Memorandum of Understanding

Between

Raipur Smart City Limited

and

Amity University, Raipur CG

This Memorandum of Understanding (MOU) sets for the terms and understanding between the Amity University, Raipur CG and Raipur Smart City Limited to establish, initiate and maintain Mor Raipur Clubs in their organization/institute/establishment.

Background

As a city, we wish to create a robust ecosystem that works with the citizen very closely in order to bring about positive change and development. To integrate fresh and young minds into Raipur Smart City Limited (RSCL) projects, Mor Raipur Clubs are being created across all the major Colleges/ Academic Institutions/ Organisations in Raipur city.

Creating a people-powered smart city means understanding and acknowledging the growing importance of participation of the citizen, especially the youth, in development initiatives and would like to extend an opportunity to your institute to formalize this channel of communication into what we call the Mor Raipur club.

Purpose

To integrate fresh and young minds into Raipur Smart City Limited (RSCL) projects, Mor Raipur Clubs are created in the major Colleges/ Academic Institutions/Organisations in Raipur city. This club is comprised of student ambassadors as well as enterprising young individuals and faculty members. The Mor Raipur Club is one-point contact between Smart City Raipur and the Institution. From time to time, Mor Raipur Club members also voluntarily participate in the activities of RSCL.

The above goals will be accomplished by setting up the following structure:

- **One Thought Leader** (Faculty)
- **3 Campus Ambassadors** (Students)
- **12 Core Members** (Students) – These Core members will represent each of the six verticals of Raipur Smart City in pairs
    - **Hariyar Raipur** – Eco friendly initiatives
    - **Compassionate Raipur** – Helping the underprivileged
    - **Rising Raipur** – Health and Wellness initiatives
    - **Shining Raipur** – Swachhta Initiatives
    - **Badhiya Raipur** – Infrastructure development
    - **Digital Raipur** – Digital and tech initiatives

The formal creation of this Mor Raipur Club would ensure that even as students graduate out of the college, the continued involvement and communication of the institute with Smart City Raipur does not get hampered, resulting in what we envision to be a great exercise in student-powered planning and execution of city development and management.

Key Requirements from Institutes

- Attendance to each student participating in Mor Raipur Club activities and validating the same.
- One key faculty member to front-end and lookafter the club and their activities.

Salient features of associating with Mor Raipur Club:

- Active participation in advancement of the city
- Certificates signed by Honorable Chief Minister/ Mayor/ Municipal Commissioner of the City
- Exclusive Merchandise/ goodies for core group members
- Participation in meetings with City Municipal Commissioner and other government officials
- Career guidance by officials, participation in activities like Heritage Walk, Garbage Festival, Save Water campaigns and other social awareness programmes.
- You may have an opportunity to enhance your interests to engage in community service or other forms of public engagement
- It can lead to a career interest / internship opportunities
- You can develop your skills, aptitude and be a better decision maker, this can be a future ready
- Learning for the upcoming professional career
- Media Coverage
- Networking with other corporate organizations/ MNC's working on the projects

Duration

This MOU is at-will and may be modified by mutual consent of authorized officials from Amity University, Raipur CG and Raipur Smart City Limited. This MOU shall become effective upon signature by the authorized officials from Amity University, Raipur CG and Raipur Smart City Limited and will remain in effect until modified or terminated by any one of the parties by mutual consent.

Signing Authorities:

19.11.19 Date:

For Raipur Smart City Limited,

Shri Anant Tayal.

Date: 19/11/19

For Amity University, Raipur CG

Dr. SURAJIT C. MUKHOPADHYAY

Amity University Chhattisgarh

Affordable Hostel Accommodation

1. **Affordable housing for employees**
   - **(a)** Family Flats- Amity University, Chhattisgarh has in campus family flats for its employees. A total of 36 such family flats are available for the employees. Presently 30 employees are availing this facility.
   - **(b)** Bachelor/Spinster faculty and staff Accommodation- As the campus is located in a distant area, approximately 35 kms from Raipur city, with a view to ensure the comfort of such employees they have been accommodated in the student hostel complex itself. All such employees are allotted one room each. Presently this accommodation is provided free of cost and 26 employees are availing this facility.

2. **Hostel Accommodation at affordable rate**

   Amity University, Chhattisgarh, a not-for-profit private university has provided a world class infrastructure for the students at its Raipur campus. This also includes a hostel accommodation comprising 804 bed capacity. The hostel provides best of the facility and infrastructure to ensure a comfortable and gainful stay for the students which includes world class furniture, upholstery, hygienic and nutritious food (Rs 3,360 per month), medical center, indoor and outdoor games facility etc. The hostel fee per annum is Rs 55,000/- (Refer prospectus- copy attached). Empathizing with the parents of number of students having financial challenge due to Covid- 19, during this academic session the University has made a special provision for pro rate basis payment of the hostel fee. This facilitation by the University has been appreciated by the parents.

AMITY UNIVERSITY CHHATTISGARH

COMPREHENSIVE ACADEMIC REPORT FOR ON-LINE CLASSES

1) Lecture and Student Attendance

A) Total On-line Lecture conducted:

Even Semester AY 2019-20: 11,366

Odd Semester AY 2020-21 (till Date): 31,888

Total: 43,254

***ANNEXURE A** – Details with Data Institution wise of Even Semester AY 2019-20, Odd Semester AY 2020-21 and Total Online Classes conducted*

B) Average Student Attendance for On-line Lecture conducted:

Even Semester AY 2019-20: 96%

Odd Semester AY 2020-21 (till Date): 93%

Total: 94.5%

***ANNEXURE A** – Details with Data Institution wise of Student attendance for Even Semester AY 2019-20, Odd Semester AY 2020-21 and Total Attendance AUC*

2) Number of Videos uploaded on MIS

Not inclusive of Presentations, Live Webcasts / Broadcasts

Total: 58

***ANNEXURE A** – Details with Data Institution wise of Videos uploaded*

3) Methods used to engage Students during the Self-Study Hours

A) Practical Questions and Assignments

B) Educational Articles and Book links

C) Case Studies / Caselets

D) Writing Critical Appreciations of important Literary contents for enhancing Writing skill

E) Preparing PPT Presentations

F) Reviewing Books / Periodicals to enhance reading habit, creativity and imagination

G) Surprise Tests

H) Decoding Research Paper for gathering Literature

4) Average Term Papers / Open Book Exams:

Not inclusive of Class Tests

Total: 142

ANNEXURE A – Details with Data Institution wise of Term Paper / Open Book Exam conducted

5) Methods for assessing and evaluating Learning Outcome of Students:

A) Classroom quizzes

B) Group Discussion on Application based Topics

C) Mid Semester Exams

D) Industry Course embedded Assignments / Tests

E) Presentations, Extempore, GD, Debate, Book Review

F) Creative Writing / Research Paper / Review Paper

G) Students' participation during class hours

H) Viva-Voce

I) Poster presentations

6) Assessment of Student Feedback in terms of their experience, satisfaction:

A) Mentor – Mentee Meetings

B) Post – Commencement Feedback on Amizone

C) Pre – Exam Feedback on Amizone

D) Overall Student's Feedback Form (in process)

E) Parent's Feedback Form (completed)

A brief on problems faced by Students:

A) Most significant is the Low Internet Connectivity

B) Accessibility of Laptop / Personal Computer to undertake Assignments through Presentations, Project / Report Writing, Term papers.

C) Fatigue due to prolonged continuous online Classes

D) Extent of subject Clarity especially in case of Numerical / Quantitative / Statistical papers

E) Voice Clarity and Screen Sharing complications

F) Adaptability Struggle in low network areas

G) Inability to submit Work on CAD or similar software, due to unavailability of the software by the Students of Architectural / Interior Design

7) Engagement of Students in Practical oriented courses:

A) Use of Virtual Labs

B) Use of online facilities for simulations

C) Explanation with illustrations before practical questions attempt

D) Communicate with the help of multiple formats

E) Home Assignments for practice

F) Self-assessment opportunities

G) Tutorial Classes

H) Use of Online Audio / Video sessions for further references

8) Online Academic experience of the Faculty:

A) Overall Good Experience in Numerical subjects

B) Challenging in Numerical / Quantitative / Statistical papers

C) Decrease in the Faculty-Student inter-action

D) Technical Competence enhanced while accessing Online Platforms

E) Novel experience gained by adapting / integrating Digital Pedagogy

F) More challenging to explain the concepts as compared to offline mode

9) Steps taken to improve the Quality of Teaching:

A) Equipping the students with IT integrated and Varied Study Material

B) Extensive use of Screen sharing and White board methods

C) Wider use of Study materials including videos and Case Study

D) Application based assignments

E) Industry Guest Lectures

F) Referential video lectures from NPTEL/MOOC platforms

G) NPTEL courses attended by Students along with their Faculty

H) Promote reflection and communication through quality discussions

10) Challenges of Research and innovation encountered by the Faculty:

A) Diversion of Research Grants / Funds to Pandemic Research

B) Laboratory Research Work could not be undertaken

C) On Ground Primary Research Data adversely impacted

D) Empirical research was hindered due to less physical connectivity

E) Interdisciplinary / Multidisciplinary Research adversely impacted

F) Fatigue due to drastic increase in Screen Time

G) Partially zero bench work results

11) Novel and innovative Best Practices employed:

A) Mix of learning tools were employed

B) The Learning content of the Syllabus was made more Digital

C) Improvement in the Digital proficiency of the learners

D) Increased emphasis on Moral-Philosophical Approach, Stylistic Approach, Periphrastic Approach and Personal-Response Approach

E) Peer Mentoring through Buddy System

F) Use of online simulation tools and trainings

G) Competence building through participation in activities conducted by students club, state and national level Hackathon

I) Continuous Student participation in innovative activities conducted through Institute Innovation Cell (IIC) (Top 5th in Central India) under the aegis of Amity Incubator

J) Interactive workshops on emerging area of technologies by -AWS, Progate, ElaheTech, Texas Instruments, RedHat Academy and UiPathetc.

K) Collaborative studio with ASAP of other Amity Campuses (AUM)

12) Webinars / Online Conferences / Training / Out-reach programs during the period of the Academic On-line Class Mode:

ANNEXURE A

100+ Prominent Webinars / Online Conferences / Training / Out-reach programs conducted by AUC

DETAILS OF THE ON-LINE CLASSES

Sr. No.	Institution	Lectures			Student Attendnace		Videos Uploaded	Term Paper / Open Book Exam
		Even Sem AY 2019-20	Odd Sem AY 2020-21 (till date)	Total	Even Sem AY 2019-20	Odd Sem AY 2020-21 (till date)	Not inclusive of Ppt.	
1	ABS	2147	6543	8690	96%	94.25%	8	16

2	ASET / AIIT	3478	8489	11,967	100%	85%	NIL	11
3	AIB	1774	2560	4334	90%	90%	30	18
4	ASAP	1151	3898	5049	90%	90.94%	NIL	21
5	ALS	1244	4609	5853	95%	97%	NIL	39
6	ASCO	494	2083	2577	100%	95%	Nil	6
7	ASFT	549	1820	2369	100%	90.41%	20	6
8	ASL	160	802	962	99%	100%	Nil	6
9	AIBAS	369	1084	1453	90%	95%	Nil	19
	TOTAL	11366	31888	43254	96%	93%	58	142

ANNEXURE B

Details with Data Institution wise (Not Limited to) of the Prominent Webinars / Online Conferences / Training / Out-reach programs conducted

DETAILS OF PROMINENT EVENTS (NOT LIMITED TO)

Sr. No.	Institution	Webinars / Online Conferences / Training / Out-reach programs
1	ABS	Webinar on Indian Economy – Post Covid -19
2		Webinar on Brand Marketing in the times of COVID 19
3		Webinar on Navigating the opportunity: From Business Resilience to Sustainable Growth
4		Webinar on Financial Awareness & Literacy
5		Webinar on South-South Cooperation in Post Covid World Economy: Restoring Resilience and the Ruptured Value Chains
6		Webinar on Contextualising Corporate Social Responsibility Vis-à-vis Covid-19 Pandemic
7		Webinar on Is globalization in Retreat
8		Webinar on Talent Acquisition
9		Webinar on Sustainable Development Goals and Poverty Alleviation Initiatives by NGOs - Role of Professionals and Corporate Foundations
10		Workshop on Live Trading in Collaboration with BSE (Investor's Protection Fund)

11	ASET / AIIT	Programmers Date by Microsoft
12		Wireless Energy for India & Role of Electric Vehicles in Microgrid
13		Webinar on Future Electric Vehicle & Hero Electric Technology
14		Webinar on Unlocking Unlimited Learning Possibilities
15		Webinar byProf. Anil D. Sahasrbudhe, Chairman AICTE
16		Webinar byMr. Abhishek Singh, CEO, Mygov
17		Webinar by Ms. Shradha Sharma, Founder &CEO talks about her journey & struggle while starting YourStory
18		How to prepare for Competitive Coding & Placements in IT/Software companies?
19		De novo engineering of trans-activating riboswitch in E. coli and directed evolution with using Phase
20		WEBINAR ON EMPOWERING PRODUCTIVE SKILLS
21		Webinar on Open Source Technology - Career Opportunities for RHA Students
22		Webinar on Power Plant Operation and Maintenance
23		Teaching and Learning with MATLAB
24		Guest Lecture on Process Planning for manufacturing of component
25		Guest Lecture on Tunneling Technology
26		Guest Lecture on -Advances in IC Engines
27		AWS Training
28		40 Hours Virtual Training on HTML & CSS by Progate
29		G+6 Building Design using Tekla Stractural Designer
30		Training by ElaheTech on Algorithms & Data Structure
31		Sanjivani vridhashram on 28 Sep 2020
32		Sanjivani vridhashram on 01 Oct 2020
33	AIB	Webinar on De novo engineering trans-activating riboswitch in *E. coli* and direcricted evollution with using phage
34		Webinar on Crossing the Speed Barriers in Seperation Sciences
35		Webinar on Ecotoxicology
36		Webinar on Application of genetic and genomic tools in crop improvement for abiotic stress tolerance
37		Webinar on Seeing Bioprocess engineering through metabolic glasses
38		Webinar on An approach to process validation of Biopharmaceutical Manufacturing
39		Webinar on Prospective and Challenges in the Studies of Cave Science
40		Webinar on Infectious Desease and Mordern Tecnology
41		Webinar on CRISPR and its application in Plant Biotechnology
42		Webinar on Lipstatin production from petriplate to bioreactor
43		Webinar on Isolation and characterization of *Arabdopsis Thaliana* & its applications
44		Webinar on Sustainable Agricultural and Rhizosphere Biology

45	ASAP	Webinar/Guest Lecture on Current practices in shopping mall design
46		Webinar/Guest Lecture on Low tech to High tech Museum Design
47		Webinar/Guest Lecture on Lanscape Architecture
48		Webinar/Guest Lecture on Bamboo Architecture as sustainable option after Covid-19
49		Webinar/Guest Lecture on MODERN HVAC Systems
50		Webinar/Guest Lecture on WOOD WORKING
51		Webinar/Guest Lecture on Vernacular and contemporary
52		Webinar/Guest Lecture on Urban Design working with Urban Spaces
53		Webinar/Guest lecture on Plumbing in Building Services
54		Webinar/Guest lecture on Concept bathrooms
55		Webinar/Guest lecture on The opportunities and challenges of Incremental Housing for making sustainable habitat
56		Workshop and Guest Lecture on Built form, sunshine and shadows
57		Workshop and Guest Lecture on Landscape Architecture as a profession and its Scope
58		Webinar/Guest lecture on Fire services
59		Webinar/Guest lecture on on Covid - 19 re-opening economies and sustainability
60	ALS	Webinar on Rule of Law
61		Webinar on International Commercial Arbitration
62		Webinar on Contract Drafting
63		Webinar on FDP on Intellectual Property Rights
64		Webinar on Career Opportunity after Law
65		Webinar on The Constitution: Contemporary Issue and Challenges
66		Webinar on Human Rights Day
67	ASCO	Workshop on Advance Photography in collaboration with Nikon India Pvt. Ltd. Mumbai
68		Webinar on Understanding Health Communication in Emergencies-Like COVID-19 with UNICEF
69		Webinar on Newspaper or e-Paper: Future of print media for budding Journalism and Mass Communication aspirants
70		Webinar on Elements, Creativity, and Avenues in Film Making
71		Guest Lecture on Impact of COVID-19 on Print Media: Can Newspapers Survive?
72		Webinar on SDG and Communication for Development (C4D) in collaboration with UNIC
73		Guest Lecture on Digital Film Making: Opportunities & Challenges
74		Webinar on Television Journalism: Technology trend and post covid predictions
75		Webinar on Basics and Scope of Photography in the future
76		Webinar on The art of creating wonderment: Film Making
77		Webinar on Indian economy during pandemic: Opportunities and Challenges

78		Guest Lecture on Corporate Communication in the age of Digital Media
79		Webinar on Role of Journalist in the Present Global Media Scenario
80		Webinar on Media, Identity and Indian Diaspora
81		Webinar on Career Opportunities in Radio Journalism
82		Webinar on Recent Trends and Avenues in Television Journalism
83		Webinar on Building Trust with Effective Public Relations
84		Webinar on English Journalism in the Hindi Speaking Heartland
85		Webinar on “Specialized Reporting in Magazine Journalism
86	ASFT	Textile Upcycling & Sustainable Fashion
87		Sustainable Fashion Education- Changes in the Covid 19 Era
88		Online Training Sustainable Fashion Design with Khadi
89		Online Training E-Textile
90		Online Training Dress Designing by Thematic Relevance
91		Social Outreach Program EmpoweringUnderprivileged Women of Math Village, Kharora
92		Social Outreach Program Distribution of hand made cotton Masks to Chhattisgarh State Police and District Council
93	ASL	Guest Lecture on Aesthetics of Indian Theatre
94		Workshop on Effective Presentation & Interview Skills
95		Enrichment Lecture on An Introduction to Indian Writing in English
96		Social outreach throughTeaching Common English Phrases
97		FDP on Learning Silence to Teach Life
98	AIBAS	Workshop on Data Analysis using SPSS
99		Webinar on Surge in Domestic Violence During Covid 19: Impacting Mental Health
100		Webinar on An overview and current guidelines for the management of Corona Virus Disease -19
101		Guest lecture on Clinical practices and Social Justice:Basic Principles of Community Psychology
102		Workshop on Art Based Therapy
103		Psychological Movie Review
104		Poster Making Competition on Be Kind to Your Mind: Mental Health Matters

AMITY UNIVERSITY, CHHATTISGARH

ESTABLISHED UNDER THE CHHATTISGARH PRIVATE UNIVERSITIES (ESTABLISHMENT AND OPERATION) (AMENDMENT) ACT, 2014 (CHHATTISGARH ACT NO. 13 OF 2014)

STANDARD OPERATING PROCEDURE FOR TRANSPORT

AMITY UNIVERSITY, CHHATTISGARH

ESTABLISHED UNDER THE CHHATTISGARH PRIVATE UNIVERSITIES (ESTABLISHMENT AND OPERATION) (AMENDMENT) ACT, 2014 (CHHATTISGARH ACT NO. 13 OF 2014)

STANDARD OPERATING PROCEDURE FOR TRANSPORT

1. APPROVAL BY BOARD OF MANAGEMENT

The Board of Management in its meeting held on _____ has resolved to approve the following 'Standard Operating Procedure for Transport' vide Resolution No._____**.** Any amendment(s) to this Procedure shall only be notified after the same has been approved by the Board of Management as per the process.

2. TITLE

These Procedures shall be called 'Standard Operating Procedure for Transport'.

3. APPLICABILITY

This Procedure shall come into force from the date of approval of Board of Management.

4. PREAMBLE

Transport is an essential infrastructural link to be established for the University for members of Faculty, Students and Staff members. The University intends to establish a transport policy which will streamline the various requirements.

5. AIM

The Procedure intends to establish the broad framework for the said subject and additional rules/procedures/policies specific to campuses could be implemented subject to approval from competent authority.

6. GENERAL GUIDELINES

a. Transport Officer/Administrative Assistant

He will be responsible for upkeep, maintenance, running and administration of all transport held / hired for the utilization by the University. In absence of Transport officer & Transport incharge would be nominated by Director Administration.

b. Personnel

1. Drivers

The drivers for the vehicles will be dedicated and made responsible for the vehicle on their charge. They will ensure its maintenance, servicing, upkeep and be responsible for its functionality at all times. Driving license in original of all Drivers will be deposited in the

office and shall be returned on termination of service. All drivers will be responsible for:

i. Completion of vehicle diary, as issued
ii. Reporting on duty at given time.
iii. Maintenance and upkeep of vehicles.
iv. Understand the route where he has to go for duty.
v. Discipline of staff traveling in the vehicle.
vi. Adhere traffic rules and regulations.
vii. Avoid accident by being extra cautious any loss/damage due to negligence will be borne by driver.
viii. Safety of Passengers

2. Transport Clerk/Office Assistant

He will be function under Transport Office and Director Administration. He will be responsible for the following:

i. Maintenance of all documents and records.
ii. Correct documentation with RTO Office.
iii. Insurance of Vehicles.
iv. Preparation of documents for hiring of transport, their records and payment.
v. Pay bills of all employees.
vi. Clearance of repair bills.
vii. Collection of transport fee from students.

3. Parking

All Vehicles will be parked at the nominated parking and kept duly locked. The responsibility shall be that of the driver.

4. Security

Administrative/Security Officer/Supervisor will be overall responsible for the security of the vehicles.

5. Documentation

Details of documents to be maintained by the Transport Officer/Admin Assistant are as follows:

i. Vehicle records (documents/bills etc.) to kept under the custody of Deputy Director
ii. Administration.
iii. Insurance Records
iv. Vehicle Diary
v. Servicing Record
vi. Record of Repair
vii. Expenditure accounting of fuel and repairs.
viii. Maintain Transport Record.

6. Hiring of Transport
   The shortfall of transport will be met by hiring of cars/buses as and when required. Administrative officer will take the prior approval of Director (Administration) before hiring and will maintain the details of utilization as well as payment.

7. Utilization of Buses
   a. Administrative/Transport Officer will collect and collate the data of students to be picked up and co-ordinate routes of buses and movement of Institute buses accordingly. The route will be reviewed regularly to ensure optimum use of transport effort.
   b. Passes: All Students desirous of using the bus service will indicate accordingly and will be issued with bus passes.
   c. Staff: Staff using the bus service may be permitted to travel however dedicated bus service for staff may not be feasible with prior permission of Vice-Chancellor

8. Night Duty
   The drivers would be nominated for duty after 05:00 PM on weekly basis by Transport Officer/Administration Assistant. He would not leave out of station without the prior permission of Deputy Director Administration. Need of Ambulance after 05:00 PM would be indicated by Nursing Assistant for attending to students of Hostel which need to be referred to doctor to be hospitalized.

9. Keys
   All keys of the transport would be kept at duty Room at the main gate under the supervision of security supervisor.

10. Fuel
    Fuel slips would be signed by the Deputy Director Administration as on when required for withdrawal of fuel from an agency duly authorized by Director, Administration after approval from Vice-Chancellor. Monthly bills would be strictly checked by Administrative Assistant and Deputy Director Administration before processing with accounts.

11. Miscellaneous Aspects
    a. Drivers while on duty will not consume any alcohol/drugs etc.
    b. All passengers shall maintain decorum while traveling.
    c. Busses will only stop at authorized stops.

2. CONCLUSION

The SOP formulated intends to act as a guideline in maintaining relevant records and may be suitably modified from time to time by various Institutes/Departments as deemed appropriate with the approval of Vice-Chancellor. The SOP is also subject to revision by the management as it is only elaborative and not exhaustive.

AN APPROACH TO BETTER QUALITY OF LIFE IN VILLAGES OF CHHATTISGARH –

"A case study of math village"

Prof. Vidya Singh
Ar. Arpita Maji Das

Ar. Neeta Mishra
Ar. Smita Agrawal

An Approach to Better Quality of Life in Villages of Chhattisgarh - "A Case Study of Math Village"

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AN APPROACH TO BETTER QUALITY OF LIFE IN VILLAGES OF CHHATTISHGARH - "A CASE STUDY OF MATH VILLAGE"

AMITY SCHOOL OF ARCHITECTURE AND PLANNING

Prof. Vidya Singh, Ar. Neeta Mishra, Ar. Arpita Das, Ar. Smita Agrawal

2020-2021

FOREWORD

I am extremely pleased to foreword the Documentation & compilation work by students & faculty of Amity School of Architecture & Planning. It depicts a significant journey of systematic approach of the school. Being one of the top research universities in India, Amity University is actively conducting research in almost all fields, including Architecture. Being an integral part of every arena of knowledge, Amity has put great importance to the development and progress of Architecture teaching, experiential learning, and research. Research activities have been at the forefront of Amity's academic pursuit. We are working towards establishing Amity University Chhattisgarh as the hub for academic excellence. Hence, our academicians and academic staff are always engaged in research, consultation, publishing, and social work activities.

Prof. (Dr.) Rajendra Kumar Pandey
Vice Chancellor
Amity University Chhattisgarh

The Documentation work of Village Math by students of Architecture, not only, exhibits the quality work but also, shows the sensitivity of students in understanding the rural part of the state. The suggestions as a part of the proposal demonstrates students understanding on the subject matter. The Documentation work and preparing a comprehensive proposal to improve the quality of life of Rural people, is appreciable. Architecture is multidisciplinary and always has been for people but the impact of Urbanization on Rural India did damaged the culture and flavor, which, I, am sure will be dealt by these budding Architects. I look forward to having such fruitful assignments and I am hopeful that these young creative students and faculty will work towards betterment of the society. I congratulate Professor Vidya and her team for a well-documented and presented book. I wish the entire team of ASAP, a huge success in all their endeavors.

PREFACE

Prof. Vidya Singh
Dean & Director
Amity School Of Architecture And Planning,
Amity University Chhattisgarh

Architecture is a reflection of the culture and socio-economic mirror of the prevailing time. It demands professionals having sensitivity towards social, local, national and global issues and awareness towards development, as well as having their values firmly rooted in the culture and traditions including inclination towards careful use of resources available and sustainability. Schools of Architecture thus need a set of dedicated personnel for creating an environment necessary to stimulate inquisitive urge amongst students to learn Architecture from this perspective. Architecture is an Art and Science of built environment and plays an important role in the development of a nation. Supply of trained and skilled individuals to the society enhances the quality of environment and thus braces the National Policy.

The primary purpose as an academic institute is to impart quality education and bridge the gap between academics and the industry. Application of knowledge for the betterment of the society is another responsibility of the institute. To fulfill this mission, Amity School of Architecture & Planning initiated the proposal of documenting village Math which is adjoining Amity University Chhattisgarh Campus. Certain parameters were decided, and a brief was floated to students. This activity also aimed for a vertical grouping to strengthen the bonding between students. The Documentation was conducted under the supervision of faculty members. Two weeks of activity resulted in submission of documentation in the form of plates and resulted in the form of suggestions /solutions on the issues observed by students.

Documentation is a first step to expose students to rural environment and help them understand people, their culture and its impact on built spaces. Documentation of Math is our first attempt not only to see vernacular but also to study the impact of urbanization on culture & rural life of Chhattisgarh and to find an approach for better quality of life using opportunities to convert them into a smart village. Since, we wanted to go a step further, we decided to work on developing a module of a Smart Village with Math as a Case study. We, as a part of the Architecture fraternity wanted to evolve a module, which can make the village self-sustainable. This also will reduce the pressure on cities which are crumbling down due to migration and huge population. The goal is to translate the comprehensive and organic vision of Mahatma Gandhi into reality, keeping in view the present context as per guidelines of Sansad Adarsh Gram Yojana (SAGY) by instilling certain values in the villages and their people so that they get Urban benefits along with the organic advantages of a country side and live a harmonious life...

It was a daunting task to compile the work in order to present it in the form of a book. The current education system of semester pattern and other subsequent academic administrative work , do not offer much time to the faculty to engage themselves into these kind of rigorous activity. I am so proud of my team for not only devoting to online teaching but also compiling a book. The unprecedented time of pandemic and lockdown and eventually shifting to online teaching is a situation in itself. But they overcame the challenges of sitting at a different geographical location but still working in a team. The book is written in chapters, each explaining the different parameters selected for the activity and the last is the conclusion with a suggestion. I am extremely proud to present this book and I am hopeful that the suggestions proposed in the book would further be submitted to Government of Chhattisgarh as a proposal under Smart Village.

ACKNOWLEDGEMENT

As we express our gratitude, we must never forget that the highest appreciation is not to utter words, but to live by them. – John F. Kennedy

With the above quote we express our gratitude to Dr. Ashok K Chauhan, Founder president, Amity Universe, for allowing us to be associated as a part of his dream and letting us to take a step towards his mission of nation building through education and beyond, of which this book is a small part.

We would like to express our deep gratitude to Dr. Aseem Chauhan, Chairman, Amity University Chhattisgarh, for always providing his generous support in imparting education to our students through human values which is the core of this book.

We are grateful to Dr. W Selvamurthy, Chancellor, Amity University Chhattisgarh, for constantly motivating us to undertake such activities and thereby giving it its true form and thus, the documentation work undertaken took the form of this book.

Everyone needs a mentor to get you to the next level. We are full of gratitude to Dr. R. K. Pandey, Vice Chancellor, Amity University Chhattisgarh whose encouragement and enthusiastic support helped us in writing this book.

We express of gratitude to Dr. Vijay Singh Dahima, Deputy Pro-Vice-Chancellor, Amity University Chhattisgarh, who helped us in shaping this book by his mantra of not working under stress.

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We are deeply thankful to Sarpanch and people of village Math, for permitting and extending the help to us to understand their life in a village and thereby helping us to cover all the aspects that we were required to document the village Math.

We thank from bottom of our hearts to our students of Amity school of Architecture and Planning, Amity University Chhattisgarh for putting in all their hard work as a team and to be on board with us in documenting the village in the scorching heat and humid climate in the month of August 2018.

We all are truly grateful to the faculties of ASAP, AUC for their extraordinary support in mentoring the students in undertaking the documentation work of village Math.

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The book would not have taken shape without the untiring effort of Mr. Shakir Khan. Gratitude to Shakirbhai for giving the final form to the book at a very short notice and in a short span of time.

Writing a book is harder than we thought and more rewarding than we could have ever imagined. Finally, thanks to all those who directly or indirectly supported us to make this happen.

Ar. Neeta Mishra, Ar. Arpita Das, Ar. Smita Agrawal

CONTENT

1.1 INSIGHT

"The mother of art is architecture. Without architecture of our own, we have no soul of our own civilization." – Frank Lloyd Wright (June 8, 1867 – April 9, 1959).

An American architect, interior designer, writer and educator, who designed more than 1,000 structures, Wright believed in designing structures that were in harmony with humanity and its environment, a philosophy he called as "Organic Architecture".

How true it is and how relevant it is. Today, human race is running behind technology and trying to conquer other planets to explore opportunities for developing settlements. We are spending millions and millions of Dollars for research on how to achieve this and spending trillions of dollars destroying our natural resources to achieve this target forgetting the very basic fundamentals of harmonious living maintaining the ecological balance which was practiced by earlier generations. They developed a system referred as The Vernacular. Indian Vernacular Architecture has always demonstrated the close relationship with sustainable materials and techniques for built environment. However, Urbanization and exponential growth of cities, on the other hand failed in utilizing the basic fundamentals of local context. Glass & Aluminium Panels cladded buildings spurred on the urban skyline without considering geographical and climatic context. Today we are paying heavy price for this mindless copy paste approach in terms of consumption of electricity to get thermal comfort on the micro climatic level of built mass. Extensive use of Air Conditioners has not only contributed towards global warming but also has resulted in overuse of natural resources. List would be long for quoting examples on how our unthoughtful approach is causing environmental imbalance. We have drifted away from our rich cultural heritage and our conventional but scientific way of life. But there is always a hope and thankfully, out of few states that are still away from getting spoiled, Chhattisgarh tops the chart.

The picturesque state of Chhattisgarh abounds in natural splendour, is an idyllic mix of the pastoral and the urban. Popularly known as the "rice bowl" of India, Chhattisgarh is responsible for more than 70% of the country's production of rice. With 1, 35,000 sq.km. areas the state has a divergent topography.

Formed on 1st November 2000, the state claims 12% of India's total forest area that accounts for tremendous biodiversity as well as a rich collection of timber and variegated species of wildlife. The strategic location, abundant power supply and rich storehouse of minerals augment the state's industrial and economic potential. The industrial area is centered on the cities of Borai, Anjani, Sirgitti, Urla and Siltara in the districts of Bilaspur, Raigarh, Raipur and Durg/ Rajnandgaon.

Some of the significant industries housed within the territorial area of Chhattisgarh include:

- NTPC Korba (National Thermal Power Corporation Ltd)
- S.E.C.L. (South Eastern Coalfields Limited)
- Bhilai Steel Plant
- S.E.C. Railway Zone
- BALCO Aluminium Plant (Korba)

The state is also a hub of Central India's cultural extravaganzas that is evinced by the friendly and vivacious people, culture and festivals of Chhattisgarh. With mostly the talented and creative tribal population, their expertise is manifested in the exquisite world-famous traditional handicrafts. Chhattisgarh Handicrafts are, to a great extent, responsible for the revenue earning and the overall economy of the state. It also adds to the tourist interest of the place.

Chhattisgarh is known for metal crafts, jewellery, paintings, wood carving, bamboo work and ethnic ornaments. Chhattisgarh the 'Gateway to Central India' has Raipur as its capital with diverse population from across the country. In a very short span, Raipur has emerged as a major business hub for automobile, mining and agriculture. Going one step ahead the state ventured to prepare the development plan of Naya Raipur, India's first organic metropolis region, to replace Raipur as state capital. This planned city is a smart city with go green as a concept. Hence, Chhattisgarh offers perfect combination of Urban & Rural perspective to study and further explore for developing a model for sustainable development. This study, however, is restricted to rural area only. This is an attempt to understand the prevalent conditions of a typical village of Chhattisgarh and try and offer a solution for the rural population to have a quality life.

The study also was initiated to orient students of Amity School of Architecture & Planning to have an experiential learning to understand and study a typical village on different parameters. Architects must know the roots of their country and hence it is the primary responsibility of an Educational Institution to offer more and more opportunities for students to learn and grow. In order to expose students to the rich heritage and culture of our country, club "DHAROHAR" is established and various activities are undertaken by students themselves.

1.2 VILLAGE PROFILE- "THE VILLAGE MATH"

Village Math was the obvious choice for us to take up as a case study. The geographical location of the village offers many advantages to students of Amity University as we share the boundary. Many programs are undertaken by the University under Institutional social outreach responsibilities.

As per the guidelines of smart village scheme declared by Government of India, the case study was undertaken and also decided to take this as a project for upliftment of the village and convert it into a smart village on the certain parameters assigned to students.

1.3 VILLAGE PROFILE- "THE VILLAGE MATH"

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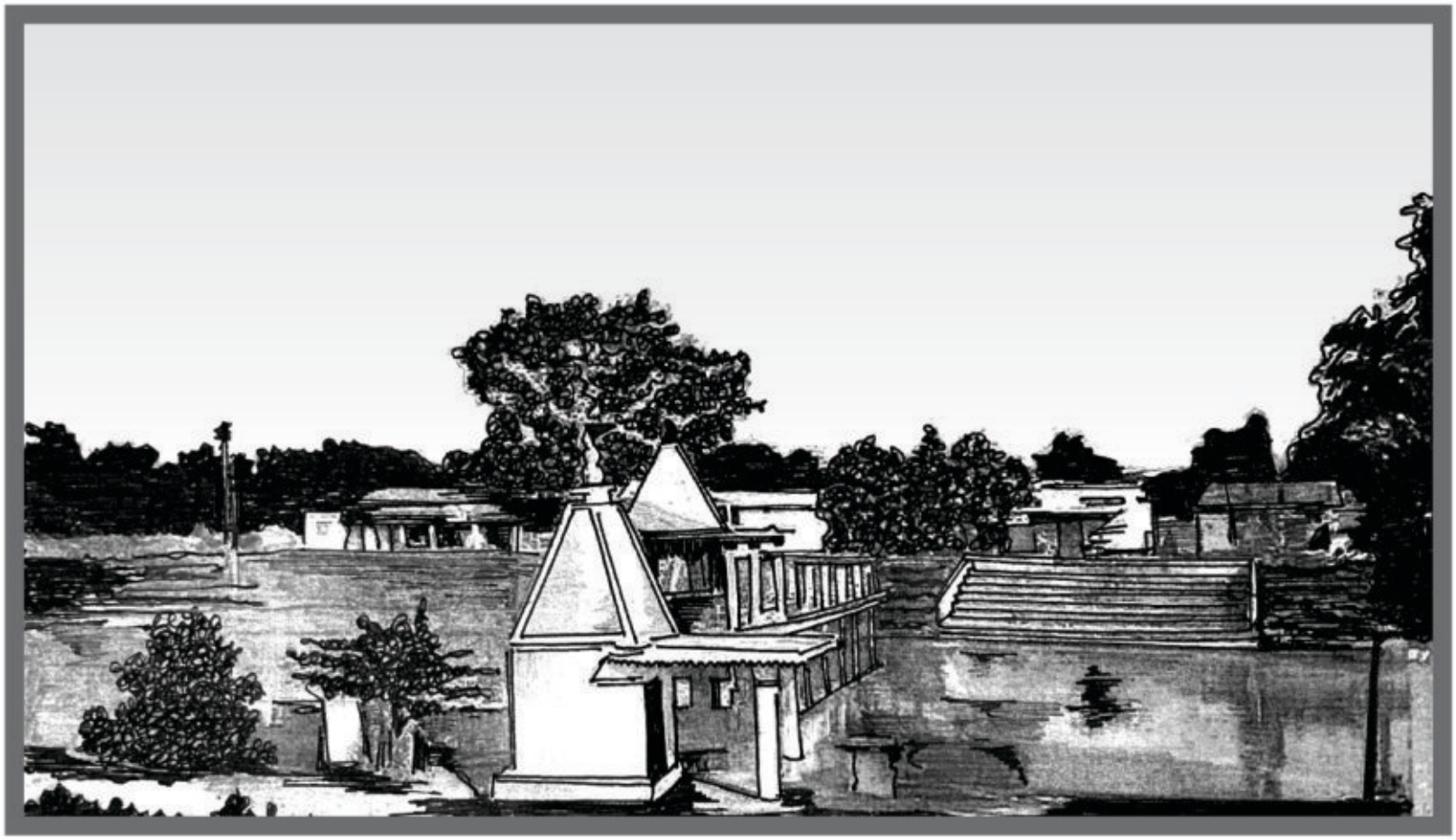


Sketch Courtesy - Ar. Arpita Das

1.4 THE APPROACH

As a part of right-angle club activity, at the beginning of every new session the students are assigned to undertake the onsite field experience. One such activity was documenting the village Math which share its boundary with Amity University Campus. After undertaking the documentation, we realised that we can carry forward the work done to the next level because the village can be transformed into a smart sustainable village which is motto of our prime minister Hon'ble Shri Narendra Modi. To reach to the large number of people the documented work of the student converted into a coffee table book so that people form another village of India can also be benefitted.

Thus, Students were divided in seven groups and certain tasks were assigned to them. Each group focused on the given task and tried to collect the information, took pictures, draw sketches and later prepared plates on the collected data. The collective efforts of students is compiled and presented here with solutions to issues identified by students during the study.

Parameters for study assigned to different groups:

NIRMAN	POPULATION SOCIO ECONOMICS/ LOCAL BUSINESS (SKILLED/UNSKILLED LABOUR AND TYPE)
NIRMANSHIP	CLIMATE CONDITION CULTURE CONSTRUCTION MATERIAL
ANTARIT	OPEN PUBLIC SPACES
VASTUVIDYA	WATER SUPPLY SEWAGE
ANUKRITI	ELECTRICAL SUPPLY GARBAGE COLLECTION AND DISPOSAL
STHAPATYA	VERNACULAR HOUSE

Table no. 1

Outcome of every parameter is discussed in different chapters of the book.

CHAPTER-II

UNDERSTANDING GOVERNMENT SCHEMES:

As a Reference

To develop a smart village, it was essential to understand and refer various government schemes that are proposed by Government of India. Thus, two government schemes were referred which would help to develop "MANTH" as model smart village based on guidelines of both the schemes.

2.1 SANSAD ADARSH GRAM YOJANA (SAGY)

One of the schemes that was referred is "SANSAD ADARSH GRAM YOJANA" (SAGY) under rural development program which broadly focuses upon the development in the villages which includes social development, cultural development and spread motivation among the people on social mobilization of the village community.

Aim:

The aim is to translate the comprehensive vision of Mahatma Gandhi about an ideal Indian village into a reality, keeping in view the present context.

Objective:

Key objectives of the Yojana include:

1. The development of model villages, called Adarsh Grams, through the implementation of existing schemes, and certain new initiatives to be designed for the local context, which may vary from village to village.
2. Creating models of local development which can be replicated in other villages.

As per the guidelines of the yojana the aim is to guide the gram panchayat for holistic progress giving importance for social development at par with infrastructure such that the 'Adarsh Grams' are to become schools of local development and governance, inspiring other Gram Panchayats.

India's way is not Europe;
India is not Calcutta and Bombay.
India lives in her seven hundred thousand villages.
M. K. Gandhi

2.2 UNNAT BHARAT ABHIYAN

Another scheme that was referred is "UNNAT BHARAT ABHIYAN" which is inspired by the vision of transformational change in rural development processes by leveraging knowledge institutions to help build the architecture of an Inclusive India.

Objective:

1. To engage the faculty and students of Higher Educational Institution in understanding rural realities.
2. To identify and select existing innovative technologies, enable customization of technologies or devise implementation for innovative solution as per the local needs.
3. To leverage the knowledge base of the institutions to devise processes for effective implementation of various government programmes.

Even though, our country has made phenomenal progress in the field of Science and Technology as well as the mainstream industrial infrastructure, the fruits of these developments have not reached the large spectrum of our rural population which still languishes in deprivation and poverty. Presently, 70% of our population lives in rural areas engaged in agrarian economy with agriculture and allied sector employing 51% of the total workforce. There are huge developmental disconnects between the rural and urban sectors such as inequity in health, education, incomes and basic amenities as well as employment opportunities, all causing great discontent and large-scale migration to urban areas. opportunities locally. Increasing urbanization is neither sustainable nor desirable. In this context, it may be recalled that Mahatma Gandhi had envisioned that the development of the country should take place on the basis of 'Gram Swaraj' i.e. self-sufficient and sustainable rural economy – a dream which continues to remain unfulfilled even after 70 years past independence.

Further, the imperatives of sustainable development which are being felt more and more acutely all over the world also demand eco-friendly development of the villages and creation of appropriate employment opportunities locally. Increasing urbanization is neither sustainable nor desirable. In this context, it may be recalled that Mahatma Gandhi had envisioned that the development of the country should take place on the basis of 'Gram Swaraj' i.e. self-sufficient and sustainable rural economy – a dream which continues to remain unfulfilled even after 70 years past independence.

2.3 INFERENCES

Government guidelines for transformational change in rural India set the guidelines for students to undertake the survey and study of a village. It was envisioned to develop a holistic proposal for Village Math, hence was based on certain parameters. These parameters further helped to develop the strategy for undertaking the documentation work.

Following are the points which has been considered for the documentation –

1. Personal development
2. Human Development
3. Social Development
4. Economic Development
5. Environmental Development
6. Basic Amenities and Services and
7. Social Security

The documentation thus was undertaken and along with Data collection and identifying the issues, some solutions also were proposed. These solutions are simple, economical and are sustainable and easy to execute for people to operate. Further chapters describe the documentation work. The book concludes with a suggestion of a strategy which can help any village to transform into a smart village.


RIFE RA

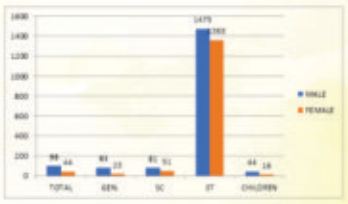

NIKE

CHAPTER-III
DOCUMENTATION OF
VILLAGE MATH

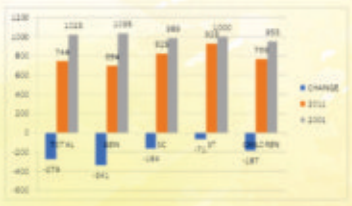
BY STUDENTS

(Year 2018)
AMITY SCHOOL OF
ARCHITECTURE AND PLANNING

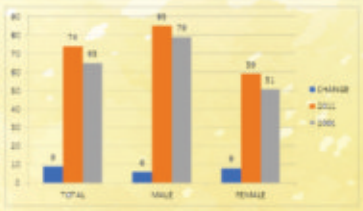
DATA COLLECTION



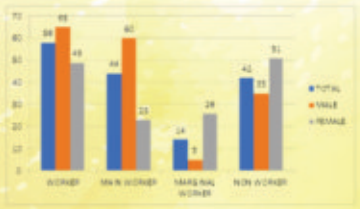
CHANGE IN SEX RATIO



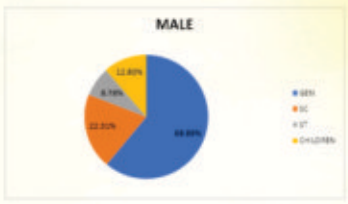
CHANGE IN POPULATION 2001-2011



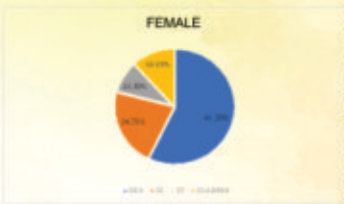
CHANGE IN LITERACY RATE 2001-2011



% OF WORKING POPULATION



CASTE WISE MALE POPULATION 2011



CASTE WISE FEMALE POPULATION 2011

S O I L

•Murrum - Rich in iron and aluminum - Good material for building huts - Vegetation - soya bean, til

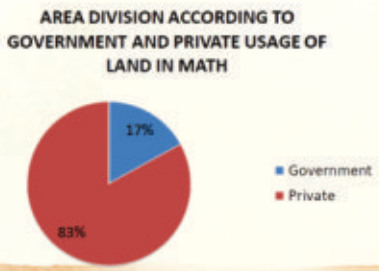
•Black soil - Rich in iron, magnesium and aluminum. - Vegetation – cotton, peanut, wheat, rice, oil seeds, tobacco,

CLIMATOLOGY

•Tropical climate – The climate is hot and humid because of its proximity to the Tropic of cancer and its dependence on the monsoons for rain.

•Temperature - 30-45 degrees Celsius in summer - 0-25 degrees Celsius in winter

•Wind direction – west south west , 11km/hr



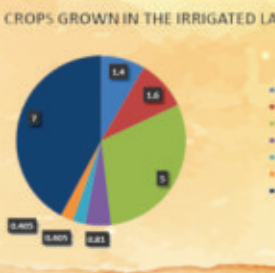
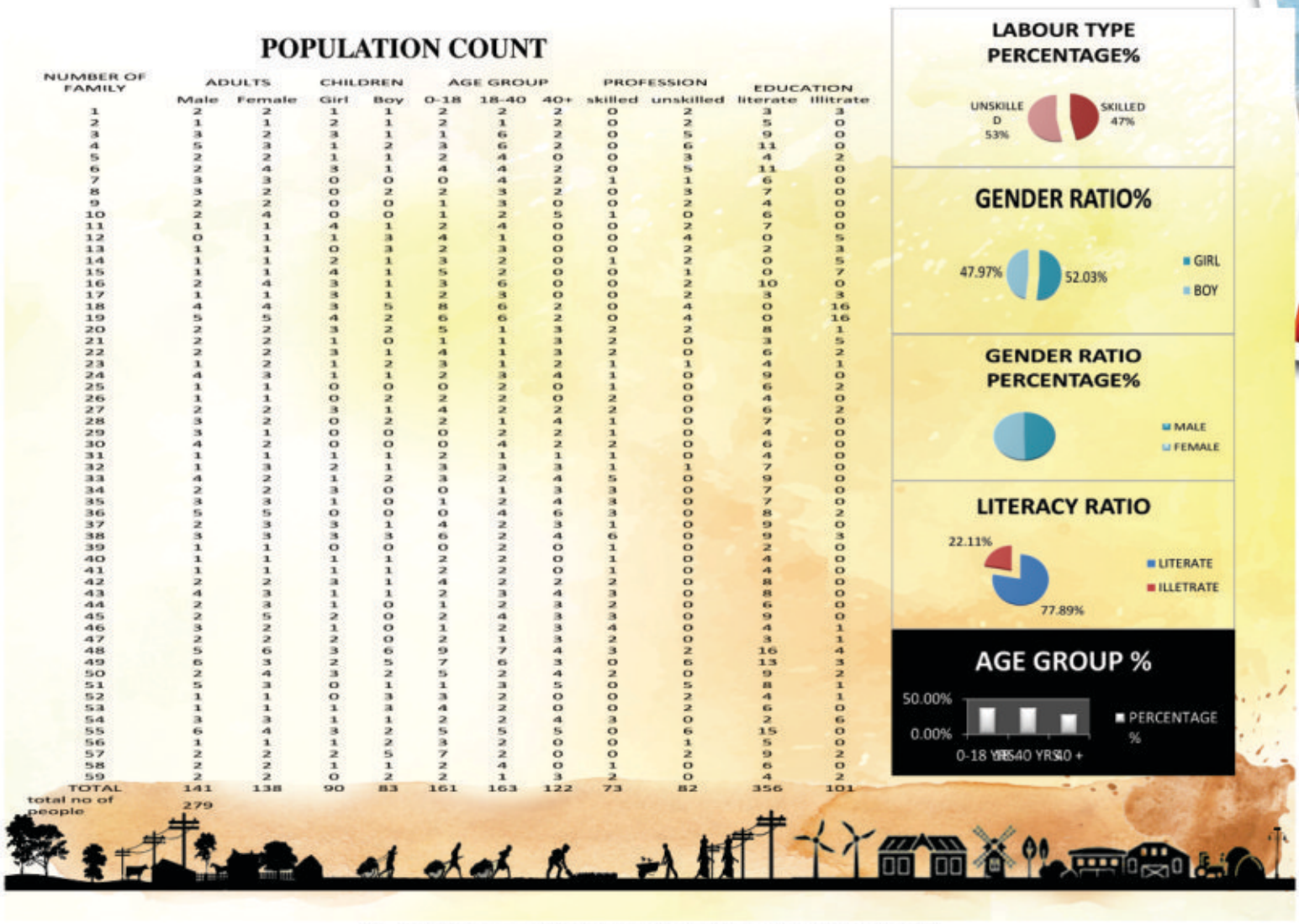


Fig. No.2. Demographic Datas collected by student (Sheet no 1).

The socio-economic information expressed statistically which also includes employment, education, income, marriage rates, birth and death rates and more factors, that can be used for various other research purposes is known as Demographic Data. This chapter briefly discusses about the Demographic condition that is the population structure of Math Village. The Data's were collected by students on a field survey. It helped the students to understand the overall socio economical as well as cultural conditions.



NUMBER OF FAMILY	ADULTS		CHILDREN		AGE GROUP			PROFESSION		EDUCATION	
	Male	Female	Girl	Boy	0-18	18-40	40+	skilled	unskilled	literate	illitrate
1	2	2	1	1	2	2	2	0	2	3	3
2	1	1	2	1	2	1	2	0	2	5	0
3	3	2	3	1	1	6	2	0	5	9	0
4	5	3	1	2	3	6	2	0	6	11	0
5	2	2	1	1	2	4	0	0	3	4	2
6	2	4	3	1	4	4	2	0	5	11	0
7	3	3	0	0	0	4	2	1	1	6	0
8	3	2	0	2	2	3	2	0	3	7	0
9	2	2	0	0	1	3	0	0	2	4	0
10	2	4	0	0	1	2	3	1	0	6	0
11	1	1	4	1	2	4	0	0	2	7	0
12	0	1	1	3	4	1	0	0	4	0	5
13	1	1	0	3	2	3	0	0	2	0	3
14	1	1	2	1	3	2	0	1	2	0	5
15	1	1	4	1	5	2	0	0	1	0	7
16	2	4	3	1	3	6	0	0	2	10	0
17	1	1	3	1	2	3	0	0	2	3	3
18	4	4	3	5	8	6	2	0	4	0	16
19	5	5	4	2	6	6	2	0	4	0	16
20	2	2	3	2	5	1	3	2	2	8	1
21	2	2	1	0	1	1	3	2	0	3	5
22	2	2	3	1	4	1	3	2	0	6	2
23	1	2	1	2	3	1	2	1	1	4	1
24	4	3	1	1	2	3	4	1	1	9	0
25	1	1	0	2	0	2	0	1	1	6	2
26	1	1	0	2	2	2	0	2	0	4	0
27	2	2	3	1	4	2	2	2	0	6	2
28	3	2	0	2	2	1	4	1	0	7	0
29	3	1	0	0	0	1	2	1	0	4	0
30	4	2	0	0	0	4	2	2	0	6	0
31	1	1	1	1	2	1	1	1	0	4	0
32	1	3	2	1	3	3	1	1	1	7	0
33	4	2	1	2	3	2	4	5	0	9	0
34	2	2	3	0	0	1	3	3	0	7	0
35	3	3	1	0	1	2	4	3	0	7	0
36	5	5	0	0	0	4	6	3	0	8	2
37	2	3	3	1	4	2	3	1	0	9	0
38	3	3	3	0	6	2	4	6	0	9	3
39	1	1	0	0	0	2	0	1	0	2	0
40	1	1	1	1	2	2	0	1	0	4	0
41	1	1	1	1	2	2	0	1	0	4	0
42	2	2	3	1	4	2	2	2	0	8	0
43	4	3	1	1	2	3	4	3	0	8	0
44	2	3	1	0	1	2	3	2	0	6	0
45	2	5	2	0	2	4	3	3	0	9	0
46	3	2	1	0	1	2	3	4	0	4	1
47	2	2	2	0	2	1	3	2	0	3	1
48	5	6	3	6	9	7	4	3	2	16	4
49	6	3	2	5	7	6	3	0	6	13	3
50	2	4	3	2	5	2	4	2	0	9	2
51	5	3	0	1	1	3	5	0	5	8	1
52	1	1	0	3	3	2	0	0	2	4	1
53	1	1	1	3	4	2	0	0	2	6	0
54	3	3	1	1	2	2	4	3	0	2	6
55	6	4	3	2	5	5	0	0	6	15	0
56	1	1	1	2	3	2	0	0	1	5	0
57	2	2	2	5	7	2	0	0	2	9	2
58	2	2	1	1	2	4	0	1	0	6	0
59	2	2	0	2	2	1	3	2	0	4	2
TOTAL	141	138	90	83	161	163	122	73	82	356	101
total no of people	279										

Fig. No.3. Demographic Datas collected by student (Sheet no 2).

3.1 POPULATION DISTRIBUTION AND GROWTH

According to Census 2011 information, Math has a total population of 2,501 peoples. There are about 453 houses in Math village. Tilda Newra is nearest town to Math which is approximately 24km away. Also, the data collected by students of Math village has a population of 480 households.

3.2 SEX RATIO

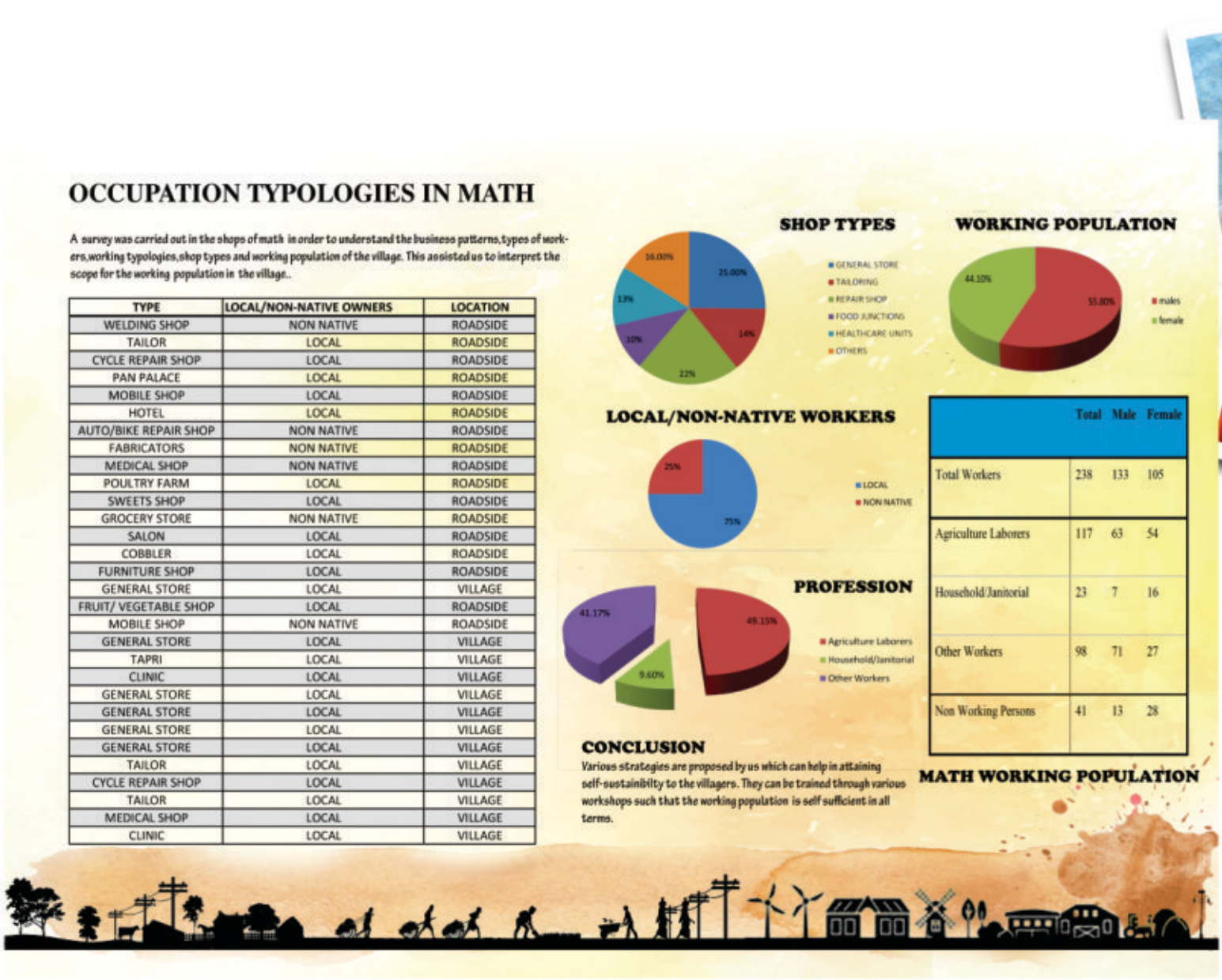
The Female Population is 42.7% as per data collection of students. The sex ratio indicates a fair share of both the genders which implies no or negligible socio-political distortions.

3.3 LITERACY RATE

As per data collection by students the total village literacy rate is 64.5% and the Female Literacy rate is 21.9%. It demands the need and attention to be put into improving Female Literacy issue.

3.4 WORKER AND WORK FORCE DISTRIBUTION

The percentage sex ratio of working population is reasonable enough, but the education and literacy rate seem to be grim. Most of the villagers are involved into farming hence both male and female population can be seen playing a fair share in work force distribution.



TYPE	LOCAL/NON-NATIVE OWNERS	LOCATION
WELDING SHOP	NON NATIVE	ROADSIDE
TAILOR	LOCAL	ROADSIDE
CYCLE REPAIR SHOP	LOCAL	ROADSIDE
PAN PALACE	LOCAL	ROADSIDE
MOBILE SHOP	LOCAL	ROADSIDE
HOTEL	LOCAL	ROADSIDE
AUTO/BIKE REPAIR SHOP	NON NATIVE	ROADSIDE
FABRICATORS	NON NATIVE	ROADSIDE
MEDICAL SHOP	NON NATIVE	ROADSIDE
POULTRY FARM	LOCAL	ROADSIDE
SWEETS SHOP	LOCAL	ROADSIDE
GROCERY STORE	NON NATIVE	ROADSIDE
SALON	LOCAL	ROADSIDE
COBBLER	LOCAL	ROADSIDE
FURNITURE SHOP	LOCAL	ROADSIDE
GENERAL STORE	LOCAL	VILLAGE
FRUIT/ VEGETABLE SHOP	LOCAL	ROADSIDE
MOBILE SHOP	NON NATIVE	ROADSIDE
GENERAL STORE	LOCAL	VILLAGE
TAPRI	LOCAL	VILLAGE
CLINIC	LOCAL	VILLAGE
GENERAL STORE	LOCAL	VILLAGE
GENERAL STORE	LOCAL	VILLAGE
GENERAL STORE	LOCAL	VILLAGE
GENERAL STORE	LOCAL	VILLAGE
TAILOR	LOCAL	VILLAGE
CYCLE REPAIR SHOP	LOCAL	VILLAGE
TAILOR	LOCAL	VILLAGE
MEDICAL SHOP	LOCAL	VILLAGE
CLINIC	LOCAL	VILLAGE

Fig. No. 4. Demographic Datas collected by student (Sheet no 3).

The economy of a village is a simple economy. Goods and services are produced for self-consumption and not for market. The basic objective of the people living in a village is to satisfy the current needs. A schoolteacher, a farmer, a labourer are the examples of the residents of a village. Each individual uses his own resources to fulfil his needs. Virtually there is no specialization. Exchange of goods and services takes place to enable people to fulfil their needs. For example, a teacher with his income may buy goods and services he needs.

Fig.no.5. Cultural happenings in Math (Sheet no 4).

3.5CULTURE

Culture plays a very significant part in determining the overall progress of a place or region as it provides intrinsic values, important social and economic benefits. Cultural activities of a place define the social condition of any place or region. Cultural celebrations foster respect and open-mindedness for other cultures. Celebrating our differences, as well as our common interests, helps unite and educate us. It helps understand other's perspectives, to broaden our own, and to fully experience and educate ourselves; And in turn developing a sense of belongingness and acceptance along with harmonious social living conditions.

Villagers of Math have a lot of cultural activities taking place throughout the year depicting its social bonding between the villagers. A wide range of people from different caste live harmoniously. According to the findings by students about various festivities with variety of cultural happenings take place. The people belong to different castes their spirit is lively and thus they celebrate to their fullest on every occasion and stay United.

The various festivals celebrated by the villagers of Math indicate their accepting and tolerant nature towards all castes. Also, their gratitude towards the Mother Nature is seen in each and every celebration. Since the settlement in Math is more Agriculture oriented hence the celebrations and festivals also revolve around farming.

These spaces provide opportunities for the villagers to come together and engage with each other. Also, it helps in strengthening internal communication through socials bonds thereby providing chance to the villagers to communicate without a barrier of intimidation.

CHAPTER-IV

INFRASTRUCTURE DEVELOPMENT

For socio-economic development of any village adequate infrastructure in the form of Water supply and sewage system, Garbage collection and disposal, Electrical supply, social infrastructure etc plays a very important role. The distinguishing feature of Infrastructure is that it is location based i.e. it requires special analysis to ensure inclusive growth, a good quality infrastructure is important which will further lead to better quality of life in villages.

Thus, in this chapter the analysis of existing infrastructure has been done.

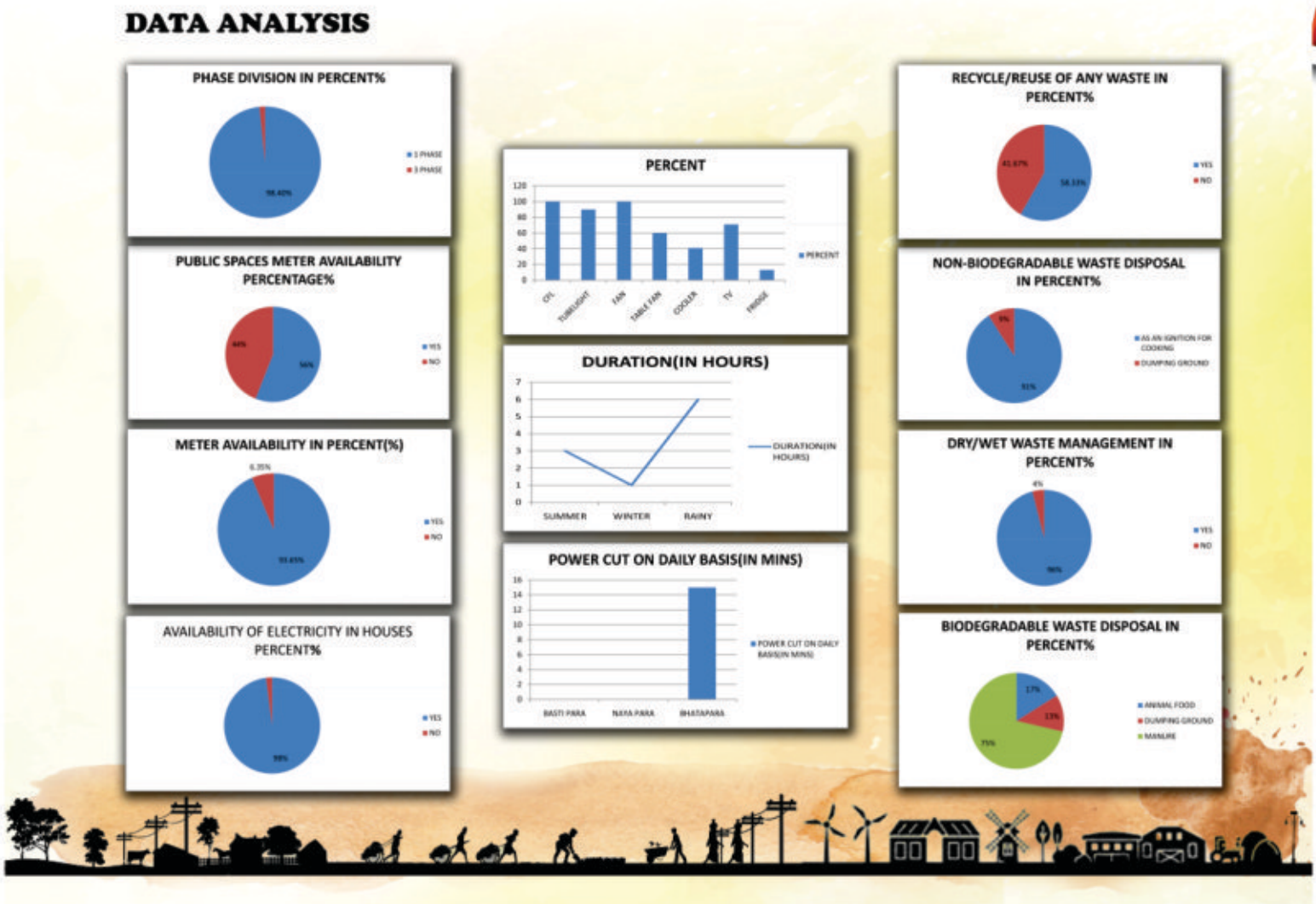


Fig.no.6. Infrastructure Data Analysis (Sheet no 5).

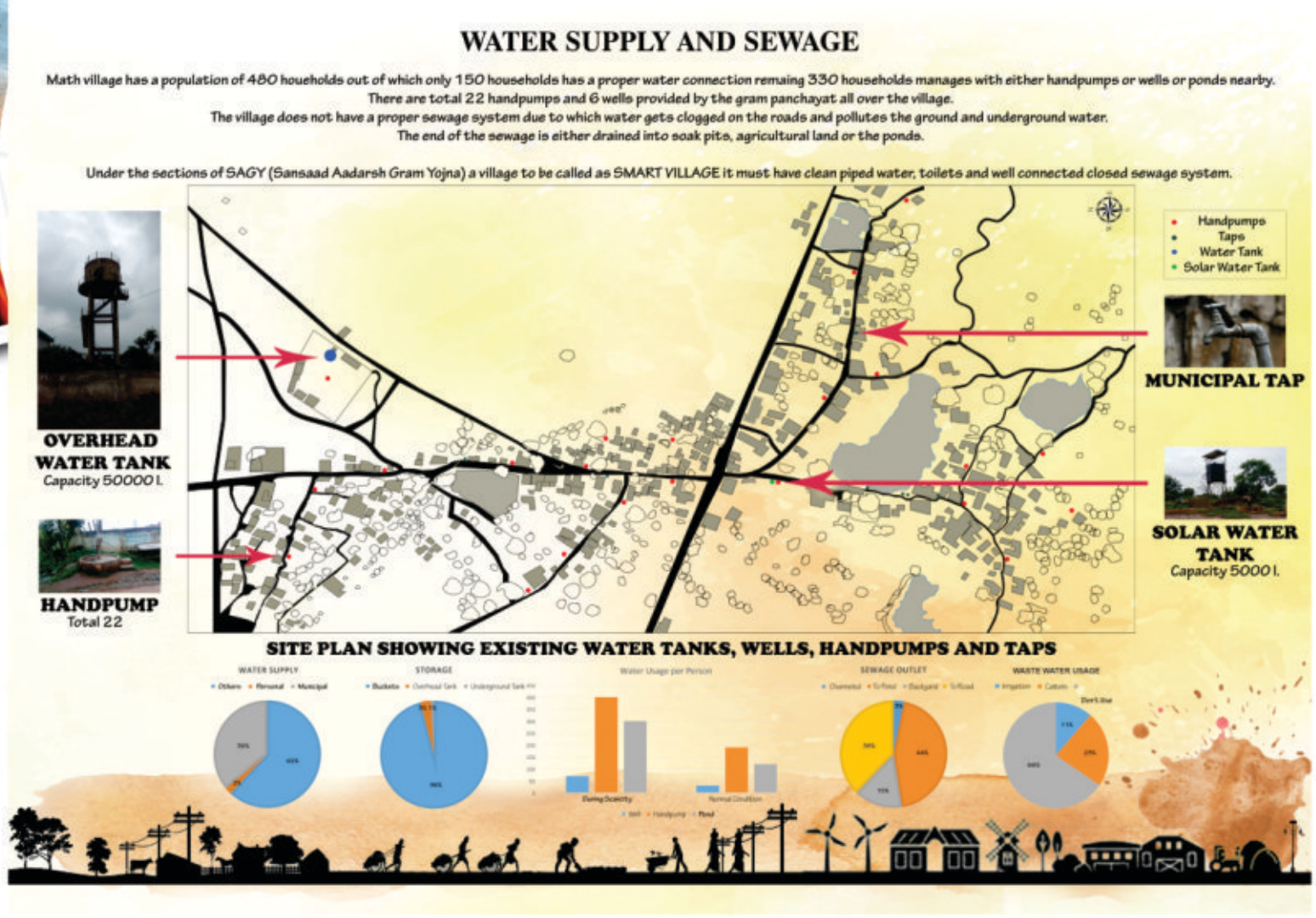


Fig.no.7. Existing Water Supply and Sewage Layout Plan in Math (Sheet no 6).

4.1 Water Supply & Sewage Systems

One of the needs for our survival is water. It is important to remember that water is not a permanent resource available throughout the year. However, it can be recycled. Today, overhead or underground tanks store water.

Water Supply and Sewage Systems mean accessibility to safe potable water and safe wastewater and sewage disposal systems; using appropriate technology;

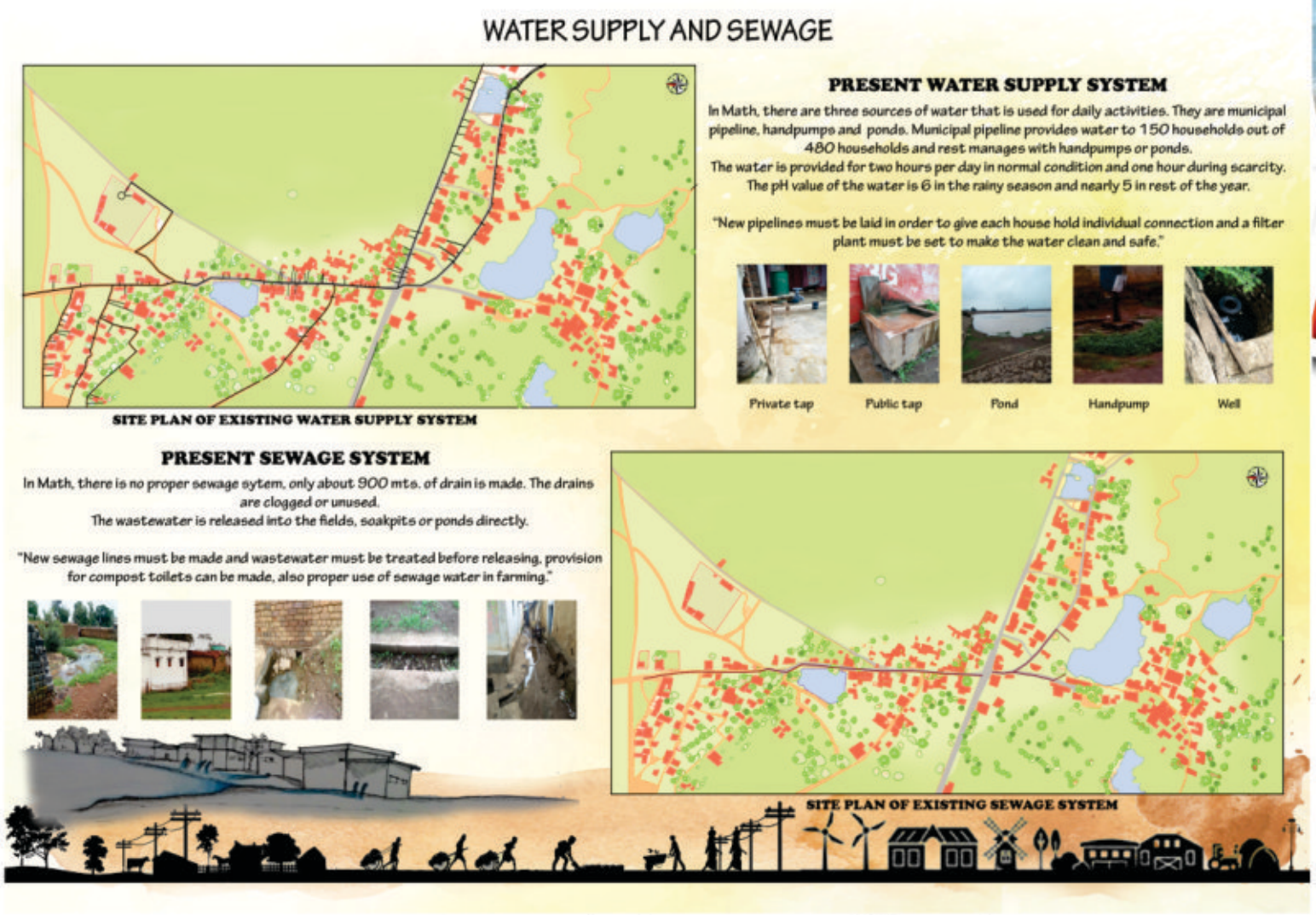


Fig.no.8. Existing Water Supply and Sewage System in Math (Sheet no 7).

According to the survey Math village has a population of 480 households out of which only 150 households has a proper water connection remaining 330 households manage with either hand pumps or well's or ponds nearby.

There are total 22 hand pumps and six wells provided by the gram panchayat all over the village. The village does not have a proper sewage system due to which water gets clogged on the roads and pollutes the ground and underground water. The end of the sewage is either drained into soak pits, agricultural land or the ponds.

Fig.no.9. (a) Existing Solid waste disposal condition in Math.

4.2 SOLID WASTE MANAGEMENT

Solid-waste management is the collecting, treating, and disposing of solid material that is discarded because it has served its purpose or is no longer useful. Improper disposal of municipal solid waste can create unsanitary conditions, and these conditions in turn can lead to pollution of the environment and to outbreaks of vector-borne disease—that is, diseases spread by rodents and insects.

In India especially in the rural areas, waste is a severe threat to the public health concern and cleanliness. Though the form of waste solid waste generated in rural areas is predominantly organic and bio-degradable, yet it has become a major problem to the ecological balance.

The survey on garbage collection and disposal was carried out in the village Math. During the survey it was found that in every house depending on the size of household and is of house a separate area was left vacant usually at the back side of the house which is called "Bada" by the villagers. The Bada is used as a place to grow vegetables that are required on daily basis and there is as large dug pit is which is used to dump or throw the kitchen waste as well as cattle waste along with all the biodegradable waste that is generated on the daily basis.

Fig.no.9. (b) Existing Solid waste disposal in open areas at Math.

Fig.no.9. (c) Existing Solid waste disposal in open areas at Math.

Once the pit is filled with the garbage it is left as it is until it gets converted in the compost. The process is repeated usually with two pits in the Bada.

Villagers have small house with not enough space for Bada simply throws the garbage on the roadsides which is a threat to both health of villagers and on environment.

In rural areas, as compared to urban ones, land availability is not often a constraint. Also, there are more options possible in rural areas for reuse of waste, such as composting of biodegradable material, which can be used in kitchen gardens, agricultural fields, and so on.

The adoption of a phased approach depends on the unit of implementation. The management of solid waste at the village or gram panchayat level, is done where all households implement the waste management since its scale contributes to efficiency and effectiveness of community level waste management.

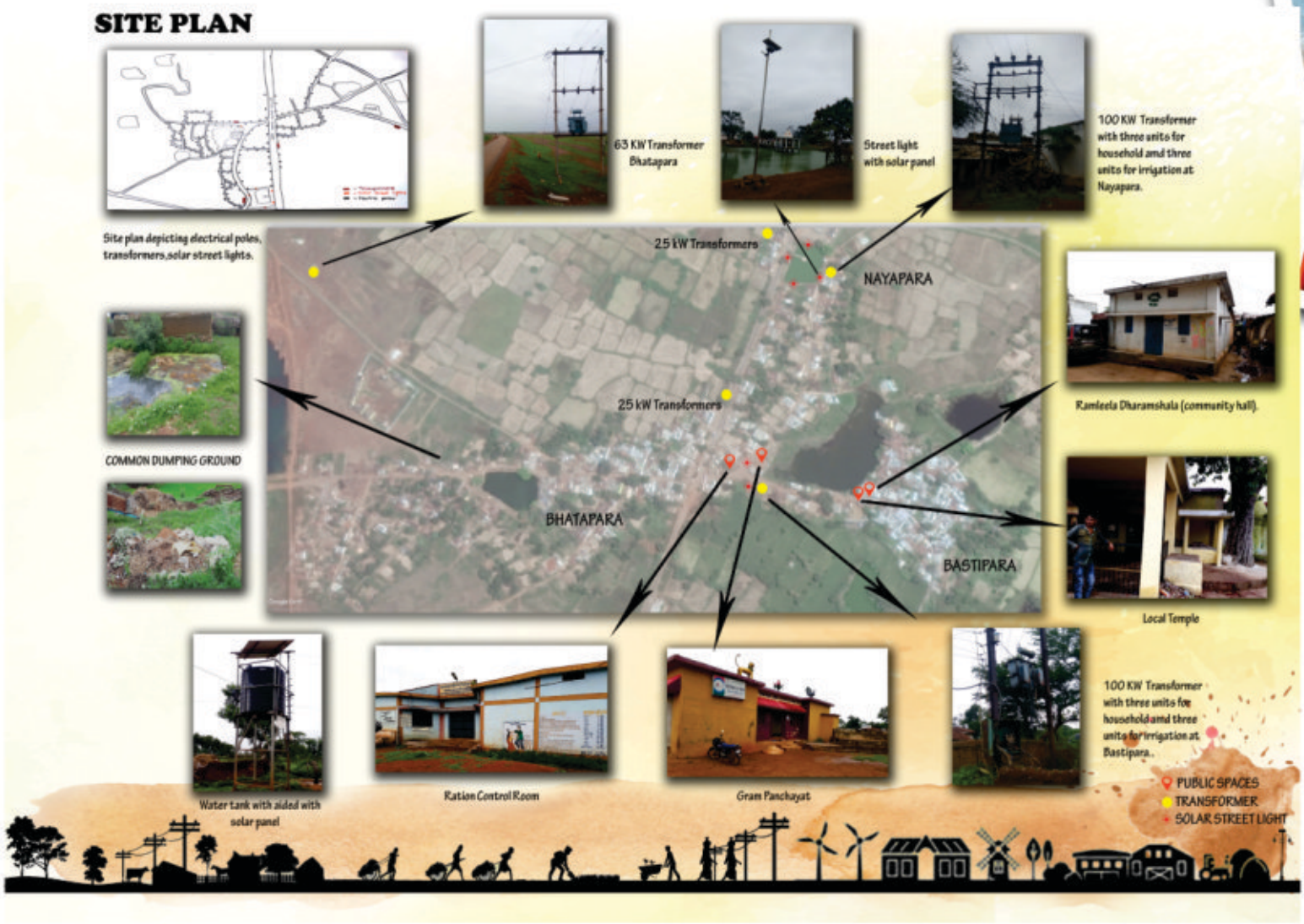


Fig. No.10. Existing electrical supply system at Math.

4.3 ELECTRICAL SUPPLY

"Electricity is termed as the fundamental 'Right' to life and liberty of every Indian citizen as per Article-21 of Constitution of India ...!"

Electrical infrastructure consists of Generation, Transmission and Distribution to each household.

Access to electricity is necessary for modern economic & overall social development of the country. Electricity opens the new avenues of technologies that promote education, public health and mass communication. Without electricity, communities are unable to participate in the benefits of modern advances and may left isolate, literally in the dark. Electricity is a neat and clean, superior form of energy than heat and easy to transport and storage with comparatively lesser losses. It may generate heat, turn a motor and may produce efficient lighting. India is agriculture-based country, more than 70% of India lives in villages, and therefore, 'Rural Electrification' is a key step in the direction to uplift the quality of life of common man to ensure rapid economic development by providing electricity as an input for uses in agriculture, rural industries, etc.

In villages electricity is not only used for household purpose but is also used for various other purposes. While undertaking the survey on electric supply in the village MANTH it was observed that most the village has proper supply of electricity having transformers as well as distribution lines for electricity in the village.

Maximum houses in the village have legal electric connections having their own electric meters. Streetlight with electric poles are also there in the village. Few of them are solar streetlights with solar panel. Transformers (63 kw, 100 kw) for supplying electricity are located as per the need such as household, irrigation, dharmshala, gram panchayat building, etc.

Overhead water tanks to supply water to the village are also equipped solar panel for fulfill the electricity consumption to run the water pump.

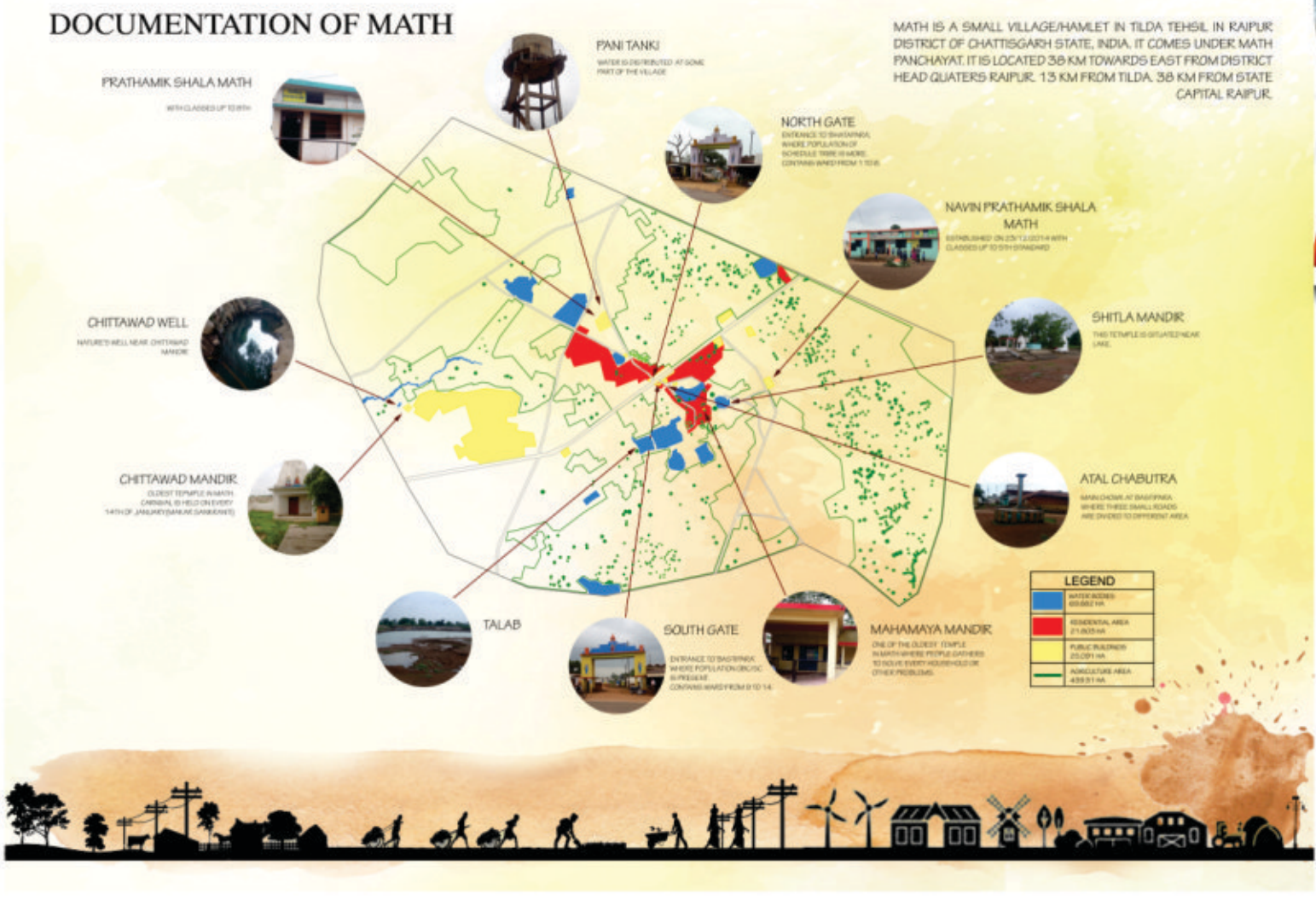


Fig.no.11. Existing Social Infrastructures at Math.

4.4 Social Infrastructure

Infrastructure is a subset of the infrastructure sector and typically includes assets that accommodate social services such as schools, universities, hospitals, prisons and community housing, police, courts and other justice and public safety provisions, as well as arts, culture and recreational facilities. Investment in social infrastructure is a pre-requisite for inclusive growth and employment.

The Government had laid down the vision for the decade which among other things emphasized upon building of social infrastructure; a healthy society-Ayushman Bharat, well-nourished women & children and safety of citizens. Some of the milestones to be achieved in this journey are access to electricity, a clean cooking facility, and housing for all by 2022.

Social infrastructure with its positive externalities has a significant role in the economic development of the country. It is empirically proven and widely recognized that education and health impact the growth of an economy. Investing in human capital by way of education, skill development, training and provision of health care facilities enhances the productivity of the workforce and welfare of the population.

Hence, at village Math, we look for a sustainable developmental module through social and community network with participation of local people, Gram panchayat, NGO's, Social worker and Institutes . A self-sustainable village can contribute not only to provide a healthy environment for their children to learn at par with Urban students but also will contribute in lessoning the pressure of Urban cities. Further, projects like Argo tourism, Argo based industries, Organic Farming, Small scale Industries and ecofriendly products can be promoted for the same.

CHAPTER-V

DOCUMENTATION OF TRADITIONAL HOUSES

This chapter talks about the two traditional houses that are presently in use and constructed with the materials available in the village and the construction techniques used for the same.

5.1 TRADITIONAL HOUSE

Vernacular house is characterized using local materials and knowledge, usually without the supervision of professional and a settlement created in pre-industrial societies and includes a very wide range of buildings, building traditions, and methods of construction. Vernacular houses are typically simple and practical, whether residential houses or built for other purposes.

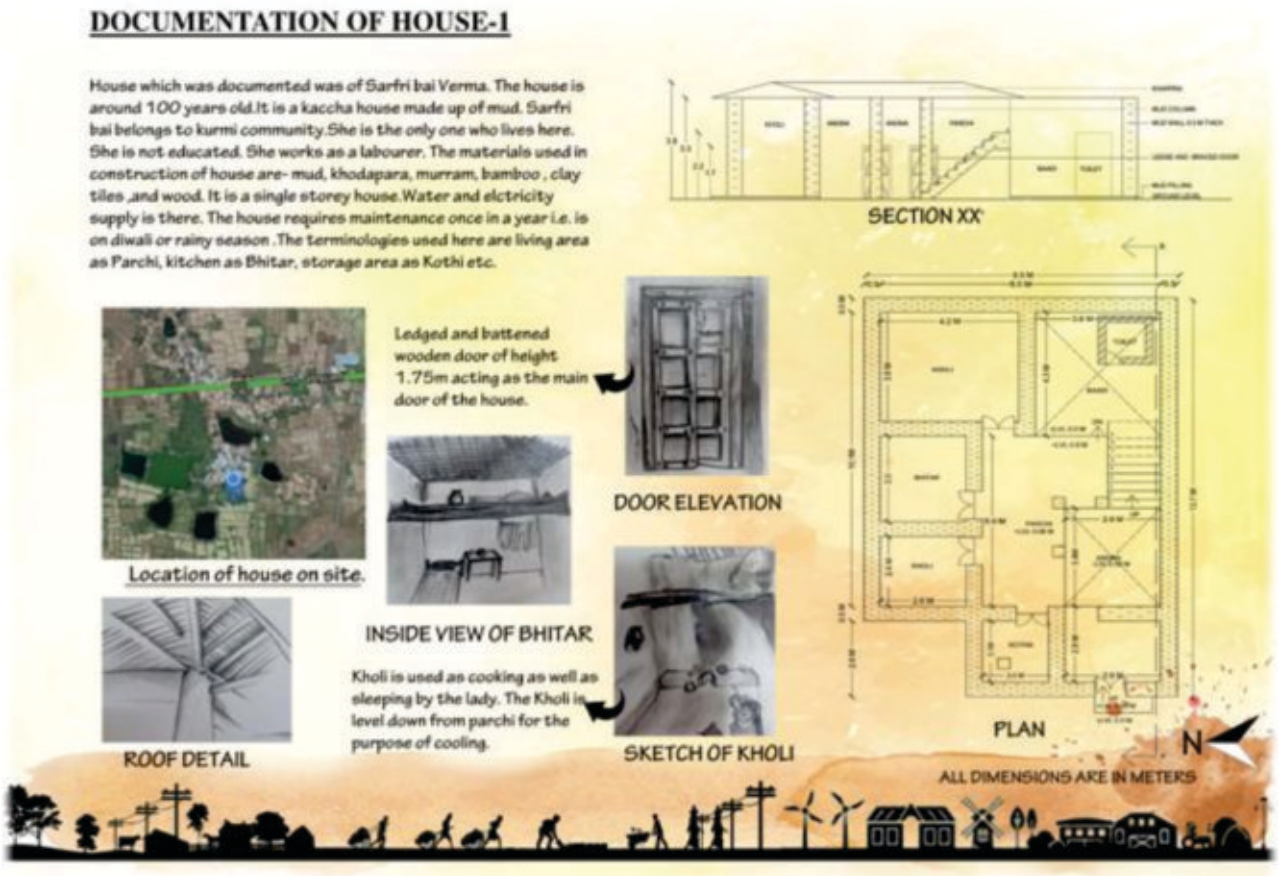


Fig.no.12. Documentation of House no.1

5.1.1 DOCUMENTATION OF TRADITIONAL HOUSE-I

The first documented house was of Mrs. Sarfri Bai Verma and having a typical courtyard planning. The house is having various features like locally available material which are sustainable and because of theses sustainable materials the people lives over there ha got longer and healthy; and also the vernacular techniques because of this they can easily make their houses without investing more money in the construction work.

5.1.2 DOCUMENTATION OF TRADITIONAL HOUSE 2

The second khapra house which was documented is of Shri. Domar Singh Sarang and the house is almost 70 – 80 years old. The materials used in the construction of house are mud, khodopara, murrum, bamboo, wood and clay tiles which are nearly available in the site. The house is single storey and made by using of old traditional techniques and because of the sustainable material the houses ha special feature i.e. room temperature is stable even in summers which again helps them to stay in a comfortable zone without any extra expenditure.

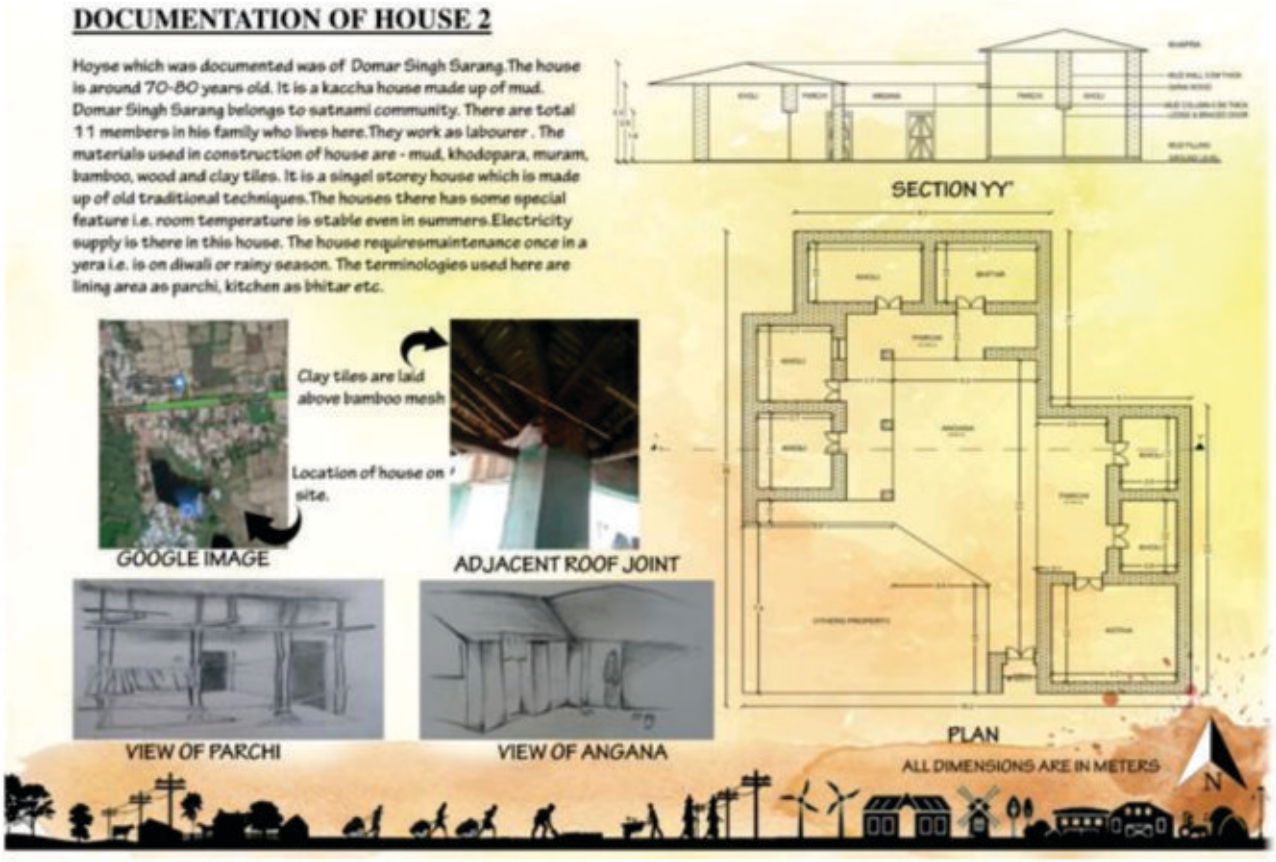


Fig. No.14. Proposal for improvement of existing and new houses.

STRAW BALE CONSTRUCTION

IT IS A BUILDING METHOD THAT USES BALES OF STRAW (COMMONLY WHEAT, RICE, RYE AND OATS STRAW) AS STRUCTURAL ELEMENTS, BUILDING INSULATION, OR BOTH. THIS CONSTRUCTION METHOD IS COMMONLY USED IN NATURAL BUILDING OR "BROWN" CONSTRUCTION PROJECTS. STRAW-BALE CONSTRUCTION IS A SUSTAINABLE METHOD FOR BUILDING, FROM THE STANDPOINT OF BOTH MATERIALS AND ENERGY NEEDED FOR HEATING AND COOLING.

MURRUM

MURRUM IS A GRAVELLY LATERITIC MATERIAL, OFTEN USED TO SURFACE MINOR ROADS IN PARTS OF AFRICA. MURRUM IS A VERY COMMON WORD USED ALL OVER THE WORLD FOR COARSE GRAINED MATERIAL MIXED WITH FINES WHICH IS USED FOR ROAD AND EMBANKMENT CONSTRUCTION WIDELY ALL OVER THE WORLD.
ALSO, IT IS A VERY COMMON WORD USED TO DESCRIBE FILLING MATERIAL IN INDIA.

CLAY BRICK

THE TERM BRICK REFERRED TO A UNIT COMPOSED OF CLAY, BUT IT IS NOW USED TO DENOTE ANY RECTANGULAR UNITS LAID IN MORTAR. A BRICK CAN BE COMPOSED OF CLAY-BEARING SOIL, SAND, AND LIME, OR CONCRETE MATERIALS. ... TWO BASIC CATEGORIES OF BRICKS ARE FIRED AND NON-FIRED BRICK

THATCH

THATCH IS A LAYER OF ORGANIC MATTER THAT ACCUMULATES ON A LAWN AROUND THE BASE OF THE GRASS PLANTS. THATCH IS A COMBINATION OF LIVING AND DEAD PLANT MATTER INCLUDING CROWNS, AND ROOTS.
THATCHING IS THE CRAFT OF BUILDING A ROOF WITH DRY VEGETATION SUCH AS STRAW OR PALM FRONDS, LAYERING THE VEGETATION SO AS TO SHED WATER AWAY FROM THE INNER ROOF.

RUBBLE

RUBBLE IS BROKEN STONE, OF IRREGULAR SIZE, SHAPE AND TEXTURE; UNDRESSED ESPECIALLY AS A FILLING-IN. ALSO KNOWN AS 'BRASH' (COMPARE CORNBRASH). ROUGH STONE, GENERALLY IN THE CONSTRUCTION OF WALLS. DRY-STONE RANDOM RUBBLE WALLS, FOR WHICH ROUGH STONES ARE PILED UP WITHOUT MORTAR, ARE THE MOST BASIC FORM. AN INTERMEDIATE METHOD IS COURSED RUBBLE WALLING, FOR WHICH STONES ARE ROUGHLY DRESSED AND LAID IN COURSES. SNECKED RUBBLE FEATURES STONES OF VARYING SIZES WITH SMALL FILLERS OR SNECKS BETWEEN THEM.

SUN-DRIED BRICKS

SUN-DRIED BRICKS ARE NORMALLY MADE FROM RECTANGULAR MOLDS, ONCE DRY, THEY ARE THEN JOINED TOGETHER BY A MUD MORTAR OF THE SAME COMPOSITION AS THE BRICKS, MAKING A UNIFIED MASS, WHICH IS THEN COVERED BY A MUD PLASTER.

COW DUNG

COW DUNG, ALSO KNOWN AS COW PATS IS THE WASTE PRODUCT OF BOVINE ANIMAL SPECIES. THESE SPECIES INCLUDEDOMESTIC CATTLE ("COWS"). COW DUNG IS THE UNDIGESTED RESIDUE OF PLANT MATTER WHICH HAS PASSED THROUGH THE ANIMAL'S GUT. THE RESULTANT FAECAL MATTER IS RICH IN MINERALS. COLOR RANGES FROM GREENISH TO BLACKISH, OFTEN DARKENING SOON

WOOD

WOOD HAS BEEN USED AS A BUILDING MATERIAL FOR THOUSANDS OF YEARS. BIGGEST ADVANTAGES OF USING WOOD AS A BUILDING MATERIAL IS THAT IT IS A NATURAL RESOURCE, MAKING IT READILY AVAILABLE AND ECONOMICALLY FEASIBLE. IT IS REMARKABLY STRONG IN RELATION TO ITS WEIGHT, AND IT PROVIDES GOOD INSULATION FROM THE COLD. SUSTAINABLE, BIODEGRADABLE AND RENEWABLE, AND CARRIES THE LOWEST CARBON FOOTPRINT OF ANY COMPARABLE BUILDING MATERIAL.

PROPOSAL

PROBLEM IDENTIFICATION:

1. Height of the plinth reduces during rain since plinth is made of mud.
2. At the junction of two adjacent walls and junction of wall and floor the rats dwell in the mud structure.
3. Lot of termite attacks.
4. Laying of roof tiles is improper which results in the leakage.
5. Drainage leads to the entrance of house and hence to the lane running outside the house.
6. Courtyard is wet and has stagnant water in rainy season.

BAD WALL CONDITION

LOW PLINTH HEIGHT

TERMITE ATTACK

IMPROPER MAINTAINENCE

SOLUTIONS

PLINTH:

1. Backfilling will be done with rubble, third class brick and muroom, reduces the cost of the material.
2. Height of the plinth will be 600mm from ground level. Rainwater run off will not damage the plinth of the mud structure.

COURTYARD:

1. Covered with pebbles and rubble tiles to step upon and walk.

COLUMNS:

1. Mud brick piers.

WALLS:

1. Will be made of sun burnt mud bricks with thick mud plastering on either sides. Reduces the rodent problem.
2. Lime plastering will be final coating on wall.

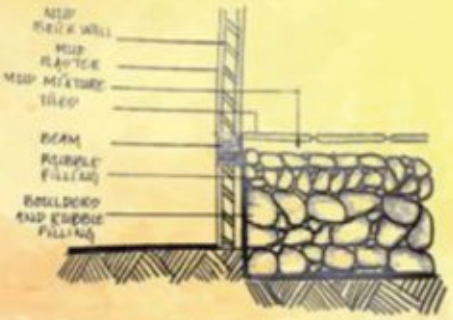
BEAM:

1. Cheen

ROOF:

1. Cheen truss
2. Terrcotta tiles

DRAINAGE PROBLEM

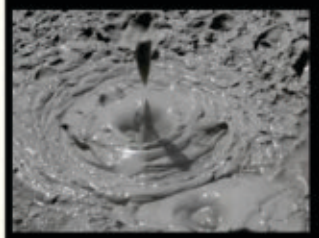


SOLUTION OF PLINTH

5.2 CONSTRUCTION MATERIAL

Construction material are the materials which are naturally occurring substances, such as clay, rocks, sand, and wood, even twigs and leaves, have been used to construct buildings. There were many materials which were easily available in the site for construction work and are easy to handle with their own techniques. The following are the material which was use for construction of the above two documented houses.

MATERIAL PROPOSAL



EARTHCRETE

- RAW MATERIAL SAVINGS (NO GRAVEL REQUIRED AND LESS SAND)
- NONCORROSIVE (IDEAL FOR OCEANFRONT CONDITIONS)
- SOUND ABSORPTION (NO ECHO LIKE OTHER CONVENTIONAL CONCRETE)
- MUCH MORE DURABLE THAN WOOD CONSTRUCTION (REDUCING MAINTENANCE AND UPKEEP COSTS)
- PROVIDES 100% COMPACTION TO FILL SPACES ENTIRELY WITHOUT SHRINKAGE
- LOW WATER ABSORPTION AND PERMEABILITY (ELIMINATES TERMITES/INSECTS/RODENTS AS FOUND WITH WOOD CONSTRUCTION).
- RESISTANT TO HIGH HEAT AND HIGH FREEZE CONDITIONS.
- PROVIDES EXCELLENT THERMAL INSULATION (UP TO 500% BETTER INSULATION)
- PROVIDES IMPROVED FIRE-RATING (SAVES ON INSURANCE COSTS)
- HIGH SLUMP (VIRTUALLY SELF-LEVELING)
- STEEL-REINFORCEMENT (LESS STEEL REQUIRED AS LESS DEAD-LOAD)
- OFFERS A BROAD RANGE OF DENSITIES AND COMPRESSIVE STRENGTHS
- LIGHTWEIGHT (REDUCES TRANSPORTATION COSTS)

LIME

lime binders are promoted by the Society for the Protection of Ancient Buildings for repairs is because they are vapour permeable and allow buildings to breathe. This reduces the risk of trapped moisture and consequent damage to the building fabric.

- Porous and open textured materials such as lime plasters, help to stabilize the internal humidity of a building by absorbing and releasing moisture.
- Porous and open textured materials such as lime plasters, help to stabilize the internal humidity of a building by absorbing and releasing moisture.
- When buildings made with lime are subject to small movements they are more likely to develop many fine cracks than the individual large cracks which occur in stiffer cement-bound buildings.

BAMBOO PARTITION WALL

THIS WALL IS BASICALLY USED AS PARTITION WALL AS IT CANNOT BEAR HEAVY LOAD UPON IT. THE MAIN CONTENTS USED IN ITS CONSTRUCTION ARE TREATED BAMBOOS,LONG STRAWS AND PLASTERING MUD. IN THIS TYPE OF WALL LONG STRAIGHT BAMBOOS ARE TIED TOGETHER WITH LONG STRAWS IN A SERIES. MUD IS THROWN INTO SPACE BETWEEN THE BAMBOOS. ONCE THE LAYER IS CREATED A NEXT LAYER OF TOP SOIL IS CREATED TO GIVE IT A FINISHED WAVY SHAPED WALL.

THE WOOD IS PREFERABLY USED IN ROOF. THE FRAMEWORK OF THE ROOF CONSISTS OF THE FOLLOWING ELEMENTS: PURLIN, RAFTERS, POSTS, COLLARS MADE UP OF WOOD. THE STRUCTURE OF THE BUILDING OAK IS THE MOST FREQUENT CHOICE. THE ROOF IS TRADITIONALLY COVERED WITH MANGLORE TILES. THE WALL STRUCTURE OF VERNACULAR HOUSING IS TYPICALLY MADE OF LOGS (FIR, OAK) WITH DIMENSIONS RANGING BETWEEN 120-150 MM FOR THE WIDTH AND 200-300 MM FOR THE HEIGHT.

UPVC PIPES

Fangxing uPVC sheet is a new option for roofing and wall cladding construction. It is tough, durable in color and lightweight, better than metal and galvanized sheet.

- UPVC roofs can withstand strong winds.
- UPVC roof is an energy efficient roof type, because it reflects solar heat and can cut back on cooling costs immensely.
- upvc roof has good anti-corrosion ability.

CHAPTER-VI

CONCLUSION

Better quality of life to rural population implies both the economic betterment of rural people as well as social transformation. In order to provide better opportunities, increased participation of people in the rural development programs, decentralization of planning, better enforcement of land reforms and greater access to credit are needed.

Providing equal amenities & facilities in rural areas as that of urban areas and generating livelihood opportunities and by identifying the potential sources will reduce unemployment in the rural area. It will help to decrease rural-urban migration and improvement in standard of living of rural population.

This chapter provides complete information on initiatives that can be taken by the government for upgrading the standard of living of people in rural areas. The same can be achieved through improvisation in sectors like Health, Education, Sanitation, Water Supply, Economics etc.

Different strategies and their outcomes are listed below for an approach to offer better quality life in villages of Chhattissgarh:

PROPOSAL BASED ON SOCIO-ECONOMIC DEVELOPMENT

1. Ensure effective dissemination of information, education and impart training to the elected representatives for overall rural development. Short films and podcast on success stories need to be aired through free to air television channel and radio programme. (E.g. Pradhan Mantri Mann Ki Baat at National Level).

2. Loan Mela's and Financial Literacy Campaign should be run periodically by the state sponsored Regional Rural Banks (RRBs) to provide a proper socio- economic stability in the village.

3. Micro Insurance Facilities should be introduced for micro and small businesses of various sectors like Pradhan Mantri Fasal Bima Yojana in Agriculture Sector, to provide them necessary shield against uneven conditions. Vikas Yojna (PMKVY), Skills Acquisition and Knowledge Awareness for Livelihood Promotions (SANKALP).

4. Skill Development for rural youths to make them employable through National Rural Livelihoods Mission (NRLM), Pradhan Mantri Kushal Vikas Yojna (PMKVY), Skills Acquisition and Knowledge Awareness for Livelihood promotions (SANKALP).

5. Promotion of environmental balanced development in the village.

6. Maintain and upgrade existing rural infrastructure and promote such facilities as storage, cold chain, food parks, marketing intelligence network to facilitate agro processing industries etc.

7. Strong need to develop rural agro based industries & households industries which have the potential of absorbing the surplus agriculture labourforce and checking migration to urban areas.

8. Upgrade rural market growth Centres for agriculture produce, according to international requirements, in view of World Trade Organisation (WTO).

9. Training for organic farming.

10. Promoting Diversified Agricultural Livelihoods, Agricultural seed research and development, including Livestock, Horticulture, rural industrialization, Activities related to village tourism, including eco-tourism, dairy produce.

11. Local Materials should be promoted while constructing house under Government Schemes.

12. Promotion of concepts like Vocal for Local should be increased to generate more opportunities.

PROPOSAL BASED ON EDUCATIONAL DEVELOPMENT

1. Aggressive promotion of adult literacy campaigns to ensure functional literacy through youth volunteers and adult education school. Improving educational infrastructure and increasing higher enrolment and decrease in dropouts from school.
2. Renovating the old Panchayat building (Anganbadi School) to new classrooms, Play area for children and hygienic toilets.
3. Emphasising more on schemes like Sarwa Shiksha Abhiyan and Mid- day Meals to attract students towards the school and also implementing virtual class rooms for global exposure.
4. Rural Urban Student exchange programmes should be introduced for 1-2 week a year.
5. Skill oriented educational system should be promoted from high school level.
6. Vocational training should be provided to villagers regarding farming and other occupations.
7. One stop technological base Agri Solution like Krishi Vigyan Kendra should be introduced in collaboration with Ministry of Agriculture, CSIR and various private peers.

PROPOSAL BASED ON INFRASTRUCTURE DEVELOPMENT

1. Below Poverty Line families survey data need to be updated immediately, So that the new target for housing, Electricity, Drinking Water & Sanitation can be fixed.
2. Identification of all houses, without household latrines and facilitate construction of toilets in each household, identify lack of toilets in all public institutions in the gram panchayat and facilitate construction.
3. Construct covered drains along with liquid waste treatment pits, garbage collection, segregation and disposal system, identify appropriate solid and liquid waste management technologies for the Gram Panchayat context.
4. Rainwater Harvesting provision should be included in housing constructing under Govt. Schemes.
5. Identification and filling of gaps in health infrastructure, reduction in infant and maternal mortality rate.
6. Solar Street Lights should be installed in the village for lighting the streets.
7. Installation of Biomass & Bio-gas plants should be encouraged in rural areas.

9. Provision for composting linked to Biogas and preparation of farmyard manure.
10. Permeable pavers solution for road.
11. Other public buildings like public toilets, shops, market area garden, gathering space and what ways can be constructed to develop unused spaces.
12. Agricultural and bio technological research base infrastructure should be increased with the help of institutions like NABARD having a dedicated Rural Infrastructure Fund.

Thus, it is observed and identified through the documentation work that the demands of the rural areas if addressed properly the rural population can enjoy a better quality of life. Also, rural society occupies an important place in State`s economy and ultimately contributes in nation building. It is the onus on the authorities, government, and the people to make sure that the development is equally distributed. No development program can succeed if it is not built on the foundation of the rural sector. There is dire need to give high priority to rural development and to formulate an integrated rural development policy. Thus, a mutually inclusive sustainable growth model needs to be implemented by adopting adequate mitigating measures.

"The future of India lies in its villages" – Mahatma Gandhi.

With this quote we wish to conclude that the future generations need to be sensitized towards the rural India and how it can contribute to the sustainable development of the country. Our attempt in experimenting with students on understanding the village life and village was successful by identifying the issues and solutions to the same are testimony to this experiment.

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AN APPROACH TO BETTER QUALITY OF LIFE IN VILLAGES OF CHHATTISHGARH - "A CASE STUDY OF MATH VILLAGE"

AMITY UNIVERSITY CHHATTISGARH

OUTCOME REPORT

of

'Dharohar' Club Activity

On

27th April 2019.

By

AMITY SCHOOL OF ARCHITECTURE & PLANNING

General Introduction- A Club Activity for 'Dharohar' to Budha Talab (Vivekanada sarovar) at Raipur was organized

Objective(s) of the Event : The objective of the club activity is to make them aware of the culture and heritage of Chhattisgarh state as it is unexplored in many ways.

1. Envisaged Vs Achieved Outcomes

Sn	Envisaged Outcome	Is the outcome tangible or intangible?*	Achieved Outcome	Remarks, if any
1	The club activity of Dharohar Club to be undertaken in the heritage precincts of the Budha Talab by students to know and imbibe its importance as a heritage for Raipur City	Tangible	- Students understood Budha Talab as one of the anvils of heritage for Raipur City	
2	The activity also focused on the evolution and adaptation of Budha Talab by different generations and ages from the Kalchuri period to contemporary time.		- Students understood how city and its culture adapts and modifies precincts	

			according to the time.	

2. Actionable Progressive Outcomes

Outcomes requiring prolonged monitoring are as under:

Sn	Envisaged Outcome (a)	Outcome activity yet to be achieved (b)	Is the outcome tangible or intangible?*	Action plan to achieve the Outcome activity described in column "(b)" (c)	Target Date (d)	Responsibility (e)	Remarks, if any (f)
1	The students will understand the culture of Chhattisgarh and adapt it in their design and their outlook towards built and unbuilt structures.				Throughout their practice as Architects & Interior Designers.		

(*) – Tangible outcomes should have a specific target date. Intangible outcomes need not have a specific target date.

Faculty Accompanied **:** Ar.Sarang Barbarwar, Ar.Khushboo Sahu

PARTICIPANTS – Students of B.Arch 2nd Semester & B.I.D 2nd Semester.

PHOTOGRAPHS:

AUC (Outcome Report)*Annexure - II*

AMITY UNIVERSITY CHHATTISGARH

OUTCOME REPORT

of

Site visit to Aarang

6th Mar 2020

by

AMITY SCHOOL OF ARCHITECTURE & PLANNING

General Introduction- Site visit to Aarang for Documentation of Human Settlement and Vernacular Architecture of Bhand Deval Baag Temple, Aarang by B.ARCH semester IV students.

Objective(s) of the Event: To undertake Site visit to Aarang for Documentation of Human Settlement and Vernacular Architecture of Bhand Deval Baag Temple, Aarang.

Envisaged Vs Achieved Outcomes

Sn	Envisaged Outcome	Is the outcome tangible or intangible?*	Achieved Outcome	Remarks, if any
1	It was envisaged by conducting the site visit to make students perform the documentation by recording and analyzing human settlement and vernacular architecture details to answer specific research questions.	Tangible	- Students understood the process of documenting the place by using various techniques.	

1. Actionable Progressive Outcomes

Outcomes requiring prolonged monitoring are as under:

Sn	Envisaged Outcome (a)	Outcome activity yet to be achieved (b)	Is the outcome tangible or intangible?*	Action plan to achieve the Outcome activity described in column "(b)" (c)	Target Date (d)	Responsibility (e)	Remarks, if any (f)
1	The students will understand the nuances of Documentation of a structure and the precincts in terms of human settlement and vernacular architecture.				Throughout their practice as Architects.		

(*) – Tangible outcomes should have a specific target date. Intangible outcomes need not have a specific target date.

Faculty Accompanied **:** Ar.Shivi Joshi

PARTICIPANTS – All student of **B.Arch IV Semester** of Amity School of Architecture and Planning.

AUC (Outcome Report)*Annexure - II*

PHOTOGRAPHS:

AUC (Outcome Report)*Annexure - II*

AMITY UNIVERSITY CHHATTISGARH

OUTCOME REPORT

of

DOCUMENTATION OF MATH

VILLAGE AND TRANSFORMING IT INTO A SMART VILLAGE.

24-JULY-2018 TO 02-AUGUST-2018

By

AMITY SCHOOL OF ARCHITECTURE & PLANNING

General Introduction- Group activity- Site visit, Data collection, Internal Review, Final Presentation.

The activity of documenting the math village, Chhattisgarh was proposed. Students were divided into 7 equal groups as per the areas of documentation and were expected to work under their mentor. The students visited the village and gathered information and presented the same along with their solutions keeping in view the concept of smart village.

GROUPS

GROUP-I (NIRMAN)	POPULATION SOCIO ECONOMICS/LOCAL BUSINESS(SKILLED / UNSKILLED LABOUR AND TYPE)
GROUP-II (NIRMANSHIP)	CLIMATE CONDITION CULTURE CONSTRUCTION MATERIAL
GROUP-III (ANTARIT)	LOCAL HERITAGE PUBLIC SPACE LANDSCAPE MONUMENTS UNUSED SPACE AREA CALCULATION
GROUP-IV (VASTUVIDYA)	WATER SUPPLY SEWAGE
GROUP-V (ANUKRITI)	ELECTRICAL SUPPLY GARBAGE COLLECTION AND DISPOSAL
GROUP-VI (STHAPATYA)	OLDEST HOUSE
GROUP-VII (RACHNA)	ROAD NETWORKING

Objective(s) of the Event :

The aim of this activity was to document the existing village of math and generate proposal for a smart village. The project will be seen under Amity consultancy cell and proposals shall be submitted to the govt. of Chhattisgarh.

OBJECTIVES ARE AS FOLLOWS:

- Economic change and social transformation
- Efficient engine of growth and prosperity
- An organized hub not only in labouring & service providers but also in manufacturing and social sectors
- A financial helper of the native place as well as state
- Sustainability-to generate own resources for self-sufficiency and self-sustainable.
- Basic educational facilities and strive to develop as a knowledge base.

1. Envisaged Vs Achieved Outcomes

Sn	Envisaged Outcome	Is the outcome tangible or intangible?*	Achieved Outcome	Remarks, if any
1	It is envisaged that by documenting the study on village "MATH" a report to be submitted to GOVERNMENT OF INDIA for development of Smart village under the scheme of GOVERNMENT OF INDIA – SANSAD ADARSH GRAM YOJANA – SAGY.	Tangible	- Presentation of the documented work along with proposal in a creative manner was done by the students in the form of the sheets having graphical representation, charts, images and tables along with their sources which were self explanatory.	

			- Students learnt the objectives of smart village laid by the govt. of India.	

2. Actionable Progressive Outcomes

Outcomes requiring prolonged monitoring are as under:

Sn	Envisaged Outcome (a)	Outcome activity yet to be achieved (b)	Is the outcome tangible or intangible?*	Action plan to achieve the Outcome activity described in column "(b)" (c)	Target Date (d)	Responsibility (e)	Remarks, if any (f)

(*) – Tangible outcomes should have a specific target date. Intangible outcomes need not have a specific target date.

Faculty Accompanied **:** Prof.Vidya Singh, Ar. Minakshi Singh Rajput, Ar.Neeta Mishra, Ar.Parampreet Kaur, Ar. Arpita MajiDas, Mr.Mukesh Verma

PARTICIPANTS – Students of B. Arch – III - 22, V- 30,VII- 26 semester & BID – III-12,V – 9 semester – **TOTAL NO OF STUDENTS- 99**

PHOTOGRAPHS:

AMITY UNIVERSITY CHHATTISGARH

Amity School of Architecture and Planning

Organized

Tour & Workshop on Bastar Arts and Traditions

By

SAATHI SAMAJ SEVA SANSTHA

Venue: Kondagaon, Jagdalpur & Naman Baster, Chhattisgarh

Tuesday, 5th March, 2017 To 9th March, 2017

Report

Name of the Event: Tour & Workshop

Event In-charge: Ar. Arpita Maji, Ar. Saksham Jain & Dr. Prasanna Kumar Sharma

Venue: Kondagaon, Kotumsar Cave, Teerathgarh Falls, Chitrakote Falls, Naman Baster Jagdalpur, Chhattisgarh

Name of the Guest: Mr. Bhupesh Tiwari

No. of Students Participated: 35 Students of AUC

Name of Student (AUC)

1. AKSHATA PENDHARKAR
2. ARUSHI PANDEY
3. ASAVARI MOHDIWALE
4. ASMITA ASATI
5. CHARU MAKHIJA
6. GEETIKA SAHU
7. JYOTI SHRIVASTAVA
8. LALAK BHANDARI
9. MAYANK KAUSHIK
10. MOHIT ADWANI
11. NAMAN GOLCHHA
12. NANCY GOYAL
13. NIKITA JADWANI
14. PANKAJ NARNOLIA
15. RADHIKA LAHOTI
16. RAJNEET KAUR SIDHU
17. RASHI GUPTA
18. RIYA BHATIA
19. SAMRUDHHI TAYAL
20. SHIVANI SAHU
21. SHRISTI GHOSH
22. SIMARAN BANERJEE
23. SOHEL SINGH DHANJAL
24. STUTI AGRAWAL
25. VILAS GUPTA
26. ZENIT AGRAWAL
27. UNNATI MOURYA
28. AASHIKA JAIN
29. IRTIQUA AFREEN
30. SANIYA TABASSUM
31. VINITA JAISWAL
32. TANUSHREE KRISHNA
33. RUCHIKA JAIN
34. RIFAT PARVEEN
35. AASHISH NAGWANI

Objectives of the Event

1. To develop team spirit among the students.
2. To develop the habit of time management.
3. To be able to manage unforeseen crisis.
4. To be able to adapt to various odd situations.
5. To work in any circumstances (time, health, weather conditions, availability of materials, etc).

6. To learn rural architecture to study and appreciate the rich cultural heritage of our country.
7. To stay and work together in the workshop.

Event Brief:

The students were introduced to traditions & culture of Bastar art. The 3 days workshop was proposed to understand & learn the different techniques of making different things and the trip was planned to understand the history of Chhattisgarh.

DAY 01: 5th March 2017

On the first day of the 5th March 2017 of the visit, we reached Kondagaon in around 5 Hrs of journey and then to Saathi Seva Sanstha Guest House, an organization working for the promotion and revival of arts of Bastar region.

ABOUT SAATHI SEVA SANSTHA

Saathi Samaj Sevi Sanstha is located in Kondagaon Chhattisgarh. Saathi Samaj Sevi Sanstha is registered as a society at Bhopal of state Madhya Pradesh with NGO unique registration id 'cg/2014/0075247'. The NGO registration is done by registrar of societies with registration number 25941 on the date of 1993 October 4th; its parent organisation is Paul foundation. The chairman of Saathi Samaj Sevi Sanstha is Bhupesh Tiwari and chief functionary officer is Bhupesh Tiwari. Promoters are Rajesh Verma, Dr. Ratna Verma, and Harilal Bharadwaj.

It was very interesting to know about our religion of Chhattisgarh and decided that every candidate has to choose activity to be performed in the workshop. Students explored the sanstha and time passed. At night they had their dinner and moved for hotel.

DAY 02: 6th March 2017

Second day starts with a great enthusiasm and excitement. The entire student chooses different topics of their interest to learn about. The artists present there were taught how to make the things and students continued.






DAY 03: 7th March 2017

This day started with a beautiful sightseeing and adventure like trekking which students enjoyed a lot. After that they went to the Saathi Guest House, had breakfast and started working on their pending work to complete it. At afternoon they visited the local artisans and the local village fair called ‘Madhaimela’ and also visited the villages to understand the culture better and enjoyed the tribal folk dance.



DAY 04: 8th March 2017

KOTUMSAR CAVES

Kotumar was discovered in 1993 and is well known for stalactite and stalagmite formations, known to be India's first and the world's seventh underground cave. It is situated about 35mts below ground level and is about 1371mts long. This is known to be the world's second longest natural cave. Kotumsar cave is about 40km from Jagdalpur.


TIRATHGARH FALLS

Chhattisgarh is famous for its waterfalls. One of these magnificent falls is the Tirathgarh Waterfall. The fall here splits into multiple falls, creating a stunning vista. The falls comes under the eco-tourism venture of the state tourism department as it enjoins the Kanger National Park.


CHITRAKOOT FALLS

Chitrakoot Waterfall is supposed to be the Niagara Falls of India. It is the broadest water fall in India. During monsoon one can see its might. The river Indravati falls from a height of 29m (96ft) to form this waterfall. It is located 48km from Jagdalpur.

NAMAN BASTER

Naman Baster is an exclusive Resort, spread in 3.5 acres of lush greenery on the way to Chitrakoot Waterfalls & just 6kms from centre of city Jagdalpur.

DAY 05: 9th March 2017

On this day all came back to Raipur with lots of memories.

Learning Outcome

1. Students understood the level of hard work done by the labors and the value of their time.
2. They can easily understand the difficulties to prepare those things.
3. They told that they will never ask any welder to low their price of the local different material.
4. All the students learned to.
5. The outcome of the workshop thus shows that it helped them to grow not only academically but in grooming their personality.