

Documentation on  
Existing livelihood of Urban Poor  
***Building and Construction Workers***

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## Context of study

Urban poor comprise one of most neglected set of people in Rajasthan. In spite of estimated 29.7 lakh urban poor households<sup>1</sup> in Rajasthan as of March, 2010, government interventions are deficient. Majority of livelihoods are self-financing and receive almost negligible support from government agencies in form of business development services, market linkages, technical assistance, price discovery, tax sops and infrastructure. State run agencies like financial institutions, local agencies offer negligible livelihood developmental support. The slums and colonies that these urban poor live in have extremely deplorable and poor infrastructure. There is a dire need for interventions to enhance the livelihoods of these urban poor. In this context, a livelihood profiling survey was conducted by Center for Microfinance, Jaipur to understand the livelihood patterns of poor and how policy makers can intervene to enhance livelihoods of the poor. The survey threw some key insights with respect to livelihoods of poor. An overall analysis<sup>2</sup> of livelihoods of urban poor indicates that almost 43% of urban poor are employed in building and construction industry. Almost 18% are employed as mason, 16% are employed as labour while 9% are employed as painters, plumbers, carpenter, floorer, piler etc.

## Rational of Study

Construction workers are the largest group of service providers in Jaipur city. Almost 43% of urban poor are employed in building and construction industry in Jaipur. These poor have deplorable working conditions and work roles, which severely impact their lifestyle, health and growth potential. There is an immense need for policy level intervention and efforts towards enhancing livelihoods of poor. To start with, documentation of value chain, cost structure, jobs, roles, payscale and industry dynamics is a key towards dissemination of existing practices. The documentation serves as a platform for policy makers to understand profile of construction workers, industry dynamics, and problems of urban poor and possible areas where intervention can be made.

## Objective of Study

The objective of the study is to document livelihoods practices of urban poor in building & construction industry. The document serves as a platform for policy makers to design intervention strategies in this sector, which employs maximum number of urban poor. The study completely analyzes the industry characteristics, value chain, cost structure and demographic profile of urban poor in building & construction sector in Jaipur.

## Research Items

The research involves primary and secondary market research. Primary Market Research involves analysis of industry, supply chain, jobs value chain and cost structure. Primary research also involves analysis of demographic profile of urban poor in building & construction sector in Jaipur.

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<sup>1</sup> Rajasthan Microfinance Report 2010

<sup>2</sup> One livelihood (be it primary, secondary or tertiary) has been taken as one data point. In all, there are 564 data points

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## Methodology

The primary research involves personal interviews and field visits with different stakeholders in supply chain(s) of building and construction industry viz. Builders, architects, contractors, masons, carpenters, painters, labourers, government organizations etc. Apart from that, statistical analysis of data, gathered on urban poor in Jaipur, has also been undertaken.

## Findings

Findings have been categorized into different sections for easy readability. The first section discusses key industry characteristics like demand-supply gap, key success factors and growth rate. The second section elaborates on value chain in building and construction industry. Value is created after builder buys/ leases a land and hires architects & contractors to undertake construction activities. Contractors hire subcontractors or directly hire mason, labour, painter which in turn, create value by constructing building, property or plant on the land. The next section monetizes the value created by all stakeholders and elaborates on the cost structure to understand value-benefit mismatch of urban poor. There is also a discussion on upcoming projects in Jaipur where urban poor will get hired to undertake construction activities. There is also a section on demographic profile of urban poor in construction activities. At end, an analysis of the problems faced by urban poor is made. This section gives a clue to designing of possible policy level interventions to enhance poor's livelihoods.

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## Industry Characteristics

### i. Growth in construction market

Jaipur is experiencing its first phase of economic growth. Investment and ramp-up on industrial and service sector, particularly in the IT/ITES sector, is a more reason for this spurt in the city's profile<sup>3</sup>. Jaipur has been ranked 31 among the 50 Emerging Global Outsourcing cities<sup>4</sup>. Genpact and Infosys have their BPO already established and running successfully. In fact, Genpact has the fastest growing location in Jaipur.

Real Estate business in Jaipur has been flourishing well from last 4–5 years. According to expert realtors and estate agents<sup>5</sup>, Jaipur's real estate market is on a boom and is seeing lot of interest from speculators and investors willing to put in money in booming city. Investors are more interested in buying properties in Jaipur instead of Delhi, Chandigarh, Ludhiana and other connected states.

This growth in real estate market in Jaipur has consequently resulted in growth in building and construction industry. Over last 4-5 years, there has been gradual and significant increase in construction activities undertaken in Jaipur. This has resulted in more migrants from U.P., Bihar, Orissa and other parts of country immigrating to Jaipur to work as labourers, painters and masons<sup>6</sup>.

### ii. Demand and Supply match

Rising prices of plots and rentals of apartments<sup>7</sup> in Jaipur indicate a rising demand of real estate in Jaipur. Due to increased interest from investors (both Indian investors and NRIs) to invest in property in Jaipur, significant construction is taking place in outskirts of Jaipur viz. Jagatpura, Sikar Raod, Ajmer Road, Sanganer Road etc.

To match this rising demand, supply of raw materials, labour and land will have to catch up, to limit the rise in real estate prices. In context of this study, this translates to rising demand of construction workers in Jaipur. Due to this reason, Jaipur, in recent years, has become a key hub for construction workers to immigrate to, to earn their livelihood.

### iii. Low wage to workers

In spite of spurt in real estate and construction activities in Jaipur, the daily wages of workers has not seen a proportional growth. Primary reason attributable is abundant supply of mason, painter and labour<sup>8</sup>. With rising demand of construction workers, there is influx of much higher supply of construction workers, thereby, putting a lid on wage increase. This abundant supply of labour results in exploitation of labourers, low quality of work, low income and deplorable conditions to live in. Even though the construction

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<sup>3</sup> Brix Research. <http://content.magicbricks.com/property-rates-in-jaipur>

<sup>4</sup> Top 50 Emerging Global Outsourcing Cities, Global Services-Tholons Study, 2008

<sup>5</sup> Personal interviews with builders and real estate brokers based in Jaipur

<sup>6</sup> Feedback from interaction with construction workers, Vishwakarma Industrial Area, Jaipur

<sup>7</sup> [www.magicbricks.com](http://www.magicbricks.com)

<sup>8</sup> Feedback from interaction with construction workers and contractors

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workers add the highest amount of value in supply chain, they end up getting paid the least<sup>9</sup>.

## Value chain

In building & construction industry, builder usually does not undertake construction by oneself. Builder first selects the site (may be in consultation with architect). The architect assembles a design team of consultant engineers and other experts to design the building and specify the building systems. Builder then hires a contractor who, in turn, hires subcontractors, who take services of mason, painter and labour and others to undertake construction activities. The builder, architect and contractor work closely together to meet deadlines and budget. The contractor works with subcontractors to ensure quality standards and make sure that the building is completed within the specified time and budget.

### i. Builder hires Contractor

A Builder hires a contractor, who is usually responsible for the supplying of all material, labour, equipment, engineering vehicles and tools and services necessary for the construction of the project (there is also a model in which builder gives only labour work to contractor while buys all material and supplies all equipment by oneself). To do this, it is common for the contractor to retain a construction labour force. In some cases, he subcontracts part of the work to other persons/ subcontractors that specialize in these types of work like masonry, sanitary, carpentry, painting, electrical, stone laying etc. Subcontractors put up foundation, walls, roof, electrical and plumbing systems, supply the labour etc. Occasionally, the builder commissioning the construction of the building chooses to act as the contractor. In such cases, he works directly with various subcontractors and takes on all liability for proper sequencing of the work, and dealing with the realities of construction.

All contractors in construction industry can be categorized into three types – Category ‘A’, category ‘B’ and Category ‘C’ contractors. There are further subdivisions like A1, A2, B1, B3 etc among these bands.

#### 1. Category A contractor

These are the contractors which undertake large projects (say above Rs. 100 cr). Such contractors comprise of both government recognised and unrecognized contractors. Those contractors which are government recognized have licence to undertake large government projects and are categorized into A1, A2, A3 etc. Such government recognized contractors bid for large projects and in some cases, sublease to category A/ B/ C contractors.

Different government bodies have different set of recognized contractors. For example, road ministry may have a different set of empanelled contractors as compared to JDA or Municipal office.

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<sup>9</sup> Discussed later with detailed analysis

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### 2. Category B contractor

These are contractors which undertake medium scale projects (say Rs. 1 cr to Rs. 100 cr). Such contractors also comprise of both government recognized and unrecognized contractors. They are categorized into B1, B2, B3 etc depending upon their capability to undertake projects and experience. Once capable enough, they are promoted to a higher level and gradually moving closer to category A. These contractors are fit enough to cater to large private real estate developers like Unique Dream Builders, Mahima group, ARG group etc

### 3. Category C contractor

These are the contractors which have least amount of experience and capacity to undertake projects. These are typically small and mid-sized contractors which employ group of 10-100 masons, painter and labours. These are usually the sub-contractors who spin off from/ work under bigger contractors in category – A, B, to start off on their own. They start off by either pulling ex-employer's staff along with them or sourcing labour from their village.

### ii. Contractor hires masons, painters and labour

The contractors/ subcontractors possess a team of mason, painter and labourers to undertake building and construction activity.

#### 1. Types of construction workers

##### a. Mason

Mason is typically involved in bricklaying, tiling and laying of stone, concrete or blocks for construction of wall, floor or simply a block. Masons are assisted by labourers (*beldars*), who manually carry heavy loads of brick, cement, stone etc from unloaded heap to main construction point. The common materials of masonry construction are brick, stone such as marble, granite, limestone; concrete block, glass block and tile. Concrete finisher works with concrete, which includes placing, finishing, protecting and repairing concrete in construction projects. They are paid upto Rs. 300 a day in Jaipur.

##### b. Carpenter

Carpenter performs a wide range of woodworking that includes constructing buildings, furniture, and other objects out of wood. The work generally involves significant manual labour and working outdoors, particularly in rough carpentry. They are paid upto Rs. 350 a day or upto 30% of the furniture cost.

##### c. Plumber

Specialises in installing and maintaining systems used for plumbing, heating, drainage, portable (drinking) water or small-

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sized industrial process plant piping. A Pipefitter is someone who lays out, assembles, fabricates, maintains and repairs large-sized piping systems for industrial processes which are typically under high pressure and require metals such as carbon steel, stainless steel, and other alloys fused together through welding.

d. Plasterer

Also referred to as putty worker, puts plaster and wall putty on interior walls, before painter takes up for painting

e. Painter

Is a construction worker who paints the walls of the building, both interior and exterior. Painters are involved in both re-painting and new painting works. Re-painting vs new painting in India is split as 70-30<sup>10</sup> therefore, painters spend more time re-painting existing units rather than painting new ones. Re-painting is undertaken either when the earlier paint coat needs replacement or during special events/celebrations. There are two ways of payment methods prevalent in Jaipur - either upto Rs. 300 a day or upto Rs. 2 per sq ft.

f. Steel Erector

Steel Erector installs structural steel frames of building. The components usually are prefabricated, including all welded joints. Structural steel installation is usually crane assisted for large projects and utilizes mobile elevated work platforms or scissor lifts as the structure progresses. The work is executed in team using powered and hand tools to bolt the steelwork together

g. Electrician

Electrician specializes in electrical wiring of buildings and related equipment. Electricians may be employed in the construction of new buildings or maintenance of existing electrical infrastructure.

h. Welder

A welder specialises in welding materials together.

i. Labour (called *beldars*)

Male labourget paid relatively more because of ability to carry heavier loads as compared to those carried by women. Men

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<sup>10</sup> Based on interaction with Asian Paints – pattern of consumption of paints

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typically get paid Rs. 180 while women labourers typically get paid Rs. 150.

### 2. Personal protective equipment

Protective equipments are seldom used at private construction sites. Even though the wages are relatively better off at private sites, as compared to fixed government wages, protection of construction workers is rarely a priority. At government sites, construction workers are required to wear hard hat, steel-toe shoes, along with high visibility jackets. In situations involving hazardous substances, protective gloves and goggles are also provided. However, these are seldom provided at private construction sites. The risk of accidents and illness at private construction sites, is therefore, relatively higher.

### 3. “Chokhti” or meeting spots in Jaipur

Migrants mainly from U.P., Bihar, Orissa and other parts of the country stay in outskirts of Jaipur e.g. areas adjoining to Vishwakarma Industrial Area on Sikar Road, Jawahar Nagar, Ajmer Road, Sanganer Road, Jagatpura etc. They gather every morning at Chokhti, where they are hand picked by contractors, who need daily wage workers for certain time period. Popular chokhtis in Jaipur are –

- Kiran Palace Hotel, Ajmer Road (*more than 1000 construction workers assemble*)
- Malpura Gate, Sanganer (*more than 800 – 1000 construction workers assemble*)
- Number 4 Dispensary, Sodala (*more than 400-500 construction workers assemble*)
- Near Kanwatia Hospital, Shastri Nagar (*more than 150-200 workers assemble*)
- Chandi ki taksaal (*more than 400-500 construction workers assemble*)
- Sun & Moon, Sikar Road (*around 500 construction workers assemble*)
- Near Panchayat Samiti, Jhotwara (*around 300-400 construction workers assemble*)
- Gujar Ki Thadi, Mansarover
- 200ft By-Pass, Ajmer Road

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## Cost Structure

An analysis of cost structure of a building or construction site indicates the value addition done by mason and labour in value chain. Below table indicates that expenses on labor wages are less than 10% of the revenue.

Cost structure (Rs. Per sq ft assuming 6600 sq ft construction)	In Rs.
Sales Price to buyer (Rs. per sq ft)	1400
Builder's profit margin (Rs. per sq ft)	233
Cost of builder's capital (Rs. per sq ft)	23
Total labour Wages (Rs. per sq ft)	130
Construction raw material (e.g. cement, bricks, putty, paint etc) (Rs. per sq ft)	560
Land (including stamp duties, registration etc)	454

Above cost structure indicates that even though the value created by labourers is high, the money paid to them is low (less than 10% of revenue). Most of the surplus is pocketed by builders as profit.

## Largest employers of construction workers in Jaipur

Projects in and around Jaipur where interventions should be focused are the ones where large numbers of construction workers are employed. Such projects include large scale government projects and small, medium private projects. Major projects are -

1. MGNREGA – Mahatma Gandhi National Rural employment Guarantee scheme is estimated as largest avenue of employment for construction workers in Jaipur. Workers build roads, boundaries and do stone work etc
2. On-going and upcoming construction of 500 ft road from Kota to Jaipur and from Bikaner to Sikar road.
3. On-going and upcoming Metro Rail Project
4. Special Economic zone on Ajmer road
5. Delhi - Mumbai freight corridor
6. Railway yards at Jagatpura

Apart from above mentioned large scale government projects, small & medium scale private projects are also on-going in Jaipur. There are more than 30,000 buildings under construction, estimated to be employing over 1 lac construction workers in Jaipur. Some of large private developers in Jaipur include Unique Dream Builders, Mahima, ARG, Majestic, Sunrise, OK plus, Suncity etc

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## Urban poor in building & construction

i. Women – roles, work and payscale

Women mostly work as labourers (*beldars*) at construction sites. With most of them as illiterate or just literate, they assist masons in construction activities. Women typically carry heavy loads of stone, rock, brick, cement, concrete etc from heap (unloaded from truck) to main construction point where mason demands the material.

Women typically are not suited for masonry work as masonry demands climbing on weak wooden structural frames to lay bricks, concrete, cement etc. They do, sometimes, take up low lying masonry work viz. Laying stones for flooring, brick laying at low heights, putting concrete at low heights etc

Women labourers are paid lower than male labourers. Daily wage of women labourer typically is Rs. 125 to 150, with most taking home around Rs. 150 a day. The wage varies according to the age and physical strength of women labourer.

ii. Men – roles, work and payscale

Men play varied roles viz. Labourer, mason, painter, plumber, electrician, carpenter etc. Men labourers typically get paid higher than women labourers due to relatively better physical strength and heavy weight carrying capacity. Men get paid a daily wage of Rs. 150 to Rs. 200 depending upon the weight carrying capacity of men, with most men taking home around Rs. 180 a day. Like women, they assist mason in construction activities by carrying heavy loads of stone, rock, brick, cement, concrete etc from heap (unloaded from truck) to main construction point where mason demands the material.

Masons add highest amount of value in construction supply chain. They lay stones, bricks, cement and concrete to do flooring, constructing walls or blocks. They carry on high lying construction work by climbing on wooden/ steel structural frames, which renders them susceptible to danger of collapse of structural frame and thus, accidents. Masons typically get paid upwards of Rs. 250 at daily wage.

Putty workers or plasterers and painters form the next biggest lot. Painters are also involved in re-painting work at existing units, apart from new painting work at new construction sites.

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## Biggest problems that poor face

As per interviews, field visits and household surveys, the biggest problems facing urban poor in slum area are -

i. Health related

From interactions with masons, labourers and other construction workers at sites, 'illness' crops up as major hindrance to smooth lifestyle and livelihoods of urban poor. This is validated by analysis of data from 300 households of urban poor. A study of extraordinary expenditure of urban poor households indicates that construction workers account for almost two-thirds of the lot, which spent extraordinary money on illness or health related issues<sup>11</sup>. The analysis proves that construction workers are more prone to health related problems and illnesses than those in other livelihoods.

Practically all families in urban slums do not have medical insurance. A deeper analysis indicates that medical insurance is an unviable product, both from insurer's perspective and insured's perspective. Urban poor typically require medical intervention for short-term treatments. In majority of cases, poor do not get hospitalized or require OPD intervention. This renders medical insurance ineffective as insurance covers only OPD charges. Further, analysis of money spent by urban poor at construction sites indicates that majority spend around Rs. 5000 to Rs. 30000 per annum on medical treatments. This amount of money spent by large number of people will result in high insurance premium; if at all any such medical insurance product is designed. Any government or donor subsidy is ignored, as it is not sustainable. This indicates that medical insurance for urban poor households is unviable. This, possibly, could be the reason for lack of interest shown by insurance agencies to enter this market, in spite, of promise of large volume.

As per a preliminary survey conducted among health practitioners, a 'cure' driven medical intervention like slum clinic or mobile clinic may not be sustainable on on-going basis, if medicine costs are subsidized. Higher costs of medicines render such interventions unviable.

Alternatively, what is sustainable is 'preventive' driven medical intervention, which aims at preventing recurring diseases and ailments. One such intervention is 'public health camps' in urban slum areas. Public health campaigns aimed at preventive measures should be organized in slum areas.

Preventive cure driven public health campaigns should act as triggers rather than simple knowledge transfers/ lectures. Studies show that many people are aware of preventive measures but lack the means to undertake preventive measures. The health campaign undertaken should aim at analyzing the root cause of problems and then imparting preventive measures, rather than simply imparting generic preventive measures.

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<sup>11</sup> Almost 58% of surveyed families have one or more members in construction industry. And almost 66% of survey families who spent extraordinarily on 'illness' have one or more member in construction industry.

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ii. Lack of work and low income

From interactions with labourers and other lowly paid construction workers at sites, 'lack of higher paying work' and 'low income' emerge as major issues with construction workers. The 'low income' is attributable to abundant supply of labourers, due to immigration from Bihar, UP, Orissa etc, who are willing to work at lower wage simply to get employed maximum number of days. The other problem of 'lack of higher paying work' has to do low skill levels and lack of literacy at labourers end. They lack skills for higher paying work. An interaction with such labourers indicates they do have willingness to train themselves to aim for higher paying jobs and improve their lifestyle. Most demanded skill trainings are carpentry, painting and plumbing<sup>12</sup>.

However, such trainings may fail to get workers if they are conducted during busy days. It should be kept in mind that these poor give higher priority to short term earnings to feed their family on daily basis, rather than long term planning. It is recommended that these trainings be conducted during '*mal mahina*' i.e. '15<sup>th</sup> Dec to 14<sup>th</sup> Jan' or during rainy season when new construction projects do not start. Adding to that, some fixed monetary incentive needs to be provided to them to compensate for the opportunity cost. These poor live their lives on short-term or rather 'daily' basis and cannot afford not to earn during the day. Therefore, paying them small amounts will help in fetching them to training camp. The training can also be linked to free lunch or dinner ('Akshay Patra' like concept of mid-day meals for children).

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<sup>12</sup> Based on interaction with labour at Chokhati at Sun & Moon, Sikar Road and with labour at Jagatpura construction sites

## Conclusions and Way Forward

There are about 24 lakh building and other construction workers<sup>13</sup> in Rajasthan as per estimates (2010). These workers are one of the most numerous and vulnerable segments of the unorganised sector in India. The building and other construction works are characterised by their inherent risk to the life and limb of the workers. The work is also characterised by its casual nature, temporary relationship between employer and employee, uncertain working hours, lack of basic amenities and inadequacy of welfare facilities.

In Jaipur, the livelihood of these construction workers is primarily driven by real estate market, which has been flourishing well from last 4–5 years. This spurt in real estate market in Jaipur has resulted in spurt in building and construction industry also. In spite of spurt in real estate and construction activities in Jaipur, the daily wages of workers has not seen a proportional growth. Primary reason attributable is abundant supply of mason, painter and labour. With rising demand of construction workers, there is influx of much higher supply of construction workers, thereby, putting a lid on wage increase. This abundant supply of labour results in exploitation of labourers, low quality of work, low income and deplorable conditions to live in. Even though the construction workers add the highest amount of value in construction supply chain, they end up getting paid the least.

Among these construction workers, women mostly work as labourers (*beldars*) at construction sites. With most of them as illiterate or just literate, they assist masons in construction activities. Women labourers are paid lower than male labourers.

As far as problems faced are concerned, construction workers are more prone to health related problems and illnesses than those in other livelihoods. Practically all families in urban slums do not have medical insurance. A deeper analysis indicates that medical insurance is an unviable product, both from insurer's perspective and insured's perspective. As per a preliminary survey conducted among health practitioners, a 'cure' driven medical intervention like slum clinic or mobile clinic may not be sustainable on on-going basis. Alternatively, what is sustainable is 'preventive' driven medical intervention, which aims at preventing recurring diseases and ailments. One such intervention is 'public health camps' in urban slum areas. Preventive cure driven public health campaigns should act as triggers rather than simple knowledge transfers/ lectures. Studies show that many people are aware of preventive measures but lack the means to undertake preventive measures. The health campaign undertaken should aim at analyzing the root cause of problems and then imparting preventive measures, rather than simply imparting generic preventive measures.

Further, 'lack of higher paying work' and 'low income' emerge as major issues with construction workers. The 'low income' is attributable to abundant supply of labourers. The other problem of 'lack of higher paying work' has to do with low skill levels and lack of literacy at labourers end. Skill trainings such as carpentry, painting and plumbing may be undertaken for enhancement of livelihoods. However, such trainings may fail to get workers if they are conducted during busy days. It should be kept in mind that these poor give higher priority to short term earnings to feed their family on daily basis, rather than long term planning. It is recommended that these trainings be

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<sup>13</sup> Assuming 29.7 lac households and 5.3 members per household. It is also assumed that 15% of urban poor household members are in construction industry (based on survey of 300 urban poor households)

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conducted during '*mal mahina*' i.e. '15<sup>th</sup> Dec to 14<sup>th</sup> Jan' or during rainy season when new construction projects do not start. Adding to that, some fixed monetary incentive needs to be provided to them to compensate for the opportunity cost. These poor live their lives on short-term or rather 'daily' basis and cannot afford not to earn during the day. Therefore, paying them small amounts will help in fetching them to training camp. The training can also be linked to free lunch or dinner ('Akshay Patra' like concept of mid-day meals for children).