issues. Two respondents mentioned vector borne diseases. Three of them mentioned regular fever and body pains.
- Out of eight respondents, two of them said that women don't have specific health issues and don't face problems to access health care services.
- Of all the households, four respondents mentioned that they access hospital by walk and rest of them use private transportation facility.
- Only one respondent has access to LIC Life insurance.
- Everyone has a health card. However, most of them have not used it till now except for one respondent.
- The shocks faced in household level are financial debts and high interest rates.
- With regard to sources of information about Cyclone/warning – 6 of them said that their source was from government announcements and the other two households got to know from neighbours/relatives or others.
- With regard to extent of damage created after Hud Hud - 5 families stated that their houses were completely damaged. Of 5 families, 3 households indicated that the amount spent on reconstruction of house was more than amount of loss.
- Of the eight households - seven of them faced trouble to access drinking water and seven respondents faced problems to commute. During Hud-Hud, none of them had access to power supply for more than 2 weeks. The schools remain closed for more than 2 weeks.
- Everyone said that their household assets got damaged during Hud-Hud and three families mentioned damage caused to work related assets. Of the total surveyed, only three families received compensation after the damage assessment of their house.
- Important things people carried at the time of evacuation – five respondents out of eight carried documents, four of them mentioned carried food and three of them carried clothes.
- Risk sharing – Six of the respondents said that they borrowed money during Hud-Hud either from money lender or friends/relatives. They are still clearing the debt.
- Seven respondents out of the eight, said that they would stay in the same place, if there's a warning of a cyclone in near future
- With regard to actions people are likely to take if there's a cyclone every year/long term adaptation – In this case, six of them responded that they wouldn't take any action and two of them said that they would ask for government support to construct a house.
- Land ownership details of current residences – Although the land belongs to the railway quarters and none of them have any kind of ownership, two of them mentioned that they have occupancy certificate. The occupancy certificate is in the name of the male head in the family.

- Of the total samples, six respondents said that finding opportunity to work and everyday risks in livelihood are the major concern. One respondent said that paying high rent is a problem. Seven of them said that not having a *pucca* house which is safer from floods. Five of them mentioned that open defecation, lack of enough toilets, poor health conditions and lack of good power supply are major problems.
- Of the total samples, four members mentioned that community and transportation are the major benefits of living in ASR Nagar.

Key findings

- People said that living in ASR Nagar is more important than having a *pucca* house in the relocation site. Respondents stated that they just need a legal claim on their existing houses and they would construct a *pucca* house whenever they have money. Learning from the others experiences—they wouldn't want to take any risk of changing or losing their socio-economic networks which would have an impact on income activities. They stated that they are used to their work since generations and it would be difficult to change their occupation.
- Access to informal credit (from money lenders, caste groups and friends) has been a lifeline for the working population. These credit sources operate on trust relationship since generations. People who borrowed money would clear the loan despite any odds to have access to new loans next time. Respondents said that they would lose their credit networks in case they move to other relocation sites and are highly dependent on loans for any additional expenditure. This is also a burden at times.
- The money that they make is just enough to survive with low paid jobs/livelihoods. For them, major expenditure is food and paying interest plus principal to lender on monthly basis. Any other expense becomes an extra burden to the families. Such additional expenditure leaves them dry to re-invest in income activity or save money. Any extra money if they earned is used to clear past debts.
- Public infrastructure services like hospital, market, medical shops and other basic needs are accessible by walk. Residents said that many people moved back from relocation site to ASR Nagar as they needed to spend on travel to access their minimal needs. They believe that they couldn't

afford to spend on travel as their earnings were already minimal.

- Most of them did not receive compensation after Hud-Hud. The investment in house reconstruction before damage assessment made many people ineligible for compensation. Although, many of them did receive some compensation, it was very late and did not serve much purpose in reconstruction. Many people stated it would cost Rs.40,000 for construction of asbestos roof house. However, the compensation given was around Rs.5000 for a completely damaged house which didn't cover even the labour cost. Many people claim that local leaders were unjust in the identification of beneficiaries and allocation of compensation.

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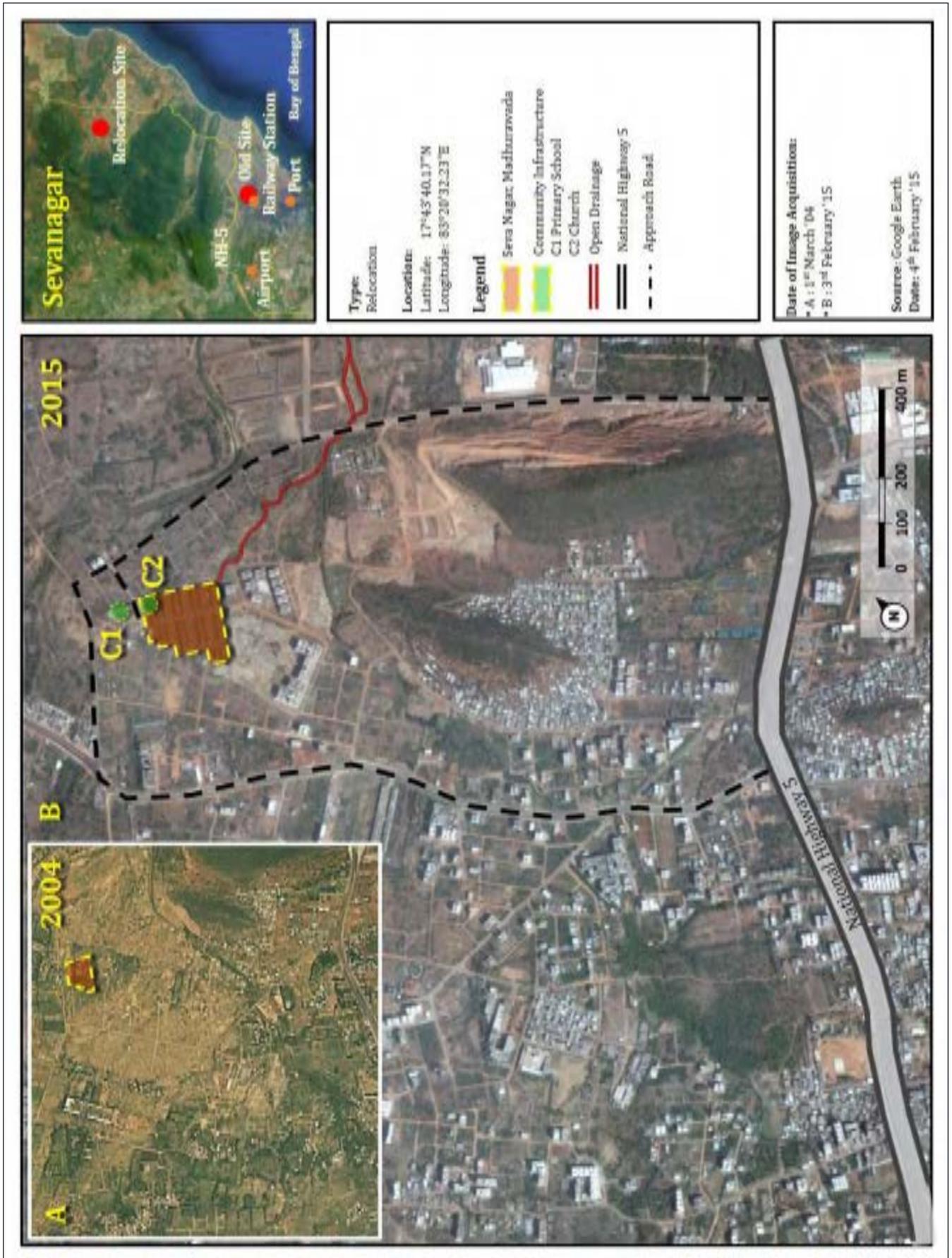
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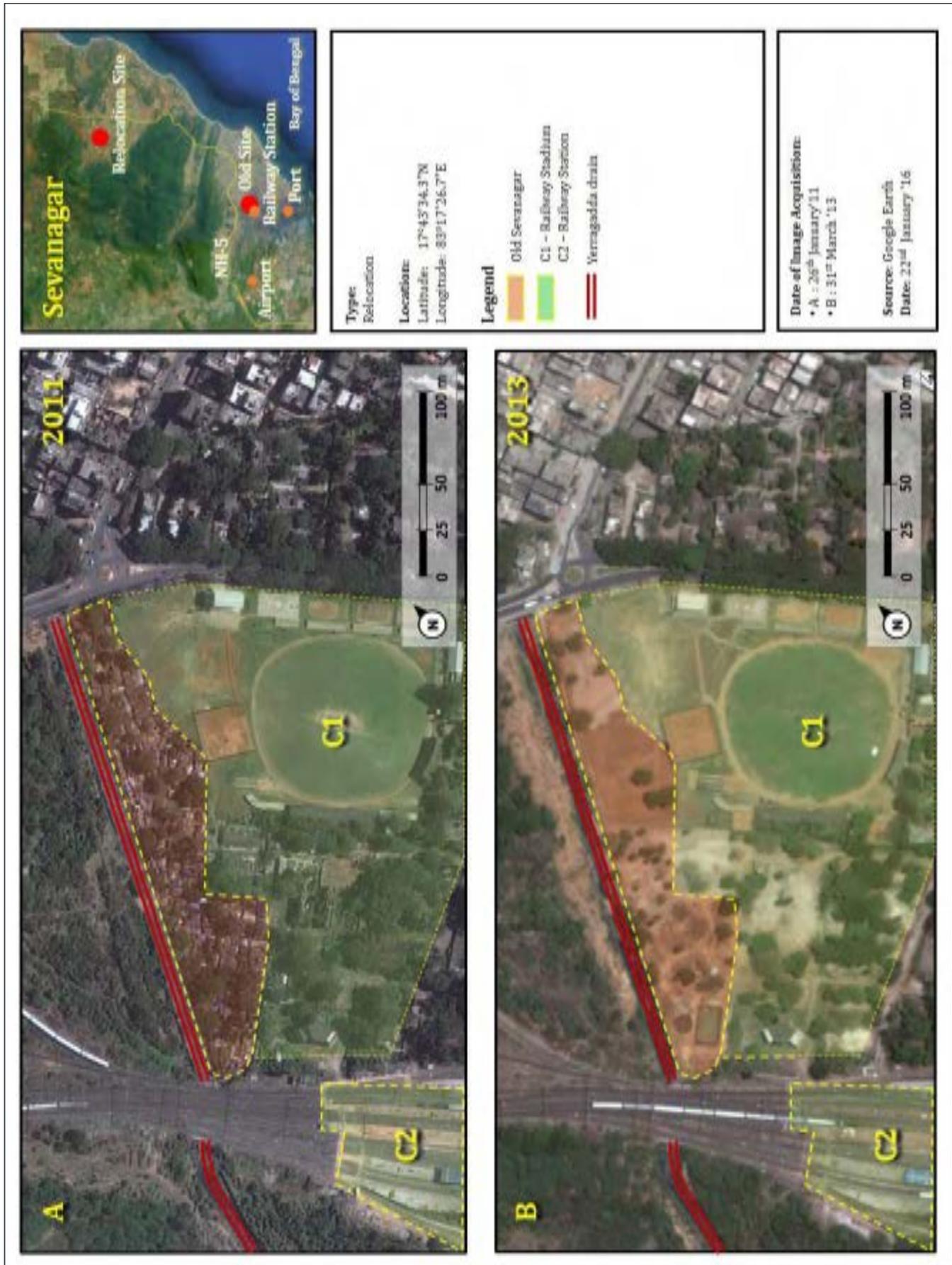
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Sevanagar Madhurwada





Summary of Settlement - Sevanagar Madhurvada		
A	Project level Characteristics	
A1.	Type of Project	Relocation under Jawaharlal Nehru National Urban Renewal Mission (JNNURM)
A2.	Type of Risk Management	Development
A3.	Nature of Planning	Planned with risk measures –
		Reinforced Cement Concrete structures withstand high wind speeds. Plinth level is above the level of the road which will reduce damage during floods.
A4.	Level of planned participation	No participation.
		People were forcefully evicted from Seva nagar slum and other areas. Several attempts were taken by the railways and GVMC to evict these people but only in the year 2011, these people are evicted to Madhurvada.
A5.	Motivation/Nature of Hazard	Development
		The old site is located on railway land and East coast railways after several attempts evicted them to the new site in Madhurvada. The railways have built a sports club in the old site.
A6.	Level of attribution of CC to hazard frequency and intensity	Low
A7.	Primary Decision Maker	Combination of Railways and GVMC.
A8.	Distance between old and new locations	25 to 30 km.
A9.	Time between decision and implementation	More than 2 years
A10.	Time taken to complete the project	2 years
A11.	Age of the project (time since completion)	5 years
A12.	Size of the Project	Large (958 HH)
A13.	Nature of dividing the population	Different parts of the settlement moved together to one place.
		Families from nearly 12 different locations in the city were relocated to the new site, of which many families were from old seva nagar.
A14.	Financing Sources	Contribution of funds from different sources such as the central government (50 per cent), state government (40 per cent) and also beneficiary contribution (10 per cent).
B	Original Settlement level characteristics (old Seva Nagar)	
B1.	Type of land tenancy	Railway land
B2.	Age of settlement (before the move)	More than 25 years
		Most families have been living in this location since their forefathers.
B3.	Size of the settlement	Large (668 HH)
B4.	Most dominant nature of livelihood options for HH	Daily wage labour is the most dominant form of livelihoods ranging from auto drivers, construction labourers, cleaners, petty shop owners, vegetable vendors and small businesses. Women either work as house helpers or sell vegetables.

B5.	Level of Hazard Risk Exposure	High- To floods and cyclones
		Located next to a drain which floods the colony often during heavy rains and monsoons. Most of the house are temporary in nature vulnerable to high wind speeds.
B6.	Type of Urban form	A combination of cluster housing and row housing
B7.	Levels of social infrastructure distinguished by provider	Poor – self provisions
B8.	Strength of social networking	High.
		People belonged have been living there since many years and have developed strong networks and relations.
B9.	Most dominant form of family structures	Nuclear family with male family heads
B10.	Use given to abandoned site	The railways have cleared the land and proposed to build a railway club. However with evicted families filing a case, the constructed has not yet started.
C	New settlement level characteristics	
C1.	Level of hazard exposure	High. Broken sewer lines on either side of the tenements and poor quality of drinking water have caused severe health issues.
C2.	Type of land tenancy	Owned.
		Once the beneficiaries pay the beneficiary contribution they will be given the certificates.
C3.	Type of new Urban form	G+3 structures - A total of 30 blocks and 960 dwelling units
C4.	Level of planning and provisions (Good, medium, minimum, none)	(a) Designed housing (Good)
		(b) Roads (Good) Paved roads within the community and connected to the highway.
		(c) Public Transport (Poor) only few buses connecting to the main city. Residents depend on private transport like autos and own vehicles.
		(d) Water and Sanitation (Poor). Lack of maintenance
		(e) Electricity (Good)
		(f) Schools (Poor). There is a school located next to the site, but only till primary level education
		(g) Hospitals or health centres (Poor) – There are no government hospitals in the vicinity, so people have to commute long distances to avail medical facilities or depend on private hospitals
		(h) Marketplaces (Minimum)

Profile

Population and Demographics: The relocation site, Madhurvada falls under ward 4 of Greater Visakhapatnam Municipal Corporation. There are a total of 668 beneficiaries who have been relocated from Seva Nagar in December 2011. Majority of the population speak Telugu. Families have been living for more than 25 years in the same city before relocation.

Seva nagar was located on the railway land. After several attempts, the East coast railways and the GVMC forcefully evicted people in the year 2011 without prior

notice to different locations namely Seva nagar in Kom-madi (Madhurvada) and Polagawani Palem in Pendurthi Mandal. The new site is almost 25–30 km from the city.

According to the Census of India, 2011,

- Total population of the ward is 27132, and 7082 households.
- 10 per cent of the total population of ward belongs to Scheduled Castes and Scheduled Tribes.

- 70 per cent of the ward populations are literate and 36 per cent of them are employed.
- 100 per cent of the census houses in the ward are used as residences. 13 per cent of the houses have thatch/grass/bamboo/wood as the material of the roof, 1 per cent of the houses have handmade tiles as the material of the roof, 9.4 per cent asbestos, and 73.5 per cent have RCC roof. 44.1 per cent of the houses have walls made of burnt bricks and 9 per cent of the houses have walls with mud/unburnt brick.
- 38 per cent of the families have average household size of four
- 59 per cent of them own the houses and 39 per cent of them are renters.
- 55 per cent of the houses have access to treated drinking water while 4 per cent have access to untreated drinking water. 25 per cent depend on tube well or bore well.
- 51 per cent of the total HHs have water sources within premises.
- 92.2 per cent of the houses have electricity connections.
- 75 per cent of the houses in the ward have latrine facilities in their premises, of which 21 of the

houses are connected to pipe sewer system and 52 per cent are connected to septic tanks. 0.4 per cent use public toilets, and the rest 25 per cent go for open defecation.

However, the census data was collected before these families were relocated. And from the sections below we might be able to compare what are the existing services that are being provided or if the services has improved or deteriorated over the span of 4 years.

Livelihoods: Daily wage labour is the most dominant form of livelihoods in this neighbourhood. 14 out of 16 respondents work in the informal sector. People are involved in various livelihood activities ranging from auto drivers, construction labourers, cleaners, petty shop owners, vegetable vendors, and ironsmith among others. Women work as house helpers, sell vegetables and run small shops in the neighbourhood. There also few residents who own businesses in the neighbourhood and some in the city. Some families are still engaged with the work in railway station even after relocation.

As a consequence of relocation, most livelihoods were affected and their average monthly income has reduced. They spend nearly Rs200 or sometimes more on travel when they go for work or for other services to the central part of the city. Loss of income and increasing unemployment has battered the social fabric and morale of the community. In our interview with the secretary of Seva nagar, Mr. Akula Jojibabu said that livelihoods of most of the relocated families were affected and be-

Image 41: Seva Nagar Madhurvada tenements



Image 42: Broken sewer lines on either side of the tenements



cause of which unemployment, alcoholism have increased in the neighbourhood. Even women who used work earlier have lost their livelihoods. Some of the female respondents during the survey said that they need better job opportunities and government support to form a self-help group (SHG) (Benjamin, 2013).

Social and Physical Infrastructure: There are a total of 30 blocks with 960 dwelling units. All are G+3 tenements. Each house measures 250 sqft and has one living room and a small space for kitchen and toilet. Respondents have complained about cracking walls due to poor quality of construction.

The new settlement is a few kilometres off the highway. However, there are no proper transportation facilities for people to commute and they rely on private transport. There is a bus that runs once every few hours. Other times, people have to reach the highway to get transport to travel to other parts of the city.

Water is available only for two hours a day and the residents also complained that the quality of water is very poor. Families we spoke to said that nearly 30 people have died in the last 3 years due to poor quality of drinking water. People either carry drinking water from the hand pumps or buy canned water for drinking. The water pipes and sewer pipes are broken and are leaking out in the open at either side of each block. The septic tanks in most of the blocks lack maintenance and are overflowing. The place is completely polluted because of

this and mosquitoes breed on them. Solid waste management is a concern as most of it being dumped within the tenement complex.

There is a primary school next to the site, and for higher education kids have to travel to the city. As result of which children's education has suffered and there are many dropouts. There are also no *anganwadis* and thus, no provisions for supplying nutritious food to young children and pregnant women. There are no government hospitals in the vicinity and hence people have to travel long distance to avail any medical facilities or rely on private hospitals near the highway and are expensive. At nights, with no proper street lighting facilities the place gets very dark and women encounter various safety issues.

There are four liquor shops within the complex and most of the younger generations are addicted to alcohol and even school going students are getting influenced by them. Most people here were better off in the old settlement. People were busy with work and post relocation, the lives of people have changed for the worse.

Socio-natural shocks: Most people feel that even though they were living in *kutch* houses in the old settlement, they were doing well in terms of work. However, relocation has made it worse for them as most people have lost their livelihoods. 15 out of 16 respondents have lost livelihoods and thereby have lost income. Unemployment and lack of income has increased alcohol

consumption among men in the neighbourhood. As a result of this, most men and younger generations are involved in gambling and petty crime.

Some women, reportedly, have been forced into sex work to feed their families. Mr. Jojibabu said that most men consume alcohol. He also added that there are nearly 300 youth in this neighbourhood and not even one among them have studied till 12th grade. Only very few of them studied till 10th grade.

With most of the income spent on travel, some of the families said they don't save after the relocation which was not the case earlier. Families have become economically very poor.

Residents are expected to pay a sum of Rs30,000 as beneficiary contribution in order to get *patta*. A few sources also reveal that this sum of money might increase in the upcoming years and people clearly can't afford to pay this amount of money. One of the respondents said that the government should pay them as the families have suffered because of the government's decision.

Families also have lost their networks and connections after relocation. One family who work as ironsmiths said that they used to make and sell their products near their house in the previous location. They also use to get contracts for making products. After relocation they have lost the trust of money lenders and the material suppliers because of their distance to the city. It is also difficult for them to work in the relocation site, as their work requires lot of space and the neighbours complain of noise and smoke.

The old settlement used to flood very frequently, but none of them fell sick then. Post relocation, many people have fallen sick and some have died due to poor quality of drinking water. The major concern of this area is also the outlets of the sewer lines on premises of the blocks which are causing major health issues. For most people eviction has itself become a shock.

A few years back there were police raids in the site and all the houses were checked without any reason. When the community asked the police, they said they have got complaints regarding thefts in the neighbourhood and they have raided the colony for catching thieves. This news was widely reported in the media, and then after families who were working in the neighbourhood as daily wage labourers, maids etc., were removed from their jobs. Some respondents said, when they reveal that they are from Sevanagar, people have a wrong impression of them and it is very difficult for them to find jobs. They said they have lost their livelihoods because of relocation and lost respect after this incident.

People also complained that in the old site, NGOs and their foundations would offer them both monetary and non-monetary assistance. They used to also get compensation from government during times of extreme events. But now that they have moved very from their old site, they do not get any kind of assistance from any agency. Even post Hud-Hud, they did not receive any compensation.

Deaths in the neighbourhood also has its impacts on the families living in the site. One woman we spoke to said that the government moved them to this site to let them die slowly over the years. There are no health and transportation facilities. If there is an emergency in the night it is difficult to travel to the hospital. The persons who operates auto quote very high and it takes too much time for the ambulance to arrive to their site. Many people have died because of these. For everyday illnesses also, because the transportation charges are high, they avoid going to doctors as it will be expensive to get treatment.

Decision making processes

Under JNNURM, 960 dwelling units were constructed in Madhurvada site. 50 per cent of funds came from the central government, while 40 per cent from the state and 10 per cent from beneficiaries. Families were relocated from more than 10 different locations, and most of them were living on railway land. When we spoke to residents, they told that they were evicted without notice and shifted them overnight to the relocation site.

In the year 1993, the East coast railways threatened the slum dwellers to evacuate the place. But however the resident society of Seva nagar Schedule caste Seva Sangam collected funds from the residents and filed a case at the Andhra Pradesh high court. As a result the high court declared that the slum will not be evicted until a final decision is made. But again in the year 2004, the East coast railways issued door to door eviction notice to the residents. In response to this, people again appealed at the high court and the eviction process was put on a hold as the final judgements weren't out.

There was no public consultation in any of the process and people were evicted without prior notice by GVMC. Though GVMC did not own the land, it is unclear as to why GVMC was involved in the process of eviction. None of the government agencies including MRO, GVMC and railways claim that they have land records. Mr. Jojibabu said that he filed a RTI in the year 2010 to find out who owns the 3 acres 33 cents land and he got a response that said that as this case is still held at the court the information he asked for cannot be revealed. So there is still some uncertainty around who owns the land records.

Beneficiary Selection: Several settlements on the railway land were evicted during this project. However some settlements were ignored. The selection of criteria of these slums is not known. Within the selected slums, some of the families were left out. In Sevanagar and Omkar Nagar slums, a total of 668 families were relocated and 36 families were left behind. The government has not provided housing for the remaining 36 families who were left out at the time of eviction. One of the residents who were left behind complains that his house was demolished at the time of eviction and though the government had promised to provide him housing nothing has been materialised yet (SARMA, 2012)

Implementation challenges

Families who have been living for more than 30 years have been evicted overnight and relocated 30 kms away from their original location. Only support that they have received is the transport of HH items to the relocation site. Families from one settlement were moved to several relocation sites. Only once they moved, they knew where they are being relocated to. The selection criteria for each relocation site and why families have been split into different sites is unknown (GVMC, 2015b).

Ground floor units were given to elders, handicapped the remaining families have been allotted houses based on the lottery. So families who were living before have got houses in different blocks. When the families moved, other than the housing, no other services were provided.

With these issues and the shock of relocation, families never felt that the new place belongs to them and which led to lack of ownership and maintenance of the place. Workers from the municipality clean the street and take away the trash, but the septic tanks and drainage lines lack maintenance. Even though there are housing associations and local leaders, they are not involved in maintenance of the place.

Resettlement costs: A sum of Rs30,000 is expected to be paid by the beneficiary as a part of the beneficiary contribution. Once the amount is paid people will receive *patta* for the house. However, most respondents have said that post relocation they have lost income and they can't afford to pay this sum of money. 7 out of 16 respondents have said that they borrowed money either from money lenders/relatives after relocation. They are repaying their debts with high interest rates.

Outcomes

The resettlement process has ignored the aspect of human rights as well as the inter-linkage between housing, livelihood, and other human rights. All respondents from our surveys complained about poor services and lack of livelihood opportunities in the new site. It is also evi-

dent from our surveys that people were happy with the services that were provided in their old site. People have been living in the new settlement since four years and are still struggling for basic services and amenities, including water, sanitation, transport, electricity, and access to healthcare, education, work, and food.

As the new settlement is 30kms away from their old site, both men and women have lost their livelihoods. As a result of this people have become economically poorer than before. Lack of income and employment opportunities has increased alcohol consumption rates which thereby have increased crime rates within the community. Emerging crime rates pose huge safety threat on women. Due to lack of public transport, it has become impossible for women to travel at nights. There are no schools/*anganwadis* in the new settlement as a result of which many children's education has been stopped. Basic services such as water and sanitation facilities are also substandard causing threats to lives of people.

Summary of key findings

16 households were interviewed in resettlement colony Seva nagar Madhurvada and some of the findings from the interviews are

- Four members is the average HH size of the family.
- Of the total 16 households, 11 HHs are male headed, 3 are women headed HHs and rest 3 HHs are headed by the eldest son
- 10 out of 16 respondents have mentioned that they used to live in a joint family before relocation
- Of the total family members in 16 HHs, 5 family members are illiterate, 4 persons have graduated till middle school, 5 of them have education till matriculation level
- 11 persons have reported that they have dropped out of the school. Among the 11, 5 said they have dropped out of the school because of financial reasons and 3 dropped out as they got married.
- Average no. of working members in a family is one person and Rs. 5000 to Rs 6000 is the reported monthly average household income.
- Of the total respondents, 14 are involved in informal jobs. 4 people work as drivers, 3 are involved in household work. Some of the other reported livelihoods are ironsmith, tailors, vendors, cleaners.
- Two respondents have an alternate/additional source of income

- Of the total 20 respondents, 5 of them wanted their kids to become police officers, 2 of them wanted their kids to get educated and get into government jobs.
- 13 out of the total 16 respondents have been living here between 1 and 5 years.
- According to the observations, 12 houses have reinforced cement concrete roofs, 13 houses have walls made with burnt bricks with cement mortar. 12 houses have plinths above road level.
- Asset ownership: Out of 16 HHs interviewed, 15 of them mobiles, 15 of them have gas connections, 13 HHs own television, 2 HHs own two wheelers and 3 HHs own four wheelers.
- Of the 16 HHs, when asked whether they want a new house from the government, 6 of them wanted a house in-situ, 8 are okay with relocation.
- 7 families have said that they approached government, but there was no action from the government while 4 approached the community/local organisation.
- 13 out of 16 HHs have bank accounts and 11 of them said that they have opened one in the last two years. 11 HHs have reported that they have opened after the government introduced the zero balance bank accounts scheme and 3 HHs have opened for saving money.
- 7 out of 16 respondents save money either for health reasons of children's education
- Of the total sample, 11 respondents said that they have voter ID, 12 respondents said they have Aadhar card, 7 respondents of them said they have BPL card and 2 HH have APL card.
- When asked about the health issues, 7 families have reported that they face problems with regular fever and cold, 6 of them reported water and vector borne diseases, 1 of them reported body pains and arthritis.
- 8 out of 16 respondents said that the hospital is located within 5kms from their location and 12 of them avail private transport to reach hospitals.
- One household has differently abled members in the family.
- Three HHs have said that they have life insurance.
- Eight HHs have health cards

- Different types of shocks faced in the households were – alcoholism, relocation, health issues and financial loans and high interest rates, lack of work opportunities.

Services

- 13 out of 16 respondents complained about housing in the settlement. Most people felt that the houses are too cramped.
- 15 respondents said that the transportation facilities are very poor. The site is a few kms away from the main road and even from the main road the public buses aren't frequent.
- 15 respondents mentioned that the water quality is very bad and there have been some deaths within the neighbourhood due to poor water quality.
- All respondents have access to toilet
- All respondents had access to electricity but 6 among them complained of frequent power cuts.
- There are no schools/*anganwadis* in the vicinity. Post relocation the school dropouts rates have increased.
- There are no hospitals or markets in the vicinity.

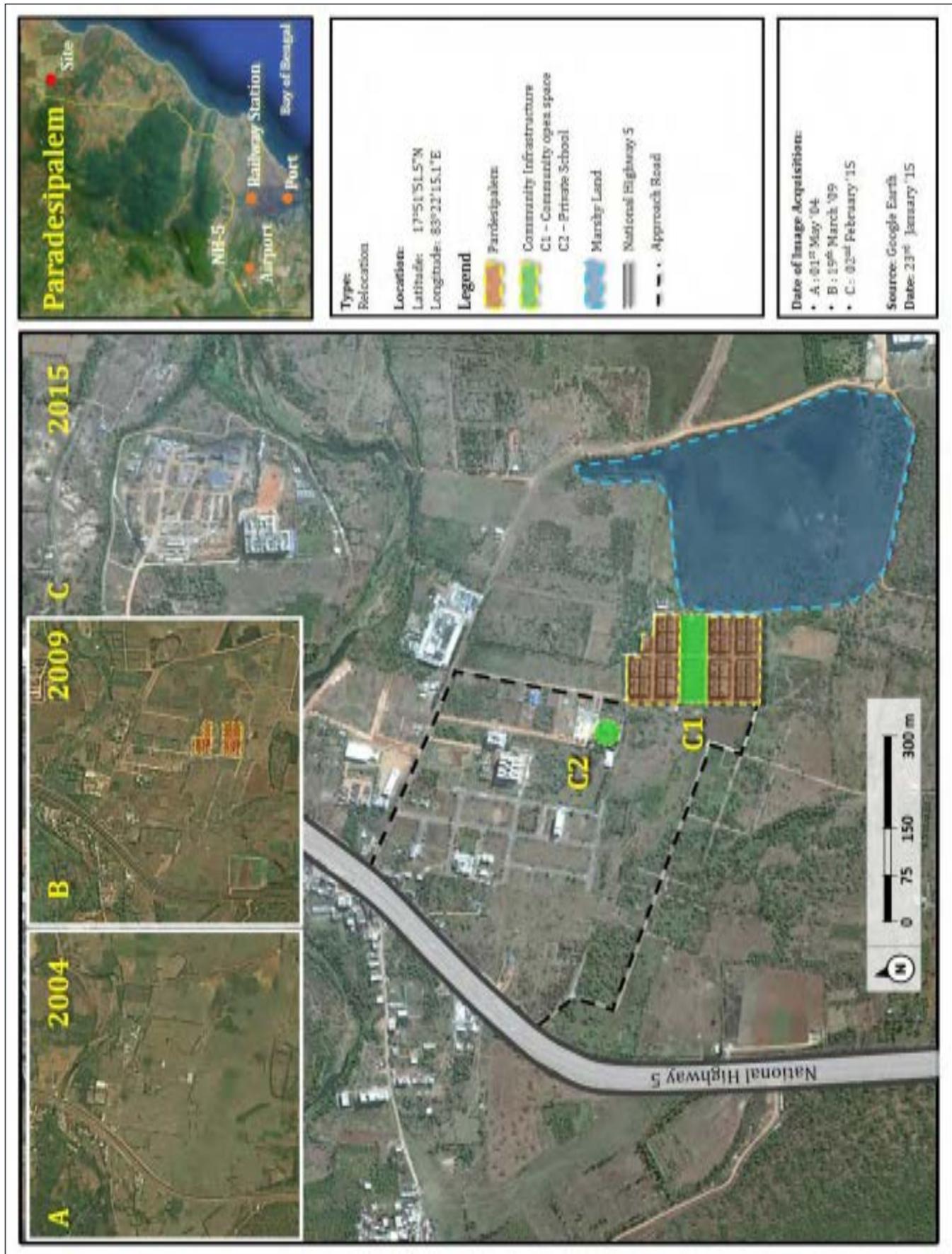
Livelihood/economic activity

- 15 out of 16 respondents said that they have faced serious livelihood issues post relocation.
- 7 respondents have said there are no job opportunities and that their travel expenditure has increased from Rs200 per day to Rs500 per day.
- 12 out of 16 respondents have mentioned that their savings have reduced post relocation or they unable to save.

Three important things for household/neighbourhood

- 4 out of 5 female respondents have asked for job opportunities, adequate water supply and health card.
- 7 out of 11 male respondents have asked for job opportunities, affordable transportation facilities and better infrastructure facilities.

Paradesipalem



Summary of Settlement - Paradesipalem		
A	Project level Characteristics	
A1.	Type of Project	Resettlement
A2.	Type of Risk Management	Combination of pre-emptive and corrective
		The decision making and implementation was taken in early 90's.
A3.	Nature of Planning	Planned with risk measures
A4.	Level of planned participation	Part of decision-making process
A5.	Motivation/Nature of Hazard	(a) Development
		(b) Low-intensity High Frequency events
A6.	Level of attribution of CC to hazard frequency and intensity	Medium
A7.	Primary Decision Maker	Combination of Government and beneficiaries
		Government is quite dominant during whole planning and implementation process. Beneficiaries consent was taken before allocation of relocation site.
A8.	Distance between old and new locations	25 to 30 km
A9.	Time between decision and implementation	More than 2 years
A10.	Time taken to complete the project	More than 5 years
A11.	Age of the project (time since completion)	5 to 10 years
A12.	Size of the Project	Large (more than 500 HH) (928 HHs)
A13.	Nature of dividing the population	Different parts of settlements moved together to one place
A14.	Financing Sources	Contribution of funds from the central and state government including the beneficiaries.
B	Original Settlement level characteristics	
B1.	Type of land tenancy	None of them has a legal house certificate or occupancy certificate. Families we spoke to said they use to stay in rented house.
B2.	Age of settlement (before the move)	More than 10 years
B3.	Size of the settlement	Dwellers moved from different locations of the city/ state and have been living in the city since their forefathers.
B4.	Most dominant nature of livelihood options for HH	Mixed nature of income activities which includes travel between 1 and 5kms and more than 5kms for work
		All the families use to stay near their workplaces and some use to work as auto drives, travel in the city.
B5.	Level of Hazard Risk Exposure	High
		People who lived in kutcha houses faced frequent damages to the house, work and household related assets.
B6.	Type of Urban form	Varied – Families have moved from several locations to the relocation site
B7.	Levels of social infrastructure distinguished by provider	Varied – Families have moved from several locations to the relocation site

B8.	Strength of social networking	High Strong networks between, for example: the watch repair association, auto repair association, sweepers association etc.
B9.	Most dominant form of family structures	a) Nuclear family with male or female head b) Joint family with male or female head.
B10.	Use given to abandoned site	Not applicable.
C	New settlement level characteristics	
C1.	Level of hazard exposure	Low All the syntex water tanks on the roof were blown away during the cyclone. Open drains are not wide enough which would overflow during heavy rains.
C2.	Type of land tenancy	Certified as occupants. They will be given occupation certificates when after the repayment of beneficiary contribution.
C3.	Type of new Urban form	Cluster housing with G+ 3 structure with respect to JNNURM project standards.
C4.	Level of planning and provisions (Good, medium, minimum, none)	(a) Designed housing – Medium, resident's find quality of house is not good. (b) Roads (Good), people complain about approach road to new site (c) Public Transport (none) (d) Water and Sanitation (Good. Toilets provided at HH within the project. Drinking water is collected from common source which is a public tap provided in an each lane.) (e) Electricity (Good) (f) Schools (none – though there is a private school. Most of the kids have been sent to government school located 20–30 km away from new site) (g) Hospitals or health centres (Good – could only access by walk or private transport) (h) Marketplaces (None – located more than 5km away - could only access by private transport)

Profile

Population and Demographics: Paradesipalem relocation site is a conglomeration of people who moved from Akkayapalem, Maduravada, Allipuram, Pedawaltair, Adharsh Nagar, Arilova, Bharati Nagar, Boyapalli and a few other different locations of Visakhapatnam. The families relocated were living the city for more than 50 years before relocation. There are total of 928 dwelling units constructed in relocation site. As of 2015, of the total 928 units, 927 units are allocated to beneficiaries and of which only 480 houses are occupied (GVMC, 2015a).

These households are nuclear families with an average of 4 to 5 members. Respondents said that they moved as group and along with joint/extended family members. Families we spoke to said that they have relocated voluntarily, and they also said that they have formed

a resident groups for operation and maintenance of services in the relocation site. These aspects make the Paradesipalem study area distinct from any other site.

Paradesipalem colony is currently located in ward no 5. According to Census of India (2011).

- The ward consists of 43,744 persons and accommodates 11400 households.
- Of the total population, 8.11 per cent people belong to Scheduled Castes and 1.5 per cent people belong to Scheduled Tribes.
- About 65.5 per cent of the total population are literates. Of which, 28.9 per cent of them are male working population and only 9.5 per cent are female working population.

- More than 39.3 per cent of the families have an average household size of four and above.
- 62.6 per cent of them own the houses and 36.4 per cent of them are renters.
- 42.2 per cent of the houses have access to treated drinking water source. 31.9 per cent people depend on hand pump and 17.3 per cent people depend on tube well or bore well.
- 30.9 per cent of the total HHs has water sources within premises.
- 94.4 per cent of the houses have electricity connections.
- 80.7 per cent of the houses in the ward have latrine facilities in their premises, of which 12.2 per cent of the houses are connected to piped sewer system and 64.9 per cent depend on septic tank. In the remaining 20 per cent, only 1.4 per cent use public toilets, and the rest 17.9 per cent defecate in the open.

Livelihoods: The nature of livelihood of beneficiaries is self-employment and highly dependent on daily wages. Most of the dwellers work as auto drivers, daily wage labour, barbers, cobblers, butchers, own watch repair shops, cooks, domestic workers and other services. Post relocation many of them couldn't continue to

Image 43: A mobile breakfast shop located in Paradesipalem



engage in alternative or additional income activities because of the distance to the city from the relocation site. Particularly women who used to engage in activities like domestic work, stitching, maid at schools and colleges,

Image 44: Water leakage from sewer lines



vegetable vending, cooking etc., which were accessible within walk-able distance in their previous location. These activities used to serve as an alternate source of income during off season for the households. But with the relocation they lost their work and for the families who are working after relocation, there are additional costs for travel.

There are strong networks and associations between work groups. For example all the auto drivers and watch repair workers have their own worker unions. These networks support members in finding an opportunity to work during off season, and also conflict resolutions.

Social and Physical Infrastructure: Leakage of sewer lines, dampness on walls, overflow of open drain during heavy rains, damaged water tanks are some of the problems reported by the residents. Some residents who live on upper floors said that carrying water to upper floors is a problem.

Image 45: Damaged water tanks are dumped in a space between the two blocks



There is a private school nearby. Most of them do not send their kids to that school, as they cannot afford the school fees. There is no government school close by, and children have to travel more than 20kms daily to attend the school. There is no marketplace close by, residents use private transport to access market facilities. Most of them mentioned that before relocation they used to have easy access to all public services like private or government hospitals, medical shop, school, college, markets and most importantly workplace.

There is poor maintenance with respect to water supply. Residents complained about bad water quality and water colour. Existing overhead water tanks are not hygienic enough, so many of them stopped consuming water available from the HH level taps. Now, everyone use public taps and hand pump for drinking purpose. All the HHs use toilet facilities provided at in the individual units.

Public or private transport services is a major concern for residents here. This affected their livelihoods and daily needs and other activities, especially for women. According to the residents, all of them especially children and women face problems accessing the site at night as there are no streets along the approach road. There are street lights in the site, but most of them are not in working condition.

Socio-natural shocks: There were no serious impacts of cyclone Hud-Hud in the relocation site. The water tanks got damaged in the cyclone and it took few weeks for the government to replace them. There was loss of income for more than two weeks and work related assets such as auto and temporary sheds were damaged.

Among the surveyed households, most of them said that they don't feel safe in the relocation site, especially for children coming from school and for working women as it gets difficult to commute during the night from the approach road to the relocation site. They also said they frequently spot snakes in the access road and in the neighbourhood. There are also instances that women have stopped sending their daughters to schools because of increased travel and safety issues.

Most of them had networks to access informal financial sources, which they lost after relocation as they lenders wouldn't trust because of their distance to the city. With only half the units occupies, the services are not being provided by the government, which they would be provided after all the units are occupied. Residents said even some of the units that are allotted are lying unused as the beneficiaries are still living in the city because of livelihood reasons or own another house.

Decision making processes:

Objectives and project components: In 1983, a state level independent party formed a government for the first time in Andhra Pradesh. Respondents stated that their expectations on the new administration motivated them and many other people from all over the city to approach the government. The agenda was to make a representation concerning their need for housing. In 1994, the government decided to provide housing for families below poverty line. However, this was significantly delayed and the beneficiaries were allotted housing in 2014. 20 years after of the beneficiary identi-

cation. The housing units were built under the JNNURM project completed in 2012, and allotted in 2014.

Beneficiary selection: In the year 1994, the state development housing corporation conducted surveys for identifying beneficiaries. This exercise was to understand the status of their living conditions and the level of affordability to decide whether they were eligible for the new housing. The project was limited to the families living within then city limits and having BPL card. Families without a BPL card even if their low income level were not included in the beneficiary list. Migrants living within city limits who had voter identity were included in the beneficiary list.

Along with the identification details, housing status was one of the key criteria for eligibility – only families living in *kutcha* houses were eligible (here semi *pucca* houses with asbestos roof were not considered). Types of assets were another aspect of enquiry. A check was done to know if a person had a gas stove, vehicle, television, furniture and other assets related to work.

Institutional organisation: The state housing board was responsible for the construction of the units and the allocation of the houses was done by GVMC Urban Community Development Department. The level of people's participation was very minimal during the decision making process in the form of representations made by people to government.

State housing board officials and Zonal commissioner held a consultation where beneficiaries could choose a site from among Paradesipalem in Madhuravada, Pendurthi or Parvada. The reason given by the residents for selecting this particular site over others in their words - *Madhuravada Paradesipalem seemed to be a good option as it is located near to highway and we believed that the government would provide us with a bus transport facility so that we could travel easily to our workplace*.

Implementation challenges

It took nearly 20 years for the beneficiaries to receive the housing after they applied in 1994. Changing governments and delays in decision making and implementation are the reasons for this delay. Families we spoke to said that even though the construction of units were complete, the infrastructure was not provided for many years. As of now, only 480 houses are allotted. Most of the people among the surveyed sample, moved 6 months back before the primary survey was done. They said after the change in the government in 2014, the infrastructure was provided and they were allotted housing.

Budget and resettlement costs: A beneficiary contribution for each unit is decided at Rs.69,000. To confirm

their allocation, families were required pay Rs.23,000 in the beginning and the remaining Rs.46,000 can be paid in instalments after relocation. Once the families pay the specified amount, they will be provided with an occupation certificate. For those who couldn't afford the amount, the government associated with banks provided loans for the beneficiary contribution. In this case, families will get certificate once they repay the loan amount.

Aadhaar card has been made mandatory for the application process, which was introduced recently by the government, and which wasn't the case when they applied. Families who didn't have the Aadhaar card, had to apply for this to get their housing unit.

Relocation costs for beneficiaries: Some of the additional costs to the beneficiaries because of the relocation are :

- Extensions/modifications in the new house – storage spaces for example
- A few families borrowed money to pay house instalments
- Some of the families pay rent for the year in advance in the houses they were staying before relocation, because they moved to the new house, they were not able to recover the advance rent that they paid.
- Costs for relocation. Some of them are still repaying for the loans they have taken for relocating to the new site
- They had to bear the costs for repairs and cleaning of the site, as the site was unoccupied for few years after construction.

Outcomes

- Most of the respondents stated that their livelihood got affected for various reasons. Some of the reasons given are
 - Workplace being 20–30 km away from relocation site.
 - No proper public or private commuting services which couldn't support them to travel to city on regular basis.
 - Increased expenditure on travel- approx. Rs60–80 every day. In this case they couldn't rely on public transport because they need to reach early to the market.
 - Loss of networks and connections. For instance, after relocation, a person's networks with regard to the dry fish business were taken

by someone else who has been involved in selling dry fish.

- Nearly 50 per cent of the houses are yet to be allotted. Of the allotted housing, some of the housing units are still unoccupied, because of this the families living in the site are unable to get the services that they are eligible for, as a part of the project.
- Some of the respondents said that some beneficiaries are not willing to move because a) there are no services available in the new site b) lack of new livelihood opportunities c) they have paid rents in advance and will be in loss if they move before the end of the agreement.

Key questions of inquiry

- What are the opportunities available for women after relocation? How has it affected their daily activities at household level? Their access to work within walkable distance made them more independent and were an earning member of the family. They have stopped working or earning less because of the opportunities available in the relocation site
- Who is benefiting in the whole process? Is the city losing out on the services provide by the families after relocation?

Site Survey Summary

12 respondents were interviewed at the Paradesipalem site. Below mentioned are the key findings of the primary work.

- The average household size of an each family is four persons. With an average of one person as a working member.
- There are ten men headed families and two female headed families.
- Of the surveyed population, eight of them never attended school. six of them attended only till primary level which is from 1st to 4th class. nine of them completed middle level education (5th–7th class) and ten of them completed matriculation level. One of them has non-technical diploma or certificate not equal to degree.
- From the overall sample population, 17 members have dropped out of school. Of which, seven persons mentioned financial issues as a reason to drop out from school. Three of them said marriage is one of the reasons to drop out from school and rest of them mentioned lack of interest.
- Of the 14 working members, 11 have been involved in informal income activities. And rest of them have been involved in formal income activities.
- Three of them have an alternate source of income.
- None of the respondents migrate for work.
- Seven respondents want their children to be well-educated and work in formal jobs.
- *Asset ownership:* of the total 12 samples, 11 of them own a mobile, 9 of them own a television. None of them own four wheeler vehicles, four of people own a bicycle and only two of them own two wheeler vehicles. Seven respondents own work related assets. Seven of them own furniture and other electronics such as fan, refrigerator etc., ten households use gas connection for cooking, four respondents have furniture and, only 2 households own work related assets.
- Everyone has access to bank accounts which were opened as part of government initiated scheme (Jhan Dhan Yojana – financial inclusion scheme) or to receive compensation. Of which, five of them mentioned that he/she would save at home and rest of them wouldn't save regularly. Most of them would prefer to save for kid's education, health, kid's marriage, future and livelihood.
- According to them, transportation facilities, school and suitable work opportunity nearby are the three important things at community level.
- Out of twelve families, only eight families have Aadhaar card and seven families have Voter Id card and seven families hold BPL (Below Poverty Line) card. Of the eight families, four of them receive pension.
- Of total 12 samples, seven respondents mentioned common cold & fever related health issues. Only one respondent mentioned BP, diabetes, gastric, asthma, cancer, & cardiovascular problems and, one mentioned body pains & Arthritis.
- Out of the 12 respondents, two of them said that women do face specific health issues such as backache.

- Of the total surveyed, five responded that he/she access hospital by walk.
- Out of 12 respondents, only two people hold life insurance and none of them have nonlife insurance.
- Out of 12 households, six families have a health card. However, most of them have not used it till now.
- Types of shocks faced in the household level are
 - Women headed families
 - Health issues
 - Evictions, and
 - Lack of livelihood options and safety nets.

Related to post- Hud Hud (Cyclone)

- Of the total surveyed, two of them responded that the government announcement was the source of information about Cyclone/warning. Six of them mentioned television or radio and, three of them mentioned neighbours/relatives.
- With regard to extent of damage created after Hud-Hud - Eight families stated that there was no damage to their house and rest of them stated as partial damage to roof.
- Out of the total respondents, five of them received universal compensation in the form of money and other goods such as tarpaulin sheets, solar lantern etc., and three families received standard package (500 rupees + 50 kg rice).
- Of the total households, eight of them faced problems accessing drinking water. Everyone faced problem to access power supply. And six of them mentioned lack of access to commuting services. Five of them stated that they could not send their kids to school.
- Out of total samples, three of them faced losses related to household assets. Six respondents stated that there was a loss of pay, as they couldn't work.
- Most of them responded that they carried/saved food and documents during Hud-Hud, 2014.
- Six of them stated that they would stay in the same place, if there's a warning of a cyclone in near future and only one responded that they would move to safer place.

- With regard to actions of people – 10 of them responded that they wouldn't take any action; if there's a cyclone every year/long term adaptation.

Related to Resettlement

- Of the 12 households, 10 of them responded an increase in travel expenditure after relocation
- Of the total population, three of them changed their work after relocation. Of which, two of them mentioned an increase in the distance to workplace and another one said that they had retired.
- Of the relocated, six of them responded as satisfied with the new house allocation and five of them mentioned as not satisfied. Rest of them did not respond.
- Six of them responded as rented house/paying high rent. And, two of them responded as *pucca* house which is safer from climate related hazards.
- Land Ownership details of current residences – Everyone hold occupancy certificate.
- Of 12 houses, ten houses are in the name of female and other two houses are in the name of male.
- Land ownership before relocation – None of them had any kind of ownership status.
- Everyone responded that hand pump and public tap have been the sources of drinking water even before and after relocation.
- *Prevalence and use of toilets* – of the 12 respondents, only one of them said that they defecate in the open before relocation; post relocation everyone has access to household level toilets.
- *Problems living in current location* – seven of them said livelihood, two said quality of housing, five of them said household level drinking water connections, 5 of them said power supply, four members said education, three of them said disturbed community networks, and five of them said leakage of sewer lines, lack of enough street lights and no access to public transportation
- *Benefits of living at the current location*- one said livelihood, six of them said no rent/own house, five of them said living in a *pucca* house, three said good water supply, three of them said power connections, two said health and two said community.

- *Problems faced at the original location* – three of them said lack of good opportunities, 10 of them said high rent, six said their own house, three said drinking water supply and two said open defecation and one of them said education and health.
 - Of the 12 surveyed, six of them indicated a reduction in family income.
 - Of the 9 surveyed, six of them responded that older family members used to live together before and not after and only three responded as no change.
 - Almost everyone used to live in rented houses before relocation.
- there is increase in travel costs to workplace, to send their kids to school and colleges, to access market and hospital.
- The above relationship also explains the effect on their savings. Almost everyone has access to sources such as bank account, local saving groups etc. They claim that they don't save regularly, the amount of money they earn mostly goes into food and non- food expenditure and clearing past debts.

Key findings

- The need to own a house with ownership certificate and to be safe from climatic hazards are the reasons for voluntary relocation despite knowing post-relocation impacts on their livelihoods.
- According to beneficiaries, having own house would help build their physical capital and would increase their savings. They believed that money they used to spend on rent would feed into their savings, this was the common response given by the women during the interviews.
- In 1994, when the government enquired about house condition, the elder ones in the family were identified as beneficiaries. This has affected the family members who are now between the age of 25 and 45 and who have moved out after marriage and have no houses to stay now.
- *Entitlements:* A bank account needs to be opened to start the payment process, which requires set of documents for proof of identity and residence. In India, the Aadhar card has become mandatory to claim the ration card or any other services from government. As some people don't have an Aadhar card, they can't get a ration card. As a result of this, they can't open a bank account to begin the payment process.
- Increase in the distance to workplace and a change in livelihood networks has been showing a proportional relationship with a) increase in expenditure, b) No livelihood opportunities to earn in the new site and c) loss of alternate/additional source of income as well. Especially women couldn't continue to work as they did before. Their earnings used to serve as an alternate source of income at the household level. Of the surveyed samples, many of them stated that

Peda Jalaripeta



Summary of Settlement - Peda Jalaripeta		
A	Project level Characteristics	
A1.	Type of Project	Relocation (proposed)
A2.	Type of Risk Management	Corrective / Post impact
A3.	Nature of Planning	Planned with risk measures (proposed)
		Pre-fab construction techniques are proposed for the construction.
A4.	Level of planned participation	None as of now
		Families do know about the proposed project, but none of them know who will be the beneficiaries for the project and site of construction. They may be involved in the long term maintenance, but are not involved in the decision making process.
A5.	Motivation/Nature of Hazard	Post extreme climate event – Cyclone Hud-Hud
A6.	Level of attribution of CC to hazard frequency and intensity	High
A7.	Primary Decision Maker	Government – Andhra Pradesh State Government
A8.	Distance between old and new locations	Relocation site is yet to be decided
A9.	Time between decision and implementation	More than 1 year - Project is still in planning stage and implementation is yet to be initiated
A10.	Time taken to complete the project	Not Applicable – project yet to start
A11.	Age of the project (time since completion)	Not Applicable – project yet to start
A12.	Size of the Project	Medium (100–500 HH)
A13.	Nature of dividing the population	Yet to be decided
		The project is still in its planning phase therefore it is difficult to assess the nature of dividing the population until the project is announced.
A14.	Financing Sources	(e) Contribution of funds from different sources including the beneficiaries
		Funds donor contribution government contribution and some beneficiary contribution
B	Original Settlement level characteristics	
B1.	Type of land tenancy	Occupational rights for few families and some families don't have any explicit/legal rights
B2.	Age of settlement (before the move)	More than 10 years
		During out site visits it was mentioned that most of the families have been living in this location since their forefathers.
B3.	Size of the settlement	Large (more than 500 HH)
B4.	Most dominant nature of livelihood options for HH	Predominantly fisher-folk
		Few men also involved few into daily wage work, self-employed and auto drivers)
		Women travel 0–5 km for work (housemaids and selling fish)
B5.	Level of Hazard Risk Exposure	High
B6.	Type of Urban form	Organic

B7.	Levels of social infrastructure distinguished by provider	Poor - with contribution from public fund
		Few houses in the neighbourhood have individual tap connections and the neighbourhood is also connected with few public taps. There are few drains in the locality which get drained into the sea. The locality completely lacks sanitation and solid waste management facilities.
B8.	Strength of social networking	High
		Very high predominance of fisherman community. Though there are various sub castes, the community in totality is identified as fishermen community.
B9.	Most dominant form of family structures	Nuclear family with male or female family heads
		During the site visits it was observed that both men and women are part of any major decisions taken in the family.
B10.	Use given to abandoned site	No use planned.
		As the relocation is still in planning stage, no use has been planned for the current site which is not yet abandoned.
C	New settlement level characteristics	
C1.	Level of hazard exposure	Location of the new site is yet to be decided
		In term of housing units, with proposed pre-fab construction, the families would be less vulnerable to wind speeds. However exposure to floods and other related hazards will depend on the location of the site
C2.	Type of land tenancy	Yet to be disclosed
		The relocation project is in its planning stage and the type of land tenancy is not yet disclosed.
C3.	Type of new Urban form	G+3 Structures
C4.	Level of planning and provisions (Good, medium, minimum, none)	Proposed – All the housing units will be provided with basic services such as roads, electricity, water and sanitation facilities are being provided. But provision of public transport and, schools and hospitals and marketplaces is yet to be known.

Profile

Population and Demographics: Peda Jalaripeta, a highly dense residential neighbourhood located in the 17th ward of Greater Visakhapatnam Municipal Corporation. Peda Jalaripeta is one of the oldest settlements in the region. Peda Jalaripeta predominantly is fishing village and is considered to be the second largest fishermen settlement after Pudimadaka village. Over time, Visakhapatnam city grew around Jalarpipeata and is now a part of the city. 'Jalari' is the most predominant caste in the neighborhood. Some of the other communities are Mala, Chakali (dhobi) and Reddy that reside in Peda Jalarepeta.

According to the Census of India, 2011,

- Total population of the ward is 26,262, and 6731 households.
- 6.5 per cent of the total population of ward

belongs to Scheduled Castes and Scheduled Tribes. 67 per cent of the ward populations are literate and 36.5 per cent of them are employed.

- 4 per cent of the houses have thatch/grass/bamboo/wood as the material of the roof, 9.5 per cent of the houses have handmade tiles as the material of the roof, 2.9 per cent asbestos, and 76.5 per cent have RCC roof. 36.8 per cent of the houses have walls made of burnt bricks and 4.8 per cent of the houses have walls with mud/unburnt brick.
- 34.4 per cent of the families have an average household size of four, 19.2 per cent of families have an average family members five
- 53.7 per cent of them own the houses and 44.4 per cent of them are renters.
- 39.4 per cent of the houses have access to treated drinking water while 2.1 per cent have

access to untreated drinking water. 54.9 per cent depend on tube well or bore well.

- 71.5 per cent of the houses have water sources within their premises.
- 97.9 per cent of the houses have electricity connections.
- 84.3 per cent of the houses in the ward have latrine facilities on their premises, of which only 1.9 of the houses are connected to a pipe sewer system and 79.6 per cent are connected to septic tanks. 13.3 per cent use public toilets

However, the census data was collected before these people were relocated and from the sections below we might be able to compare what the existing services that are being provided are, or if the services have improved or deteriorated over the past few years.

Livelihoods: The predominant form of livelihood in Jalareipeta is fishing. A few people in the neighbourhood also work as daily wage workers such as in welding and construction related work. Most of the women in the neighbourhood we spoke to said that they work as housemaids in the nearby locality in the mornings and sell fish in the afternoon.

Traders come to the neighbourhood to buy fish and fishermen go to fishing harbours to sell fish which is nearly 10kms from the site. Fishermen on a daily basis earn Rs 300 to Rs 400 from fishing, and on the days with good

catch they earn up to Rs 3000 in one day. During one of the discussion the fishermen complained of reduction of fish in the sea due to mechanised fishing activity which was recently permitted by the Government. Due to reduction of fish catch and fishing is becoming a very risky job, fisherman now are educating the younger generation in a hope that the younger generation enter the formal job sector, but a few fishermen want their kids to enter the sea for fishing because there are no jobs available for educated youngsters. From the surveyed sample one person was found to be with disabilities and said that there were not many job opportunities to support his family due to his disability, but responded positively to be receiving special incentives under Arogya Sri Health program run by the state.

Other than fishing the neighbourhood have a few small scale home based businesses (such as selling dry fish), grocery stores and other small shops. A few youngsters in the neighbourhood have started owning and running auto rickshaws which act as support to their main fishing activity. They also use them to transport the fish catch to the harbour which is nearly 8kms from the current location. After the cyclone Hud-Hud fishermen in the neighbourhood have faced losses to their fishing boats. Some of them are still trying to recover from the loss. There is a mandatory fishing ban every year for a span of three months, during which the government pays compensation to all the fishermen.

Social and physical Infrastructure: Peda Jalaripeta has *pucca*, *semi pucca* and *kutchha* houses in all. However, while houses in the interiors are *pucca* and *semi pucca*, *kutchha* house are located along the coast. These *kutchha* houses faced maximum damages after Hud-Hud. In the late 1980s a housing drive took place in the neighbourhood where nearly 200 houses have been provided occupational certificates to the residents. During the household survey nearly four households have said they have occupational certificates. When asked if they want a new house, many respondents that they prefer in-situ and a few said that they are willing to relocate for better house.

The neighbourhood has a school and *anganwadi*. The school in the neighbourhood was primarily used as a cyclone shelter by the residents during Hud-Hud. The neighbourhood is well connected to small private medical facilities in the nearby localities and also is well connected to the city government hospital.

The neighbourhood is well connected to the city. All the road in the neighbourhood are paved cement concrete or asphalt top roads. A bus depot is located adjacent to the neighbourhood which connects the neighbourhood with rest of the city.

Image 46: A street in Jalaripeta



Image 47: Sulabh toilet complex in the neighbourhood



A few houses in the locality have piped water connections and there are also public taps and hand pumps in the neighbourhood. Only a few houses have toilet in their houses, and most of them defecate in the open. There is a paid public toilet near the coast. It wasn't functional for

many years and was repaired after the cyclone. All the waste water is let out into open drains flowing directly into the sea without any treatment. Solid waste management is also a major concern, as much of the waste is dumped into the sea.

Image 48: Solid waste being dumped on the ocean



Peda Jalaripeta has a few religious institutions close to the sea and also has a semi open community area which is used by the residents for community gatherings and fishermen use the space to weave fishing nets during the day. There is no jetty for the fishermen. They anchor their boats on the beach.

Active participation of NGOs and other private bodies is seen in the neighbourhood towards provision of social and physical infrastructure. It was learnt that the primary school in the neighbourhood was constructed by the Hong Kong Shanghai Banking Corporation under their Corporate Social Responsibility program. After Hud Hud it was learned that many NGOs have visited the slum and provided relief material to the neighbourhood.

Socio natural shocks: Most houses close to the shore are *kutchra* and are often and the most affected by cyclones. People consider cyclones and floods as major risks as it affects their livelihoods and most people find it economically very hard to recover from the damages faced during these extreme events. From the primary survey, all the respondents said that they have faced damages to their housing structures. Eight houses faced complete damage and two houses faced partial damages after Hud-Hud. It was found that people with partial damages spent Rs 2,000–Rs 5,000 in reconstruction and people with complete damages spent Rs 10,000–Rs 2,00,000 towards reconstruction of their damaged houses.

Fishermen dying in the deep sea during fishing are a big shock for a few families. All the family income is dependent on fishing and such accidents, affect the whole family with loss of an earning member. It was also said that the affected families didn't receive compensation as they couldn't provide proof of accident.

The fishermen said the amount of catch is reduced after the government issued licenses for mechanical boat fishing. Fishermen who go into the sea in smaller boats are affected because they can't go deep into the sea. They also said with increase in number of fishing members in the community and lack of fish in the sea, it is forcing the new generation to move out of the community in search of jobs

A few years back a huge fire broke out in the neighbourhood which caused damage to lot of houses in the neighbourhood. It took many years for the community for reconstruction. From the primary survey it was found that there were no major disease outbreaks in the community.

Decision making processes:

After the cyclone, the Government of Andhra Pradesh with support from donors, proposed to build housing for the cyclone affected families under the NTR Housing Scheme. The cost of the each unit is decided as Rs. 4 lakhs. The NTR Housing Scheme is also linked with the Swatch Bharath Abhiyan under which the toilet cost will be funded. The funding pattern for the houses is below:

The predominant livelihood of the families in Jalaripeta is fishing and related activities. Relocating them would affect their livelihoods and with intervention of local elected representative, the government decide build houses in-situ in an identified site within Jalaripeta.

As Jalaripeta falls under the coastal regulations zone, special permissions from the CRZA were also acquired after the site was identified and the technical team from Andhra University were consulted for the structural design.

The state government decided to build these houses with pre-fab construction techniques instead of conventional RCC structures. The reason was that the pre-fab construction would take only six months from beginning to the completion of structures, whereas the RCC structures will take 18 months for construction.

The cost for pre-fab construction is higher (Rs.1350 per sft) compared to RCC (Rs.1300 per sft). With the intention of giving houses to affected families at the earliest, pre-fab techniques house was chosen for construction of houses under this program.

Beneficiary Selection: 400 Houses are allotted in Jalaripeta for the NTR Housing Scheme. As per the guidelines issued by the district collector, the guidelines for the verification of the beneficiaries are i) BPL families

	Source	Amount
1	Government Contribution	Rs. 1,78,000
2	Donor Contribution	Rs. 2,00,000
3	Beneficiary Contribution	Rs. 10,000
4	Swatch Bharath Abhiyan	Rs. 12,000
	Total	Rs 4,00,000

affected in the cyclone and received compensation from the government ii) Identified beneficiary and spouse should not have a *pucca* house iii) Beneficiary should be Aadhar card and White BPL card holders. Iv) Beneficiaries should not have been covered in any earlier schemes v) sites identified under rehabilitation will be maintained by the local bodies after completion. Once final, the list of the beneficiaries will be made public.

Implementation challenges:

Though Peda Jalaripeta is one of the oldest neighbourhoods of the city, there were no major housing programs that was implemented here, which leaves us with few questions

- The political and administrative inaction in upgrading the housing condition in the neighbourhood though there have been various programs such as BSUP that have been implemented in the city and the lack of mention of Peda Jalaripeta under these schemes, though the neighbourhood having few houses in the risk prone area needs more investigation.
- The neighbourhood falls under the coastal regulation zone and the decision of providing housing under the Memu Saitam rehabilitation program, which is still under planning phase, and the fact that the current site is directly connected to the livelihood of the neighbourhood needs more investigation on how the constrained circumstances are impacting the decision making process.
- Though the neighbourhood represents a large section of the population of the ward (nearly 91 per cent), lack of proper solid waste and sanitation facilities in the neighbourhood needs to be studied in greater detail. This is to determine reasons for lack of proper management of services in such high density ward which is leading to the present outcomes.
- From news reports it was learnt that, in the past, some people after being allocated a new house in a different location have resisted the move and returned to Peda Jalaripeta after renting out the provided housing facility. Therefore, the design of relocation or upgradation project for the residents of Peda Jalripeta in particular needs more public acceptance and participation at the decision making level. Hence it is suggested that people participation must be mainstreamed for the current housing scheme which is still in the planning phase and consider people voice for better outcomes of the project.
- If relocated, decision on what the vacated land should be used for has to be decided at the beginning of the project.
- As per the current decision of relocating the population from a risk prone zone and providing safe housing for the selected population may be conflicting as in the process, there is a large population which is being left out in the risk prone site. It would be important to know the government's action to safeguard the neighbourhood in terms of risk reduction, considering the importance of the neighbourhood in terms of its income generating capacity for the city through fish trade and also the strong livelihood connection the neighbourhood has with the current risk prone site.

Outcomes

As the project is still in its planning phase the challenges and outcomes are yet to be seen. However a few possible challenges and questions needs to be addressed and they are as follows.

- The site falls in the Coastal Regulation Zone, the decision of provision of housing in the same location can face possible roadblocks during the implementation phase of the project. Therefore such roadblocks have to be reduced during the design and decision phase by taking Coastal Regulation Guidelines in to consideration.
- Availability of suitable land in the nearby regions can be a possible roadblock in the implementation as nearby areas are covered with residential and institutional areas.

From a few news reports, it was learnt that previously there has been a resistance from the community to relocate to housing provided by the government. Therefore acceptance from the community to relocate to the new site is critical for better outcomes.

Summary of findings

A total of 10 households were interviewed in Peda Jalaripeta and some findings from interviews are:

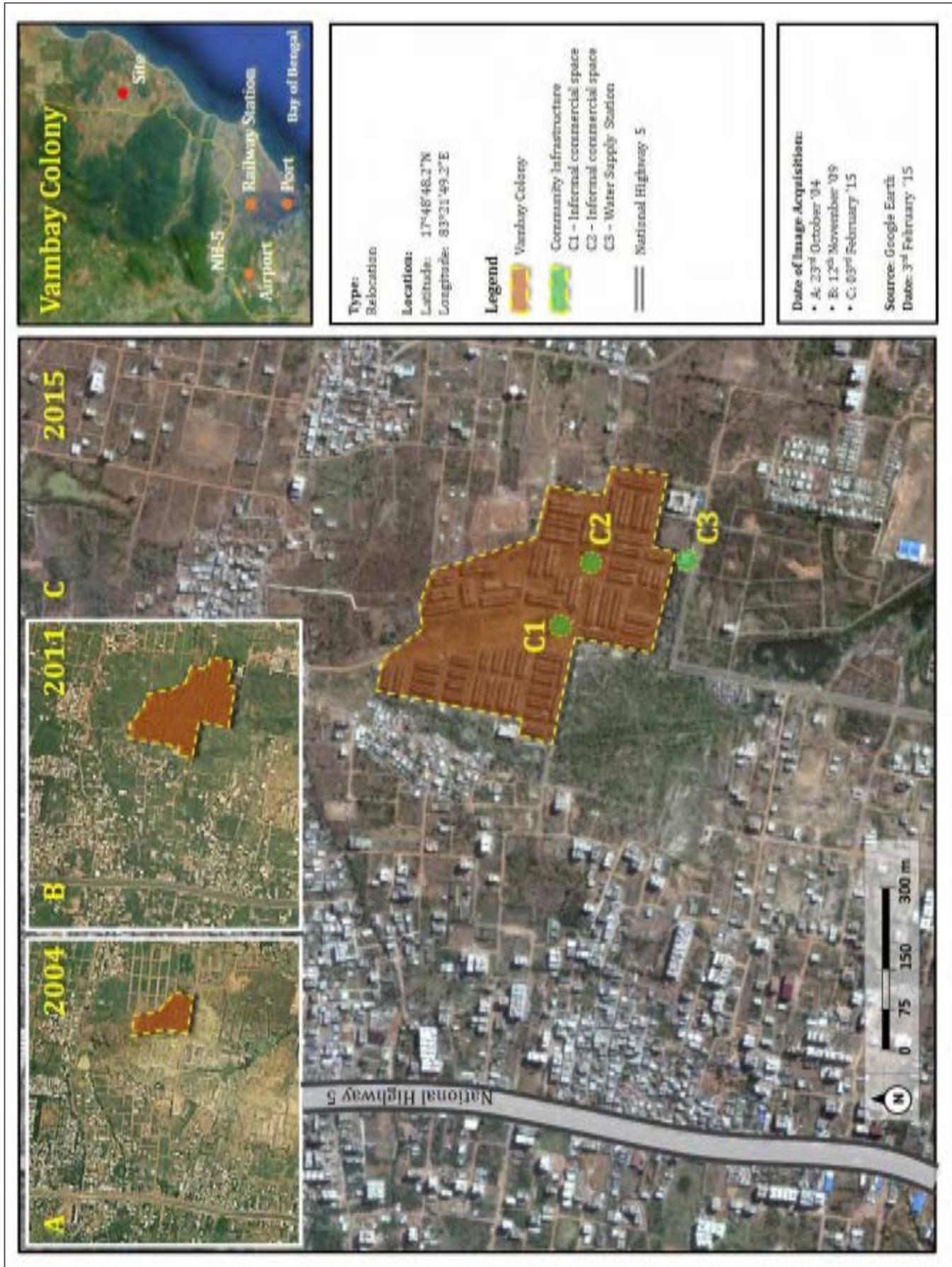
- Four members is the average HH size of the family
- In four households women take decisions and males are the major decision takers in the rest of the six houses from the surveyed sample

- Eight members from the interviewed samples are illiterate and one person completed his graduation and one sample has completed his matriculation.
 - Three from the sample have stated financial reasons and one of them has stated family related reasons for not receiving education.
 - On an average, every household has two working members and it was observed that three families have only one earning member in the family
 - Four of the surveyed do not working and two are fishermen. Two others are involved in household work, one person has responded is self-employed and other is a barber.
 - Two of the surveyed have an alternate source of income and eight others are dependent on one primary source of income
 - When asked what they would like their children to do, four members from the sample want their children to get educated and enter the formal job sector and one person wants his children to continue in fishing activity.
 - Three of the surveyed have been living in Peda Jalaripeta for nearly 50 years and remaining seven have been living in the current site for more than 50 years.
 - It has been observed that seven households from the surveyed sample are living in temporary thatch structures and two houses have asbestos roofs and one house has a RCC structure. Five houses from the seven thatched houses have mud walls and one house has burnt brick walls with cement mortar and one house is seen to have asbestos/ plastic as its wall material
 - *Asset ownership:* Six households from the surveyed sample use gas stove for cooking and four houses possess furniture and six families have television in their houses. five houses holds possess to have other electronics like fan/refrigerator and three households own work related assets.
 - None of the surveyed own livestock and have responded of not having livestock even before relocation.
 - Nine respondents from the surveyed have opted for a new house of which six respondents have opted for In-Situ upgradation.
 - When asked why they required a new house, four of the surveyed said that their house was not strong enough, two of them because they did not have a *patta* house and one cited lack of space in their current house.
 - Out of 10 respondents eight have taken action in approaching officials for a new house, out of which six people approached government officials and requested for a new house and one approached the political representative for a new house and all of them said that there was no action by either.
 - Nine out of those interviewed have a bank account of which four accounts have been opened under the zero bank account programs and two respondents have opened an account for compensation and only two respondents have opened accounts for saving purposes.
 - Strong house, house title, suitable work opportunities, good school and good health facilities are the three most important things that the household needs
 - *Entitlements:* Six out of the interviewed sample have voter ID cards, five have aadhar cards, four HHs have BPL cards, one receives old age pension and one women is receiving maternity benefits
 - When asked about frequent health issues, four of the respondents are affected by common cold and fever frequently, three suffer from body aches and arthritis frequently and one faces vector borne diseases frequently.
 - Only one from the surveyed sample responded of having trouble in reaching the hospital and stated financial reason for the same.
 - Of the surveyed sample, one person has permanent disability and is availing special incentives
 - None of the surveyed have insurance of any kind and four respondents possess a health card out which one person had a chance to use it.
 - When asked about other shocks in the family lack of livelihood shocked two persons, for one person, it was a reduction in their fish catch and for one it was alcoholism.
- Event related questions:**
- 8 out of the 10 surveyed knew about Hud-Hud in advance out of which five knew about the cyclone through government announcements, two from TV/ radio, and one through neighbours

- All the interviewed respondents have reported damages to their houses out of which two have claimed partial damages to their houses and one faced partial damage to their roof and others have reported complete damage to their homes.
- 7 out of the 10 surveyed population have responded of receiving compensation out of which 5 have received standard compensation
- All the respondents faced trouble in water supply after the cyclone for more than two weeks, and all the respondents had no access to electricity for more than two weeks
- Six from the sample have faced damages of property such as boats/nets and couldn't go fishing for more than two weeks and this caused them a loss of Rs 10,000– Rs 1,00,000/-
- 9 out of the 10 respondents have sought help after the cyclone, from which four people approached their relatives for help and two members approached money lenders and other institutions for financial help and one approached the government for help. One person has approached their relatives seeking for a place to stay after the cyclone
- When asked what they would do if there was a cyclone warning in near future, six of the respondents said that they would move to a safer location and carry their documents, food and clothes along with them. Others said that they would not leave their homes.
- Five of the surveyed have issues with insufficient livelihood options and housing in the current location.

Five of the surveyed said that livelihood options was the benefit of the the current site.

Vambay Colony



Summary of Settlement - Vambay Colony		
A	Project level Characteristics	
A1.	Type of Project	Resettlement
A2.	Type of Risk Management	Not applicable – done in the context of development as part of the slum improvement program and affordable housing program for the urban homeless.
A3.	Nature of Planning	Planned with Risk Measures – RCC structures prevented the damage during Hud Hud cyclone. High plinth to prevent damage from floods.
A4.	Level of planned participation	No Participation – People were moved here after the construction of housing units and do not have any local committee/ resident association for maintenance of housing and infrastructure. Few blocks have residents contributing once in few months for cleaning of septic tanks.
A5.	Motivation/Nature of Hazard	Floods – some of the households were moved from low lying areas that get flooded every year.
A6.	Level of attribution of CC to hazard frequency and intensity	Medium
A7.	Primary Decision Maker	Government – GVMC and APSHCL - houses were allotted after the completion of the project and in some cases moved by force
A8.	Distance between old and new locations	More than 5 km
A9.	Time between decision and implementation	More than 2 years
A10.	Time taken to complete the project	Project was implemented between 2000 and 2005
A11.	Age of the project (time since completion)	More than 10 years
A12.	Size of the Project	Large (more than 500 HH)
A13.	Nature of dividing the population	Different settlements in their entirety moved together to one place – HHs from various location in the city moved to one place.
A14.	Financing Sources	Contribution of funds from different sources – Government funding and beneficiary contribution (7000)
B	Original Settlement level characteristics	
B1.	Type of land tenancy	DKCS – Families have moved from different location to one place
B2.	Age of settlement (before the move)	DKCS – Families have moved from different location to one place
B3.	Size of the settlement	DKCS – Families have moved from different location to one place
B4.	Most dominant nature of livelihood options for HH	Travel 0–5 km for work.
		Mostly families were living close to their work locations.
B5.	Level of Hazard Risk Exposure	High – Living in temporary structures – thatch/asbestos roof structures that cannot resist high cyclone wind speeds.
B6.	Type of Urban form	DKCS – Families have moved from different location to one place
B7.	Levels of social infrastructure distinguished by provider	DKCS – Families have moved from different location to one place

B8.	Strength of social networking	Low
B9.	Most dominant form of family structures	Nuclear family with male or female family heads
B10.	Use given to abandoned site	DKCS
C	New settlement level characteristics	
C1.	Level of hazard exposure	Medium – With poor construction quality and no proper maintenance, structures may suffer damages in case of floods and cyclones.
C2.	Type of land tenancy	Owned – Once they complete their beneficiary contribution, they will get the patta)
C3.	Type of new Urban form	Multi-storeyed structures with high density
C4.	Level of planning and provisions (Good, medium, minimum, none)	(a) Designed housing – (Minimum – not all the housing units are maintained well – roofs chipping off and window shades falling in some blocks)
		(b) Roads (Good – CC roads provided – but much after the housing was completed)
		(c) Public Transport (Medium – Few buses come to the area, but only started many years after occupation)
		(d) Water and Sanitation (Minimum or Poor – Most of the septic tanks are overflowing with no proper maintenance by the residents)
		(e) Electricity (Good – all the houses have connected – but connections were provided years after occupation)
		(f) Schools (Minimum – Some have to go the main city for good education – travel distance around 20 kms one way)
		(g) Hospitals or health centres
		Marketplaces (Minimum – People rely on local stores for basic needs. For others they have to travel 10 kms one way)

Profile

Profile and Demographics: Vambay housing colony has a populations of more than 15,000 (estimate). It is located in Ward No.5 in Zone -1 of GVMC area. The construction of housing units were completed in 2004 and allotted to the beneficiaries in 2005. There are a total of 57 small and large blocks of G+2 pattern. The small blocks contain a total of 36 units (12 per floor X 3 floors) and bigger blocks contain 72 units (24 per floor X 3 floors). All the residents are relocated from different parts of the city over the last 10 years. Most have them been relocated from different locations, from more than 10 kms away to the new site. While there are original allottees still living here, some of them have sold their units and some units are given out for rent. There are few housing units that are still vacant and are yet to be occupied/allotted.

According to the Census of India, 2011,

- Nearly 10 per cent of the total population of ward belongs to scheduled castes and scheduled tribes.
- 65 per cent of the ward population are literates and 38 per cent of them are working population.
- 99 per cent per cent of the census houses in the ward are used as residences. 11.3 per cent of the houses have thatch/grass/bamboo/wood as the material of the roof, 1.2 per cent of the houses have handmade tiles as the material of the roof, 8 per cent asbestos, and 77 per cent have RCC roof. 32 per cent of the houses have walls made of burnt bricks, 47.9 per cent have walls made of stone packed in mortar, 5 per cent have walls made of stone not packed in mortar, and 6 per cent of the houses have walls with mud/unburnt brick.
- More than 50 per cent of the families have an average household size of five.
- The total population of the ward is 43744, and 11400 households.

- 63 per cent of them own the houses and 36 per cent of them are renters.
- 42 per cent of the houses have access to treated drinking water, 7 per cent have water from untreated sources. 32 per cent depend on hand pump and 17 per cent depend on tube well or bore well. Only 31 per cent of the total HHs have water sources within their premises and 54 per cent have source of water near their premises.
- 94 per cent of the houses have electricity connections.
- 80 per cent of the houses in the ward have latrine facilities in their premises, of which only 12 per cent of the houses are connected to piped sewer system and 65 per cent depend on septic tank. In the remaining 20 per cent, only 2 per cent use public toilets, and the rest 18 per cent defecate in the open.
- 45 per cent of the total HHs in the ward have bank accounts.

Livelihoods: People from all income backgrounds and livelihoods live in the site. The families here are involved in daily wage labour, contract labour, small shops and some regular wage. In the last 10 years, housing units on the ground floor, especially the ones facing to the main road have turned into small shops. Along with this

there are also street vendors and they sell vegetables in evening markets. The daily wage workers, contract labour and construction workers still depend on networks from their previous locations for work. If they get a call from contractor or their contacts from other areas, they go for work otherwise stay at home. Some of them have told us that there is no work opportunities available in the new location.

Social and Physical Infrastructure: All the residents we spoke to said that they have access to all kinds of services and it has improved over last few years. But it was pointed out that the infrastructure was provided many years after the houses were occupied by them.

Hand pumps were the only sources for water for the first few years. It especially was big problem for the families living on first and second floors. After a few years the water connection was provided at the building level to the overhead tank. Connection costs to the individual units have to be borne by individuals. Those who could afford the costs have piped water connection and rest of them either share water from neighbours or source it from the public tap or hand pump. For drinking water, a few families told us that they rely on water cans and the quality of water is not good for drinking

All the households have toilets at the unit level. In most blocks, residents pool in money once in few months and get the septic tanks cleaned. However, in a few blocks, the septic tanks are clogged or overflowing, and the

Image 49: Community centre. A community water tank can be seen in the left of the image



toilets are not functioning. The residents in these blocks either defecate in the open or use public toilets. There is a sewage treatment plant and water supply station plant located at the site

As a part of the project, concrete roads, electricity services, street lights were provided, but were implemented years after the housing. All the roads in the site are paved with cement concrete. There is decent transport access to other parts of the city and main markets. Most of the residents depend on private transport for commute—either their own vehicles or auto rickshaws. There are few bus services that operate during the day, but mostly during morning and evening hours. However, during emergencies or other part of the day, residents have to go to the highway nearby for getting transport access to the main parts of the city.

Residents depend on local medical stores and doctors for regular illnesses. But for serious emergencies and health services, they have travel for a minimum of 10–15 kms. Primary and secondary level education for the children is accessible for the areas nearby. For higher education and colleges, students have to travel a minimum of 10kms. There is also a community centre in the site.

Socio - Natural Shocks: None of the houses have suffered serious damages by the cyclone. The water supply was affected for more than two weeks. The electricity connection were restored between 1–2 weeks in most of the houses after the cyclone. No public transport or other transport services available for about a week after the cyclone. Education and livelihoods were affected because schools and work places were closed for almost a month.

Decision Making Process

Objectives and project components: The VAMBAY housing scheme was implemented as a part of the slum improvement program and for providing affordable housing for the poor in Visakhapatnam. Nearly 8000 housing units were built between 2000 and 2005 in Visakhapatnam city under the VAMBAY Scheme. The project consists of both voluntary and involuntary relocation.

The land for the project was allotted by the housing department. Based on the amount of land available, the number units were decided at each location. The units were built by the APSHCL. The beneficiaries were decided by the District Collectorate and GVMC and the allotment was done by Urban Community Development Department (UCDD), GVMC. According to the UCDD officials, the beneficiaries of the VAMBAY housing scheme were, slum dwellers on untenable lands, families living in huts from various parts of the city, EWS families applied under affordable housing scheme, families affected by road widening/land acquisitions and few other catego-

ries. Some of the relocated families were from Rajiv colony and Lakshmidivi Peta in Visakhapatnam. Both of these sites are affected by floods every monsoon and did not have access to any services.

Implementation Challenges

- Lack of basic services in the initial years may have delayed occupation of houses by the beneficiaries and may have forced people to move out.
- Maintenance of the services is the responsibility of the individual family. Residents think of infrastructure as public asset and none of them take responsibility.
- In most of the blocks, cement plasters on the floor, wall and the roof are chipping off. The concrete window shades are broken. Even though the houses are built with permanent materials, with poor construction quality and lack of regular maintenance, most of the blocks are in bad condition.
- Some blocks are still lying vacant even after 10 years of construction. Either the families were not convinced to move to the new location in spite of being provided housing and other infrastructure or there are gaps in the beneficiary identification and allotment.
- Motivating and increasing community participation for maintenance of infrastructure and other public services is still a challenge.

Outcomes

Of the families we spoke to, some of them were positive about the housing and some were not satisfied. Some of the observations from the site are

- Families have gained access to infrastructure services over last few years, which may not have been the scenario if they were still residing in the old place.
- The provision of services has definitely improved the quality of life in the residents, which may not have been the case, if they were still living at the old location
- Ownership of the house is the biggest advantage of the project. Even though the title is not transferable, original allottees have sold the units and moved elsewhere.
- Relocation has definitely affected the livelihoods of the families, but over time, people have either

found other opportunities or have made adjustments. Those families who could not adapt to the new location have sold the units or given them out for rent.

Site Survey Summary

A total of eight HHs were interviewed during the primary survey and some of the key findings from the survey are

- The average HH size of the family is four members
- Of the eight samples, three HHs are headed by women, three HHs are headed by men and two respondents said they take decisions together as family.
- Of the total family members in the eight HHs, 23 per cent are illiterate, 8 per cent have received primary education, 23 per cent have studied up to middle school, 35 per cent are educated till matriculation, 3 per cent have received higher secondary/intermediate education/ non-technical degree and 3 per cent are graduates.
- Of the sample, nine members said that they have dropped out of school, of which eight persons said they have dropped out because of financial reasons.
- Average no. of working members in a family are two persons and Rs.13,300 is the reported monthly average household income.
- Small shops, small businesses, cooking, driving, electrician, iron smith, mechanic were some of the responses, when asked about their livelihoods.
- Two respondents said that they have an alternate source of income.
- Of the sample, none of them or members of their families migrate for work, and when asked about willingness to migrate to other areas if given a chance, one respondent said that they are willing to move if there is work.
- Two respondents said that they aspire that their children to get educated and get a job, while two others said they will support whatever their children want to do.
- Of the samples, three HH's were living in the same city/town/neighbourhood for more than 50 years, four HHs between 10–50 years and one HH between 1–10 years.
- All the houses in the relocated site are G+2 RCC structures.
- All the HHs surveyed own gas stoves. five out of the eight HHs said they have a TV, and all of them have mobile phone connections. Two HH's said they own a cycle, one HH has a two wheeler and none of them have own fourwheelers.
- Of the sample, when asked if they wanted a new house from the government, all of them said yes. Of which only one HH preferred insitu, four of them wanted to relocate and three of them said they wanted a house—either in-situ or relocation. When asked about the reason for wanting a new house, six of them said they were on rent and wanted a house of their own.
- All the HHs interviewed have bank accounts, of which four of them said that they have opened bank account as part of the new zero balance account program—Pradhan Mantri Jan Dhan Yojana, three responded saying that they have opened bank accounts for savings and one said for receiving government benefits.
- Of the sample, when asked about the reasons for saving, three of them said that they would save for their kids' education, six of them for health reasons.
- Piped water and adequate water supply, work opportunities nearby, house title, health care facilities and access to markets were some of the responses, when asked about the most important things needed for them.
- Six out of the eight samples said that they have Voter ID and Aadhar Card, one HH has BPL card and one HH has APL card.
- Common cold and fever are the health issues reported by four HHs, and one HH reported that one of the family members was affected by paralysis.
- Of the sample, we found one HH with a differently abled family member, and during the allocation, they were not allotted a ground floor unit and was given a house on the second floor. Climbing to the second floor is an issue face by this family member. When asked about government assistance, they said they don't receive any kind of government assistance.
- Three out of the eighth surveyed said that they have life insurance and none of them respondents said they have taken either non-life insurance or

the new Pradhan Mantri Bhima Yojana, All the three families said that they have taken insurance after relocation.

- Five HHs said that they have health cards and two of them said they have used the card for treatment before.
- Deaths in the family is reported as the main shock in the family. One of the respondent said that she lost her husband a few years after relocation and it is difficult for her to take care of the family on her own.

Findings related to the effects of cyclone

- Six out of total eight HHs surveyed said that they had an early warning about the cyclone. Of the six HHs, five of them said they heard from TV/radio and one HH heard from government announcement.
- 6 out of 8 HHs said that they have faced damages in the cyclone. The damages reported were damages to sun shades and other external damages to the house. None of the houses suffered roof or wall damage.
- When asked about compensation received post cyclone, 3 HHs said that they have received standard compensation package of money and rice, 1 HH said they have received goods like tarpaulin, solar lantern etc, and 2 HH said they have received money after damage assessment or after perusal.
- When asked about the services after cyclone, 6 HHs reported problems with drinking water, 3 HH said they face problems for defecation. All the HHs said there was no electricity for almost a week after the cyclone. 4 HHs said their kids' education was affected after the cyclone.
- Seven out of the eight surveyed, said they have suffered losses at work. The losses were because either the work place was either shut or lack of access. The HHs who owns small shops said they face loss because of the damage to the shop and the goods. One person who works in a small shop as accountant said she was paid salary for that one month, so she hasn't suffered any losses.
- Two out of the eight HHs said their HH assets were damaged in the cyclone and three respondents said their work related assets were damaged.
- All the HHs stayed in their own houses as they were RCC structures.
- Three HHs said that after cyclone they sought help from friends/relative/neighbours for money. Two HHs said they have borrowed loan and one of them are still repaying.
- When asked about actions they would take if there's a warning of a cyclone in near future, only one HH said they will move to a safe shelter and five HHs said they will stay in their own place.
- When asked about actions they would take if there's a cyclone every year/long term adaptation, one respondent said they will move permanently to a safer location, and four HHs said they will still stay in the same place and not move permanently.
- All the families were relocated to at least 20kms away from their original site.
- All the HHs reported increase in travel expenditure after relocation.
- Of the total members of the relocated families, nine members changed their work after relocation and four members said they were involved in the same work even after relocation.
- Of the total sample, four HHs said that they have moved as community to the relocated site, and four HHs said only their family moved to the relocation site.
- Of the eight relocated families, six HHs said they are happy with the new house and two HHs said otherwise.
- When asked about the reasons / motivation for relocation, four HHs said getting a house of their own is the main reason. Higher rents/ saving on rent were also mentioned as the reasons for willingness to relocate.
- All the beneficiaries are only given occupation certificates. They are not allowed buy or sell the allotted units. However, it was observed that some families have sold the houses at higher prices.
- Six out of the eight families said that they have *patta*/certificate for their house. Of the total six, three of them owned by men, two of them are in the name of the women and 1 house is jointly owned.

- None of the families owned land before relocation. They were either living on rent or were illegally occupying the land.
- All the beneficiaries were allotted houses in the relocation site, constructed by contractor.
- In the relocation site, of the eight samples, for water, four HHs depend on public tap/hand pump, and four HHs have piped water connection.
- All the HHs interviewed have access to toilets in their house. When asked about access to toilets before relocation, six of them said they had access to toilets and two HHs didn't have access to toilets and were defecating in the open.
- When asked about the problems they face, one HH said that quality of housing is a problem in the relocation site, three HHs said they face problems related to water, three HHs said they face sanitation related issues, one HH reported electricity related issues, four HHs said they face health related issues, one HH said kids' education is also an issue.
- When asked about benefits of living in their current site, 2 HHs said livelihoods/economic activity is good, 5 HHs said that they save rent in the relocated site, 2 HHs are happy with the housing, 5 HHs said they are happy with water services now, 4 HHs said they are happy with sanitation/toilet services, 5 HHs said they are happy with electricity services, 3 HHs are happy with access to education, only 1 HH responded positive about health and transport services. 2 HHs it is benefits living with community in the relocation site.
- When asked about problems faced before relocation, six HHs said that paying rent was an issue at their previous location, five HHs said they had problems with housing conditions before relocation, three HHs said availability and quality of water was a problem, one HH said they face sanitation related issues. two HHs reported problems with electricity services and health issues.
- When asked about benefits of living in the previous site, six out the eight HHs interviewed said that the livelihood/economic activity was a benefit at the previous location. Two HHs said either less/no rent was an advantage. Three HHs said they had better water and sanitation facilities at their previous location.
- Three out of the eight HHs said they family member living in their previous location.
- Five HHs said they were living in a joint family before relocation.
- Five HHs have said they relatives living in the relocated site.
- Of the relocated, one HH said they are living together with their elder family members after relocation. One HH said they were living with their elder family members before relocation, not after.
- 2 HHs said they have borrowed loans after relocation and one of them said they are still paying monthly instalments.

Key findings

- There are families who were relocated, some of them relocated voluntarily and some them were shifted by force. There are clear differences in the outcomes of these two types. Those who have moved voluntarily have reported positive outcomes like asset creation and house of their own. Families who were moved by force, said they still face problems with livelihoods and other services.
- Families who were allotted house on the ground floor are the most benefitted. Over the last few years, they either have converted their units to small shops or sold it.
- With no access to markets, families have generated livelihood opportunities by providing services to the residents. Now most of the families from nearby localities come here for buying goods and others services,

Pudimadaka



Type:
Relocation

Location:
Latitude: 17°51'51.5"N
Longitude: 83°22'15.1"E

Legend

- Pudimadaka
- Relocation Site
- Community Infrastructure
- C1 - Community centre
- C2 - Panchayath Office
- SEZ
- Pudimadaka road

Date of Inauguration:

- A : 17th March '15
- B : 18th October '15
- C : 16th October '15

Source: Google Earth
Date: 4th February '16



Summary of Settlement - Pudimadaka		
A	Project level Characteristics	
A1.	Type of Project	Relocation (Proposed)
A2.	Type of Risk Management	Corrective / Post impact
A3.	Nature of Planning	Planned with Risk measures
		The new site location is few hundred metres away from the coast protecting the settlement from surge. RCC and pre fab techniques that are used for construction reduces vulnerability to cyclonic wind speeds.
A4.	Level of planned participation	No Participation
		Families have information about the project, but they are not sure of the beneficiary identification and relocation process and project timeline.
A5.	Motivation/Nature of Hazard	Post extreme climatic event
A6.	Level of attribution of CC to hazard frequency and intensity	High
A7.	Primary Decision Maker	Government
A8.	Distance between old and new locations	1–5 km
A9.	Time between decision and implementation	More than 2 years
		Of the total 600 units, only 200 units are under construction. Construction of the remaining 400 is yet to start
A10.	Time taken to complete the project	1 year for the construction of 200 units.
A11.	Age of the project (time since completion)	Not Applicable
A12.	Size of the Project	Large (More than 500 HH) (600 HH)
A13.	Nature of dividing the population	Part of HH moved and scattered in different locations
A14.	Financing Sources	Combination of funds from government, donor funding and beneficiary contribution
B	Original Settlement level characteristics	
B1.	Type of land tenancy	Government land
B2.	Age of settlement (before the move)	More than 10 years. Have been living for many generations
B3.	Size of the settlement	Large (more than 500 HH)
B4.	Most dominant nature of livelihood options for HH	Predominantly fishing
B5.	Level of Hazard Risk Exposure	High – Located on the coast and is exposed to cyclonic risks and storm surges
B6.	Type of Urban form	Combination of Cluster and Row Housing – Low rise - high density
B7.	Levels of social infrastructure distinguished by provider	Poor – provided by the government – Not all the houses have access to services direct to their houses.
B8.	Strength of social networking	High – not a very close knit community, but families with same livelihoods have strong networks
B9.	Most dominant form of family structures	Nuclear family with male or female family heads

B10.	Use given to abandoned site	Not applicable – only infrastructure up gradation is proposed
C	New settlement level characteristics	
C1.	Level of hazard exposure	Low – With the new location a few hundred metres from the coast, the families are less exposed to storm surges. With RCC and pre-fab structures the houses are safe from the cyclonic wind speeds
C2.	Type of land tenancy	Non-Alienable
C3.	Type of new Urban form	G+1 Structures – Low rise – High density
C4.	Level of planning and provisions (Good, medium, minimum, none)	(a) Designed housing (Good)
		(b) Roads(Good – new settlements will be connected with concrete roads to the old village and the coast)
		(c) Public Transport (None – Will have to the main highway few hundred metres or go to the old village bus stop)
		(d) Water and Sanitation (Good – All the houses will have piped water supply and toilets)
		(e) Electricity (Good)
		(f) Schools (Same as before)
		(g) Hospitals or health centres (Same as before)
		(h) Marketplaces (Same as before)

Profile

Profile and Demographics: Pudimadakha is a coastal village located south of Visakhapatnam. It is one of the oldest settlement in the region and families have been living here for generations. It is located in Achuthapuram Mandal, Visakhapatnam, district of Andhra Pradesh. The cyclone Hud-hud in 2014 caused a land fall near Pudimadakha.

According to Census of India (2011)

- The total population of the village is 9912 persons and 2412 HHs.
- Only 38 per cent of the total population are literates
- 38 per cent are total working population of which 28 per cent are male working population and 10 per cent are female working population
- 60 per cent of the houses have grass/thatch/ bamboo/wood/mud and 26 per cent of the houses have concrete roofs.
- 52 per cent of the houses are made of mud/ unburnt brick walls and 26 per cent have walls made of burnt brick in cement mortar.
- 70 per cent have the houses are one room dwelling units and 23 per cent are two room dwelling units.

- Nearly 70 per cent have average HH size of 4 or more persons.
- 96 per cent of the houses of the houses are owned and only 3 per cent of them are rented.
- 36.5 per cent of the households have access to treated drinking water
- 85 per cent of them have electricity connections and 15 per cent of them rely on kerosene lamps.
- Only 9 per cent have latrine facility at home and 91 per cent of them defecate in the open

Livelihoods: Fishing is the predominant livelihood in the village. Only a few hundred families are involved in other professions like having ration shops, grocery stores, etc. Some fisherman also work as daily wage workers. Only the older generation is involved in fishing activity, the younger generation is getting educating and want to move into other jobs and are not interested in learning fishing. However, when we spoke to the young men, they were complaining about not having jobs for the educated, so they are unsure of what to do in the future. Even the parents do not want them to fish.

Fishermen here go into the sea on smaller boats unlike Vishakhapatnam, where they fish using big mechanised boats and even stay in the sea for days together. In Pudimadakha they don't have jetty to park bigger boats. With small boats they are unable to travel deep into the

sea for fishing, because of which they do not earn as much as they fishermen do in Visakhapatnam.

The government bans fishing for two months, August and September to help fish reproduce. In these months they get financial support and ration from the government. Fishing activity also gets affected during big events that are related to the naval base and also during the cyclones.

Many families own fishing assets like boats ropes and nets. Men who don't own these assets join other boats and go for fishing. All the fishermen get an equal share of the catch. The person who owns the boat and the nets gets two extra share for the boat and the net.

They also export fish to other parts of the country.

Social and Physical Infrastructure: Of the total houses, more than half of them are made of temporary materials like thatch, asbestos etc. Most of the houses that are made of thatch are located along the coast. There is a four lane road that connects the village to the nearest town Anakapalle. For most of their needs they travel to Anakapalle and Visakhapatnam. There is a primary health centre in the village. They go to local health centre or medical store for the everyday illnesses, but for serious illnesses and emergencies they travel to Visakhapatnam. There are frequent public transport between Visakhapatnam and Pudimadakha. Fishermen store their boats on the coast and do not have jetty for

parking their boats. There are no sanitation and solid waste management facilities in the village. All the houses let the waste water to open drains which gets drained in to the sea. Families also dump solid waste in the drains which also gets into the sea.

Socio-Natural Shocks: Most of the houses in Pudimadakha were affected by the cyclone Hud-Hud in 2014. The houses that are close to the shore were affected by a storm surge. All the roofs with tin/asbestos/ thatch roofs were blown off and boats were damaged. All the houses that were damaged got a compensation of Rs.5000 and compensation was also given for the loss of household assets. All the compensation money was transferred directly to the bank accounts of the beneficiaries. So families with no bank accounts and those who have given wrong details didn't receive any compensation. These families had to go to the officials several times for getting their compensation packages. Many NGOs worked in the village after the cyclone. They provided relief in terms of food and other goods.

Other than cyclone, people whom we spoke to during the survey said their fishing activity is getting affected by the pollution from the industries. They said a new textile industry was setup a few kilometers from the site. They have a built a pipeline a few kilometers into the sea and release all their effluents into the sea. Because of this all the fish near the coast are dying and over time they were not able to catch fish and they had to go deep into the sea for fishing. With the kind of boats they have, it

Image 50: Panchayath Office, Pudimadakha



Image 51: Fish getting prepared for export

is a difficult and time consuming process. They also said it also became more expensive because of higher diesel consumption for travel and their profits have come down. Because of these reasons, they have to now stay in the sea for days together to make it more profitable.

They said they have got a onetime compensation of Rs.1,00,000 and they were offered jobs in the industry. Within a year after they started working in the industry, all of them were removed from the jobs citing lack of necessary skills. They said the families are now scared of the new proposed 4000 MW power plan which could lead more pollution and may also affect their livelihoods more and they also may be evicted. At the time of primary visit, a local NGO hired by the District Administration were conducting surveys to identify persons eligible for jobs in the new SEZ's proposed in the region.

Decision making processes:

After the cyclone, the Government of Andhra Pradesh with the support from donors proposed to build housing for the cyclone affected families under the NTR Housing Scheme.

Beneficiary Selection: As per the guidelines issued by the district collector, the guidelines for the verification of the beneficiaries are:

- BPL families affected in the cyclone and received compensation from the government

- Identified beneficiary and spouse should not have any *pucca* house
- Beneficiary should be Aadhar card and White BPL card holders.
- Beneficiaries should not have been covered in any earlier schemes
- Sites identified under rehabilitation will be maintained by the local bodies after completions.
- Families living in thatch houses on the coast. Once final, the list of the beneficiaries will be made public.

A total of 618 people were identified as beneficiaries for the project. After the verification those who are living away from the coast were excluded from the beneficiary list. So a net of 600 households are identified

Of the 600 units proposed, Infosys offered to build 200 units. Most of the construction of these is near completion. Government is building the rest of the 400 units and infrastructure such as roads, water and sanitation facilities. While Infosys is constructing using conventional construction techniques with reinforced cement concrete, the government is using pre-fab techniques.

The cost of the each unit proposed by government is estimated at Rs.4 lakhs. The NTR Housing scheme is also linked with the Swatch Bharath Abhiyan under

	Source	Amount
1	Government Contribution	Rs. 1,78,000
2	Donor Contribution	Rs. 2,00,000
3	Beneficiary Contribution	Rs. 10,000
4	Swatch Bharath Abhiyan	Rs. 12,000
Total		Rs. 4,00,000

which the toilet cost will be funded. The funding pattern for the houses are as above.

Implementation Challenges

Of the total 600 units, 200 units are under construction by Infosys. Government allotted land for the 200 units at one place and for the other 400, they are constructing in two other locations. Even though the construction of 200 units is near completion, the government will not allot the houses to the beneficiaries till all the 600 units are completed. It is still unknown who will be responsible for the operation and maintenance of the unoccupied units.

When we spoke to the few families, all of them said they have information about the housing but none of them know who is eligible or when they will be relocated.

Families also mentioned that they will be willing to relocate together, otherwise there will be issues within the

community between those moved and those are waiting to be relocated.

With three different locations, families would want to relocate to the nearest site. With strong community networks, families want to relocate together, which may not be the case during the allocation process.

Outcomes

The outcomes of the project are yet to be seen. However, some of the key possible outcomes and key issues that can be looked into are:

- The community is being relocated to three different sites. Social cohesion in the community, will have to be seen in the long run.
- The three relocation sites are a few hundred metres away from the sea. Since most of the families

Image 52: Housing built by Infosys for the Hud-Hud affected families



living on the coast are from the fishing community, the long term impacts of the relocation will have to be looked into.

- It will be studied in the future how the families are affected with the proposed construction of the 4000 MW thermal power project. This may also impact the quality of life and their livelihoods.

Site Survey Summary

A total of five households were interviewed. These are the key findings from primary work.

- The average HH size of the family is four members. On an average, each family has two working members.
- Of the surveyed, three households have a male member heading the family and, two households have female members heading the family.
- Of the total 21 members from five households, more than 50 per cent of them are illiterate, 14 per cent have primary level education and 5 per cent have completed middle school education. 19 per cent have received education till matriculation and 5 per cent are graduates.
- Of the people who attended school, only 2–3 people have dropped out of school, because of financial reasons.
- The nature of livelihood is informal. Almost everyone is involved in fishing, which has been most predominant practice and none of them have an alternate source of income.
- None of the respondents or other members of their families migrate for work.
- Of the surveyed, two respondents aspire that their children get educated and get a job. One of them preferred that their child continue with fishing and another one wants his/her children to work in nearby industries.
- Four of the five surveyed have been living in the same city/town/neighbourhood for more than 10–50 years, of which, one of them said that they have been living in the village for over 5 years. And, one of them for more than 50 years.
- Of the five surveyed, none of them own two or four wheeled vehicles or cycles. Only one of them own work related assets and furniture. Two of them use gas stove for cooking and, three households said they have TV and mobile phone as well.
- When asked if they need a new house from the government, all of those surveyed said yes, and all of them prefer to have in-situ housing.
- Everyone surveyed have bank accounts and they gave different reasons for opening one—to receive government benefits for work, to receive compensation, and opened as part of zero balance account under PMJDY government scheme. Among them, most of them prefer to save for their children education, house and future.
- Suitable work opportunities nearby, piped water and adequate water supply, school and house legal certificate are the most important things for them at the community level.
- Of the samples, most of them have access to Voter ID, Aadhar Card and BPL card and none of them have access to pension, maternity benefits and APL card.
- Common cold and fever are the health issues reported by two HHs. One of them mentioned water borne diseases, and other one mentioned BP, Diabetes, Gastric, Asthma, Cancer, and Cardiovascular problems.
- One HH out of the five stated that they have life insurance and took that before Hud Hud. None of them have either access to life insurance or knew about Pradhan Mantri Bhima Yojana.
- Only two households out of five have health cards and none of them have used it till now.
- Of the five households, two respondents use water cans for drinking purpose. Two of them use a public tap and one of them uses a hand pump. None of them have access to toilet facilities at the household level and they defecate in the open.
- *Problems living in current location* – Three of them responded that they faced issues with respect to livelihood and economic activity. One of them said rent and everyone mentioned housing. Four of them mentioned water supply and sanitation. Two of them said electricity, and three of them mentioned health.
- *Benefits of living at the current location* - Three of them responded that livelihood and economic activity were the benefits. None of them mentioned anything apart from livelihood.

Findings

Related to effects of cyclone

- Everyone said that they had received an early warning about the cyclone. Of which, four of them mentioned that the government announcement was the source of information, and only one mentioned TV/radio as source of information.
- Of the total surveyed, everyone has faced damages during Hud Hud. Of which, three of them reported complete damage to house, walls and roof, and the rest of them mentioned that there was a partial damage to walls and complete damage to their house roof.
- Of the total samples, everyone received post cyclone compensation, of which, four households said that they received standard compensation such as money, rice and universal compensation such as goods like tarpaulin, solar lantern etc. Of the four households, two of them said they received compensation after damage assessment.
- When asked about the services after cyclone, everyone said that they faced problems related to access to drinking water. Most of them managed to buy water and two of them said that they had saved water before. Four HH said they faced problems with respect to space for defecation. All the HHs said there were no electricity and commuting facilities for more than two weeks after the cyclone. Four HHs said their kids' education was affected for more than a week.
- Everyone stated that their fishing activity was affected for more than 2 weeks after Hud Hud, and, they lost fishing related assets, where the loss in amount has been more than Rs.10000.
- Everyone reported damage to household related assets. Four households out of five spoke about damage to work related assets and only one, about damage to other related assets.
- All the households stayed in their houses during Hud Hud.
- Of the total surveyed households, two households said that they have taken help from friends/relative/neighbours for money after Hud Hud and, two households said they have borrowed money from a lender for an interest. Everyone stated that they are still paying those debts.
- When asked about actions they would take if there's a warning of a cyclone in near future, only

1 HH said he/she would move to a safe shelter, the rest of them said they would stay in their own place.

- When asked about actions they would take there's a cyclone every year/long term adaptation, one responded said she/he would move permanently to a safer location, and rest of them said that they would still stay in the same place.

Related to Relocation

- Everyone responded that they want an in-situ house and legal certificate.
- None of them have moved to the new allocated houses. As some of the houses are under construction. Of total samples, 4 of them don't have an access to house legal certificate at the original location and only one of them have a freehold certificate which is in the name of a male member.

Key findings

- More than the cyclone, families mentioned that the impact on livelihoods after the construction of the SEZ is a major shock. Only a one time compensation was provided, however their livelihoods and income suffered in the long run.
- The families we spoke to told us that there are no livelihood opportunities in the village or the nearby locations, even for the educated persons.



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