KPMG

VEDANTA ALUMINUM LIMITED - LANJIGARH

Baseline cum Needs Assessment, Impact Assessment and Perception Study

October 2022

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Executive Summary

This section presents a summary and holistic perspective of baseline study emerging from primary as well as secondary data.

Areas of focus	Insights from Baseline Study (2022)
Health	▪ 98 percent of the respondent households have access to MHUs, and 96 percent of the population has access to Anganwadi centres. ▪ Access to health services has increased by 40 percent ▪ Institutional deliveries have improved at 98 percent. ▪ Out of pocket expenditure has increased as compared to previous years. ▪ Health education in the Anganwadi centres is low at 28 percent. ▪ Malaria and Anemia were the two diseases that was common within the area ▪ As compared to previous baseline conducted in 2019, institutional deliveries have increased by 24 percent
Women Empowerment	▪ 50 percent of the women are a part of an SHG or a federation in Lanjigarh block ▪ 58 percent of women respondents could take decisions on voting and financial decisions ▪ Of the women surveyed, agriculture and phenyl training are what was asked for skilling purpose

Education-	▪ Literacy rate was at 94 percent of the sample population ▪ Dropout rate of the has increased to12.7 percent compared to previous baseline 2019 ▪ The level of education in the area needs to improve drastically as only 18.29 percent of the population had completed class 8 and 15.93 percent had completed class 10 ▪ In terms of facilities, the higher secondary schools lacked a few infrastructures and the secondary schools lacked teachers. These kinds of challenge have also been seen in other levels of schools as they lack common facilities
Environment	▪ Air pollution and water pollution are the biggest environment issues in Lanjigarh with 81 percent and 54 percent ▪ 58 percent of the respondent revealed that tree plantation, 21 percent water management and 20 percent natural resource management, 13 percent solar stove, 7 percent solar pumps are the environment protection activities in the Lanjigarh block
Sustainable Livelihood	▪ 68 percent use single crop farming. Only 20 percent use double crop farming ▪ Market linkage along with subsides for irrigation, assistance in seeds and crop insurance are the biggest support provided by the Government ▪ 58 percent reported. water problem is the biggest issue while carrying out agricultural activities ▪ Average amount INR 13,400 was spent by respondents on agriculture

Sports and Culture	▪ 49 percent and 41 percent of the respondents reported access to grounds for Football cricket facilities. ▪ 33 percent of the respondents reported promotion of cricket locally ▪ In Lanjigarh, 50 percent of the respondents reported the artisans specialize mostly in the traditional art ▪ Of the support provided by the Government to the artisans, market linkages were reported at 42 percent. ▪ VAL-L is providing archery training to over 100 students
Skilling	▪ Interest on farm skilling reported at 51 percent, IT Skills was reported at 48 percent, and interest to learn finance management was reported at 35 percent ▪ 70 percent of the respondent were not willing to pay for skilling ▪ Lack of opportunities was seen as the biggest reason for unemployment in different families
Community Development	▪ Overall community infrastructure has improved comparatively from previous baseline 2019 ▪ Increase in household electricity by almost 20 percent ▪ 54 percent reported solar streetlight facilities compared to no streetlights in 2019 ▪ Handpumps are the main source to drinking water at 86 percent ▪ 100 percent of households had handpumps

Insights from Impact Assessment

This section presents a holistic perspective of insights from impact assessment

Areas of focus	Insights from Impact Assessment (2022)
- **Project Aarogya** - **Maa Sanoshi Jan Kalyan Foundation Hospital**	- There has been a 44 percent decrease in annual health expenditure - 78 percent of the beneficiaries reported on MHU improving timely services - Increase in beneficiaries having benefitted by the MHU by 20 percent as compared to 2019 - There have been a 33 percent increase in child moving from MAM to healthy
Project Sakhi	- 51 percent of women improved regular savings due to project impact - 34 percent improved decision making in household - 32 percent improved access to financial services - Benefitted 3984 women households.
Clean Energy	- 62 percent reported the project interventions has improved the access to clean cooking solution - Efficient cooking and improvement in health has been reported due to clean cooking stoves
Project Community Development	- 69 percent reported improvement in road construction - 52 percent reported in interventions of solar streetlights - Since the inception of plant, over 500 community projects have been done by the BU.

Child Care Centre (CCC)	- In Project CCC, over 12,000 children have been benefitted from this project - In FY 2021, health check-up was conducted for 851 students enrolled in the CCC - Vedanta Lanjigarh and Government partnered projects such as NITI Aayog Aspirational Programme provides quality early childcare services through improved ICDS centers.

Recommendation basis emerging gaps

Basis the emerging needs and challenges and stakeholder interactions, below are points to focus upon while designing programs.

Women Empowerment	▪ Close the Gender Gap through behaviour change initiatives with the panchayat and men on the benefits of women's empowerment in society. With greater allies within the community, women will be able to make bigger strides, further improving overall development indicators within each household (example: involvement of women with GPDP) ▪ Awareness generation on Menstrual hygiene ▪ Convergence with government schemes such as Kanya Saksharta Protsahan Yojana, Saraswati Cycle Yojana, Jawahar Utkarsh. ▪ Skilling of women workforce ▪ Greater financial support should be provided to SHGs along with creating more livelihood opportunities to increase productivity.
Community infrastructure	▪ Construction of toilets and concrete roads ▪ Recommended to resolve uncovered drains issue ▪ Electrification – use of clean energy
Education	▪ Infrastructure upkeep ▪ A reward recognition program and training of teachers, introducing digital education and computer literacy for the students ▪ Focus on higher education may be taken up as priority ▪ Correspondence or short-term vocational course on various subjects may be introduced for the dropout students or interested students.
Sustainable Livelihood	▪ Establishment of FPOs ▪ Bringing in Modern irrigation methods ▪ Capacity building programs may be undertaken with farmers for better and efficient farming practices ▪ Market linkages ▪ Access to financial service ▪ Access to water sources - Most people in the village are dependent on agriculture, yet they are facing a shortage of water. Access to different sources of water is critical for the farmers to be able to achieve better crop yields and other benefits. The repeated requests for access to these sources of water may be addressed to ensure a successful agricultural future for the people of Lanjigarh.

Health	- Fill infrastructural gaps in community access to medical facilities, train staff for operation and maintenance of the infrastructure. - Create a hub and spoke model. A patient side tele medicine unit, enabled by clean energy, can be placed at the PHC and CHC level and that can be connected to a hub-a public or private hospital with specialized doctors. - Infrastructure deployment and capacity building for Anganwadis. - Train Anganwadis on use of digital technologies and on real time monitoring of children, adolescents, and pregnant and lactating mothers. - Liaison with District Health Department and PRI institutions Strengthening the Anganwadi Services - Increase awareness generation for prevention from diseases, menstrual hygiene and sanitation, government health benefits, etc.
Environment	- Increase Community awareness - Chemical free water sources - Encouraging water efficient crop farming - May consider conducting special studies on renewable energy
Skilling	- Integrate vocational courses in school curriculum to equip students with industry relevant skills - New anchor institutes can be setup for research and faculty training in Transportation and Logistics, Retail, Healthcare, Banking and Financial Services, Hospitality and Tourism - Skilling awareness / programme awareness campaigns - Intervention in healthcare sector to increase jobs and improve access to healthcare services.
Sports and Culture	- Communities should have access to facilities, training courses, for sports like cricket, football, volleyball, archery, wrestling, etc. to encourage participation in those activities as viable career alternatives. - Enhancing the Promotion of handicrafts and artisanal work through the provision of subsidies and other aids are required for communities to thrive.

Business Drivers

Basis the interactions with various stakeholders, these are the business drivers for each of VAL-L's projects

Areas of focus	Business Drivers
Project Sakhi **(Women Empowerment)**	Through the Sakhi programme, the business is able to enhance the economic empowerment of women in the field locations which in turn has an impact on their decision making, seen through the impact assessment. The programme was intended to increase the economic activity of the women in households such that they engage in productive activities and contribute their potential for raising the income of their households and ultimately the well-being of their families and community. VAL-L has instrumentally supported the Sakhis in becoming leaders in the social change process in the communities where they are working, thus driving ownership of the community members while further ensuring recognition by the community on the strengths of these women. Now the project covers 387 WSHGs (Women Self Help Groups) and reaching nearly 3984 women households.
Community infrastructure	Vedanta Limited since its inception has worked in over 500 development projects to improve the quality of life for the people of Lanjigarh. Notably the road construction and solar streetlights where 69 percent and 52 percent of the respondents mentioned during the impact survey. Now, almost 100 percent of the community household have water pumps and about 86 percent depend on them for source of drinking water. The block now has place where people and panchayats can hold meetings in the community halls instead of an individual's house or fields. The health situation has improved due to the Vedanta hospital, it has helped most people in the community cut down spending for health expenditure and also saved the distance to reaching the district hospital. The WASH scenario has also improved due to the coverage of drains and building of toilets, although there has been requests for more improvements when it came to WASH in the households. Community infrastructure is a key projects and will always remain an ongoing project for any company as the sustainability of the economy of the area and business depend on it

Project Aarogya **(Health)**	• The project Mobile Health Unit, by providing access to healthcare at the doorstep of the beneficiaries, has become a partner in healthcare development in the field locations it operates in. Not only is it one of the goals of VAL-L to ensure the overall wellbeing of the communities it works with, the focus on healthcare paves the way to ensure that the population's other basic needs such as livelihood and education do not suffer during those days lost to sickness. A healthy and content community recognizes the value of the business unit in complementing the efforts of the public healthcare system. It further reduces the stress on the government health systems, as a partner to the local stakeholders of the area to meet the goals of ensuring a healthy population. The programme is widely appreciated and is one of the most popular ones run by VAL-L and has been ranked no. project run by the business unit. • Through project Aarogya which consists of the hospital and its Mobile Health Unit service, the business unit have worked with the community to adopt the best practices, bring in awareness campaigns that has brought about behavioral change and also to provide doorstep medical facilities. The villagers have now shifted their mindset to modern medicine and medical practices instead of approaching local quacks. With time, Vedanta has been able to bring in other projects as per the needs and demands of the people of Lanjigarh. By virtue of the Vedanta Hospital, it has helped reduced the commuting expenses and the travel time to Bhawatnipatna which has a district hospital and has made healthcare accessible to the people of Lanjigarh. Till date the hospital has had almost 40,000 outpatient Department registrations in the last three years.
Project Clean Energy	VAL-L introduced Clean Energy project, where the aim is to transform the villages in Lanjigarh from using the traditional forms of energy and cooking methods to using clean lighting and clean cooking products. 850 households in 25 villages have started using solar lanterns in place of kerosene lamps with 80 percent cost support from the company and 20 percent beneficiary contribution. VAL-L has contributed about 80 percent of the cost for alternate and sustainable cooking. This has brought about ease in cooking and better health within the households due to cleaner environment. The streetlights installed in the villages are also solar powered and many households with children are now satisfied as it allows students to study in the evenings, as using candles or lighting fire affects the health and the dependency on normal power supply is not reliable. Apart from benefitting the children, clean energy project has made an impact on many women in the village as they are the ones mostly who are busy in the kitchen or with their children. This is supportive to the business in long run as the world is moving towards the use of clean and sustainable energy and it benefits the company as it is educating the coming generations the importance of a healthy environment.

Key Business Drivers and Management Perception Findings

Equal emphasis was given to all the sustainable drivers that includes **equal economic opportunities, conserving the environment, social development of the local community and preserving and promoting culturing heritage.**

The benefits focusing on the business drivers helped in **improving relationships with the local communities,** followed by **improvement of the reputation of the organization and then improving the recognition of the brand.**

The most highly ranked area of intervention in terms of its importance to Vedanta's social license to operate were **Women empowerment** and **skilling.**

WASH and Health care were also found to be important interventions.

Community and Stakeholder Perception

The community was asked to rank the projects according to their impact on the community's basis their perception. **Project Aarogya** was ranked the highest followed by **Project Sakhi.**

100 percent of the stakeholders reported to be satisfied with the ongoing projects by VAL-L.

Solar power interventions, Skilling and employment generation and community interventions were the top 3 support requirements in the community.

Among district stakeholders, 100 percent of the respondents were satisfied with the CSR interventions and felt that they fulfilled the needs of the community. While 41 percent of the community members were satisfied, 32 percent felt it exceeded expectations. 27 percent of the community members reported that more support is required.

The study conducted provides a comprehensive situational analysis of various thematic areas, showcasing the impact of the company's CSR projects and mapping the public perception towards these initiatives. The report offers insights into the strategies that could be implemented by VAL-L to strengthen their existing projects, demonstrating a strong relevance to the Lanjigarh landscape analysis.

Introduction to Studies

India, where 65 percent[1] of its population live in the villages and are largely dependent on agriculture for their livelihood, has been making strides to become one of the largest economies of the world. In the backdrop of social development, schemes and policies of central and state governments have focused on the rural population and economy in last decades. This has led to rural communities, across India, see a paradigm shift in their socio-economic status. Over the past few years, the rural ecosystem has evolved at an exponential rate driven by government interventions with the help of varied stakeholders. Continuous advancement has been observed in the physical and digital infrastructure in the rural sector across the country. The growth in the rural GDP has been catapulting India towards its ambitious target of becoming a 5 trillion-dollar economy. In 2019-20, the rural economy contributed to half of India's GDP with an assimilation of around 68percent of the total workforce.

Despite the Covid-19 pandemic paralyzing the supply chain across the world and negatively impacting the economy in its whirlwinds, the agriculture sector expanded by 3.9percent in India. Similar trends were observed in the rural health sector. The number of Public Health Centers (PHCs) in rural areas increased by 1619 during the period 2005-2019, from a total institutional figure of 23,236 to 24,855, whereas the number of Community Health Centers (CHCs) increased by 1989 in the same period. Along with that, there was an increase of around 38.1percent from 2007 to 2020 in the Anganwadi Centers in India.[4] The growth led to a drastic improvement in the health indicators amongst rural children. Infant mortality rate dropped down to 38.4 in 2020-21 from 57 in 2005-06, while immunization amongst children between 12-23 months of age improved from 39percent in 2005-06 to 76.8percent 2020-21 in rural areas.

India made advancement in her quest for gender equality. Over the years, India has focused on improving its development indicators pertaining to gender, given that the country has been largely a male dominated society. Over the years, several constitutional and legal amendments have been made to promote gender equality. Today, 83.3percent of legal frameworks that promote, enforce and monitor gender equality under the Sustainable Development Goals (SDGs), with a focus on violence against women, are in place in the country. This has resulted in many positive impacts on the development front. The adolescent birth rate was found to be 12.2 per 1,000 women aged 15–19 as of 2018, up from 10.7 per 1,000 in 2016. In 2016, 72.8 percent of women of reproductive age (15-49 years) had their need for family planning satisfied with modern methods.

In the context on rural sector, women participation in household decision making process increased from 33 percent in 2005-06 to 87.5percent in 2020-21.[6] In fact, in contrast, rural women at 45.7 percent own more land than urban women, which is essential considering rural women are mostly employed in agriculture, and owning land, apart from being a right, ensures autonomy over agri-production thus ensuring better livelihood

[1]

outcomes. In addition to being a major contributor to the rural economy, women have set benchmarks for the evolution of micro enterprises through various economic engagements through Self-help Groups (SHGs). There has been a massive 54.6 percent increase in the number of SHGs from 2010 to 2021-22, bolstering the income of the rural women. Several policies and schemes have been implemented by the state to ensure smooth facilitation of women centric entrepreneurial activities in the remotest locations of the country.

Owing to rural development interventions, rural communities observed a paradigm shift in socio-economic indicators. It not only pulled out millions of people living in rural areas from poverty, but also provided merit and non-merit goods to create a safety net to avoid slippage in the poverty trap.

Notwithstanding the development, rural communities have still missed the bus of the development. Per-capita income of the communities living in the rural areas is almost half their counterparts living in urban spaces.[2] The health care infrastructure in rural areas still remains in shambles. The healthcare facilities in rural areas are yet to show the progress seen in urban areas. In 2021, 28.3 percent PHCs and Sub Centers were functioning without doctors, while half of the CHCs were devoid of any specialist doctors.[3] Malnourishment amongst rural children between 0-5 age group is almost 10 percent higher than urban children.[4] The penetration of the vocational training amongst rural youth still remains abysmal, wherein 93.7 percent of the rural youth don't have any vocational training. 89 percent of the rural schools in India only have one teacher. There are only 14 percent of the schools in India having access to Internet.[5] Around 23 percent schools in rural areas have unusable toilets and 11.5 percent of the schools don't have separate toilets for boys and girls.[6]

Around 40.9 percent of the households in rural areas still lack access to piped drinking water.[7] Due to lack of access to clean drinking water, water borne diseases like diarrhea and cholera still remains prevalent in rural areas.

Despite of rapid electrification in villages, the access to reliable electricity still remains a challenge. Only half of the Villages in India get more than 12 hours of power supply and 47 percent schools, and 25 percent health centers still remain un-electrified.[8]

Advent of COVID-19 pandemic has made the life of rural India more precarious. The COVID-19 pandemic removed the veil from the naked realties of rural India and further exacerbated the living condition of rural communities. It pushed millions living in rural

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[2] https://www.financialexpress.com/economy/indias-rural-urban-divide-village-worker-earns-less-than-half-of-city-peer/1792245/
[3] https://www.thehindubusinessline.com/data-stories/deep-dive/rural-india-is-strugglingwith-shortage-of-doctors-paramedical-staff/article65623110.ece
[4] https://www.epw.in/engage/article/covid-19-opportunity-engage-urban-malnutrition
[5] https://indianexpress.com/article/education/foundational-learning-took-a-hit-amid-covid-only-19-schools-have-access-to-internet-unseco-report-7553799/
[6] https://www.downtoearth.org.in/news/waste/building-toilets-in-rural-schools-is-not-enough-they-have-to-be-usable-too-63017
[7] https://www.indiawaterportal.org/articles/nearly-40-percent-rural-households-do-not-have-drinking-water-news
[8] https://www.thehindubusinessline.com/opinion/100-rural-electrification-is-not-enough/article26645721.ece

below the poverty line, resulted in higher dropout rates amongst rural children and fractured the already dilapidated rural health infrastructure.

Lanjigarh village is located in Lanjigarh tehsil of Kalahandi district in Odisha, India. It is situated 16km away from sub-district headquarter Lanjigarh (tehsildar office) and 61 km away from district head quarter Bhawanipatna. It is about 430 km away from the state capital, Bhubaneswar. Lanjigarh is now known for Vedanta Aluminium's refinery which started operation in 2007. In line with the Vedanta Group's vision of giving back to the communities it operates in, Vedanta Lanjigarh has focused interventions in and around Kalahandi, reaching out to over 50,000 people in the process.

VAL-L is committed to transforming the lives of the communities in its areas of operations and beyond. They are working towards need-based community development programs as part of their corporate social responsibility, in alignment with the priorities at the state and national level as well as local needs.

Furthermore, the organization has been involving the stakeholders and its local communities in all their CSR activities to reach the goals of educating and refining the quality within the community.

In order to remain unbiased and strategic, it is pertinent for any organization undertaking philanthropic endeavors to develop projects that are need based and factually sound. This is done through carrying out frequent baseline and need assessments. Moreover, to ensure that the projects being run remain impact-driven, frequent impact assessments are also pertinent, and now also a compliance requirement under Companies Act 2013[9].

This third-party impact assessment not only helps to assess the significance of the project, including effectiveness of design and project interventions, and sustainability of results and impact of the intervention on the target community, but further assists the company to undertake course correction and provide direction to scale up or replicate the successful initiatives, and at the same time, re-model or discontinue the projects/ initiatives which have not been able to create the desired impact.

While frequent baseline and impact assessments allow the company to design, implement and monitor projects in a strategic manner, another study, known as the perception study, can support a company understand the overall attitude and perception of the community, different external stakeholders as well as internal management and CSR team regarding the company's operations and specific perception on CSR itself. Such a study gives credence to the social license to operate and highlights the business drivers that can be strengthened by the company to operate more smoothly in a particular area.

The study thus delves into analyzing the impacts and values created by the development initiatives by VAL-L across the geographies, where it is intervening. It also provides a

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[9] It must further be noted that Impact Assessments are mandatory for "every company having an average CSR obligation of INR 10 crores or more in the three immediately preceding financial years, shall undertake impact assessment, through an independent agency, of their CSR projects having outlays of one crore rupees or more, and which have been completed not less than one year before undertaking the impact study" [Section 8 (3) of Companies (Corporate Social Responsibility Policy) Amendment Rules, 2021].

benchmark against which the future progress can be tracked through baseline assessment. Through the perception assessment it draws the general sentiments of the myriad stakeholders towards the CSR activities of VAL-L. Finally, drawing gaps, challenges and recommendation through primary/secondary data analysis and stakeholder interviews, this study chalks out a long-term CSR strategy to make VAL-L's intervention more sustainable and resilient.

Methodology and Approach

Methodology

Vedanta Limited Lanjigarh (VAL- L) has been carrying out impactful CSR programs based on the needs of the community. The exercise of carrying out the three studies viz. Baseline cum Needs Assessment, Impact Assessment and Perception Study, is intended to provide an understanding of what has been done right and what can be done next.

The following key questions are to be answered through these studies:

Figure 1: Research questions

What impact have the CSR activities been able to create (intended and un-intended)?

How do local communities and other stakeholders perceive Vedanta's CSR activities vis-à-vis its business operations?

How are the CSR programs helping strengthen the social license to operate for the respective business units?

What are the current needs of the community and baseline values for the indicators Vedanta wants to impact?

How are different projects / BUs / Thematic areas performing w.r.t each other and what course corrective actions are needed?

The key objective of this exercise is to support the business units strategize their CSR activities in the future.

The key objective of this exercise was to support the business unit strategize their CSR activities in the future. The study used mixed methods including both qualitative and quantitative data collection tools. These included surveys and interviews with beneficiaries, block/village stakeholders, State/district stakeholders as well as companies' internal stakeholders.

Methodology for OECD-DAC

Evaluation Framework

OECD DAC criteria will be used for impact evaluation. The framework has been described in the below sections

Impact assessment is a structured process for assessing the effects of an intervention on the intended beneficiaries. Impact evaluation, on the other hand, is a broader term that encompasses a range of issues such as appropriateness of the intervention design, the cost and efficiency of the intervention, its unintended effects and guidance on future course of the intervention in terms of design and implementation (OECD).

Impact assessment has often been described as a theory-based activity since it is designed based on a 'theory of change'. This relates to establishing a chain of causation from intervention to impact and has the advantage of being specific and focused on the identified impacts. The impact assessment may, however, tend to overlook some of the unexpected and undesired results of the intervention

Regarding the overall approach for undertaking an impact study, the widely acclaimed framework for evaluating the effectiveness of development projects is the one established by the OECD-DAC (**Organization for Economic Co-operation and Development** - **Development Assistance Committee**) Evaluation Network. In response to the need for having a mechanism by which bilateral development agencies could monitor the funding provided to multilateral organizations for various development projects, the DAC Evaluation Network devised a set of evaluative criteria for assessing the effectiveness of any development project (UNICEF, 2012). The OECD DAC first developed the criteria in 1991 for evaluating international development co-operation. They have since become a cornerstone of evaluation practice and are widely used, beyond the DAC. These criteria have often been applied for international donors such as UN agencies (OECD, 2020).

The OECD DAC Network has defined five evaluation criteria – relevance, effectiveness, efficiency, impact, and sustainability – and two principles for their use. These criteria are intended to guide evaluations. They were refined in 2019 to improve the quality and usefulness of evaluation and strengthen the contribution of evaluation to sustainable development (OECD, 2020).

OECD DAC: Evaluation Criteria

This study has used OECD DAC framework as it helps in gaining qualitative understanding of the impact created, stakeholder perception, and sustenance of the change through the following parameters:

- **Relevance:** Assesses the extent to which project responds to the felt needs of all the communities.
  - To what extent are the objectives of the program still valid?
  - Are the activities and outputs of the program consistent with the overall goal?

- Are the activities and outputs of the program consistent with the intended impacts and effects?
- **Coherence:** The compatibility of the intervention with other interventions in a country, sector, or institution.
  - The extent to which other interventions (particularly policies) support or undermine the intervention, and vice versa

- **Effectiveness**: Assesses the extent to which objectives of developmental interventions are being achieved.
  - To what extent were the objectives achieved / are likely to be achieved?
  - What were the major factors influencing the achievement or non-achievement of the objectives?
- **Efficiency**: Assesses the extent to which project uses the least costly resources possible to achieve the results.
  - Were activities cost-efficient?
  - Were objectives achieved on time?
- **Impact:** Assesses the extent to which positive or negative changes are produced by the development intervention, directly or indirectly, intended, or unintended, or externally or internally.
  - What has happened as a result of the program?
  - What real difference has the activity made to the beneficiaries? How many people have been affected?
- **Sustainability:** Assesses the extent of continuation of benefits from a development intervention after major assistance has been completed.
  - To what extent did the benefits of a program continue after donor funding ceased?
  - What were the major factors which influenced the achievement or non-achievement of sustainability of the program?

To evaluate CSR programs on the OECD criteria, KPMG developed its own Scorecard based upon

the information and documents shared by VAL-L.

Figure 2 OECD DAC

The scoring sheet:

KPMG carried out a scoring exercise for VAL-L wherein it's relative performance per project has been ascertained and presented basis the OECD-DAC Framework. The OECD-DAC Framework comprises a set of parameters that aid in systemic and objective assessment of ongoing or completed development programs, their design and implementation. Various components within the parameters were assigned scores which that is used to develop a parameter wise ranking for VAL-L.

Scoring parameter is based on Relevance, Coherence, Efficiency, Effectiveness, Impact and Sustainability

KPMG has already shared the scoring sheet with the business units in order to carry out concurrent assessment across the parameters. The questions shared are as follows:

To Note: Given that KPMG is the internal auditor for some of the Vedanta BUs, the assessment to be carried out under the OECD-DAC framework will exclude areas that are covered under the scope of the internal audit. To ensure comparison, the same criteria will be applied across BUs during assessment.

Sample Selection

The sample size has been developed basis a scientific method of taking a 95 percent confidence level and 5 percent margin of error using the population coverage of the business unit.

Post this, multiple consultations were undertaken with the Vedanta Group (of which representatives of VAL-L were part of) through which it was decided that a sample size of 3700 will be used for the specific studies. This was further divided proportionately across the business units, basis the quantum of their outreach, while maintaining at least the minimum sample reach as per the scientific method.

The total sample size of the survey:

Beneficiaries	339
District, Block, and village level stakeholders	14
CSR Management team	4
Total	**357**

Table 1: Sample size

The sample is divided amongst beneficiaries, district level stakeholders, block village level stakeholders and VAL-L's internal stakeholders. Beneficiaries, district level stakeholders and block village level stakeholders were covered for baseline, impact, and

perception study, while VAL-L's internal stakeholders were covered for CSR perception study.

To develop the heatmap, a scan was run through social media (Facebook, Twitter, YouTube, Instagram, LinkedIn, Blogs, Forums) and search engines. This covered all the business units as a whole and amassed 18,576 mentions. However, it must be noted that the number of mentions used to generate the heatmap have not been included in the total sample.

Geographical Coverage

The survey was undertaken across 20 villages of Lanjigarh block in Kalahandi, Odisha

Table 1 Geographical coverage and Kalahandi

Business Unit	State	District	Villages Covered
VAL-L	Odisha	Kalahandi	20

Figure 3 Map of Kalahandi[10]

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[10] About Kalahandi district-odikala

Data Collection and Analysis

KPMG onboarded a third party to support with the data collection exercise. They were supervised by KPMG as well as VAL-L's CSR SPOCs across locations. District-level and business unit level stakeholder interviews were conducted by KPMG team.

Below steps were taken during the data collection and analysis:

- Conducting a pilot testing of research tools under the supervision of KPMG team along with sharing feedback as required.

- Translation of the questionnaires as per requirement

- Training of investigators and enumerators with the support of KPMG team

- Collection of data as per sampling design under the supervision of KPMG Team.

Figure 3 Phases of Data Collection and Analysis
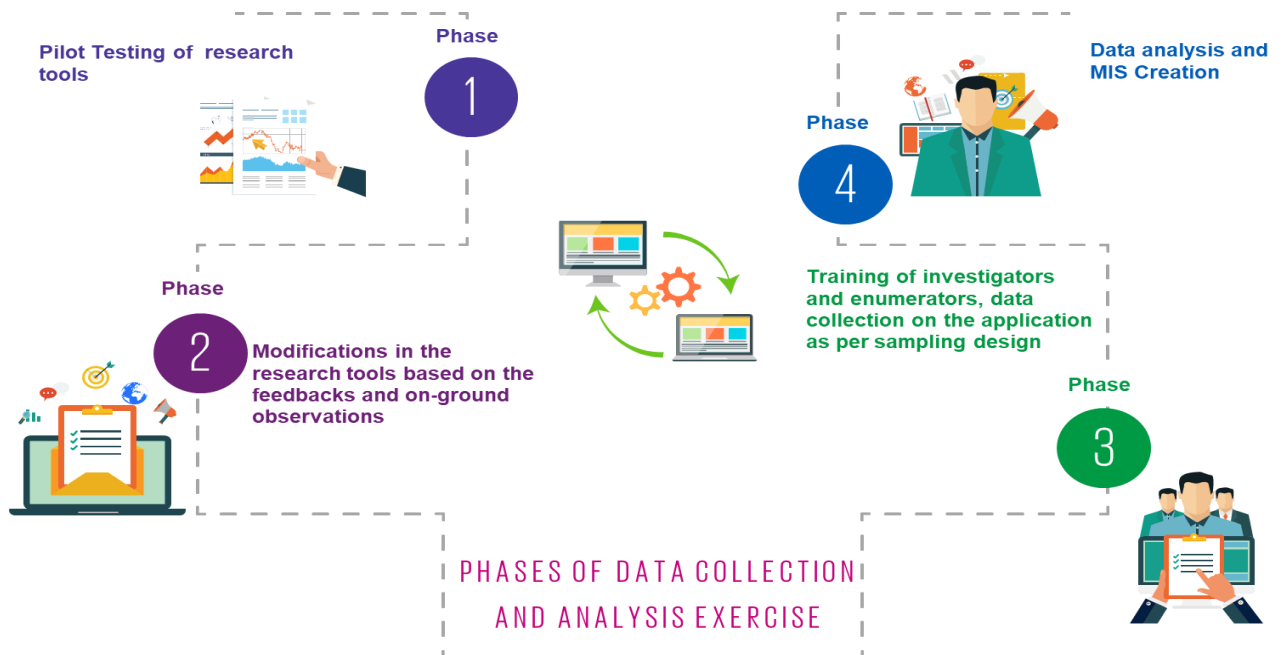
Data was collected through an app-based solution and regular updates on the status of data collection was provided to the BUs. In areas where the internet networks were intermittent, Pen-and Paper interviews were conducted through KPMG and data collection team. Later, the data was transformed and updated into the app.

Further, post collection, data was analyzed, and the findings was used to develop a smart dashboard designed specifically for the purpose.

Stakeholder Map

Stakeholder for this study is defined as individuals, organizations, institutions (Public and Private), government authorities, Gram Sabha representatives and frontline workers that have a direct interest in the Vedanta Aluminium Limited's projects and outcomes.

These stakeholders play a critical role in implementing socio-economic policies/programs on the ground. Under this study a myriad stakeholder, from Primary School teachers, District Collectors, Block Development Officers to Anganwadi workers are being covered. Involvement of the stakeholders can provide valuable insights that'll help in making important decisions about the organization. They have also provided their recommendations to enhance the efforts of the company that can help the business unit strategize their activities better in the future.

Below, one can see a mapping of the selected stakeholders for the study as a whole and their relative position. It must be noted, however, that the position and number of stakeholders vary from business unit to business unit and were interviewed based on the list shared by the respective business units.

Stakeholders and institutions involved in the exercise were:

Stakeholders

Table 2 Stakeholder and institutions

Thematic Area	Institutions Covered	Stakeholders Covered	Government Administrators
Educational	Primary School Upper Primary School Higher Education Institutions Skill Training Institutes	School Principals Gram Pradhan PRI Members NGO Partners	District Education Officer (DEO) Chief Block Educational Officer (CBEO)
Health	Aganwadi Centers APHC PHC CHC District Hospitals Ayushman Kendra Private Hospitals	ANM ASHA AWW MOIC Gram Pradhan PRI Members NGO Partners	Chief Medical Officer (CMO) RWSS Block Officer
Livelihood and Women Empowerment	Skill Training Centers Youth Centers Agriculture	Managers of training centers Gram Pradhan PRI Members SHG Leaders	District Employment Officer, Heads of the Horticulture,

			Block Project Manager (Mission Shakti), Assistant Fishery Officer Project Manager (Sakhi Project)
Community Assets	NA	Gram Pradhan PRI Members NGO Partners	BDO District Collector
Environment	NA	Gram Pradhan PRI Members SHG Leaders NGO Partners	District Collector/BDO
Sports and Culture	NA	Gram Pradhan PRI Members NGO Partners	District sports Officer

About the Business Unit and CSR Activities

*Gateway to Vedanta Aluminium, Lanjigarh

Vedanta Limited, is one of the world's leading Oil and Gas and Metals company with significant operations in Oil and Gas, Zinc, Lead, Silver, Copper, Iron Ore, Steel, and Aluminium and Power across India and various other countries.

Under Vedanta Aluminium and Power Business, Vedanta Limited is the largest producer of 'green metal' aluminium with operations in the states of Odisha and Chhattisgarh. The Company has two bauxite mines, three coal mines, one Alumina Refinery, and two Aluminium Smelters in India. This business is also the amongst the largest private power producers in India with a capacity of over 5300 MW.

Vedanta Aluminium is India's largest producer of aluminium, manufacturing more than half of India's aluminium at 2.26 million tonnes in FY22[11]. It has carved a niche for itself in the aluminium industry with its superior product quality based on state-of-the-art technology. Vedanta Limited operates a 2 MTPA (million tonnes per annum) alumina refinery in Lanjigarh (Kalahandi district), Odisha, since 2007 and an associated 90 MW captive power plant at Lanjigarh, which was commissioned in 2008.

The refinery feeds Vedanta's aluminium smelters at Jharsuguda in Odisha and at BALCO in Korba, Chhattisgarh. Vedanta firmly believes in contributing to the communities it operates around. The company is committed towards improving health, education, livelihood, and infrastructure in the Kalahandi region. With its world-class Aluminium Smelters, Alumina Refinery and Power Plants in India, the company fulfils its mission of spurring emerging applications of aluminium as the 'Metal of the Future' for a greener tomorrow.

Good governance and sustainable development are at the core of Vedanta's strategy. Sustainable development as a core requirement to strategically improve the value of the

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[11] vedantaaluminium.com

business. With 'Zero Harm, Zero Waste and Zero Discharge' its guiding principles, Vedanta is committed to delivering sustainable and responsible growth, fueling the country's self-reliance by harnessing natural resources, turning them into tools of prosperity and creating value for the society at large.

Vedanta's operations at Lanjigarh have always worked with the motive of society and environment first and it has successfully managed to do that over the years. The organization is still not limiting its work towards environment and society, constantly finding new and innovative methods for creating a better world for people to live in, be it in terms of basic facilities like education and healthcare or towards the environment we live in.[12]

The organisation has a well-defined CSR Policy that describes Vedanta's philosophy, thematic focus areas of CSR work, monitoring mechanism, review process and overall responsibility of execution of the policy. It further describes the approach of Vedanta in execution of CSR functions i.e., Inclusive Development and Partnering with stakeholders. The ultimate responsibility to ensure effective implementation of CSR policy lies with CSR committee of the organisation. In line with the group's strategy of contributing to the communities it operates in, the company has focused interventions in the areas of health, education, livelihood, and infrastructure amongst several others, in the Kalahandi region.

Below are the focus areas at Vedanta Limited Lanjigarh[13]

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[12] https://d1rbiogke1jwo5.cloudfront.net/wp-content/uploads/2021/05/Lanjigarh-Environment-brochure-English.pdf

[13] https://www.vedantalimited.com/img/media_mentions/media_reports/pdf/Vedanta-Annual-CSR-Report-20-21.pdf

*Rainfed farming in Lanjigarh

District Profiles

Vedanta Aluminum Limited is operating across two states viz. Odisha and Chattisgarh. Below is the profile for its Alumina Refinery in Lanjigarh (Kalahandi district, Odisha)

<u>Kalahandi</u>

Kalahandi is a district in southwestern Odisha in the watershed region of the river Tel. It is considered as one of the most backward regions in the country owing to its poor HDI parameters and has been identified by NITI Aayog as an Aspirational District. Demographic characteristics of the district reflect that it is predominantly rural and has a high concentration of weaker sections (SCs and STs). The district is rich in minerals such as Bauxite, Graphite, Manganese, Iron and Quartz of which, only Bauxite and Graphite have been commercially exploited. Bauxite is found in Lanjigarh Block at Niamgiri on a large scale. The overall literacy rate of the district is 60.2 percent with the male literacy rate being 73.3 percent and that for females being around 47 percent[14]. Girls' enrolment at all levels is only 48.4 percent indicating a lack of gender parity in education. 99.6 percent of the schools have access to drinking water and over 96 percent of them have separate toilet facilities for girls. However, only 20.8 percent of the schools have access to electricity. The district has a relatively high average annual drop-out rate of 6.8 at the secondary level as compared to other districts of the state. About 50 percent population in the district is in the working age group of 15-59 year and contributes to the district growth. The district economy is dominated by the primary sector that contributes roughly half the GDDP. Agriculture is the main source of employment and income for over 80 percent of the population. Besides agriculture, mining, quarrying and other tertiary sector services have gained ground recently. With respect to the community infrastructure, 97 percent of the houses are electrified as against a mere 69 percent in 2015. About 65 percent of the households have reported using an improved sanitation facility as against 15 percent of them in 2015.

The percentage of households with a member covered under a health insurance/financing scheme was around 50 percent in 2015. The NFHS-5 data suggests that the figure has marginally reduced to around 49 percent as of 2019. This is a peculiar trend indicating the lack of awareness and accessibility to such schemes.

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[14] https://www.census2011.co.in/census/district/419-kalahandi.html

The percentage of children suffering from Moderate Acute Malnutrition is 33.6 percent and those suffering from SAM (Severe Acute Malnutrition) is 6 percent. Around 91.3 percent of the population has been immunized. However, around 65 percent of the women aged 15-49 are anemic. Around 93 percent of the deliveries in the district are institutional births indicating a deeper penetration of basic healthcare services. While 49 percent of the couples utilize modern family planning methods, around 30 percent of them go for female sterilization methods, considered harmful for females. Less intrusive methods like pills (11.3 percent) and condoms (4.4 percent) are also prevalent.

The district has a tree cover of 30.4 percent of the total geographical area and 29 percent of its population uses clean fuel for cooking. Only about 0.8 percent of total installed power generating capacity is renewable. However, due to a favourable geography, renewable energy sources can be tapped to foster a green transition.

Introduction to Baseline Assessment

Over the past few years VAL-L has been implementing myriad social development programs across thematic areas for increasing wellbeing and the quality of life of local communities in its operational states. The baseline study focuses on establishing the baseline data on the effectiveness of VAL-L's CSR programs across its intervention in the Lanjigarh block, Kalahandi district, Odisha. The Baseline will help VAL-L to set achievable and realistic indicators for their CSR projects. Moreover, it will help VAL-L in adjusting and maneuvering the progress of their current CSR programs and develop new projects based on the needs of the community.

The baseline further will help in establishing the future objectives of the interventions, as well as determine and identify the type of support needed to achieve the objectives. This will necessitate identifying locally perceived resources as well as needs and problems as defined by local stakeholders. The baseline study can be used during from the implementation process to monitor progress. The defined indicators and the result in the study can be used to access the achievement and outcome of the interventions.

The objectives of the base line study are as follows:

- To create socio-economic profiling of the communities.

- To map the infrastructure and institutions in the communities

- To provide an understanding of the communities in which VAL-L operates.

- To identify gap areas to facilitate improvement in the implementation of CSR programs.

- To provide a baseline against which the work of VAL-L's CSR programs can be evaluated.

Baseline Data

Demographic profile

Kalahandi district occupies the south-western portion of Odisha the geographical area of the district is 7920 sq. km. The district falls in the western undulated zone of Odisha. M/s. Vedanta Alumina is one of the two prominent mega industries in the district Ltd.

As per 2011 census of India, Kalahandi has a population of 1,576,869 in 2011 out of which 787,101 are male and 789,768 are female[15]. Baseline survey collected from the field through interviews with 339 beneficiaries has been analysed and presented below. The same has been divided into sub-categories like respondents' profile etc.

As per the census - 2011, 47.5 percent of the households belonged to Schedule Tribes, 23.1 percent of the household were from Schedule caste.[16]

As per the NITI Aayog's National Multidimensional Poverty Index (MPI) 2021 report, 29 percent of the population of Odisha is multidimensional poor, while 47 percent of the population in Kalahandi is multidimensional poor.[17]

Figure 6: Economic Category
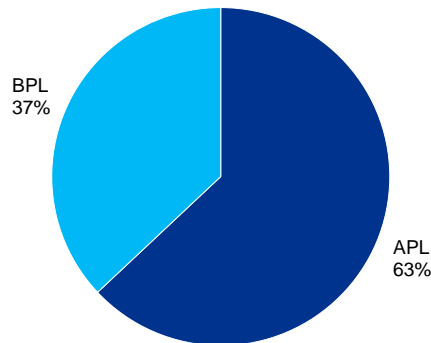
In Lanjigarh (Kalahandi district), as per the data, economic category suggests that 63 percent of the beneficiaries are reported to be above the poverty line and the rest 37 percent are below the poverty line. Caste related data reflects that 5 percent of the respondents are from the general category, and 28 percent belong to the OBC, while the rest belong to the schedule caste and schedule tribes.

Majority of the respondents were male with 75 percent, while 25 percent were females. During the survey, the status of the households was noticeable by the assets owned by them. Almost all the houses had electricity connection with 91 percent. The Kankeri village, a tribe that lives deep in the forests of Niyamgiri Hill Range did not have electricity connection.

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[15] https://www.census2011.co.in/census/district/419-kalahandi.html
[16] https://www.censusindia.co.in/subdistrict/lanjigarh-block-kalahandi-odisha-3162#:~:text=Thepercent20totalpercent20literacypercent20ratepercent20of,ispercent2025.43percent25percent20inpercent20Lanjigarhpercent20Block.
[17] https://www.newindianexpress.com/states/odisha/2021/nov/27/30-per-centof-odisha-population-is-poor-niti-aayog-report-2388739.html

As seen on the graph (figure 7), more than 50 percent of the beneficiaries owned TV, geysers and cycle. Assets such as Refrigerator, laptops, LPG, coolers, washing machine etc., were rare to see in every household. Mobile phones with only calling and messaging functions were owned by 54 percent, while 21 percent of the responded owned smart phones.

Furthermore, it was also observed during the survey that about 28 percent of the households did not have access to toilets. It can be inferred that the asset ownership of the respondent household is lower than the residents of the district.

Figure 7: Asset Ownership
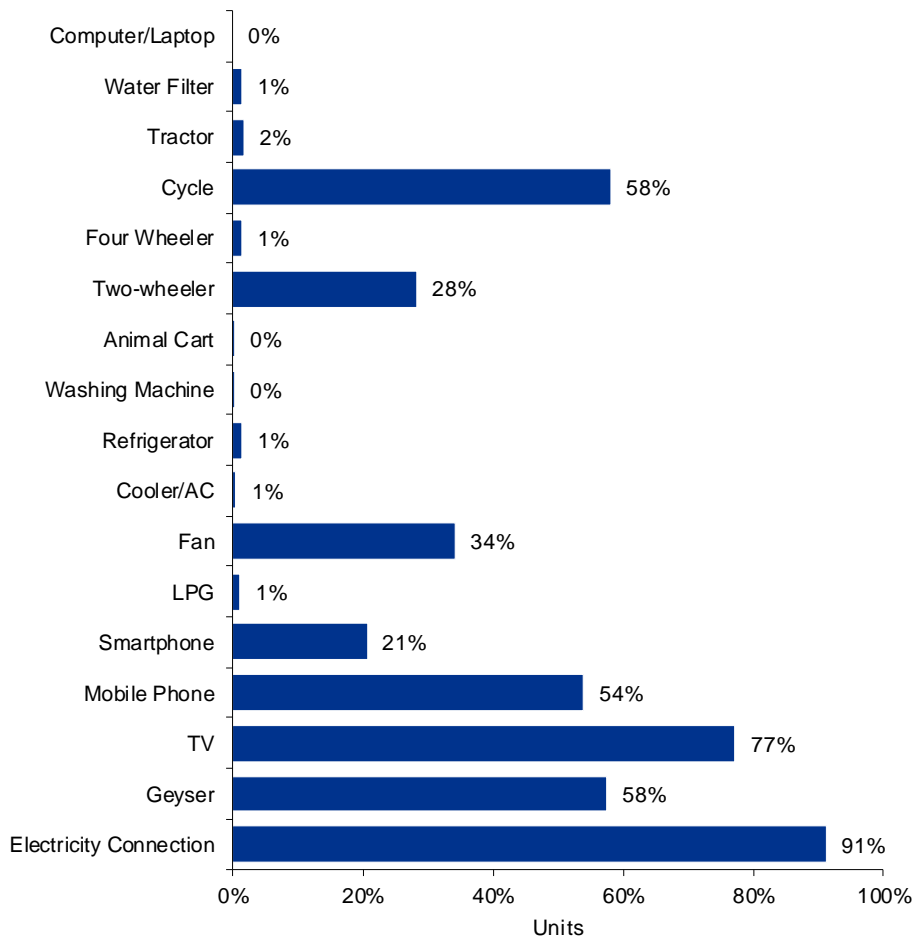
Occupation of the respondents

Distribution of workers across broad industry groups highlights the importance of various sectors and sub-sectors of the economy in providing gainful employment opportunities to the workforce.

As per the economic survey of Odisha, there is a proverbial predominance in agriculture and allied activities in labour absorption in the state. The Labour Force Participation rate in rural areas for the 15-59 years group were 56 percent for Odisha[18]. With that, there are a vast

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[18] https://finance.odisha.gov.in/sites/default/files/2021-02/Economic_Survey.pdf

number of occupations within the block where the respondents have been engaged in. According to the data, most of the beneficiaries are engaged with farming in their own land, which round up to 38 percent. Daily wage and skilled wage workers have also been reported on the rise with 14 percent, and 9 percent respectively. Skilling is where there have been a lot of requests by the beneficiaries. While 12 percent of the beneficiaries have been employed by Vedanta Limited Lanjigarh (VAL-L), it was observed that since the projects are running successfully and has given back a lot towards the community, a huge portion of the beneficiaries are seeking to get associated with VAL-L for work. While the unemployment rate (UR) as derived from the usual status approach was found to be 7.6 percent for Odisha and 6.2 percent for India for the 15-59 years age group[13], 12 percent of the beneficiaries were found unemployed in the area.

Figure 8: Occupation of respondents

	Daily Wage Labourer	Farming on Lease	Farming on Own Land	Own Business	Retired	Salaried Employee in Government	Skilled Wage Worker	Unemployed	Unskilled Wage Worker	Works at Vedanta
Series1	14%	2%	38%	3%	1%	1%	9%	12%	6%	12%

Unskilled Wage Worker: Beneficiaries who has a job, but do not possess any kind of special skill or training and these workers of the data are not employees of Vedanta.

Works at Vedanta: Beneficiaries who are working with the Business Unit. They could be under various categories – labourers in the BU (contract labourer), Drivers of the BU or even employees/workers in the plants (on pay roll)

Retired: Beneficiaries who have stopped working permanently. It could be due to old age, medical condition, family needs etc.

Salaried Employee in Government: He/she is a servant/employee for the Government of India.

Skilled Wage Worker: Beneficiaries who has special skill, training, knowledge which they can then apply to their work. They may have attended a college, university, or technical school. Alternatively, a skilled worker may have learned their skills on the job. Most are employed by an organization. These workers on the data and are not employees of Vedanta.

Unemployed: Beneficiaries who do not have work or are not able to find a job
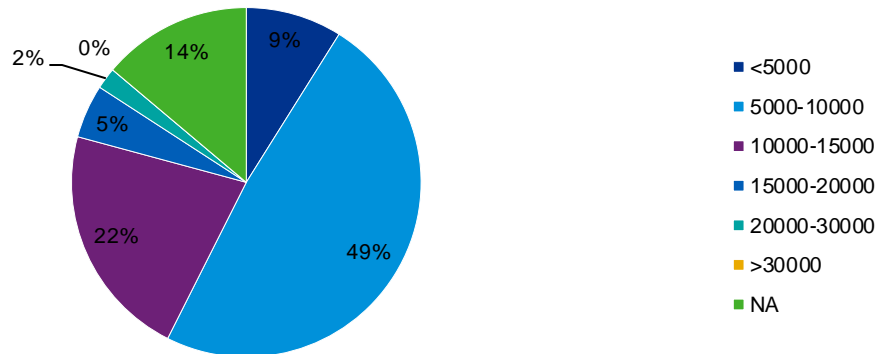
Income level

Almost half of the beneficiaries earning income, falls in the category of INR 5000-10,000. 22 percent of the income levels were in INR 1,000-15,000 category. According to the survey conducted, there was less than 1 percent of beneficiaries earning above INR 30,000.

Furthermore, during the survey, it was noticed that a lot of the members did not have entitlements, which was more than 50 percent. Rest of the holdings which was about 50 percent were Antyodya, MGNREGA job card and Kisan credit card. 52 percent of the household had land holdings.

Thematic Area: Education

Executive Summary

Vedanta Aluminium Limited, Lanjigarh (VAL-L) in the past has been carrying out significant efforts in the field of early education, with a strong community and stakeholder connect. They have worked with complete synergy and cognizance with the stakeholders to develop and carry forward such projects through education indicators have seen a tremendous improvement as compared to 2019 baseline and other secondary state and district level trends.

Following the National Education Policy (NEP) 2020, the country has affirmed the right to universal and quality education to ensure economic growth, advancement, wellbeing, and development. Additionally, since the Right to Education Act, there have been tremendous improvements in enrolment as well as ensuring efforts towards reducing the number of out of school children. However, the improvement in the overall educational status does not imply that all children in the country are receiving equitable education. In fact, not only there remains a need to improve the status of education within the country, but special focus also further needs to be provided to states that are lagging, such as Odisha.

Key Highlights of the Baseline Assessment:

- Literacy rate was at 94 percent of the sample population as compared to the baseline conducted in 2019, this has increased by 38 percent
- Dropout rate of the has increase from 12.7 percent compared to previous baseline 2019. This is also a result due to the COVID-19 pandemic. The dropout rate stood at 12.3 percent in 2019, while the current drop rate amongst the surveyed sample is 25 percent
- Only 16 percent of the population had completed class 8 and 18 percent had completed class 10
- In terms of facilities, the higher secondary schools lacked a few infrastructures and the secondary schools lacked teachers. These kinds of challenge have also been seen in other levels of schools as they lack common facilities
- 63 percent of the children under the age of 5 are well nourished

The functional literacy cannot be judged against the achievement or unfulfillment against the level of education, rather the improvement in achievement of higher levels of education are necessary. Moving ahead, functional literacy shall not be the sole judge of a community's growth, rather the progress achieved in reaching higher levels of education, skilling and further increasing one's overall agency and decision-making capabilities. After the Covid pandemic, about 30 percent students are now found not attending schools in primary, secondary and higher secondary classes in Odisha, according to the education department.[19]

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[19] https://www.thehindu.com/news/national/other-states/30-students-in-odisha-not-attending-schools-says-education-department/article65416229.ece

Key Highlights of the Impact Assessment:

- In Project CCC, over 12,000 children have been benefitted from this project
- In FY 2021, health check-up was conducted for 851 students enrolled in the CCC
- Vedanta Lanjigarh and Government partnered projects such as NITI Aayog Aspirational Programme provides quality early childcare services through improved ICDS centers.

Key Recommendations:

VAL-L wishes to ensure that they reach the last mile through providing support to those lagging in their educational levels. Towards this, the following has been recommended:

- **Awareness generation on education via community participation -** VAL-L has already shown success in fostering community connect not only through their projects but also through building strong community organizations such as SHGs (Sakhis). Such organizations play one of the most important roles in increasing community participation and inculcating ownership over programmes. It is recommended that such organizations are fostered to increase participation within school management committees and drive demand towards proper functioning of school infrastructure and development. **The current data has seen an increase in dropouts of students, therefore awareness generation and emphasize on the importance of education is of the highest importance.**

Baseline Assessment

Education of children is the foundation of the future of our children and our nation. It is a key contributory factor for preparing our children for life as also for nation building. Prosperity, quality of governance, nature of public discourse all depends on barrier free access to quality education for children and youth of our country. To ensure education to all children regardless of their socio-economic background, every successive government post-independence has brought new legislations and new policies. The most important legislation enacted in this regard is the Right of Children to Free and Compulsory Education Act, 2009 (RTE Act) which guarantees access to education and ensures free and compulsory education to all children up to the age of 14 years. However, even after several years of this Act coming into effect, gaps exist, and a considerable section of children are yet to access education in both rural and urban areas. As per NSSO 71st Round in 2014, the Net Attendance Ratio (Number of persons in the official age-group attending a particular class-group to the total number persons in the age-group) of children in school was 83 percent at primary level, 63 percent at upper primary level, and 52 percent at secondary level.[20]

Within education, one of the key elements is the availability and access to key infrastructure. Therefore, through this study, an attempt has been made to understand the kind of infrastructure, facilities and amenities present in education institutions viz. primary schools, Nandghars, middle school, secondary school, higher secondary schools.

The literacy rate in India stands at 74 percent while the male literacy rate in India stands at 84.7 percent. and that of females is 70.3 percent. Kalahandi district's literacy is at 59.22 percent[21]. The male literacy rate is 71.90 percent and that of female is 46.68 percent in Kalahandi, the female literacy rate is much lower than the state average of 64 percent.[22]

Level of Education

Education is a basic human right of all children. As per the Declaration of Human Rights (Article 26)[23], everyone has the right to education and education should be free, at least at the elementary/foundational levels. Elementary education is further meant to be compulsory while

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[20] National Sample Survey Organisation. (2016, March 10). Education in India, NSS 71st Round (January -June 2014). New Delhi: National Sample Survey Office, Ministry of Statistics and Programme Implementation, Government of India

[21] https://finance.odisha.gov.in/sites/default/files/2021-02/Economic_Survey.pdf

[22] https://www.census2011.co.in/census/district/419-kalahandi.html

[23] https://www.un.org/en/about-us/universal-declaration-of-human-rights#:~:text=Everyoneper cent20hasper cent20theper cent20rightper cent20toper cent20education.,onper cent20theper cent20basisper cent20ofper cent20merit.

higher education shall be made accessible in an equal manner on the basis of merit. The aim of education is to ensure the full development of the human personality and further strengthen other human rights and fundamental freedoms. This is further bolstered in the Convention of the Rights of the Child (Article 28 and 29)[24]. It further expands the concept of the right to education from the Decoration of Human Rights. It includes obligations on the State to encourage regular school attendance and the reduction of dropouts. It further directs states to ensure the child's dignity within educational institutions. India ratified the Convention of the Rights of the Child (UNCRC) in 1992.

The National Education Policy 2020[25] affirms that the provision of universal access to quality education as a key to ensure India's economic growth, scientific advancement, national integration, cultural preservation as well as ensuring social justice and equality within the country. It has been acknowledged that India will have the highest population of young people in the world within the next decade and thus high-quality educational opportunities will play a key role in determining the future of not only the youth of the country but the country itself.

The Right of Children to Free and Compulsory Education Act (2009) is what guarantees the right to education to all children in the country. It operationalizes the constitutional guarantee offered under Article 21 of the Indian Constitution.

Over the years, especially after the Right to Education Act 2009 came into place, India has made strides in education through improving the quality of education, increasing elementary school enrolment as well as ensuring efforts towards reducing the number of out of school children. However, the improvement in the overall educational status does not imply that all children in the country are receiving equitable education. The literacy rate in India is still at 78 percent, with literate males at 85 percent and literate females at 70 percent, according to the National Family Health Survey (NFHS-5) and National Statistical Office: NSO (2021 and 2022). There has been a marginal improvement in the Gross Enrolment ratio across all levels of schooling. Gross Enrolment Ratio increased to 89 percent in 2019-20 (from 87 percent) at Upper Primary level; 99 percent (from 96 percent) at Elementary Level; 78 percent (from 77 percent) at Secondary Level; and 51 percent (from 50 percent) at Higher Secondary Level.[26]

In fact, not only there remains a need to improve the status of education within the country, but special focus also further needs to be provided to states that are lagging behind.

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[24] https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-child
[25] https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf
[26] https://www.thehindubusinessline.com/news/national/gross-enrolment-ratio-up-at-all-levels-of-school-education-report/article35077594.ece

Figure 10: Education Level of Beneficiaries
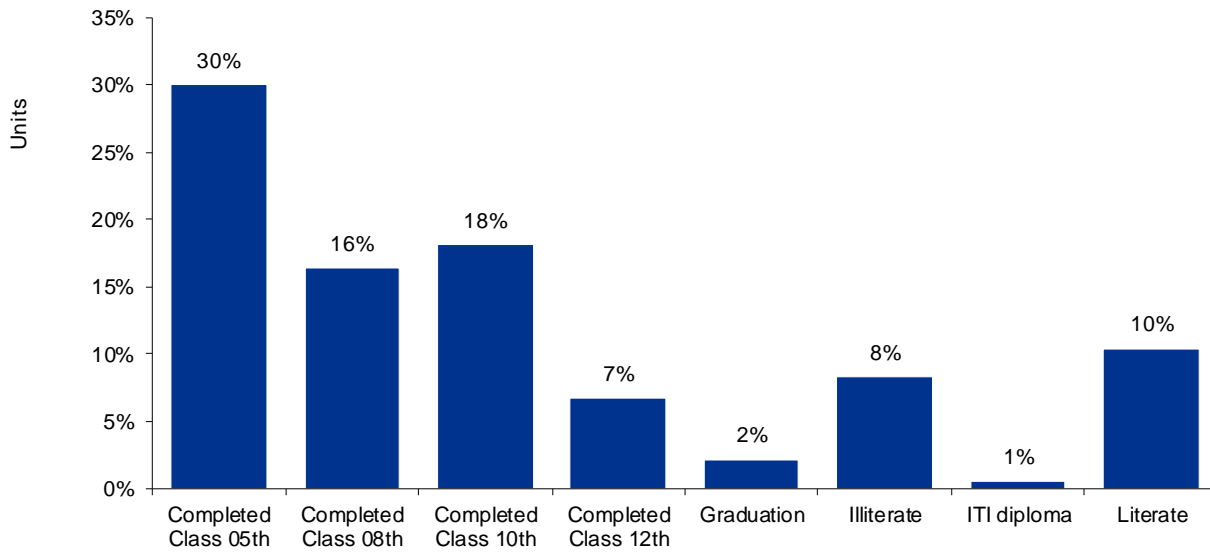
8 percent of the interviewed population remains illiterates, faring better than the district average, where 40.8 percent of the population was found to be `illiterate during Census-2011[27]. Since the previous baseline (in 2019), there has been an overall improvement of the levels of education amongst the respondent households in Lanjigarh. 20.5 percent more population have completed class 5th, 20 percent more have completed class 8th. In the previous baseline 5.9 percent of the population had completed class 10th while in the current baseline data indicates that 18 percent of the sampled population had completed class 10th. While 7 percent had completed class 12th as compared to 1 percent in the previous baseline.

Facilities in Educational Institutions

It has been a well-established fact, schools with good infrastructure facilitate higher attendance and enrolment rates. School infrastructure plays a pivotal role in motivating students in attending the schools regularly. According to the World Bank, physical infrastructure plays a significant role in children's enrolment, attendance, completion rates as well as learning outcomes[28]. Furthermore, ensuring adequate water, sanitation, and hygiene (WASH) facilities in schools 'improve access to education and learning outcomes, particularly for girls, by providing a safe, inclusive and equitable learning environment for all[29]. It also helps in increasing the interest of students and teachers in learning activities.[30] Schools having separate toilets for girls improves gender parity in education by facilitating higher enrolment and retention rates of girl students.

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[27] https://www.census2011.co.in/census/district/395-jharsuguda.html
[28] https://policytoolbox.iiep.unesco.org/policy-option/school-infrastructure/
[29] file:///C:/Users/sakshijerath/Downloads/JMP-WASH-in-Schools-WEB.pdf
[30] https://files.eric.ed.gov/fulltext/ED604388.pdf

In the backdrop of various government policies and schemes, India has taken a holistic approach in improving the academic performance of students. Infrastructure facilities have improved across India in the last few years.

Odisha has observed a significant improvement in school infrastructure facilities. However, only 89 percent of the schools in Odisha have functional toilets for girls as compared to National average, which is 93 percent[31].

In 2018, in Odisha, only 55.8 percent of schools were complying with the teacher-student ratio and 72.9 percent were complying with the classroom-teacher ratio.[32]

Quality of teaching and teachers' education are central to delivering quality education for all. They enable education to achieve its transformative potential for individuals, communities and for overall national development[33]. Quality education is chiefly determined by teaching pedagogy and thus is not simply the process of acquiring knowledge and skills but assessing such knowledge, understanding its significance and value and constructively use the same for the emergence of the learner as a knowledgeable being.

This thus requires the presence of adequate number of teachers, their ability to bring forth equal attention towards the learning outcomes of the children, contextualize the same and not simply the provision of education.

Facilities in Lanjigarh block

The Supreme Court of India has highlighted that all schools must have separate toilets for boys and girls and also facilities for water for drinking and other purposes which is an integral aspect of Right of Children to Free and Compulsory Education (RTE) Act, 2009[34].

At present, there are 2287 Primary Schools, 709 Upper Primary Schools and 362 Secondary Schools, 342 high schools in Kalahandi district. In terms of technical education, the district has limited institutes.[35]

According to the previous baseline of 2019, 65 percent of the primary schools surveyed had the drinking water and sanitation facilities. As per the UDISE data, at the district level 97 percent of the primary schools in Kalahandi have drinking water facility. While 93 percent of the schools have separate toilets for girls.[36]On contrary, when it comes to functionality and operations of the aforementioned infrastructure, it must be noted that a CAG report on toilets[37] has stated that despite presence of the same, they are not hygienically maintained. Therefore, reporting of existing toilets within schools does not signify that there are available or comfortable to use by children. While interacting with the stakeholders, 91 percent of the respondent household reported to have availability of toilets for their children in primary schools. 77 percent of the respondent households reported availability of separate toilets for

[31] https://src.udiseplus.gov.in/School/DataDashboard
[32] Aser 2018 Final Cover.cdr (asercentre.org)
[33] https://unesdoc.unesco.org/ark:/48223/pf0000379115
[34] All schools must have separate toilets for girls and boys: Supreme Court (downtoearth.org.in)
[35] http://www.msmedicuttack.gov.in/annualreport/DIPpercent20-percent20Kalahandi-2020-Final.pdf
[36] https://udiseplus.gov.in/#/home
[37] https://cag.gov.in/en/audit-report/details/111816

their children in primary schools while only 97 percent of the respondent households reported to access to drinking water facilities in primary schools for children.

Figure 11: Facilties in Primary School
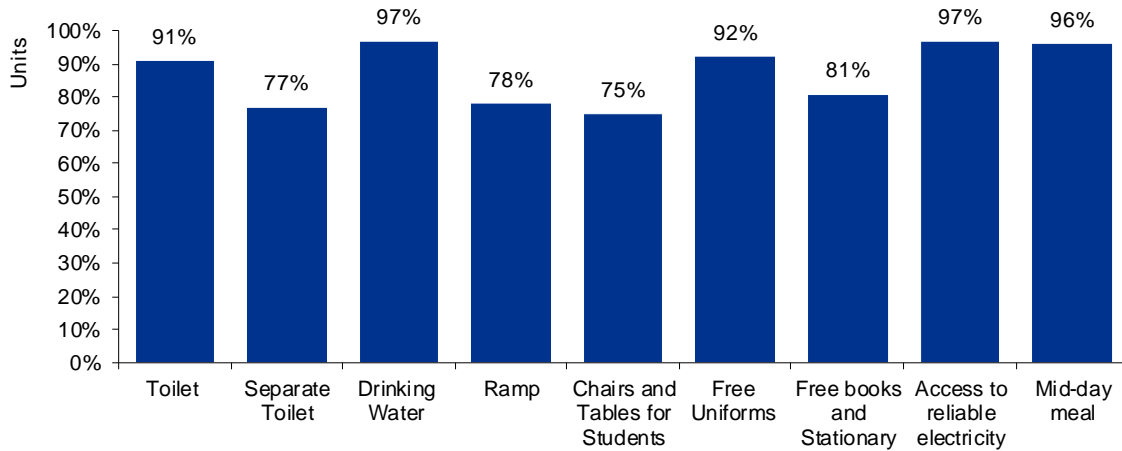
When it comes to the access to electricity in the schools, while secondary data indicates that only 69 percent of the primary schools had electricity, the current baseline data shows that **97 percent of the respondent households stated that their children had access to electricity in primary schools**. The UDISE data reveals that no primary school in the district[38] have availability of furniture in the schools, however 75 percent of the respondent households reported to have availability of furniture in the primary schools. Further, 62 percent of the primary schools were found to have the facility of the ramps[39], while only **78 percent of the respondent households reported to have the availability of the ramps in the primary schools.**

In rural areas, mid-day meal serves as an enticing incentive for parents to take their children to school and it acts a medium to fulfil the nutritional needs of the children.[40] As per the NSS, only 50 percent of the students in rural India reported to receive free mid-day meals in schools, this percentage stood at 61.4 percent in Odisha.[41] Meanwhile, current baseline data indicates that **96 percent of the respondent households reported to have access to mid-day meals for their children in the schools.**

Facilities in Secondary School

Similar trends were also observed in the secondary schools much like the primary schools.

As per the UDISE district data of secondary schools in Kalahandi, almost all the secondary schools have the facility of the drinking water and have functional toilets for. 70 percent of the

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[38] https://udiseplus.gov.in/#/home
[39] https://udiseplus.gov.in/#/home
[40] https://www.smilefoundationindia.org/blog/mid-day-meals-and-their-role-in-the-education-of-children/
[41] https://mospi.gov.in/web/nss

secondary schools have the provision of electricity while only 62 percent schools have ramp facilities.[42]

The previous baseline shows that only 40 percent of the surveyed schools had facilities of drinking water, while 60 percent had sanitation facilities. However, the current baseline data shows that in the secondary household, 98 percent of the respondent households in Lanjigarh believed that children in secondary schools had access to drinking water, 90 percent stated availability of separate toilets for girls and boys while, 97 percent stated availability of electricity in secondary schools.

Figure 12: Facilities Secondary School
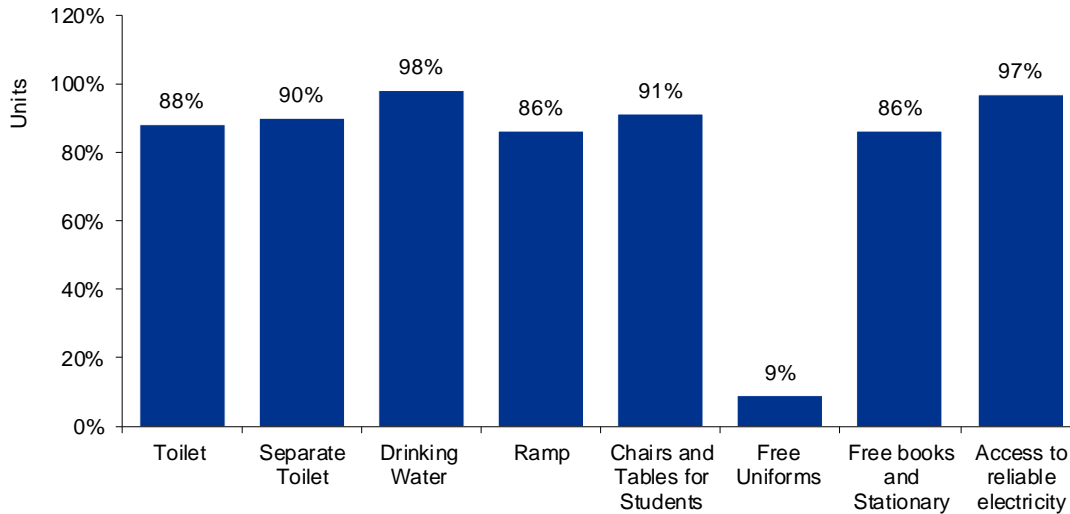
As per the UDISE 2021 data, none of the secondary schools in Kalahandi district have furniture for students. On the contrary, current baseline data shows that 91 percent of the respondent households reported the availability of furniture in secondary schools. Furthermore, secondary data on availability of ramps indicates that 52 percent of the secondary schools in the district have ramps, while in the current baseline 86 percent of the respondent households reported the availability of ramps in secondary schools.

Facilities in Higher Secondary Schools

As per the UDISE district data of higher secondary schools in Kalahandi, all the schools have the facility of the drinking water and have functional toilets for girls and boys. 100 percent of the higher secondary schools have the provision of electricity and ramp facilities.[43] When it comes to the availability and accessibility of the toilets in the higher secondary schools for children from respondent households, only 68 percent of them reported to have the availability of the toilets for their children while 67 percent of the respondent reported to have availability of separate toilets for girls. 67 percent of the respondent households reported to have

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[42] https://udiseplus.gov.in/#/home

[43] https://udiseplus.gov.in/#/home

availability of drinking water facility in higher secondary schools. Only 56 percent of the respondent households reported to have availability of ramp facilities in higher secondary schools

Figure 13: Facilities Higher secondary School
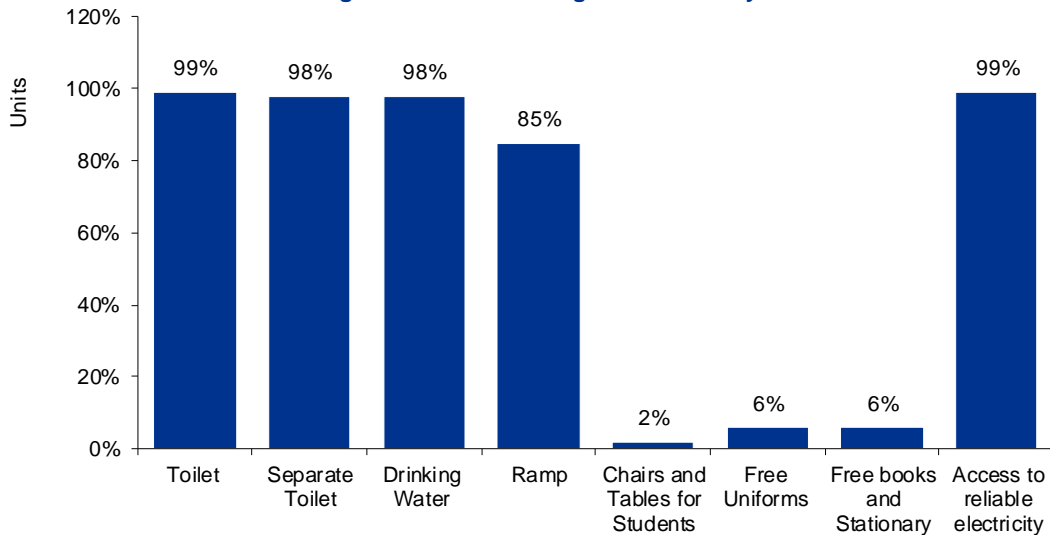
School Dropouts

According to UNICEF[44], in 2014 there were 6.1 million children out of school in India, a figure that had reduced from 13.46 million in 2006. However, **29 percent of children drop out of school before completing their elementary education and 50 percent of adolescents do not complete secondary education in the country**[45].

Moreover, as per the **NSSO Key Indicators of Household Social Consumption of Education 75th Report** - 15 percent of the persons between 3-35 year of age never enrolled in the education, only 37.8 percent of the people between age group of 3-35 were found to be attending the education in Odisha.

In 2019-20, the highest dropout of 6,731 students were in the Kalahandi district[46]. The district also saw a 3.35 percent dropout in primary schools, 7.04 percent in upper primary and 3.38 percent of dropout in secondary schools[47].

As per the previous baseline conducted in 2019, the dropout rate stood at 12.3 percent while the current drop rate amongst the surveyed sample is 25 percent. **Thus, indicating an increase of 12.7 percent dropout within surveyed population.**

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[44] https://www.unicef.org/india/what-we-do/education
[45] https://www.unicef.org/india/what-we-do/education
[46] https://urbanupdate.in/odisha-saw-rise-in-school-dropout-rates-post-pandemic/#:~:text=6731%2C%20the%20highest%20number%20dropouts,wherein%2019%20students%20dropped%20out.
[47] http://opepa.odisha.gov.in/website/Download/2016-17.pdf

Reason for school dropouts

Despite the efforts taken towards infrastructure upgradation in schools, the usability and accessibility of infrastructure remains a challenge, especially in the rural areas.

From schools being far away to cost of education, there are myriad reasons that emerge with respect to drop-out rates amongst students within the school going age within the business unit's operational areas.

According to the state economic survey, reasons for the high dropout rates among ST, SC and girl students are the socio-cultural norms, lack of access to education, disability, migration of families, early marriage etc.[48]

Figure 14: Reasons for dropout
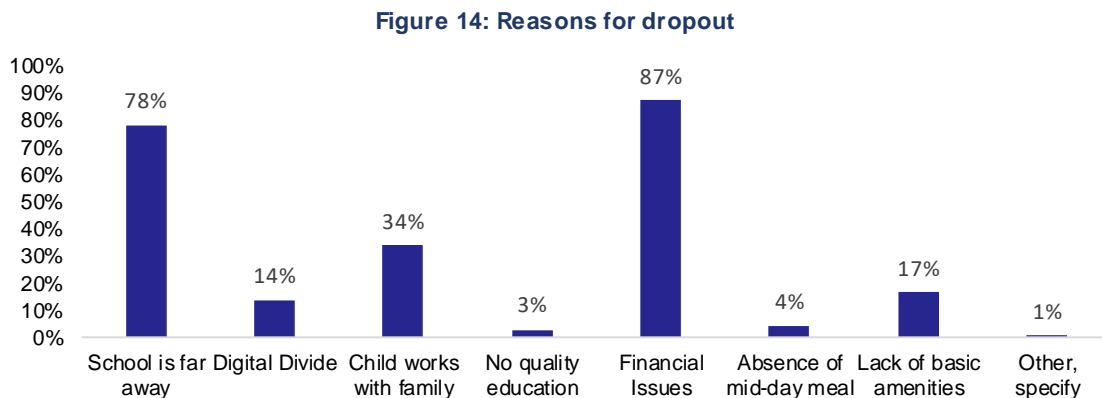
Poverty impacts the attainment of quality education of children and is one of the major reasons for school dropouts in India.[49] It was found out that 87 percent of the children from the respondent households were not regular to the schools due to financial issues. However, as per the data received, 63 percent of the respondent households were from APL category. When it comes to defining the poverty levels of a households, APL and BPL entitlement and the consumption criteria becomes confounding and asset-based indicator of poverty becomes more relevant.[50] Around 64 percent of the respondents are stilling living in the Kuccha houses.

Moreover, as per the International Labour Organization, poverty is one of the single greatest forces to drive children into workforce. Due to the prevailing poverty in the household, children often leave the school and support the family by working in the labour force.[51]

78 percent of the respondent stated the distance of the schools as the reason for not attending the schools regularly by their children. As per the findings of the last baseline, the average distance of the schools from the villages was found out to be 1.62 Kms. Further 34 percent of

[49] https://jstrust.in/2020/09/14/poverty-induced-dropouts-in-india-2/
[50] https://journals.sagepub.com/doi/10.1177/097370302093374?icid=int.sj-full-text.similar-articles.2
[51] https://www.ilo.org/moscow/areas-of-work/child-labour/WCMS_248984/lang--en/index.htm

the surveyed households reported that children leave their education as they work with their families as daily laborer's.

As per the UNESCO 2021 State of the Education Report for India: '*There are no teachers and no classes'*, the use of technology for ensuring quality education has emerged as important.[52] However, schools across India lack digital infrastructure. Only 24 percent of the schools in India have internet connectivity.[53]

When it comes to Lanjigarh, mobile and internet services are still inaccessible in 331 villages in 16 panchayats of Lanjigarh block of Kalahandi district, while mobile services are inaccessible in most of the areas of this block[54]. Hence it may be said that the due to the absence of internet, student lacks access to quality education. Current data indicates that, 14 percent of the respondent households reported lack of digital infrastructure as the reason behind their children of school going age not attending the schools regularly.

Access to Digital Education

COVID-19 pandemic highlighted necessary changes required in the Indian educational system with greater number of schools needing to adopt digital learning as part of their mainstream educational practices. The lack of this led to the discontinuation of education for scores of children across the country, where Odisha suffered as well. Thus, leading to a greater number of dropouts, child marriage as well as child labour.

Of the Government schools in Odisha, only 13 percent schools have computers. While 84 percent schools are devoid of computer sets, 97 percent educational institutions are facing issues of internet service.[55]

According to UNESCO, digital technology has the power to not only complement but to enrich and transform education as is practiced currently. It further has the potential to speed up progress towards Sustainable Development Goal 4 (SDG 4) for education through transforming the modes of learning and accelerating access to learning. India too is pushing towards the same in its national agenda. As per the National Education Policy 2020, "Schools will develop smart classrooms, in a phased manner, for using digital pedagogy and thereby enriching the teaching-learning process with online resources and collaborations"[56].

However, the significant scope of digital education cannot be met until the digital divide in the country is reduced. Only 20 percent of school-age children in India had access to remote education during the pandemic, of whom only half participated in live online lessons. According to a study conducted by Azim Premji Foundation, 38 percent of surveyed households stated that at least one child had dropped out of school due to the pandemic[57]. Furthermore, only 32 percent of children had easy access to Smartphones for online classes and around 60 percent

[52] https://thepolicytimes.com/only-19-of-schools-in-india-have-internet-connectivity-unesco-report/

[53] https://udiseplus.gov.in/#/home

[54] https://southodishaupdates.com/lanjigarh-area-people-are-suffering-due-to-no-mobile-network/

[55] https://odishatv.in/news/education/udise-report-paints-grim-picture-of-odisha-s-digital-education-177388

[56] https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf

57 https://timesofindia.indiatimes.com/world/rest-of-world/digital-divide-still-a-challenge-in-remote-teaching-learning-say-experts/articleshow/87700565.cms

were not attending online classes at all during the pandemic. It must also be noted that according to UNESCO only **30 percent of schools in the state have internet access**[58].

As per the NSS report on Key Indicators of Household Social Consumption on Education in India, only 1.8 percent of the rural household in Odisha have computers in their home and only 5.8 percent of the rural households have access to internet.[59]

U-DISE developed a performance grading index for districts in India which captures the status of school education in India. One of the 12 parameters that they capture is digital learning. The indicators deployed by U-DISE to provide the scoring which has been listed per field unit below include:

1. The percentage of schools with internet facility for pedagogical purposes

2. Percentage of schools with computer/ laptop used for pedagogical purposes

3. Percentage of schools having computer-assisted teaching learning facility (e.g., smart classrooms)

4. Student-to-Computer Ratio

5. Percentage of teachers trained in use of computer and teaching through computer

Kalahandi scored 5 out of 50 on the digital learning scale by U-DISE, which depicts the poor state of digital education in the district.[60]

The current baseline data shows that 70 percent of the children were going to school of which **19 percent of the school going children in the age group 6 to 18 years were using smart phones for accessing digital education.** Whereas 14 percent students had access to digital education via its digital classrooms. Laptop, desktop, and tablets were other forms of devices through which students had access to digital education. Only 6 percent used the cybercafes to access digital education.

[58] https://unesdoc.unesco.org/ark:/48223/pf0000379115
[59] https://nss.gov.in/
[60] https://pgi.udiseplus.gov.in/DISTRICT-PGI-ENGLISH.pdf

Figure 15: Access to digital Education
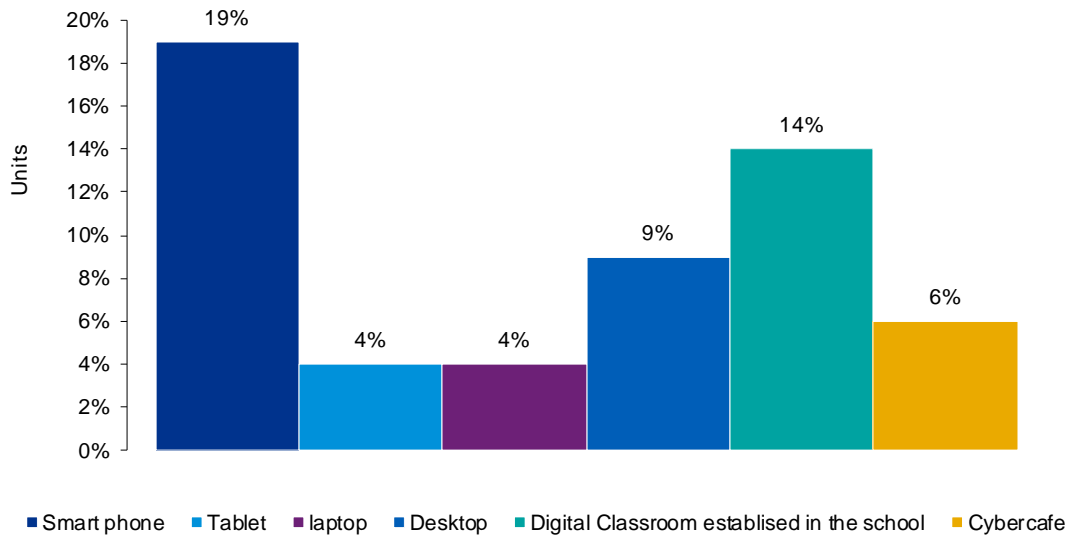
Services provided at Anganwadi centres

To ensures the needs of children, smooth service delivery and proper function delivery of Anganwadi become crucial. Presence of proper infrastructure at Anganwadi centers ensure high enrolment rate of children, pregnant and lactating mothers. Secondary studies suggest that the Anganwadi centers with quality infrastructure have better influence on the overall development of pre-school children than the Anganwadi centers that lack proper infrastructure.[61]Moreover, Health Indices like – Neo-natal mortality rate, child mortality rate, stunted growth, underweight, etc. have a direct correlation to the various services extended by Anganwadis under the ICDS scheme.

Anganwadi centers, as a part of Integrated Child Development Services (ICDS) play a crucial in supporting low-income families by ensuring early childhood care. Under the umbrella of Integrated Child Development Services (ICDS) programme, Anganwadi centers caters to the nutrition, health and pre-education needs of children till six years of age as well as the health and nutrition of women and adolescent girls is one such scheme. Moreover, being the part of the India health care system, Anganwadi centers act as an entry point to health care by providing basic health care facilities to children in the age group of 0-6, to pregnant/lactating women and adolescent girl. Role of Anganwadi center is palpable in meeting and ensuring the nutritional, health, and educational need of children from 0-6 age group. 66.5 percent of the children in rural Odisha received immunization through Anganwadi centers.

In the present data, about 80 percent of the respondents have said that the centers are used mostly for health check-up, while 50 percent of the respondent's stated availability of pre-school education and 47 percent beneficiaries stated availability of immunization services at

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[61]https://www.researchgate.net/publication/265490695_Influence_of_Infrastructural_Facilities_in_Anganwadis_on_Promoting_the_Allround_Development_of_Preschool_Children

anganwadi. Further 39 percent stated that health camps were organized at Anganwadi's and only 28 percent stated provision of health education at Anganwadi.

The current baseline data also indicates that majority (63 percent) of the children under the age of 5 years fall under the green category, that indicates that the child is well nourished.

Figure 16: Services provided at Anganwadi centers
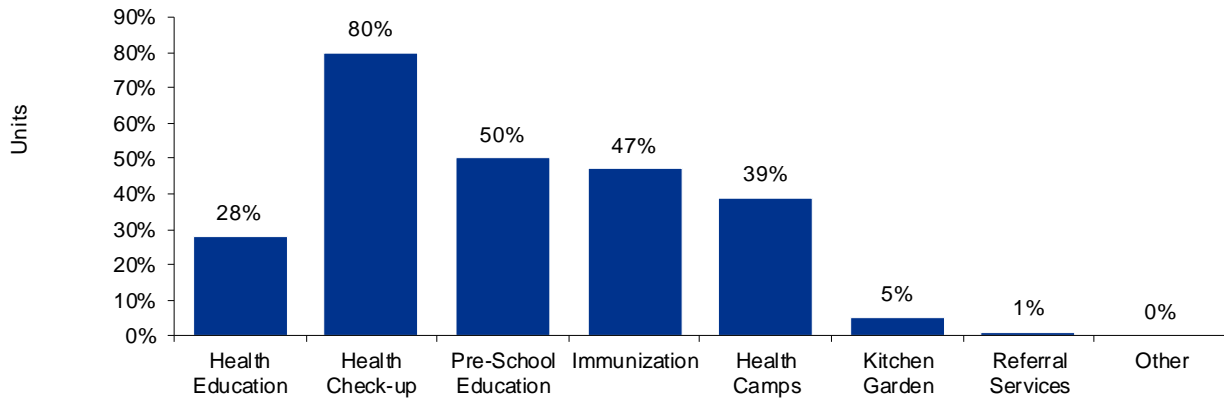
Facilities at Anganwadi centres

As per the primary data, availability of toilet and drinking water in Anganwadi centers was reported by 96 percent and 98 percent of the respondents respectively. 98 percent of the respondents reported to have the availability of Mid-Day meals in the Anganwadi centers. When it comes to electricity in Anganwadi centers, 97 percent of the respondents reported to have access to reliable electricity at Anganwadi centers. Availability of furniture were reported at 64 percent and only.

Figure 17: Facilities in Anganwadi centers
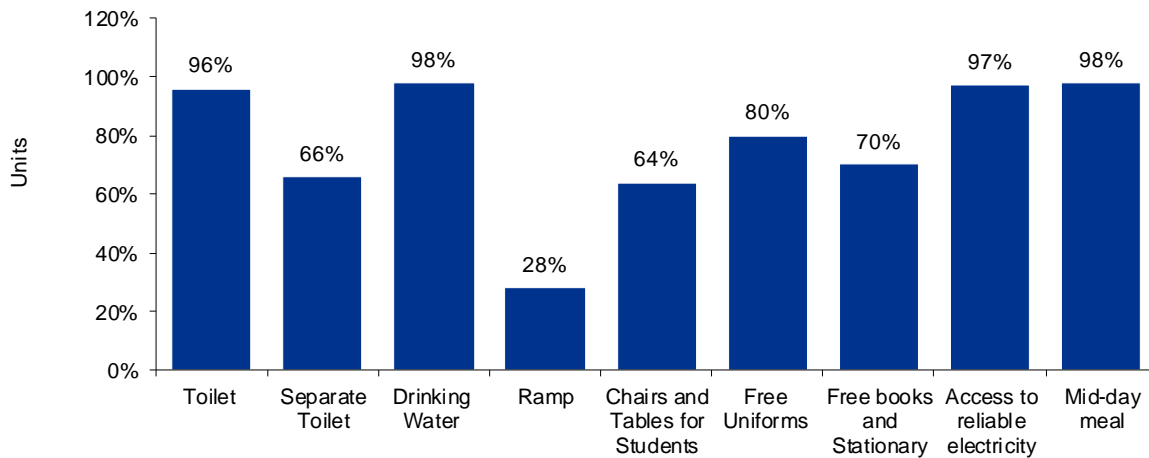
Analysis and Way Forward

Observations

The educational attainment levels have increased field across locations since the previous baseline in 2019.

- On an average, the proportion of illiterates in the population has reduced by 19 percent.
- 20.5 percent more of the population has completed up to class 5.
- 20 percent more of the population completed up to class 8.
- 12.1 percent more completed class 10.
- The average dropout rate in the previous baseline was 12.3 percent whereas in the current baseline, this has increased to 25 percent

Challenges

There have been improvements in the education system in the past three years. There is a lack of infrastructure in some of the primary schools and notably in the higher secondary schools. Only 7 percent of students complete 12th class.

Access to digital education on a whole remained low. It should be noted that during the pandemic, in the country, only 20 percent of children had access to remote learning.

Possible solutions

- Infrastructure upkeep
- A reward recognition program and training of teachers may be encouraged along with introducing digital education and computer literacy for the students
- Focus on higher education may be taken up as priority, in which case the BU can come up with a free education programme for the students in higher secondary
- Correspondence or short-term course on various subjects may be introduced for the dropout students or interested students
- For Early Childhood Education 0-6 years, sustained capacity building of the anganwadi workers and improvement of an assessment feature such as development of milestone may be introduced or enhanced.

KPMG

Way Forward

Enhancement of Infrastructure –

The proper maintenance of existing infrastructure facilities within schools (including proper functionality and usability) is necessary to ensure the proper learning environments. This in turn supports to ensure that children stay in school, enrolments for all increase, dropouts decrease and learning outcomes improve. To achieve the same, community involvement through the revival (where required) as well as proper functioning of School Management Committees (SMCs)[62] could be ensured. Meetings of SMCs must be carried out regularly and suggestions of SMC members regarding improvement of school should be adopted. Furthermore, including periodic social audits would ensure accountability.

> **Government Alignment:** The government of India has approved a centrally sponsored scheme viz. *PM SHRI Schools* wherein 14500 schools will be strengthened including ensuring adequate, inclusive and safe infrastructure for all children. It will be administered through the *Samagra Shiksha Abhiyan* which further aims to universalize access to quality school education by expansion of schooling facilities through up-gradation of schools up-to senior secondary level.

Quality of Education:

Increase Pupil-Teacher Ratio: Based on the National Educational Policy 2020, the ideal pupil teacher ratio should be 30:1. Moreover, it is not simply ensuring that the ideal number of students.

per teacher, but the quality of teaching maintains the standards required to ensure universal education. In Odisha, more than two lakh teachers are needed to meet student-teacher ratio as per Right to Education norms, according to UNESCO[63]. data showed that only 69 percent

> **Best Practice:**
>
> **Samagra Shiksha**: An overarching programme for the school education sector extending from preschool to class-XII with the broader goal of improving school effectiveness and equitable learning outcomes.
>
> **ANWESHA:** ANWESHA provides quality education to ST/SC students in 178 best private schools in 17 districts. Under this scheme, over 21, 682 ST and SC students are getting free quality education in the best private schools in these districts. Free Lodging and boarding facility are being provided to students, including school fees, uniforms, study material, tutors etc.

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[62] School Management Committees (SMCs) are mandated by the Right to Education Act (2009) and the composition must include 75 per cent of parents/guardians from which half must be women, the rest of the 25 per cent must include local authorities, school teachers, academicians/students. In Rajasthan, the number of members that have been suggested is 15.
[63] https://odishabytes.com/odisha-needs-2-lakh-teachers-to-meet-student-teacher-ratio-unesco/

of schools were complying with the ideal pupil-teacher ratio. Moreover, the ratio especially is very low secondary and primary schools. It is recommended to work with the state department of education on curriculum development and train teachers accordingly. This can be done on pilot bases to integrate further based on success.

Equity in Access to Education: The enrolment in primary, secondary and higher secondary have increased on average, however, the enrolment figures of the government indicate the proportion of girls being enrolled into these institutions is often 90 percentage points lesser than boys on a yearly basis. Furthermore, drop-outs among girls as well as the proportion of girls who have never been to school is higher than boys. A key need here is to carry out behaviour change campaigns in order to ensure gender parity in enrolment and continuance of education. Furthermore, linkage with existing government policies on scholarships can be made. Further details provided below.

> **Best Practice:** Vodafone-Idea, as part of their CSR has developed India's largest multi-lingual scholarship discovery and assistance platform (www.learningwithvodafoneidea.in). This platform has curated information of scholarships worth more than INR 15,000 crore. The platform lists the minimum criteria required for each scholarship and further maps beneficiaries against the same.

Impact Assessment

Project Child Care Centre (CCC)

Evaluation Criterion 1: Relevance

It is said that the development of the brain is most crucial when the child is between the age of 0 to 6 years. The basics and fundamentals of all the learning by a child are laid during these years which eventually have enormous impact on their future[64]

According to the ASER report, across Odisha, at age 3, around 90 percent children are enrolled in Anganwadis. This continues to be the case at age 4 as well. By age 5, a movement into schools is visible with 34 percent children moving into schools.[65]

In July 2020, the Ministry of Education released the new National Education Policy, where schooling begins with the inclusion of ECCE from age 3. The policy states "Universal provisioning of quality early childhood development, care, and education must thus be achieved as soon as possible, and no later than 2030, to ensure that all students entering Grade 1 are school ready."[66]

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[64] Microsoft Word - 2. National ECCE Curr Framework final .doc (wcd.nic.in)
[65] http://img.asercentre.org/docs/ASER%202019/aser%202018%20young%20children/aser2018youngchildren.pdf
[66] Early childhood education | UNICEF India

The three years of ECCE and early primary grades (Classes 1 and 2) are proposed as a continuum of learning and referred to as the foundational stage of school.

The NEP 2020 recommends four models for implementation of quality Early Childhood Care and Education (ECCE), these are Anganwadis centers in communities. Anganwadis centers located within school premises, pre-primary sections in schools and standalone pre-schools[67].

Upon realizing such mismatch of the early childcare education where children attend irregularly, back and forth movements between preschool and primary grades [68]and Kalahandi being also known for its poverty and low literacy rate. In addition to that, there are no schools providing pre-school education in the area. To instill discipline in children and to prepare them for formal education, the project Child Care Centre was started. Health and nutrition for the children is also a part of the programme which now runs under Nandghars. Thus, the intervention is extremely satisfactory on the relevance scale.

Evaluation Criterion 2: Effectiveness

The program's effectiveness has been measured by examining how successfully the project's targets were defined, as well as the achievement of the targets. The program has well defined target and project outputs. The program has successfully achieved the targets defined. It establishes the effectiveness of the program extremely effective.

The project is well aligned with Vedanta's CSR policy of continuously working towards improving quality of life of the communities in its operational areas. The project has MoUs with clear definition of starting and end dates, timelines, and budget provisions. However, there is an underspent in the project budget.

Evaluation Criterion 3: Coherence

A program's relevance is determined by how well it aligns with the goals and policies of the national and state governments as well as Sustainable Development Goas. It also aims to ascertain whether the project is pertinent to the beneficiaries' requirements. The project's relevance is understood in terms of both linkages to existing government programs and community needs. The project aligns with the goals and policies of the national and state governments as well as SDG Goals.

The project is well aligned to SDG 4, that envisions to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. Not only that the project is aligned to SDG 3, which envisions to ensure healthy lives and promote well-being for all at all ages.[69]

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[67] 2018 Final Report for 2019_Part-1.cdr (asercentre.org)
Early childhood education | UNICEF India
[68] file (unicef.org)
[69] https://unric.org/en/sdg-3/

SDG	How are projects aligned with BU's CSR Policy?
	In terms of SDG alignment, SDG Goal 4 of quality education aligns with project goals. The project is ranked as moderately satisfactory as per the coherence scale.
	The project ensures access to health services for the community

Evaluation Criterion 4: Efficiency

The program's effectiveness has been measured by examining how successfully the project's targets were defined, as well as the achievement of the targets. The program has well defined target and project outputs and has achieved the targets defined. It establishes the effectiveness of the program to be satisfactory.

Evaluation Criterion 5: Impact of intervention

Improvement in Child's nutritional status

As per the NFHS data 2021, children who were receiving adequate diet (6-23 months) in the state (rural) was 31.4 percent. 18.6 percent of children under 5 years were wasted and 32 percent of the children were stunted. 31 percent were underweight. [70]

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[70] http://rchiips.org/nfhs/NFHS-5_FCTS/Odisha.pdf

Figure 18: Child's nutritional status
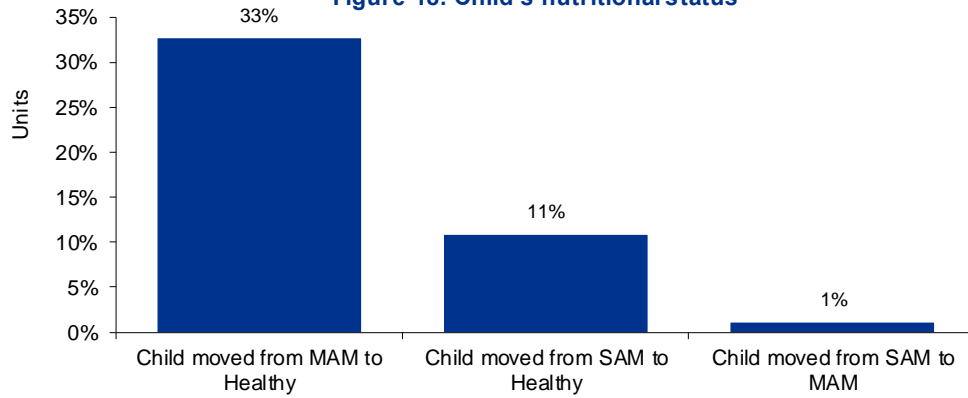
33 percent of the children moved from MAM to healthy whereas only 11 percent of the Children from SAM in Lanjigarh block moved to being healthy.

As mentioned in the current baseline, **63 percent of the children** under 5 years of age are well nourished.

Improved access to supplements for children/pregnant women

Figure 19 Improved access to supplements
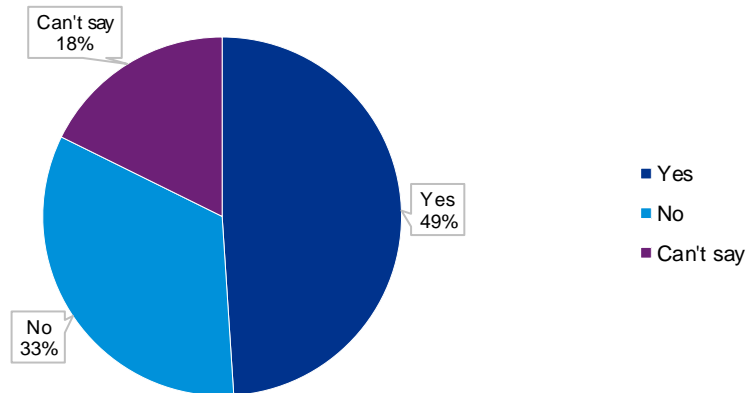
As per figure 19, VAL-L provides supplementary nutrition to children under the age of 6 in the Anganwadis they intervene in. According to the respondents who had children under the age of six, all had increased access to supplementary nutrition through the Anganwadis. Nutrition for pregnant woman has also improved with 49 percent of the respondents agreeing.

Other than Project Child Care Centre, Vedanta is also committed to provide quality education to the children in Lanjigarh. To ensure this, VAL-L established the DAV International School as part of its social interventions.

DAV Vedanta International School

Vedanta Aluminium is committed to providing quality education for the people of Lanjigarh, Odisha through its social interventions. Established in 2006-07, DAV Vedanta International School is a pioneering institution that provides educational support to more than 2700 students. Located in the Vedanta Aluminium township campus, the school aims to bring development to the doorsteps of the local community. It is managed by the DAV College Managing Committee and provides an educational journey from Nursery to Std-XII.

With Vedanta's interventions, The DAV Vedanta International School is Kalahandi's first English medium school and is dedicated to providing quality education to every child from the nearby villages, at an affordable cost. The school is well-equipped with state-of-the-art infrastructure and facilities, such as smart classrooms, modern computers, science and maths labs, multimedia room, a well-stocked library and more. Fueling the curiosity of nearly 1200 students, the majority of whom are from local communities, the DAV Vedanta International School is making a real and lasting impact in the lives of its students.

2022's CBSE Board Exam results saw an incredible 98.60% achieved by a class 10 student, and 96.40% by a class 12th student - a testament to the impact Vedanta has brought to their lives through quality education. These extraordinary results are a clear reflection of the commitment to excellence that Vedanta has instilled in its students.

Evaluation Criterion 6: Sustainability of intervention

The exit plan is clearly defined in the project charter- herein, the CCCs (which are within a 16-year project) will be merged with AWCs through advocacy with the Women and Child Development department- through conversion into Nand Ghar.

Nand Ghars is a network of Modern Anganwadis with an integrated approach to child welfare and skill development for women. Its core initiatives are Early Childhood Education, Nutrition, Maternal and Child Health, and Women 's Economic Empowerment the rough Skill Development. The intervention is extremely satisfactory on the sustainability scale.

Thematic Area: Health

Executive Summary

Health is defined in the Constitution of the World Health Organization as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" [71].The Government of India in 2017 introduced the National Health Policy, which envisages attaining the highest possible level of health and well-being for all, through a preventive and promotive health care orientation in all developmental policies, and universal access to good quality health care services without anyone having to face financial hardship as a consequence[72].

However, even today, India's healthcare system has been battling with various issues, including the low number of service delivery institutions, lack of treatment and medical care facilities in the institutions, poor doctor-patient ratio, and patient-bed ratio for quite a while now.

The purpose of the Baseline Assessment is to collect information to compute baseline values of monitoring and evaluation indicators and depict the big picture of demand and accessibility around health in Lanjigarh block, district of Kalahandi. There has been a shortage of health infrastructure facilities in the district considering the needs of the people. The following table presents the number of medical institutions available in the district[73].

Key Highlights of the Baseline Assessment:

- The access to the health institutions remains high amongst the respondent households. 98 percent of the respondent households have access to MHUs, and 96 percent of the population has access to Anganwadi centres.

- Despite of having access to public health institutions amongst the respondent households, the access to health services has increased by 40 percent compared to previous baseline 2019.

- Institutional deliveries have improved and remain high at 98 percent.

- Out of pocket expenditure has increased as compared to previous years.

- Health education in the Anganwadi centres is low at 28 percent.

- Malaria and Anemia were the two diseases that was common within the area

Key Highlights of the Impact Assessment:

- There has been a 44 percent decrease in annual health expenditure

- 78 percent of the beneficiaries reported on MHV improving timely services

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[71] Constitution of the World Health Organization
[72] National Health Policy, 2017
[73] DES

- Increase in beneficiaries having benefitted by the MHU by 20 percent as compared to 2019

- Improvement in institutional deliveries since 2019 by 24 percent

Key Recommendations

- **Strengthening of Public Health Infrastructure:** The infrastructural gaps have been persistent in public health institutions. There is a need to fill the infrastructural gaps by providing infrastructural support and installing required health equipment and paraphernalia. This involves most of the public health infrastructures in the block.

- **Support the Public Health Institution with Technology Enablement and Creating a Tandem Mode:** Through digital technology integration, the BU can create a hub and spoke model. A patient side tele medicine unit, enabled by clean energy, can be placed at the PHC and CHC level and that can be connected to a hub-a public or private hospital with specialized doctors. **As per field findings during the survey, sometimes there are lack of specialist doctors which remain a challenge**

- **Strengthening the Anganwadi Services:** With the help of the District Health Department, the BU can train the AAWs for the real-time monitoring of Children, Adolescents, Pregnant and Lactating mother. The BU can work towards filling the service delivery gap in liaison with the ICDS District Program Officer by building the capacity of SHGs to provide quality and nutritious food at Anganwadi Centers. **Health education in the Anganwadi centres is low at 28 percent.**

Baseline Assessment

Since its Independence, India has made significant progress in the sphere of healthcare. Against the backdrop of various government interventions and policies, India achieved substantial improvement in the public health care delivery. From eradicating the epidemic in the first two five-year plans to strengthening the public health delivery systems, and establishment of public health institutions under the consecutive five-year plans, India has achieved a robust public health delivery system.[74] Government policies like National TB Control Program, Universal immunization Program, National Cancer Control Program, National Health Policy, Integrated Child Development Scheme, National Health Mission etc. played a pivotal role in fulling the providing the healthcare needs of the country.[75]

The life expectancy in the country improved from 32 years in 1947 to 70.19 years in 2022. Similarly, the infant mortality rate came down from 145.6/1000 live births[76] to 27.6/live births

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[74] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7122919/
[75] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7122919/
[76] https://www.ijph.in/article.asp?issn=0019-557X%3Byear%3D2018%3Bvolume%3D62%3Bissue%3D1%3Bspage%3D1%3Bepage%3D3%3Baulast%3DZodpey#:~:text=The%20overall%20life%20expectancy%20was,to%201000%20in%20the%201950s.

in 2022.[77] India had also progressed in controlling diseases like Malaria, Tuberculosis, Polio, Leprosy, Filaria which were major life-threatening diseases in the early years of Independence.[78] To provide financial risk protection against catastrophic health expenditure, Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY) was launched in 2018 by Government of India, which is the largest Government funded health assurance/insurance scheme in the world. Moreover, the government launched several other schemes like Pradhan Mantri Swasthya Suraksha Yojana (PMSSY) that enhanced the quality of medical education in the country. India has witnessed extensive improvement in healthcare infrastructure since independence. With over 92,000 seats, there are now 612 medical colleges in India as compared to 28 in the 1950s[79]

Odisha has also made notable improvements in health status in recent years. Infant mortality rate (IMR) in Odisha has reduced dramatically, from 112 deaths per 1,000 live births in 1992–93 to 36 in 2019–21. The state also achieved one of the faster declines in maternal mortality compared to India's seven other EAG (Empowered Action Groups) states, with a decrease in maternal mortality rate (MMR) from 235 deaths per 100,000 live births in 2010–12 to 168 in 2015–17. Although Odisha has the highest incidence of malaria in the country, the state has seen a steep decline—of more than 80 percent —in malaria cases between 2017 and 2019.[80] Between 2005-2019, 1619 new PHCs, 1989 CHCs, 11385 Subcenters were established in rural areas. At the same time, 761 new Subcenters, 146 CHCs, and 6 PHCs were established across rural areas of Odisha.[81]

When it comes to Kalahandi district, it is at the par with the state averages on health indicators. Despite that, 64,2 percent of the women between age 15-49 years are still anemic. 91.3 percent of the children between 12-23 months are immunized. 17.2 percent of the children are wasted, and 33 percent of the children are stunted in Kalahandi. The scenarios depit furtherher intervention in the domain of public health care in the district.[82]

[77] https://www.financialexpress.com/healthcare/news-healthcare/india-at-75-important-healthcare-achievement-of-the-country-since-gaining-independence/2621945/
[78] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7122919/
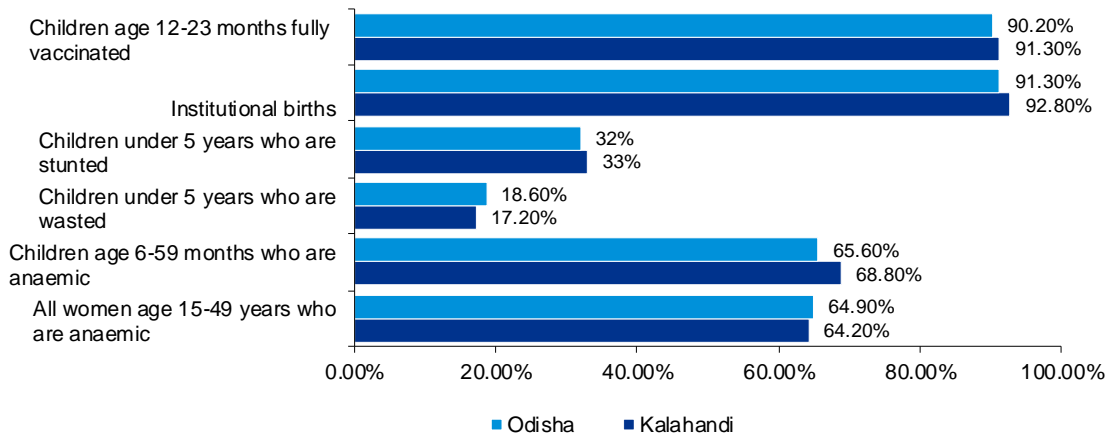[79] https://www.financialexpress.com/healthcare/news-healthcare/india-at-75-important-healthcare-achievement-of-the-country-since-gaining-independence/2621945/
[80] https://www.tandfonline.com/doi/full/10.1080/23288604.2022.2132366
[81] https://main.mohfw.gov.in/sites/default/files/Final%20RHS%202018-19_0.pdfare
[82] http://rchiips.org/nfhs/NFHS-5_FCTS/OR/Kalahandi.pdf

Figure 20: Health indicators of the state and Kalahandi

Children age 12-23 months fully vaccinated: 90.20% / 91.30%
Institutional births: 91.30% / 92.80%
Children under 5 years who are stunted: 32% / 33%
Children under 5 years who are wasted: 18.60% / 17.20%
Children age 6-59 months who are anaemic: 65.60% / 68.80%
All women age 15-49 years who are anaemic: 64.90% / 64.20%

■ Odisha ■ Kalahandi

[83]

Access to health institutions

Healthcare is a right to all in the country and the population should be able to receive health services that are "physically and financially accessible, affordable and acceptable for all"[84]. According to an article titled "Human Development in India: Challenges for a Society in Transition" major illnesses in rural India often go untreated due to the unavailability of diagnostic facilities in the local vicinity. In fact, according to a study, while only 3 percent of major illnesses in urban areas remain untreated, the figure stands at 12 percent for rural areas, primarily, less developed villages[85]. Another key factor that influences access to healthcare is 'distance'. Often people residing in rural and tribal belts are deprived of quality healthcare merely because of the lack of availability of healthcare in their vicinity. This implies travel to greater distances to reach any healthcare facility. Furthermore, for people to avail healthcare services it is essential for the necessary infrastructure to be in place.

Although India's overall health indices have improved over the past few decades, the progress across socio-economic groups have not been consistent with the degree of health awareness being low among the underprivileged population due to lower educational status, poor functional literacy, lack of emphasis on education within the healthcare system, and a low priority for health. According to data from Oxfam India Inequality Report 2021[86], the chances of a child dying before his fifth birthday are three times greater in the bottom 20 percent of the population than in the top 20 percent. [87]

At the district level Kalahandi has 242 sub centers, 46 PHCs, 18 CHCs, 1 sub divisional hospital and 1 district hospital all of these align with the health policy basis the rural population of the district. [88]However, there is a lack of 36 percent doctors at PHC, 84 percent of doctors in CHC

[83] http://rchiips.org/nfhs/NFHS-5_FCTS/Odisha.pdf
[84] https://nmji.in/access-to-healthcare-among-the-empowered-action-group-eag-states-of-india-current-status-and-impeding-factors/
[85] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4621381/
[86] https://www.oxfamindia.org/press-release/india-inequality-report-2021-indias-unequal-healthcare-story
[87] https://www.oxfamindia.org/press-release/india-inequality-report-2021-indias-unequal-healthcare-story
[88] https://main.mohfw.gov.in/newshighlights-90

and 51 percent of doctors in District Hospital in Odisha. When it comes to the infrastructure, only 41 percent of the Subcenters in the Odisha have access to electricity. Only 44.6 percent of the Subcenters and 65 percent of the PHCs have separate toilets for male and female.[89]

The purpose of the current baseline assessment is to collect information to depict the demand and accessibility around health in the operational areas of VAL-L. During data collection, respondents were asked whether a certain healthcare institution was accessible to them or not.

As per the primary data, in Lanjigarh 96 percent of the respondents were accessing Anganwadi, 87 percent were accessing Subcenters, 90 percent were accessing district hospitals. While PCH and CHC were accessed by 87 percent and 89 percent of the households respectively.

The accessibility to MHU unit has been reported by 98 percent of the respondents.

As per the previous baseline conducted in 2019, 56.7 percent of the households travelled more than 5 Kms to avail for health care services.16.5 percent of the households travelled 1-3 Kms to avail health care services and 11.3 percent would travel 3-5 Kms to avail health care services. 55 percent of the respondent household reported to have access to district hospital for their health care needs.

Figure 21: Access to health institutions
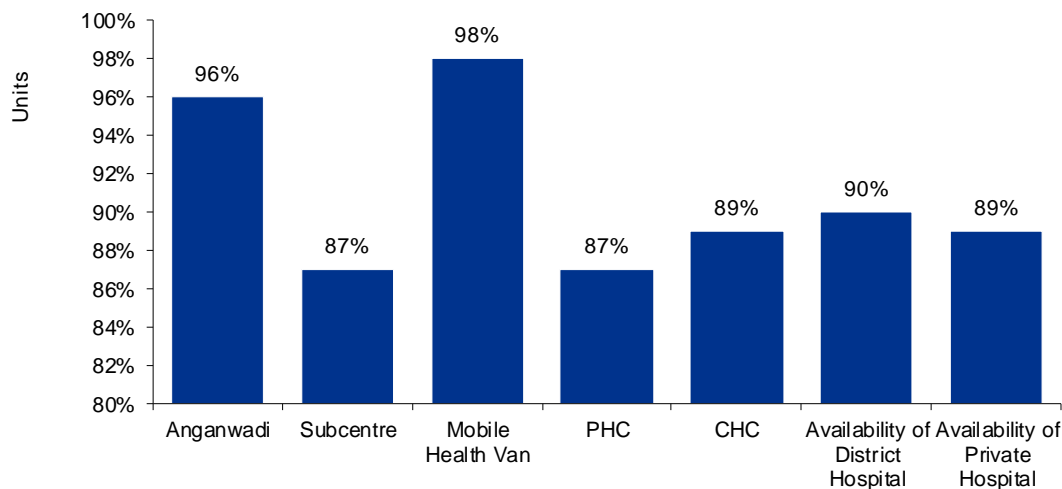
Accessibility to Medical facilities

Access to health care services is important for maintaining health, preventing disease, reducing disability and premature death amongst children, and achieving health equity. When it comes to access to health care services, there lies a disparity between urban and rural areas. [90] Rural population often relies on the public health infrastructure to access medical health facilities,

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[89] https://main.mohfw.gov.in/sites/default/files/Final%20RHS%202018-19_0.pdf
[90] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6522336/

while urban population have an option to choose between private and Government health institutions. Public health infrastructure in rural areas often lack health care facilities and suffers from shortage of staff leading to inaccessibility of the health care facilities.[91]

According to the Rural Health Statistics 2021, almost two-third of the country's population resides in rural areas and yet only 33 percent of the total health workers and 27 percent doctors are available in rural areas.[92].

Odisha has 1 doctor per 1864 people. When it comes to Kalahandi, the district has a doctor population ration of 1:12459[93] which is much higher than the WHO standards of 1:1000[94]. These scenarios hamper the accessibility of the inhabitants of the district to access health care facilities. Moreover, the public health institutions in rural Odisha are plagued with lack of the doctors.

As per the primary data, 98 percent of the respondents are accessing institutional delivery facilities. 79 percent of the beneficiaries reported access to free medicines and 83 percent of the respondents stated to have access to OPD. Facilities like X-ray, ICU beds, ventilators, and operation theatre are available and accessible, but the response was low. Only 15 percent of the respondents have said that awareness camps were being done. 41 percent of the respondents responded that diagnostic Labs are accessible. Despite of having access to public health institutions amongst the respondent households, the access to medical services remains low.

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[91] https://www.thehindubusinessline.com/data-stories/deep-dive/rural-india-is-strugglingwith-shortage-of-doctors-paramedical-staff/article65623110.ece
[92] https://main.mohfw.gov.in/newshighlights-90
[93] http://www.desorissa.nic.in/pdf/dshb-kalahandi-2018-final.pdf
[94] https://scroll.in/article/1029766/how-true-is-the-health-ministers-claim-that-indias-doctor-population-ratio-exceeds-who-guidelines#:~:text=Assuming%2080%25%20availability%20of%20registered,standard%20of%201%3A1000.%E2%80%9D

Figure 22: Medical facilities accessible

Facility	Percentage
Ventilators	12%
Awareness camps	15%
Trauma treatment	7%
Operation theater	11%
ICU	11%
Free Medicines	79%
Institutional delivery	98%
Beds in hospital	14%
Diagnostic Lab	41%
X-ray	11%
OPD	83%
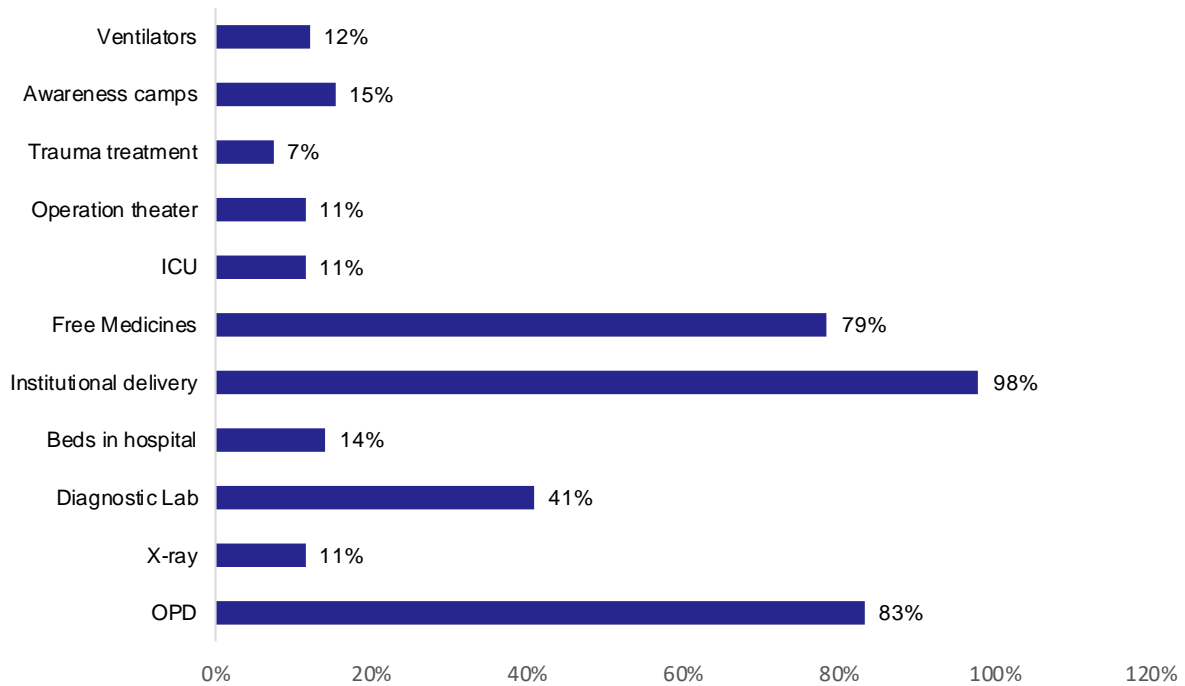
Mode of Delivery

Institutional deliveries as the method adopted for birth has improves drastically across states. In the last few years, the government has taken several initiatives such as Janani Suraksha Yojna where a mother gets a cash assistance of INR 1400 from the government for the institutional delivery.[95] The scheme also provides an incentivization of INR 600 for ASHA in facilitating institutional delivery.[96]Moreover in Odisha, the government has provisioned referral ambulances and Janani Express, an ambulance service for providing 24*7 referral services to the rural patients, especially pregnant women.[97] Better connectivity of the villages through proper road infrastructure has also improved the institutional deliveries in rural communities.

The graph below indicates that 98 percent of the female respondents chose institutional delivery while only 2 percent child births took place at home. This is slightly higher than the percentage of institutional births in the district, which stands at 92.8 percent. **There has been an increase of 24 percent as compared to previous baseline 2019.**

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[95] https://nhm.gov.in/index1.php?lang=1andlevel=3andlid=309andsublinkid=841
[96] https://nhm.gov.in/index1.php?lang=1andlevel=3andlid=309andsublinkid=841
[97] http://www.nrhmorissa.gov.in/frm108services.aspx

Figure 23: Mode of delivery

Home Birth
2%

■ Home Birth
■ Institutional Birth

Institutional Birth
98%
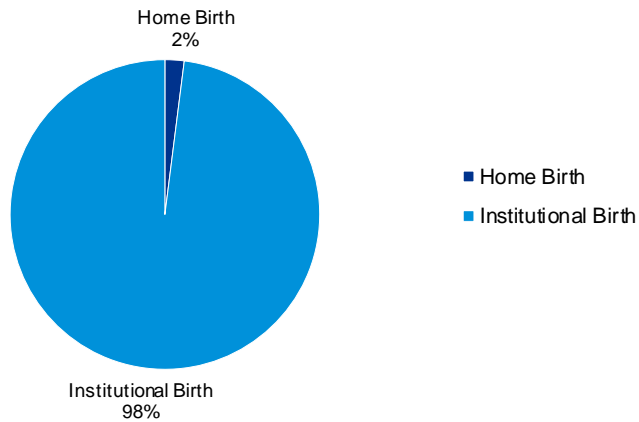
Frequency of healthcare service visit

In case of hospitalization treatment in Odisha, about 83 percent in rural areas of population availed treatment in public hospitals, whereas 18 percent in rural areas of population availed treatment in Private hospitals.[98]

As Per the NSSO 75th report, key Indicators of Social Indicators in India: Health, 3.5 percent of the person reported to have ailing during a15-day period in rural Odisha. Proportion of persons that responded as ailing (PPRA) was highest for the age group of 60 and above followed by that among in the age-group 45-59[99]. Frequency of accessing health care facilities can be the determinant of the health and health seeking behavior of the community. Frequency of accessing health care can be attributed on determining the overall health of the community and whether they have the access to required health care facilities.

As per the current baseline data on frequency of healthcare visits in Lanjigarh, on an average 50 percent of the beneficiaries are accessing health services. 25 percent of the beneficiaries visit the hospital once a month to every three months. Only one to two percent visit the hospitals in six months or more. While majority of the respondents stated accessing health services at least twice a month.

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[98] http://www.desorissa.nic.in/pdf/health-odisha-75th-NSS.pdf

[99] http://www.desorissa.nic.in/pdf/health-odisha-75th-NSS.pdf

Figure 24: Frequency of healthcare service visit
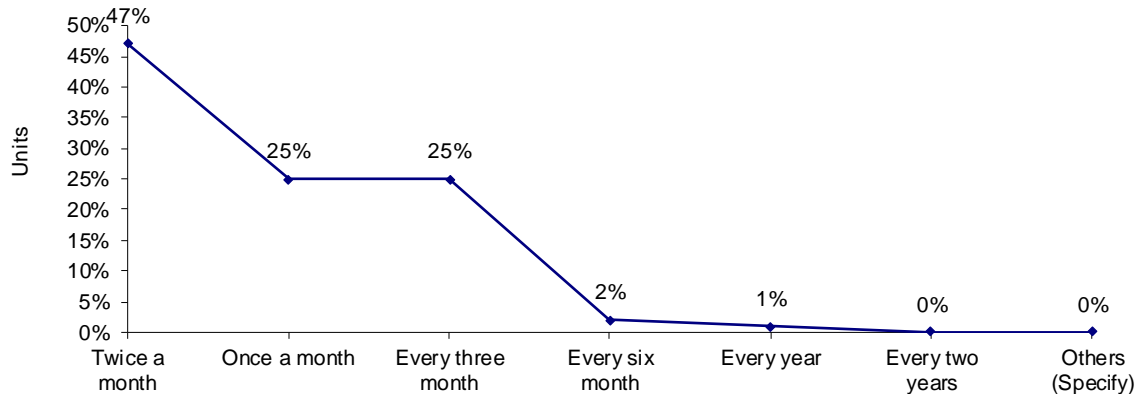
Out of Pocket Health Expenditure

Health expenditure often results into increasing financial burden on rural communities. Increase in medical expenditures can push towards the poverty trap. High expenditure on healthcare leads to create 'medical poverty trap' especially in communities living only on sustenance level. According to the National Economic Survey the Per-Capita out of pocket health expenditure in India stood at INR 2097 in 2021. There has been a drop of 10 percent from 2017 in out-of-pocket expenditure.[100]

As per the National Health Account Estimates of India for 2018-19, the per capita out-of-pocket expenditure (OOPE) - direct payment made by households to healthcare providers at the point of receiving service - has significantly declined from Rs 2,693 in 2015-16 to Rs 1,750 in 2018-19.[101] However, the out-of- pocket health expenditure remains 53.2 percent of the total health expenditure in the state which is much higher than the national average of 40.60 percent as of 2019, according to the MHFW. [102]

Out-of-pocket health spending can force people to choose between spending on health and spending on other necessities. WHO has stated that out-of-pocket expenditure on health is a key driver for economic disadvantage compared to other factors, pushing people into poverty.

Respondents provided annual expenditures on healthcare in the ranges of <2000 INR, 2000 INR - 5000 INR and 5000 INR - 10000 INR. It must be noted that the majority of the respondents spent less than INR 2000 annually on healthcare.

As per the current baseline data, in Lanjigarh 51 percent of the respondents reported to spending between INR 2000 - INR 5000 on healthcare annually, whereas, compared to previous baseline, only 16.5 percent spent in the same range.

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[100] https://www.thehindu.com/news/national/per-capita-out-of-pocket-health-expenditure-declines-from-2336-to-2097-says-report/article37747876.ece
[101] https://www.newindianexpress.com/states/odisha/2022/sep/13/odishas-out-of-pocket-spend-on-health-drops-to-53-per-cent-says-nha-report-2497715.html#:~:text=Home%20States%20Odisha-,Odisha%27s%20out%2Dof%2Dpocket%20spend%20on%20health%20drops%20to%2053,71.5%20pc%20to%2053.2%20pc.
[102] https://pib.gov.in/PressReleasePage.aspx?PRID=1858770

26 percent was reported to spend between INR 5000-10000, whereas, compared to previous baseline, only 13.4 percent spent in the same range.

And 23 percent reportedly spent less than INR 2000 on healthcare in the current baseline, whereas, compared to previous baseline 2019, 53.6 percent of the households spent less than INR 2000 on healthcare.

Figure 25: Out of pocket expenditute in health
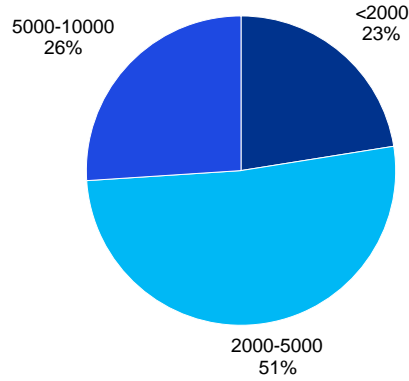
It can be observed that there has been an increase in the out-of-pocket health expenditure amongst the respondent household from the previous year baseline.

Alternatives for Institutional Healthcare Used

Figure 26: Alternate for Institutional Healthcare used
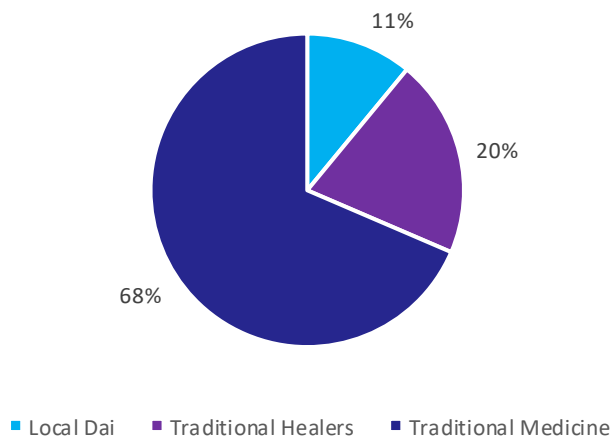
The education level and medical qualification of health workers in India is less than a quarter, only 23.3 percent of all health workers had a medical qualification. Among the allopathic

doctors, 57.3 percent did not have medical qualifications[103]. Further 96.2 percent of the persons in rural Odisha reported to avail allopathic treatment and only 3.7 percent reported to have AYUSH treatment.[104]

Despite of having improved access and availability to health care facilities, rural HHs still depend on traditional healers and traditional medicines/home remedies owing to lack of knowledge. Access to such methods may have placebo effect, but it can also exacerbate the health condition of the patient. Hence, it is important to establish a baseline amongst respondents, to help VAL-L in identifying the key alternative a respondent use as the alternative of accessing and availing health facilities. It will also depict the behavioral aspects of the respondents towards health institutions.

As per the primary data, 68 percent of the beneficiaries use traditional medicine for their aliments. Traditional healers and local Dais are also being visited in case of medical emergency or necessity by 20 percent and 11 percent respectively. To address such concerns, VAL-L established the Vedanta Hospital and is focusing on improving the health facilities for the people of Lanjigarh.

Analysis and Way Forward

Improvements in health

- There has been an increase in access to the district hospitals by about 40 percent.
- As compared to the previous baseline survey 2019, a jump of 24 percent has taken place as 98 percent of the women practice births through institutional deliveries.
- 80 percent of the respondents depend on the Anganwadi centres for health check-ups compared to 42.5 percent of the household stated improvement of health facility in the Anganwadi centers as per previous survey 2019.
- The Mobile Health Units is a success as 98 percent of the respondents depend on it for their health requirement
- High quality and abundance of medical facilities available in the Vedanta hospital
- Free consultations and free medicines for all in the community

Challenges

As expressed by beneficiaries, the community still insist on better facilities and services, like specialists' doctors and lifesaving equipment technology in the Lanjigarh block. More often due to lack of specialist doctors, (example a Gastroenterologist etc.,) and due to distance between the hospital and some of the villages, community members are facing challenges in accessing healthcare. Thus, community members are compelled to visit the Government hospital at Bhawanipatna.

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[103] WHO: The health Force Work in India https://apps.who.int/iris/bitstream/handle/10665/250369/9789241510523-eng.pdf?sequence=1andisAllowed=y
[104] https://nss.gov.in/

There has been requests and demands from the villagers for the MHUs to cover the last mile, although it covers most of the areas.

Possible Solutions

Making specialist doctors available for the patients

▪ Government Alignment

> National Health Mission provides financial support to states to strengthen the public health system including upgradation of existing or construction of new infrastructure. Under NHM high focus states can spend up to 33 percent and other States up to 25 percent of their NHM funds on infrastructure.
>
> Source: https://nhm.gov.in/

▪ Liaison with District Health Department and PRI institutions Strengthening the Anganwadi Services

Infrastructure deployment and capacity building for Anganwadi workers are the two crucial aspects of strengthening the service delivery of Anganwadi services. While the BU has already worked on strengthening the Infrastructure of the Anganwadi Centre through the implementation of the group-level Nand Ghar program, where the required infrastructure is being provided to the Anganwadi centers.

The BU can train the Anganwadi workers (AWWs) on the use of digital technologies which are provisioned under the Poshan Abhiyan.[105]With the help of the District Health Department, the BU can train the AAWs for the real-time monitoring of Children, Adolescents, Pregnant and Lactating mother. The BU can work towards filling the service delivery gap in liaison with the ICDS District Program Officer by building the capacity of SHGs to provide quality and nutritious food at Anganwadi Centers. It can work towards strengthening the PDS with government liaison to provide food security to the targeted households.

It can mobilize Village Health and Sanitation committees at the Gram Panchayat Level to mobilize the community to send their children and pregnant and lactating mother to the Anganwadi centers. The committee can also act as a pressure point on the District Health Department for strengthening the services at Anganwadi Centers.

▪ Community Involvement in increasing health seeking behaviour and bringing behavioural change:

VAL-L has a strong connection with the community and has created effective community-based organizations in the areas that they operate. Given that health behaviour change is essential for increasing health seeking behaviour as well as increasing promotive healthcare, such community-based organizations can be leveraged for the same in a campaign mode. It is also acknowledged that VAL-L has been carrying out campaigns on

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[105] http://poshanabhiyaan.gov.in/#/

special health days, however this can be bolstered along with these groups as a regular feature that peaks the attention of the rest of the community.

Impact Assessment

Project Aarogya

Under healthcare, the BU has two interventions. Projects Aarogya, which consists of Vedanta Hospital, providing healthcare services in Lanjigarh and the Mobile Health Unit that provides health services to the last mile.

The hospital engaged a highly qualified and experienced medical staff to ensure that the hospital delivers quality treatment.

Maa Santoshi Jan Kalyan Foundation Hospital (MSJKF) is another intervention which is supported by the VAL-L and provides to the tribal community.

The following section will analyze the impact created by VAL-L's MHU program by using OECD framework.

Evaluation Criterion 1: Relevance of Intervention

Rural medical care has been an issue of concern for residents in the many villages of Odisha. The out-of-pocket expenditure on health in the Kalahandi district is about Rs. 2,271 compared to the Orissa state which is at Rs. 4,139[106]. Limited access to proper medical care, unaffordability of the same, remoteness of the villages, distance from the city center and financial state of the rural folk, are few of the many factors' contributing to the poor situation. VAL-L under its CSR introduced the Vedanta Hospital under Project Aarogya and since has been a leader in providing high quality health services in Lanjigarh region. The project focuses on working with the community to adopt best preventive measures towards healthcare through a robust Information, Education and Communication (IEC) approach, and provide quality curative health services to local populace through the hospital and Mobile Health Unit. The services in the hospital are complimentary which is beneficial for all the people in Lanjigarh block.

Vedanta has also partnered and supports Maa Santoshi Jan Kalyan Foundation Hospital (MSJKF), which is 30 kilometers away from Lanjigarh.

Targeting the needs of the beneficiaries: CSR plays a crucial role to make health not just accessible, but affordable, and relevant for the upcoming generations. Project Aarogya is one such initiative that aims to reach out underserved communities but is at the same time futuristic in its intent

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[106] http://rchiips.org/nfhs/NFHS-5_FCTS/OR/Kalahandi.pdf

Through Project Aarogya and MSJKF, Vedanta Limited Lanjigarh has managed to address inaccessibility to health in addition to contributing to providing jobs to the community.

The relevance of Vedanta hospital has been found to be extremely satisfactory, whereas MSJKF was satisfactory on the relevance rating scale.

Evaluation Criterion 2: Effectiveness

The program's effectiveness has been measured by examining how successfully the project's targets were defined as well as the achievement of the targets. The program has well defined target and project outputs and has successfully achieved the target defined.

Financial savings for the beneficiaries – Under Project Aarogya, through Vedanta Hospital, facilities like pathology, radiology, In Patient Department (IPD) wards, physiotherapy, consultations and medicines are free of cost.

The beneficiaries also have access to medical specialties such as Pediatrics, Medicine, Obstetrics and Gynecology, Orthopedics, dentist, and ENT doctors.

The Mobile Health Unit travels across the village blocks to provide medical facilities which helps beneficiaries who find it difficult to travel to the hospital. The Mobile Health Unit also conducts awareness camps within the area. As per the data on the current baseline, 98 percent of the beneficiaries had access to MHUs. Due to the reasons above, the frequency of the use of healthcare facilities have increased.

Awareness on Health – Awareness is everything and yet there is no achievement without action. Vedanta limited, Lanjigarh supports Maa Santoshi Jan Kalyan Foundation Hospital, which provides health camps, awareness camps, and training program for the tribal communities in Bankakundru. There are menstrual health management camps covering village-on-village basis awareness drive with a target to sensitize the community in entire Kalahandi district. Institutional birth rate is at 98 percent now, which shows the effects of the interventions.

The intervention of both Vedanta Hospital and MSJKF were extremely satisfactory on the effectiveness scale.

Evaluation Criterion 3: Coherence

SDG Target	SDG	How are the projects aligned?
- Target 4.1 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.[107]	**3 GOOD HEALTH AND WELL-BEING**	The project provision to provide quality health services to the doorsteps of the community free of cost.

The coherence of Vedanta hospital has been found to be extremely satisfactory, whereas MSJKF was rated moderately satisfactory on the coherence rating scale.

A matrix of relevant polices and schemes have been illustrated in the table given below:

Health System strengthening Interventions in Odisha	
Name of the programme	**Key Highlights**
Nidaan Scheme	Free Diagnostic Services at identified Public Health Facilities both through own system and PPP mode are implemented.
ANMOL	ANM Online is an android based application, developed to facilitate seamless work of ANMs as well as ensuring collection of good quality data and its digitization at its source. It has been implemented in all 30 districts.
Sunetra	Universal Eye Health Programme for five years from 2018-19 to 2022-23 to address all the eye related barriers
Khushi	To address the issue of menstrual hygiene among women, both post-partum and post-MTP (Medical Termination of Pregnancy) and adolescent girls,

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[107] https://unric.org/en/sdg-3/

SOPAN	To improve the nutritional and health status of children below the age of 6 years
MAMATA	Financial aid to the pregnant women and lactating mothers to alleviate the prevailing conditions of maternal and infant undernutrition

Evaluation Criterion 4: Efficiency

Project Aarogya and MSJKF Hospital is aligned with Vedanta's CSR policy and has MoU's in place which has a well-defined start and are ongoing projects. Both, Vedanta's Project Aarogya and MSJKF underspent the budget as compared to original allocated amount. The reason for the underspent is also due to lack of manpower with Vedanta Hospital.

The efficiency of Vedanta hospital and MSJKF was rated satisfactory on the efficiency scale.

Evaluation Criterion 5: Impact of intervention

Average annual expenditure on health

As per the analysis the **44 percent respondents stated that there has been a decrease in the average annual expenditure on health. The average decrease was INR, 1,624**. While the other 34 percent felt that there has been an increase in their expenditure on health.

The remaining 16 percent and 6 percent of beneficiaries did not see any change or have not responded to the issue respectively.

Figure 27: Average annual expenditure on the health expenses
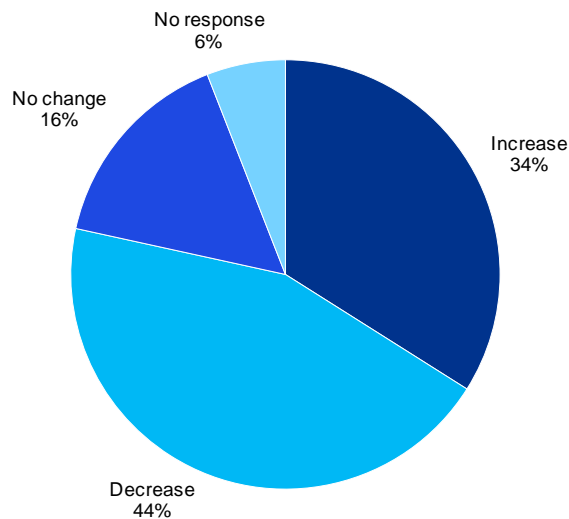
Accessibility to health services via MHU

As per the current baseline data, 98 percent of the beneficiaries have access to MHU. According to Directorate of Economics and Statistics, GOO, 99 percent of children in rural Odisha had received any vaccination from Government/ Public hospital[108] and the mobile medical units played an integral part of the success.

As per the current data, **54 percent of the respondents felt that there is an increase in accessibility to free medicines via MHU's** and 42 percent felt that it helps in better ORS distribution. 24 percent of the respondents reported access to health check-up through MHU.

As per the previous baseline data 2019, 56.7 percent of the households had to travel more than 5 kilometers to access health services. **The Mobile Health Unit or MHU, has helped bringing medical facilities to the doorstep of the villagers.**

Figure 28: Access to health service via MHU

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[108] http://www.desorissa.nic.in/pdf/health-odisha-75th-NSS.pdf
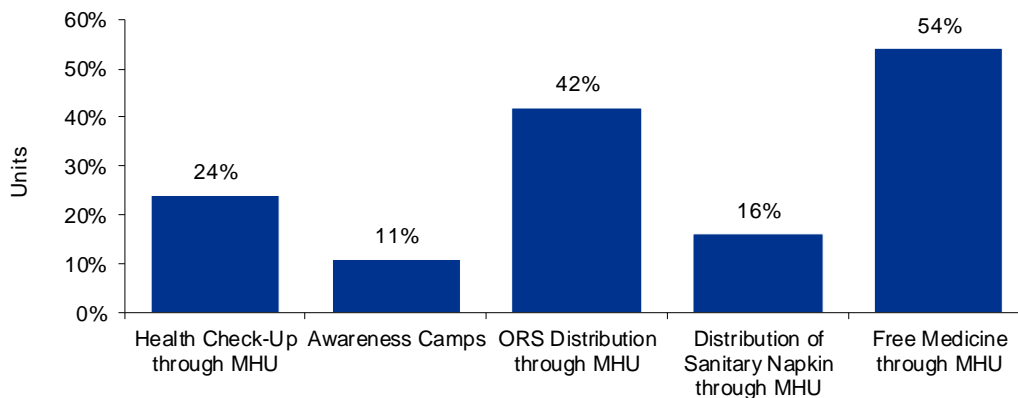
Improving timely health services

Figure 29 MHV improving timely health services
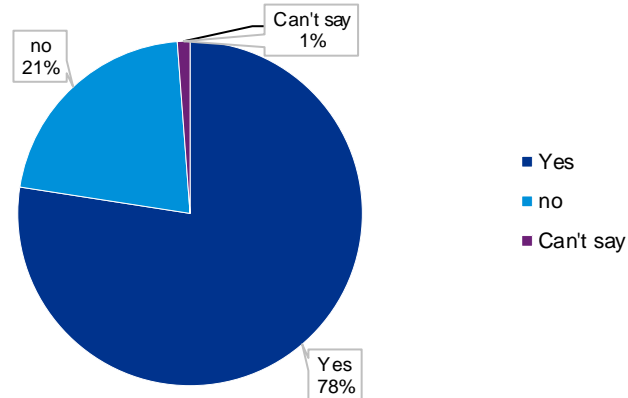
The Mobile Health Unit (MHU) provides doorstep healthcare services including quality medical consultations and cost-free medicines to over 50 remote villages per month. **78 percent of the respondents stated that MHU has led to increase timely access to health services.**

As per the previous impact study 2019, the services of the Mobile Health Units had definitely improved as 50 percent of the households derived high benefits. However, the high benefit of the mobile unit services was mainly cornered by the high-income group as the extent of the benefit received by the low-income group was just 24.4 percent.

Impact of Mobile Health Unit on healthcare services

Figure 28: Impact of Mobile Health Unit to healthcare services
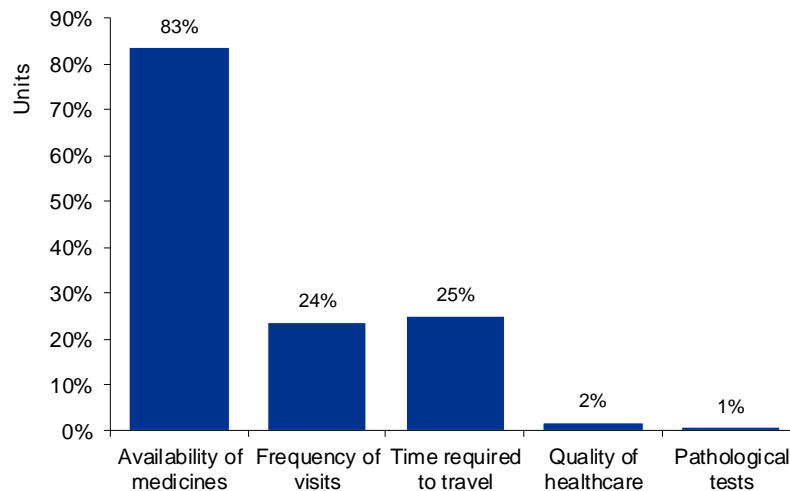
Availability of medicines was the biggest impact brought in by the mobile health unit at 83 percent, while the time required to travel to the locations have been improved as mentioned by 25 percent of the respondents. Despite the 24 percent increase in frequency of visits, the BU may need to strive to increase the number even. The quality of healthcare and availability of pathological tests are at a staggering low of 2 percent and 1 percent which the BU may look into.

Based on the previous impact study 2019, 77.8 percent were benefitted from the Mobile Health Unit programme. This number has considerably increased to 98 percent of the beneficiaries having benefitted by the MHU.

Once the health quality improves, the other components will increase simultaneously.

Improved access to healthcare and WASH facilities

Figure 30: Improved access to healthcare facilities
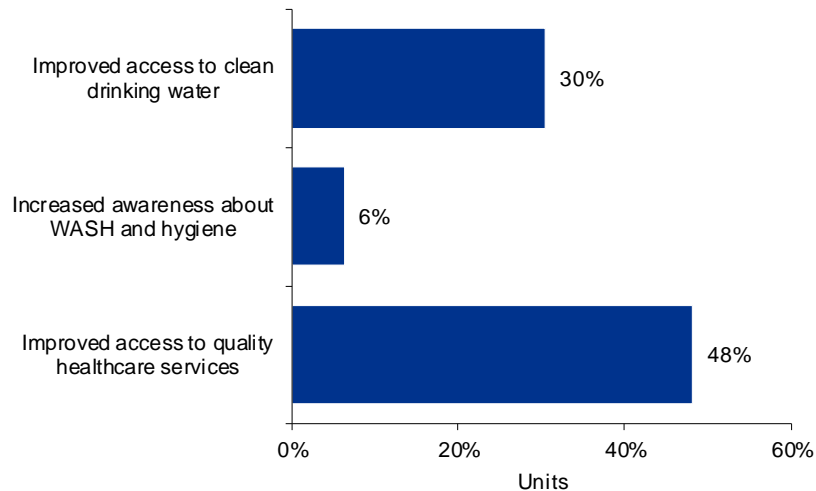
Lanjigarh block has benefited from improved access to quality of healthcare services and access to clean drinking water and hygiene with a 48 percent and 30 percent respectively. The beneficiaries reported increasing awareness of WASH and hygiene at 6 percent only.

As mentioned on figure number 22, Vedanta hospital have also contributed to those numbers and have provided many advanced medical facilities for the people of Lanjigarh. It is pleasing to hear that 98 percent of the respondents were aware of institutional delivery facilities. 79 percent of the respondents felt that free medicines are accessible to them, though the Vedanta hospital provides free medicines to all its patients (100 percent). OPD service in the Lanjigarh block is easily accessible as mentioned by 83 percent of the respondents in the baseline data.

Menstrual health management

Vedanta Limited's sensitization drive on menstrual hygiene for adolescent girls and their mothers in the peripheral villages of Kalahandi district has been a great success. As part of the NITI Aayog's Aspirational District programme, Vedanta Lanjigarh has been carrying out this drive since December 2020, with a focus on menstrual hygiene, eradication of related myths and misconceptions, and bringing about positive changes in the habits and practices of the adolescent girls pertaining to menstrual and reproductive health. Due to this drive, the adolescent girls have already started using sanitary pads in these villages - a huge improvement from the previous practice of using clothes during their menstrual cycle, which often resulted in hygiene-related health problems. So far, the initiative has reached nearly 3066 adolescent girls and their mothers through 177 awareness programs.

Community Health Awareness Programme (CHAP)

Under Project Arogya, Vedanta Hospital follows two-pronged approach i.e., "Curative and Preventive". Curative part is catered by Vedanta Hospital, MHU team and Health/Medical Camps. On the other hand, Preventive aspect is catered by a specially designed team which follow I.E.C. (Information, Education & Communication) model. Such Preventive approach aims to make people aware about those practices that can lead to epidemic. These awareness programs not only make people aware about such practices, but also provide information to the community about the ways to tackle health hazards before it turns into disaster. The team covers 60 villages in a month spreading awareness about diseases like malaria, diarrhoea and other seasonal diseases and the safe sanitation practices to tackle them.

Support from CSR projects during Covid-19 pandemic

During the Covid -19 pandemic, The CSR projects in every thematic area have supported the beneficiaries as shown below in the figure. But Health and WASH is one area where 88 percent of the respondents have given a vast response of the support received. Activities like Sensitizing the community towards the need of COVID 19, distribution of masks and soaps, meals during lockdown, availability of doctors, telemedicine services were some of the interventions taken by the BU under health and WASH.

Figure 32 Support from CSR projects during Covid-19 pandemic
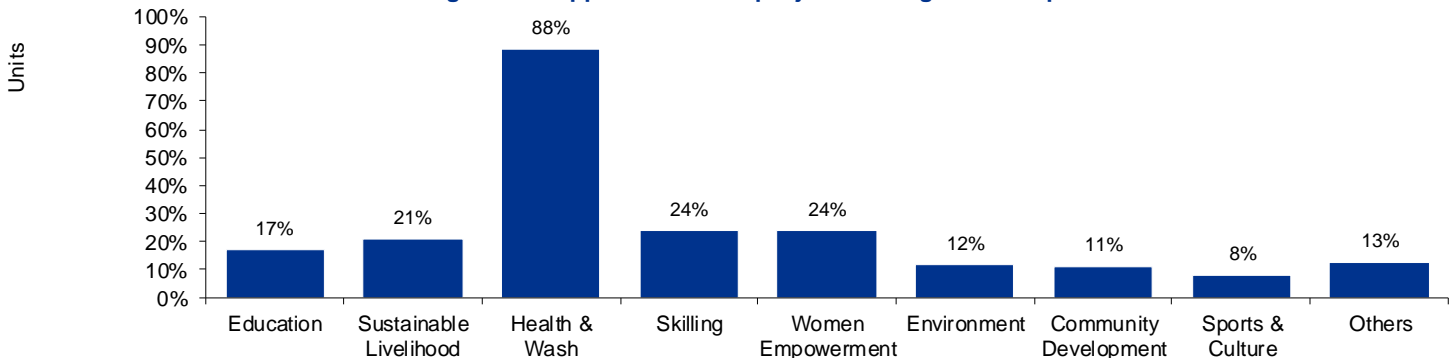
Evaluation Criterion 6: Sustainability of intervention

The indicators for mapping sustainability are to check if there is a mechanism in place to ensure convergence and exit strategy so that the impact of the project can be sustained.

Projects Aarogya is working with an objective to make world class health facilities accessible for the local communities, while providing door-to-door and awareness campaigns in the village block. The BU has also tied up with Government hospital like Maa Santoshi Jan Kalyan Foundation Hospital where free health services to tribal communities and health camp, awareness camp, training program for community are given.

The exit plan is to hand over the Vedanta Hospital to the government. However, until the plant is in existence, Vedanta will run the hospital. While, for MSJKF, Vedanta plans to gradually withdraw as the government adopts the hospital. The implementing partner has already begun leveraging funds from the government for the hospital.

The sustainability of Vedanta hospital and MSJKF has been found to be extremely satisfactory, on the sustainable scale.

Suggested Way forward

Better healthcare facilities –

Quality healthcare is what Vedanta Hospital provides to the people of Lanjigarh. But healthcare institutions require upliftment both in infrastructure and human resources. This needs systemic long-term planning as this will ensure effective steady and committed healthcare. The project may focus on bringing in specialist doctors as there have been requests by the beneficiaries. This will help save cost which will add to the impact of the project. A partnership with several Government hospitals can be looked like a way forward. There are private and Government volunteer doctors as well which the BU may target from various organizations such as Red Cross, Aarogya seva or Government Health Cadre etc.

VAL-L may focus on improving the health services in Anganwadi centres by upgrading the facilities and providing health equipment and paraphernalia. As per the stakeholders interviewed, the healthcare in Anganwadi centres were poor. The BU can fill this gap by provisioning telemedicine at Anganwadi centres and even PHCs and CHCs. This will further improve the accessibility of the beneficiaries living in far flung village and further reduce their travel cost for accessing health services at District Hospital.

Best Practice

Ama Clinic: To reduce out of pocket expenditure of the urban population and slum dwellers in particular, the Govt. of Odisha has launched 'Ama Clinic' to provide weekly specialist services in the Urban Primary Health Centers and Urban Community Health Centers. The specialist services include Obstetrics and Gynecology (O and G), Pediatric, Nutritionist, Medicine and Geriatric, Adolescent services, Psychiatric services, Ophthalmology services and Physiotherapy services.

Government Alignment: eSanjeevani is the first-ever online OPD (outpatient) consultation service offered by the government of India to citizens. According to the government, this is the first time the government of a country is offering a service of this kind to its citizens. A few states like Jharkhand, Kerala, Punjab and Tamil Nadu, etc. have started offering specialized doctor consultation services also. It is also present on mobile phones.

Increase Awareness Generation –

The term awareness generation is now a generalized term, but the impact it creates if focused upon is very high. Awareness generation for prevention from diseases, menstrual hygiene and

sanitation, government health benefits, etc. will help changing the health-seeking behaviour of community. It will also reduce the burden on households through the prevention of diseases, seeking early treatment, availing benefits from government schemes, etc. Therefore, it is suggested to carry out awareness generation activities in a more comprehensive way by organizing camps within villages, and schools. Also, involving the community by organizing 'nukkad natak' and other cultural events to generate awareness might be an effective way. **Although under Project Aarogya, the BU are running, Community Health Awareness Programmes, the BU may continually remind the villagers to reinforce the importance of health. This will help to ensure that the importance of health is ingrained in their minds and that may help them take proactive steps to maintain their health and wellbeing.**

Mobile Health Unit coverage –

The Mobile health Unit cover most parts of the villages, but there have been requests for it to address and reach the last mile. This too comes down to connectivity and development of the areas. There are National Ambulance Services at disposal where the hospitals can collaborate with, and the average time of Emergency Medical Ambulance Services (EMAS) ambulances is about 26.27 Minutes.

In all, 624 Emergency Medical Ambulance Services (EMAS) ambulances are operational. Of these, Capital cost of all 596 Ambulances and Operational cost of 176 Ambulances have been borne by the State.[109]

Business Drivers for Health Programmes

CSR is a pivotal management concern given that in order to expand their wealth creation role in society, businesses must proactively manage risks and take advantage of opportunities vis-à-vis reputation and engagement with stakeholders. Based on the perception survey, the internal stakeholders of VAL-L believe that companies having a focus on key business drivers focused on sustainability have a greater chance of success and further believe that such companies are more attractive to investors.

The CSR management that are certain that the focus on certain key drivers for business have improved community relations. In fact, the focus on these business drivers has a direct relation to improving relationships with local communities, increasing trust, improving the reputation of VAL-L as well as contributing to the national and international social development goals. Therefore, VAL-L leadership's perception on such benefits is both inward and outward looking and encompassing a varied group of stakeholders. Specifically, according to the study 100 percent of the VAL-L's internal stakeholders considered "supporting social development of the local community", "providing equal economic opportunities to the local community", conserving the environment and preserving and promoting cultural heritage the key business drivers for their Corporate Social Responsibility key sustainability drivers. Specifically, within the area of social developed, 75 percent of the internal stakeholders considered that the introduction of MHUs for door-to-door access of health services is the strongest business driver for health programmes run under the BU's CSR.

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[109] https://odisha.gov.in/sites/default/files/2022-03/Economic_Survey_2021-22_0.pdf

![KPMG logo]

Business Case for Mobile Health Units:

Health is a global agenda which demands a large amount of technical as well as financial focus from all governments. In the backdrop of COVID-19, provision of preventive, curative as well as promotive healthcare has become one of the top priorities across the world. Not only is it necessary to ensure that a country has a healthy population for its economy, but a population which has access to adequate, affordable and quality healthcare can invest in its own development and wellbeing. The project Mobile Health Unit, by providing access to healthcare at the doorstep of the beneficiaries, has become a partner in healthcare development in the field locations it operates in. Not only is it one of the goals of VAL-L to ensure the overall wellbeing of the communities it works with, the focus on healthcare paves the way to ensure that the population's other basic needs such as livelihood and education do not suffer during those days lost to sickness. A healthy and content community recognizes the value of the business unit in complementing the efforts of the public healthcare system. It further reduces the stress on the government health systems, as a partner to the local stakeholders of the area to meet the goals of ensuring a healthy population. The programme is widely appreciated and is one of the most popular ones run by VAL-L and has been ranked no. project run by the business unit.

Business Case for Vedanta Hospital:

For a business to operate successfully, it is imperative to work with the community and improve its relationship. One of Vedanta's projects towards the society was the establishment of the Vedanta hospital, which is now the lifeline of the Lanjigarh block. **The introduction of the hospital** provides free services and medicines to the people. Through project Aarogya which consists of the hospital and its Mobile Health Unit service, the business unit have worked with the community to adopt the best practices, bring in awareness campaigns that has brought about behavioral change and also to provide doorstep medical facilities. The villagers have now shifted their mindset to modern medicine and medical practices instead of approaching local quacks. With time, Vedanta has been able to bring in other projects as per the needs and demands of the people of Lanjigarh. By virtue of the Vedanta Hospital, it has helped reduced the commuting expenses and the travel time to Bhawatnipatna which has a district hospital and has made healthcare accessible to the people of Lanjigarh. Till date the hospital has had almost 40,000 outpatient Department registrations in the last three years. [110]

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footnote

[110] Vedanta Lanjigarh annual CSR report 20-21

Thematic Area: Sustainable Livelihood

VAL-L has shown significant concern regarding the sustainable livelihood of the communities around which they carry out their business operations.

In a country such as India which is one of the world's fasted growing economies, it is often assumed that there is a direct correlation between growth in the economy and in the job sector. However, it has been noted that "a 10 percent increase in GDP now results in less than 1 percent increase in employment"[111]. Thus, there is a clear need to focus on the meaningful livelihood generation for the population in the country. Furthermore, given that most of the population continues to be engaged in the agricultural sector, support is required to be focused there.

Executive Summary

India is considered to be one of the world's fasted growing economies. Stability in such growth can only be achieved through ensuring meaningful, secure and remunerative employment viz. sustainable livelihood. According to a State of Working India report 2018, economic growth in the country is not accounting for a growth in jobs. In fact, "a 10 percent increase in GDP now results in less than 1 percent increase in employment"[112]. Furthermore, while real wages have grown between 3 to 4 percent in most sectors (other than agriculture where growth happens only once every two decades), wage adjusted for inflation has grown at 2 percent per annum for organized manufacturing, 4 percent for unorganised manufacturing, 5 percent for unorganised services, and 7 percent for agriculture (for the last, growth has collapsed since 2015)[113].

India is the 7th largest country geographically in the world with 328 Mha area and has about 160 Mha of arable land that is second largest in the world. About 50 percent of its total geographical area is cultivated which ranks it among the top user of the land for agriculture. Agriculture has been central to the economy for the sustainable and inclusive economic growth of the country. The sector engages 49.6 percent of the workforce and accounts for about 17 percent share in India's Gross Domestic Product (GDP).[114]

Since the independence there has been an improvement in the overall crop production and overall food grain production increased from 51 Mt in 1950-51 to over 314 Mt in 2021-22. From being food scarce till 1950 to transforming itself into food shortage by 1960, food sufficient by 2000, food secured by 2010, India became food surplus by 2010 onwards. A blend of science, technology, extension, and policy has contributed to this journey of transforming the country from food scarce to food surplus nation.[115]

Livestock sector has also witnessed all round growth after Independence. Being a milk deficit country in and was importing milk/milk powder. With the launching of Operation Flood in 1970,

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[111] https://cse.azimpremjiuniversity.edu.in/wp-content/uploads/2019/02/State_of_Working_India_2018-1.pdf
[112] https://cse.azimpremjiuniversity.edu.in/wp-content/uploads/2019/02/State_of_Working_India_2018-1.pdf
[113] ibid
[114] https://icar.org.in/Indian-Agriculture-after-Independence.pdf
[115] https://icar.org.in/Indian-Agriculture-after-Independence.pdf

one of the largest rural development programmes of the world, the milk production grew steadily at 6.4 percent, well above the global annual growth rate of 2.2 percent.

Many institutions were established for the promotion of agriculture in India post-independence. Commission for Agricultural Costs and Prices (CACP) and the Food Corporation of India (FCI) were established to assist the farmers with price support operations and ensure the productivity gains reaching the consuming sector through the Public Distribution System (PDS). In the year 1982, the National Bank for Agriculture and Rural Development (NABARD) was established to undertake the agricultural credit related functions of the Reserve Bank of India. Further to provide support to farmers financially, government of India launched Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) scheme.[116]

India has now several national priorities such as enhancing farmers income (200 percent), reducing fertilizer use (25 percent) and water use (20 percent), increasing renewable energy use (50 percent), reducing GHG emission intensity (45 percent) and rehabilitating degraded land (26 Mha) to achieve.[117]

With the expected population of over 1.6 billion and annual food demand of 400 Mt by 2050, the country requires minimum 4 percent annual growth in agriculture. The challenges of environment Indian Agriculture tremendous pressure. From rising temperature to extreme climatic events are impacting the production of food grains.[118]

Hence it becomes inevitable to have sustainable agricultural practices for ensuring food security to increasing population. India has 121 Mha i.e., 36 percent of the geographical area degraded with soil erosion, salinity, alkalinity, acidity, water logging and other edaphic stresses. With 4 percent of world's renewable water resources, the country has only 43 Mha fully irrigated, 23 Mha partially irrigated and 74 Mha rainfed land. In the recent past, both drought and floods have been seen to be stress factors in farming. Fertilizers are being leaked into the environment through volatilization, leaching or emissions resulting in multiple adverse effects on terrestrial and aquatic systems and on human health.[119]

The way forward for Indian agriculture, therefore, should focus on precision agriculture, reducing chemical footprints, nature-friendly farming; use of nano-fertilizers, with more synergy in crop, weather and water cycles and crop planning using ecosystem approaches.

Key Highlights of the Baseline Assessment:

- 86 percent of the respondents practiced single cropping patterns in the village, mostly paddy.

- In terms of Government assistance, there has been improvements in market linkages as only 12.4 percent in the previous baseline had access, while now it has increased to 35 percent.

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[116] https://icar.org.in/Indian-Agriculture-after-Independence.pdf
[117] https://icar.org.in/Indian-Agriculture-after-Independence.pdf
[118] https://icar.org.in/Indian-Agriculture-after-Independence.pdf
[119] https://icar.org.in/Indian-Agriculture-after-Independence.pdf

- 22 percent had access to merchandized farming equipment. In previous baseline the same was 15.9 percent.

- 21 percent of the respondents had access and used the veterinary services, while in 2019 baseline there were requests for veterinary doctors and medicines for animals.

Key Recommendations

- **Establishment of FPOs -** Interventions are required to facilitate the establishment as well as the involvement of farmers with FPOs in the field locations because there was a significant absence of support via them. It is imperative to establish them as it can support the farmers receive end-to-end services covering almost all aspects of cultivation from inputs, technical services to processing and marketing. FPOs help in reducing the input and output cost while also strengthening the backward and forward linkages from buying seeds to selling the final produce in the market. **Only 1 percent of the farmers in Lanjigarh is associated with an FPO.**

- **Modern irrigation methods -** Most of the respondents still carry out rainfed/rainfall irrigation which is an outmoded. Rainfed mode of irrigation may contribute to climate change as famines and droughts are common features of rainfed agriculture. It is recommended that the business unit focuses its efforts on government convergence and advocacy to increase access to modern methods of irrigation. **Only 3 percent use drip irrigation and 2 percent of respondents sprinklers.**

Baseline Assessment

Income Levels

According to the Socio-Economic Caste Census (SECC) data, 94.23 percent of the members of the Kalahandi district were earning less than INR 5000 monthly, 3.32 percent were earning between INR 5000- INR 10000 and 2.4 percent were earning more than INR 10000.[120]

As per the current primary data, 9 percent of the primary respondent was earning less than INR 5000. 49 percent were earning in between INR 5000-10000 while 2 percent of them were earning in between INR 20000-30000. 22 percent of the respondents were earning in between INR 10000-15000.

As per the previous baseline study in 2019, 67.12 percent of the respondents were earning less than INR 5000 months. 28.75 of the respondents were earning in between INR 5000-10000, 4 percent were earning between NR 10000-20000 and 0.12 percent were earning more than INR 20000.

Figure 31: Income level of Primary Beneficiary
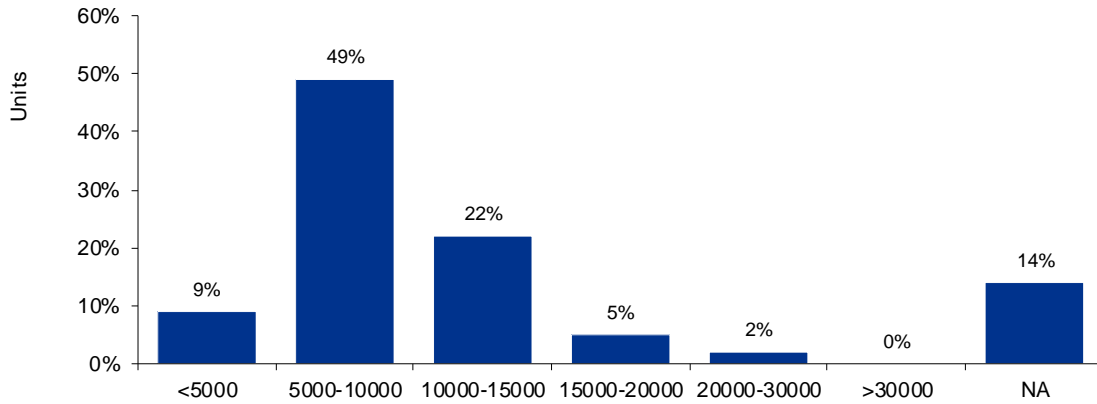
Occupation

As per the previous baseline, about 60 percent were engaged in agriculture activities. However, as per the Census-2011 figures 51 percent of the households were involved in agriculture.[121]

As per the current data, 15 percent of the male and 33 percent of the women members between age group of 19-50 years from the respondent households were found out to be unemployed. Only 1 percent male and 2 percent women from the respondent households were having salaried government jobs. 39 percent male members and 29 percent women in the working age group were involved in agriculture.

It can be observed that the share of the population in agriculture has been increase by eight percent amongst the respondent households.

Cropping pattern

Agriculture in Odisha is characterized by dependency on monsoon, higher concentration of rice in cropping pattern and production, low input use (fertilizers, pesticides, and mechanization) as compared to other states. This contributes to the fluctuations in output of the crops sector, leading to instability of livelihoods for the population dependent on agriculture.

The core sub-sectors of the broad agriculture sector include crop, livestock, fishery and forestry. During 2021-22, the contribution of crop sub-sector to total GSVA in Odisha was 12.25 percent and that of livestock, fishery, and forestry were 3.26 percent, 2.43 percent and 2.66 percent respectively. Besides paddy, Odisha also produces different non-paddy agricultural and horticultural crops[122].

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[121] https://censusindia.gov.in/census.website/data/census-tables
[122] https://odisha.gov.in/sites/default/files/2022-03/Economic_Survey_2021-22_0.pdf

Figure 32: Cropping Pattern
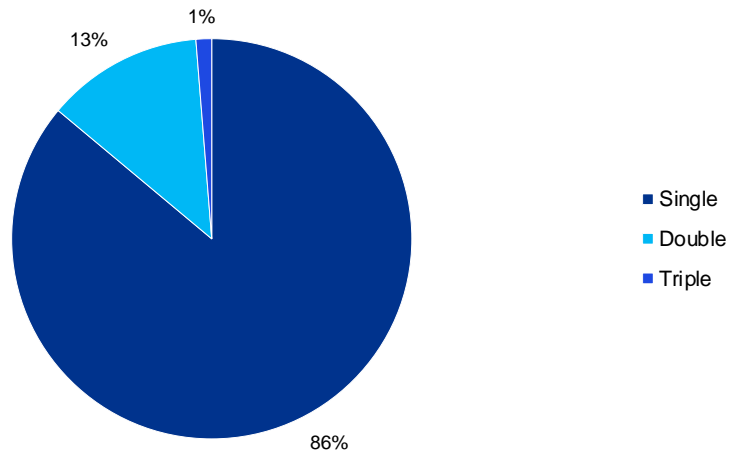
86 percent of the respondent households stated to grow only single crop, while only 13 percent of the respondent households reported to grow double crops in a year. All of the respondent household who were into agriculture were into paddy cultivation. Respondent households involved in the double cropping were cultivavting vegetables and paddy.

Government Assistance in Farming

Agriculture contributes significantly to India's GDP and more than 60 percent of the population of India still depends on the agriculture, agriculture has been the focus area of the Government of India. Government has taken several measures from subsidies to market linkages to provide impetus to the agriculture sector.

Several national and state government schemes have been aiding farmers for agriculture, yet access to these assistance remains a challenge due to myriad reasons. The following section will analyze the support provided from the government to the respondent household in Lanjigarh.

Figure 33: Government Assistance Farming
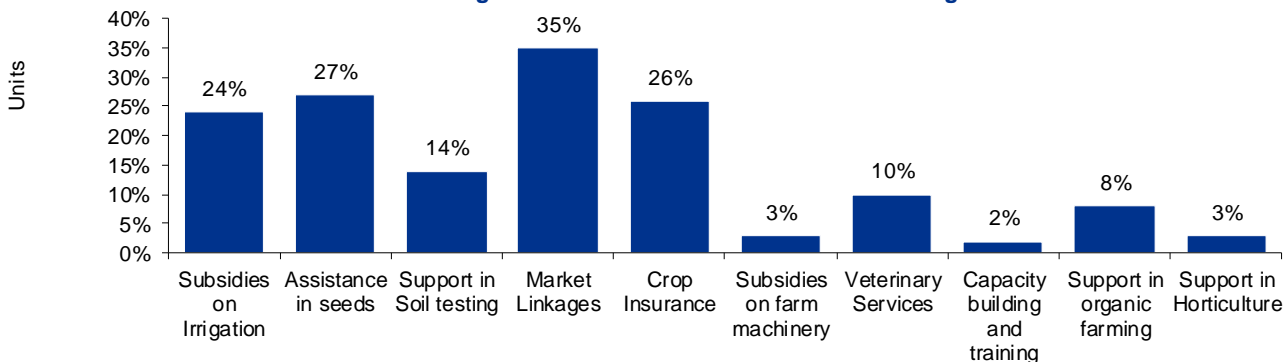
When asked about the government assistance provided for agriculture and animal husbandry, respondents provided either single or more responses. 35 percent of the respondents said that

82

market linkages is where the government is assisting the most in terms of farming. 27 percent reported assistance in seeds, while 26 percent and 24 percent were reported on crop insurance and subsidies on irrigation respectively. Assistance in veterinary services were at 10 percent.

*Poultry farming in Lanjigarh

Challenges faced by respondents in carrying out agricultural activities

For 58 percent of the respondents reported, lack of available water was an issue of concern. Irrigation and ash problems were minimal. Other issues concerned were rain, drip borewell etc. However, 35 percent of the respondents did not respond to the question.

Previous baseline 2019, water availability for agriculture in the village was one of the main issues and 27.5 percent of the household's faced availability of surface water for agricultural in carrying out agriculture activities, while 15.9 percent said that availability of agriculture tool and new technology.

Figure 34 Challenges faced in carrying out agricultural activities
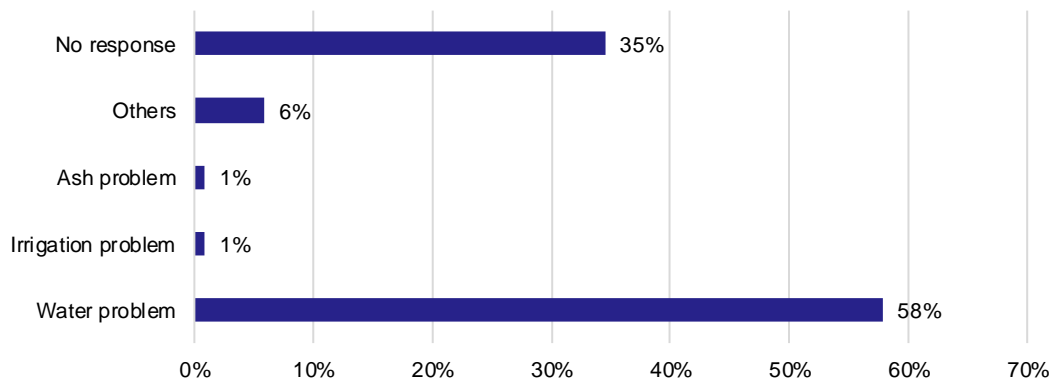
Mode of Irrigation

Odisha remains the most rain fed agriculture dependent state in the country, where 74 percent of its cropped area being rainfed[123]. Currently, in Kalahandi 33.39 percent is under rainfed cultivation and need to be brought under irrigation in order to enhance the standard of living. With the present water resource and by the proper water management, there is ample of scope to improve the area under irrigation in the district.[124]

The existing ground water draft for irrigation is 0.09618 BCM. The overall stage of groundwater development of the district is 18.49 percent. There is wide variation in term of irrigation development among the blocks and it varied from 12.28 percent to a maximum of 71.9 percent of the total cropped area is under irrigation[125]. Development of irrigation infrastructure is crucial to address the vulnerabilities posed by changes in rainfall patterns.

Figure 35: Mode of irrigation
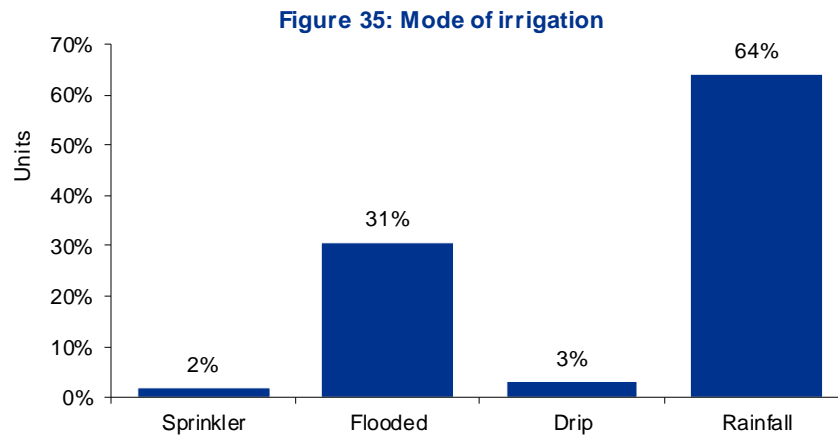
64 percent of the respondents shared that their main source of irrigation was via rainfall, and farmers had even constructed canals/nala from rivers or streams. The Rainfed agriculture plays an important role in Indian economy covering 68 percent of the total net sown area spread over 177 districts[126]. The farming systems approach in rainfed agriculture not only helps in addressing income and employment problems but also ensures food security[127]. One of the villages, which was near a small hill, had a properly constructed canal while other villages had a regular nala/chari. 31 percent farmers use surface and flooded mode of irrigation

In the previous baseline 2019, 0.8 percent had accessed watershed assistance and none of the households had access to micro irrigation methods.

The respondents were also asked about the average amount spent on agriculture annually. Data shows that **an average amount INR 13,400 was spent by respondents on agriculture.**

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[123] https://odishavikash.org/rainfed-agriculture/
[124] http://www.dowrodisha.gov.in/DIP/2015-20/kalahandi.pdf
[125] http://www.dowrodisha.gov.in/DIP/2015-20/kalahandi.pdf
[126] http://www.dhan.org/rainfed.html
[127] https://www.phytojournal.com/archives/2017/vol6issue6/PartAG/10-2-336-956.pdf

Livestock Services

Livestock plays a significant role in improving livelihood, enhancing farmers' income and fostering rural development in the country. It provides livelihood to two-third of rural community. It also provides employment to about 8.8 percent of the population in India. India has vast livestock resources. Livestock sector contributes 4.11 percent GDP and 25.6 percent of total Agriculture GDP[128]

As per the Livestock Census 2019, Odisha has 3.39 percent share of India's total livestock. For rural Odisha, the livestock sub-sector (animal husbandry) is the largest segment after the crop sub-sector. The activities under animal husbandry have been oriented towards improving health of the livestock, increasing production of milk, meat and eggs, and provision of bullock power for agricultural operations.[129]

Figure 36 Livestock Services

Legend:
- Veterinary Services
- Artificial Insemination
- Access to milk testing
- Access to fodder seeds
- Access to milk chilling units
- Other (Specify)

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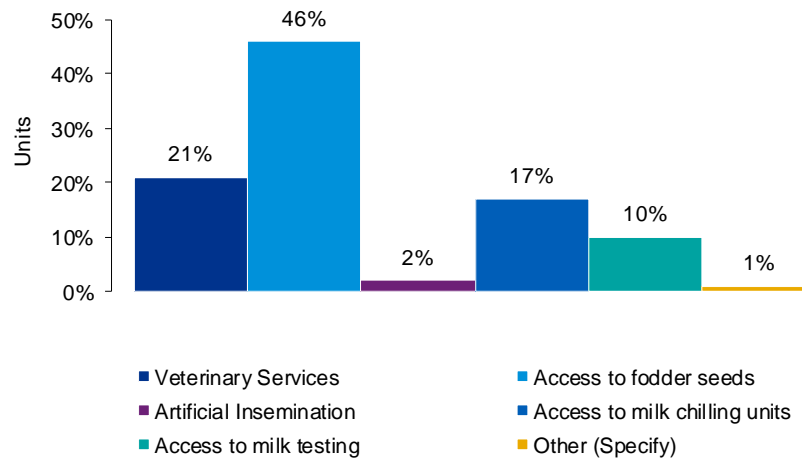
[128] https://www.pashudhanpraharee.com/livestocks-contribution-to-indian-economy/
[129] https://odisha.gov.in/sites/default/files/2022-03/Economic_Survey_2021-22_0.pdf

The primary data of livestock services shows us that 46 percent of the respondents have access to fodder seeds. According to discussions on the field, almost all the households had cows and goats as livestock. **Farmers received fodder seed support from the Government** as animal husbandry is an important livelihood options in those villages. Below on table number 4 are the livestock population in Kalahandi.

Farmer's dependence on animals for farming is immense and the need to have good veterinary doctor is important. Almost all the households had cows and goats as livestock. In Odisha, there are 541 veterinary hospitals/dispensaries[130]. 21 percent of the respondents in Lanjigarh use the veterinary services. Access to milk chilling units and milk testing are 17 percent and 10 percent respectively. Artificial insemination services sit at 2 percent.

As per previous baseline 2019, most of the households (about 69 percent of them) in the region produce own fodder for their cattle and few of the households bought as well as produced fodder. There were few households (12.6 percent) that procured fodder as well. However, there were a small proportion of households that stated that they faced the issue of availability of fodder in managing their livestock

Table 3 Livestock Population in Kalahandi District as Per 2012 Census[131]

S.no.	Category of Livestock Population and Poultry	Number
1.	Cattles	310875
2.	Buffalo	43765
3.	Sheep	79939
4.	Goat	216924
5.	Pig	3727
6.	Poultry	584055

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[130] https://odisha.gov.in/sites/default/files/2022-03/Economic_Survey_2021-22_0.pdf
[131] Livestock census 2012

Access to merchandized farming equipment's

Figure 37: Access to merchandized farming equipments

22%

78%

■ Yes ■ No
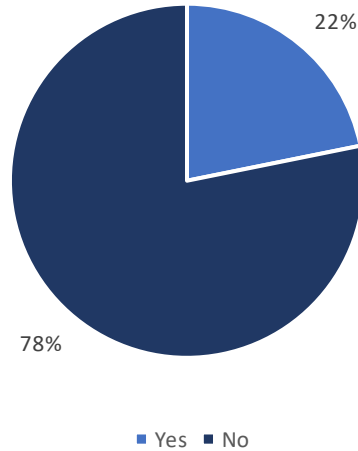
Most of the respondents (78 percent) do not have access to the farming equipment's. While only 22 percent had access to farming equipment.

In the previous baseline 2019, 15.9 percent of the households have said that they face issues with availability of agriculture tool and lack of knowledge of new technology-based farming methods. Few of the households also faced challenges with availability of agricultural inputs.

Associated with any FPO/farmers' club

A Farmer Produce Organization (FPO) is a registered collective of a group of farmers, who come together for the purpose of leveraging economies of scale in the production and marketing of agricultural produce. FPO support farmers to enhance income and profitability along with other benefits as a group.

Figure 38: Associated with any FPO/farmers' club?
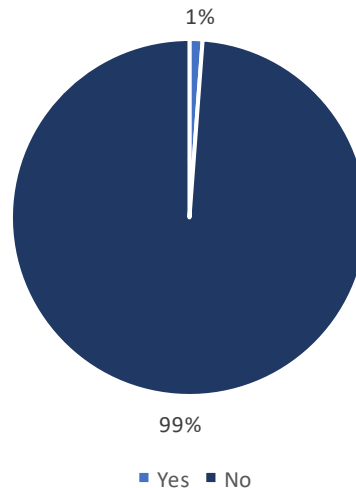
1%

99%

■ Yes ■ No

Odisha Farmer Producer Organizations (FPOs) Policy was launched during 2018, to support Farmer Producer Organizations (FPOs) in production, aggregation, storage, processing, distribution and marketing of agriculture and allied sector resources to promote sustainable development by generating large scale employment in rural and semi urban areas

In Lanjigarh, **almost all the respondents mentioned no association with an FPO or a farmer's club.**

Analysis and Way Forward

Overall picture

- 86 percent of the respondents practiced single cropping patterns in the village, mostly paddy.

- In terms of Government assistance, there has been improvements in market linkages as only 12.4 percent in the previous baseline had access, while now it has increased to 35 percent.

- Only 22 percent had access to merchandized farming equipment. It has not improved drastically since the previous baseline with 15.9 percent.

- 21 percent of the respondents had access and used the veterinary services, while in 2019 baseline there were requests for veterinary doctors and medicines for animals.

- Almost all the households had cows and goats as livestock. They received fodder seed support from the Government as animal husbandry is one of the critical livelihood options in those villages.

- In Lanjigarh 1 percent of the respondents mentioned association with FPOs.

Challenges

- Support from the Government in market linkages, veterinary services, capacity building, subsidies on irrigation. Although support from the Government is present, compared to the need of the communities are not enough

- Rainfed agricultural practice is old and causes drought, therefore need for new farming techniques and practice

- 99 percent of the respondents are not associated with any FPOs

- Lack of owning a skill set, marketing training and knowledge are the biggest gap related to livelihood generation

Impact Assessment

Project Sustainable Livelihood

Evaluation Criterion 1: Relevance

Sustainable Livelihoods is a holistic approach to looking at strengthening the society and reducing the deficiencies by supporting beneficiaries to build on their assets. As per census 2011, about 61.82 percent population of the state depend on agriculture for sustaining their livelihood, but in Kalahandi which is one of the most backward districts of Odisha and also in India, about 80 percent of the community depends on farming for their livelihood. Agriculture is the main occupation of the households in the area. This indicates that more than 3/4th of population of the district depends on agriculture for deriving their livelihood directly or indirectly. Hence, agriculture is considered as the main stay for the people of Kalahandi district. However, the agricultural production in the state is considerably affected by the natural calamities like floods, cyclones and droughts[132]

Baseline conducted in different cycles before project initiation which highlighted that owning a skillset for agriculture practice has been seen as a challenge. While the Government has promoted subsides on irrigation, crop insurance etc., water problem has seen as a major issue in the area.

Project Sustainable Livelihood was started in 2020. with the sole focus of creating robust livelihood opportunities for enabling households to earn more and lead healthier lives. This portfolio covers several integrated community-based interventions that strive to improve rural incomes through various practices. It was also observed that Farming and daily wage for skilled and unskilled labors are the main source of income in the area. Many beneficiaries have also opened their own business to find a way sustain themselves.

Under this thematic area, the BU has also started conducting animal vaccination to avoid seasonal infections and death to ensure continuous livelihood of the community dependent on livestock.
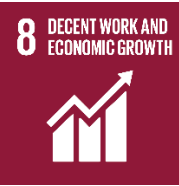
The relevance- based rating of this project is hence extremely satisfactory.

Evaluation Criterion 2: Effectiveness

The effectiveness has been well laid out on the MOU and the documents and the achievements of them were considered. The BU has engaged over 1127 families through our livelihood initiatives like backyard poultry, pisciculture, mango orchard, mini-enterprise development, bio-floc farming, mushroom cultivation, poultry units, Matschya Pokhari Yojana and many other initiatives. Project Sustainable Livelihood is considered to be extremely satisfactory on the effectiveness scale.

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[132] https://www.hilarispublisher.com/open-access/migration-of-labour-in-kalahandi-district-of-odisha.pdf

Evaluation Criterion 3: Coherence

Scheme/policy/Dept	SDG	How are projects aligned with the Government Scheme/policy/Dept?
NABARD Veterinary Department Horticulture Department	**8 DECENT WORK AND ECONOMIC GROWTH**	Project Sustainable Livelihood aligns with both national priorities on livelihood and economic development as well as with the Sustainable Development Goals. Therefore, the intervention is extremely satisfactory on the coherence scale. This is including the animal vaccination camp the BU conducts to ensure best health and low death rate in animals on which local communities are dependent for their livelihood. Sustainable Livelihood is considered to be satisfactory on the coherence scale.

Evaluation Criterion 4: Efficiency

Project Sustainable Livelihood is aligned with the VAL-L's policy, clear timelines were articulated in the MoU provided and budgets were also included within the same. The ongoing project utilization data showed that the budget had been underutilized by over 20 percent during the timeline assessed. It has been understood that lot more project activities have been taken up as well. The project was found to be satisfactory as per the efficiency scale.

Evaluation Criterion 5: Impact[133]

Backyard Poultry: The Backyard Poultry Project has been a great success for VAL-L, having helped nearly 550 households. Every beneficiary was provided with 10 chicks, a shed, feed, and vaccination, as part of the government's Odisha PVTG Empowerment & Livelihood Programme (OPELIP) scheme. On average, these beneficiaries have earned an additional Rs.3500-4000 per year by selling poultry. An impressive 40% of people have reinvested the profits to sustain their activity, making it a reliable source of additional income.

Orchards: In collaboration with the Horticulture Department of the Government of Odisha, VAL-L has planted mango trees on 25 acres of land. The saplings were provided by the Horticulture Department and BU helped to enroll the beneficiaries to avail the saplings and ensure that the saplings were properly fenced. Additionally, VAL-L is also providing capacity

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building of the target families to enable them to effectively establish and maintain an orchard, as well as build linkages between different institutions and markets.

MO-UPAKARI BAGICHA: In order to improve access to nutrition and provide better health outcomes for pregnant women, lactating mothers, children, and adolescent girls in the family, VAL-L distributed 13 types of seeds to 212 households through the Odisha Livelihood Mission (OLM) and the Mahatma Gandhi Employment Guarantee Act (MNREGA). These households were chosen with the objective of creating backyard kitchens and increasing access to a wide variety of vegetables and fruits.

Backyard Kitchen: To support COVID-affected households, VAL-L provided 303 households with seeds to create backyard kitchen gardens in partnership with the Horticulture Department of the Government of Odisha, as part of the Rashtriya Krushi Vikas Yojana (RKVY) scheme. This initiative is helping to create sustainable livelihoods and promote food security in local communities.

Farm pond: Farm ponds are an invaluable resource for farmers, providing them with the necessary water supply to ensure multiple crop yields post-monsoons. VAL-L identified 65 households that need farm ponds and have begun the process of digging ponds for 16 of them. By harvesting rainwater and developing these farm ponds, these households will be able to reap the benefits of multiple cropping.

Broiler and Layer farming: To empower local poultry producers and help local farmers increase their income through the production of broiler meat and eggs, VAL-L have established a 500-bird broiler farming unit and a 200-bird layer chick unit in collaboration with the District Veterinary Department. This initiative will not only strengthen the local poultry production system, but also create additional sources of income for farmers.

Mushroom Cultivation: VAL-L has successfully trained 125 households in mushroom cultivation in partnership with NABARD. Over the course of just 4 months, VAL-L have helped prepare 1139 mushroom beds which produced a total of 800 kgs of mushrooms and generated an income of INR 1,09,424 for the beneficiaries. This remarkable achievement demonstrates the immense potential of mushroom farming for providing sustainable livelihoods.

Bio Floc Unit: VAL-L, in collaboration with the District Fisheries Department, has introduced Bio-Floc, an innovative aquaculture technology that can significantly increase fish production in the Lanjigarh region. This pioneering technology allows fish to be bred and produced in limited spaces utilizing high density artificial tanks. Nutrients are continuously recycled and reused in the culture medium, with minimum to zero water exchange, thereby minimizing overhead costs. VAL-L seeks to provide economic and livelihood opportunities to farmers who do not have the resources to carry out fish farming in ponds or reservoirs.

Evaluation Criterion 6: Sustainability of intervention

The sustainability plan for this project is through owning the livelihood business and scaling it up via market linkages or convergence to have a better impact. A beneficiary owning a skillset in agriculture practice could also benefit the project and there has been demands. This could help as the beneficiary is expected to contribute by taking ownership of their livelihood. The overall impact of the sustainability of this intervention was found to be extremely satisfying on the sustainability scale.

Way Forward

- **Establishment of FPOs -** Interventions are required to facilitate the establishment as well as the involvement of farmers with FPOs in the field locations because there was a significant absence of support via them. It is imperative to establish them as it can support the farmers receive end-to-end services covering almost all aspects of cultivation from inputs, technical services to processing and marketing. FPOs help in reducing the input and output cost while also strengthening the backward and forward linkages from buying seeds to selling the final produce in the market.

> **Government Alignment:**
>
> - In July 2020, the Government of India published detailed guidelines for the setting up of 10,000 new Farmer Producer Organizations (FPOs) in the country by 2024. These guidelines also serve as the base for many other schemes, such as the Agriculture Infrastructure Fund (which allows FPOs to further invest in creating agricultural infrastructure) or 'One District-One Product' initiative to boost natural farming.
>
> - Odisha Farmer Producer Organizations (FPOs) Policy was launched during 2018, to support Farmer Producer Organizations (FPOs) in production, aggregation, storage, processing, distribution and marketing of agriculture and allied sector resources to promote sustainable development by generating large scale employment in rural and semi urban areas
>
> - NABKISAN Finance Limited and Directorate of Horticulture, Odisha has set up a Credit Guarantee Fund (CGF) to provide collateral free loan facilities to Farmers' Producer Organizations (FPOs)

- **Modern irrigation methods -** Most of the respondents still carry out rainfed/rainfall irrigation which is an outmoded. Rainfed mode of irrigation may contribute to climate change as famines and droughts are common features of rainfed agriculture. It is recommended that the business unit focuses its efforts on government convergence and advocacy to increase access to modern methods of irrigation.

Drip irrigation is one such technique, and is the most water-efficient irrigation system, with up to 90 percent water use. Because drip irrigation is a low-pressure method for delivering crop watering needs, it can also have low energy requirements. This will also help with the water shortage issues the villages are facing.

Replace a timer-based irrigation controller with an advanced control system that waters plants only when needed based on weather or soil conditions. Many available technologies use weather or soil moisture information to schedule irrigation according to plant needs. A few options include a weather-based irrigation control system, soil-moisture-based irrigation control system, central irrigation control system.

> **Government Alignment:** Soura Jalanidhi scheme (solar irrigation) started in 2019 can play an important role by meeting the irrigation requirements especially in remote and drought prone areas of the State in a climate friendly way.

- **Capacity building -** To provide the farmers with the correct knowledge base, there was also a need to increase capacity building and training initiatives. Such training initiatives will help in providing knowledge and awareness around sustainable agriculture practices as well as schemes of the government that can support them further. This goes hand in hand with skilling and if the skilling situation in the village block can be improved and done in the right manner, it will enhance the general livelihood of the village.

- **Market Linkages –** Given that the villagers in these areas now have increased access to livestock, further support can be provided to FPOs to increase development with market linkages.

> **Government Alignment:** A flagship scheme Mukhyamantri Krushi Udyog Yojana (MKUY) of Odisha State Government has been launched during 2018 to provide single window operation facilities for promotion of commercial agri-enterprises. Subsidies are being provided for setting up of commercial agriculture, horticulture, animal husbandry and fisheries units.

- **Access to financial services** - It is crucial for the farming communities to have access to financial services which would help them financially and educate them about better saving practices that would eventually increase their household income and create economic stability. The BU may help the farmers in guiding them to establish accessibility to Kisan Credit Card schemes, Financing Facility under Agri-Infrastructure Fund etc.

Thematic Area: Skilling

Executive Summary

The Indian economy is set to transform from an agricultural-based to a manufacturing and service-based economy. Thus, the Government of India has ambitious plans to transform India into a competitive, high-growth, high productivity middle-income country. In fact, according to the National Skill India Mission "As India moves progressively towards becoming a 'knowledge economy' it becomes increasingly important that the country should focus on advancement of skills and these skills have to be relevant to the emerging economic environment"[134].

Key Highlights of the Baseline Assessment:

- There is a huge potential for skilling and all the stakeholder respondents and beneficiaries have requested for skilling programme in the block

- Interest on farm skilling reported at 51 percent, IT Skills was reported at 48 percent, and interest to learn finance management was reported at 35 percent

- 70 percent of the respondent were not willing to pay for skilling

- Lack of opportunities was seen as the biggest reason for unemployment in different families

Key Recommendations

- Integration of curriculum
- Setting up Anchor Institutes
- Placements
- Convergence of government schemes
- Build industry linkages
- Popularize and create awareness about the schemes around skilling

Baseline Assessment

India has one of the youngest populations with around 62.5 percent of its population in the working age group of 15-59 years[135]. India's demographic dividend[136] is estimated to peak around 2041 when the share of the working-age population is expected to rise to 59 percent[137]. Although this demographic opportunity holds significant potential for progress, there are certain prerequisites for harnessing the same such as a skilled working population, gainful employment opportunities, access to education and vocational training, and a healthy populace[138].

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[134] https://nationalskillindiamission.in/policy/

[135] https://www.livemint.com/Opinion/zgCdZ3GrDwtDpQWD95HenO/Opinion--Indias-demographic-dividend-will-play-out-over-a.html

[136] The term "demographic dividend" describes the potential for economic growth that can result from changes in the age structure of a population, particularly when the share of the working-age population, which is defined as those between the ages of 15 and 64, is higher than the non-working-age population. Source: https://www.imf.org/external/pubs/ft/fandd/2006/09/basics.htm

[137] Source: Economic Survey 2018-19

[138] https://thewire.in/rights/world-population-day-withering-demographic-dividend

According to the data from the Centre for Monitoring Indian Economy (CMIE), India's labour force participation rate for the age-group 15-59 years has fallen to 40 percent in 2022 from 47 percent in 2016-17[139]. This suggests that the country's labour force has further decreased to less than half of the total working-age population, amounting to approximately 435 million out of 1,085 million[140] individuals. Hence, the nation needs to create more jobs and enhance skills to increase employability among the young population.

While 37.1 percent of the youth are in the labour force, there is a large difference between the participation rate of men (57.1 percent) and that of women (12.7 percent)[141]. India's rigid labour structure and gender disparity reveals that 3 out of every 4 women do not take part in any recognized economic activity[142]. In such a situation, when more than half of our youth do not participate in the formal labour force, it is difficult to realize India's demographic advantage. With rapidly changing technology, automation of job and increased globalization, the skill sets required at the workplace are also changing. As a result, there- exists a gap between the skill demands of industry and the available skills of the youth. Therefore, Skill Development has emerged as a key strategy to realize youth potential[143].

It is projected that by 2026, there will be a demand for 22.58 lakh highly skilled and 62.11 lakh semi-skilled professionals (Skill Gap Assessment report for Odisha, 2012). However, it must be noted that 6 Government ITIs and 4 Private ITIs of Odisha have found place in top 100 out of 12,260 ITIs graded in the country[144].

Reasons for unemployment

According to the Global Business Coalition for Education (GBC-Education), United Nations Children's Fund (UNICEF) and the Education Commission, more than 50percent of Indian youth is not on track to have the education and skills necessary for employment by 2030.[145]

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[139] Centre for Monitoring Indian Economy (CMIE)
[140] https://www.thehindu.com/business/Economy/only-40-indians-are-employed-or-seeking-work-cmie/article65354550.ece
[141] India's Labour Force Participation Rate (drishtiias.com)
[142] Skilling And Employment Of Women: A Priority For India's Progress (outlookindia.com)
[143] IBID, p31
[144] https://www.skillodisha.gov.in/Application/uploadDocuments/Report/ReportFile_1650270469.pdf

[145] https://timesofindia.indiatimes.com/blogs/voices/the-aspiring-youth-and-the-skill-gap/

Unemployment rate in Odisha is 6.2 percent which is higher than unemployment rate of India which stands at 4.8 percent. However, unlike female LFPR and WPR, unemployment is lower in Odisha for female vis-à-vis male[146].

The problem of educated unemployed is a serious phenomenon in recent years in Kalahandi. The Employment exchange apart from functioning as the agency for placement deals with the other related activities such as registration of names of candidates and submission of names against vacancies notified. However, as regards uneducated unemployed who remain in the remote areas of the district, the employment exchange does not have the scope to register the details in employment exchange. The employment exchange gives a partial figure. However, the fact remains that there is acute under employment in the district and steps need to be taken to provide part-time employment to a large number of persons during off seasons.[147]

Figure 39: Reason of Unemployment in the family
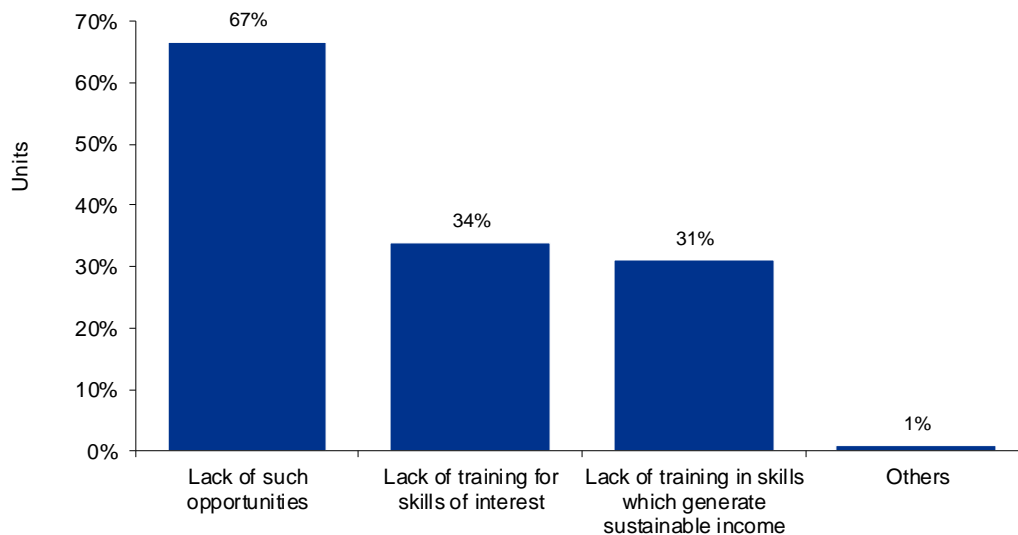
In the graph above, 67 percent of the respondents reported that there is lack of opportunities in the area and hopeful that the BU and the Government intervene more to increase such opportunities. Although there is a vast interest in learning a skill set and there are a few skilling programmes available within the area, 34 percent reported that skill of interest is lacking hence, leading to unemployment. While 31 percent reported lack of training in skill which generates sustainable income' upon being asked the reason of unemployment in the community.

Interest in Skill Training

People living in Kalahandi district depend on multiple skills, total workers are 751,930 out of which men are 447,290 and women are 304,640. Total 112,897 cultivators are depended on agriculture farming, out of which 102,007 are cultivated by men and 10,890 are women.

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[146] https://odisha.gov.in/sites/default/files/2022-03/Economic_Survey_2021-22_0.pdf
[147] http://www.msmedicuttack.gov.in/annualreport/DIPpercent20-percent20Kalahandi-2020-Final.pdf

143,873 people works in agricultural land as labor, men are 100,376 and 43,497 are women. Kalahandi sex ratio is 1,003 females per 1000 of males.[148]

During the recent survey conducted, the beneficiaries were asked of a skill that they would like to possess. 51 percent of the respondents reported wanting to learn farm skilling and almost the same number of respondents, 48 percent reported to learn IT skills. Skills in finance management was also taken upon as one of skill that was of interest for the respondents with 35 percent. 20 percent of the respondents were interested in learning communications and reporting. Skilling in animal husbandry and Entrepreneurship Development Programmes (EDP) were not as popular with only 12 percent and 15 percent respectively.

As per previous baseline data 2019, Agriculture skill development opportunities, sewing and handloom and skilling in health center were the skilling opportunities provided by the BU and 55.3 percent of the households were aware about the skill centers.

Figure 40 Interest in Skill Training

Legend:
- On farm skills
- IT Skills
- Mining and reporting
- Animal husbandry
- Communication skills
- Finance Management
- EDP Training
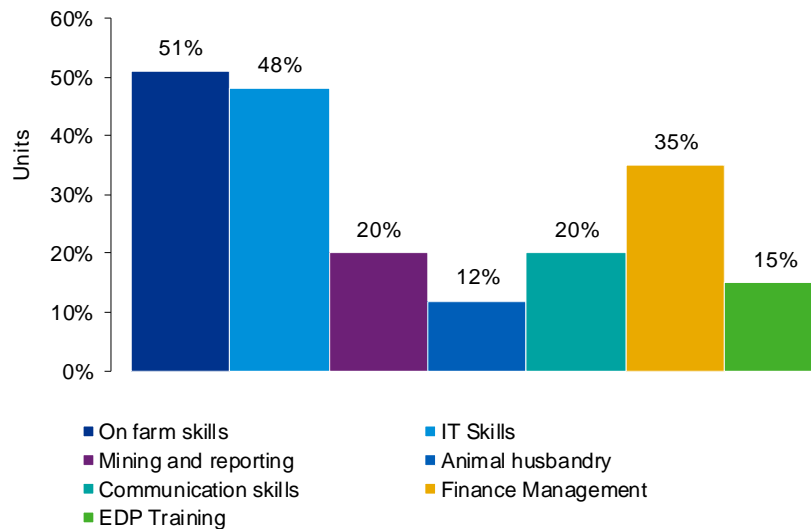
Willingness to pay for Skill Training

The chart says that 70 percent of the respondents were not willing to pay for a skill training program even though they may like to attain a skill. But there were a few respondents who wanted to learn a skill and were willing to pay. 10 percent of the respondents were even willing to spend up to INR 10,000 to attain a skillset. 16 percent reported willingness to pay less than INR 5000.

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[148] https://www.census2011.co.in/census/district/419-kalahandi.html

Figure 41: Willingness to pay for Skill Training

Legend: ■ <5000 ■ 5000-10000 ■ 10000-20000 ■ 20000-50000 ■ >50000 ■ Not Willing to spend
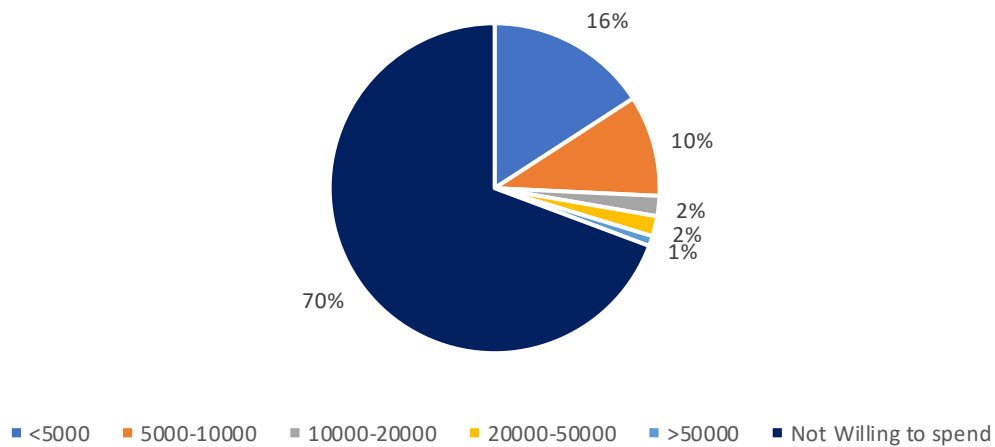
Analysis and Way Forward

Overall picture

- There is a huge demand for skilling in the area. Attaining skills on Farm skills, IT skills and finance management skills were the popular choice.

- According to the stakeholders, there is a potential for skill training under retail, welder, electrical mechanical skills and skills related to solar equipment

- Women force demanded separate skilling programme that would focus on women

- As per the respondents Sewing machine skilling and Housekeeping are some of the trainings being provided to the youth at the moment

Challenges

- Despite the demand on learning a skillset, 70 percent of the beneficiaries are not willing to pay to attain a skillset.

- There is a lack of placements for the people who attain a skillset

- Lack of opportunities in the area to learn a skillset and if there are skilling programmes available, there is a lack of interest by the beneficiaries due to the traits of the work

Way forward

▪ **Introduction of skilling programmes as per the demands -** It is important to analyze in which sectors workforce is employed and whether there is a need to reorient the workforce to more productive sectors. The BU may introduce some of the skilling programmes as per the demands of the beneficiaries.

There is a huge dropout rate with 25 percent within the block. Targeting the dropouts will create a huge impact.

Projected increase in skilled manpower in the State. It is projected that by 2026, there will be a demand for 22.58 lakh highly skilled and 62.11 lakh semi-skilled professionals (Skill Gap Assessment report for Odisha, 2012) in the state. Odisha has made concerted efforts towards skill development with its 'Skilled in Odisha' initiative[149]

> **Government Alignment:** Government of Odisha programmes where there is a target of skilling 15 lakhs youth in the next 5 years (2019-20 to 2023-24) at the rate of 3 lakhs per annum

▪ **Placements –** Placement of candidates is always a motivation factor for an individual to participate in a skilling programme and attain a skill. It is important for the BU to bring in companies from the district or from different areas who requires skilled workforce. Another way forward could be, after completion of every batch/training, the BU may organize a job mela.

> **Government Alignment:** OSDA is conducting Placement Linked Training Programme through private/government Project Implementing Agencies (PIAs) since 2011-12. As of 2020-2021, a total of 98,051 youths is trained, and 27,611 youths are placed under the programme

▪ **Awareness programme -** Creating awareness of employment and education to the youth and the rest of the people should be an ongoing process taken up by the BU. Significance awareness campaigns about the schemes under Skill India Mission or State linked schemes through various means may be done effective media communication or via a public announcement in every block.

▪ **Integration of curriculum**- Integrate vocational courses in school curriculum to equip students with industry relevant skills. Further establishment of systems for Integrated Learning with Industry through Multi Level (4 Levels) learning structure, where Level 1 and 2 trainings are provided in school and supplemented by Level 3 and 4 trainings in industry. Inclusion of soft skills and the **use of technology in the classroom** environment to facilitate learning. Career counseling, with information on skill development can be

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[149] Skill Gap Assessment report for Odisha, 2012

provided at school level itself. There should be high focus on these counseling session in schools.

- **Setting up Anchor Institutes-** Considering the high potential / aspirational value for sectors of Handicraft, Retail, Solar, Healthcare, Banking and Financial Services, Hospitality and Tourism, farming new anchor institutes can be setup for research and faculty training.

Thematic Area: Women Empowerment

The census 2011, counts women population at 48.5 percent of the total population in India. India ranks 140th among 153 nations on the World Economic Forum's Global Gender Gap Index of 2021[150]. 27.3 percent of women aged 20–24 years old who were married or in a union before age 18. As of February 2021, only 14.4 percent of seats in parliament were held by women. In 2018, 18.4 percent of women aged 15-49 years reported that they had been subject to physical and/or sexual violence by a current or former intimate partner in the previous 12 months[151].

Women also endure inequality with regard to land and property rights. A 2016 UNICEF report noted that only 12.7 percent of properties in India are in the names of women despite 77 percent of women in India depending on agricultural work as a core source of income[152]. Additionally, the labor force participation rate for women is much lower than that of men in both urban and rural areas, standing at 18.6 percent and 27.7 percent, respectively, as compared to 58.4 percent and 57.1 percent for men, according to data from the Annual Report 2020 – 2021, Periodic Labour Force Survey conducted by National Statistical Office (NSO)[153].

The female Labour Force Participation Rate of Odisha is 33 percent which is more than the national average of 30 percent.[154]

Odisha is on the path of steady progress and female literacy rates have increased sharply in the past few decades, which resulted in reduction of the gender gap from 24.9 percent in 2001 to 17.6 percent. Kalahandi has its own set of challenges when it comes to women taking active participation in income generation for their families, however VAL-L is doing all to support the women of the Lanjigarh block through its projects and campaigns.

Key Highlights of the Baseline Assessment:

- 50 percent of the women are a part of an SHG or a federation in Lanjigarh block

- Women have started taking family decisions. 58 percent of women respondents could take decisions on voting and financial decisions

- Of the women surveyed, agriculture and phenyl training are what was asked for skilling purpose

Key Highlights of the Impact Assessment:

- It was reported that 51 percent of women improved regular savings due to project impact

- 34 percent reported improvement in decision making in their household

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[150] https://www.thehindu.com/news/national/wefs-gender-gap-index-india-slips-28-places-ranks-140-among-156-countries/article34206867.ece#:~:text=Indiapercent20haspercent20slippedpercent2028percent20places,itspercent20genderpercent20gappercent20tillp ercent20date.
[151] https://data.unwomen.org/country/india
[152] Ibid
[153] Source: Periodic Labour Force Survey (2020-2021)
[154] Periodic Labour Force Survey, 2019-20, MoSPI

- 32 percent reported improved access to financial services

- The project has benefitted 3984 women households.

Key Recommendations

- There is a need for better entrepreneurial models as well as market linkage to enable these existing SHG's and develop leadership skills.

- Development of curriculums and training of trainers should be done to help SHG women to learn all aspects of their trade.

- Capitalizing on E-commerce

Baseline Assessment

The Gender Development Index measures gender inequality in three basic dimensions of human development[155]. In India, the GDI value is 0.849[156] while the global GDI is 0.958. The Gender Inequality Index provides insights into gender disparities in health, empowerment, and the labour market. Unlike the GDI, higher values in the GII indicate worse achievements wherein India currently stands at 0.462. These provide standalone indictors for the existing gender disparity in the country. In fact, according to the World Economic Forum's Global Gender Gap Report 2022[157], India ranked 135 out of 146 countries indicating high gender disparities across all indicators.

State	GDI	GII
India	0.876	0.462
Odisha	0.796	0.483

The state of Odisha ranked lower than the country vis-a-vis GDI i.e., the gender parity in Odisha is worse with respect to life expectancy of girls at birth, the expected years of schooling for girls as well as the mean years of schooling. There is an absolute deviation from gender parity of over 10 percent in Odisha, and it has been characterized as a low equality state.[158] Given that GII measures the human development cost for gender inequality, a higher GII indicates more disparities between females and males and thus a greater cost to human development. Odisha's GII is 0.483, a higher score than the national average, indicating a greater cost to human development on the state due to gender disparity.

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[155] This includes female and male life expectancy at birth; education, measured by female and male expected years of schooling for children and female and male mean years of schooling for adults ages 25 years and older; and command over economic resources, measured by female and male estimated earned income.
[156] https://hdr.undp.org/gender-development-index#/indicies/GDI
[157] https://www3.weforum.org/docs/WEF_GGGR_2022.pdf
[158] mospi.gov.in

![KPMG logo]

Decision making power

Decision-Making is a key indicator when it comes to women empowerment. The agency of a women can be expressed through decision making wherein they are able to exercise influence, take decisions, establish their own goals, and take actions on such goals. The key decisions that impact a woman's life occur both within the private sphere (such as the household, interpersonal relations, and self) as well as public sphere (within the community and in public profiles). Empowered decision making is carried out when a woman is aware of her rights, voices her beliefs and acts on these decisions. 10.1 percent of the women in Odisha didn't not make any decision at the household level in the study, not only has it been assessed whether a woman makes decisions across spheres such as financial decisions, family planning, employment, education of the child, voting (political decisions) as well as mobility.

Figure 42 Decision making power
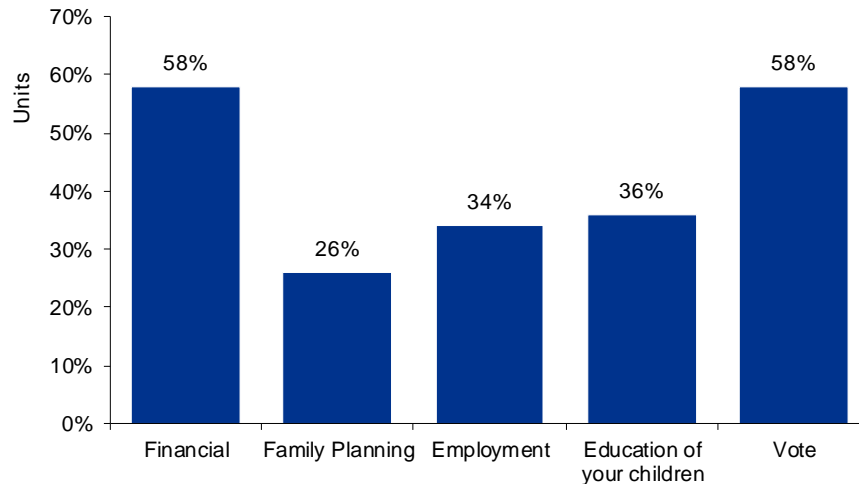
The graph shows that 58 percent of the women in their households make the financial decisions and the decisions for votes. 38 percent reported that taking a decision for Educating their children is taken by women. Family planning and employment were also a part of the decision making by women as per the survey at 26 percent and 34 percent respectively.

As per NFHS 5 data, 89.9 percent of the currently married women in rural Odisha participated in three household decisions[159]

Frequency of decision making by women

In a study by Grillos (2018), the inclusion of women is believed to improve environmental decision outcomes. Figure shows that the frequency of decision making by women. According to the data, many women reported that they were taking the decisions within the family. 44 percent of beneficiaries said that they had the upper hand in making financial decisions, 34 percent of the beneficiaries said that they were making financial planning, 63 percent were making vote decisions and 28 percent reported that they were the ones making decisions for

[159] Odisha.pdf (rchiips.org)

education of their children. However, there were families where the women rarely made decisions. 35 percent said that they rarely made any financial decisions and 12 percent said that they have never made any financial decisions within the household. Employment and voting decisions were also rarely made in a few households with 29 percent and 34 percent respectively. The positive feedback from this data is that women have a say in decision making which is important for the society and the families.

Figure 43: Frequency of decision making by women

■ Financial ■ Family planning ■ Employment ■ Education of your children ■ Vote ■ On your own mobility
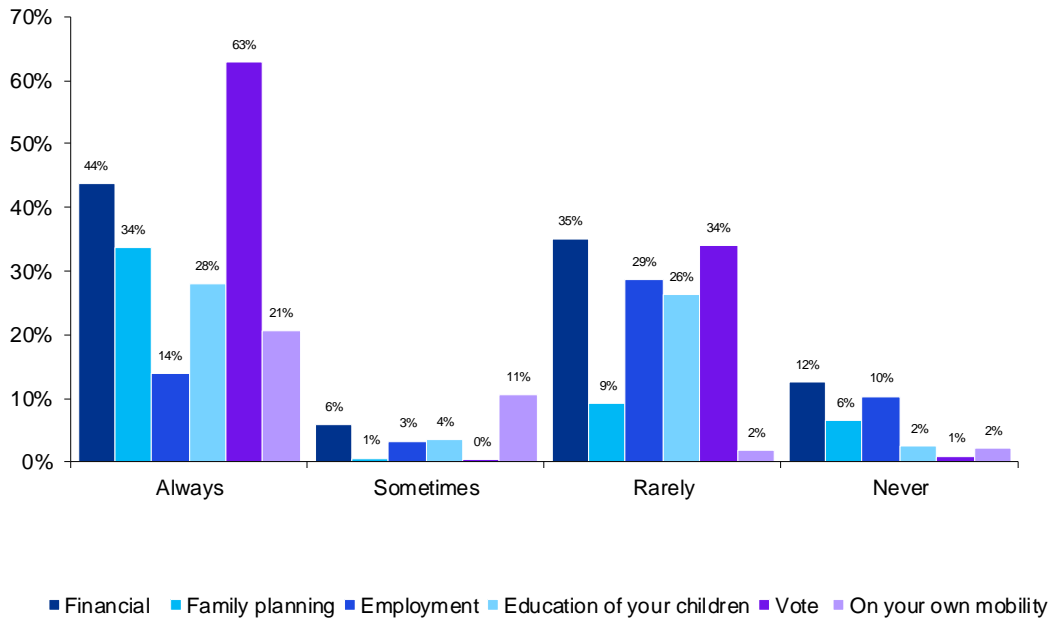
Association with SHG or Federation and Skills Required

SHS has emerged as an important micro-finance system. SHGs provide a platform especially to rural women to promote solidarity among women, bringing them together on issues of health, nutrition, gender parity and gender justice. SHGs plays a pivotal role in enhancing skills of women, promoting entrepreneurial activities amongst women, and building leadership skills.

The origin of SHGs in India can be traced back to the establishment of the Self-Employed Women's Association (SEWA) in 1972. One of the chief reasons of the SHG in the rural poverty is the lack of access or limited access to credit and financial services. Apart from financial inclusion, SHG also helps in empowering social integrity, gender equality, source of livelihood/employment, banking literacy, impact on health etc.[160]

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[160] https://byjus.com/free-ias-prep/self-help-group/

Figure 44: Association with SHG or Federation

50.15%   49.85%

■ Yes ■ No
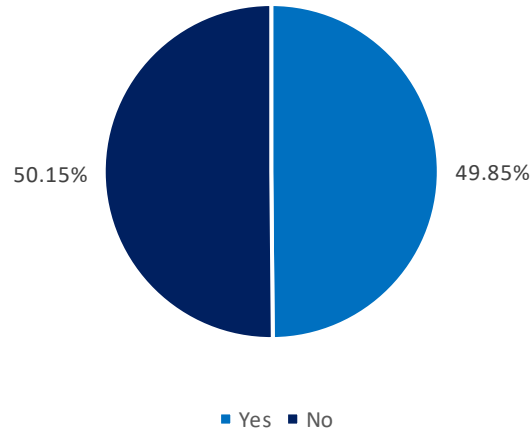
SHGs have been at the forefront in rural India in promoting and ensuring women empowerment. The chart above provides the percentage of women who are associated with SHGs or Federations out of the total women interviewed. Almost 50 percent of the women in the Lanjigarh block is associated with an SHG or a Federation. Such association with SHGs provides women greater opportunities in accessing more forms of financial, communal as well as psycho-social support.

Figure 45: Economic skill needed
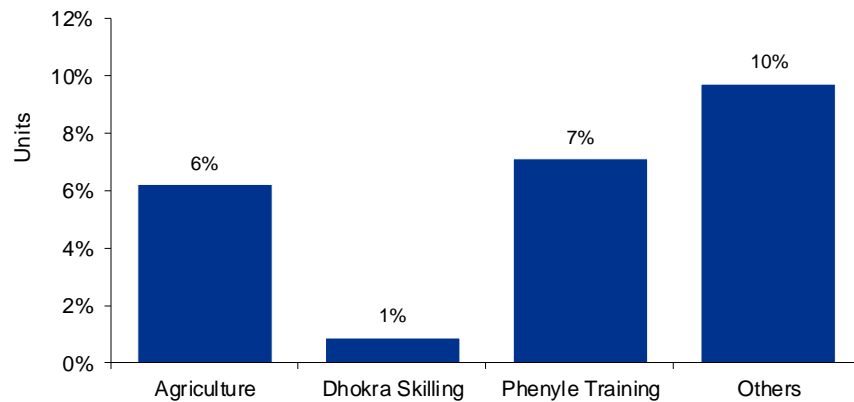
Further of the women who were surveyed, a few responded regarding the skill that is needed by them. 6 percent said that agriculture skills need to be introduced for women and 7 percent were interested in phenyl training. About 10 percent respondents expressed interest in other trainings like mushroom farming, turmeric packing etc.

According to the previous baseline 2019, skill requirements for women such as skill based on vocational trainings on tailoring, livelihoods etc. Employment generations in general as well as livelihood options from home were also discussed as a requirement.

Analysis and Way Forward

Overall picture

- There has been an improvement when it comes to decision making for the family and women are taking important decisions for the households

- Financial and voting decisions have common agreement, making decision on employment, family planning and education to the children are still quite limited

- 50 percent of the women are engaged or involved with a SHG

- There is a significant need of skilling for women to receive training in agriculture as well as alternative occupations like tailoring, sewing, and embroidering, health-related jobs, etc. The women will be able to support their families financially owing to these trainings and generate their independent livelihood.

Challenges

- Men still have the upper hand in decision making in the households. Only 26 percent of women make family planning decisions and less than 35 percent of women makes decisions for employment and education of children in the households

- Lack of job opportunities for women in the area.

- Half of the women population are not aware of SHGs or federations in the area

Way Forward

- Introduce gender-based and community behavior change programmes
- Skilling opportunities for women
- Awareness campaigns
- Financial support for SHGs
- Market linkages

Impact Assessment

Project Sakhi

Evaluation Criterion 1: Relevance

Women comprise around 50 percent of the country's population, and a bulk of them stays economically dependent on each other without employment. But there is a considerable division of the women in this nation who require optimistic support.[161] In most Indian villages and semi-urban cities, women are still denied fundamental basic like making a decision for herself or getting a job of being self-employed etc. Living in a male dominating society, women are not equally treated, therefore factor like gender discrimination and access to education should be looked into.

Gender inequality is a stark reality in the country, wherein girls and women face discrimination in all domains of development, whether it be education, livelihood, bodily integrity etc. Associations of women such as cooperatives act as avenues for women for inclusive economic development, through increasing their participation in decision making, supporting their skill building, livelihood generation as well as building support structures

To bridge the gender disparity, VAL-L initiated Project Sakhi, a flagship project run by women led Self Help Groups to improve options of income generation for local women, through locally viable group enterprises was introduced in 2015. The notion behind this project is to bring awareness amongst women of their privileges and rights and their socio-economic status. Thus, the intervention is extremely satisfactory on the relevance scale.

Evaluation Criterion 2: Effectiveness

The effectiveness of the intervention was assessed on the secondary documentation for the program wherein the availability of the targets as well as the achievements against the same was considered

Strengthening of SHGs and its members capable of contributing to family income - the project now covers 387 WSHGs (Women Self Help Group) reaching nearly 3,984 Women households.

Strengthening the SHG federation to govern its affairs by virtue of itself development and internal fund management – Loans are available to new micro entrepreneurs at a low interest rate and long-term repayment schedule. Almost 50 percent of the women in the district is associated with an SHG or a Federation.

Convergence and Market Acceptance: the BU has made efforts to bring in converges for the sakhis and bring in market linkages to promote and help them sustain themselves. One of the converges was Shaktimayee Foundation Board Members started a Tailoring Training Program with support of Vedanta Sakhi CSR Project and Mahashakti Foundation.

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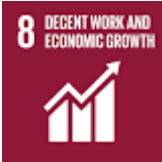
[161] https://hindrise.org/resources/women-empowerment-in-india-and-its-importance/#:~:text=Womenpercent20empowermentpercent20inpercent20Indiapercent20ispercent20dependentpercent20uppercent20topercent20apercent20great,panchayat)percent2Cpercent20andpercent20nationalpercent20levels.

There has also been improvement in the decision-making power for the women in their households. Women now are making household decision on financial planning, employment, education of children etc.

Hence the effectiveness for Project Sakhi is extremely satisfactory on the effectiveness scale.

Evaluation Criterion 3: Coherence

SDG	SDG Target	How are projects aligned with the Government scheme?
5 GENDER EQUALITY	• Target 5.1 End all forms of discrimination against all women and girls everywhere • Target 5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life • Target 5 Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws	By empowering women socially and economically the project improves decision making capabilities of women. The project also makes economic resources accessible to the women.

	▪ **Target 1.1** By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day ▪ **Target 1.2** By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions ▪ **Target 1.31** By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	The project provision to provide financial and entrepreneurship support to the women that further enhance their food security, income level and provides access to economic resources.
	▪ **Target 8.5** By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and	The project provides descent employment and entrepreneurship opportunities to women.

	equal pay for work of equal value	

Project Sakhi aligns with both national priorities on women empowerment and economic development as well as with the Sustainable Development Goals (Goal 5: Gender Equality)

The project is ranked as extremely satisfactory as per the coherence scale.

Evaluation Criterion 4: Efficiency

The efficiency of the intervention was considered vis-à-vis the documents provided on the project including the agreements with the implementing partners, whether the intervention had adhered to its timelines, whether utilization was undertaken through the budget and whether the intervention aligned with the CSR policy of VAL-L. Although the project was aligned to the CSR policy, the efficiency of the project was found to be satisfactory. The has been an underspent of more than 20 percent.

Evaluation Criterion 5: Impact of intervention

Impacts for women empowerment

Figure 46:Project impacts for women empowerment
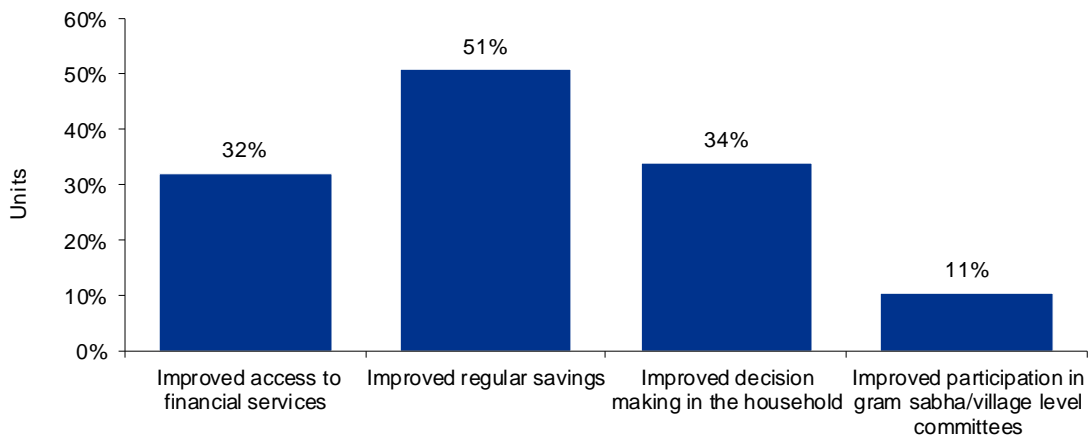
As per the data, 51 percent of the respondents feel that the projects intervention has improved regular savings there has been a 34 percent improvement in making decisions in the household.

However, the participation in village level committees is still at a low at 11 percent.

Herein, there are four areas that were identified as potential impacts of the projects:

1. **Improved Regular Savings:** Promoting women's understanding of the importance of personal savings through financial education, as well as assisting them in opening savings accounts or even improving their access to a regular source of income, can be identified through an impact in this area.

2. **Improved Decision Making at the Household Level**: With the help of the self-help groups (SHGs), women's general confidence can grow, and financial security can result in better household decision-making. As per the current baseline, 58 percent of the women in their households make the financial decisions and the decisions for votes. Women are becoming more dependent on their own and expect the percentage to increase going forward. This has been a good step from previous years.

3. **Improved Access to Financial Services:** Access to financial services is often a challenge for women, especially in rural areas. In the Indian rural society, most men are the ones who manages the accounts and finances of the family. Measures to support women in taking out loans on their own, opening savings accounts and imparting financial knowledge have a positive impact in this area. 50 percent of the women are a part of SHGs which has helped the access to financial services. This achievement may be escalated as BU can connect and link with other Government schemes related to SHGs.

4. **Improved participation in gram sabha/village level committees:** In order to improve gender behavior in the community and sustain societal change toward gender, women's access to decision-making outside of the home is equally crucial. Gender-sensitive and gender-progressive activities can take place in the community if there are more women in positions of decision-making. Interventions that help women become more capable of making decisions may have effects across generations. According to the stakeholders surveyed, in the past 5 years, about 10-50 women have been elected as panchayat or ward members

Thus, where women have stated that the impact of interventions have improved any of the above interventions in a significant manner, it provides evidence for the impact of the business unit in supporting women empowerment in the communities VAL-L works in.

Purpose of the loans availed

Figure 47: Purpose of availing loans
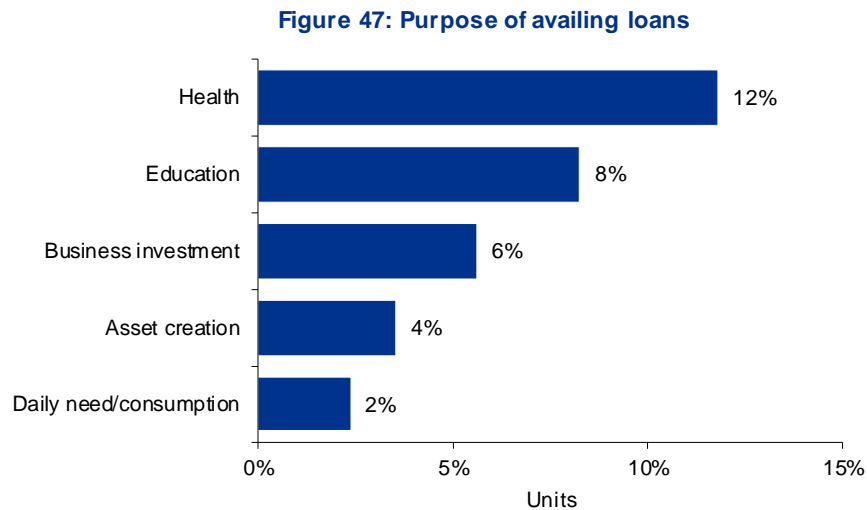
According to the respondents, 76 percent of the beneficiaries reported that they did not avail loans through the SHGs, while 24 percent are using the SHG loans for different purposes. 82 families were surveyed who had taken loans. As per the data, beneficiaries used the loans for health-related issues and education as reported with 12 percent and 8 percent respectively. Only 6 percent of the beneficiaries reported of taking loans for business investments.

In the previous impact study of 2019, most of the women availed loans for farming purpose.

Menstrual Health Management:

VAL-L runs NITI Aayog aspirational district programme where Menstrual health management programmes are run through equipped medical sub-centers. Awareness campaigns such as regarding menstruation, menstrual hygiene and reproductions are being educated to adolescent girls and adult women.

Till date the programme has reached nearly 3066 adolescent girls and their mothers through 177 awareness programs in the district

Evaluation Criterion 6: Sustainability of intervention

The future of the project is to link all the SHGs with the ongoing Government programmes and schemes. The project will focus more on women capacity building and training of the SHGs. Support in their business plan will also be an additional input for the women entrepreneurs. The project is found to be extremely satisfactory on the sustainability scale.

Suggested Way forward

Skilling programme –

The correlation between female work force participation and wage gap across states (female earnings/male earnings) was negative 0.24 from regular wage employment. [162]

Work force participation rate for females in Odisha is 31.8 percent. This calls for attention to increase the employability of women and to motivate women to take up formal jobs. Skilling initiative at the grass root level may be a necessity to strengthen[163]. There has been demands by the women force and the stakeholders to introduce skilling programmes for women.

Livelihood opportunities for women has been lacking. With 80 percent of the district depending on agriculture, work opportunities for women force may be created. Special skilling programme for women may be made available. Apart from livelihood, the BU may also look at other skilling areas which would be beneficial for women. The programme may involve a minimum token money as it will incentivize the individual to perform better. Placements is another activity where the BU may focus upon to make the skilling programme a success.

Self-employment remains primary source of employment in Odisha like observed at the India level. Relative to male, female work disproportionately as unpaid helper in household enterprises. Mission Shakti is another scheme by the Odisha Government where the BU can look into for empowering women in Lanjigarh

> **Government Alignment:** Government of Odisha is encouraging greater participation of women in vocational and technical education. A special scheme 'SUDAKHYA' has been launched by the State Government to encourage increased enrolment of girls into ITIs, hither to an uncharted.

Awareness generation –

Menstrual hygiene – VAL-L, through its NITI AAYOG programme is already working towards menstrual health management through equipped medical sub-centres. However, the BU should continue to push such programmes to re instil the information imparted during these campaigns. Programmes like KHUSHI can be initiated by the BU.

Gender awareness programme – Even though women are more independent in today's day and age, they're still far from being equal over men, especially in the rural areas. If you look at the baseline data of frequency of taking family decisions, all activities reported are below 50 percent except for voting, that too stand only at 63 percent. There is a need for the BU to introduce such programmes where it should be made mandatory for men, women, and students to attend. The BU may engage projects or campaigns in their CSR, aiming towards

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[162] https://odisha.gov.in/sites/default/files/2022-03/Economic_Survey_2021-22_0.pdf
[163] https://odisha.gov.in/sites/default/files/2022-03/Economic_Survey_2021-22_0.pdf

shifting social norms by promoting gender equality and behavioral change or through strong partnerships with civil society organizations.

Diverse ways to promote and spread awareness help in better retention and better practice. Sometimes standard methods could get repetitive and monotonous, therefore awareness programmes such as gender among men and women can be escalated through mass campaigns about gender equality using community-led performing arts and crafts, such as interactive theatre shows, dance, and music

Government Alignment: MAMATA, Biju Swasthya Kalyan Yojana (BSKY), SAMMPURNA, KHUSHI, SOPAN, Maternity Waiting Homes (Maa Gruha), Janani Suraksha Yojana, Janani Shishu Suraksha Yojana, Pradhan Mantri Surakshit Matritva Abhiyan and National Health Mission are some of the healthcare schemes for women healthcare

Access to finance –

Project Sakhi brings awareness to women of their status and rights and also provides different trainings and facilities for the women participants. Only 50 percent of the women in Lanjigarh block are a part of a SHG, while the district is dominated by women. Further, awareness sessions via the project can be increased and also explore the National Strategy for Financial Inclusion for Odisha. Odisha became the first state in the country to adopt Self Help Groups (SHG) based model for financial inclusion to extend banking services in the unbanked areas.

Government Alignment: Government is also providing interest subventions to Women-SHGs (WSHGs) in the state (under OLM / NULM / NRLM/Mission Shakti). Known as the "Mission Shakti Loan" it provides interest free loans i.e., at zero percent per annum for WSHGs for loan amount up to INR 3 lakh.

NABARD has been providing financial assistance to various institution and agencies to conduct training and capacity building programme

Market linkage is a crucial issue in this project. Collaboration with stakeholders to expand the market for SHGs is one step while exposure visits for the members to open their horizons to understand the market and its trend is second.

Government Alignment: Mission Shakti was launched with the objective of empowering women through gainful activities by providing credit and market linkage. Around 70 lakh women through 6 lakh groups in all blocks and urban local bodies of the State are changing the fortune of many families and empowering the society at

Business Drivers for Women empowerment programme

CSR is a pivotal management concern given that in order to expand their wealth creation role in society, businesses must proactively manage risks and take advantage of opportunities vis-à-vis reputation and engagement with stakeholders. Based on the perception survey, the internal stakeholders of VAL-L believe that companies having a focus on key business drivers focused on sustainability have a greater chance of success and further believe that such companies are more attractive to investors.

"CSR is essentially a strategic approach for firms to take to anticipate and address issues associated with their interactions with others and, through those interactions, succeed in their business endeavours".

- Hohnen, Paul (2007). Corporate Social Responsibility: An Implementation Guide for Business. International institute for Sustainable Development
Source: https://www.iisd.org/system/files?file=publications/csr_guide.pdf

All the respondents believe that the focus on certain key drivers for business have improved community relations. In fact, the focus on these business drivers has a direct relation to improving relationships with local communities, increasing trust, improving the reputation of VAL-L as well as contributing to the national and international social development goals. Therefore, VAL-L leadership's perception on such benefits is both inward and outward looking and encompassing a varied group of stakeholders. Specifically, according to the study, 100 percent of the VAL-L's internal stakeholders considered "supporting social development of the local community", "providing equal economic opportunities to the local community", conserving the environment and preserving and promoting cultural heritage the key business drivers for their Corporate Social Responsibility key sustainability drivers. Specifically, within the area of social developed, 25 percent of the internal stakeholders considered that awareness campaigns on health and hygiene is the strongest business driver for women empowerment programmes run under the BU's CSR.

Business case for Project Sakhi

Through the Sakhi programme, the business is able to enhance the economic empowerment of women in the field locations which in turn has an impact on their decision making, seen through the impact assessment. The programme was intended to increase the economic activity of the women in households such that they engage in productive activities and contribute their potential for raising the income of their households and ultimately the well-being of their families and community. VAL-L has instrumentally supported the Sakhis in becoming leaders in the social change process in the communities where they are working, thus driving ownership of the community members while further ensuring recognition by the community on the strengths of these women. Now the project covers 387 WSHGs (Women Self Help Groups) and reaching nearly 3984 women households.

Thematic Area: Community Development

Community infrastructure is the framework of physical facilities needed to support and sustain a community of people to live and work. The availability of community infrastructure helps in giving an overall idea of accessibility of services. The infrastructure sector acts as a catalyst for India's economic growth as it drives the growth of the allied sectors like townships, housing, built-up infrastructure and construction development projects. The infrastructure sector has become the biggest focus area for the Government of India. India plans to spend US$ 1.4 trillion on infrastructure during 2019-23 to have a sustainable development of the country[164]. In India, under Union Budget 2021, support initiatives such as 'Housing for All' and 'Smart Cities Mission' has been allocated Rs. 13,750 crores by the government.

Baseline Assessment

Infrastructure play a vital role in a country's development course, in ways such as production diversification, trade expansion through increased competitiveness, enabling improvements in environmental conditions and reductions in multidimensional poverty through augmentation of non-income factors. [165]

Community or Rural development is the main pillar of State's (Odisha) development. In order to improve the quality of life in rural areas and address the multi-dimensional problems of people living in those areas, several programmes have been conceived and implemented. While one respondent may have stated more than one facility accessible to them, others may not have stated that any are available. This does not necessarily mean that these facilities are not existent within the community. Therefore, this provides a perception of the community members regarding their accessibility to the community infrastructure.

Key Highlights of the Baseline Assessment:

- In Lanjigarh, the overall community infrastructure has improved as compared to previous baseline 2019

- There has been an increase in household electricity by almost 20 percent as compared to 2019

- 54 percent reported streetlight facilities compared to no streetlights in 2019

- Handpumps are the main source to drinking in the block water reported by 86 percent

- 100 percent of households in the surveyed villages had handpumps

Key Highlights of the Impact Assessment:

- In Lanjigarh, 69 percent reported improvement in road construction

- 52 percent reported in interventions of solar streetlights. There were no streetlights as compared to 2019 baseline

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[164] Infrastructure Development in India: Market Size, Investments, Govt Initiatives | IBEF
[165] https://www.orfonline.org/expert-speak/indian-infrastructure/

- Since the inception of plant, over 500 community projects have been done by the BU.

Key Recommendations

- This project (Community development) may converge with sports and further promote football, volleyball and cricket by **development of arenas** for the same leading to a holistic impact. **This was a request by the respondents during the survey conducted.**

- Strengthening Gram Panchayats to develop a holistic plan by system strengthening and capacity of ward members should be further explored.

Community infrastructure

When asked regarding the infrastructure services that are there in the community, 57 percent responded the availability of community halls. 45 percent of the respondents also mentioned concrete roads but insisted that not all areas are covered. Sports ground, gram panchayat and banks are also some of the infrastructure as reported at 24 percent, 37 percent, and 18 percent respectively, only 4 percent said that agriculture credit cooperative societies are available. There is a bus services and a post office within the community as reported by 9 percent of the respondents. The accessibility to Kisan seva Kendra, E-seva kendra were below 10 percent according to the respondents.

Based on the previous baseline 2019, only 41 percent of the villages covered had 100 percent road coverage. There was a post office and 3 bus stands. It also had 7 community halls, 2 micro banks. As compared to the current baseline data of the improvement of roads, there was an improvement by only 4 percent.

Figure 49: Community infrastructure services
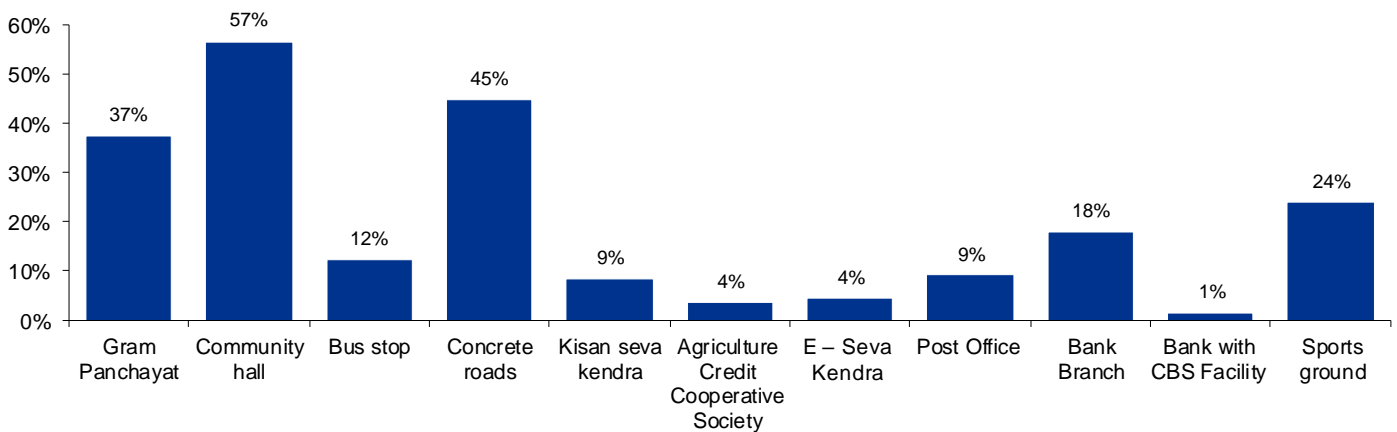
Household electricity covered facilities

The total installed capacity of Power Sector in Odisha during 2019-20 was 7647.69 MW which is hiked by 27 percent over 2018-19. The Domestic Sector is the largest consumer of electricity in Odisha accounting for about 37.41 percent (7327 MU) of total consumption. Rural consumers alone constitute 78 percent of total consumers of energy during 2019-20. During 2019-20, the milestone 100 percent villages electrification was achieved by the State[166]. As on March 2019, there were 2116 number of villages electrified within the Kalahandi district[167].

As per the primary data, 94 percent of the households had grid electricity connectivity and 54 percent have streetlights in the Lanjigarh block, though there have been complains that the electricity is not consistent. Rural electrification in Odisha is practically completed, and now only the task of ensuring the quality of the power supply remains to be carried out.

As per previous baseline 2019, 75.3 percent of the households had electricity connection and the area had no streetlights. As compared to the current baseline, electrification has increased by 20 percent and now 54 percent of the villages covered had streetlights.

Figure 50: Household electricity covered facilities
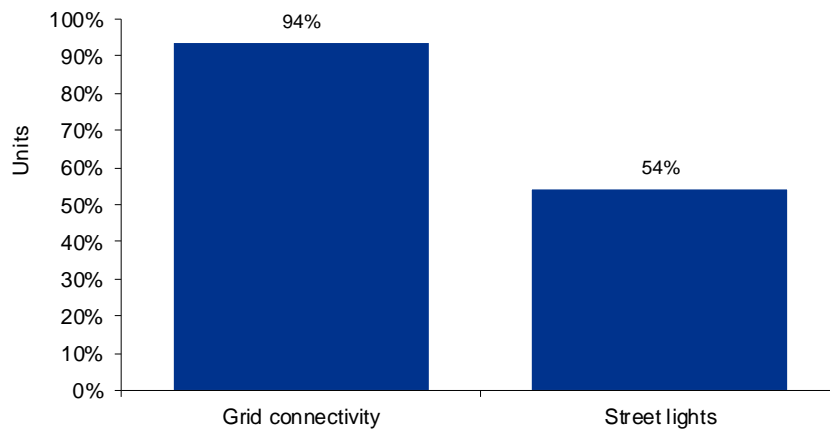
Source of drinking water

As per the NSS report on Drinking Water, Sanitation, Hygiene and Housing Condition, only 2.7 percent of the households in Odisha were dependent on the piped drinking water in homes for drinking water and 10.2 percent of the households were dependent on public tap/standing tap. 63 percent of the households in Odisha were dependent on hand pumps and 11.6 percent were using wells as source of water in Odisha.[168]

The data states that 86 percent of the households use handpumps as their main source of drinking water. Community well is also a common place where drinking water is sourced from

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[166] http://www.msmedicuttack.gov.in/annualreport/DIPpercent20-percent20Kalahandi-2020-Final.pdf
[167] http://www.msmedicuttack.gov.in/annualreport/DIPpercent20-percent20Kalahandi-2020-Final.pdf
[168] https://nss.gov.in/

with 46 percent of the households depending on the well. There is a lack of piped water supply which only 10 percent of the respondents reported to utilizing it. Only 3 percent of the respondents reported depending on the rivers and 2 percent said the use of RO plant as sources for drinking water. 20 percent of the respondents use community water posts as their source of water. Water tanks with taps were provided in all villages. There is 1 water post for each 15-20 households. They also have a handpump in each hamlet and each household has access to a hand pump.

Based on the previous baseline 2019, hand pump or public stand post seemed to be the main source of water in the villages as about 84.8 percent of households accessed water from this source. Only 3.4 percent stated that water was available at home, i.e., piped water. 6.3 percent of the households used protected wells and 1 percent dependent on surface water. There were limited community posts like water tankers as only 0.9 percent dependent at it.

Figure 51: Source of drinking water
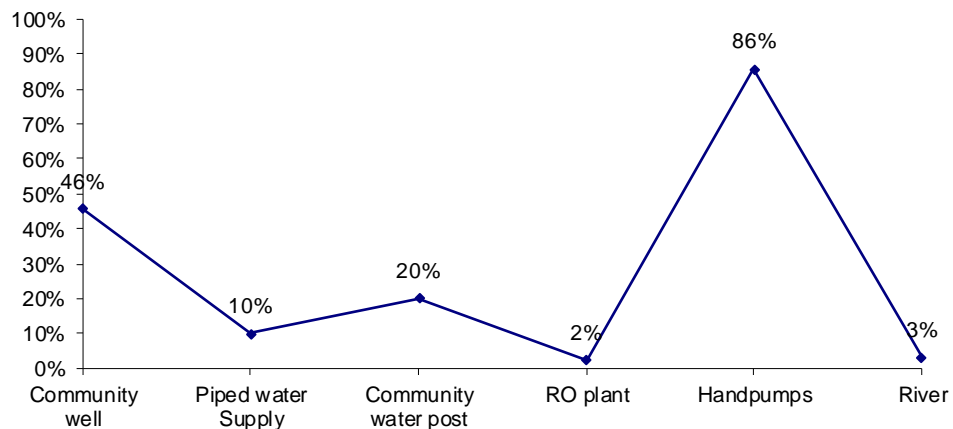
Amenities covered in household

According to this current data, almost all the households have handpumps as per the respondents with 100 percent reporting it. 82 percent of the households are covered by community water posts. Drains remained mostly uncovered. Only in the vicinity of the house, people would block the drain with stones or wood for additional protection. 68 percent of the respondents said that there are uncovered drains compared to 13 percent covered. Only 15 percent of community toilets are covered to the households. 27 percent households had piped drinking water and 15 percent had water disposal mechanism at their homes.

As per the previous baseline data 2019, only about 23.8 percent population using toilets in their households. The mechanism for disposal of solid waste by households was a matter of concern in the plant area as maximum households (71.4 percent) in the villages throw waste in open. Open defecation was present and evident in all the surveyed villages and none of the villages had community toilets. 3.4 percent had piped water and 84.8 percent of households used handpumps for source of drinking water. Disposal of bathroom and kitchen wastewater in of open drains (18 percent) was practiced by the households.

Figure 52: Amenities covered in household
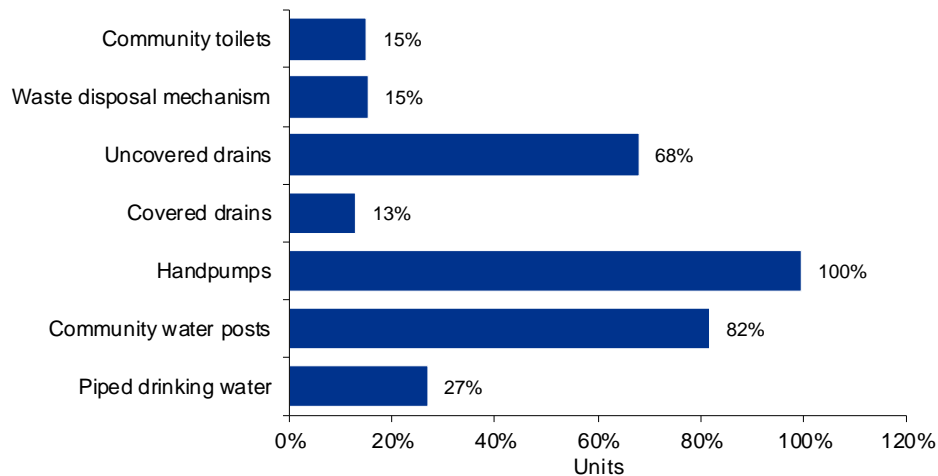
Analysis

Overall picture

- As compared to the previous baseline, all the roads are not concrete, there has been little improvement

- Community hall is being used by the village people even though the graph shows only 57 percent, it is likely to increase over the course of time

- There is a lack of Kisan Seva Kendra and Agriculture Credit Cooperative Societies

- There has been a jump of almost 20 percent in the households with electricity since 2019 and a jump of 54 percent in terms of streetlight in the area

- Handpumps was seen as the common source of drinking water. Every household had a handpump

Challenges

- Even though most households had electricity, it was inconsistent. The streetlights covered in the villages are not enough

- The situation of uncovered drain is a big challenge. Leaving left unattended may lead to poor sanitation conditions and affect health of the people

- Lack of community toilets and lack of water

- Open defecation still persists in the area

Impact Assessment

Project: Community Infrastructure

Evaluation Criterion 1: Relevance

Only 58.2 percent of the household in rural India had drinking water facility within the premises of the households and only 71.3 percent of the household in rural India had access to latrines[169]. When it comes to Odisha, almost 50 percent of the rural households don't have access to latrine. 10.2 percent of the households in rural Odisha are still devoid of improved drinking water sources. In Kalahandi, the situation is better as only 3.5 percent of the households do not have access of improved drinking water sources. As per the NFHS-5 report, only 58 percent of the household in rural areas of Odisha use improved sanitation facilities, while 64.4 percent of the household in Kalahandi have improved sanitation facilities. Through their concentrated efforts, VAL-L has been working on providing infrastructure support to communities to fill the infrastructural WASH Gaps. Community infrastructure development is an important intervention area for VAL-L. The aim was to build and construct basic infrastructure around the villages around Lanjigarh block. After understanding the needs of the community, the BU has supported in constructing roads, community centers streetlights and also WASH interventions like drinking water projects, local drains, etc.

Evaluation Criterion 2: Effectiveness

Community infrastructure interventions are not programme based but need based activities that are undertaken for the well-being of the community and play an integral role in building the social capital of a business in the areas that they operate. Thus, this thematic area as a whole has not been analysed vis-à-vis effectiveness.

Evaluation Criterion 3: Coherence

SDG	How are projects aligned BU's CSR policy?
6 CLEAN WATER AND SANITATION / 11 SUSTAINABLE CITIES AND COMMUNITIES	Community Development Interventions are not programme based but need based activities that are undertaken for the well-being of the community and play an integral role in building the social capital of a business in the areas that they operate. Thus, this thematic area as a whole has not been analyzed vis-à-vis coherence

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[169] https://nss.gov.in/

Evaluation Criterion 4: Efficiency

Community Development Interventions are not programme based but need based activities that are undertaken for the well-being of the community and play an integral role in building the social capital of a business in the areas that they operate. Thus, this thematic area as a whole has not been analyzed vis-à-vis efficiency

Evaluation Criterion 5: Impact of intervention

Infrastructure development interventions in the area

Figure 53: Infrastructure development interventions in the area
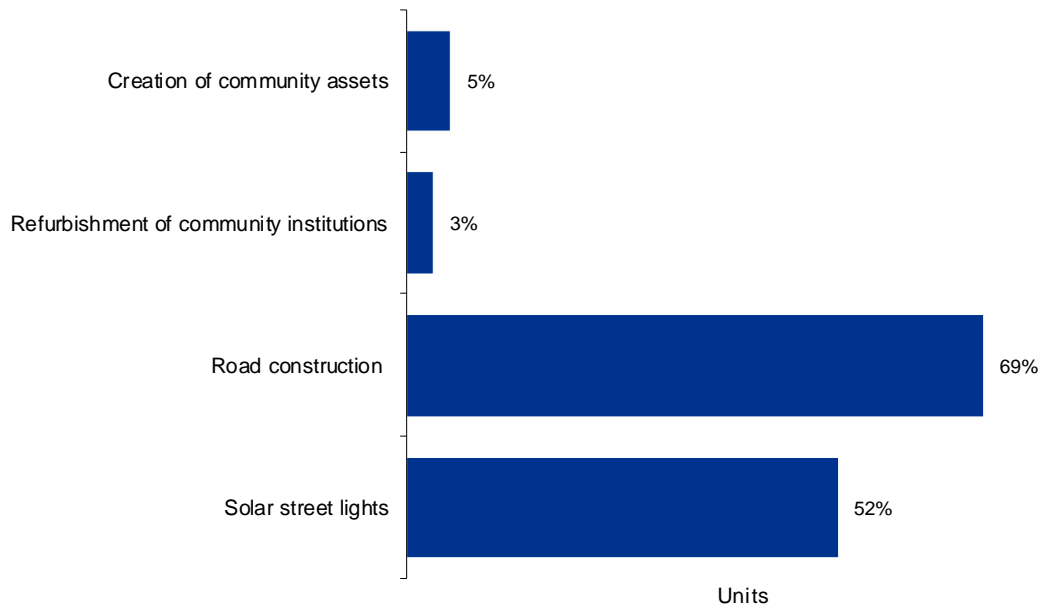
As per the community development in the area, most of the respondents have said that solar streetlight and road construction have been the major interventions with 52 percent and 69 percent respectively.

Improvement in road building: Ever since the inception of the plant, the BU has been involved in over 500 developmental projects. Among them, building concrete roads has been one of the major initiatives and is an ongoing activity. Even though there are a few villages demanding for better road access, this was well noticed by the people of Lanjigarh as 69 percent of the people have spoken about the impacts made by concrete roads constructed.

Bringing water source to every household: The Lanjigarh block, a handpump is present in almost all the household where water can be sourced. Although, additional efforts are being requested from the BU to provide clean water supply from other sources as well.

Increasing community halls and streetlights: Solar streetlights intervention by the BU was seen as a big impact around the community. Although there has been requests for the same

to be covered in all the villages. This comes as a huge impact since 2019, as there were no streetlights in the area. The use of community halls by the village people have increased and a lot are dependent on it. The impact created by the BU has been noticeable by the people of Lanjigarh.

Programme with NITI Aayog

Vedanta Lanjigarh is working with the state Government and development partners to strengthen Government institutes to run several projects. One of such is the NITI Aayog Aspirational District programme where community infrastructure development through creation of village roads, water, sanitation, and electricity through alternative energy source makes it an integral part of the project.

The effect of the community infrastructures has been praised by the stakeholders and the beneficiaries. Since the inception of the plant, there has been more than 500 development projects. Over 40 tube wells, 10 approach roads, 12 local drains, 10 community centers have been developed and dedicated to the community. There have been improvements in community hall, as 57 percent of the respondents said on the survey along with other infrastructures like roads, gram panchayat etc.

Evaluation Criterion 6: Sustainability of intervention

Maintenance of the community infrastructure is important. For most of Vedanta's projects, there is a plan for an exit strategy and thus the programmes are built in such a way that they can be sustained and run by the Government or other bodies. In case of infrastructure, the community should feel responsible to maintain the infrastructure as it will impact the livelihood.

Suggested Way forward

Electrification: As per the data the streetlights cover 54 percent of the Lanjigarh village and needs to cover more area/villages to improve community development. According to some of the respondents surveyed, there are a few villages where there are no streetlights.

Odisha has witnessed a massive transformation in availability of power over the last decades. All villages (47,679) of Odisha have been electrified by the end of March 2020. The BU may start to move into using of solar powered equipment for not only streetlights, but also look to explore solar drinking water, solar irrigation, Kiosks etc.

Uncovered drains: Uncovered drains possess a threat not only to poor sanitation and health purpose, but also is life threatening to people in the villages. Malaria cases has been seen as a common threat in the district. The BU may address these issues of the drainage system in their next infrastructure/community development project

Community toilets: It was observed that toilets are not available in many households and constructed toilets are not being used due to limited access to water. Construction of roads and toilets may help the community better given the fact that water lines are provided to all sanitary constructions. As per the Rural Water Supply and Sanitation Department, Odisha had

achieved 100 percent ODF status in 2019 with all the 30 districts declared Open Defecation Free and thus households having no facility of toilet in 2020-21 dropped to zero[170].

Most villages still practice open defecation. Having community toilets in every village will help eradicate this issue.

Business Drivers for Community Infrastructure programme

CSR is a pivotal management concern given that in order to expand their wealth creation role in society, businesses must proactively manage risks and take advantage of opportunities vis-à-vis reputation and engagement with stakeholders. Based on the perception survey, the internal stakeholders of VAL-L believe that companies having a focus on key business drivers focused on sustainability have a greater chance of success and further believe that such companies are more attractive to investors.

> "CSR is essentially a strategic approach for firms to take to anticipate and address issues associated with their interactions with others and, through those interactions, succeed in their business endeavours".
>
> - Hohnen, Paul (2007). Corporate Social Responsibility: An Implementation Guide for Business. International institute for Sustainable Development
>   Source: https://www.iisd.org/system/files?file=publications/csr_guide.pdf

All the respondents believe that the focus on certain key drivers for business have improved community relations. In fact, the focus on these business drivers has a direct relation to improving relationships with local communities, increasing trust, improving the reputation of VAL-L as well as contributing to the national and international social development goals. Therefore, VAL-L leadership's perception on such benefits is both inward and outward looking and encompassing a varied group of stakeholders. Specifically, according to the study, 100 percent of the VAL-L's internal stakeholders considered "supporting social development of the local community", "providing equal economic opportunities to the local community", conserving the environment and preserving and promoting cultural heritage the key business drivers for their Corporate Social Responsibility key sustainability drivers. Specifically, within the area of social developed, 75 percent of the internal stakeholders considered that creation of concrete roads, Ros, Water ATM, rejuvenation of community ponds, irrigation infrastructure, piped drinking water, Street lights, CCTV, overhead tanks etc. is the strongest business driver for community development programmes run under the BU's CSR.

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[170] Rural Water Supply and Sanitation Department

Business case for community infrastructure project:

Development of community infrastructure plays a critical role in the economic growth of any country. Presently 65percent of India's population resides in its rural areas[171]. Rural infrastructure needs to be developed to provide basic amenities such as civic services and housing to the rural population, as it will enhance and boost their quality of life. Vedanta Limited since its inception has worked in over 500 development projects to improve the quality of life for the people of Lanjigarh. Notably the road construction and solar streetlights where 69 percent and 52 percent of the respondents mentioned during the impact survey. Now, almost 100 percent of the community household have water pumps and about 86 percent depend on them for source of drinking water. The block now has place where people and panchayats can hold meetings in the community halls instead of an individual's house or fields. The health situation has improved due to the Vedanta hospital, it has helped most people in the community cut down spending for health expenditure and also saved the distance to reaching the district hospital. The WASH scenario has also improved due to the coverage of drains and building of toilets, although there has been requests for more improvements when it came to WASH in the households. Community infrastructure is a key projects and will always remain an ongoing project for any company as the sustainability of the economy of the area and business depend on it.

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[171] The rural infrastructure sector under National Infrastructure Pipeline (investindia.gov.in)

Thematic Area: Environment

India is the 5th most vulnerable to climate change globally. In 2018, India lost nearly 37 billion dollars due to climate change (almost twice than what it lost between 1998-2017). NITI Aayog (2018) estimates that more than 600 million Indians will face 'acute water shortages' in coming years. [172] Air pollution and environmental sustainability are great concerns in India of the world's 30 most polluted cities are in India (IQ Air Report, 2020) and a Lancet study from 2018 estimates that air pollution in India killed 1.24 million people in 2017 (12.5 percent of total deaths). Yale's Environmental Performance Index ranked India at 177 out of 180 countries, based on four performance indicators measured in 2018[173].

Forests play a vital role in maintaining ecological stability and contribute significantly to the local economy, especially by providing livelihood support to forest dependent socially backward communities, mostly the scheduled tribes. While Odisha's Forest areas cover 39.31 percent of the State's geographical area[174], Kalahandi District is very ideal for farm forestry due to suitable agro-climate conditions and abundant availability of degraded/waste land. The total geographical area and forest area in the district are 7920 sq.km. and2 538.01 sq.km. respectively. The percentage of Forest area to Geographical area is 32.05[175].India, which occupies 2.4 percent of the world's land area and 4 percent of global freshwater resources, consumes only 6 percent of the world's primary energy while feeding about 18 percent of the world's population. India is a mega-diverse country both culturally and biologically. It hosts 7– 8 percent of all recorded species, four global biodiversity hotspots, the world's largest tiger and Asian elephant populations, 10 biogeographic and 15 Agro-climatic zones.

Key Highlights of the Baseline Assessment:

- Air pollution and water pollution are the biggest environment issues in Lanjigarh with 81 percent and 54 percent respectively

- 58 percent of the respondent revealed that tree plantation, 21 percent water management and 20 percent natural resource management, 13 percent solar stove, 7 percent solar pumps are the environment protection activities in the Lanjigarh block

Key Highlights of the Impact Assessment:

- 62 percent reported the project interventions has improved the access to clean cooking solution

- Efficient cooking and improvement in health has been reported due to clean cooking stoves

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[172] Concept of LiFE explained at COP27 - Let Me Breathe

Key recommendations:

- **Convergence with District Environment Plan:** If VAL-L wishes to work on environment, there is an opportunity to ensure converge and thus collaborate with the district administration on Environment Action Plans created by different districts.

- **Promotion of Climate-resilient Agriculture (CRA):** Through the existing sustainable livelihood programme, CRA can be promoted which is an approach that includes sustainably using existing natural resources through crop and livestock production systems to achieve long-term higher productivity and farm incomes under climate variabilities.

Baseline Assessment

Yet, India faces looming environmental challenges. India is home to 63 out of 100 most polluted cities in world. 48 percent of the country's cities have more than 10 times higher PM2.5 concentration than the 2021 WHO air quality guideline level. Vehicular emissions, industrial waste, smoke from cooking, the construction sector, crop burning, and power generation are among the biggest sources of air pollution in India. The country's dependence on coal, oil, and gas due to rampant electrification makes it the world's third-largest polluter, contributing over 2.65 billion metric tons of carbon to the atmosphere every year.[176]

70 percent of India's surface water is unfit for Consumption. In India, around 40 million liters of wastewater enter the water bodies every day.[177] Every day, India produces more than 25000 tons of plastic waste. Only 5percent of the total waste collected is recycled in India.[178]The country has already lost 90 percent of the area in the four hotspots. Due to climate change, droughts, floods, heatwaves, heavy rains have become persistent.

As per the Central Pollution Control Board data, Odisha has the highest number of contaminated sites.[179] Fly Ash from plants, wastewater discharge from mines, deforestation have become major environmental threat in Odisha.

To maintain the ecological balance, there should be 33 percent of the forest cover in the geographical area. Forests play a vital role in maintaining ecological stability and contribute significantly to the local economy, especially by providing livelihood support to forest dependent socially backward communities, mostly the scheduled tribes. While Odisha's Forest areas cover 39.31 percent of the State's geographical area[180][181], Kalahandi District is very ideal for farm forestry due to suitable agro-climate conditions and abundant availability of degraded/

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[176] https://earth.org/environmental-issues-in-india/
[177] https://earth.org/environmental-issues-in-india/
[178] https://earth.org/environmental-issues-in-india/
**'Contaminated sites' are delineated areas in which "constituents and characteristics of the toxic and hazardous substances, caused by humans, exist at levels and in conditions which pose existing or imminent threats to human health and the environment", according to the Union environment ministry
[179] https://www.downtoearth.org.in/news/environment/odisha-has-most-contaminated-sites-in-india-cpcb-data-75870
[180]
http://www.msmedicuttack.gov.in/annualreport/DIP%20-%20Kalahandi-2020-Final.pdf

waste land. The total geographical area and forest area in the district are 7920 sq.km and2 538.01 sq.km. respectively. The percentage of Forest area to Geographical area is 32.05[182].

Environment related issue

Figure 54 Environment related issues
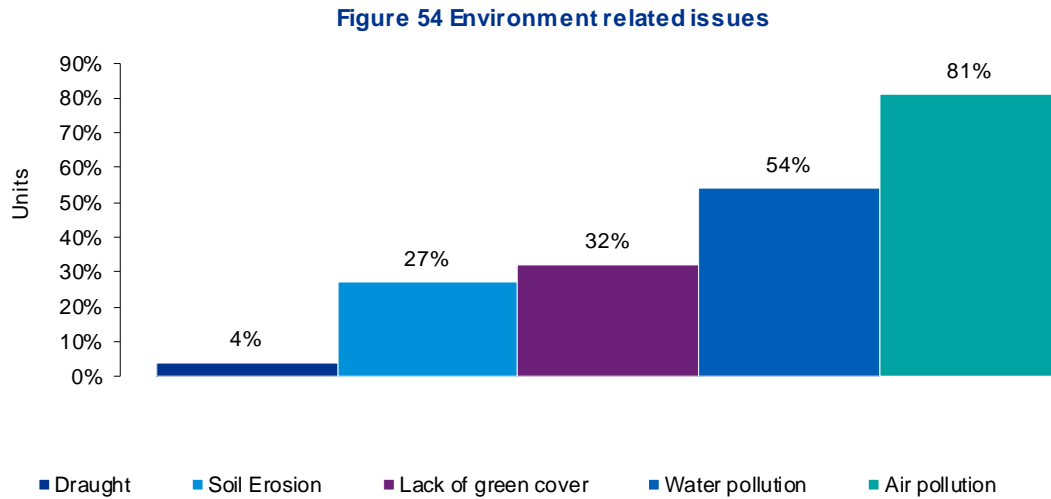
The Kalahandi district has about 32.05 percent of its geographical area as forest area. Kalahandi District is very ideal for farm forestry due to suitable agro-climate conditions and abundant availability of degraded/ waste land. The species Eucalyptus and Acacia are very popular in the district. Similarly, Wasteland can be brought under vegetative cover with reasonable effort, which is currently unutilized. Further, the condition of the land is deteriorating for lack of appropriate water and soil management practices or on account of natural calamities.

Current data states that 81 percent of the respondents have reported that air pollution as one of the biggest factors that is harming the environment, while water pollution was also given as a consistent answer to environment related issue with 54 percent. Red mud situation has been observed due to the refinery and has affected the water in the area. 32 percent of the respondents reported lack of green cover and 27 percent said there are soil erosion issues in parts of the village blocks. Deforestation was another issue which 10 percent of the respondents reporting on it. Only 4 percent reported drought as an issue, though Kalahandi district has suffered from repeated droughts and famines for several decades, causing great hardships to the local farmers[183]

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[183] https://www.cgiar.org/news-events/news/drought-prone-landscape-turns-green/

Environment protection activity ongoing in the community

As per the primary data, 58 percent of the activities were tree plantation along with water management and natural resource management which are around 20 percent and above. The communities also have started the use solar devices, clean stoves, and Biogas as an effort to protect the environment, but that were reported below 13 percent by the beneficiaries

Figure 55 Environment protection activity
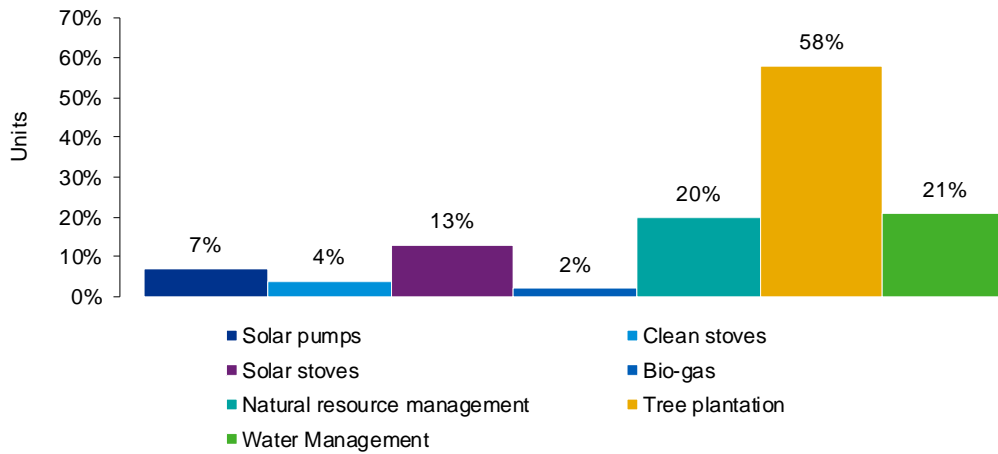
*Tree plantation by Vedanta

Analysis and Way Forward

Challenges

- Air pollution and water pollution have been seen as the biggest environmental issue to the community as it is interfering with people everyday lives and had an impact on their overall health and well-being.
- Deforestation and drought are the most severe ecological challenges prevalent in the community area that are caused by climate change.
- There has been an increase of solar products but is still new to the people.

- Tree plantation is the most common activity undertaken to protect the environment

Way forward

- Bringing in environmentalism and cultivate awareness in the area
- Convergence with State Pollution Control Board, Odisha for Implementation of Environment Action Plan
- Improving Water treatment in the area. There is lack of water in the area.
- Encourage the use of solar equipment

Impact Assessment

Project: Clean Energy

Evaluation Criterion 1: Relevance

The lack of access to clean fuels for cooking is included among the 12 indicators for measuring multidimensional poverty in the National Multidimensional Poverty Index (MPI) Baseline Report brought out by the NITI Aayog in September 2021[184]. Moving towards access to cleaning lighting and cooking is necessary to achieve the objective of attaining improvement in health and improvement in environment

A program's relevance is determined by how well it ascertains whether the project is pertinent to the beneficiaries' requirements. A baseline study was conducted to establish the project in Project affected and Project Displaced villages. The program was designed based upon the findings of the baseline study.

Vedanta Ltd Lanjigarh, is planning to bring light into the lives of 5,000 rural households by replacing the kerosene/paraffin lanterns with solar lighting devices.

The relevance of Project Clean Lighting and Clean Cooking is found to be moderately satisfactory.

Evaluation Criterion 2: Effectiveness

Project Clean Lighting and Clean Cooking was introduced with the aim to reduce the use of the traditional forms of energy and fuels and promote clean energy and bringing efficiency which intends to protect the families from developing health issues and also using sustainable forms of lighting. There has been an improvement the accessing clean cooking solutions and most people in the village are sensitized to affordable and clean energy with special focus on clean cooking and clean lighting. 850 households in 25 villages have started using solar lanterns in place of fuel lamps with 80percent cost support from the company.

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[184] https://www.niti.gov.in/sites/default/files/2021-11/National_MPI_India-11242021.pdf

The intervention is extremely satisfactory on the effectiveness scale.

Evaluation Criterion 3: Coherence

SDG	SDGs target	How is it aligned?
7 AFFORDABLE AND CLEAN ENERGY	- Target 7.A Enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology	Project Clean Lighting and Clean Cooking targets to reduce carbon footprints by replacing traditional energy sources with alternative solutions through promotion of clean lighting and clean cooking in tribal households. It aligns with goal number 7 of the Sustainable Development Goals and Vedanta's CSR policy. The intervention is moderately satisfactory on the coherence scale.

Evaluation Criterion 4: Efficiency

Project Clean Lighting and Clean Cooking is aligned with Vedanta's CSR policy and has MoU's in place which has a well-defined start and are ongoing projects. The project underspent the budget as compared to original allocated amount. The reason for the underspent is also due to delay in issuance of PO. A matrix of indicators and its guidelines along with relevant weightage have been illustrated above. The project was found to be satisfactory on the on the efficiency scale.

Evaluation Criterion 5: Impact of intervention

Improved the access to clean cooking solution

Figure 56 Access to clean cooking
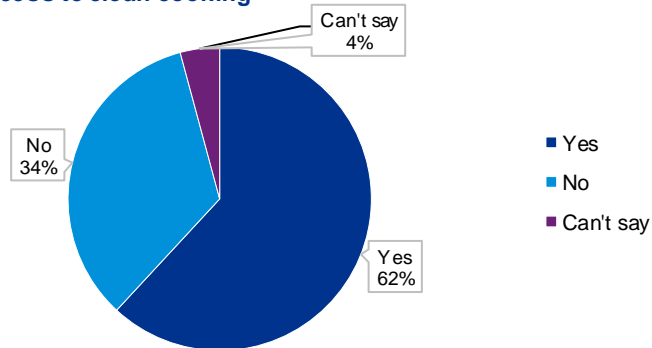
The project interventions have certainly improved access to clean cooking solutions. 62 percent of the beneficiaries have given a positive response, while 34 percent of the beneficiaries still use the traditional ways of cooking. While to improve this rate, there can be better awareness programs to spread the message. VAL-L shares at least 80 percent of the cost of alternative cooking and lighting devices.

Impact of clean cooking stoves

Figure 57 Impact of clean cooking stoves
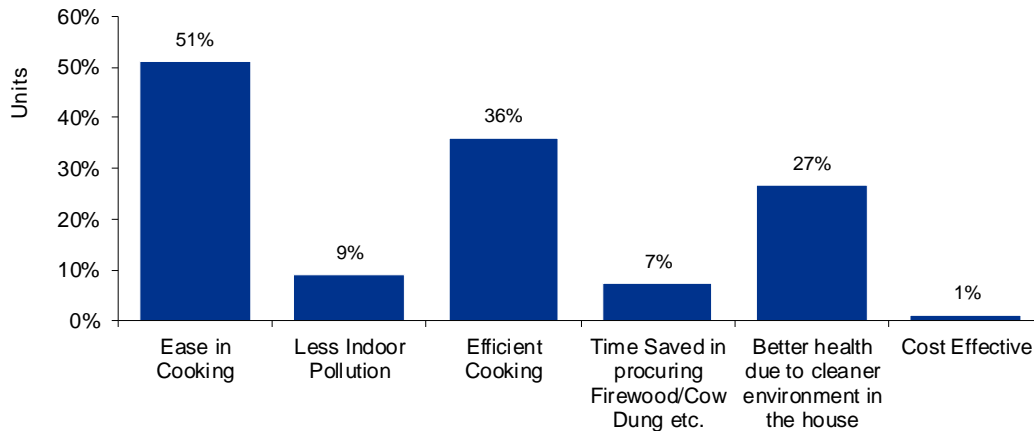
When asked the beneficiaries on how the clean cooking stoves has impacted the households, 51 percent of the respondents said that it helps make cooking easier and 36 percent of the beneficiaries reported that cooking is more efficient. 27 percent also reported benefits from health perspective. Most respondents did not find it cost effective as 1 percent was reported

Evaluation Criterion 6: Sustainability of intervention

All effort that the BU is putting into building energy efficient villages will go to waste if the beneficiaries of these villages don't contribute towards ownership. The process could take time to get used to but taking responsibility will soon bring in sustenance of change within the society. The project is found to be extremely satisfactory on the sustainability scale.

Suggested Way forward

▪ **Community Awareness -** Not just plant trees at the BU level but generate awareness among the community and educate them about the effectiveness and necessity of maintaining the planted trees. It is imperative to also generate awareness that the older the tree, the greater its potential to store carbon and slow climate change better. Though there may already be awareness among the population, multiple campaigns still need to be focused upon to work toward the betterment of the environment

- Encourage the community to form "**community lawns**" and "**environment committees**" like paryavaran panchayat or pani panchayat- dedicated groups that meet periodically and work dedicatedly for the environment.

Best Practice

Village Adoption Program Under Swachchta Initiative (VAPUSI) of IIT Delhi Alumni Association (IITDAA) an SOP for plantation

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- **Chemical-free water sources** - provision to stop water contamination at the source through filters and industrial water processing.
  Promotion of integrated agriculture — integrated pest management, integrated nutrient management and integrated water management — rather than chemical-based agriculture

  Rainfed mode of irrigation may contribute to climate change as famines and droughts are common features of rainfed agriculture. Most farmers in the Lanjigarh block practice the same mode, the BU may investigate supporting the farmers with better techniques.

Best Practice

PepsiCo India is working with N-Drip to help farmers to enhance water efficiency across thousands of hectares in the country by 2025. N-Drip's technology has already been introduced in Uttar Pradesh, Punjab, and Rajasthan.

- A few good practices include the 6Rs
  1. Refuse - refrain from purchasing things you do not need or single-use products
  2. Reduce - Reducing is simply **creating less waste**. It's the best method for keeping the environment clean
  3. Reuse - Reusing in environment health and safety or waste prevention terminology means using an object or resource material again for either the same purpose or another purpose without changing the object's structure in a significant way.
  4. Repair - Repairing what you already own is also likely to save you money in the long term, as well as doing your bit for the environment.
  5. Recycle - Recycling is the process of converting waste materials into new materials and objects.
  6. Rethink – Reprocess a material or product and make something else

- Encourage **water-efficient crop farming** in the area - through regional FPOs resilient crops can be cultivated which would help conserve a lot of water in the area.

- BU may involve academicians, specialists etc., to conduct a study of the potential of **renewable energy** within the village, potential of environment beneficial facilities for the households. Some possible initiatives might include solar night lamps, solar water heating pumps, rooftops solar.

Business Drivers for Environment programme:

CSR is a pivotal management concern given that in order to expand their wealth creation role in society, businesses must proactively manage risks and take advantage of opportunities vis-à-vis reputation and engagement with stakeholders. Based on the perception survey, the internal stakeholders of VAL-L believe that companies having a focus on key business drivers focused on

> "CSR is essentially a strategic approach for firms to take to anticipate and address issues associated with their interactions with others and, through those interactions, succeed in their business endeavours".
>
> - Hohnen, Paul (2007). Corporate Social Responsibility: An Implementation Guide for Business. International institute for Sustainable Development
> Source: https://www.iisd.org/system/files?file=publications/csr_guide.pdf

sustainability has a greater chance of success and further believe that such companies are more attractive to investors. All the respondents believe that the focus on certain key drivers for business have improved community relations. In fact, the focus on these business drivers has a direct relation to improving relationships with local communities, increasing trust, improving the reputation of VAL-L as well as contributing to the national and international social development goals. Therefore, VAL-L leadership's perception on such benefits is both inward and outward looking and encompassing a varied group of stakeholders. Specifically, according to the study, 100 percent of the VAL-L's internal stakeholders considered "supporting social development of the local community", "providing equal economic opportunities to the local community", conserving the environment and preserving and promoting cultural heritage the key business drivers for their Corporate Social Responsibility key sustainability drivers.

Business case for clean energy project:

To keep the environmental pollution in check, VAL-L introduced Clean Energy project, where the aim is to transform the villages in Lanjigarh from using the traditional forms of energy and cooking methods to using clean lighting and clean cooking products. 850 households in 25 villages have started using solar lanterns in place of kerosene lamps with 80 percent cost support from the company and 20 percent beneficiary contribution. VAL-L has contributed about 80 percent of the cost for alternate and sustainable cooking. This has brought about ease in cooking and better health within the households due to cleaner environment. The streetlights installed in the villages are also solar powered and many households with children are now satisfied as it allows students to study in the evenings, as using candles or lighting fire affects the health and the dependency on normal power supply is not reliable. Apart from benefitting the children, clean energy project has made an impact on many women in the

village as they are the ones mostly who are busy in the kitchen or with their children. This is supportive to the business in long run as the world is moving towards the use of clean and sustainable energy and it benefits the company as it is educating the coming generations the importance of a healthy environment.

Thematic Area: Sports and culture

Executive Summary

The Government of India has taken multiple initiatives to nurture athletes for professional sports. But there is a long way before India emerges as a sporting nation in its truest sense. The National Education Policy 2020 offers a window of opportunity to integrate sports as a non-alienable part of the curriculum in schools and colleges.

Key Highlights of the Baseline Assessment:

- 49 percent and 41 percent of the respondents reported access to grounds for Football cricket facilities.
- 33 percent of the respondents reported promotion of cricket locally
- In Lanjigarh, 50 percent of the respondents reported the artisans specialize mostly in the traditional art
- Of the support provided by the Government to the artisans, market linkages were reported at 42 percent.

Key Recommendations:

- Communities should have access to facilities, training courses, for sports like cricket, football, volleyball, archery, wrestling, etc. to encourage participation in those activities as viable career alternatives.
- Enhancing the promotion of handicrafts and artisanal work through the provision of subsidies and other aids are required for communities to thrive. **These are recommendations and requests by the respondents. Although they have acknowledged the support received by the BU.**

Baseline Assessment

In recent times, the Government of India has taken multiple initiatives to nurture athletes for professional sports. But there is a long way before India emerges as a sporting nation in its truest sense. Sports have to be a part of a child's growing up. The National Education Policy 2020 offers a window of opportunity to integrate sports as a non-alienable part of the curriculum in schools and colleges[185]. The network of schools and colleges makes a perfect platform to scale sports to reach each household.

The Government of India, in recent years, has taken several initiatives such as Khelo India, etc. to build India as a sporting nation with a great amount of emphasis in the rural areas. While these initiatives are commendable, there is a long way to go in creating a structured sports culture in India – rural and urban both

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[185] Reinvigorating Sports in Rural Areas | NITI Aayog

Type of sports facilities available

There was a mixed response by the beneficiaries regarding sports facilities. A lot of the respondents said that there are sports facilities and sport grounds, but the condition needs to improve for both the facilities available and the situation of the grounds.

As per the primary data, availability of grounds for football and cricket were reported by 49 percent and 41 percent respectively, there are a handful who enjoy Volleyball with 6 percent of the beneficiaries reported access to the facility. The rest 4 percent are other sports like indoor games, athletics etc. that were available in the Lanjigarh block.

As per the previous baseline 2019, the response of availability of sports facilities was only 30 percent. 41.5 percent of the households said that improvements need to be made towards the sport facilities. - Comparatively, this has increased by nearly 20 percent as per the current baseline data.

Figure 58 Availability of sports facilities
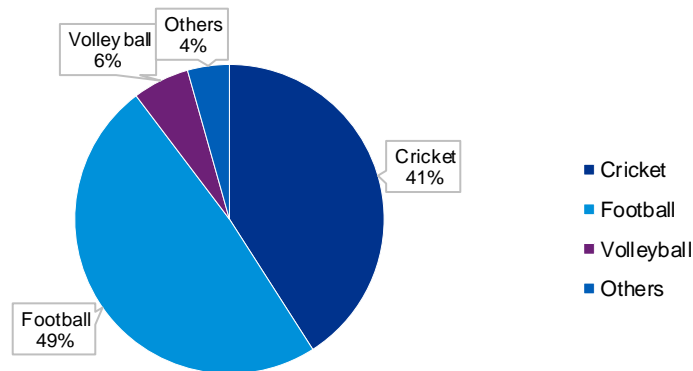
Sports facility that can be promoted locally

When asked if any sport facility in that can be promoted locally, 33 percent said promotion of cricket. While there was 35 percent of respondents who said that sports were not very important, 6 percent of the respondents said a proper ground where cricket, football and other sports like athletics also needs promotion.

Figure 59 Sports facility that can be promoted locally

Bar chart showing:
- Cricket and football and others: 6%
- Only cricket: 33%
- Only football: 8%
- No response: 18%
- None: 35%
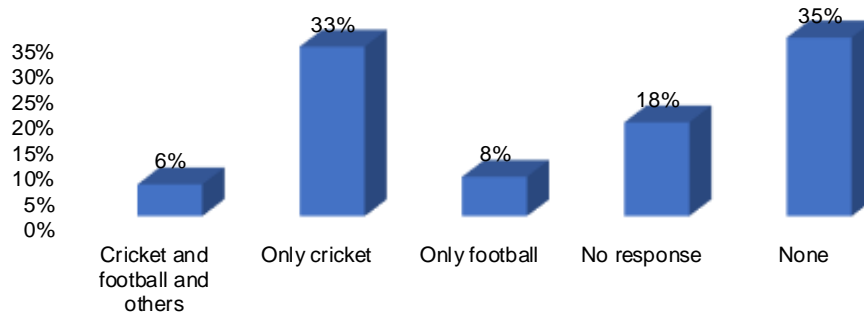
Type of artisanal work

Presently in Odisha, as many as 50 different crafts are practiced by more than 1.50 lakh artisans, dispersed throughout the State. The Odisha Handicrafts Policy 2019 aims to leverage the unique selling proposition of the skilled workforce of Odisha. The State has the best craftsmanship in the country having highest number of artisans honored with national awards including 'Padma' awards[186]. While there has been a growing demand for handicraft products both in domestic and international markets, most of the artisans live in rural areas and are unable to cash in on the opportunity. Mass-produced and machine-made products have taken centre stage, leaving little room for skilled artisans and their handmade products[187]

The Lanjigarh block (Kalahandi district) is known for its different types of artworks. 50 percent of the respondents reported the artisans specialize mostly in the traditional art. Pottery, stonework and woodcraft are also the other artisanal work in the district as reported on the primary data which were below

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[186] IBID
[187] These 5 brands are reviving Indian handicrafts and crafting a livelihood for rural artisans (yourstory.com)

20 percent. Only 5 percent of the artisans were textile specialist as per the survey

Figure 60 Type of artisanal work in the district

| 17% | 5% | 50% | 13% | 14% |

0%   20%   40%   60%   80%   100%   120%
Units

■ Pottery ■ Textile ■ Traditional Art ■ Stone work ■ Woodcraft
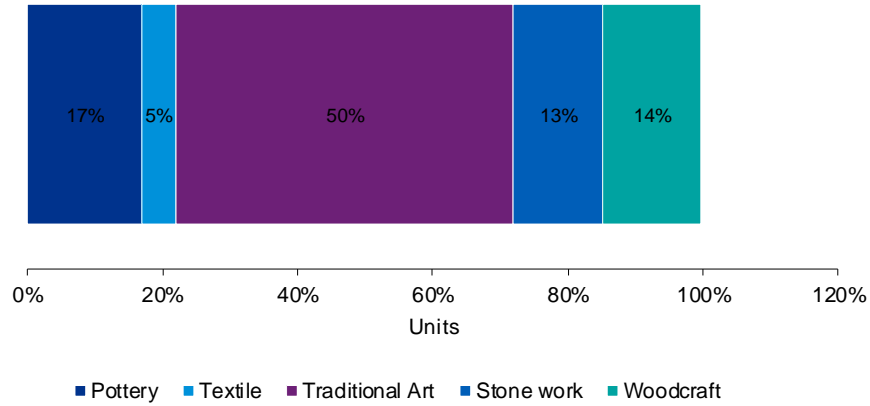
Government support provided for the promotion of artisanal work

The Government has been supporting the artisanal work in various ways. As per the primary data the most support provided by the Government has been in market linkages with 42 percent. Government also supported with loan services and bank service facilities as reported by 25 percent and 18 percent of the beneficiaries respectively. Only 8 percent was reported for the support on events promotions and 7 percent on seed grants.

Figure 61 Government support

Promotional events 8%
Bank services 18%
Market linkages 42%
Loans 25%
Seed grants 7%
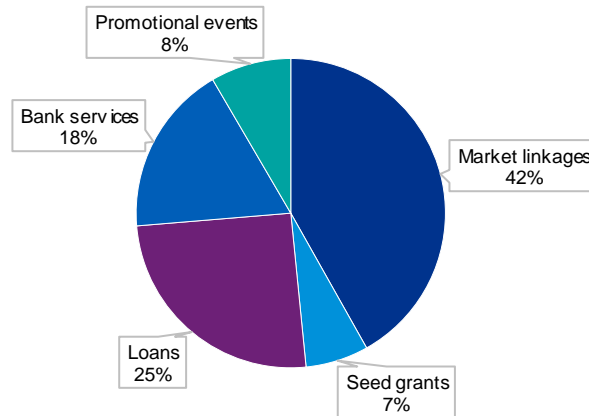
BU's benefit on sports and culture

VAL L has a range of social programmes and one of them focuses on sports and other culture, by increasing sports participation and contributing to the state. Through these interventions, we have seen a marked improvement in the sports participation of our beneficiaries, making a positive and lasting impact.

Archery and Karate:

Vedanta Lanjigarh has established a number of community development programs, with the aim of fostering holistic development of rural youth and encouraging their participation in the national sports sector. At present, Vedanta is providing archery and karate training to over 100 and 80 students respectively, at the DAV Vedanta International School and SSD High School, Lanjigarh. Recently, 10 students, supported by Vedanta Lanjigarh's archery program, have achieved success in the 23rd State Archery Championship 2022 in Bolangir, Odisha. 19 athletes from Kalahandi also participated in the competition, following an intra-district championship hosted by Vedanta Lanjigarh in collaboration with the Kalahandi District Athletics Association (KDAA). Of these 19 students, 10 returned home as state champions, winning 4 Gold, 2 Silver and 4 Bronze medals and 3 participants in the junior category have been selected for the 42nd NTPC Junior Nationals. Vedanta Lanjigarh is committed to promoting rural youth development and sports participation, exemplified by the success of these students in the State Archery Championship.[188]

VAL-L's contribution in preserving and promoting local art forms

Dhokra art:

Dhokra Art is a part of India's diverse and rich handicraft legacy dating back to the Indus Valley Civilization - nearly 4000 years ago! Artisans skilled in the traditional metalworking art of Dhokra have passed on their knowledge and skill through generations, however the art was limited to making simple traditional jewelry to sell in local village markets. Unfortunately, this wasn't enough to make ends meet. Realizing the importance of keeping this ancient art alive, Vedanta Aluminium launched a social intervention program to provide professional training to the artisans. This training helps them to incorporate modern design trends into their sculptures and art pieces, making them more commercially viable and increasing their market value.[189] Vedanta has taken extensive steps to help the Dhokra artisans keep their craft alive. Through 'artisan cards', they provided public recognition for these artisans, allowing them to participate in government-held exhibitions and commercialize their works. They also provided the initial seed capital for procuring metal and other raw materials and helped organize the first exhibition for them to get better prices for their craft. Vedanta also helped the artisan community create a raw material bank and open a Self-Help Group bank account to provide adequate financial support and assisted each of the households to open bank accounts where they can save their

[188] Vedanta Lanjigarh's archery training programme produces 10 state champions – Odisha Diary (orissadiary.com)
[189] https://www.bizzbuzz.news/industry/vedanta-aluminium-preserving-promoting-local-artforms-through-livelihood-development-1128093

money. In doing so, Vedanta has taken an active role in addressing the marketing challenges faced by the Dhokra artisans and giving them the opportunity to keep their art alive.[190]

Saura Art:

Vedanta Limited, Lanjigarh has launched a six-month training program for students in the traditional tribal art of 'Saura'. This unique art form, which prominently features in the cultural heritage of Odisha, is inspired by nature and the daily lives of its artists. Animals, farmers, gods, natural spirits, and ancestors are all represented in this art form. 36 students have been carefully selected for the program based on their interest. During the course of the six-month program, they will receive expert training and guidance from experienced teachers. This program will not only serve as an incredible opportunity for the students to learn and grow, but also to preserve and promote Odisha's tribal art. The program will continue to benefit the students, the school, and the community.[191]

Analysis and Way Forward

Overall picture

- There are a number of demands for sports in the village like football and cricket. Most respondents even feel that there should be specializations in several sports to create local state champion from the block.
- BU has contributed towards archery in the past, there has been no mention of interest by the beneficiaries surveyed.
- There has been support for the artisans by the BU and the Government, but demand persists
- The sport facilities are average, and improvements are needed

Challenges

- The sport facilities and the grounds conditions are only satisfactory and needs improvement
- The area lacks trainers due to which the children are not able to receive proper guidance and training
- Most youth are interested in attaining modern day skill instead of becoming a craftsman or an artisan

Way forward

- **Improvement of sport facility** – This has been the major demand from the beneficiaries. The youth do not have the means and support to play sports and most parents do not think that playing sports is important for their children. If a proper facility is provided like good playgrounds, a coach that can converse in the local dialect and sporting equipment, the Lanjigarh block can hope and aim to create local sports state champion.

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[190] https://vedantaaluminium.com/media/press-releases/list/vedanta-revives-traditional-artforms-to-create-sustainable-livelihood-opportunities/

[191] https://vedantaaluminium.com/media/press-releases/list/vedanta-lanjigarh-helps-train-a-new-generation-of-saura-enthusiasts/

- **Support to the artisans** – marketing support is the biggest backing that is required by the artisans. The BU may explore different schemes to promote the work of the artisans and craftsmen.

> **Government Alignment:** 901 artisans were provided marketing support through participation in exhibitions (Toshali National Crafts Mela, Annual Terracotta Exhibition, Multicraft Exhibition and other State and District level exhibitions) promoting sales of 1633.58 lakhs.
>
> The handicraft artisans and handloom weavers of the State have been provided with marketing support by UTKALIKA through their Sales Outlets.
>
> Can explore Shilpi Unnati Yojana (SUY) scheme

Benefits of Lanjigarh community due to VAL-L's intervention

Since establishing in 2007, Vedanta Aluminium has since become India's leading aluminium producer and has stood aspired to work towards the betterment of the local community. To ensure the success of the business, it is important to build strong relationships with the local community. Vedanta's commitment to provide a better live and opportunities to the people of Lanjigarh, Odisha, remains unwavering.

Through its social interventions, it has reached almost all villages, providing quality education, sustainable livelihoods, women empowerment, health, water and sanitation, and community infrastructures to over 40,000 people every year. The BU has provided educational support to over 1300 students through schools and 12,000 children via anganwadi services, project Child Care Center etc., empowered almost 4000 women from 387 SHGs, and delivered healthcare services to over 42,000 people annually. Additionally, VAL-L have planted over 2 lakh trees in partnership with the locals at the community level. The projects under these thematic areas are aimed to provide holistic development of the communities.

The findings of the survey revealed that Vedanta Aluminium Ltd – Lanjigarh (VAL-L) is strongly committed to improving the quality of life and wellbeing of those that live and work around the company's locations and their peripheries. Through its vision, VAL-L ensures it meets its social license to operate and provides meaningful support to the communities it serves.

One of Vedanta's projects towards the betterment of the community was the establishment of the Vedanta hospital. As per the discussions with the district and block stakeholders, Vedanta hospital is viewed as the lifeline of the Lanjigarh block. The hospital provides free services and medicines to the people and has a Mobile Health Unit service as well thus ensuring medical care and modern medicine practices reach villagers at their doorstep. With time, Vedanta has continued to introduce developmental projects to meet the needs of the local community. Through these efforts, it has been able to bring about remarkable changes in the lives of the local people. The villagers of Lanjigarh have now adopted a modern approach to healthcare, turning away from the traditional methods of approaching local quacks.

Through its education program - Project Child Care Centre, VAL-L, Vedanta has worked to provide pre-schooling in rural areas, ensure proper nutrition for the children, and build community ownership to ensure the sustainability of the project. This project is merged with Anganwadi centers (AWC) through advocacy with the Women and Child Development department, aiming to converting them into Nand Ghars. The DAV Vedanta International School is Kalahandi's first English medium school and with VAL-L interventions the school is well-equipped with state-of-the-art infrastructure and facilities, such as smart classrooms, modern computers, science and maths labs, multimedia room, a well-stocked library etc.

Vedanta Aluminium BU is proud to be a part of the employment generation movement in rural India. It was observed that the most common occupations in the area were farmers, daily wage workers, and those working with Vedanta. By providing employment opportunities to villagers and hiring members of the local community into their management team, Vedanta has helped to improve the quality of life for many families. Not only are these jobs providing an income, but they are also helping to preserve and promote the unique cultural heritage of the region.

Additionally, its infrastructure development program has improved connectivity among villages, and the construction of solar streetlights has created a sense of safety for families living in the respondent households. To date, VAL-L has worked in over 500 community development projects in Lanjigarh. Despite these efforts, Kalahandi district still faces a number of environmental challenges. Air and water pollution, lack of green cover, and red mud issues remain issues of concern. VAL-L is dedicated to continuously build a better and healthier environment for the people of Lanjigarh block.

Previously, villagers were reliant on traditional forms of energy and fuel which had a detrimental effect on the health of individuals and caused environmental pollution. To address this, the BU implemented clean energy projects that provide clean cooking and lighting. As a result, 25 villages now have access to solar lanterns, with cost assistance from the BU. This has made it possible for students to study in the evening and has had a positive impact on the health of women. Many women in the family are now taking decisions within their households and generating income for their families. In the near future, the BU intends to introduce more programs, such as Project Sakhi, to promote and further empower women in the village.

Significant progress in addressing the WASH needs of the community. Through its dedicated efforts, it has made an impact in sanitation and hygiene in the villages and provided access to clean drinking water to the beneficiaries.

VAL-L's remarkable achievements in introducing sports programmes and restoring cultural heritage artisans have been a huge accomplishment for the village of Lanjigarh. Karate and Archery have produced state champions and by giving artisans a livelihood opportunity, skilling them has been an extremely successful venture. This success is a testament to the dedication of students, staff and coaches is a source of pride for everyone connected with the village.

The Vedanta Aluminium BU team are committed to sustainability and work towards the four sustainability drivers of equal economic opportunities, supporting social development, conserving the environment, and preserving and promoting cultural heritage. This commitment to sustainability helps to ensure that their projects are self-sustainable and have a positive impact on the community. VAL-L's commitment to sustainability and the local community ensures that their projects are self-sustaining and beneficial to the people of the region.

The social intervention that BU has brought in has not only strengthened the partnership with the Government but has also enabled the Government to strengthen its institutions. The BU's work on various thematic areas has been successful in reducing the incidence of theft and other crime in the community. Through regular monitoring, evaluation, and communication between stakeholders and the BU, the relationship has been greatly strengthened, leading to a better connection, and understanding. The village leaders have been offering valuable insights during meetings on the needs of the village and are receiving strong support from the BU to ensure that these needs are being met. As a result, the Lanjigarh community has seen a dramatic improvement in their overall development.

PERCEPTION

Perception of Local Beneficiaries and Stakeholders (Community members)

Ranking of Projects

The respondents were asked to rank the projects according to their perception of how well they were impacting the communities. The ranking is provided below per location.

Ranking of Projects by Community Perception

Rank	Name of Project
1	Project Aarogya
2	Project Sakhi
3	Child Welfare Project (Child Care Centres)

Table 10 Community perception ranking

The respondents were asked to rank each project being carried out by the business unit from 1 to 3. Based on the highest proportion of votes for each rank against each project, the ranking has been determined.

From this data, one can see the impact of the Vedanta Hospital (Project Aarogya) has on the whole block of Lanjigarh. This is followed by Project Sakhi in Rank 2 and the Child Welfare Project in Rank 3.

Support required in the community

While a baseline and need assessment provides an understanding of the needs of the community, there is often an underlying perception and attitude of a community towards what support would be best sought from a company that is carrying out CSR in their area. Moreover, while fact-based assessments are necessary for creating a project of value, community perception is a necessary component that allows for the business unit to garner a greater social license to operate.

Figure 62 Support required in the community
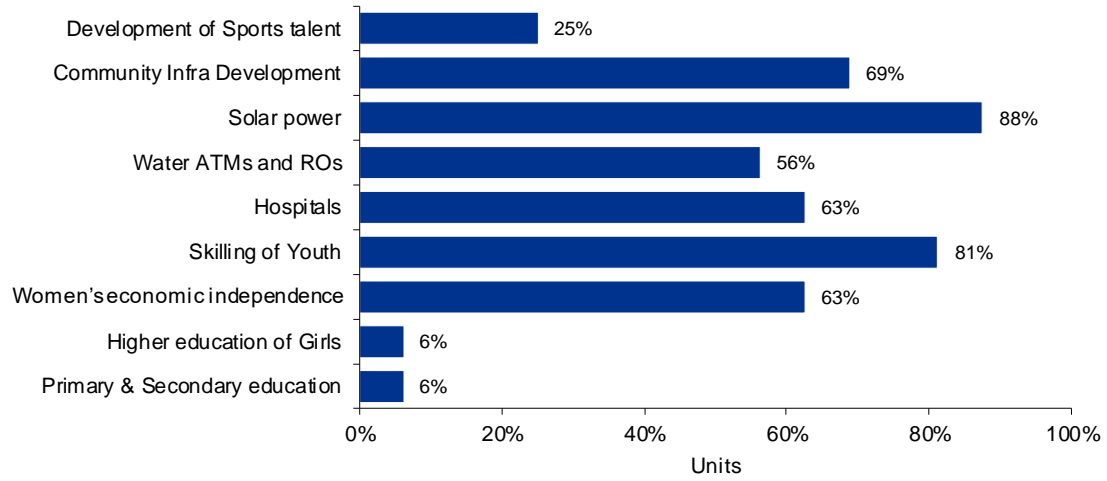
Rank	Name of Project
1	Solar Power
2	Employment creation
3	Community Infrastructure Development

Here, the community members and stakeholders were asked to provide three of the top areas of support that they may require from VAL-L, going forward. Based on the proportion of beneficiaries who have provided the affirmative for each of the options, a rank would be determined.

Satisfaction Levels among community stakeholders

Figure 63 Satisfaction Levels among the local stakeholders
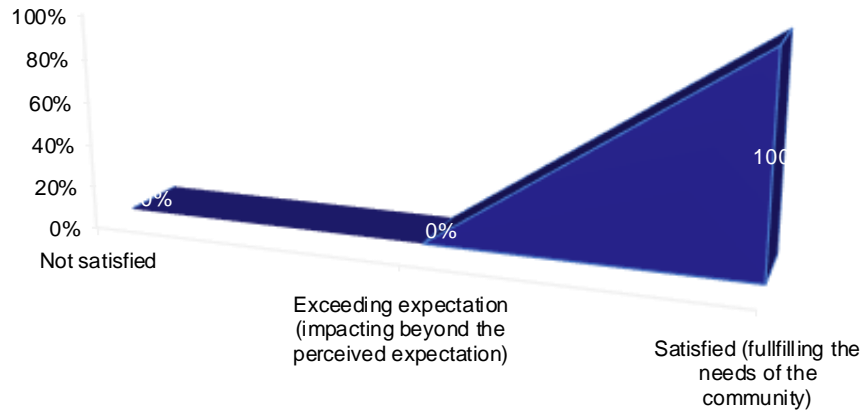
Overall, the local stakeholders were very satisfied with the engagements that the BU has engaged in. In Lanjigarh, although there have been demands and needs of interventions as mentioned in the report, by community and the stakeholders, the impact the BU has created via its CSR projects exceeded the expectations and therefore, the local stakeholders were satisfied.

Perception of CSR Team and BU Management

In today's world, the definition of business success goes much beyond the business profits, brand recognition, market value and growth pf the company. In the era of stakeholder capitalism, the success of the company is based upon the perception of the stakeholders. Today, the corporates are judged based on their impacts on the society and the environment and how it generates economic values, not only for its consumers and stakeholders, but also on the local communities where it operates. Sustainability has become a fulcrum, around which the business of an organization revolves around.

CSR activities and sustainability have become synonymous and interchangeable. Businesses around the world have adopted CSR activities to ensure economic, social, and environmental sustainability. Corporates have now started anchoring CSR in their business strategies to ensure sustainability. CSR not only helps in ensuring the sustainability of an organization but also latently functions by improving the brand value, retaining the talent, and attracting the customers and investors.

To have a resilient CSR strategy at place and ensuring the execution of the strategy, it is pivotal to understand the attitude and perception of the leadership and internal stakeholders involved in execution of CSR activities. A strong orientation and positive perception about the CSR and sustainability amongst the internal stakeholder helps in engraining the CSR in the DNA of an organization. The following section delves in to understanding the attitude and perception of internal stakeholders and leaders of VAL-L regarding the CSR.

Key Sustainability Drivers

Sustainability drivers are a subset of business drivers, specifically focuses on measures towards supporting communities and the environment. On a broad level, they can be used to determine which area of focus would allow a business to ensure its sustainability. Such drivers link the core operations of a business with the outside, to ensure a balanced and holistic approach towards operations. Therefore, through this study, the business can understand what the key sustainability driver according to their internal stakeholders are and how it can be leveraged to ensure a strong social license to operate.

Figure 64 Key sustainability drivers
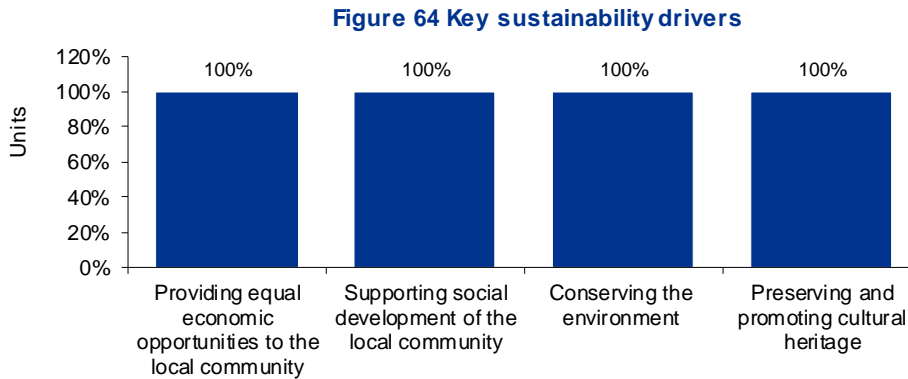
During the discussions with key stakeholders within the CSR management team, it was seen that all the stakeholders believed that all the sustainability drivers are equally important.

Benefits of focusing on Sustainability Drivers for VAL-L

Figure 65 Benefits of focusing sustainable business drivers

- Improving the reputation of company/organization through sustainable practices
- Improving relationships with local communities
- Improving the recognition of brand as responsible,sustainable
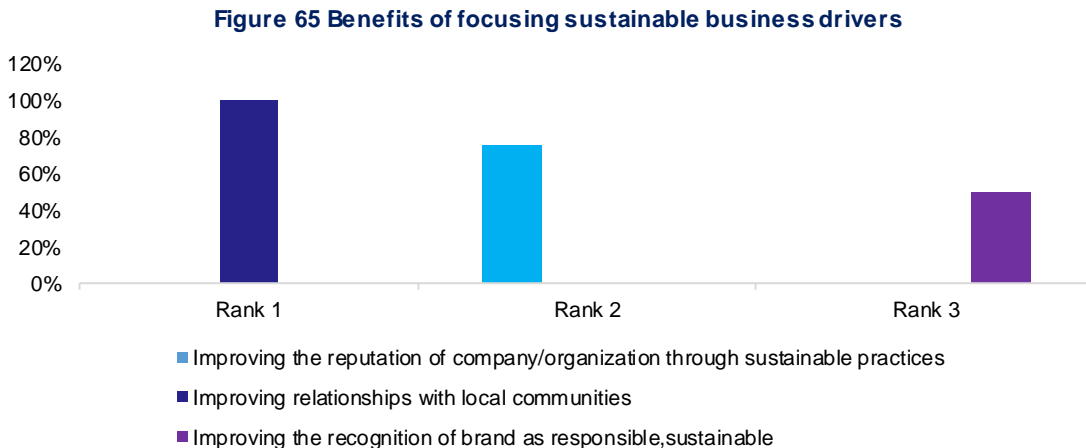
The internal stakeholders while agreeing that the focus on sustainability drivers would lead any business to have success were further asked to rank the same in order of the benefits that they perceive would be received. The rankings are as follows:

1. Improving relationships with local communities at Rank 1.

2. Improving the reputation of company/organization through sustainable practices at Rank 2.

3. Improving the recognition of brand as responsible, sustainable at Rank 3.

CSR in the context of Business

Figure 66 CSR in context of business

- CSR is a compliance requirement and is separate from the rest of the business

- CSR is an integral part of strategy that drives the business forward through the generation of trust.
- CSR generates value and success for both the company and society
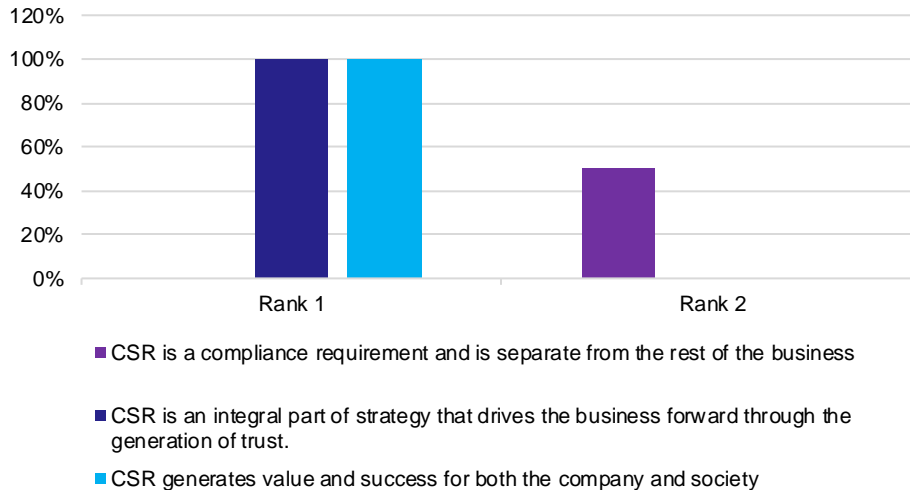
While CSR is now a mandated requirement in the Indian context for certain companies, its core aim is to ensure that companies give back to the communities in the areas in which they work, or beyond. For any company that has extractive or manufacturing processes close to large hamlets of people, it is necessary to ensure that their presence is not determinantal to the community in order to ensure that their business works in harmony with those around it. Thus, it is critical to understand how CSR is currently perceived by the internal stakeholders.

Thematic Areas that are most important to VAL-L Social License to Operate

Figure 67 VAL-L social license to operate
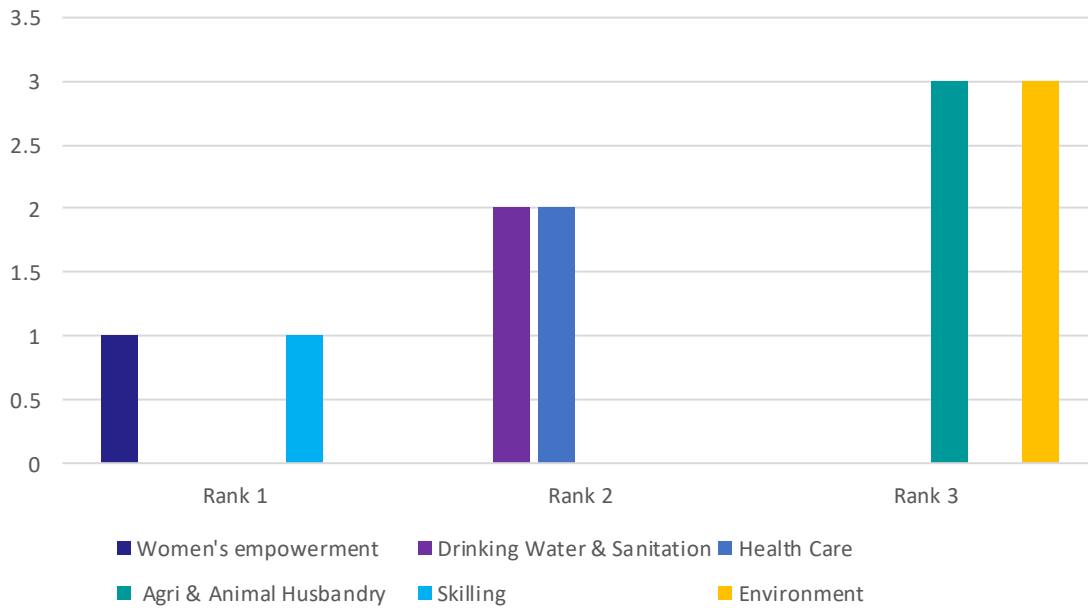
The internal stakeholders of VAL-L were asked to rank the thematic areas given within its CSR Policy from 1 to 3. Based on the composite scores, the thematic areas that have received the highest ranking are:

1. Women's Empowerment and Skilling tied at Rank 1

2. Drinking Water and Sanitation and healthcare at Rank 2

3. Environment and Agri and animal husbandry at Rank 3

Benefits to the BU/Business due to the social interventions

Since the inception of the plant, VAL-L has been committed to creating positive impacts in the Lanjigarh region through its various Corporate Social Responsibility (CSR) initiatives. These initiatives have been instrumental in improving the quality of life of the local communities and promoting sustainable development, leading to multiple benefits for the business.

Vedanta's commitment to sustainable operations has yielded significant benefits for its operations in Lanjigarh, such as improved environmental performance, better compliance, enhanced reputation, reduced risks and improved innovation. By embedding sustainability into its operations, VAL-L can ensure long-term success and contribute to the sustainable development of the local community. These initiatives have allowed Vedanta to develop a social license to operate in Lanjigarh and its surrounding areas. Through engagement with local communities and investment in social and environmental initiatives, Vedanta has shown its dedication to responsible and sustainable practices, building trust and goodwill with stakeholders, while minimizing the risk of non-compliance.

Vedanta has dedicated immense work and efforts to build positive relationships with local communities in Lanjigarh, Odisha through a range of Corporate Social Responsibility initiatives. Some of these include investments in education, healthcare, livelihood, skilling, environmental protection, and infrastructure development that have improved the quality of life in the area. As a result, the local communities have expressed their support for Vedanta's operations, reducing the potential for protests or disruptions. Through these efforts, Vedanta has fostered a stronger, more supportive relationship with the local people, which is essential for long-term success.

VAL-L has taken an important step to strengthen its relationship with the local community, by investing in the village people. By setting up a vocational training center in Lanjigarh and providing technical and skill-based training to local youth, VAL-L have provided jobs to local talents, without the need to recruit from outside the area, and also by creating an opportunities for individuals to make their own decisions instead of always relying on the BU. This social activity has had numerous benefits for the organization, such as improving the standard of living in the local community and helping to enhance the company's reputation and goodwill. Additionally, by contributing to the development of the local area, VAL-L has been able to reduce pressure from local community members, community activists and NGOs, who may otherwise criticize the organization.

Implementation of robust environmental management systems and technologies at its Lanjigarh plant to reduce its impact on the environment have benefitted the region. These efforts have been instrumental in enhancing Vedanta's recognition as a sustainable brand that is deeply committed to protecting the environment. Not only have these initiatives helped to reduce the company's environmental footprint, but also strengthened its reputation as a responsible corporate citizen. This, in turn, has helped mitigate potential legal or regulatory risks.

VAL-L's CSR initiatives in Lanjigarh have been successful in engaging with various stakeholders, such as government officials, NGOs, civil society organizations etc. Through its CSR commitments and process of dialogues, VAL-L has been able to take into consideration the concerns and expectations of these stakeholders, enabling the organization to stay compliant with all regulations and laws. The stakeholders have expressed their appreciation of the Business Unit's social commitments, which has enabled VAL-L to maintain all necessary authorizations and permits, for e.g., even during the unprecedented challenge of the COVID-19 pandemic. As a result, the organization has seen substantial benefits, including improved reputation, increased customer trust and loyalty, enhanced employee morale and retention, improved efficiency and productivity, and improved risk management.

Vedanta's education interventions have provided village students with new confidence and opportunities to seek further education and gain better job prospects. By supporting the development and growth of the wider society, Vedanta is helping to create potential future business opportunities for the communities around its operations. In addition to education, sports are hugely popular in the Lanjigarh block and has seen success in state competitions, particularly in archery. With continued dedication, Lanjigarh is aiming to produce a champion in the near future, which will be a great benefit to the organization and its programs. By promoting education and sports, Vedanta has managed to build trust and goodwill among stakeholders, villagers, and the community, thus creating long-term relationships and future business prospects.

CSR Footprint of VAL-L

Education

- Over 12,000 children have been benefited from this project.
- In FY 2021, health check-up was conducted for 851 students enrolled in Project CCC.
- Students from tribal community are at par with all other children of their age elsewhere.
- The program helped in habit of punctuality, discipline, care, social skills apart from the regular curriculum.
- 1300 students have benefitted from DAV International School

Community infrastructure

- Over 500 developmental projects carried out since plant Inception
- Over 40 tube wells, 10 approach roads, 12 local drains, 10 community centers have been developed and dedicated to the community

Health

- 156,120 Outpatient Department registrations in last three years
- Single facility caters to 170 periphery villages
- Average 15,000 patients benefitted annually with over 30% patients in the senior citizen category
- Mobile Health Unit conducts 680 visits on an average in 8 Gram Panchayats annually
- Address the spread of malaria in this area has resulted in bringing down malarial cases drastically
- Reliance more on medical practices instead of approaching quacks

Women Empowerment

- Project covers 387 WSHGs and reaching nearly 3984 women
- Enabled women from local communities through different training programmes, market linkages , loan facilities
- Convergence with Governmental Schemes and organizations

Sustainable Livelihood

- Engaged over 1194 families through our livelihood initiatives like backyard poultry, pisciculture, mango orchard, mini-enterprise development, bio-floc farming, mushroom cultivation, poultry units, Matschya Pokhari Yojana and many other initiatives.
- Income Generating Activities (IGAs) for farm and non-farm activities benefitting around 1000 women

Clean lighting & clean cooking

- Villagers sensitized towards SDGs of affordable and clean energy
- Use of solar lanterns in 850 households in 25 villages
- 223 Chullahs in the households
- 80% cost support from the company and 20% beneficiary contribution
- BU shares at least 80% of the cost of alternate cooking and lighting devices

.

Project NITI Aayog aspirational district programme
Menstrual health
- Reached nearly 3066 adolescent girls and their mothers – awareness drive
- Sensitizing women on dietary supplements and best hygiene practices

Animal vaccination Camp
- Conducted animal vaccination camps in 20 villages benefitting 291 people

Figure 4: CSR footprint of VAL-L

Findings

Stakeholders and beneficiaries' perception responses

<u>Most important community requirements of business unit's CSR should focus on</u>

Figure 69 Community requirements of business unit's CSR should focus on

Skilling of youth was perceived as the most important requirement in the community that the BU CSRs may focus on. Even though the access to Vedanta hospital has increased, 41 percent of the respondents still believe the focus should be as much if not more. Higher education for girls was also voiced upon by 35 percent of the respondents. Focus on early childhood care was the least important requirement as a part of CSR focus.

Economic opportunities to the community, that add the most value to BU's social license to operate

Figure 70 Economic opportunities that add the most value to BU's social license to operate
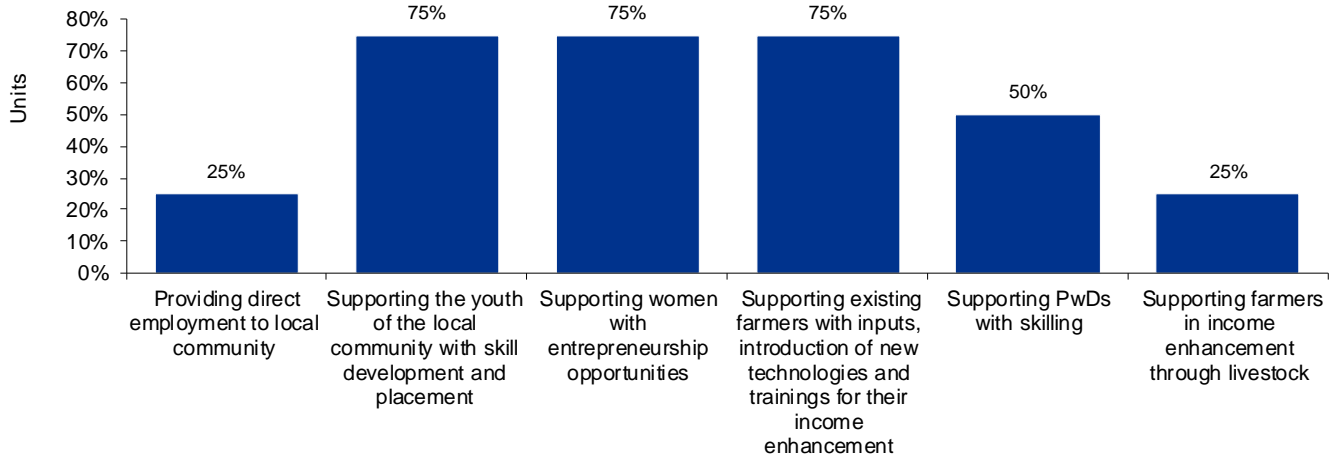
The CSR management believes that the perception of the BU focusing on the business drivers over the past few years have improved the communities and its relations. Apart from improving the reputation and the recognition of the organization and its activities, working and emphasis on improving the relationships with the locals within the communities was perceived as important.

75 percent reported supporting youth with skill development program and placement along with entrepreneurship opportunities for women and supporting farmers will add most value to BU's social license to operate. But also felt, there are other opportunities that can be explored that could help the BU

Social development interventions

Figure 71: Social development interventions, that add the most value to social license to operate
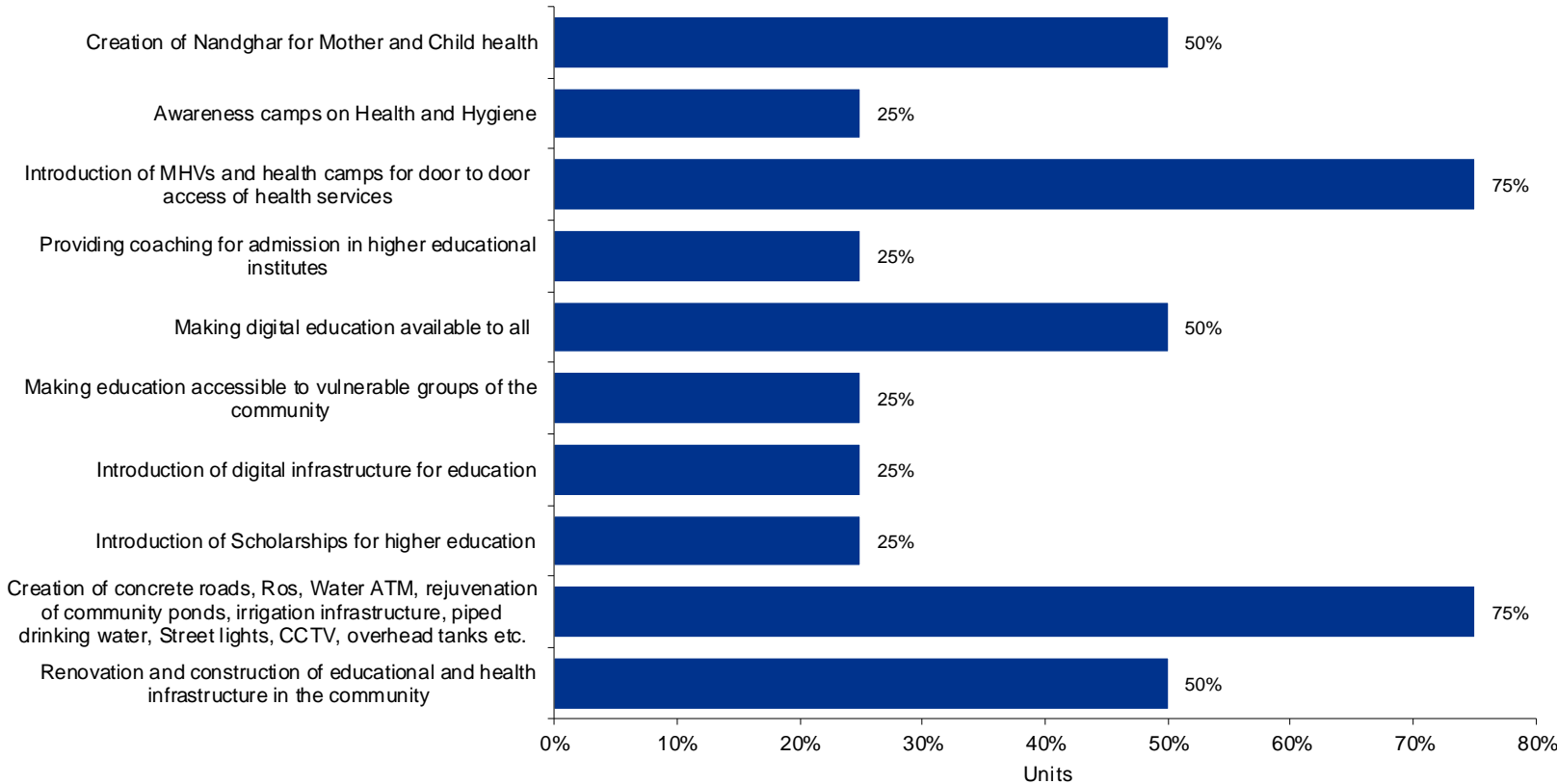
As per the graph, creation of concrete roads, Ros, Water ATM, rejuvenation of community ponds, irrigation infrastructure, piped drinking water, Street lights, CCTV, overhead tanks are the most was the most important intervention for social development interventions with 75 percent of the stakeholders answers.

Introduction of MHUs and health camps for door to door access of health services- was also as important according to the stakeholders.

Environmental conservation activities, that add the most value to VAL-L's social license to operate

Figure 72 Environmental conservation activities most value to your social license to operate
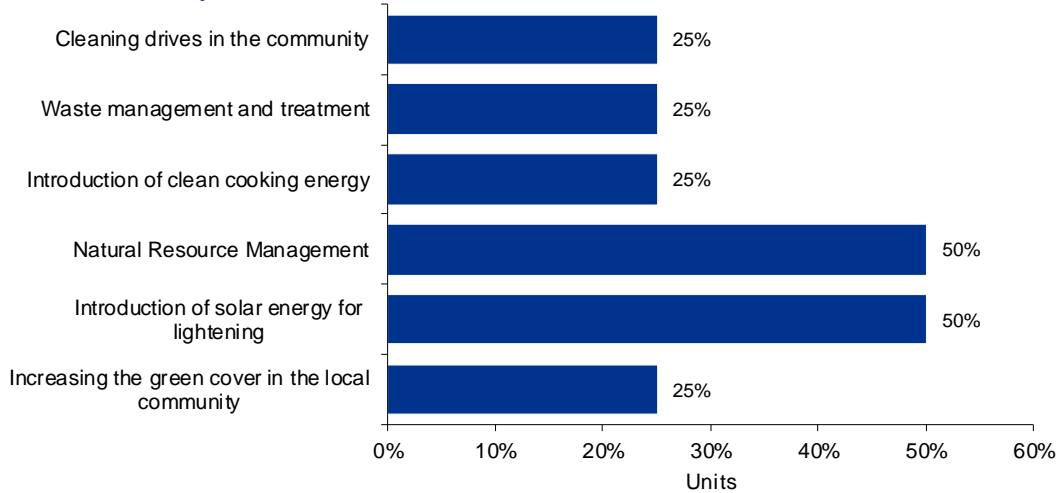
On the environmental conservation front, 50 percent of the stakeholder respondent said that natural resource management and introduction of solar energy for lighting would add the most value

Promotional and preservation activities around sports and culture

Figure 73 Promotional and preservation activities for sports and culture
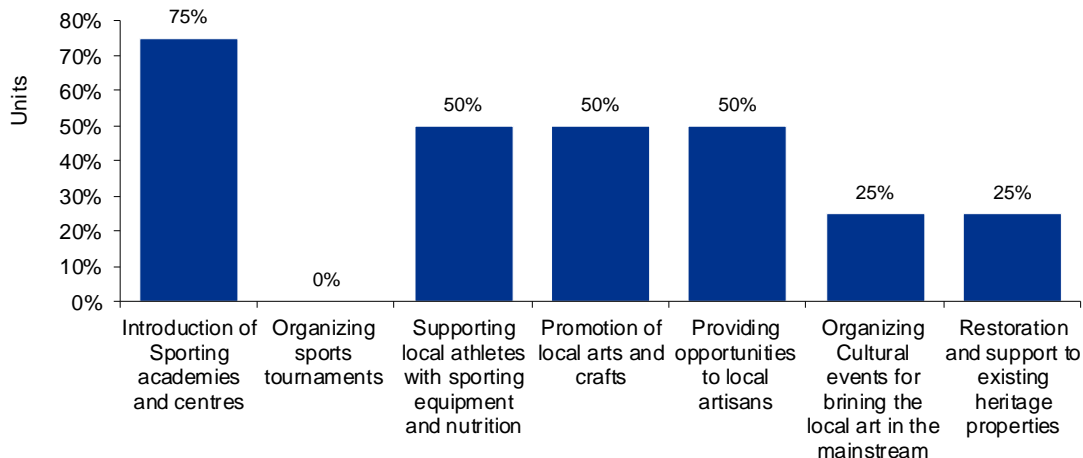
75 percent of the respondents have said, introduction of Sporting academies and centers could help add the most value to the BU. 50 percent responded supporting local athletes, promotion

of local arts and crafts and Providing opportunities to local artisans' 25 percent also responded organizing cultural events and restoration and support heritage properties.

Address environmental concerns

Figure 74 Address environmental concerns
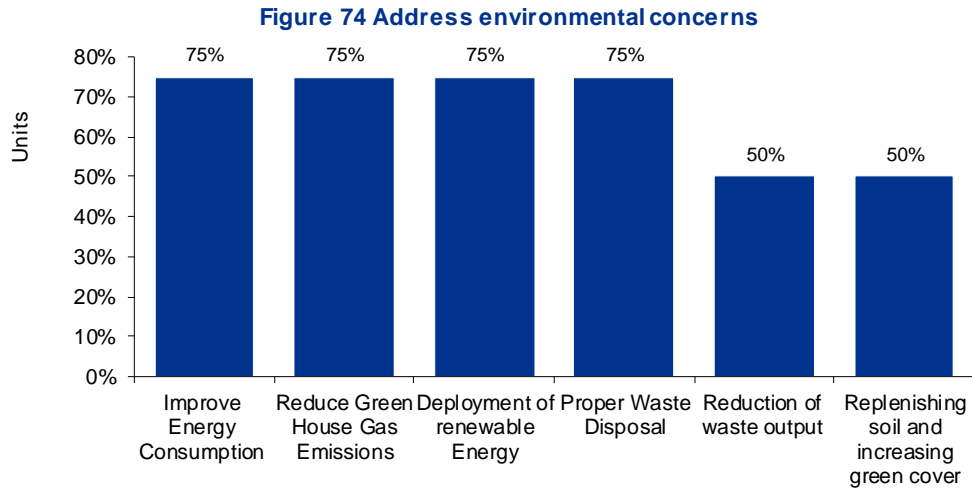
To address the environment concerns, there was a mix of responses. The respondents had similar answers, but 75 percent reported all the activities as given on the chart was as important to address with special focus on Improve Energy Consumption, Reduce Green House Gas Emissions, Deployment of renewable Energy and Proper Waste Disposal.

Hinderance in Implementing CSR

Carrying out CSR activities is not only mandated to VAL by law but is also equally recognized as a mechanism for their business to increase their social license to operate and further reduce the risks involved in carrying out their business.

Figure 75 Biggest Problem in Implementing CSR Activities

■ Insufficient recognition through branding

■ Working in silos i.e. lack of convergence with government and other stakeholders

■ Unfavourable local environment hindering sustainable value add to the community by CSR

■ Lack of resources available to implement projects
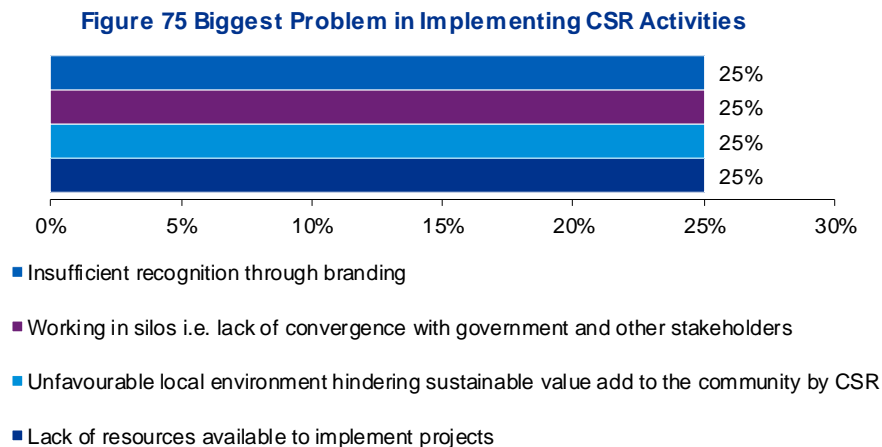
While the programs are well designed and have made good impact within the community, there remain certain hindrances in implementation and are recognized by the internal stakeholders. All the respondents had different opinions as mentioned on the graph above (figure number 75)

Building Resilience During COVID-19: A Note

Figure 76 COVID-19 pandemic interventions

- Financial support to local/women entrepreneurs
- Financial support to beneficiaries
- Inculcating reverse migratory stratum into the existing programs
- Distribution of Sanitization kits in the community
- Introduction of awareness camps for COVID
- Supporting health facilities with life saving equipment
- Introduction of digital and mobile education in skill training centres
- Making digital education accessible to all

Figure 5: Covid 19 pandemic interventions

VAL-L's Covid-19 pandemic interventions were excellent covering all the thematic areas. But special focus according to the respondents were digital education accessibility for the beneficiaries, supporting health facilities with lifesaving equipment and Distribution of Sanitization kits in the community.

Skilling & Education

Vocational building for the dropouts, secondary and higher secondary students

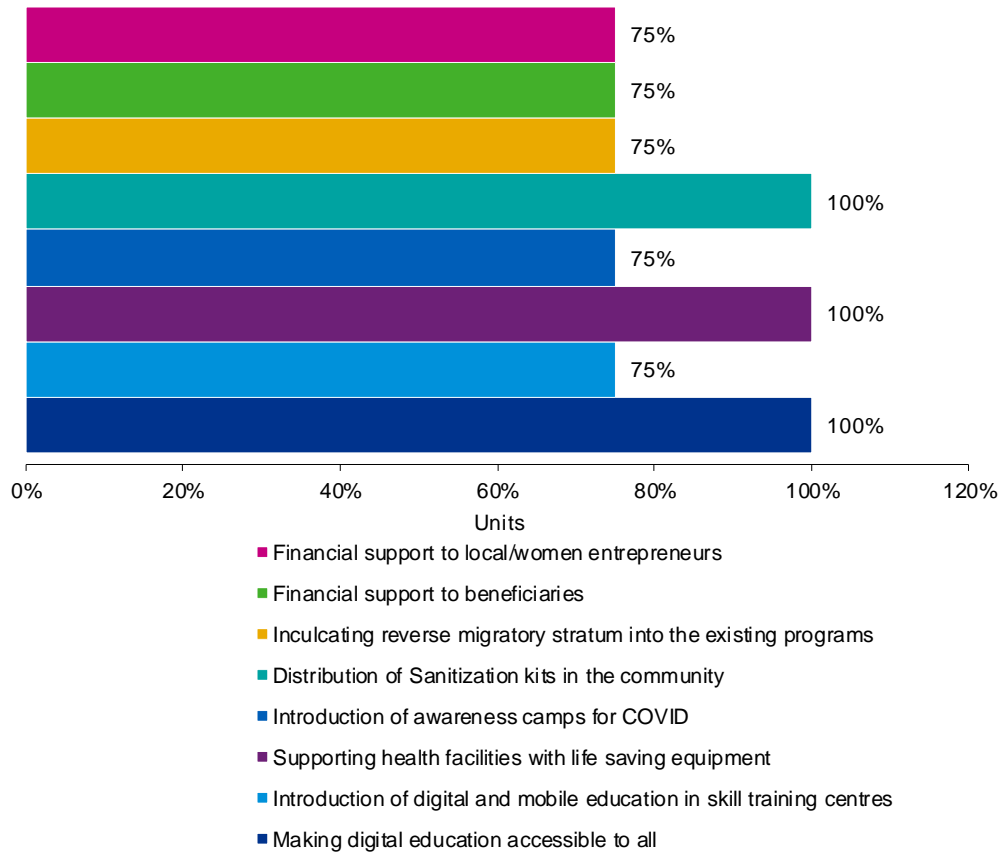Bringing in job opportunities by offering placement opportunities

Introducing digital based curriculum to all students and creating a reward based system for the teachers

Capacity building of the teachers and making them available for each class

Women Empowerment

Community based awareness sessions around MHM practices, adherence to proper nutrition during the try semesters, taking good care of neonates and infants

Providing employment opportunities for women and capacity building for the AWW

Environment Conservation

Bringing in new techniques towards modes of water irrigation

Awareness and driving the cause of awareness campaigns

Involve academicians, specialists etc., to conduct a study

Healthcare for all

Building convergence with the Government and bringing in on demand specialists to the Vedanta hospital

Cover of open drains and treatment of malaria and amenia prevention plans

Expansion of MHV program

Capacity building of public health workers

Community Development

Availability of sports coaches and trainers for better guidance and training

Making water available as well as building more toilets in the villages

Capacity enhancement and increase of solar interventions

Creating market linkages for the artisans and the farmers
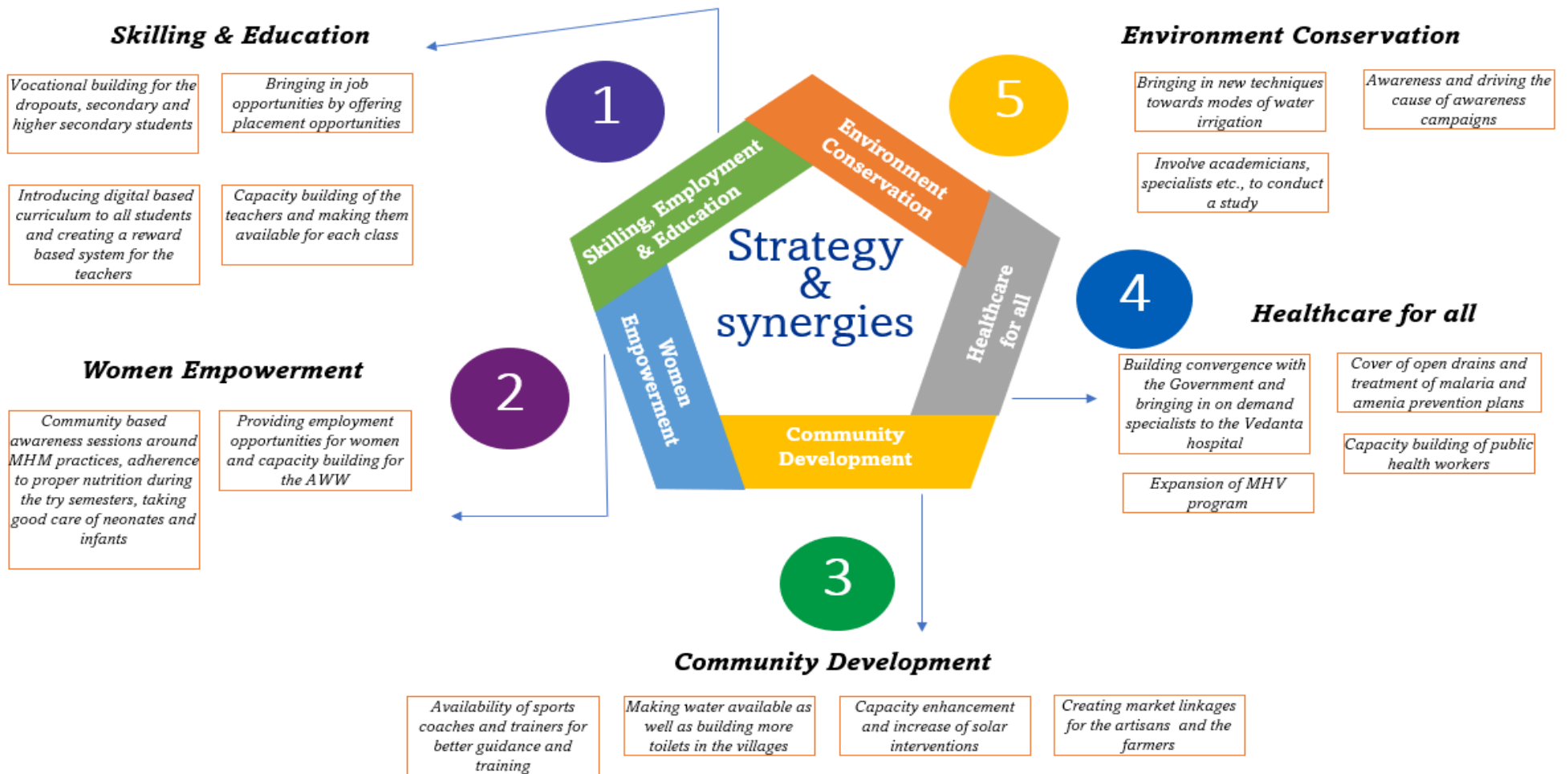
Figure 6: Strategy and way forward

Strategy and Way forward

Strategy 1 - **Continuum for skilling, employment, and education –** under this approach, the business unit may project and strategize the future of the youth in the area. Special focus on youth has been mentioned because there has been a voice behind skilling of youth by the respondents. Networking and collaborating with small and medium business houses who require trained resources, developing an in-house skilling program may be worked upon. Bringing in placements will help in increasing the employment rate and support to the dropouts. It is also proposed that infrastructure and better learning facilities to the higher education institutes will see an increase of students.

Strategy 2 - **Increasing the interventions towards environment conservation** - biodiversity loss attributes to loss of habitat. Therefore, integrating biodiversity into VAL-L's business ecosystem for enabling a greener future may help the area. Water has been a major issue in the area, the BU can focus on wastewater treatment plants and use advanced irrigation systems like lift irrigation, innovative rainwater harvesting structures etc. The BU can develop progressive soil erosion techniques, while the farmers can use common practices like mulching, building ridges, channeling, or piping techniques. An awareness campaign or a community workshop village by village on such practices may benefit the beneficiaries.

Strategy 3 – **Healthcare for all** – under this strategy, it is proposed that the healthcare project which is Project Aarogya is reshaped into a continuum of care initiatives. The Vedanta Hospital, in Lanjigarh, is an advanced medical facility with well-equipped doctors, but is not sufficient. Convergence with district hospitals and sharing of resources by introducing additional specialist would be a huge benefit for the people of Lanjigarh. Brining in better health access of facilities in the Anganwadi centers and refurbishing smaller clinics in the villages by bringing in specialist doctors timely will help those individuals and families who find it far to reach the Vedanta Hospital. Consistency solutions are the need of the hour. Anemia and malaria were seen as the most common disease in Lanjigarh. Both Anemia and Malaria treatment and prevention interventions should be initiated. Treatment of a patient with malaria depends on the country's national guidelines and by making malaria drug available that is recommended by national malaria control programs and approved by WHO. Interventions like Insect treated nets, Intermittent preventive treatment of malaria in pregnant women (IPTp), Intermittent preventive treatment of malaria in infancy (IPTi) and Indoor residual spraying (IRS) may be started by the BU to prevent the spread of the disease.

Strategy 4 - **Community development** – sports, water, toilets, solar intervention - While community infrastructure is suggested as an overarching focus across strategic areas, it is pertinent to include 'solarification' of villages. Building toilets and making cutting out water shortage issues in every village by bringing in experts responsible for overall exploitation and maintenance of assets, validation of technical specifications of pumping systems, rehabilitation, renewal and extension of pumping/ machine systems. Better rainwater harvesting techniques and asset introduction. More ponds are required and better management as they are the primary source of water for bathing, washing, cattle, etc.

Introducing coaches and trainers for the students, that too a trainer who can converse in local dialect. To improve any sporting situation, the facility needs to be up to the mark, so to improve the grounds would be a good step to encourage sports.

Strategy 5 – **Women Empowerment** - Special Focus on behavior Change around Gender. Despite the current efforts of the business unit, girls and women are facing challenges in benefiting from all the projects because of the lack of support received within the household and the community beliefs over gender. Thus, to ensure maximum benefit, a specific focus needs to be provided to change behavior in the villages on gender. This can be done along with local stakeholders such as panchayats through which not only special days on gender should be celebrated but constant efforts to raise awareness within the community. In schools, learning materials, games and sports should be geared towards encouraging gender-equitable behavior.

KPMG

Appendix A: Final Questionnaires

A.1   Baseline Assessment Questionnaires

A.1.1   Baseline Beneficiary Questionnaire

VAL-L Baseline
Questionnaire Benefic

A.1.2   Baseline Stakeholder Questionnaire

Baseline
Questionnaire Stakeh

A.2   Impact Assessment and Perception Study Questionnaires

A.2.1   Impact Assessment and Perception Study Beneficiary Questionnaire

VAL- L_Beneficiary
Impact Assessment_Fi

A.2.2   Impact Assessment and Perception Study Stakeholder Questionnaire

VAL-L _ Stakeholder
Impact Assessment_Fi

A.3   BU Management and CSR Team Perception Study Questionnaires

Perception study
management & CSR T

Appendix B: List of Villages

Sample Coverage across Villages

The number of villages were selected basis discussion with the business units and leadership wherein 30 percent of core villages, 15 percent of periphery villages and 20 percent of outreach villages were selected. However, it must be noted that the final list of villages and the distribution of the sample within it was based on ground realities.

The list of villages covered along with the sample covered under the study have been provided below against each state. Here, the internal stakeholders covered under the Business Unit Management and CSR Team perception study have been excluded.

Sample Coverage per Village

State	District	Villages	Beneficiaries	Village and Block level Stakeholders
Odisha	Kalahandi	Chatrapur	21	NA
		Kenduguda	16	
		Bhatguda	17	
		Kapaguda	17	6
		Basntapada	16	
		Sindhibali	19	
		Tangankana	19	
		Chandanpur	19	8
		Nutunbatelima	21	
		Batrapara	15	
		Goipatta/Raghunatpur	16	
		Batelima	13	
		Lanjigarh	19	NA
		Similibhata	22	
		Banigaon	15	
		Harekrushnapur	15	
		Kutingpadar	15	
		NVN	14	
		Kankeri	17	
		Boringpadar	13	
		TOTAL	**339**	**14**