Baseline Survey of Brick Kilns Pakistan

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Submitted By:

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Table of Contents

Background

1. Background

1.1. The growing emphasis of the Government of Pakistan on infrastructure development, coupled with rapid urbanization and ever widening gap between the available and required number of housing units has led to an increased demand for construction material. The most favored construction material in Pakistan is the masonry brick.

1.2. Brick making industry is a major means of creating employment opportunities; particularly in the rural areas of country where agriculture cannot itself provide a mean of sustainable livelihood. Although the brick-making industry has advanced a lot in the past decade, however, it is still mostly dependent upon traditional and labor intensive methods of production. In Pakistan, the most practiced method for brick baking is still the Fixed Chimney Bull's Trench Kiln (FCBTK). The obvious reason for large number of FCBTKs is the availability of local expertise using different kinds of fuels and fuel mix like indigenously produced lignite coal, rice husk and other agro wastes, beside rubber tyres, plastics and varied industrial wastes producing highly toxic gases thereby damaging the environment.

1.3. The green brick making is mostly manual which is considered as major source of employment. The manual green brick making, as practiced, does not require any formal training; rather the craft is transferred from generation to generation through "on-job training". Obviously, since the method is labor intensive, it does not require major capital investment. This process has inherent problems in terms of (i) low production rate, (ii) higher wastage, (iii) labor requirement and associated problems and (iv) quality aspects.

1.4. The mechanized green brick making is also gaining popularity in Pakistan. Most of the entrepreneurs are using locally fabricated green brick making machines. The mechanized green brick making, has obviously a high production as compared to manual green brick making which obviously has major advantage like (i) less wastage, (ii) less labor intensive, and (iii) consistent brick quality. The mechanized green brick making obviously requires more capital investment.

1.5. Various studies have established that improvements in technology and practices can reduce fuel consumption and pollutants emissions (including black carbon) significantly. The Climate and Clean Air Coalition (CCAC) is a collective effort of the member countries under the auspices of United Nations Environment Programme (UNEP) which is making

efforts towards mitigation of the impacts of short-lived climate pollutants and address the climate change. Pakistan adopted the Climate and Clean Air Coalition (CCAC) in 2017 and became a focus country for the project on brick production. The CCAC's Brick Production Initiative (BPI) is aimed at substantial mitigation of emissions of black carbon and other pollutants from brick kilns through employing a range of technology and policy approaches.

1.6. The International Centre for Integrated Mountain Development (ICIMOD), is coordinating the CCAC-BPI activities in South Asia. Pakistan being a focus country under CCAC, ICIMOD aims to transform brick sector in Pakistan into a cleaner and healthier industry with reduced negative environmental impacts from greenhouse gasses and black carbon through reduced emissions from brick production besides, addressing other concerns like health, working and living conditions of kiln workers, vicinity inhabitation, child labor and agri land degradation etc.

1.7. Pakistan has more than 20,000 brick kilns across the country; of which more than 10,000 are in Punjab. The CCAC Brick Production Initiative has initially selected the Province of Punjab to study transformation to cleaner brick-making and brick-baking technologies for adoption by the entrepreneurs and government. The initiative will, as well, improve well-being of the directly engaged workforce, people living in the air shed in general, and particularly those living in the vicinity of brick kilns.

1.8. The ICIMOD has contracted the Community of Evaluators Pakistan (CoE Pakistan) to undertake a Baseline Study of Brick Kilns in the Punjab Province to examine and understand the bottlenecks during technology conversion and to understand the effectiveness of brick kilns conversion into zigzag technology. The Baseline Study will be undertaken in 11 districts of the Punjab Province wherein data will be collected from 440 brick kilns on specially tailored questionnaires. The Baseline Study results will not only support the Government of the Punjab Province in its efforts to introduce cost effective and scalable Zigzag kiln technology in the province but also help the Government of Pakistan, Brick Kiln Owners Association and other key stakeholders for making informed decisions and to better plan transforming brick kilns into a cleaner industry at the national level.

1.9. As part of the Baseline Study, CoE Pakistan will also facilitate the Brick Kiln Owners Association (BKOA), Pakistan, to finalize Enlisting of the Brick Sector in Pakistan for preparing a legal structure for its registration with the relevant federal ministries/ provincial departments in Pakistan to perform as an organized and regulated sector.

2. Scope of Work of the Study

The Community of Evaluators Pakistan (CoE Pakistan) to carry out baseline study for the brick kilns that included initiation of preparatory work for baseline, conduct baseline survey using specified questionnaires, develop database and carry out descriptive analysis of data sheets. The CoE Pakistan is meant to undertake the following detailed tasks for the Baseline Study:

i) CoE Pakistan in close co-ordination with Strategic Planning, Monitoring and Evaluation (SPM&E) - ICIMOD and BKOAP, agree on the required baseline information, finalize baseline tools, baseline data collection methodology and, data collection timeline
ii) Hire and train required number of enumerators and supervisors on behalf of their respective firm/institution for baseline data collection
iii) Prepare a detailed data collection plan, finalize in consultation with SPM&E and Pakistan Brick Owners Association
iv) Take a lead role and collect baseline data from 440 kilns from across 11 selected districts in Punjab provinces.
v) Closely collaborate with Brick Kiln Owners Association in Pakistan and ICIMOD for timely and smooth collection of baseline data.
vi) Create database of above collected information in appropriate computer application.
vii) Prepare a detailed tabulation/ data analysis plan, and carryout analysis and prepare a baseline report in consultation with SPM&E

The study results will focus on the following deliverables:

Deliverable	Responsibility
i) Undertake baseline data collection from 440 kilns across 11 districts in Punjab using the prescribed questionnaires	CoE Pakistan
ii) Develop database of cleaned baseline data sets	CoE Pakistan
iii) Prepare tabulation plan, and carry out draft descriptive analysis	CoE Pakistan
iv) Final report on Enlisting of brick kilns in Pakistan by APBKOA	APBOKA with the facilitation of CoE Pakistan

The study comprised of a systematic approach of collecting data on prescribed questionnaires and interviews of the kiln owners, management, workers, workers families and surrounding population of 440 brick production units in 11 districts in the Punjab Province. The survey work was undertaken by a team of professional enumerators in the target districts and on the identified brick kilns. The study brought useful data and needed to be funneled through a systematic approach for district wise analysis and quick overview of required information on types of kilns, brick making & baking technologies, land use, fuel usage, labor conditions, state of mechanization, transportation of bricks, environment, health, production capacity etc.

3. Approach Adopted

The broad objective of the study is to understand the current status of the brick kilns sector in Pakistan. The following multi-pronged strategy was adopted for liaison with ICIMOD, APBKOA and the Kilns Management as per the following:

3.1. Coordination with ICIMOD

- Finalization of Baseline tools
- Chalked out Baseline data collection methodology
- Finalization of data collection timelines
- Finalization of the questionnaires

- Finalization of survey plan
- Allocation of unique codes to enumerators, districts, tehsils and kilns for digitization of data

3.2. Coordination with All Pakistan Brick Kiln Owners Association (APBKOA)

- Consultative Meetings held with All Pakistan Brick kiln Owners Association to:
  - Finalized the survey questionnaire
  - Brick Kiln Survey and fields visit plans
  - Finalization of data collection timelines
  - Identification of 440 brick kilns in 11 target Districts in Punjab
  - Facilitation in access to brick kilns
  - Facilitation in finalization of the Enlisting of brick kiln of Pakistan

4. Methodology

CoE Pakistan adopted the following methodology for collection of data from the identified brick kilns:

4.1 Selection of Districts and Kilns

CoE Pakistan in consultation with ICIMOD and APBKOA selected 11 districts in Punjab and identified 440 bricks kilns for undertaking the baseline survey. The districts with high brick kilns concentration across Punjab were selected. The details of the selection of brick kilns is at **annexure-I**. The representative selection of brick kilns across a district was made on the basis of their geographical spread, volume of production, incidence of vicinity population and agricultural practices. Each brick kiln was assigned an ID Code to facilitate the management of the data. (**annexure-II)**

4.2 Data Collection

The following three specific questionnaires were developed to collect data from the brick kilns:

- **Questionnaire-I (annexure-III)**
  This questionnaire pertained to collection of information from the Operator/Manager/Owner of respective kiln(s). It mainly focused on the management and operational aspects of the kilns.

- **Questionnaire-II (annexure-IV)**
  It contained questions to be answered by the workers/families working on the respective kiln. This questionnaire was to highlight the socio-economic condition of the workforce/families working at the kilns.

- **Questionnaire-III (annexure-V)**
  It warranted reporting on various aspects by the enumerators, as observed. The significant observable components included: operational mechanism of the kiln, safety & working conditions of the workers/families at the kiln, housing & trade in the surrounding of the kiln, status of the surrounding land etc.

4.3 Hiring of Enumerators

Enumerators were hired to undertake the survey of 440 brick kilns in 11 districts of Punjab. A total number of 22 enumerators were hired to undertake the baseline survey. The enumerators were selected based on their survey experience, educational qualification and residency in the of the respective target district. This process has led to ensure access to the brick kilns, extended work timing, reliable, real time & accurate data collection. The survey team in each district comprised of 02 enumerators to work jointly and cross check/validate the data sheets. The details of the selected enumerators is at **annexure-VI**.

4.4 Training of Enumerators

The Enumerators after selection were imparted a 2 days orientation training for the baseline survey. The main objective of the training was to develop a clear understanding on the purpose of the survey and to impart hands on training on the survey tools, methods of data collection, use of GPS coordinates for identification of kiln location, SOPs and code of conduct. Mr. Fareed Ahmad (Head SPM&E-ICIMOD) also briefed the enumerators about the objectives and need of this survey in its future perspective. The training was followed by conducting a mock exercise on use of survey tools. The enumerators were provided with survey kits comprising handbag, stationery, jacket, and cap. The program of the training workshop of enumerators is at **annexure-VII**.

Inaugural Session

Class Room Session

Mock Exercise

Group Photograph with the Enumerators

4.5 Initiation of Survey Activities

COEP provided district-wise and tehsil-wise data of operational kilns to the enumerators. Survey activity started on 30th March, 2019 and continued for three weeks due to the geographical and climate challenges. The questionnaires were also translated into graded language “Urdu” which helped enumerators to get more accurate data as the target groups felt comfortable in understanding the questions.

4.6 Ensuring Data Quality Mechanism

COEP developed a strong M&E mechanism for both internal and external monitoring to strictly watch the survey activities and ensure data collection and its reliability.

4.6.1 Internal Monitoring / Validation of filled in questionnaires:

- The enumerators were required to validate the filled-in questionnaires. It was devised that questionnaire filled-in by Enumerator-1 will be validated and duly signed by Enumerator-2 and vice versa.
- Each field supervisor was allocated with certain number of districts. Enumerators in the respective district were required to share their real-time GPS locations while visiting kilns also report on daily progress of the field work and seek back end support if needed.

4.6.2 External Monitoring:

COEP had a dedicated M&E team to make random / surprise visits in the field to monitor survey activities. Besides, follow-up has been using telephone calls to kiln owners/managers.

4.7 GPS Code

The Enumerators have been sharing their live GPS locations from each kiln site concurrently with the supervisors and CoEP Head Office on regular basis. It was also essential to record longitude and latitude coordinates of each kiln in the data sheet.

Data Analysis

5. Data Analysis

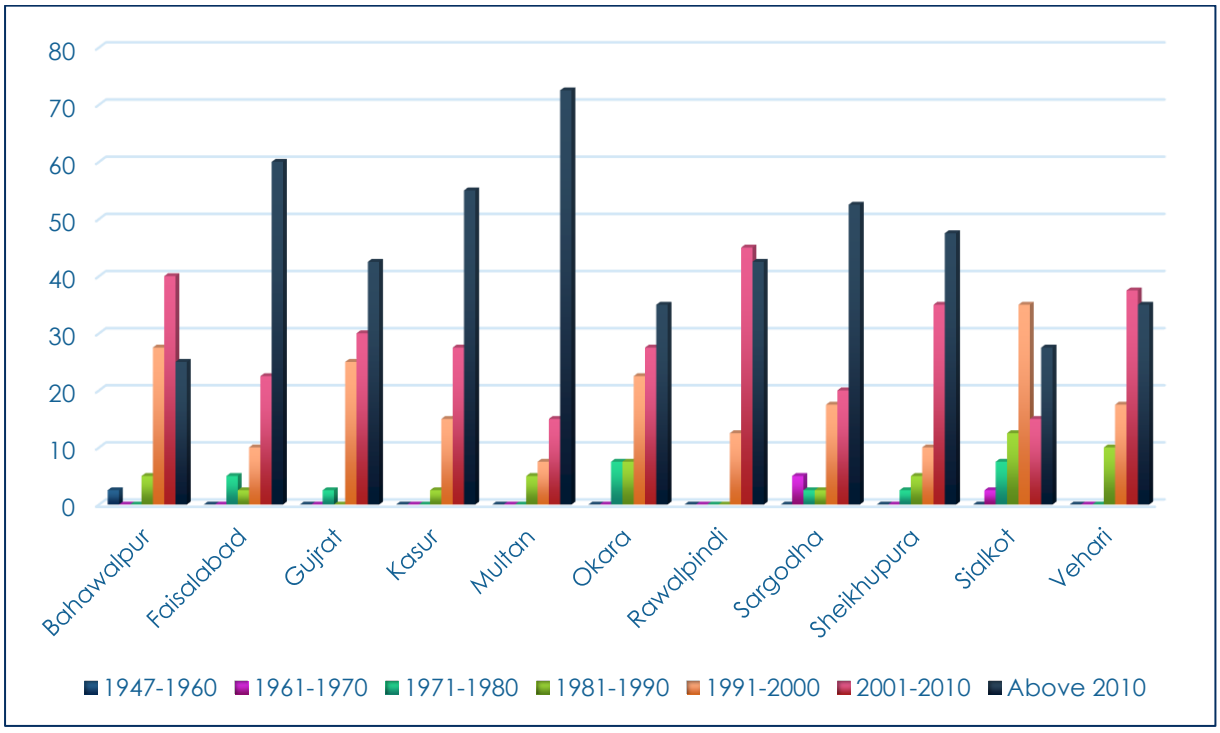
5.1. Questionnaire-I

5.1.1. Section-I: Background Information of Kiln

5.1.1.1. DISTRICT WISE BRICK KILNS STATUS OF REGISTRATION WITH BRICK KILNS ASSOCIATION

Brick kilns are scattered all over the province and are generally located in the suburbs of the towns. The owners of the brick kilns are mostly uneducated or have education up to Secondary School Level. The establishment of brick kilns in Punjab started after the independence in 1947 and the growth in brick kilns in Punjab gradually increased with increase in population and demand for houses. The development activities in Pakistan start getting momentum in eighties and continue till today. The highest growth rate of 45% has been observed in 2000. The trend of establishment of brick kilns in **Figure-I**.

Figure-I: District wise age of Kilns



The Brick Kilns in Punjab, Pakistan, were working in isolation and were not registered with any association or corporate body. In the recent past All Pakistan Brick Kilns Owners Association (APBKOA) was established and efforts were made to encourage the Brick Kiln Owners to register their Brink Kiln with the Brick Kilns Association. The district wise status of brick kilns is presented below.

Table-1: DISTRICT WISE BRICK KILNS STATUS OF REGISTRATION WITH All Pakistan Brick Kilns Owners Association

(PERCENTAGE)

Districts	Registered	Not Registered	In Process	Do not Know
Bahawalpur	42.5	37.5	12.5	7.5
Faisalabad	100	0	0	0
Gujrat	97.5	0	2.5	0
Kasur	75	15	0	10
Multan	0	17.5	75	7.5
Okara	100	0	0	0
Rawalpindi	87.5	12.5	0	0
Sargodha	92.5	2.5	5	0
Sheikhupura	30	40	0	30
Sialkot	97.5	2.5	0	0
Vehari	97.5	2.5	0	0
No. of Brick Kilns	**358**	**52**	**8**	**22**

The data collected from 440 Brick Kilns from 11 Districts indicate that 81% of the Brick Kilns are registered with the Brick Kilns Association and the cases relating to registration of brick kilns is in process and 12% brick kilns owner have not registered themselves with the Brick Kilns Association. The survey indicates that 5% of the surveyed brick kilns owners have no information regarding registration of the brick kilns with the All Pakistan Brick Kilns Owners Association.

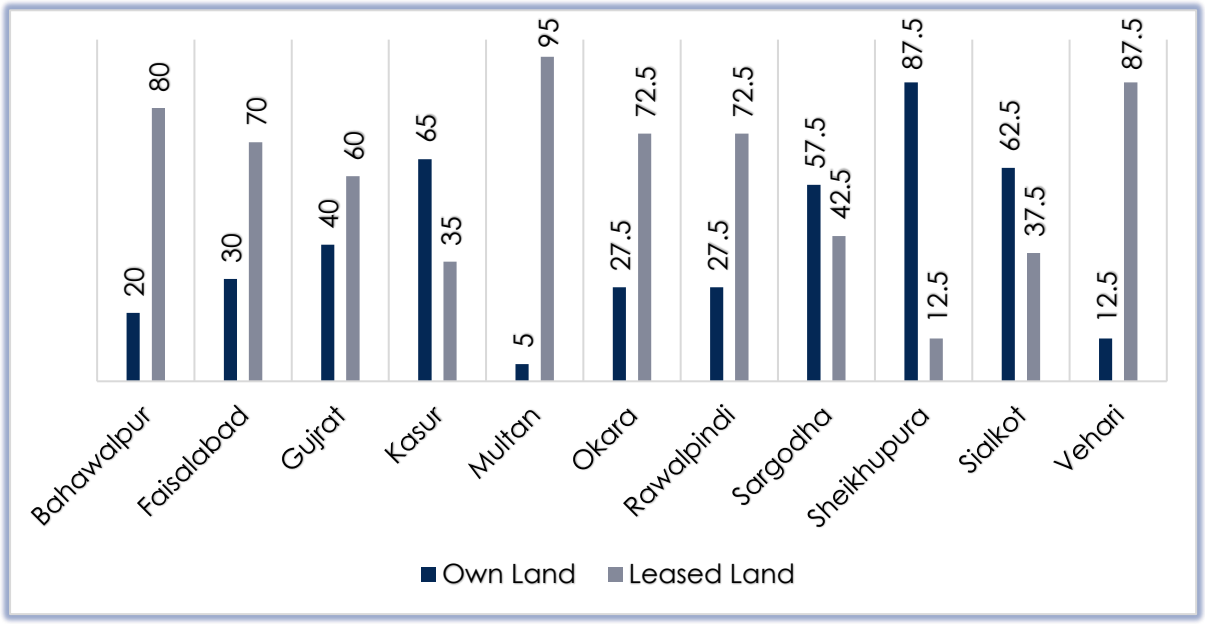
The District wise data indicate that all the brick kilns located in Faisalabad and Okara District are registered with the All Pakistan Brick Kilns Owners Association followed by Gujrat, Sialkot and Vehari where 97.5 % are registered with the All Pakistan Brick Kilns Owners Association.

5.1.1.2. Status of Land under Brick Kilns

The Brick Kilns are developed on the land owned by the brick kiln owners or the owners acquire the land through lease and paying rent to the owners of the land. The survey of the brick kilns in Punjab indicate that 40% of the brick kilns are developed on owned land and 60% are established on the land acquired on lease. The land leased agreement with the

owners varies from 4 years to 11.5 years. The district wise details of the land under ownership and lease along with leased amount is at **annexure-VIII.** The graphic presentation of the same is at **Figure-II**.

Figure-II: District wise Status of Own Land and Leased land



5.1.1.3. District wise Payment mechanism of Leased land

The analysis indicate that 60% of the brick kilns owner have developed brick kilns on leased land. The analysis further indicate that 62% of the brick kilns owners are paying the lease amount in advance while 21% are paying in installments. 16% of the brick kilns are paying leased amount on annual basis and the remaining 1% are paying at the end of the leased period or have no mechanism for payment.

The district wise analysis indicate that all the brick kiln owners located at Faisalabad are paying the lease amount in advance followed by 83% in Rawalpindi, 76% in Okara and 71% in Gujrat. It has been observed 50% of the brick kilns owner at Multan are paying the lease amount in installments followed by 35% in Sargodha and 29% in Gujrat. As regards payment of lease amount on annual basis, 100% of the brick kilns owner at Sheikhupura are paying the lease amount on annual basis followed by 54% at Vehari and 29% at Bahawalpur.

Table-II: Payment mechanism of Leased land

(Percentage)

Districts	Paying in Advance	Paying in Installment	Paying at the end of the Lease	No fix Mechanism	Paying Annually
Bahawalpur	54.2	8.3	4.2	4.2	29.1
Faisalabad	100	0	0	0	0
Gujrat	70.8	29.2	0	0	0
Kasur	28.6	28.6	14.3	0	28.5
Multan	50	50	0	0	0
Okara	75.8	20.7	0	0	3.5
Rawalpindi	82.8	17.2	0	0	0
Sargodha	58.8	35.3	0	0	5.9
Sheikhupura	0	0	0	0	100
Sialkot	46.7	26.7	0	0	26.6
Vehari	37.1	8.6	0	0	54.3
*** No. of Brick Kilns**	**153**	**53**	**2**	**1**	**39**

*Note: *Analysis based on 248 kilns while 18 observations are missing in the data.*

5.1.1.4. District/ Categories wise Covered Area under Brick Kilns

The data collected from brick kilns in Punjab, Pakistan, relating to area under brick kilns indicate that 37% of the brick kilns are developed on less than 20 Kanals of land followed by 18% developed on 41-60 kanals of land. The remaining 15% each are developed on 21-40 kanals, 61-80 kanals and above 80 kanals.

The District wise analysis indicate that majority of the brick kilns at Bahawalpur are developed on less than 20 kanals of land. The data indicate that 30% of the brick kilns at Kasur are developed on 21-40 kanals of land. 42.5 % of the brick kilns located at Gujrat are developed on 41-60 kanals while 37.5% of the brick kilns in Sargodha are developed on 61-80 Kanals of land. Majority of the brick kilns (70%) located at Rawalpindi are developed on above 80 kanals land.

Table-III: Covered / Categories Area under Brick Kilns

Kanals

Districts	Min-20	21-40	41-60	61-80	Above 80
Bahawalpur	97.5	2.5	0	0	0
Faisalabad	62.5	12.5	15	7.5	2.5
Gujrat	0	15	42.5	27.5	15
Kasur	67.5	30	2.5	0	0
Multan	12.5	15	30	32.5	10
Okara	75	5	17.5	2.5	0
Rawalpindi	0	2.5	12.5	15	70
Sargodha	0	7.5	37.5	37.5	17.5
Sheikhupura	12.5	7.5	5	22.5	52.5
Sialkot	77.5	7.5	10	5	0
Vehari	5	52.5	27.5	15	0
No. of Brick Kilns	**164**	**64**	**79**	**66**	**67**

5.1.2. Section-II: Basic Information on Workers

5.1.2.1. District wise Status of Permanent & Transient Workers

The data relating to employing the labor force on brick kilns indicate that 42% of the brick kilns employ both permanent & transient labor force while at 12% of the brick kilns the entire labor is permanent. The data also indicate that 46% of the brick kilns are employing transient labor force.

The district wise analysis indicate that 92.5% of the permanent & transient labor force are employed at Vehari followed by 90% Kasur and Sheikhupura. Faisalabad is the only district where the entire labor force is permanent. Majority of the labor force employed at Bahawalpur, Rawalpindi, Sargodha, Gujrat and Multan is transient manpower.

Table-IV: Status of Permanent & Transient Workers

(Percentage)

Districts	Both Permanent & Transient	All Permanent	All Transient
Bahawalpur	2.5	0	97.5
Faisalabad	0	100	0
Gujrat	5	0	95
Kasur	90	7.5	2.5
Multan	40	2.5	57.5
Okara	77.5	7.5	15
Rawalpindi	2.5	0	97.5
Sargodha	2.5	0	97.5
Sheikhupura	90	10	0
Sialkot	57.5	7.5	35
Vehari	92.5	2.5	5
No. of Brick Kilns	**184**	**55**	**201**

5.1.2.2. District wise Status of Permanent & Transient Female Workers

5.1.2.2.1. Permanent Female Workers

The data relating to employing female labor force on permanent basis reveals that 60% of the brick kilns in Punjab have not employed any permanent female labor force in operation of brick kilns. It has been observed that 25% of the brick kilns are employing less than 10 female workers, While 12% of the brick kilns are employing female labor force ranging between 10-20 workers. The remaining 3% of the brick kilns are employing more than 21 female workers.

The district wise analysis indicate that in Bahawalpur no female worker is employed and the entire labor force is male. In Rawalpindi & Sargodha 97.5% of the brick kilns do not employ any female worker in the brick kilns manufacturing. 62% of the brick kilns in Sheikhupura followed by 60% in Vehari and 52.5% in Okara are employing less than 10 female workers on permanent basis.

Table-V: Permanent Female Workers

(Percentage)

Districts	Permanent Female Workers				
	1-10	11-20	21-30	Above 30	Not working
Bahawalpur	0	0	0	0	100
Faisalabad	12.5	2.5	0	0	85
Gujrat	2.5	0	2.5	0	95
Kasur	30	32.5	10	2.5	12.5
Multan	22.5	7.5	0	2.5	60
Okara	52.5	30	0	0	17.5
Rawalpindi	0	0	0	0	97.5
Sargodha	0	2.5	0	0	97.5
Sheikhupura	62.5	35	2.5	0	0
Sialkot	22.5	7.5	0	5	45
Vehari	60	12.5	2.5	0	25
*** No. of Brick Kilns**	**106**	**52**	**7**	**4**	**254**

5.1.2.2.2. Transient Female Workers

The data relating to female transient workers indicates that 54% of the brick kilns do not employ any transient female workers. 27% of the brick kilns are employing less than 10 female transient workers, while 17% of the brick kilns are employing 11-20 transient female workers. The district wise analysis indicate that Faisalabad brick kilns owner do not employ any female transient worker. 95% of the brick kilns located at Bahawalpur and Sheikhupura are not employing any transient female worker. The 55% of brick kilns owner at Sargodha are employing less than 10 transient female worker followed by 50% at Rawalpindi and 45% at Multan. The data collected at field indicate that 50% of the brick kilns owner at Gujrat are hiring less than 20 transient female workers followed by 45% at Rawalpindi and 27.5% at Sheikhupura.

Table-VI: Transient Female Workers

(Percentage)

Districts	Transient Female Workers				
	1-10	11-20	21-30	Above 30	Not working
Bahawalpur	0	0	0	0	95
Faisalabad	0	0	0	0	100
Gujrat	42.5	50	2.5	0	5
Kasur	30	12.5	0	2.5	40
Multan	45	12.5	7.5	0	30
Okara	22.5	15	0	0	57.5
Rawalpindi	50	45	0	0	5
Sargodha	55	27.5	0	0	15
Sheikhupura	5	0	0	0	95
Sialkot	27.5	22.5	2.5	0	47.5
Vehari	12.5	0	0	0	77.5
*** No. of Brick Kilns**	**116**	**74**	**5**	**2**	**227**

*Note: * The results are based on 423 Kilns in permanent female categories while in temporary female category, results are based on 424 kilns.*

5.1.2.3. District wise Status of Permanent & Transient Male Workers

5.1.2.3.1. Status of Permanent Male Workers

The information collected through survey of brick kilns in Punjab indicate that brick kilns located at Faisalabad and Sheikhupura have the entire permanent male labor force. The Vehari, Kasur and Okara has employed most of its labor force as permanent employees. The Bahawalpur, Rawalpindi and Sargodha are the districts where 97.5% of the labor force is not permanent.

Table-VII: Status of Permanent Male Workers

(PERCENTAGE)

Districts	1-10	11-20	21-30	Above 30	Not working
Bahawalpur	0	0	0	2.5	97.5
Faisalabad	7.5	10	22.5	60	0
Gujrat	0	2.5	0	2.5	95
Kasur	7.5	15	17.5	50	10
Multan	15	7.5	2.5	17.5	57.5
Okara	40	32.5	0	12.5	15
Rawalpindi	0	0	0	2.5	97.5
Sargodha	0	2.5	0	0	97.5
Sheikhupura	7.5	65	25	2.5	0
Sialkot	10	20	10	25	35
Vehari	12.5	27.5	30	25	5
No. of Brick Kilns	**40**	**73**	**43**	**80**	**204**

5.1.2.3.2. Status of Transient Male Workers

The information relating to transient male workers working at the brick kilns indicate that 32% of the brick kilns are employing more than 30 transient workers followed by 19% up to 20 workers and 18% up to 10 transient workers. The district wise status of transient workers is at **Table-VIII.**

Table-VIII: Status of Male Transient Workers

(PERCENTAGE)

Districts	1-10	11-20	21-30	Above 30	Not working
Bahawalpur	7.5	0	5	87.5	0
Faisalabad	0	0	0	0	100
Gujrat	7.5	42.5	30	20	0
Kasur	15	27.5	5	45	7.5
Multan	2.5	17.5	17.5	60	2.5
Okara	5	17.5	30	40	7.5
Rawalpindi	0	22.5	45	32.5	0
Sargodha	15	32.5	45	7.5	0
Sheikhupura	90	0	0	0	10
Sialkot	10	20	15	47.5	7.5
Vehari	55	25	7.5	10	2.5
No. of Brick Kilns	**83**	**82**	**80**	**140**	**55**

5.1.2.4. District wise Male Workers at various Sites of Brick Kilns

5.1.2.4.1. Excavation Workers

The information relating to soil excavation reveals that out of 440 brick kilns 100 brick kilns are employing manpower to excavate soil, whereas, 340 brick kilns are awarding this work on fixed cost basis. Majority of the small brick kiln owners are employing up to 10 workers. Only 34 brick kiln owners are hiring labor in the category of hiring 11-20 workers. The salary of the excavation workers varies from Rs. 14250.0 at Multan to Rs. 25800.0 at Kasur. It has been observed that contractors are hired on fixed cost basis for excavation of land at Rawalpindi.

Table-IX: Excavation Workers

Districts	Excavation Workers (%)			Fixed Cost Excavation	Salary (Avg)	
	1-10	11-20	21-30		Monthly	Daily
Bahawalpur	55	27.5	0	7.5	18600	620
Faisalabad	0	5	0	95	21000	700
Gujrat	0	7.5	2.5	90	14250	475
Kasur	12.5	0	0	87.5	25800	860
Multan	22.5	2.5	0	75	15867	529
Okara	2.5	0	0	97.5	24000	800
Rawalpindi	0	0	0	100	-	-
Sargodha	35	0	0	65	20500	683
Sheikhupura	20	17.5	0	62.5	17100	570
Sialkot	7.5	12.5	2.5	77.5	24750	825
Vehari	5	2.5	0	92.5	20000	667
No. of Brick Kilns	**64**	**34**	**2**	**340**	*92	*92

*Note: * means 340 observations are "Fixed Cost Excavation here while 8 are missing in the data*

5.1.2.4.2. Coal Crushing Workers

The brick kilns are hiring man power for coal crushing it has been observed that 17% of the brick kilns are employing up to three person labor force, while 27% are hiring up to six workers and the remaining 3% brick kilns are hiring more than six workers. As regards payments of monthly salary to workers Gujrat is paying the least salary amounting to Rs. 13051.0 as compared to Rs. 18138.0 at Sialkot. The salary of the coal crushing workers at Sialkot is 39% higher than the salary at Gujrat.

Table-X: Coal Crushing Workers

Districts	Coal Crushing Workers (%)			Monthly Salary (Avg)
	1-3	4-6	Above 6	
Bahawalpur	17.5	52.5	3	15516
Faisalabad	97.5	2.5	0	16375
Gujrat	75	22.5	2.5	13051
Kasur	85	12.5	2.5	16462
Multan	72.5	25	2.5	14900
Okara	100	0	0	13950
Rawalpindi	42.5	57.5	0	14725
Sargodha	60	37.5	2.5	13821
Sheikhupura	92.5	7.5	0	16539
Sialkot	82.5	17.5	0	18138
Vehari	42.5	57.5	0	15705
No. of Brick Kilns	**307**	**117**	**16**	*427

*Note: * 13 observations are missing.*

5.1.2.4.3. Fuel Feeding Workers

After coal crushing, manpower is hired for fuel feeding in the brick kiln. It has been revealed that 76% of the brick kilns are hiring up to six person for fuel feeding in the brick kilns as compared to 21% hiring up to three workers. The remaining around 3% of the brick kilns are employing more than six workers. It has been observed that two brick kiln owners each at Faisalabad and Kasur are using other than human resources (machinery) for fuel feeding of brick kilns. The average monthly salary of fuel feeding worker at Gujrat is Rs. 13600.0 as compared to Rs. 21153.0 at Sheikhupura. The per month salary of fuel feeding workers is 56% higher than the fuel feeding workers at Gujrat.

Table-XI: Fuel Feeding Workers

Districts	Fuel Feeding Workers (%)				Monthly Salary (Avg)
	1-3	4-6	Above 6	Other than Manpower	
Bahawalpur	22.5	77.5	0	0	14888
Faisalabad	15	80	2.5	2.5	17883
Gujrat	72.5	25	2.5	0	13600
Kasur	7.5	77.5	12.5	2.5	16226
Multan	0	97.5	2.5	0	19354
Okara	20	80	0	0	14469
Rawalpindi	50	50	0	0	15258
Sargodha	35	60	5	0	14250
Sheikhupura	0	100	0	0	21153
Sialkot	7.5	92.5	0	0	19321
Vehari	5	92.5	2.5	0	17529
No. of Brick Kilns	**94**	**333**	**11**	**2**	*428

*Note: * 12 observations are missing.*

5.1.2.4.4. Offloading of Baked Bricks Workers

After completing the baking process of the bricks, manpower is hired for offloading the baked bricks. The analysis indicates that 87% of the brick kiln owners are hiring up to 10 laborers for offloading the baked bricks. 13% of the brick kiln owners are employing up to 20 workers and one brick kiln owners is hiring more than 20 workers to offload the bricks. The manpower hired for offloading the bricks is paid salary on weekly basis and the least salary amounting Rs. 4513.0 is paid at Sheikhupura as compared to Rs. 6689.0 at Sialkot. The offloading of baked bricks workers at Sialkot is paid 48% higher wages as compared to Sheikhupura.

Table-XII: Offloading of Baked Bricks Workers

Districts	Offloading of Baked Bricks Workers (%)			Weekly Salary (Avg)
	1-10	11-20	Above 20	
Bahawalpur	82.5	17.5	0	6144
Faisalabad	97.5	2.5	0	6260
Gujrat	52.5	47.5	0	6587
Kasur	95	5	0	5188
Multan	100	0	0	5229
Okara	100	0	0	5071
Rawalpindi	72.5	27.5	0	6374
Sargodha	57.5	40	2.5	6270
Sheikhupura	*97.5	0	0	4513
Sialkot	*97.5	0	0	6689
Vehari	100	0	0	5008
No. of Brick Kilns	**381**	**56**	**1**	**412

*Note: * Shows two values are missing in the data. ** means 28 observations are missing in the data.*

5.1.2.5. District wise Families and Individual Female/Male Workers at Brick Molding Process

Traditionally the brick kiln owners are employing entire family in the brick molding process. The data indicate that 92% of the brick kilns are hiring families for brick molding and 8% are not hiring families in brick molding process. The analysis indicate that 65% of the brick kiln owners are hiring up to 10 families, whereas, 25% of the brick kiln owners are hiring up to 20 families. The remaining 8% brick kiln owners are hiring more than 21 families in the brick molding process.

Table-XIII: families working at Brick Molding Process

(Percentage)

Districts	No families working	1-10	11-20	21-30	Above 30
Bahawalpur	55	40	5	0	0
Faisalabad	0	72.5	22.5	2.5	2.5
Gujrat	0	92.5	5	2.5	0
Kasur	2.5	22.5	20	25	30
Multan	2.5	65	27.5	2.5	2.5
Okara	10	47.5	40	2.5	0
Rawalpindi	0	92.5	5	2.5	0
Sargodha	0	82.5	17.5	0	0
Sheikhupura	0	42.5	52.5	5	0
Sialkot	15	55	30	0	0
Vehari	0	50	47.5	2.5	0
No. of Brick Kilns	**34**	**265**	**109**	**18**	**14**

Note: The data shows 92 % families are working at brick molding site in Punjab

5.1.2.6. District wise individual female and male workers working at Brick Molding process

5.1.2.6.1. Individual female workers working at Brick Molding process

The information relating to individual female working at the brick kilns indicate that individual females are not working at 72% of the brick kilns. The remaining 28% of the brick kilns are hiring individual female manpower in brick molding process. The data indicate that 20% of the brick kiln owners are hiring up to 10 individual female workers as compared to 6% hiring up to 20 individual female workers. The remaining 2% are hiring more than 21 individual female workers.

Table-XIV: Individual female workers working at Brick Molding process

(Percentage)

Districts	Individual female workers				
	Not working	1-10	11-20	21-30	Above 30
Bahawalpur	97.5	2.5	0	0	0
Faisalabad	88.2	11.8	0	0	0
Gujrat	87.5	2	10.5	0	0
Kasur	38.7	41.9	6.4	6.4	6.4
Multan	69.2	23.1	5.1	2.6	0
Okara	95.2	4.8	0	0	0
Rawalpindi	97.5	0	2.5	0	0
Sargodha	94.9	2.5	2.5	0	0
Sheikhupura	94.3	5.7	0	0	0
Sialkot	25	38.9	30.5	0	5.6
Vehari	15	70	12.5	2.5	0
*** No. of Brick Kilns**	**272**	**75**	**23**	**4**	**4**

*Note: * Analysis based on 378 observations as 62 observations (14.23%) are missing.*

5.1.2.6.2. Individual male workers working at Brick Molding process

The male manpower is dominating the labor force working at brick kilns as all the brick kilns are employing individual male manpower in brick molding process. The analysis indicate that 75% of the brick kiln owners are employing up to 20 workers in brick molding process as compared to 20% up to 40 workers. The remaining 5% of the brick kiln owners are employing more than 40 labor force in brick molding process.

Table-XV: Individual male workers working at Brick Molding process

(Percentage)

Districts	Individual male workers			
	1-20	21-40	41-60	Above 60
Bahawalpur	72.5	25	2.5	0
Faisalabad	35	5	2.5	0
Gujrat	82.5	17.5	0	0
Kasur	45	22.5	5	5
Multan	42.5	30	20	5
Okara	52.5	0	0	0
Rawalpindi	80	20	0	0
Sargodha	65	32.5	0	0
Sheikhupura	87.5	0	0	0
Sialkot	67.5	17.5	2.5	0
Vehari	75	20	5	0
*** No. of Brick Kilns**	**282**	**76**	**16**	**4**

5.1.2.7. Working Hours

The analysis undertaken on the basis of data collected from the brick kilns in green brick making indicate that majority of the labor force is hired on agreed / fixed target. The working hours for labor force employed by the brick kiln owners on daily basis is not hired as per labors laws of the Government of Punjab, Pakistan, as the working hours varies from 8 to 16 hours a day. The data indicate that only 7% of the brick kilns are hiring labor force for 8 hours a day and the remaining 93% of the brick kilns are hiring manpower to work beyond 8 hours a day.

Table-XVI: Working Hours in Green Brick Making Site

Working Hours	Percentage
Eight hours a day	7
Twelve hours a day	1
Sixteen hours a day	7
Until daily target agreed is achieved	18
Until agreed target for a season is achieved	2
As per the capacity of the labor	65

5.1.2.8. Transportation Mechanism of Green Bricks to Baking Site Average Payment/1000 Green Bricks

The green bricks are transported to the baking site by using different means of transportation. The following are the transportation means adopted for transportation of green bricks to baking site in Punjab.

Table-XVII: Transportation Mechanism of Green Bricks to Baking Site

Description / Communication Means	Percentage Share
Manually by using human labor	4
Human labor by using carts	29
Manually by using human & animal labor	62
Human using motorized options	0
Human using motorized/animals options	5

The analysis indicate that the most commonly used means of transportation green bricks to baking site is using human and animal labor force, followed by human labor by using carts. The motorized options for transportation of green bricks are marginal. The payment being made by brick kiln owners for transportation of 1000/bricks at Okara is Rs. 176.0 as compared to Rs. 400.0 at Bahawalpur. The transportation charges at Bahawalpur are 2.27 times higher than the charges at Okara. The district wise details of means of transportation of green bricks is at **annexure-IX**.

5.1.3. Section-III: Production Capacity V/s Actual Production

5.1.3.1. Production Capacity of Green Bricks Making per Round or Cycle of Stacking

The information relating to production capacity of green bricks making per round of stacking has been obtained from the brick kiln owners located in Punjab, Pakistan. The district wise details of the green bricks making capacity is at **annexure-X.** The analysis under taken on the basis of collected data is presented below.

Table-XVIII: Production Capacity of Green Bricks Making per Round

Production Capacity	Percentage Share
Min-100000	3
100001-200000	2
200001-300000	3
300001-400000	14
400001-500000	16
500001-600000	32
600001-700000	20
Above 700000	10

The analysis indicate that 62% of the brick kilns are producing more than 500,000 bricks per round. The analysis further indicate that 30% of the brick kilns have the green bricks making capacity 300,000 to 500,000. Only 8% of the brick kilns are producing less than 300,000 green bricks. It can safely be concluded that majority of the brick kilns have higher capacity to produce bricks.

5.1.3.2. Production of Green Bricks

The information relating to production of green bricks in selected brick kilns of Punjab, Pakistan, have been obtained and is presented at **table-XIX**. It indicate that Kasur district produce 57.110 million bricks last years as compared to 7.890 million bricks per annum at Bahawalpur. The productivity of one brick kiln at an average at Kasur is 1.631 million as compared to Bahawalpur where the production capacity is 0.375 million. Highest productivity is obtained in Kasur and Sheikhupura, which can be attributed to better soil condition for the production of green bricks along with improved management and availability of skilled manpower.

Table-XIX: Production of Green Bricks

Districts	Absolutely Numbers of Green Bricks / Year	Average Numbers of Green Bricks / Brick Kiln/ Year
Bahawalpur	7,890,000	375,714
Faisalabad	21,980,000	646,471
Gujrat	21,930,000	577,105
Kasur	57,110,000	1,631,714
Multan	20,725,000	628,030
Okara	21,235,000	530,875
Rawalpindi	21,750,000	543,750
Sargodha	20,590,000	541,842
Sheikhupura	40,450,000	1,064,474
Sialkot	29,350,000	733,750
Vehari	16,165,000	404,125
*** No. of Brick Kilns**	**397**	**397**

*Note: * 43 observations are missing in the data.*

5.1.3.3. District wise Average Percentage of A, B, C and Mixed Bricks & Damaged Baked Bricks

The data relating to category of bricks have been obtained from the surveyed brick kilns and it indicates that 18% of the bricks produced by the brick kilns are damaged before baking or during transportation to brick kilns or its offloading. The highest number of damaged bricks is observed at Kasur followed by Bahawalpur and Multan.

The data relating to grade wise brick indicates that 60% of the bricks produced by the brick kilns are of Grade-A followed by 18% Grade-B and 9% Grade-C. The data also indicate that 13% of the bricks produced by the brick kilns are Mixed Bricks. It indicate that majority of the bricks produced by the brick kilns are of good quality.

Table-XX: Grade Wise Production of Bricks

(Percentage)

Districts	Grade A	Grade B	Grade C	Mixed Bricks	Damaged Baked Bricks
Bahawalpur	52.8	25.9	11.6	9.7	10.5
Faisalabad	59.5	14.7	12.6	13.2	26.2
Gujrat	60.6	16.9	10.6	11.9	11.8
Kasur	60.1	17.4	11.5	11.0	29.8
Multan	57.9	18.1	12.5	11.5	23.3
Okara	61.2	16.2	9.1	13.5	14.7
Rawalpindi	58.0	19.1	10.2	12.7	12.6
Sargodha	58.6	17.2	9.9	14.3	14.6
Sheikhupura	62.0	18.6	4.3	15.1	18.1
Sialkot	66.1	17.1	6.2	10.6	18.8
Vehari	61.5	15.8	2.5	20.2	20.8
No. of Brick Kilns	**440**	**438**	**372**	**435**	**440**

Note: Less than 440 observations shows that Kilns in few districts had not produce quality bricks and reported '0' in the data.

5.1.3.4. District wise Coal Feeding Schedule

The coal feeding schedule of brick kilns obtained through baseline survey indicate that 10% of the brick kiln owners are feeding coal on continues bases after 10 minutes, whereas, 38% of the brick kiln owners are feeding coal at random timings, while 38% are feeding coal as & when required. The remaining 14% of the brick kiln owners are feeding coal with difference interval of 15 minute to 60 minutes.

District wise analysis indicate that 26.3 % of the brick kilns in Rawalpindi are feeding coal after 10 minutes followed by Vehari and Gujrat. The analysis further indicate that 100% of the brick kilns at Kasur are feeding coal at random timings followed by Sargodha and Gujrat. The analysis also indicate that 97.5% of the brick kilns at Faisalabad are feeding coal as & when required followed by Vehari and Sheikhupura. Okara and Multan are the districts where the coal is being feeded at intervals ranging between 20 minutes to 60 minutes.

Table-XXI: Coal Feeding Schedule

(Percentage)

District	Coal Feeding Schedule			
	Continuous after 10 minutes	Continuous at random timing	As and when needed	others
Bahawalpur	2.5	30	60.5	0
Faisalabad	0	2.5	97.5	0
Gujrat	25	67.5	7.5	0
Kasur	0	100	0	0
Multan	2.5	2.5	32.5	62.5
Okara	7.5	7.5	0	85
Rawalpindi	26.3	65.8	7.9	0
Sargodha	15	72.5	12.5	0
Sheikhupura	7.5	30	62.5	0
Sialkot	0	43.6	56.4	0
Vehari	25	2.5	67.5	5
*** No. of Brick Kilns**	**44**	**164**	**164**	**61**

*Note: *Analysis based on 433 observations as 7 observations are missing in the data.*

5.1.4. Section-IV: Fuel being used in the Kilns

5.1.4.1. District wise Types of Fuel Used

The brick kiln owners were enquired about the use of different type of fuel in the baking process of bricks. The owners were given a multiple choice and were allowed to indicate more than one option. The analysis indicate that all the brick kilns located at Kasur, Multan and Sialkot are using pure coal followed by 97.5% at Gujrat & Kasur and 92.5% at Rawalpindi. The brick kilns are also using coal mixed with other additives and analysis indicate that all the brick kilns located at Bahawalpur are using coal mixed with other additives followed by 92.5% at Vehari and 80% at Okara. A few brick kilns located at Vehari, Sheikhupura, Sargodha and Gujrat are mixing coal with rubber.

Table-XXII: District wise Types of Fuel Used

(Percentage)

District	District wise Types of Fuel Used		
	Pure Coal	Coal Mixed with other additives	Coal Mixed with rubber
Bahawalpur	2.5	100	0
Faisalabad	97.5	2.5	0
Gujrat	97.5	0	2.5
Kasur	100	7.5	0
Multan	100	2.5	0
Okara	22.5	80	0
Rawalpindi	92.5	5	0
Sargodha	82.5	17.5	2.5
Sheikhupura	87.5	15	2.5
Sialkot	100	2.5	0
Vehari	0	92.5	7.5
No. of Brick Kilns	**440**	**440**	**440**

Note: 9 percent responded in others categories that they are using gutka, poultry waste and wood powder.

5.1.5. Section-V: Technology being used in the Kilns

5.1.5.1. District wise Types of Brick Kilns

The data collected from the brick kilns located in Punjab, Pakistan, indicate that 89% of the brick kilns are using Fixed Chimney Bull Trench Kiln as compared to 9% based on Moving Chimney Bull Trench Kiln Technology. The Zig Zag technology is used in 2% of the brick kilns in Punjab, Pakistan. The Zig Zag technology was introduced at Sheikhupura in 2017 and is at infant stage. The district wise data indicate that highest number of brick kilns using Zig Zag technology are located at Sialkot. The analysis further indicate that 97.5% of the brick kilns located at Multan are using Moving Chimney Bull Trench Kiln Technology. Majority of the brick kilns located in Punjab except Multan are using Fixed Chimney Bull Trench Kiln Method to produce bricks.

Table-XXIII: Types of Brick Kilns

(Percentage)

District	District wise Types of Brick Kilns		
	Zig Zag	Moving Chimney Bull Trench Kiln	Fixed Chimney Bull Trench Kiln
Bahawalpur	0	0	100
Faisalabad	2.5	0	97.5
Gujrat	0	0	100
Kasur	2.5	0	97.5
Multan	0	97.5	2.5
Okara	2.5	0	97.5
Rawalpindi	0	0	100
Sargodha	0	0	100
Sheikhupura	2.5	0	97.5
Sialkot	12.5	2.5	85
Vehari	0	2.5	97.5
No. of Brick Kilns	**440**	**440**	**440**

5.1.5.2. *District wise Fuel used for Ignition of Kiln*

The brick kiln owners were offered multiple choice to indicate fuel used for ignition of kiln. The data collected from the brick kilns indicate that main fuel being used is wood followed by rubber tyres and LPG Gas.. Bahawalpur is the district where the brick kiln owners are using wood, LPG gas, rubber tyres, kerosene oil and diesel for ignition of kiln.

Table-XXIV: Fuel used for Ignition of Kiln

(Percentage)

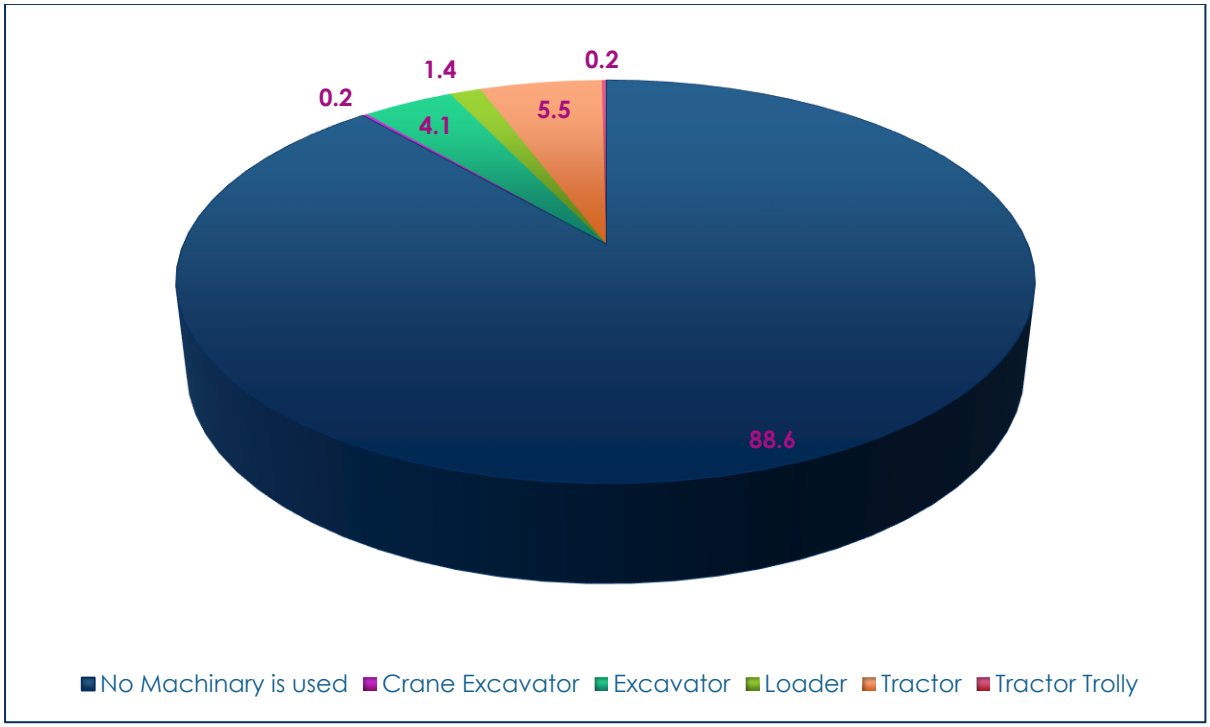
District	District wise Fuel used for Ignition of Kiln		
	Wood	LPG Gas	Used rubber tyres
Bahawalpur	30	2.5	5
Faisalabad	100	0	2.5
Gujrat	100	0	0
Kasur	100	2.5	80
Multan	100	0	5
Okara	100	0	2.5
Rawalpindi	100	0	0
Sargodha	100	0	0
Sheikhupura	97.5	0	37.5
Sialkot	97.5	0	0
Vehari	100	0	20
No. of Brick Kilns	**440**	**440**	**440**

Note: Percentage may vary in multiple choice options as respondent choses multiple options.

5.1.5.3. Use of Machinery at Brick Kilns

The data relating to use of machinery at brick kilns for excavation, soil mixing, clay making, bricks molding, staking and offloading was collected from the brick kilns owner. The analysis of the data indicate that only 13% of the brick kiln owners in all the districts of Punjab, Pakistan, are using machinery, while the remaining 87% are excavating manually. As regards soil mixing 8% of the brick kiln owners are using machinery while, remaining 92% brick kilns are doing manually.

Figure-III: Use of Machinery at Brick Kilns



5.2. Questionnaire –II

5.2.1. Section-I: Sites of Kilns where interviewed families work

5.2.1.1. District wise distribution of the sites for the interview of brick Kiln labor

The basic objective of Questionnaire-II was to obtained information relating to socio economic conditions of the labor force employed at the brick kilns. Attempts were made to provide equal representation to the labor force working at soil preparation, transportation of green bricks, stacking of green bricks, coal crushing & transportation of fuel to brick kiln and offloading of baked bricks. District wise details of the site selected for seeking interview of the labor force is at **annexure-XI** and age of the interviewed worker is at **annexure-XII.** The distribution of sites for collecting actual information along with average age is as follows

Table-XXV: Distribution of Sites for Interviewing the Labor Force

Site	Percentage	Average Age (Years)
Soil Preparation	22	41
Transportation of Green Bricks	17	42
Stacking of Green Bricks	23	38
Coal Crushing, transportation of fuel	19	38
Offloading of baked bricks	19	38

5.2.1.2. District wise Transient families and Individual workers

District wise information relating to transient families, individual female transient workers and individual male transient worker have been obtained from the brick kilns located at Punjab, Pakistan and details are at **annexure-XIII**. The analysis of the data collected from transient labor force working at brick kilns indicate that 7 transient families at an average are working at the brick kilns. The population of individual female transient workers at brick kilns is less than 1 and individual male transient workers are 12. It indicates that majority of the individual transient male workers are employed at the brick kilns followed by transient families.

The data relating to years of working at a particular sites have also been examined. It indicate that 19.6% of the employed labor force is working for more than five years in soil preparation site followed by 20.6% each for working up to 1 & 2 years. The data relating to transportation of green bricks to site indicate that 24.6% of the labor force is working for the last 1 year followed by 20.5% up to 2 years and 19.2% for 5 years and above. In case of stacking of green bricks 26% of the labor force is working for more than 2 years followed by 19% for more than 4 years and 18% for 1 year. In case of coal crushing the retention time of labor force is comparatively less and it has been observed that 56% of the employed labor force is working for less than 1 year. The reason for quick movement of labor force can be attributed to coal crushing environment. The phenomena of the labor force working at offloading of baked bricks indicate that 60% of the labor force is employed up to 3 years, whereas, 32.9% of the labor force is working for 3 to 4 years. To sum up, the trend of labor force working in the brick kilns indicate that majority of the labor force continue to work up to 3 years in a brick kiln and partially leave the brick kiln in the 4th year. In case the labor force do not leave the brick kiln, they continue to work at the same brick kiln.

Table-XXVI: District wise number of years families working in each selected site of Kiln

Sites of kiln	Less than a Year	For one year now	For two years now	For three years now	For four years now	For 5 years and above	Others
Soil Preparation site	14.4	20.6	20.6	6.2	14.4	19.6	4.1
Transportation of GB site	24.6	20.5	11	8.2	15.1	19.2	1.4
Stacking of GB sites	12	18	26	10	19	14	1
Coal Crushing, transportation to fuel site	23.2	32.9	13.4	6.1	9.8	12.2	2.4
Offloading of baked bricks site	7.1	23.5	29.4	17.6	15.3	4.7	2.4
No. of Brick Kilns	69	100	90	42	65	61	*13

*Note: * shows others includes more than years.*

5.2.2. Reasons responded by worker families staying at Kiln for more than 2 years

The information relating to staying beyond 2 years at the same brick kilns from 270 families was collected and it was observed that the workers are staying at the same brick kilns on account of multiple factors. It includes liking the owner, financial support to the worker to meet their livelihood needs, facilitation in payment of loans obtained by the families, friendly attitude of the supervisor / contractor. The analysis of the data indicate that human relationship are considered to be a binding force in continuation of work at the same brick kiln. The statistical data collected from the families is presented below.

Table-XXVII: Reasons for continuation at the same brick kiln

Description	Percentage Share
Liking Owners	36
Support for livelihood	28
Financial support to pay loan	28
Supervisor / Contractor attitude	8

5.2.3. Section-II: Working Conditions of Workers

5.2.3.1. District wise Payment arrangements of Workers working at various sites of Kiln

The information relating to payment arrangements made to pay the salaries to the workers was obtained from the interviewed labor force and it was observed that majority of the labor force working on the brick kilns are paid on weekly basis. The payment as reported is being made on Thursday. It is observed that 19% of the workers are paid salaries on monthly basis, which represent mostly permanent employees. The district wise detail of the salary structure at brick kiln is at **annexure-XIV**. The summary results are at **table-XXIX**.

Table-XXIII: Structure of Payment to Labor Force

Description	Percentage Share
Monthly salary	19
Daily wages	8
Mixed	0
Lum sum on agreed work completed	6
Lum sum for whole season	1
Weekly payment	66

5.2.4. Payment structure of remuneration

The labor force of each category was asked to indicate the salaries / wages being paid on completion of the job. The details of the information collected from the labor force is at **table-XXX**. The analysis indicate that either the payment to the labor force is made on daily, weekly, monthly basis or lum sum payment is made on completion of job are whole season. The payment made for whole season is generally link with the achievements of targets.

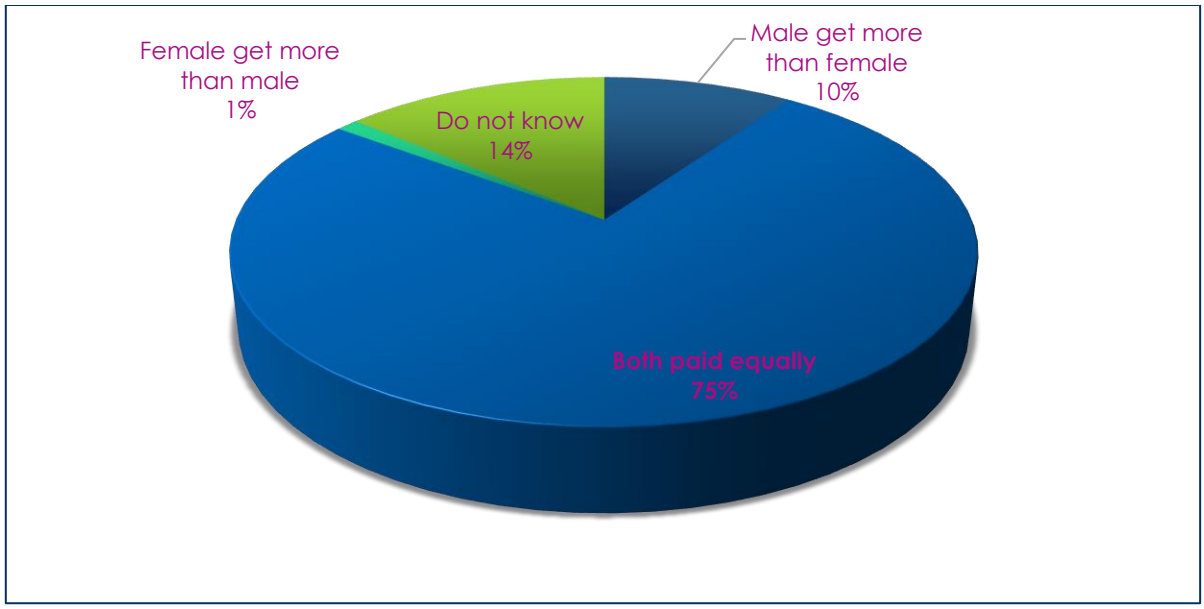
Table-XXIX: Remuneration to Labor Force

Payment Arrangements	Amount (Average)
Monthly salary	18,345
Daily wages	767
Lum sum on agreed work completed	1,180
Lum sum for whole season	423,333
Weekly payment	5,760
No. of Brick Kilns	**440**

5.2.5. Remuneration to Male and Female Workers

The data relating to remuneration being paid to male and female workers was obtained from the labor force working at the brick kilns of Punjab, Pakistan. 75.45% of the interviewed labor force, informed that the remuneration being paid to male and female are equal. The information provided by 9.77% of the labor force its indicate that the salary of male worker is higher than the female worker, whereas, 1.14% of the labor force informed that the salary of female workers is higher than the male worker. 13.64% of interviewed labor force informed that they have no idea about the wages being paid to male and female workers. The payment of remuneration to male and female workers on the basis of data collected is presented in the following graph.

Figure-IV: Remuneration to Male and Female Workers



5.2.6. Section-II-a: Accommodation provided to Workers

5.2.7. District wise Status of accommodation provided to the workers

The information relating to provision of accommodation at brick kilns was collected from the interviewed labor force. It was informed by 63% of the labor force that accommodation has been provided at the brick kiln, while 37% informed that no accommodation facilities have been provided by the owner of the brick kilns. The workers further informed that the accommodation provided to 38% of the labor force is permanent, while 62% of the labor force have been provided temporary accommodation by the brick kiln owners. The district wise details of the accommodation provided to labor force is at **table-XXXI.**

Table-XXX: Provision of Accommodation to Labor Force

Districts	No Accommodation Provided	Accommodation provided		
		Permanent	Temporary	Total
Bahawalpur	21.2	2.5	10	1.8
Faisalabad	9.3	62.5	0	9.1
Gujrat	3.0	0	87.5	12.7
Kasur	2.1	37.5	52.5	13.1
Multan	17.6	25	2.5	4.1
Okara	16.4	10	22.5	4.7
Rawalpindi	1.2	7.5	87.5	13.8
Sargodha	0	0	100	14.5
Sheikhupura	1.2	95	0	13.8
Sialkot	12.2	10	40	7.3
Vehari	15.8	12.5	22.5	5.1
No. of Brick Kilns	**165**	**105**	**170**	**275**

5.2.8. District wise Status of Toilet Facility Provided to Temporary Workers

The brick kiln owners have provided temporary accommodation to some of the labor force. The information relating to provision of basic facilities i.e. water, toilet etc. was inquired from the labor force and district wise provision of facilities is at **annexure-XV,** it indicate that Multan is the only city where toilet with tapped water and closed drain is provided. It has been observed that there is no temporary accommodation provided to the labor force at Faisalabad and Sheikhupura. The brick kiln owners have not provided any toilet facilities to majority of the brick kiln workers at Kasur, Sargodha, Gujrat and Vehari. The summary of the facilities provided to the labor force working at brick kilns is at **table-XXXIII**.

Table-XXXI: Toilet Facility Provided to Temporary Workers

Description	Percentage Share
No Toilet	73
Toilet with tapped water, open drain	16
Toilet with tapped water, closed drain	4
Toilet with tapped water, open drain, on sharing	5
Toilet with tapped water, closed drain, on sharing	1

Section-II-b: Eating Breaks

5.2.9. District wise eating breaks of the workers specific to the site of the Kiln

The information to breaks during eating hours was obtained from the interviewed labor force. It was informed that 63% of the brick kiln owners have notified scheduled time for meals, whereas, 35% of the brick kilns are allowing eating breaks on turn. The information collected from brick kilns indicate that 2% of the brick kilns do not have any eating breaks. The district wise information relating to breaks is presented at **table-XXXIII.**

Table-XXXII: Eating Breaks at Brick Kilns

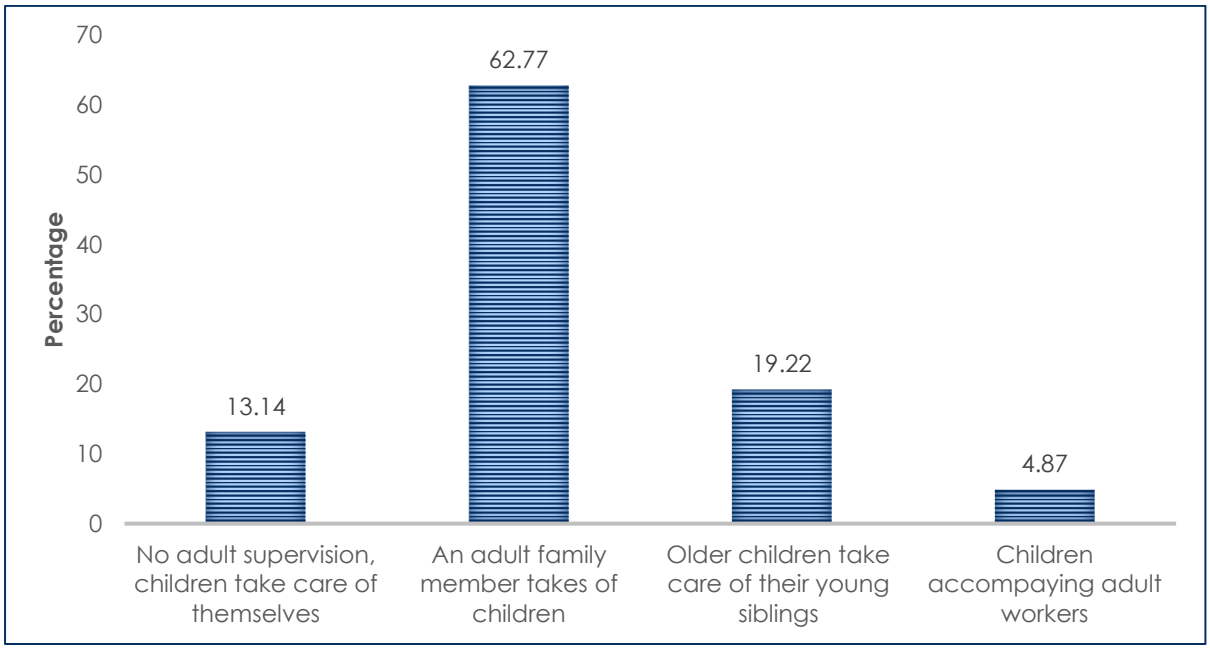
Districts	No eating breaks	Eating breaks by turns	Eating breaks at scheduled interval
Bahawalpur	0	17.5	82.5
Faisalabad	5	95	0
Gujrat	0	22.5	77.5
Kasur	2.5	90	7.5
Multan	0	5	95
Okara	0	10	90
Rawalpindi	2.5	12.5	85
Sargodha	0	37.5	62.5
Sheikhupura	2.5	10	87.5
Sialkot	0	32.5	67.5
Vehari	7.5	50	42.5
No. of Brick Kilns	**8**	**153**	**279**

Section-II-c: Accompanied Child Care

5.2.10. Overall status of child care accompanying families while adults are working

The information relating to child care accompanying families, while adults are working indicate that generally and elderly person of the family stays at home and take care of the children while adults are working at brick kiln. The data indicate that 63% of the labor force are leaving and adult family member to take care of the children, while they are working. In 19.22% of the worker indicate that older children of the family take care of the younger ones, while 13.14% leave their children at home without any supervision. The analysis further indicate that 4.87% of the workers children accompany adult members at work place. The status of the child care is presenter at Figure-V.

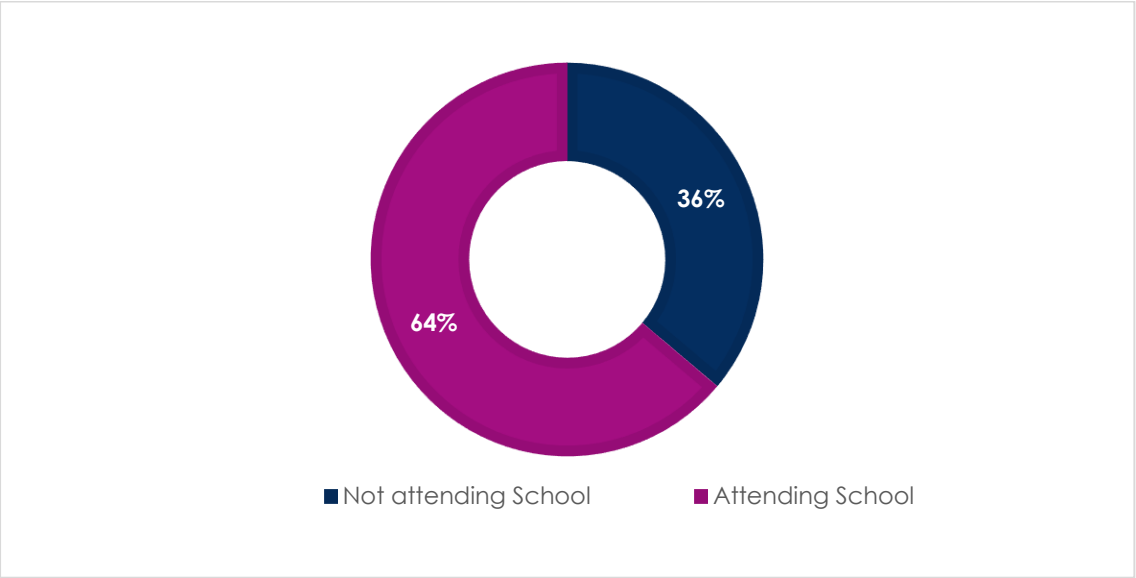
Figure-V: Overall status of child care accompanying families while adults are working



5.2.11. Percentage of Children going to school at place of origin and at migrated place

The data relating to children going to school before and after migrating to present location indicate that 36% of the children were attending the school before migration for work. The percentage of children going to school after migration have increased to 64%. The increase in enrolment of migrating children can also be attributed to school going age of the children. The **Figure-VI** indicate the status of migrated children going to school.

Figure-VI: Percentage of Children going to school at place of origin and at migrated place

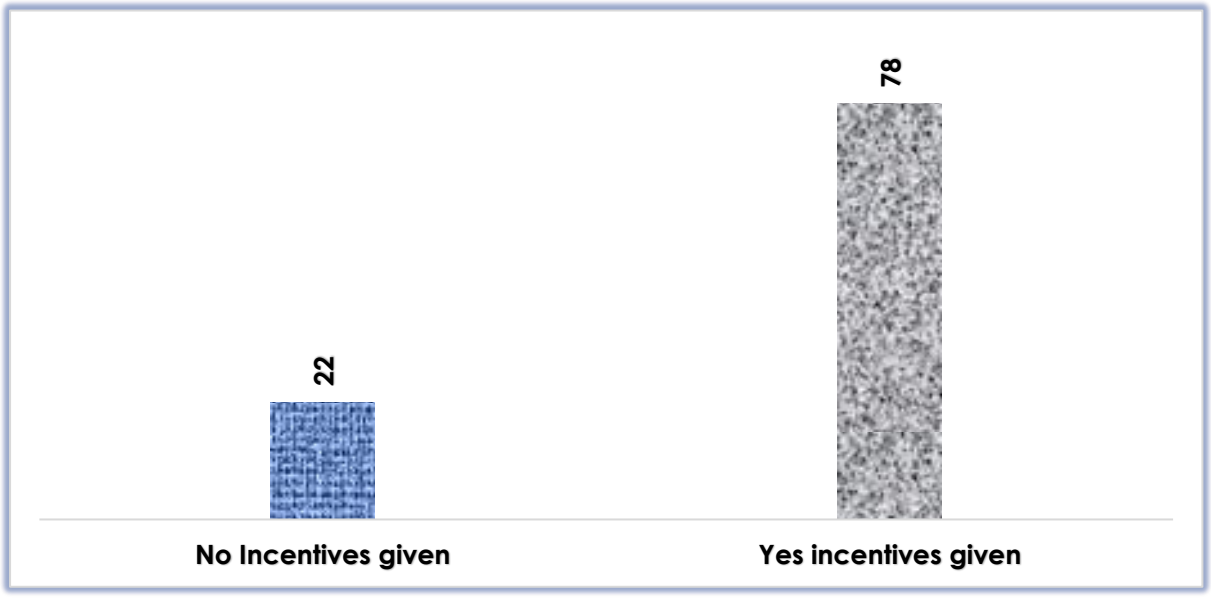


Section-II-d: Incentives Giving to Workers beyond money for work

5.2.12. Additional Incentives other than monetary incentives

The data collected from the labor force working at the brick kiln indicate that in most of the cases the labor force has to work for additional hours to achieve physical target and meet their basic livelihood. The labor force was inquired whether monitory benefits are provided to them for doing extra work or otherwise. The response provided by the labor force indicate that 78& of the labor force is paid extra financial benefits on account of additional work, while 22% of the workers have informed that no incentive is provided to them for extra work. The Figure-VII represent the status based on labor force response.

Figure-VII: Additional Incentives other than monetary incentives



5.3. Questionnaire-III

Section-I: Workers Safety Environment

5.3.1. Workers Safety Environment

The safety is an important factor to ensure the safety and security of the employed labor force. The information collected by the enumerators indicate that generally safety of labor force is ignored in the operation of brick kilns. It was observed that only 1% of the labor force is wearing the labor kit on green bricks making site, while, 99% have ignored this aspect. In case of green bricks loading and stacking site it has been observed that only 3% of the labor force were wearing the labor kit. In coal crushing site, 6% of the labor force was wearing the labor kit. It was observed that 84% of the coal is crushed manually and 16% crushed combinedly by machine and manpower. In fuel feeding site, it was observed that 34% of the labor force was wearing labor kit, while 3% was wearing both partial & full kit and 1% was wearing full kit and 30% was wearing partial kit.

Section-II: Animal Laboring and Health condition

5.3.2. Animal Laboring and Health condition

The animals are used in the brick kilns for transporting the green bricks. The information relating to health of the animals was obtained from the enumerators and it has been informed that majority of the animals seems physically active and healthy. The status of the health of animals is presented at **Table-XXXIII**.

Table-XXXIII: Physical condition of animals

All animals seem Physically weak & unhealthy	13
All animals seem physically active & healthy	66
Majority animals seem Physically weak & unhealthy	10
Majority animals seem physically active & healthy	11

5.3.3. Status of animals used in Bricks Making Process

The data collected from the brick kilns indicate that donkey is the main animal which is being used for the transportation and staking of green bricks. The status of the animals being used in the bricks making process is at **Table-XXXIV**.

Table-XXXIV: Status of animals used in Bricks Making Process

Animals	No animal is used	1-3 Animals	4-6 Animals	7-9 Animals	Above 9 Animals	Total
Mules	77.4	9.4	8.5	3.1	1.6	424
Horses	74.3	17.4	6.1	1.2	1	424
Donkeys	22.9	25.5	33.5	10.6	7.5	424
Bull	83.4	6.9	5.4	1.6	2.6	*424

Major Findings

6. Key Findings

6.1. The survey of brick kilns indicate that 81 % of the brick kilns are registered with the All Pakistan Brick Kiln Owners Association.

6.2. Most of the brick kilns located in Punjab, Pakistan, have been developed in leased land and the duration of lease varies from 4 years to 12 Years. The rent of leased land is mostly paid on annual basis. The brick kilns in majority of the cases are developed on land ranging between 20 to 40 kanals.

6.3. The brick kiln owners are employing 42% permanent and transient labor force while individual transient labor force accounts for 46%. All the labor force employed at brick kilns belongs to Punjab province.

6.4. Generally the male labor force is hired by brick kiln owners in brick making process and 65% of the labor force work as per their capacity.

6.5. Variation in wages of skilled workers at different districts has been observed. However, in majority of the cases the wages of male and female workers are the same. Payment of wages to the labor force are made on weekly basis.

6.6. The human resources and animals are used in 91% of the cases for transportation of green bricks to baking site.

6.7. 63% of the brick kilns are producing more than 500,000 bricks in a round and 78% of the bricks produced are of category A &B.

6.8. Coal is the main fuel for baking the bricks and wood is generally used for ignition of kilns.

6.9. Majority of the brick kilns are using Fixed Chimney Bull Trench Kiln and the Zig Zag technology being used in 2% of the brick kilns in Punjab, Pakistan.

6.10. Bricks making process is being undertaken manually and the use of machinery is insignificant.

6.11. Human relationship plays an important role in retaining the labor force from migration to other brick kiln.

6.12. Brick kiln owners are providing residential accommodation to 62% of the labor force working at the brick kiln. However, in majority of the cases toilet facilities are not provided to the labor force.

6.13. 63% of the brick kiln owners have notified eating breaks to the workers working at brick kiln.

6.14. 63% of the family labor working at the brick kiln leave one of their adult family member to take care of children.

6.15. The percentage of the children going to school before and after migration has increased from 35% to 64%.

6.16. Additional remuneration is provided by the brick kiln owners to the labor force for extra work.

6.17. It has been observed that no safety kit is provided to the labor force during working hours to ensure to their safety.

6.18. Donkey is the popular animal for transportation of green bricks to baking / stacking area.

6.19. The brick kiln owners generally do not provide appropriate health cover to labor force and their families working at the brick kilns.

6.20. The brick kiln owners have not taken any initiative to ensure clean environment around brick kilns.

6.21. The brick kiln owners are reluctant to provide details of sales, operating cost and annual turnover.

Recommendations

7. Recommendations

7.1. The brick kilns sector is still unorganized and a need has emerged to regulate the sector through appropriate intervention. It will not only facilitate provision of financing to the brick kilns sector but will also emerge as an industry to contribute towards GDP.

7.2. The emerging need of the brick kilns sector is to make it environment friendly and introduction of Zig Zag technology is evident. Mass awareness campaigns including seminars, trainings and group discussion will facilitate understanding the technology and its impact on health, environment and increased production efficiency.

7.3. A financial package of transforming the brick kilns from Fixed Chimney Bull Trench Kilns to Zig Zag technology be offered to the brick kilns owners by involving All Pakistan Brick Kiln Owners Association (APBKOA).

7.4. Ministry of Climate Change, Government of Pakistan and Provincial Government may be involved in addressing the challenges being faced by the community due to incidence of health hazards on account of noxious exhaust gases from brick kilns.

7.5. In order to understand the provincial dynamics in bricks making, ICIMOD may explorer possibilities for undertaking the survey in other provinces of Pakistan.

7.6. The All Pakistan Brick Kiln Owners Association in collaboration with brick kiln owners and Ministry of Climate Change / Provincial Governments may develop standard package of facilities (health, safety, education, accommodation and social security) for the labor force employed at the brick kilns.

7.7. ICIMOD may organize a seminars at different locations to disseminate the Zig Zag technology and its impact on productivity, profitability and environmental protection. The members of the District Councils and Municipal Corporation may also be engaged to frame local rules & regulations to introduce Zig Zag technology under the legal cover.

Annexures

Annexure-I

Baseline Survey of Brick Kilns

Tehsil wise selection of brick Kilns

No.

District	Tehsil / Area	Total Kilns	Selected Kilns
Bahawalpur	Ahmedpur Sharqia	131	16
Bahawalpur	Bahawalpur	41	8
Bahawalpur	Saddar	121	16
Faisalabad	Faisalabad Town	94	16
Faisalabad	Iqbal Town	65	8
Faisalabad	Madina Town	79	8
Faisalabad	Jinnah Town	66	8
Gujrat	Gujrat	231	24
Gujrat	Kharian	157	16
Sialkot	Daska	143	12
Sialkot	Pasrur	120	8
Sialkot	Sambrial	57	8
Sialkot	Sialkot	66	12
Kasur	Kasur	156	24
Kasur	Kot Radha Kishan	127	16

Sheikhupura	Firozewala	57	16
Sheikhupura	Sheikhupura	195	24
Multan	Bosan Town	73	8
Multan	Mumtazabad Town	78	8
Multan	shah rukn-e-alam Town	57	8
Multan	Sher Shah Town	194	16
Vehari	Mailsi	151	20
Vehari	Vehari	130	20
Rawalpindi	Gujar Khan	111	24
Rawalpindi	Pothawar Town	97	16
Okara	Depalpur	171	12
Okara	Okara	81	20
Okara	Renala Khurd	58	8
Sargodha	Bhalwal	82	16
Sargodha	Sargodha	138	24

Brick Kilns ID Codes

Name of Distt	Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Bahawalpur	Bahawalpur (8)	001	002	003	004	005	006	007	008																
Bahawalpur	Saddar (16)	009	010	011	012	013	014	015	016	017	018	019	020	021	022	023	024								
Bahawalpur	Ahmedpur Sharqia (16)	025	026	027	028	029	030	031	032	033	034	035	036	037	038	039	040								
Faisalabad	Faisalabad Town (16)	041	042	043	044	045	046	047	048	049	050	051	052	053	054	055	056								
Faisalabad	Iqbal Town (8)	057	058	059	060	061	062	063	064																
Faisalabad	Madina Town (8)	065	066	067	068	069	070	071	072																
Faisalabad	Jinnah Town (8)	073	074	075	076	077	078	079	080																
Gujrat	Gujrat (24)	081	082	083	084	085	086	087	088	089	090	091	092	093	094	095	096	097	098	099	100	101	102	103	104

Gujrat	Kharian (16)	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120															
Kasur	Kasur (24)	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144							
Kasur	Kot Radha Kishan (16)	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160															
Multan	Bosan Town (8)	161	162	163	164	165	166	167	168																							
Multan	Mumtazabad Town (8)	169	170	171	172	173	174	175	176																							
Multan	Shah Rukn-e-Alam Town (8)	177	178	179	180	181	182	183	184																							
Multan	Sher Shah Town (16)	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200															
Okara	Okara (20)	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220											
Okara	Depalpur (12)	221	222	223	224	225	226	227	228	229	230	231	232																			
Okara	Renala Khurd (8)	233	234	235	236	237	238	239	240																							

Rawalpindi	Gujar Khan (24)	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264
Rawalpindi	Pothawar Town (16)	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280								
Sargodha	Sargodha (24)	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304
Sargodha	Bhalwal (16)	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320								
Sheikhupura	Sheikhupura (24)	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344
Sheikhupura	Firozewala (16)	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360								
Sialkot	Sialkot (12)	361	362	363	364	365	366	367	368	369	370	371	372												
Sialkot	Sambrial (8)	373	374	375	376	377	378	379	380																
Sialkot	Daska (12)	381	382	383	384	385	386	387	388	389	390	391	392												
Sialkot	Pasrur (8)	393	394	395	396	397	398	399	400																

Vehari	Vehari (20)	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420
Vehari	Mailsi (20)	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440

Questionnaire-I: Kiln Operator/Manager/Supervisor/Owner

Baseline Questionnaire: Brick Kiln Operator/Owners/Manager

Enumerator ID	Province ID	Division ID	District ID	Kiln ID

Section A: General Information about Kiln/Factory

Longitude point measured	Latitude point measured	Altitude point measured

Address of the enterprise/ kiln: بھٹے کا پتہ	Tehsil تحصیل	City/Village گاؤں /شہر	Union Council (Name & No.) یونین کونسل (نام اور نمبر)

Question ID	Question	Pre-coded Response	Response Code
001	Name of main Kiln/Factory owner بھٹے کے مالک کا نام		
002	Telephone/mobile number of brick kiln owner/manager? بھٹے کے مالک/منیجر کا رابطہ نمبر	Owner: Manager:	
003	When brick kiln was established? (Please write English dates) یہ بھٹہ کب تعمیر ہوا؟	D D M M Y Y Y Y	
004	Is this brick kiln is associated/registered with Brick Kilns Owners Association, Pakistan? کیا یہ بھٹہ پاکستان بھٹہ ایسوسی ایشن سے منسلک/رجسٹرڈ ہے؟	00 = No 01 = Yes 02 = In process 88 = Don't know/Not sure	|____|____|
005	What is the status of kiln land? بھٹہ کی زمین کی مالکانہ حیثیت کیا ہے؟	01 = Ownership ▶ **Skip Question 006; 007; and, 008** 02 = Leased	|____|____|
006	For how long you have been leasing this land? آپ نے کب سے یہ زمین ٹھیکے پر لے رکھی ہے؟	01 = Since Kiln was established 02 = No. of years land leased..... 55 = Skipped Question	|____|____|
007	How much [PKR] have you paid/ or paying annually for the existing lease of land? زمین کے ٹھیکے کے لیئے آپ سالانہ کتنی رقم دیتے ہیں؟	01 = Write actual amount in PKR ..... 55 = Skipped Question	|____|____|
008	Normally, how do you pay the lease amount? عمومی طور پر آپ ٹھیکہ کی رقم کیسے ادا کرتے ہیں؟	01 = Paying in advance 02 = Paying in installments 03 = Paying at the end of lease 04 = No fixed mechanism 05 = Paying annually 55 = Skipped Question	|____|____|
009	Approximately, what is total Kiln area covered under this brick kiln (area comes within the demarcated boundary of the kiln)? آپ کا بھٹہ زمین کے کتنے حصے پر موجود ہے؟	Write approximate area in units of Kanal (Convert all other units into Kanal) * 1 Kanal = 20 Marla * 4 Kanal = 1 Begha * 8 Kanal = 1 Acre	____Kanal

010	Do you own another brick kiln elsewhere in Pakistan? کیاآپ پاکستان میں کسی اور بھٹے کے بھی مالک ہے؟	00 = No 01 = Yes	|____|____|

Section B: General information on workers

Question ID	Question	Pre coded response	Response Code
011	Do you employ **permanent***as well as temporary (transient) workers in your Kiln/Factory? کیاآپ کے بھٹے پر مستقل مزدوروں کے ساتھ ساتھ عارضی مزدور بھی کام کرتے ہیں؟ * Workers with incentives to return to work every kiln operation season continuously?	01 = Yes, Kiln employ both permanent as well as temporary (transient) workers 02 = No, all workers are permanent 03 = No, all workers are temporary / transient 55 = Skipped Question	|____|____|
012	What is the total number of permanent and transient workers working at this Kiln? بھٹے پر موجود مستقل/عارضی مزدوروں کی کل تعداد کیا ہے؟	Permanent workers مستقل مزدور: Female / Male; Transient workers عارضی مزدور: Female / Male	
013	What kind of workers are generally employed as permanent workers? بھٹے پر کام کرنے والے مستقل مزدور عمومی طور پر کس نوعیت کے لوگ ہوتے ہیں؟	01 = Technical Workers (fire operators; skilled stacking person; generator operators; brick making machine operators; excavator operators; manual brick makers) 02 = Both technical and non-technical workers including labor 99 = Others includes [.....] 55 = Skipped Question	|____|____|
014	How do you retain your permanent workers?* آپ اپنے مستقل مزدوروں کو برقرار رکھنے کے لیئے کیا اقدامات اٹھاتے ہیں تاکہ وہ کام چھوڑ کر نہ جائیں؟ *(Multiple responses allowed) ایک سے زیادہ جوابات دیئے جاسکتے ہیں(ٹک کریں)	A = They are provided with competitive salary/wage B = They are given paid leaves C = They are given loan as an incentive which they pay off after work D = They are given lump sum allowances 99 = Others includes [Specify .....] 55 = Skipped Question	A ☐ B ☐ C ☐ D ☐ 99 ☐ 55 ☐
015	What are the additional incentives (other than wages) you have to offer to workers? آپ کو مزدوروں کو مزدوری کے علاوہ کس طرح کی اضافی مراعات دینی پڑتی ہیں؟ایک سے زیادہ جوابات دیئے جاسکتے ہیں(ٹک کریں)	A = We provide loan when they require B = Free onsite residence C = Free food and other livelihood items D = We provide cash incentives 99 = Other includes [.....] عیدی،شادی میں سپورٹ، بیماری سپیشل فنڈ،وغیرہ	A ☐ B ☐ C ☐ D ☐ 99 ☐

Section C: Excavation of Soil for brick making

Question ID	Question	Pre coded response	Response Code
016	Where do you get soil for clay making for bricks? آپ اینٹوں کی تیاری کے لیئے مٹی کہاں سے حاصل کرتے ہیں؟	01 = On site excavation (excavation of land from within the premises of Kiln/Factory area) ► **Skip question 017; 018; and, 019** 02 = Off site excavation (excavation **of own land** from outside of the premises of Kiln/Factory area) ► **Skip question 018** 03 = Off site excavation (excavation **of leased land** from outside of the premises of Kiln/Factory area)	|____|____|

017	**Offsite excavation**: What is the approximate distance between excavation site and soil dumping area at kiln? **بھٹے کی حدود سے باہر کھدائی کی صورت میں:** کھدائی اور مٹی ذخیرہ کرنے کی جگہ کے درمیان اندازاً کتنا فاصلہ ہے؟	01 = Less than 500 meters 02 = Between 500 - 1000 meters 03 = Between 1 – 2 Km 04 = Between 2 – 5 Km 05 = Above 5 Km 55 = Skipped Question	|____| |____|
018	Approximately how much PKR you pay for leased excavation site? آپ کھدائی کی جگہ کو ٹھیکہ پر حاصل کرنے کے لیے کتنی رقم ادا کرتے ہیں؟	Rate per Kanal PKR..... of land excavated Total Area ..... Kanal 55 = Skipped question	Lump sum PKR ..... |____| |____|
019	On an average how much PKR do you pay for transportation of soil from excavation site to kiln site in a normal year? آپ کھدائی کی جگہ سے مٹی کو بھٹے تک لانے کے لیے سالانہ تقریباً کتنی رقم ادا کرتے ہیں؟	55 = Skipped Question	Amount in PKR ..... |____| |____|

020	What are the total number of workers at the excavation site? کھدائی کے مقام پر کام کرنے والے مزدوروں کی کل تعداد کیا ہے؟ *(Write N/A if not applicable)	Female excavation workers		Male excavation workers	
021	What is the average Monthly salary/ daily wage paid to excavation workers? کھدائی کرنے والے مزدوروں کی اوسطاً ماہانہ مزدوری/اوسطاً روزانہ کی مزدوری کتنی ہے؟ *(Write N/A if not applicable)	Monthly Salary اوسطاً ماہانہ تنخواہ		Daily Wage اوسطاً روزانہ کی مزدوری	
		Female	Male	Female	Male

Section D: Workflow involvement of workers/families in soil preparation/mixing/clay making; moulding/ green brick making; and, green brick drying

022	What is the total number of families performing brick moulding process(soil **mixing; clay making;; green brick making; green brick drying)** activities at this kiln/factory? کتنے خاندان اس بھٹے پر پتھیرے کا کام سرانجام دیتے ہیں (**مٹی بنانا؛ مٹی گوندھنا؛ اینٹ تھاپنا؛ کچی اینٹ تیار کرنا اور کچی اینٹ خشک کرنا**)؟	Number of families* [not individuals] involved صرف خاندانوں کے لیے		No. of families .....
023	What is the total composition of individual workers (not families) performing **soil mixing; clay making; brick moulding; green brick making; and green brick drying** activities at this kiln/factory? درج ذیل خدمات سرانجام دینے والے انفرادی مزدوروں کی نوعیت کیا ہے (**مٹی بنانا؛ مٹی گوندھنا؛ اینٹ تھاپنا؛ کچی اینٹ تیار کرنا اور کچی اینٹ خشک کرنا**)؟	**Overall number of individual workers** Individual workers: Workers unrelated to each other, even if related, they do not share kitchen at the place of their origin انفرادی مزدور سے مراد ایسے مزدور جو آپس میں رشتہ دار نہ ہوں۔ بصورت رشتہ داری انکا کھانا پینا الگ ہو۔	Female workers ..... Male workers	No: ..... No: .....

024	What are the payment arrangements made for the workers performing brick moulding process(soil mixing; clay making;; green brick making; green brick drying) activities at this kiln/factory? آپ پتھیرے کا کام سرانجام دینے والے مزدوروں کو رقم کی ادائیگی کیسے کرتے ہیں (مٹی بنانا؛ مٹی گوندھنا؛اینٹ تھاپنا؛ کچی اینٹ تیار کرنا اور کچی اینٹ خشک کرنا)؟	01 = Individuals / persons of family get piece related daily wage 02 = The family or group of individuals get a lump sum amount for piece related work per day 03 = The family or group of individuals get a lump sum amount for work per month 04 = The family or group of individuals get a lump sum amount for work per season 05 = The family or group of individuals get a lump sum amount as per target / unit of bricks made	|____|____|
025	On an average how much PKR is paid to workers to perform activities for per 1000 bricks from soil mixing to green brick drying. مٹی بنانے سے لے کر کچی اینٹ کو خشک کرنے کے مراحل تک کام کرنے والے مزدوروں کو فی 1000 اوسطاً کتنی رقم ادا کی جاتی ہے؟		PKR .....
026	How green bricks are mainly transported from green bricks drying site to kiln for baking / stacking? کچی اینٹوں کو خشک کرنے کے مقام سے بھٹے کے اندر پکانے کی جگہ تک کس طرح منتقل کیا جاتا ہے؟	01 = Manually by using human labour only 02 = Human labour using carts 03 = Manually by using human and animal labour 04 = Human using motorized options 05 = Human using motorized/ animal options	|____|____|
027	Lump sum amount in PKR paid per 1000 green bricks for transportation to baking / stacking site (ایک ہزار کچی اینٹوں کو خشک کرنے کے مقام سے بھٹے کے اندر تک منتقل کرنے کے لیے کتنی رقم ادا کرتے ہیں؟)		PKR .....
028	How many hours on a normal working day workers / families at this kiln/factory work at Green brick making site? اس بھٹہ پر ایک مزدور فرداً یا بمعہ خاندان کتنے گھنٹوں تک کچی اینٹوں کی تیاری کے لیے روزانہ کام کرتے ہیں؟	01 = Eight hours a day 02 = Twelve hours a day 03 = Sixteen hours a day 04 = Until daily target agreed is achieved 05 = Until agreed target for a season is achieved 06 = As per the capacity of labour	|____|____|
029	Total number of animals involved/ used for transportation of dried green bricks to stacking/ burning site and off-loading? خشک کچی اینٹ کو بھٹے میں پکانے کی جگہ تک منتقل اور اٹھانے کے لیے کون سے اور کتنے جانور استعمال کیے جاتے ہیں؟	Mules Horses Donkeys Bulls	
030	What is the approximate number of 'Green Bricks Moulded' during last kiln operations year / season at this kiln? گزشتہ سال آپ کے بھٹے کے لیے ایک گیڑے / چکر میں تقریباً کتنی کچی اینٹیں تیار ہوئیں؟	01 = No. ..... 55 = Skipped Question	|__|__|
031	What is the total number of workers involved in coal crushing? کوئلہ کوٹائی اور کوئلہ بھرائی میں کل کتنے مزدور شامل ہوتے ہیں؟ * Write N/A if no female/male worker		Female ..... / Male .....
032	Per month amount of money in PKR paid to coal crushing workers? کوئلہ کوٹائی اور کوئلہ بھرائی کے مزدوروں کو ماہانہ کتنی رقم ادا کی جاتی ہے؟ * Write N/A if no female/male worker		Female PKR ..... / Male PKR .....
033	What is the total number of workers involved / responsible for fuel (coal) feeding? ایندھن کی جلائی کے لیے کل کتنے مزدور کام کرتے ہیں؟ * Write N/A if no female/male worker		Female / Male
034	What is average monthly salary paid to fuel feeding workers? ایندھن کی جلائی کرنے والے مزدوروں کی اوسط ماہانہ اجرت کتنی ہے؟ * Write N/A if no female/male worker		Female PKR ..... / Male PKR .....

035	What is the mechanism of off-loading cooked bricks from the Kiln? پکی ہوئی اینٹوں کو بھٹے سے اٹھانے / نکالنے کے لیے کیا طریقہ اختیار کیا جاتا ہے؟	01 = Off loaded and stocked manually by labors 02 = Off loaded manually by labors and transported by animals for stocking 03 = Off loaded manually by labors and transported by motorized vehicles /wheel barrows for stocking 04 = Off loaded manually by labors and transported by motorized vehicles as well as animals for stocking 04 = Mechanized offloading	|____|____|

036	On an average, what percentage of cooked bricks damaged/broke/ un-useable/over fired; during offloading from Kiln and stocking in last operation year / season? گزشتہ سال ایک گیڑے کے دوران کتنے فیصد پکی اینٹیں بھٹہ سے اٹھانے اور ذخیرہ کرنے کے دوران ٹوٹ گئیں/ضائع ہوئیں/ کھنگر بنی؟	Write approximate percentage of cooked bricks damaged/broke during offloading and stocking	_____ %
037	What is the average amount of money in PKR you earned from selling of damaged/broke/ un-useable/over fired during last kiln operating year / season? گزشتہ سال ایک گیڑے کے دوران آپ کو ٹوٹی ہوئی/ضائع شدہ/ناقابل استعمال/ کھنگر اینٹوں کی فروخت سے اوسطاً کتنی آمدن ہوئی؟	PKR..... 55: Skipped Question	|___|___|
038	What type of workers are performing offloading work at this kiln? کس قسم کے مزدور پکی ہوئی اینٹوں کو اٹھانے کا کام سرانجام دیتے ہیں؟	01 = Members of one or different family are responsible to offload burnt bricks 02 = Different individuals [not families: group of workers unrelated to each other] perform these activities 03 = Mix of families and individual workers perform offloading work	|___|___|

039	What is the total number of workers involved in offloading of baked bricks? پکی ہوئی اینٹوں کو اٹھانے کے لیے کل کتنے مزدور کام کرتے ہیں؟	Female workers No:.....	Male workers No:.....
040	Payment arrangement(s) for Workers hired for/ involved in offloading baked bricks? پکی ہوئی اینٹوں کو اٹھانے والے مزدوروں کو رقوم کیسے ادا کی جاتی ہیں؟	01 = Salary on monthly basis 02 = Daily wages 03 = Mixed (combination of monthly salary and daily wages) 04 = Lump sum based of agreed bricks offloaded per day 05 = Lump sum payment per kiln operating year / season 06 = Piece rate per = 1000	|___|___|
041	What is the average weekly wage paid to workers offloading baked bricks? پکی ہوئی اینٹوں کو اٹھانے والے مزدوروں کی اوسط ہفتہ وار اجرت کتنی ادا کی جاتی ہے؟	Female workers PKR	Male workers PKR .....

042	On an average, what is the percentage of quality bricks produced in Kiln last year / season? گزشتہ سال ایک گیڑے کے دوران درجہ بندی کے لحاظ سے اوسطاً کتنے فیصد اینٹیں تیار ہوئیں؟	
	Percentage of "A" grade bricks produced	%
	Percentage of "B" grade bricks produced	%
	Percentage of "C" grade bricks produced	%
	Percentage of wastage & rora bricks produced ٹوٹی پھوٹی اینٹیں اور روڑا	%

043	What is Kiln/Factory price per Brick in PKR? بھٹے پر فی اینٹ کی قیمت فروخت کیا ہے؟	Grade quality			
		Grade A	Grade B	Grade C	All Mixed
A	Sold to contractors	PKR	PKR	PKR	PKR
B	Sold to Dealers	PKR	PKR	PKR	PKR
C	Sold to individual constructors	PKR	PKR	PKR	PKR
D	Mix sold	PKR	PKR	PKR	PKR

Section E: Origin of workers working at the following sites of the kiln? (بھٹے میں مندرجہ ذیل شعبہ جات میں مزدوروں کی آبائی نوعیت)

044 Site of the Kiln (بھٹے کا شعبہ)	Punjab	Sindh	Baluchistan	KPK	Gilgit-Baltistan	Kashmir	Other Nationalities
Green brick making (Soil preparation to green brick drying) کچی اینٹوں کی تیاری (مٹی کی تیاری سے لے کر کچی اینٹ خشک کرنے تک)							
Green brick transporting for stacking تھڑا لگانے کے لیے کچی اینٹ کی ترسیل							
Fuel crushing (ایندھن کی تیاری)							
Fuel feeding (ایندھن کی بھرائی)							
Unloading of cooked bricks (پکی اینٹوں کا اٹھانا)							

Question ID	Question	Pre coded response	Response Code
045	On an average how many green bricks your kiln can occupy/ accommodate per round/ cycle of stacking? ایک گیڑے/ چکر کے دوران آپ کا بھٹہ اوسطاً کتنی اینٹیں تیار کر سکتا ہے؟	Please write approximate/ average number of green brick stacking capacity (in thousands) of the Kiln/Factory in one round?	No: .....
046	In monetary terms how much PKR did you suffered loss when government banned / stopped kiln operation last time/year? گزشتہ سال حکومت کی جانب سے بھٹہ چلانے پر پابندی کے باعث آپ کا کتنا مالی نقصان ہوا؟	Lump sum amount in PKR	PKR .....

Section F: Technology used in the kiln

Question ID	Question	Pre coded responses	Response codes
047	What is the type of this brick kiln? اس بھٹے کی نوعیت کیا ہے؟ ► **Skip question 048** if response to Q.47 is codes 02; 03;04; or, 99	01 = Zig-zag 02 = Moving Chimney Bull Trench Kiln 03 = Straight Line, Induced, Draught Fixed Chimney Bull Trench Kiln (FCBTK) 04 = Clamp Kilns (CK) 99 = Other	|____|____|
048	If Kiln is Zig Zag, when the Kiln adopted Zig Zag practices? اگر آپ کا بھٹہ Zig Zag ٹیکنالوجی استعمال کر رہا ہے، تو یہ استعمال کب سے ہے؟	01 = During 2019 02 = During 2018 03 = During 2017 04 = During 2016 05 = Before 2015 55 = Skipped	|____|____|
049	How do you select soil suitable for brick making?* آپ اینٹیں بنانے کے لیے مناسب مٹی کا انتخاب کیسے کرتے ہیں؟ *Multiple responses allowed ایک سے زیادہ جوابات دیئے جا سکتے ہیں (ٹک کریں)	A = After lab based chemical test B = Based on physical / manual testing of soil C = Both A; and, B D = Based on word of mouth for quality soil for brick making	A ☐ B ☐ C ☐ D ☐
050	What is coal/fuel feeding schedule you use at this kiln? بھٹہ میں کوئلہ/دیگر ایندھن کے استعمال کرنے کا کیا شیڈول ہے؟	01 = Continuous every 10 minutes 02 = Continuous at random timing (interval) 03 = As and when needed 99 = Other [.....]	|____|____|
051	What type of fuel is used for firing at the Kiln?* اس بھٹے میں کس قسم کا ایندھن استعمال ہوتا ہے؟ Multiple responses allowed ایک سے زیادہ جوابات دیئے جا سکتے ہیں (ٹک کریں)	A = Pure Coal B = Coal mixed with other fuel additives (Wood, Agriculture residue, Salt dust, Biomass, Poultry Waste) C = Coal mixed with rubber tyres 99 = Other [.....]	A ☐ B ☐ C ☐ 99 ☐
052	Origin of coal used in factory? اس بھٹے میں استعمال ہونے والا کوئلہ کہاں سے منگوایا جاتا ہے؟	Write name(s) of the area from where coal is coming?	1. 2. 3.
053	Is chemical testing of coal used at factory done? کیا اس بھٹہ میں استعمال ہونے والے کوئلہ کا کیمیائی تجزیہ کیا جاتا ہے؟	00 = No 01 = Yes	|____|____|

054	What type of fuel is used for initial **ignition of fire** at the Kiln? بھٹے میں آگ سلگانے کے لیے کون سا ایندھن استعمال کیا جاتا ہے؟ Multiple responses allowed ((ایک سے زیادہ جوابات دیئے جا سکتے ہیں(ٹک کریں))	A = Wood B = LPG Gas C = Used rubber tyres 99 = Others.....	A ☐ B ☐ C ☐ 99 ☐
055	What is yearly amount of coal in tons consumed for fuel purpose at the Kiln/Factory? اس بھٹے پر فی گیزا/سالانہ کتنے ٹن کوئلہ ایندھن کے طور پر استعمال ہوتا ہے؟	Write actual/approximate/average amount of coal consumed at the Kiln for fuel purpose each operating season/operating year	_____ Tons
056	What is the average amount of money per ton of coal reached at kiln paid last year? گزشتہ سال ایک ٹن کوئلے کی بھٹے تک پہنچ کا اوسطاً خرچ کیا تھا؟		PKR .....
057	Number of generators used for power/electricity generation at the factory? بجلی کی پیداوار کے لیے بھٹے پر کتنے جنریٹر استعمال ہوتے ہیں؟	Write actual number of generators installed at the Kiln/Factory	No: .....
058	Average amount of fuel diesel/petrol consumed on a working day at Kiln/Factory? بھٹے پر یومیہ اوسطاً پیٹرول یا ڈیزل کا استعمال کتنا ہے؟	Write average amount diesel (in liters) consumed by the generators on a working day at the Kiln/Factory?	_____ liters

059	What is the type and number of machinery being used at the excavation site (if excavation is done by the owner)? مٹی کی کھدائی کے لیے کون سی اور کتنی تعداد میں مشینری استعمال کی جاتی ہے؟(اگر مٹی کی کھدائی مالک خود کرواتا ہے) **Write (0) if no machinery is used ► Skip Question 060 and N/A in the blank rows**	#	Machinery type / name	No. of Machines	Cost of machinery in PKR
		0			
		1			
		2			
		3			
		4			

060	What is the overall operation cost in PKR of the machinery being used at the excavation site during one operation year / season? بھٹے پر ایک سال کے گیزوں کے دوران مٹی کی کھدائی کے لیے استعمال کی جانی والی مشینری کو چلانے کے لیے کتنا خرچ آتا ہے؟		PKR.....

061	What is the type and number of machinery being used for **soil mixing, clay making, bricks moulding, stacking and off-loading**? کتنی تعداد میں اور کون سی مشینری مندرجہ ذیل امور کے لیے استعمال کی جاتی ہے؟(مٹی کی تیاری، مٹی کا گوندھنا، کچی اینٹوں کی تیاری، کچی اینٹوں کا بھٹے میں ترتیب دینا اور پکی اینٹوں کو بھٹے سے اتارنا) **Write (0) if no machinery is used ► Skip Question 062 and N/A in the blank rows**	#	**Machinery type / name**	**No. of Machines**	**Cost of machinery in PKR**
		0			
		1			
		2			
		3			
		4			

062	What is the overall operation cost in PKR of the machinery being used at the soil mixing, clay making, bricks moulding, stacking and off-loading sites during one operation year / season? بھٹے پر ایک سال کے گیڑوں کے دوران مندرجہ ذیل امور کے لیے استعمال کی جانی والی مشینری کو چلانے کے لیے کتنا خرچ آتا ہے؟ (مٹی کی تیاری، مٹی کا گوندھنا، کچی اینٹوں کی تیاری، کچی اینٹوں کا بھٹے میں ترتیب دینا اور پکی اینٹوں کو بھٹے سے اتارنا)	PKR .....

063	What was total capital investment made in PKR to operationalize this kiln? اس بھٹے کو فعال بنانے کے لیے کتنا سرمایہ لگایا گیا؟		PKR .....
064	Estimated payback period in years? سرمایہ کی لاگت پوری ہونے کی مدت کا تخمینہ کیا ہے؟(سالوں میں)		○ Years ..... ○ NA
065	What was the average operating cost during last production season/last year? گزشتہ ایک سال کے گیڑوں میں اوسطاً کتنی رقم بھٹے کو چلانے کے لیے خرچ ہوئی؟	Administrative/ legal cost (انتظامی اور قانونی اخراجات)	PKR .....
		Operation (Labor) cost (بھٹہ چلانے کے اخراجات)	PKR .....
		Fuel cost (firewood, coal, liquid fuel, gas etc.) (ایندھن کے اخراجات)	PKR .....
		Cost of maintenance/management of machinery (مشینری کی دیکھ بھال کے اخراجات)	PKR .....
		Electricity (بجلی کے اخراجات)	PKR .....
		Other necessary payments made (دیگر ضروری ادائیگیاں)	PKR .....

========== **THANK YOU FOR YOUR TIME** ==========

Data Validated By	
Name	
Code	
Signatures	
Date	

Questionnaire-II: Workers/families working on the kiln

Baseline Survey of Brick Kilns in Pakistan

Socio-Economic Conditions of Families Working in Brick Kiln/ Factory

Enumerator ID			Province ID		Division ID			District ID			Kiln ID		

Brick Kiln Identification

What is the name of this enterprise/ brick kiln owner? بھٹے کے مالک کا مکمل نام اور بھٹے کا نام تحریر کریں؟			
Street address of the enterprise/ kiln: بھٹے کا پتہ	Tehsil تحصیل	City/Village گاوں / شہر	Union council (Name & No.) یونین کونسل (نام اور نمبر)

Site of the kiln	Pre coded response	Response Code
001 Which is the site of the Kiln/ Factory where transient/migratory family/ workers/ selected for survey/interview are found working? جس مزدور سے یہ سوالات پوچھے جارہے ہیں، وہ بھٹے کے کس شعبہ میں کام کر رہا ہے؟	01 = Soil preparation; clay making; Green brick moulding/ making; and, drying site 02 = Transportation of Green Bricks for loading/ stacking site 03 = Stacking of Green Brick for baking site 04 = Coal crushing, transportation to fuel site 05 = Off-loading of Baked Bricks	|____| ____|

002 Basic information of family head/worker selected for interview

Age of the worker		Gender of the worker	
District of origin of the worker		Marital status of the worker	

Kiln site worker's information

Question ID	Question	Pre coded response		Response Code
003	What type of workers usually work at this site (refer to site of the kiln selected for interview)? (بحوالہ سوال نمبر ۱) بھٹے کے اس شعبے میں کس قسم کے مزدور کام کرتے ہیں؟	01 = Transient families staying onsite during kiln operations 02 = Individual transient workers staying on/off site during kiln operations 03 = Both transient families and individual workers		|____| ____|
004	What is the total number of transient families working at this site (refer to site of the kiln selected for interview)? (بحوالہ سوال نمبر ۱) بھٹے کے اس شعبے میں کس تعداد میں خاندان عارضی نوعیت کے طور پر کام کرتے ہیں؟ ٹک کریں	Number of transient families (not individuals of the families) عارضی خاندانوں کی تعداد (خاندانوں کے انفرادی افراد شامل نہیں ہیں)		No:.....
005	What is the total number of individual transient workers (not families) working at this site (refer to site of the kiln selected for interview)? (بحوالہ سوال نمبر ۱) بھٹے کے اس شعبے میں کس تعداد میں عارضی نوعیت کے انفرادی مزدور کام کرتے ہیں؟	Total number of female transient workers		
		Total number of male transient workers		
		NA = Not Applicable		

006	For how many years you/ your family is working at this Kiln/ Factory? آپ / آپ کا خاندان کتنے عرصے (سال) سے اس بھٹہ پہ کام کر رہے ہیں؟	01 = Less than a year now ► **Skip question 007** 02 = For One year now ► **Skip question 007** 03 = For two years now 04 = For three years now 05 = For four years now 06 = For more than five years now 99 = Others [.....]	|____| ____|
007	What are the reasons that you/your family is continually working at this Kiln since this long? آپ اور آپ کا خاندان اس بھٹہ پر لمبے عرصے سے لگاتار کام کر رہے ہیں۔ اس کی کیا وجوہات ہیں؟ *(Multiple choices allowed) ایک سے زیادہ جوابات دیئے جاسکتے ہیں (ٹک کریں)	A = We like the owner B = We need work/money for livelihoods C = Paying-off the loan taken D = We like the contractor / employer 99 = Other [.....] 55 = Skipped question	A ☐ B ☐ C ☐ D ☐ 99 ☐ 55 ☐
008	What is payment arrangement(s) for your work at this Kiln/Factory? آپ کو اس بھٹہ پر کام کرنے کے عوض کیسے معاوضہ ادا کیا جاتا ہے؟	01 = Salary on monthly basis 02 = Daily wages 03 = Mixed (combination of monthly salary and daily wages) 04 = Lump sum on agreed work completed 05 = Lump sum for whole season of work 06 = Payment on weekly basis	|____| ____|
009	What is amount of money in PKR paid to you (ref. payment arrangement(s) Q.008)? (بحوالہ سوال نمبر 008) آپ کو کام کرنے کا کتنا معاوضہ ادا کیا جاتا ہے؟		PKR .....
010	Are female and male workers at this site (refer to site of the kiln selected for interview) equally paid? (بحوالہ سوال نمبر 008) کیا بھٹے کے اس شعبے میں کام کرنے والے مرد اور خواتین مزدوروں کو مساوی معاوضہ ادا کیا جاتا ہے؟	01 = Male workers get more amount of money than female workers 02 = Both female and male workers are equally paid 03 = Female workers get more amount of money than male workers	|____| ____|
011	Have you been provided accommodation at the kiln site? کیا آپ کو بھٹے پر رہائش مہیا کی گئی ہے؟	00 = No ►**Skip Question 013; and, 014** 01 = Yes	|____| ____|
012	Reference Q. 011, What is the type of accommodation provided by the kiln owner? بھٹہ مالک کی طرف سے آپ کو کس قسم کی رہائش مہیا کی گئی ہے؟	01 = Permanent (if no, ►**Skip Question 013; and, 014**) 02 = Temporary	|____| ____|
013	At your temporary accommodation do you have separate rooms for sleeping and cooking? عارضی رہائش گاہ پر کیا آپ کے پاس سونے اور کھانا پکانے کے لیے کمروں کی سہولت موجود ہے؟	00 = No, we cook and sleep under the same roof 01 = Yes, we have separate rooms for cooking and sleeping	|___| ___|
014	At temporary accommodation, what type of toilet facility available to your family? آپ کو عارضی رہائش گاہ پر رفع حاجت کے لیے کس نوعیت کی سہولت موجود ہے؟	00 = No toilet facility, defecate in open 01 = Toilet facility available for each family with tapped/bucket water, open drain 02 = Toilet facility available for each family with tapped/bucket water, closed drain 03 = Toilet facility available with tapped/bucket water, open drain on shared basis 04 = Toilet facility available with tapped/bucket water, closed drain on shared basis	|____| ____|
015	Do you break for eating during working hours? کیا آپ کام کے دوران کھانے کا وقفہ کرتے ہیں؟	00 = No 01 = Yes. Individuals take eating break by turns but work continues 02 = Yes. We break for eating at scheduled intervals	|____| ____|

016	Who takes care of children accompanying you when adult family members are at work? جب خاندان کے افراد کام پر ہوتے ہیں تو چھوٹے بچوں کا خیال کون رکھتا ہے؟	00 = No adult supervision. Children take care of them selves 01 = An adult family member takes care of children 02 = Older children take care of their young siblings 03 = Children accompany adult workers on working site	|____|____|
017	Other than family members residing here at the kiln, are there any family members in your village of origin? کیا آپ کے خاندان کے تمام افراد اس بھٹہ پر کام کرتے ہیں یا خاندان کے کچھ افراد آبائی علاقے میں موجود ہیں؟	00 = No. We locked our home in origin (home town) and migrated here for work 01 = Yes. Some family member left behind at home at origin	|____|____|
018	Were your children going to school back in the village before your family migrated for work? کیا اس بھٹہ پر کام کی غرض سے منتقل ہونے سے پہلے آپ کے بچے آبائی علاقہ کے سکول میں پڑھتے تھے؟	00 = No 01 = Yes. But they are with us now 03 = Yes. They are in the boarding for studies now 04 = Yes. They are still in the village for studies (Not valid for an individual worker) (یہ سوال انفرادی نوعیت کے مزدور سے نہیں پوچھنا)	|____|____|
019	Are they going to a school in this area now? کیا آپ کے بچے اس علاقے میں سکول جاتے ہیں؟	00 = No. When we go back, they will restart school at the origin 01 = Yes. They are going to a nearby school in this area at our expense. 02 = Yes. They are going to a nearby school in this area and transportation is provided by the kiln owner. 03 = No. They study at home here and continue further school at origin when we go back 04 = No, They are not attending any school	|____|____|
020	Other than monetary incentives for work, is your family given any incentives/ benefits? کیا آپ کے خاندان کو مالی معاوضے کے علاوہ کوئی اور سہولیات مہیا کی گئی ہیں؟ *(Multiple choices allowed) ایک سے زیادہ جوابات دیئے جاسکتے ہیں (ٹک کریں)	00 = None A = Free onsite accommodation B = Free meals C = Free onsite temporary accommodation and meals D = Rent of housing around Kiln/Factory E = Rent of housing and meals F = Health care of worker G = Health care of workers and their dependents (children) H = Education of their children I = Insurance of members who work J = Insurance of working family K = Get easy loan by the owner 99 = Others [.....]	00 ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐ H ☐ I ☐ J ☐ K ☐ 99 ☐
021	If you work extra hours, do you get additional monetary incentive? اگر آپ اضافی وقت کام کرتے ہیں تو کیا آپ کو اضافی مالی معاوضہ دیا جاتا ہے؟	00 = No. we do not get additional money for working extra hours 01 = Yes. We get additional money if we work extra hours 02 = Work is such that we work flexible hours by targets	|____|____|
022	Is your family insured through any health insurance policy? کیا آپ کے خاندان کی کوئی صحت کی بیمہ پالیسی ہے؟	00 = No ► **Skip question 023; and, 024** 01 = Yes	|____|____|
023	If Yes, who pays for the insurance premium? ہاں، تو بیمہ کی سالانہ قسط کون ادا کرتا ہے؟	01 = We pay from own pocket 02 = Brick Kiln owner pays for it 03 = Payment shared by us and kiln owner 55 = Skipped question	|____|____|
024	What type of insurance you/ your family have? آپ یا آپ کے خاندان کی بیمہ پالیسی کی نوعیت کیا ہے؟	01 = Accidental Insurance 02 = Health Insurance 03 = Life Insurance 99 = Other Insurance [Specify: .....] 55 = Skipped question	|____|____|

Basic health Conditions of families

025	What are the arrangements in case you or someone in your family who lives with you here at kiln gets sick/ill اگر آپ یا آپ کے خاندان کا کوئی فرد (جو بھٹے پر رہائش پذیر ہو) بیمار پڑ جائے تو اس کے علاج کے لیے کیا سہولیات موجود ہیں؟	01 = We go to a doctor/ buy medicine at our own expense 02 = We go to a doctor/ buy medicine and kiln owner pays for it 03 = Kiln owner facilitates us to see the doctor 04 = Kiln owner facilitates us to see the doctor and also buys us medicine	|____|____|
026	Are you or anyone in your family - residing on Kiln site, currently suffering from the following diseases? کیا آپ یا آپ کے خاندان کا کوئی فرد (جو بھٹے پر رہائش پذیر ہو) درج ذیل میں سے کسی بیماری میں مبتلا ہے؟ Chronic cough; longer fever; throat pain/tenderness; weight loss; eye disease; blood in the sputum; irritation of skin and eyes; bad breath; asthma; shortness of breath دائمی کھانسی؛ دائمی بخار؛ گلے کا درد / اور کھینچاو؛ وزن میں کمی؛ آشوب چشم؛ بلغم میں خون کا آنا؛ آنکھوں اور جلد کی الرجی؛ کھٹی ڈکاریں؛ دمہ؛ سانس کی گھٹن	00 = No ► **Skip question 027;** 01 = Yes	|____|____|
027	If Yes, please collect information on such diseases in the following table اگر جواب ہاں میں ہے، تو سوال نمبر 026 میں تحریر کی گئی بیماریوں کو درج ذیل جدول میں لکھیں		

A	B	C	D	E	F	G	H
No.	Gender صنف	Age (completed years) عمر (مکمل سال)	Any born illness? کوئی پیدائشی بیماری؟	Illness currently suffering from حالیہ بیماری کا شکار	Illness suffering from since last year گزشتہ ایک سال سے بیماری کا شکار	Illness suffering from since last two years گزشتہ ۲ سال سے بیماری کا شکار	Illness suffering from since more than two ۲ سال سے زائد بیماری کا شکار
1.	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|
2.	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|
3.	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|
4.	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|
5.	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|

Gender	**Codes for illness or diseases: For columns from D to H**
01 = Female 02 = Male	01 = Chronic cough (دائمی کھانسی); 02 = Throat diseases (گلے کے امراض) (throat pain or tenderness (گلے کا درد اور کھینچاو)); 03 = Weight loss (وزن کا گرنا); 04 = Eye diseases (آنکھوں کے امراض); 05 = Respiratory diseases (سانس کے امراض) (Bad breath; Asthma; Shortness of breath); 06 = Continuous fever (مسلسل بخار); 07 = Irritation of Skin and eyes (جلد اور آنکھوں کی الرجی); 08 = Abdominal diseases (پیٹ کی بیماری); 55 = Skipped question; 66 = None; 99=Others [Specify: .....]

========== **THANK YOU** ==========

Data Validated By	
Name	
Code	
Signatures	
Date	

Baseline Questionnaire: Pakistan Brick kilns
Observation Based Questionnaire: Brick Kiln Operating Environment

Questionnaire-III

Enumerator ID	Province ID	Division ID	District ID	Kiln ID

General Information about, surrounding Kiln/Factory

Street address of the enterprise/ kiln: بھٹے کا پتہ	Tehsil تحصیل	City/Village گاوں /شہر	Union council (Name & No.) یونین کونسل (نام اور نمبر)
What is the name of this enterprise/ brick kiln owner? بھٹے کا نام اور بھٹے کے مالک کا مکمل نام تحریر کریں؟			

Question ID	Question	Pre coded response	Response Code
001	Are there house(s) surrounding the Kiln/Factory? کیا بھٹے کے گردونواح میں مکانات موجود ہیں؟	00 = No ► **Skip question 002** 01 = Yes, in all surroundings 02 = Yes, on some sides	|____|____|
002	Approximate distance of nearest house (other than residences of Kiln workers) surrounding the Kiln/Factory? بھٹے سے قریب ترین موجود مکان کا اندازاً فاصلہ کتنا ہے؟	01 = Yes, just next to Kiln 02 = Yes, within 200 meters 03 = Yes, within 500 meters 04 = Yes, beyond 500 meters ► **Write N/A for Q. 003** 55 = Skipped question 99 = Others [write approximate distance .....]	|____|____|
003	Approximate number of house(s) residing within 200 & 500 meters surrounding the Kiln? بھٹے کے گردونواح میں 200 سے 500 میٹر تک موجود مکانات کی تعداد کیا ہے؟	بھٹے کے گردونواح میں 200 میٹر کے فاصلے تک موجود مکانات کی تعداد کیا ہے؟	200 میٹر سے زیادہ اور 500 میٹر کے فاصلے تک بھٹے کے گردونواح میں موجود مکانات کی تعداد کیا ہے؟
004	Type of land surrounding the Kiln/Factory? بھٹے کے ارد گرد واقع زمین کی نوعیت کیا ہے؟	01 = Fallow land owned by some one بنجر/ناقابل کاشت 02 = Common fallow land مشترکہ قابل کاشت 03 = Open playground کھیل کا میدان 04 = Agriculture land owned by people لوگوں کی ذاتی زرعی زمین 05 = Industrial / semi-industrial area صنعتی/نیم صنعتی علاقہ 99 = Other [.....]	|____|____|
005	Is there any academic institution within a proximity of 1km surrounding the Kiln/Factory? کیا بھٹے کے ارد گرد ایک کلو میٹر فاصلے کے اندر کوئی تعلیمی ادارہ موجود ہے؟	00 = No ► **Skip question 006** 01 = Yes	|____|____|

006	If Yes, type of institution اگر ہاں، تو ادارہ کی قسم کیا ہے؟	01 = Primary school 02 = secondary school 03 = Higher secondary school 04 = College and above 05 = Madrasa 55= Skipped question 99 = Others [mention institution .....]	|____|____|
007	Are workers at excavation (if excavation is on-site) of the Kiln wear basic labor kit: Breathing mask*; Gloves*; Long labor shoes; Transparent glasses; Labor cap*? کیا بھٹے کی حدود کے اندر کھدائی کرنے والے مزدور بنیادی حفاظتی آلات (دستانے، لمبے جوتے، حفاظتی عینک، حفاظتی ٹوپی) کا استعمال کرتے ہیں؟ (Not valid in case of off-site excavation) (نوٹ: یہ سوال بھٹے کی حدود سے باہر کھدائی کی صورت میں نہیں پوچھا جائے گا)	00 = No ▶ **Skip question 008** 01 = Yes. All labors found in proper kit 02 = Yes. All labors wear partial kit* 03 = Yes. Some labors in full kit, others in partial 04 = Yes. Some labors in full kit, others not NA = Not Applicable	|____|____|
008	Percentage of labors found wearing full and partial labor kit مکمل اور جزوی آلات استعمال کرنے والے مزدوروں کا تناسب کیا ہے؟	Write percentage calculated on total number of labors on this site 55 = Skipped question	___% full kit ___% partial
009	Are workers at soil / clay preparation and molding; green brick making and drying site of the Kiln wear basic labor kit: Breathing mask*; Gloves*; Long labor shoes; Transparent glasses; Labor cap*? کیا مندرجہ ذیل شعبوں (مٹی گوندھنا؛ کچی اینٹ تیار کرنا؛ کچی اینٹ خشک کرنا) میں کام کرنے والے مزدور بنیادی حفاظتی آلات (دستانے، لمبے جوتے، حفاظتی عینک، حفاظتی ٹوپی) کا استعمال کرتے ہیں؟	00 = No ▶ **Skip question 010** 01 = Yes. All labors found in proper kit 02 = Yes. All labors wear partial kit* 03 = Yes. Some labors in full kit, others in partial 04 = Yes. Some labors in full kit, others not	|____|____|
010	[Refer to Q. 009] Percentage of labors found wearing full and partial labor kit (بحوالہ سوال نمبر 009) مکمل اور جزوی آلات استعمال کرنے والے مزدوروں کا تناسب کیا ہے؟	Write percentage calculated on total number of labors on this site 55 = Skipped question	___% full kit ___% partial
011	Are Green Brick loading workers (for stacking); stacking workers; and, off-loading workers of the Kiln wear basic labor kit: Breathing mask*; Gloves*; Long labor shoes; Transparent glasses; Labor cap*? کیا مندرجہ ذیل شعبوں (کچی اینٹوں کو بھٹے کے اندر منتقل کرنا؛ جوڑنا اور اتارنا) میں کام کرنے والے مزدور بنیادی حفاظتی آلات (ماسک؛ دستانے، لمبے جوتے، حفاظتی عینک، حفاظتی ٹوپی) کا استعمال کرتے ہیں؟	00 = No ▶ **Skip question 012** 01 = Yes. All labors found in proper kit 02 = Yes. All labors wear partial kit* 03 = Yes. Some labors in full kit, others in partial 04 = Yes. Some labors in full kit, others not	|____|____|
012	[Refer to Q. 011] Percentage of labors found wearing full and partial labor kit (بحوالہ سوال نمبر 011) مکمل اور جزوی آلات استعمال کرنے والے مزدوروں کا تناسب کیا ہے؟	Write percentage calculated on total number of labors on this site 55 = Skipped question	___% full kit ___% partial

013	Are workers working at coal crushing / preparation; and, transportation to fuel feeding site Kiln wear basic labor kit: Breathing mask*; Gloves*; Long labor shoes; Transparent glasses; Labor cap*? کیامندرجہ ذیل شعبوں (کوئلہ تیار کرنا؛ایندھن کے مقام پر منتقل کرنا) میں کام کرنے والے مزدور بنیادی حفاظتی آلات (ماسک؛دستانے، لمبے جوتے، حفاظتی عینک، حفاظتی ٹوپی) کااستعمال کرتے ہیں؟	00 = No ► **Skip question 014** 01 = Yes. All labors found in proper kit 02 = Yes. All labors wear partial kit* 03 = Yes. Some labors in full kit, others in partial 04 = Yes. Some labors in full kit, others not	|____| ____ |
014	[Refer to Q. 013] Percentage of labors found wearing full and partial labor kit (بحوالہ سوال نمبر 013) مکمل اور جزوی آلات استعمال کرنے والے مزدوروں کا تناسب کیا ہے؟	Write percentage calculated on total number of labors on this site 55 = Skipped question	___% full kit ___% partial
015	Are firing / fuel feeding workers of the Kiln wear basic labor kit: Breathing mask*; Gloves*; Long labor shoes; Transparent glasses; Labor cap*? کیا(آگ سلگانااورآگ بھرائی) میں کام کرنے والے مزدور بنیادی حفاظتی آلات (ماسک؛دستانے، لمبے جوتے، حفاظتی عینک، حفاظتی ٹوپی) کااستعمال کرتے ہیں؟	00 = No ► **Skip question 016** 01 = Yes. All labors found in proper kit 02 = Yes. All labors wear partial kit* 03 = Yes. Some labors in full kit, others in partial 04 = Yes. Some labors in full kit, others not	|____| ____ |
016	[Refer to Q.015] Percentage of labors found wearing full and partial labor kit (بحوالہ سوال نمبر 015) مکمل اور جزوی آلات استعمال کرنے والے مزدوروں کا تناسب کیا ہے؟	Write percentage calculated on total number of labors on this site 55 = Skipped question	___% full kit ___% partial
017	At on-site excavation, approximately what percentage of work is being done using machines (excavators, earth movers etc.)? بھٹے کی حدود میں کھدائی کا کتنے فیصد کام مشینوں کی مدد سے کیا جاتا ہے؟ (Not valid in case of off-site excavation) (نوٹ: یہ سوال بھٹے کی حدود سے باہر کھدائی کی صورت میں نہیں پوچھا جائے گا)	00 = All excavation work is done manually ► **Skip question 018** 02 = Less than 25% of the work is done using machines 03 = Between 25 - 50% of work is done using machines 04 = Between 50-75% of work is done using machines 05 = Between 75-100% work is done using machines 06 = 100% 99 = Others [.....]	|____| ____ |
018	Number and type of machines used for on-site excavation work بھٹے کی حدود میں کھدائی کی صورت میں استعمال ہونے والی مشینوں کی قسمیں اور تعداد کیا ہے؟	**Type/name of machine** Write 55= Skipped question under type of machine and number	**Number**
019	Approximately what percentage of work is being done using machines (soil mixer, excavators, earth movers, clay mixing, cake cutting, dryer etc.) at soil preparation, mixing, clay making, green brick making and drying site? درج ذیل شعبوں (مٹی کی تیاری؛ مٹی کھودنا؛ مٹی ہموار کرنا؛؛ کچی اینٹ تیار کرنا اور کچی اینٹ خشک کرنا) میں تقریباً کتنے فیصد کام مشینوں کی مدد سے کیا جاتا ہے؟	00 = All clay making work is done manually ► **Skip question 020** 02 = Less than 25% of the work is done using machines 03 = Between 25 - 50% of work is done using machines 04 = Between 50-75% of work is done using machines 05 = Between 75-100% work is done using machines 06 = 100%	|____| ____ |

020	Number and type of machines used at soil preparation, mixing and site clay making site مٹی کی تیاری کے لیے استعمال کی جانے والی مشینوں کی قسمیں اور تعداد کیا ہے؟	**Type/name of machine**	**Number**
		Write 55= Skipped question under type of machine and number	
021	Approximately what percentage of work is done by human; machine; and, animal for transporting green brick for loading / stacking site? کچی اینٹوں کو بھٹے تک لے جانے کے لیے تقریباً کتنے فیصد کام انسانوں، مشینوں اور جانوروں کی مدد سے لیا جاتا ہے؟	Percentage of work done by human	___%
		Percentage of work done by using machine	___%
		Percentage of work done by animal	___%
022	Approximately what percentage of work is done by human; machine; and, animal for transporting baked brick to off-loading / stacking site? پکی ہوئی اینٹوں کو بھٹے سے ذخیرہ کرنے والی جگہ تک لے جانے کے لیے کتنے فیصد کام انسانوں، مشینوں اور جانوروں کی مدد سے لیا جاتا ہے؟	Percentage of work done by human	___%
		Percentage of work done by using machine	___%
		Percentage of work done by animal	___%
023	What is physical and health condition of animals? جانوروں کی جسامت اور صحت کیا حالت کیسی ہے؟	00 = All animals seems physically weak and unhealthy 01 = All animals seems physically active and healthy 02 = Majority animals seems physically weak and unhealthy 03 = Majority animals seems physically active and healthy	|____| ____|
024	At coal crushing site of the kiln, for coal crushing what percentage of work is done manually by workers, and by machine(s)? کوئلہ کرشنگ کے شعبہ میں کتنے فیصد کوئلہ مزدور کرش کرتے ہیں اور کتنے فیصد مشینوں سے کیا جاتا ہے؟	Percentage of work done manually by workers	___%
		Percentage of work done using machine(s)	___%
025	At kiln site, is coal dumping done under proper shed? کیا بھٹے میں کوئلہ کو مناسب چھپر کے نیچے ڈھانپ کر رکھا جاتا ہے؟	00 = Coal dumped under open sky 01 = Coal dumped under proper shed 02 = Dumped coal covered with plastic/trampoline/cloth mats only 99 = Others, ...	|____| ____|

========== THANK YOU FOR YOUR TIME ==========

Data Validated By	
Name	
Code	
Signatures	
Date	

Enumerators Selected for Brick Kilns Survey

District	Name
Bahawalpur	Muhammad Jamshaid
Bahawalpur	Muhammad Kamran Aslam
Faisalabad	Ghulam Shabir
Faisalabad	Rana Ayub
Gujrat	Muhammad Nawaz
Gujrat	Haq Nawaz
Kasur	Umar Draz
Kasur	M. Junaid
Multan	Muhammad Ikram
Multan	Muhammad Afzal
Okara	Farrukh Saeed
Okara	Sajid Raza
Rawalpindi	Abdul Sattar
Rawalpindi	Aimal Inam
Sargodha	Asad ullah
Sargodha	Amir Khan
Sheikhupura	Tahir Abbas
Sheikhupura	Jawad Haider
SialKot	M. Usman Shah
Sialkot	Mujahid Abbas
Vehari	Javed Iqbal
Vehari	Tahir Abbas

TRAINING WORKSHOP ON
Baseline Study of Brick Kilns
28 - 29 March, 2019 at Islamabad

PROGRAMME

Date	Time	Schedule of Activities	Resource Person
28-03-2019	**0845 - 0915**	**Registration of Participants and Photograph**	Aziz ur Rehman Abida Munir
Thursday	**0915 - 0930**	**Why we are here?**	Syed Najam-us-Saqib Hamadani
	0930 - 1000	**Introduction of ICIMOD, COEP, Resource Persons and Participants**	A. Aziz Qureshi Mohammad Shahid
	1000 - 1030	*** Brick Kilns Operations** *** SOPs for Enumerators**	Syed Najam-us-Saqib Hamadani
	1030 - 1100	**Questionnaire-I Baseline-Survey (Continue..)**	Syed Najam-us-Saqib Hamadani Abida Munir
	1100 - 1115	***TEA BREAK***	--
	1115 - 1300	**Questionnaire-I Baseline-Survey**	Syed Najam-us-Saqib Hamadani Abida Munir
	1300 - 1400	***LUNCH/PRAYERS BREAK***	--
	1400 - 1500	**Questionnaire-II Baseline-Socio-Economic Conditions of Families Working in Kiln**	Syed Najam-us-Saqib Hamadani Abida Munir
	1500 - 1545	**Questionnaire-III Baseline-Observation Based**	Abida Munir
	1545 - 1600	***TEA BREAK***	--

	1600 - 1730	**Mock Exercises of Questionnaire II & III**	Abida Munir
29/02/2019	**0900 - 0910**	**Review of the 1st day proceeding**	A. Aziz Qureshi
Friday	**0910 - 1100**	**Mock Exercise of Questionnaire I & II**	Syed Najam us Saqib Hamadani
	1100 - 1115	***TEA BREAK***	
	1115 - 1200	**Mock Exercise of Questionnaire I & II**	Syed Najam us Saqib Hamadani
	1200 - 1230	**General Discussion**	Abida Munir
	1230 - 1300	**Closing Ceremony and Distribution of Certificates and Survey Kits Group Photograph**	
	--	***** ***JUMMA PRAYER*** ***** ***LUNCH*** ***** ***CHECK OUT***	

Status of Land under Brick Kilns

Districts	Land Ownership Status(Percentage)		Leased Land Years and Amount (Average)	
	Own Land	Leased Land	Mean of Leased Years	Mean of Leased Amount (PKR)
Bahawalpur	20	80	6.5	163667
Faisalabad	30	70	5.3	338333
Gujrat	40	60	7.7	266087
Kasur	65	35	10.1	695000
Multan	5	95	7.3	575882
Okara	27.5	72.5	11.5	290690
Rawalpindi	27.5	72.5	9.3	268750
Sargodha	57.5	42.5	6.4	394706
Sheikhupura	87.5	12.5	4	515000
Sialkot	62.5	37.5	8.8	335333
Vehari	12.5	87.5	5.2	245286
No. of Brick Kilns	**174**	**266**	***256**	****224**

*Note: *3 kilns are newly established and remaining 7 did not respond in leased years, **42 did not reported leased amount*

Means of Transportation of Green Bricks

(Percentage)

Districts	Manually by using human labor	Human labor by using carts	Manually by using human & animal labor	Human using motorized options	Human using motorized/animals options	Payment/1000 green bricks (Average)
Bahawalpur	0	7.5	60	2.5	30	400
Faisalabad	20	0	77.5	0	2.5	246
Gujrat	0	65	32.5	0	2.5	261
Kasur	17.5	77.5	5	0	0	281
Multan	0	0	100	0	0	246
Okara	0	7.5	90	0	2.5	176
Rawalpindi	0	60	35	0	5	285
Sargodha	0	85	12.5	2.5	0	247
Sheikhupura	2.5	2.5	92.5	2.5	0	200
Sialkot	0	15	82.5	0	2.5	265
Vehari	0	2.5	92.5	0	5	213
No. of Brick Kilns	**16**	**129**	**272**	**3**	**20**	***431**

*Note: * 9 observations are missing in the data*

District Wise Production Capacity of Brick Kilns/Round

(Percentage)

District	Min-100000	100001-200000	200001-300000	300001-400000	400001-500000	500001-600000	600001-700000	Above 700000
Bahawalpur	0	0	15	67.5	17.5	0	0	0
Faisalabad	0	0	0	2.5	15	25	47.5	10
Gujrat	0	0	0	0	12.5	67.5	12.5	7.5
Kasur	27.5	15	0	2.5	0	5	5	45
Multan	0	0	0	0	28.9	23.7	23.7	23.7
Okara	0	0	0	10	50	17.5	17.5	5
Rawalpindi	2.5	0	0	5	7.5	65	17.5	2.5
Sargodha	0	0	0	5	15	50	30	0
Sheikhupura	5	2.5	0	0	10	42.5	30	10
Sialkot	0	0	0	0	5	50	30	15
Vehari	0	2.5	22.5	57.5	10	5	2.5	0
*** No. of Brick Kilns**	**14**	**8**	**15**	**60**	**68**	**140**	**86**	**47**

*Note: * shows analysis based on 438 kilns as two values are missing in the data*

Site for seeking interview of the labor force

(Percentage)

Districts	Soil Preparation site	Transportation of GB site	Stacking of GB sites	Coal Crushing, transportation to fuel site	Offloading of baked bricks site
Bahawalpur	12.5	20	22.5	25	20
Faisalabad	20	0	37.5	20	22.5
Gujrat	20	20	20	20	20
Kasur	20	17.5	10	17.5	35
Multan	20	20	20	20	20
Okara	22.5	17.5	20	20	20
Rawalpindi	22.5	15	27.5	22.5	12.5
Sargodha	32.5	25	32.5	2.5	7.5
Sheikhupura	20	20	20	20	20
Sialkot	20	20	20	20	20
Vehari	32.5	10	22.5	20	15
No. of Brick Kilns	**97**	**74**	**101**	**83**	**85**

Age of Workers

Sites of kiln	Average Age	Lower Limit	Upper Limit
Soil Preparation site	41	18	75
Transportation of GB site	42	15	65
Stacking of GB sites	38	19	70
Coal Crushing, transportation to fuel site	38	23	65
Offloading of baked bricks site	38	19	60

District wise Transient families and Individual workers

(Average)

Districts	Transient families	Female transient workers	Male transient workers
Bahawalpur	2.8	0	32.5
Faisalabad	7.5	0	3.1
Gujrat	5.3	1.2	15.3
Kasur	19.5	0	11.8
Multan	2.6	2	10
Okara	4	3.9	5.5
Rawalpindi	8.7	1.1	15.1
Sargodha	6.1	0	19.5
Sheikhupura	13.1	0.1	0.5
Sialkot	1.8	0	4.5
Vehari	7	1.3	9.1
No. of Brick Kilns	***322**	****29**	*****354**

*Note: *Out of 440 workers, 322 responded that families are working at various sites of Kilns while 105 responded zero families working here. 13 observations are missing in the data.*

***The results are based on 7% transient female working at sites while 413 does not work and reported zero.*

**** shows that 81.5 % male workers are working as transient workers remaining 19.5% (86 workers) reported zero.*

District Wise Structure of Payment to Labor Force

(Percentage)

District	Monthly salary	Daily wages	Mixed	Lum sum on agreed work completed	Lum sum for whole season	Weekly payment
Bahawalpur	0	0	-	0	0	13.7
Faisalabad	8.2	0	-	30.7	0	8.6
Gujrat	2.4	0	-	0	0	13
Kasur	7.1	58.8	-	34.6	0	1.7
Multan	12.9	5.9	-	7.7	0	8.6
Okara	14.1	0	-	3.8	0	9.2
Rawalpindi	18.8	17.7	-	0	0	6.2
Sargodha	3.5	11.8	-	0	0	11.3
Sheikhupura	4.7	2.9	-	7.7	0	11.3
Sialkot	17.7	0	-	3.8	100	7.2
Vehari	10.6	2.9	-	11.5	0	9.2
No. of Brick Kilns	**85**	**34**	**0**	**26**	**3**	**292**

Toilet Facility Provided to Temporary Workers

Districts	No Toilet	Toilet with tapped water, open drain	Toilet with tapped water, closed drain	Toilet with tapped water, open drain, on sharing	Toilet with tapped water, closed drain, on sharing
Bahawalpur	50	50	0	0	0
Faisalabad	-	-	-	-	-
Gujrat	80	8.6	0	11.4	0
Kasur	95.2	4.8	0	0	0
Multan	0	0	100	0	0
Okara	55.6	33.3	0	11.1	0
Rawalpindi	48.6	34.3	11.4	5.7	0
Sargodha	92.5	0	2.5	5	0
Sheikhupura	-	-	-	-	-
Sialkot	50	37.5	0	0	12.5
Vehari	77.8	11.1	11.1	0	0
No. of Brick Kilns	**124**	**28**	**7**	**9**	**2**