

Why Participate?

A look at various participatory methods used in the SIFFS Tsunami Reconstruction Project in Tamil Nadu

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May 2005



Author Note

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the abstract

A look at various participatory methods used in the SIFFS
Tsunami Reconstruction Project and the possible motivation
for behind-participation.

'...the house is Man's affirmation in space, his most intimate environment which he must attack to make his own...'

Giancarlo de Carlo, Italian anarchist

'...why do you keep asking me questions? Just build us a bloody house...'

Villager from Chinnankudi

About the Author

Prashant Solanky aged 27, Hindu, UK citizen.

Limitations

The examples in this study come from my personal involvement in a tsunami reconstruction project. It should be noted that as I was an active member of the team, rather than ~~just~~ an observer studying the project, my perspective will ~~undoubtedly~~ be skewed. ~~Very little empirical data was used and~~ My observations, interpretations and conclusions, are based on my personal experience and books I have read.

My beliefs and bias

This paper is heavily influenced by the writings of ~~people like~~ John F Turner, Nabeel Hamdi and Paulo Friere. Turner, has worked for many years in informal settlements around the world, and is an international respected advocate of 'housing by people'¹. Nabeel Hamdi, in his book² further refines Turners ideologies as well demonstrating practical methods of their implementation. Friere, is a revolutionary educationalist, who worked with oppressed communities in Latin America. I am also work as an fledgling architect, and so bring the baggage of this profession with me, all of which will colour my views.

¹ Turner 1976

² Hamdi 1995

The introduction

Participation is one of those buzz words that get bandied about in conferences and plastered all over project proposals. It's a word, an activity, that is seen as inherently 'good'. A lot of time, money and energy is expended in the name of participation. It is a coverall for a range of activities from coercion to devolution of power. **Some Different typesforms** of participation are more suitable for particular situations than others, depending on resources and objectives.

This paper explores participation in the context of housing, in particular the context of housing in post-disaster rehabilitation work. It is based on my experiences working with SIFFS as an architect in their Tsunami Reconstruction Project in Tarangambadi. It highlights particular issues that were raised during the project.

the background – the Tsunami

December 26th 2004, an earthquake off the coast of Sumatra caused a series of gigantic waves. A tsunami, rushed towards the coasts of India, Bangladesh, Myanmar, Thailand, Malaysia, Indonesia, and Sri Lanka. The wave struck ~~the~~ India's east coast at approx. 9am. The wall of water tore through fishing villages dotted along the coast, ~~and~~ ~~a-~~As the waters receded it caused ~~s~~ even more damage. In Tamil Nadu an estimated 6500³ people lost their lives.

~~Aid immediately began to pour into affected areas.~~ The international response was overwhelming with millions of dollars worth of aid pouring ~~into affected areas~~. Entire coastal villages were destroyed. Boats, nets and personal belongs washed away. Emergency action was taken, ~~dead~~ bodies were swiftly ~~dealt with~~ ~~disposed of~~, food, clothes and medicine distributed, and relief camps set-up. NGO's built shelters to temporary house those that had lost their homes. After the initial emergency measures were in place, people began to look down the long road of restoring their lives.

The Indian government welcomed aid from international aid agencies for reconstruction and rehabilitation after the tsunami. Aid agencies were queuing up to support the devastated communities. Food, clothes, health, education and livelihood provisions, ~~everything~~ was donated to ~~the~~ communities. The government gave compensation to families affected by the tsunami: Rs 4000 for households in tsunami affected villages, and Rs 2 lakh rupees (Rs 1 Lakh from the state and Rs 1 Lakh from central) for every ~~tsunami death~~ ~~family member who lost their life~~. Extra boats, new livelihoods, free food, colour TV's, DVD players, cricket bats and

even cold hard cash were handed out by organisations and individuals. In some villages people even hid their new boats so that NGO's would give them a second one!⁴ Though the aid was well intentioned, some of it may, in the long run, have a negative impact on the fishing community. (The distribution of mechanized boats to the fishermen by NGO's, for example, may cause a saturation of fishing boats and a corresponding fall in fish stocks⁵)

The job of housing homeless communities now falls to the authorities. In Tamil Nadu a NGO-led approach to housing reconstruction was chosen. Regulations were drawn up for the location of new houses. There was to be no constructions within in 200m of the coastline. Every household within this boundary was eligible for a new home, in a new location, beyond 500m of the coastline. Those households beyond the 200m line could choose to have their houses repaired, or receive a new house, either in their existing plot or in a new site. All households that received a new house had to relinquish ownership of their old homes, and if moving to a new site, of their old plots as well. However, the regulations were not closely followed in all places.

The government (sometimes with some assistance from NGO's and funders) bought the land for the site of new villages. NGO's received money from funders to build houses. Villages/hamlets were adopted by NGO's who then built all the houses for their particular village. Regulations for un-engineered structures (i.e. structures whose structural integrity does not ~~need~~ ~~had~~ to be calculated by an engineer) were published by the state.

³ pg 44, India Today

⁴ local gossip

⁵ pg 60 Praxis Report, Tharangambadi

the background - Post-Disaster Reconstruction

Reconstructing a village after a devastating disaster is **somewhat different** from a housing project conducted under more normal circumstances. Different pressures and issues are at play, this is especially true in tsunami affected villages where many lives and homes were lost.

Time- it's an emergency, people are living in temporary shelters, in accommodation that falls way below their normal standards. In post-disaster housing projects, there is a sense of urgency, things need to be sorted out and fast. In Tarangambadi this was further exasperated by competition between NGO's- who could build the biggest, most number of houses in the quickest time? Time pressure comes from above and below, from politicians who want votes in time for elections and from the people who have been baked and drowned in temporary shelters for over a year.

Money- Funding rarely comes from the communities themselves. In post-disaster situations people may not be able to continue their normal livelihood activities, they may have lost all their personal assets so may be unable to fund the reconstruction of their own settlement. Therefore, outside funding is a necessity. Outside funds, however, are usually only available in the short-term, and often only for **capital set-up** costs. There are a number of examples, where funds are available for constructing buildings, but very little is available for the staffing and maintenance of the buildings. **Coupled with** outside funding **comes with** outside aims and objectives. Funders will **inevitably** have their own agendas to pursue, which maybe very different to that of the people. If funding comes from state or government sources, there is at some degree of

accountability to the people. **But when** it comes from outside sources, this accountability may not be as strong.

Outside inputs- Post-disaster projects, can be seen as a chance to build 'model' villages. This is especially true for tsunami affected villages, which often had generous funders who were willing to invest in trials with new technologies, techniques and procedures. Agencies look to see **What is the most they can do?; How can they solve all the people's problems?**⁶. Villages may receive new technologies, new ideas, **things it has which they have** never had to deal with before.

NGO's - In Tamil Nadu, NGO's were chosen to implement the reconstruction. For some of these NGO's it may their first time implementing a construction project. For some NGO's it was their first time working with **this** particular community- for some it maybe the first and only time, as after the construction they will leave. For many **NGOs**, the reconstruction project maybe a chance to get access to larger funds and **also to** promote themselves.

The people – The people have been through a traumatic experience and maybe in a vulnerable situation. The villages I **experienced worked with**, had been subject to many different forms of aid. The people had had an influx of outside agencies visiting them, studying them and offering them aid. The people had heard and seen what other agencies were offering other people **setting up expectations and competition**. **However,** there were also, hamlets

⁶ **There is also, perversely, the inverse of this** **The inverse also happens**. Where agencies merely tackle the given problem (lack of a house, lack of training) and then try to solve this problem as quickly and efficiently as possible, without taking a holistic view of their intervention.

| that were not classed as 'tsunami affected' which received little aid in comparison to those that had 'tsunami affected' status.

Tharangambadi and South Indian Federation of Fishermen's Society (SIFFS)

Tharangambadi is a large fishing village located in the South Indian State of Tamil Nadu. 63% of the population of Tharangambadi are fishermen.¹ The remainder of the population is made up of dalits, muslims and christians. The 2006 Tsunami swept away 304 lives and destroyed over 900 houses. Tharangambadi is one of the largest and more densely populated villages in the area, and ~~so~~ suffered a great loss in life and assets during the tsunami.

Over 600 temporary shelters were built by various NGO's in Tharangambadi, many of them are still occupied a year and a half after the disaster. There have been various improvements and additions made to the temporary shelters since they were constructed.

The fishing community has got back on its feet, with the help of the many boats, nets and engines donated by NGO's. Fishermen have returned to the sea and resumed their fishing activities. The financial status of the fishermen has been through a transformation, with monetary compensation, a free house and 'patta'* land, many of the fishermen now have financial assets they did not have before. However, many fishermen households that were 'better off' before the tsunami, have ended up with smaller land, smaller houses and have lost much of their personal belongings.

South Indian Federation of Fishermen's Society (SIFFS) has taken up post-tsunami reconstruction of Tarangambadi. It is also reconstructing another nearby village – Chinnankudi. SIFFS had been working in Tarangambadi before the tsunami, it had set-up a fishermen's co-operative society ~~set-up~~ and also ran a boat yard in the village. SIFFS works almost exclusively with fishing communities, it has active fishermen on its board and knows the fishing culture of South India very well. SIFFS intends to continue working in the village for the foreseeable future. The reconstruction project is its first foray into construction and housing.

SIFFS is intending to build approx 1200 houses in Tarangambadi, and approx 300 in Chinnankudi. SIFFS is taking an NGO-led approach to the reconstruction, incorporating participatory elements.

the middle bit

Why participate?

Public participation in housing projects is often something that has to be consciously incorporated into the project, it is rarely something that happens as a matter of course. Involving the people⁷ in a housing project often takes effort and time. What motivates development agencies and funders to involve the people in their project?

Sustainability

Sustainability of a project is an important consideration for many development agencies and their funders. ~~The advantages of sustainability are many and varied. It is not within the scope of this writing to explore them at length, it will suffice to say that~~ Ssustainability aids the long term economical, environmental and social viability of a project.

Involving the people increases the sustainability of a housing project in a number of ways. Enabling the people to participate in the design, construction and management of a housing project ~~will~~ makes s the ~~peopl~~e feel as if they have contributed, or at least affected the settlement. This helps create a 'sense of ownership' ~~in~~ the people. People are more likely to maintain things that they perceive as 'theirs'. This 'sense of ownership' is a powerful idea, and drives a lot of participation activities. This 'sense of ownership' brings with it a sense of responsibility. The people feel that the settlement is their responsibility, and not only the responsibility of the development agency. ~~However, t~~his sense of responsibility is especially difficult to achieve when a settlement is 'gifted' from an outside agency.

⁷ the term 'the people' is used in this paper to mean the persons who are the subjects/agents of a given project

East facing pooja rooms

The initial stages of the SIFFS Rehabilitation Project involved extensive studies of the two villages, Chinnankudi and Tarangambadi. Students and architects (from outside the villages) volunteered to carry out a Habitat Mapping of Chinnankudi and Tarangambadi. The villages were mapped and information gathered on each house, such as the building material, extent of damage and plinth and plot area. Detailed studies were also done of the different house types and the how people currently used space

From these studies, issues such as the need for an east facing pooja room and kitchen were discovered. Other spatial arrangements of the houses were also noted and these all fed into the design of the houses. Ten houses were designed and displayed, alongside the results of the mapping studies, at a community function. Feedback from the function was used to further refine the designs and finally 6 designs were chosen by SIFFS as house options for the rehabilitation. This exercise ensured that the 6 house options were suited to the broader community cultural and social norms.

It could be argued, however, that a creating a ‘sense of ownership’ is unnecessary in a project where the people will actually own the houses once constructed. However, it has been shown that even free houses gifted to a community can be rejected and abandoned if the development agency has not taken into consideration the needs of the people.⁸ In fact a free gift is easier to reject or abuse, rather than something that a person has worked for.

Better fit

People are different. People have different wants, needs and aspirations. A house, or more accurately - a home, needs to satisfy all these factors. A home has many dimensions, spatial, economical, social and cultural. A ‘better fit’⁹ of housing would mean, a closer match between the house-owners desires and the house itself. Without the people’s participation, development agencies will have to rely on broad and unspecific demographic data, and precedents from the past. This data may miss the finer nuances of individuals and risks treating the people as a homogenous mass. At best this will result in houses that will later need to be adapted by the people (or the people having to adapt to the housing) or at the worst- people abandoning the house.¹⁰

Participation can be a means to get a ‘better fit’ of housing. The methods employed can vary and result in different ‘grains’ of fit. Some methods such as focus groups, studies and surveys can give a coarse-grained fit – a fit that suits a broad community. A finer grain can be achieved using methods that focus on individuals.

⁸ J.D. Barenstein, pg 22

⁹ See pg 67 -72 J.F. Turner, for exploration of this concept

¹⁰ J.F. Turner pg 56

How many hooks do you want?

The SIFFS housing project has made admirable efforts to customi~~ze~~ houses to individual needs. The people could choose from a selection of 7 house designs. After which they questioned about specific features of the house and its location. A Housing Preference Survey ~~which~~ collected their preferences on walling, roofing and flooring material, the need and location of the smokeless chula, the need and location of the toilet, the location of the loft and shelves, and their plans for extension or building a second house.

Face to Face Meetings

Once the housing preference survey was completed, the architects drew up an initial design for the house and plot. This was then presented to the house-owner during a Face-To-Face meeting. The meeting is a one to one meeting between individual house-owners and the architect and social teams, it is a chance for the house owner to express their wishes about their new house, and also a chance for the architecture/social teams to explain any ideas they have. Specific items are decided on (e.g. how many hooks do the house-owners want, will they provide any of their own doors and windows), as well as issues about new technologies and the house owners future aspirations. The possible implications of the house-owner's choices are explained to them, and attempts made to make the house-owner understand other alternative options.

People's satisfaction

Studies have shown that people who have been involved in participation generally indicate they are more satisfied with their new settlements, then compared with those who have not been involved in a participatory program¹¹.

Cost and Time savings

Some forms of participation can make savings in the cost and length of project construction.¹² The people take up tasks that would normally be carried out by a builder or other construction workers. Self-help projects are a typical example, where the people provide their labour for the construction of the settlement.

After a disaster people may not be able to carry out normal livelihood activities. Constructing their own house may therefore be a good way to spend their time. However, this should be well researched and negotiated beforehand to ensure that building ~~their~~ houses is the most productive use of their time.

Physically building their own house may not be ~~the~~-practical for some communities. The people can take over other roles, which are less physically or time demanding, and more suitable to their lifestyles. The people can be employed to manage or supervise the design and/or construction. Many communities maybe unused to managing a project, and so training will need to be provided.

¹¹ J.D. Barenstein, pg 24 -25, NB the studies I have come across survey the satisfaction of people immediately or very soon after reconstruction. ~~I was unable to find satisfaction surveys that had been undertaken beyond 5 years of construction.~~

¹² Human Settlement Development through Community Participation pg 60 (HABITAT, 1991.)

Fishermen builders?

Many attempts were made to recruit the fishermen to help in the building of their houses. However, in general, the local fishermen were unwilling to work on the building sites. Fishing is a relatively lucrative occupation, most of the local people were employed in it. Very few of the fishermen had any training or lengthy experience in construction, and so could only be employed as labourers, or alternatively given training. The earnings fishermen can get from fishing outweighs the money they would receive from working onsite, so very few fishermen came forward to work on the building sites.

There are of course exceptions to this, for example construction on a number of houses was slowing down due to the limited supply of labourers. The fishermen whose houses were being constructed offered to lend a hand (for a fee), to speed up construction. Fishing is not a '9-to-5', and fishermen often have time free during the day in which they can do other activities. However, this was only ~~for a short term~~ (i.e. one day) an ad-hoc basis.

Curing concrete

The people were encouraged to cure the concrete* of their own house. They were first made aware of the necessity for curing, through the house-owners training program. When their house was being built, the house-owner was provided with sacks which they could soak and wrap around the columns and beams. Clean water was also provided in Ferrocement tanks adjacent to each house. Generally, this task seemed to fall to women and girls of the household.

As well as ensuring that the concrete is strong, this procedure helped a bond develop between the house-owner and the house itself. It is a daily activity, somewhat nurturing in form, which acquaints the person to every column, beam and brick of the house.

**in its initial stages, concrete needs to stay hydrated if it is to achieve full strength. This is usually done by pouring water over the structure 3 or 4 times a day, and wrapping wet cloth around the structure. Curing is usually done for 7 to 14 days. Bricks also need to be cured.*

Sitting and Waiting

One criticism that can be levelled at the SIFFS construction project, is the ~~speed (or lack of) of~~ pace of the construction of the houses. As SIFFS is not simply ~~throwing up~~ building 2000 identical houses but going through a painstaking process of consultation and studies, this has affected the speed in which the houses can be built. Other issues such as shortage of labour and materials have further added to this problem.

What has this meant for the people of Tarangambadi and Chinnankudi? For many they have had to simply sit and wait for their new houses. There is no incentive for them to start building their own house or improve their existing ones, as they will be getting a ~~brand spanking~~ new house soon. ~~There is very little that the people themselves could do to speed the process along, or more accurately,~~ There was very little the people felt they could do as they were not controlling the process but merely being subject to it. This has resulted in many people staying in temporary arrangements for more than a year and a half. In many cases, people in the shelters did not make repairs or improvements to their shelters, unless aided by NGO's. Even though some people could have afforded to make themselves safer and more comfortable, they chose not to, instead petitioned NGO's to construct new roofs etc. This state of limbo adds to the peoples' sense of helplessness. Waiting for events to happen to them rather than making events happen themselves.

However, this is just a generalisation. There were visible cases of villagers trying to improve their own environment. For example, the setting up of a volleyball court on some disused land by a number of fishermen youth.

People's development

Participation can be a tool to develop a people's capacity as individuals and as a community. Participation can enable individuals to make real impact in their own lives and be used to instil a sense of self-belief¹³. This is especially important in a post-disaster situation, in which people have lost their friends and family, as well as their personal belongings. The sense of helplessness amongst people after a huge disaster maybe great. The influx of outside benefactors may also make people feel further disempowered, as they are reliant on outside aid to survive. Housing as a process, can be a powerful means to combat this disempowerment. It can be a method for people to (literally!!) shape ~~(literally!!)~~ their own lives. The housing process can also be a vehicle to learn new skills or practises. It is an opportunity for a new start.

Participation in housing can also be used as a tool to develop community capacities. For a community to plan and implement its own rehabilitation, will mean gaining new skills and insights. After a disaster, when there is large scale devastation, entire communities may need to be re-housed. This presents an opportunity for the community to look at itself, ask questions about where it is now and where it would like to be in the future. It may also be a time when funding is available to kick-start these initiatives. The building of a settlement can also be a building of a community. New community organisations can be formed or old ones strengthened. New community practises (e.g. regular meetings, maintenance of community space) can be introduced during construction, and if found useful, can be continued by the community once the settlement is complete.

¹³ pg 5 JD Barenstein

Cluster Committees

The villages are split into clusters. Each cluster has about 25 to 40 households. Rather than tackle the construction of the whole village at one time, each cluster is developed separately. Each cluster has its own engineer, and Community Development Officer (CDO), and a number of contractors. The formation of the clusters is decided by the village panchayat and SIFFS.

When a cluster is formed a meeting is called of all the households. In this meeting a Cluster Committee is selected by the households themselves. The committee is made up of 5 members of the cluster. The cluster committee mediates between the cluster members, SIFFS and the contractors. It is responsible for ensuring that curing (see above) is done by cluster members, and for effective communication between SIFFS and the cluster. A Cluster Volunteer is also employed from the households in the cluster. The volunteers' role is to check the deliver of materials to site, and help ensure the smooth running of the construction.

It is envisaged that the role of the cluster committee will be developed and it will take on more responsibilities. It is also hoped that the cluster committee will continue in some form after construction is complete, and that it could take up the upkeep of local community spaces and events.

Karen St.

The dalit hamlet of Karen St is to be relocated as part of the rehabilitation process. It is a small community made up of 22 households. They have formed a committee of 10 people, and have already begun to talk about community facilities (a temple and common ground) which the committee would raise funds for and could managehandle.

However, the construction of a new settlement is a unique time in the development of a community. It is, just like the disaster that precipitated it, a 'freak' moment of time, with unusual circumstances and stakeholders. Community organisations and practices set-up in during this period, may have little relevance once the community settles back into the normal routine of daily life. This is especially true of practices forced on the people by outside agencies, without any consultation with the people. In the case where the housing is built and funded by an outside agency, community organisations/practices set-up by these agencies derive their legitimacy from the agency and the agencies activities. Once the agencies leave and their funding and activities stop, these new community organisations/practices if they are to survive, will need to derive their legitimacy from the people themselves.

Education

Participation can- be used to educate people, this adds to the development of the people as well as to the sustainability of the housing project. The people can be educated about new technologies and practices. This has to be done with great sensitivity and thought to prevent education simply being a cover for convincing the people into accepting the development agencies ideas.

The people can learn about new technologies that are to be implemented in the new houses, and if the people are taking part in the construction, they can be taught building and management techniques.

If buildings are to be built employing technologies that are new or rare in the affected area, then some thought should go into training local masons about the usage, repair and alterations of these

1 is to 2 is to 4.....

House owners are taught simple methods with which they can check and maintain the quality of construction of their houses. The teaching takes the form of a lesson that can last up to half a day. The architect gives a talk with a power point presentation on various aspects, the people are also able to question the architect to clarify their doubts. Points covered include checking for the quality and correct usage of materials.

The people have, by and large, implemented what they have learnt. There are even instances of house owners confronting the contractors about the correct mix ratio for cement, or poor quality of bricks. This training was also extended to staff from NGO's in neighbouring villages, who~~ie~~h were able to check the quality of construction in their own sites.

technologies. Employing local builders in the construction is a good way of doing this, and may also mean that the new technologies are used in any further work undertaken by the builder.

Participation can also mean the development agencies learning from the people. Learning about the way in which the people currently deal with issues they face.

Participation – an end in itself

Participation maybe undertaken for none of the reasons mentioned above. It may simply be done as a PR or promotional activity, or as a requirement from funders.

the penultimate bit

Contractor led or Owner led or maybe a third way....

Participation comes in many forms; some methods are more participatory than others¹⁴. Housing projects can range between two extremes. From contractor/developer lead settlements, that have no input from potential residents, to owner led grassroots settlements, where the people initiate and drive the project themselves.

Developer/contractor led developments generally show little concern for the social elements of housing, and treat residents as a homogenous mass. People are expected to adapt to their new houses, rather than have the houses adapted to the people. When funding for such projects comes from outside agencies, the developers have little accountability to the people themselves. These types of developments may often build houses quickly and efficiently. There is a standardisation of materials and techniques. The same level of quality can be maintained throughout the development.

Ownerled grass roots developments are initiated, managed and in some cases built by the residents themselves. ~~Slums are an example of this type of development.~~ Houses are built as best suits the resident's circumstances. They are adapted over time as the lifestyles of resident's change. Activities are initiated by the residents themselves, and so only issues that concern the residents will be dealt with. Building is incremental, over a period of years. Standards vary from house to house, depending on the priorities of each resident. Construction -maybe ~~unsafe or in unsafe~~ locationsunregulated.

¹⁴ See Sherry Arnstein 1979 article, ladder of participation

Slow and frustrating process

Adapting existing models to individual requirements whilst maintaining efficiency and speed, is difficult. At SIFFS, changes from the original 7 models of house were greeted with disapproval from the engineers and builders. These were the people who actually had the task of building the designs- all 2000 of them. Changes to the design slows down the construction process. A new cost analysis maybe needed and extra care must be taken in its construction. An engineer/builder who has been making 8 copies of the same model, has learnt how to make it quickly and now intuitively understands how it is put together. Anything that upsets this is bound to cause frustrations on site and slow down construction. An engineer told me that in one cluster only one house was as per the original model house, the remaining 20 plus houses had some alteration from the model house. I greeted this news with a huge smile, people had been adapting models to their own needs. The engineer, on the other hand, narrated this news with much frustration, 'you don't understand, we're in the field, we have to build these 20 plus different houses, it is such a slow and frustrating process'.

Decisions can be made right at the end of the chain -the SIFFS site engineers are empowered to adapt the houses on site. There have been many cases where house-owners wanted changes in the design even though construction had already started. As long as it does not add to the cost, the site-engineer is able to authorise and implement the changes. The ability to accommodate these last-minute changes is important, as house-owners may not be aware of the physical consequences of their decisions until they actually see the building being built. And it is only then they realise that the toilet is in the wrong place, or the staircase on the wrong side!!!

The SIFFS rehabilitation project comes somewhere between the two. It has many of the trappings of a mass housing development, with participation elements added to it. The melding of these two techniques has its advantages as well as its challenges.

The main advantage for the NGO of this approach is for SIFFS is able to maintain control of the process, while still being able to incorporate selective inputs from the people.

The research, design, management and construction of the project has all been lead by SIFFS. The research subject and methodologies were chosen by SIFFS and undertaken by the them. The people were the object of the study rather than the protagonists of it. Using information gathered by the studies, along with the experience of building professionals, 10 models were designed. After consultation with the public, 6 designs were chosen as housing options (a 7th rammed earth option was added by SIFFS later). The houses themselves were further refined to the individuals tastes during a face-to-face meeting. However, other then items such as locations of lofts or position of house on plots, the people have little opportunities to significantly change the design.

Finer grains of fit are difficult to achieve in housing projects that have a centralised management and delivery system. In such a system to get a house to suit every individual will require a large amount of manpower. First to gather all the information and then to actually produce the designs and build all the individual houses.

In a centralised system, where decisions are made from the top and then their consequences filtered down, participation tagged onto the end of the process will affect the efficiency of the system. Anything

The exceptions

The SIFFS houses are framed structures. One of the major advantages of this type of structure is that, as all the load is taken by the columns the walls do not need to be load-bearing. This means that positions walls can be moved without compromising the structural integrity of the building. This feature has been used to rearrange the walls of houses to suit individuals.

One of the house options featured an inside access toilet. This option of house was picked by a number of people, however many of them preferred to have the toilet accessed from outside. This was easily achievable, with a framed structure.

Some of the people, radically changed the original house plans. Replacing dogleg staircases with a straight flight, turning the house by 90 degrees, and rearranging the walls to give a larger hall. This redesign showed remarkable spatial awareness and ingenuity.

In one instance, a person's plot was too narrow for any of the house designs. Rather than force the person to purchase more land or move to a new plot, the house plan itself was slightly squeezed and stretched. Though this would cause complications onsite the engineer accepted the design in good humour and just said that extra care would be taken with the construction.

other than superficial changes made at the end of the chain will cause delays and extra costs.

In such a system, the major decisions are made at the top of the chain, as you get lower down the chain the decisions that can be made become more and more inconsequential. ~~Though to be~~ Being able to choose the colour of your own house is nice, however to be able to decide how rooms are arranged, the construction method, and when, where, and how your own house is built, is a far more important choice. To get real variety, rather than mere cosmetic variety, requires that the people at the bottom of the chain, the house owners themselves, are able to take decisions at the top of the chain. This will result in a 'better fit' of house.

One of the most important decisions that can be made is how is money going to be spent? What issues will be given priority and which can I live without? In the SIFFS project quality of construction and safety were high on the agenda. It is arguable whether all the people would have had the same set of priorities.

Another feature that the SIFFS housing project suffers from, a feature that contractor/developer led housing projects suffer from, is that of the developer becoming a provider and the people simply consumers. The developers provide everything, the people simply have to accept (or in the case of SIFFS- choose then accept). Housing is no longer a process but a product. There are numerous advantages to this type of delivery system. It is efficient and of uniform standard. Its results can ~~(to some extent)~~ largely be predicted, which ~~this~~ maybe important for funders who will want to know beforehand what they are getting for their money. However, there are also drawbacks to the system. It is not very flexible or responsive to changing circumstances at ground level. It does not

take advantage of any contributions or initiatives that the people can make. It turns the people into passive consumers, disempowering them, curtailing their freedom to create their own future.

Owner led housing takes a different approach, it starts with the people as the base, as the foundation of the project. It is the people who lead the construction of their own house. NGO's and other agencies provide technical support and guidance. It has a number of advantages over a contractor led approach it is more cost effective, can be occupied before completion and has higher occupation rates.¹⁵ As the housing project is starting from the individuals themselves, the outcomes then will be different for each individual. It is like having a thousand different projects growing up to form a settlement, rather than having one project with one source. Professionals learn from the people, and add their own knowledge where it seems appropriate and will aid the peoples work. The 87% of the houses reconstructed after the Gujarat 2001 earthquake were built using the owner led method.¹⁶

¹⁵ pg. 1, JD Barenstein *ibid*

¹⁶ pg. 5 *ditto*

The Core House

Whilst SIFFS retains most the power during construction, once the keys have been handed over to the people the house becomes the sole responsibility of the people. It is at this time that the people can truly adapt the houses. It is only at this time that the people can choose to use the room that was labelled 'kitchen' on the architect's plan, as a store or second bedroom. It is at this time when we can see whether toilets will be used to defecate in or to store utensils.

The houses being built are quite small, especially for larger families. SIFFS fully expects people to add extensions and adapt their houses, in fact SIFFS actively encourages this to happen.

Through individual face-to-face meetings with the people, the architect can find out about the future aspirations of the people, how they intend to adapt the house and plot. Some people want to build a shop or verandah in the front, others a pooja room at the rear or a thatch kitchen. Some want to extend upwards and some of the people want to add an extra house in their plot to accommodate their son and his future wife.

The houses are constructed in such a fashion as to aid all this to happen. Reinforcement rods are left if people intend to extend immediately in concrete. Rings for bamboo extensions are built into the house. Openings and lintels left for future expansion. The house is positioned on the plot so that there is room available for these expansions and extra houses and shops.

the final bit

Participation can mean anything from a questionnaire, to the people designing, building and managing their own home.

In a post-disaster situation where issues are tense and time short. An owner led housing project may seem unpredictable and risky. In a context where every NGO is giving everything away for free, the people maybe unwilling to take owner led approach. Funders may also not like the unpredictable nature of an owner led approach. They may not have faith in the people, or trust them to behave wisely. In a post-disaster situation, a contract led approach would seem like the easiest option. It is a tried and tested method of delivery, with set standards and deadlines. It has predictable results and measurable outcomes. However, it lacks flexibility of an owner led approach, and may result in houses that do not 'fit' its occupants. It will produce a series of identical house that do not reflect an individual's nuances. The people may feel little sense of ownership of the houses, and opportunities to develop the people may be overlooked.

A participatory approach, tries to solve the drawback of the contractor led approach, whilst trying to retain the advantages. SIFFS took a participatory approach to its reconstruction project. To get a better 'cultural fit', detailed research was carried out beforehand. To get a variety in design, there were 7 house models to choose from. Individuals could customize their houses by choosing the number of hooks, position of chula's etc. To develop a sense of ownership, the people are allocated a plot before construction starts. They are required to cure the concrete of their house during construction. People were taught about various aspects of

construction and material storage. Training programs were set-up to teach masons and the people how to achieve quality in construction.

The SIFFS reconstruction project genuinely attempts to meld participation with 'top-down' system. How successful the project is, will only be seen some years after the jcb's roll off site and the people move in. This will possible be the most exciting part of the project when the people 'attack their houses to make them their own'.

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