

Terracotta Industry in Asharikandi: A source of Sustainable Rural Livelihood

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Abstract

Terracotta is a culture that emphasizes the unification of natural elements with human life. Terracotta pottery is an age-old traditional art of making pottery in India, giving away sustainable entrepreneurship to thousands of people. The presence of craft clusters in rural India is a source of local resource use and non-farm income generation. However, with the growing commercialization and availability of cheap alternative products globally, Terracotta pottery is facing fierce competition. This is aggravated by the restrictions being imposed. Moreover, restrictions have been imposed on the use of traditional kilns as a measure to stop pollution. The ever-growing demand for plastic goods, coupled with nearly two years of pandemic-induced lockdown, has pushed Assam's terracotta industry to the brink of extinction. Drawing upon primary survey-based findings in a terracotta cluster in rural Assam, this paper delves into the socio-economic dynamics of the community within the terracotta and pottery industry in Asharikandi highlighting both the challenges faced by the artisans and the opportunities within this domain that provides for economic growth and social empowerment in rural Assam.

Keywords: Terracotta, Competition, Socio Economic Dynamics, Challenges.

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Introduction

The term 'Terracotta' has been derived from the words 'TERA' and 'COTTA'. Terra means 'Earth' and Cotta means 'Baked'. Literarily the people who made earthen product are known as "Potters" and the profession is called as "Pottery" (**Haloi, 2017**). An object of art made of a composition of clay and sand and baked with earthen colour, a brownish red is terracotta. In India, one of the single largest cluster where both Terracotta and Pottery crafts are found and practiced in a traditional way is Asharikandi (Madaikhali) craft village. The village Asharikandi is better known as "Terracotta craft village". The terracotta industry in Asharikandi, a village in the Dhubri district of Assam, is a unique and significant cultural asset, representing centuries of traditional craftsmanship. In recent years, the industry has witnessed a shift, as local artisans increasingly engage in entrepreneurial activities to meet market demand, enhance their income, and improve the socio-economic conditions of their community (**Hoque 2017**). This transformation from a purely traditional craft to an entrepreneurial venture offers a rich area for exploration in terms of its socio-economic impact, challenges, and opportunities. The name Asharikandi is derived from the combination of two words, ASHAR and KANDI. ASHAR means the third month of Assamese calendar and KANDI means shedding tears. The villages's low-lying area is flooded during the rainy month if Ashar (around Mid-June to Mid-July). Asharikandi is known for its distinctive terracotta products, which include clay pottery, figurines, religious idols, and decorative items. The craft, passed down through generations, is an integral part of the local culture and heritage. However, with the advent of modern markets and the changing dynamics of rural economies, many artisans in Asharikandi have begun to see their traditional craft not just as a livelihood but as a business opportunity. This shift towards entrepreneurship is influenced by various factors, including the need for economic diversification, access to new markets, and the increasing recognition of the craft's cultural and artistic value both locally and globally.

Review of literature

A thorough review of both national and international journals revealed a few important details related to the terracotta,

handicraft and folk art which find a mention below: **Satpathi (2011)**, in his research focused on the major crisis of Terracotta craft and suggested further recommendations to sustain its potentiality in India. The tiresome technique of terracotta craft making, the impact of financial organizations and technical assistance are also analyzed in this article in a scientific way. **Khalid (2012)** in his study analyzed the holistic role of handicraft sector for constructing countries share of employment opportunity, rise in regional development rate and prosperity creation. **Towseef Mohi Ud Din(2014)** in his scholarly publication focused on the role of Indian traditional handicraft sector in employment generation , skill enhancement and regional development. He also defined the simplistic procedure of production of various handicrafts by using clay, tree bark, stone and bamboo metals in a sustainable and eco-friendly manner. **Ghosh (2014)** in his research article focused on the impact of intermediary person and analyzed how they would manipulate the price of this terracotta craft article. He showed in his research paper how the rural artisans were deprived as their commodity would be sold at a low price where it is sold in the market at a high price so a high margin of profit. It is the gain by this middleman due to the unawareness of the original artisans who could not get the expected profit after a hard struggle of craft making. So the socio economic situations of these craftsmen remained in a zone of shadow and deprivation. **Dutta(2014)** in his research article on the ground level problems of affecting the marketing mix of terracotta products suggested that Govt. authorities, NGOs and the artisans should take corrective measures for proper utilization of available resources through modern techniques and marketing strategies to develop Asharikandi as a world class production hub for terracotta products. **Sahoo (2016)** in his research paper described the magnificent role of terracotta cottage industry for accelerating the regional development in these rural craft hubs in a very sustainable manner. He also identified the role of women engagement and women participation in these pottery craft. **Gangopadhyay and Sen (2019)** in their study on socio economic study on terracotta workers in Panchmura described about the recent rise of demand of terracotta crafts and suggested to merge the terracotta sector with organized sector for its further growth and acceleration of employment and earning opportunity. They

also suggested for proper information, technology up-gradation, skill enhancement programme and proper marketing technique for the convenient development of this sector. **Das et. al (2023)** in their paper aimed to regain the past glory of Terracotta Industry through an interactive service design platform. Based on the inputs with the artisans of Assam, India, the current state of the market and capital was tallied through a questionnaire-based survey. **Sachdev, S et al. (2024)** focused on one arena of livelihood management to promote sustainable rural development, i.e., the Panchmura, Bankura district terracotta industry, which is part of folk culture and heritage.

Research Gap

Majority of the studies related to terracotta industry has dwelt on the problems encountered by the artisans. Very few studies have considered this art as a form of rural sustainable livelihood which could uplift the socio economic condition of the youth living in this region. Also from the perspective of preserving and promoting this unique cultural heritage it seeks to understand how local artisans are navigating the challenges of transforming their traditional craft into viable entrepreneurial ventures. Keeping this in view the following objectives are formulated.

Objectives of the study

1. To study about the socio economic characteristics of the artisans in Asharikandi;
2. To explore how the sector contributes to sustainable livelihood;
3. To identify the constraints suffered by the artisans of the study area.

The broader objective of this research is to shed light on the potential of traditional industries such as terracotta craftsmanship that contribute to rural economic development, poverty alleviation, and cultural preservation. By focusing on entrepreneurship in Asharikandi, this research will contribute valuable insights into the role of cultural industries in promoting sustainable rural development and the potential for rural artisans. Terracotta craftsmanship can be considered a **rural livelihood**

because it provides income and sustenance to artisans in villages, especially in regions where clay is abundant. This study aims to offer a comprehensive understanding of the socio-economic implications of craftsmanship in the terracotta industry of Asharikandi , Dhubri , highlighting both the challenges faced by artisans and the opportunities that entrepreneurship provides for economic growth and social empowerment in rural India.

Research Methodology

An exploratory and descriptive research design is adopted in this research study. To serve the purpose of the study, a structured questionnaire and schedule is designed for the respondents. Also personal interviews were taken. The secondary data has been collected from various published and unpublished articles, Govt. Websites, published books, journals, statistical data and census data. The study involves a sample size of 50 respondents irrespective of their background , educational qualifications and age groups. The sample has been collected using convenience sampling techniques. The collected data have been properly classified, tabulated and presented through various table and diagram such as pie charts, bar diagrams, graphs etc. MS-Excel has been used for analyzing the data in this research study.

Data Analysis and Interpretation

Table1: Demographic profile of the artisans

Age	No. of Respondents	Percentage
Under 25	3	6%
25-35	5	10%
35-45	10	20%
45-55	17	34%
55 and above	15	30%
Educational Qualification	No. of Respondents	
No formal education	14	28%
Primary level	20	40%
Secondary level	6	12%

Higher Secondary level	8	16%
Graduate	2	4%
Others	0	0
Marital Status	No. of Respondents	
Married	42	84%
Unmarried	4	8%
Widowed	3	6%
Divorced	1	2%
Monthly income(in rupees)	No. of Respondents	
< 10000	26	52%
10000 - 30000	18	36%
30000- 50000	6	12%
> 50000	0	0%
Total	50	100%

Source: Field Study

From the demographic profile it is evident that 34% of the respondents are in the age group 45-55 followed by 30% who are above 55. Respondents who are in the employable age constitute 36%. With respect to the educational level, 20 % of the respondents (highest amongst the lot) and only 2% were graduate. 84% of the respondents were married and 52% were earning below 10,000 rupees per month. A very deplorable state of affairs as seen from their socio economic status.

Table 2: Years of involvement in Terracotta Craftsmanship

Years	No. of Respondents	Percentage
Less than a year	5	10%
1 – 5	8	16%
5 - 10	18	36%
10 years and more	19	38%
Total	50	100%

Source: Field Study

From the table it is seen that 38% of respondents were in the terracotta craftsmanship for 10 years and more, this includes artisans with high experience and their deep knowledge can drive product innovation and sustainable practices. Also 36% of them were in the business for 5 to 10 years, which represents more expertise artisans entrepreneurs having knowledge of the market and demand shifts. 16% of the artisans were involved in this terracotta craftsmanship for 1 to 5 years, this represents those artisans developing their skills and establishing themselves for the different market challenges. Remaining 10% of the artisans were in this sector for less than a year, which indicates newcomers exploring this sector or a lack of other job opportunity.

Table 3: Learning Platform of Terracotta Craftsmanship

Platform	No. of Respondents	Percentage
Family	34	68%
Self Taught	12	24%
Training	4	8%
Total	50	100%

Source: Field Study

From the table it is seen that 68% of the respondents have learnt the skill from their family i.e. the skill has been passed on through generations. It aligns with the sustainable development framework which is people centered approach to development. Learning a skill and passing onto the next generation not only keeps the art alive but it also contributes to sustainability. 24% of the respondents learnt terracotta craftsmanship by themselves which shows their effort and creativity but without guidance it may result in potential risk of quality product and limited growth. A very low percentage i.e. 8% of the artisans learnt through professional training. Expanding training programs could improve the quality, innovation and market reach while strengthening both sustainability and entrepreneurial success.

Table 4: Primary source of income of the artisans

Terracotta	No. of Respondents	Percentage
Yes	34	68%
No	16	32%
Maybe	0	0
Total	50	100%

Source: Field Study

The above table points to the fact that 68% of the artisans rely solely on terracotta as their only source of income. While 32% of the artisans have diversified income sources and does not depend primarily on terracotta. This suggests that terracotta plays a crucial role in their livelihood and economic stability. However it is highly vulnerable to changing market demands and consumer preferences. A drop in demand of the terracotta products could directly impact their income and well-being.

Table 5: Type of products produced by the artisans

Type	No. of Respondents	Percentage
Utility items	18	36%
Sculptures	14	28%
Decorative items	12	24%
Others	6	12%
Total	50	100%

Source: Field Study

This table categorizes the different types of terracotta products made by artisans. Utility items (36%) are the most commonly produced, indicating that artisans focus on practical products such as pots, plates, and storage containers. This implies that artisans should target more the household and eco-friendly products. Sculptures (28%) hold a significant share, showing demand for artistic and traditional clay figurines. Such items should find place in exhibitions, online platforms and tourism markets. Decorative items (24%) include home decor pieces like wall hangings, showpieces, and vases, highlighting their importance in interior

design. Other items (12%) may include jewelry, religious idols, or customized handmade products.

Table 6: Initial investment of the artisans on Terracotta business

Investment (in Rupees)	No. of respondents	Percentage
Less than 5000	16	32%
5000 - 10000	20	40%
10000 - 20000	9	18%
More than 20000	5	10%
Total	50	100%

Source: Field study

This table presents data on the **amount of investment** made by terracotta artisans in their business categorized into different investment ranges. 40% of respondents invest between ₹5,000 - ₹10,000 making it the most common investment range, suggesting that most artisans operate on a small scale. So if proper skill training is provided the artisans can maximize their profits even with low investments. 32% invest less than ₹5,000 showing a significant portion of entrepreneurs with very low capital. Government should introduce subsidies and grants to help the small artisans scale up their business. 18% invest ₹10,000 - ₹20,000, which may indicate more established artisans with slightly larger operations. Through bulk purchasing it can help reduce costs and improve production efficiency. Only 10% invest more than ₹20,000, implying that few artisans are scaling up to higher production levels.

Table 7: Primary source of funding terracotta artisans

Source	No. of respondent	Percentage
Personal Savings	17	34%
Family & friends	18	36%
Bank loans	7	14%
Others	8	16%
Total	50	100%

Source: Field Study

From the above table, it can be seen that majority of the artisans i.e. 36% of the respondents were dependent on family and friends for financing their terracotta business, which limits their ability to scale and long term sustainability but also shows trust and close-knit social networks. 34% of the artisans use personal savings for financing their craft business, this shows self reliance and careful or sustainable financial planning but also it shows their financial insecurities that affects long-term sustainability. Together, these two sources account for 70% of the total artisans, showing that informal sources of funding (self and close networks) are the primary choices for most individuals. Also 14% of the artisan depends on bank loan for financing their business which indicates the limited access to formal sources suggesting lack of financial literacy. 16% of the respondents resort to other sources such as micro finance institutions and so on. The last option indicates diverse funding options beyond traditional methods. It could reflect a growing interest in alternative financing like microfinance, government grants, or angel investors. As policy implications for financial institutions there is a gap in accessibility or awareness, which banks could address by offering more flexible loan products for small businesses. Encouraging alternative funding options (e.g., grants, microfinance) could help diversify financing sources and support economic growth.

Table 8: Capacity of producing products

No of units produced /month	No. of Respondents	Percentage
Less than 100	16	32%
100 - 300	24	48%
300 - 500	10	20%
More than 500	0	0%
Total	50	100%

Source : Field Study

Since 80% of respondents produce **300 units or less**, this suggests that many businesses or individuals operate on a small to medium scale rather than mass production. Some businesses (20%) have reached 300-500 units per month indicating that there

is potential for expansion if barriers like funding, market demand, or resources are addressed. Businesses operating in the lower production ranges may need strategies to scale up, such as better funding access, improved marketing, or investment in production efficiency. **For policymakers & financial Institutions:** support for small-scale producers (through grants, better loan accessibility, or infrastructure support) could help increase production. **For investors or suppliers** there may be opportunities to invest in expanding production capacity or supplying better materials/equipment to increase output.

Table 9: Type of raw materials used by the artisans

Materials	No of Respondent	Percentage
Clay	36	72%
Natural pigments	8	16%
Glazes	3	6%
Others	3	6%
Total	50	100%

Source : Field Study

The above table shows that 72% of the artisans use clay that indicates the artisan's strong dependency on natural resources. Clay is often readily available and cost-effective compared to processed materials. High demand for clay suggests a strong market for quality clay sources, while low use of glazes might indicate an untapped market for those materials. Many artisans may rely on clay due to traditional methods or local industry norms. This suggests that the majority of respondents are involved in ceramics, pottery, or clay-based crafts. 16% of the artisans uses natural pigments as raw materials which appeals to consumers seeking organic traditional products and promote sustainability. **Natural pigments (8 respondents, 16%)** are the second most common material, likely used for decoration or coloring of finished products. A small percentage i.e. 6% of the artisans uses glazes as their primary raw materials which improves product's durability and results in increase of market competitiveness. The remaining 6% of the artisans uses other raw materials that indicates innovation and adaptability which is vital for sustainable

entrepreneurship. The low percentage of glaze users may indicate constraints such as cost, lack of access, or preference for natural finishes. **Rest of the materials** could include alternative materials like wood, metal, or recycled materials, though they are not as widely used.

Table 10: Main expenditure of the artisans

Expenses	No. of respondents	Percentage
Raw material	10	20%
Labour cost	24	48%
Marketing	9	18%
Overhead cost	7	14%
Total	50	100%

Source: Field study

The table shows the expenditure breakdown of the terracotta artisans. It can be seen that 48% of the artisans have highest expenditure in labor cost, which reflects the labor intensive nature of the work. 20% of the artisans have main expenditure on acquiring raw materials in terracotta product making; this highlights reliance on natural resources. The other 18% artisans have marketing cost as their main expenditure which shows that the entrepreneurs are investing in reaching buyers and it is a positive indicator for business growth and sustainability. 14% of the artisans found overhead cost as their main expenditure, which includes all the indirect expenses. A rise in these expenses may result in a cut into the income of the artisans thereby making their livelihoods less stable, so keeping these costs manageable is essential for sustainable profitability.

Table 11: Main customers of the artisans

Customers	No of respondents	Percentage
Local customers	18	36%
Retailers	12	24%

Tourists	8	4%
Online customers	12	24%
Total	50	100%

Source: Field Study

This provides insights into different types of customers purchasing terracotta products along with their distribution percentage. 36% of the artisans sell their products to the local customers, which indicate strong local demand and reliance on local buyers that could limit growth and sustainability. 24% of the respondents sell their products to the retailers who provide wider market reach and bulk orders with a stable sale. Another 24% of the artisans sell their products on various online platforms which reflect modern adaptability and access to growth potential while enhancing sustainability. Remaining 4% of the artisans sell their products to tourists who reflect the lack of tourism attraction and seasonal tourism shifts. Diversifying the customer base may result in long term sustainability of the terracotta entrepreneurship. Strengthening local sales and offering customized products could be a long term solution. Also **retail partnerships** with more craft stores, boutiques, gift shops and **online presence** by leveraging e-commerce platforms like Etsy, Amazon Handmade, and social media marketing **could boost sales**. **Tourists could also be attracted** by collaborating with tourism boards, selling in souvenir shops, and offering special packaging.

Table 12: Type of promotion used by the artisans

Promotion	No of respondents	Percentage
Social media	8	16%
Word of mouth	20	40%
Exhibition & fairs	16	32%
Others	6	12%
Total	50	100%

Source: Field Study

This table presents data on how terracotta artisans promote their products. It highlights different promotional strategies and their

effectiveness based on the number of respondents. 40% of the artisans use word of mouth as their promotional strategy for promoting their products which reflects the trust of the customer in personal experience and authenticity. 32% of the respondent artisans use exhibition and fairs for promotion of their products. This confirms that physical event works well for promoting terracotta products. 16% of the artisans use social media platform to promote their products which shows the growing demand for organic and handmade products online. 12% of the artisans uses other promotional methods such as local advertisement, small events, partnerships and so on which is less impactful to the more personal and experience driven methods.

Table 13: Training received by the respondent

Training	No of respondents	Percentage
Yes from Govt. Organization	12	24%
Yes from NGO	14	28%
Yes from both Govt. & NGO	8	16%
No	16	32%
Total	50	100%

Source : *Field Study*

From the above table it can be seen that majority of the artisans i.e. 32% of the artisans have not received any training program neither by Govt. organization nor by NGOs, which suggests a need of more accessible skill development. 28% of the artisans received training from NGOs which is a slightly more than the Govt. training programs received by 24% of the artisans. While 16% if the artisans received training from both the Govt. organizations and NGOs. This highlights the importance of expanding and improving training program to support growth and sustainable entrepreneurship.

Table 14: Foresights on terracotta business of the respondents

Future plan	No of respondents	Percentage
Expand product range	14	28%

Increase market reach	18	36%
Improved production range	10	20%
Others	8	16%
Total	50	100%

Source: *Field Study*

This table provides insights into the **future plans** of terracotta artisans based on their priorities. 36% of the artisans have a future plan on increasing their market reach indicating a desire to reach into a wider consumer base and boost sales. 28% of the respondent artisans want to expand their product range reflecting a interest in offering more variety to attract different consumers. This could include new designs, styles, or categories, indicating a need for creativity and innovation. Expanding the product range (28%) indicates that entrepreneurs recognize the importance of innovation to stay competitive. Whereas 20% of the artisans want to improve their production range in the future suggesting enhancement in quality and efficiency of the production by upgrading techniques, using better materials, or increasing efficiency.

Table 15: Type of challenges faced by the artisans

Challenges due to weather condition	No. of respondents	Percentage
Quality of raw materials	8	16%
Lack of skilled Labour	22	44%
Financial constrains	11	22%
Poor quality tool & equipment	9	18%
Challenges faced in accessing market		
Lack of market information	19	38%
High competition	15	30%
Transport issues	9	18%
Others	7	14%
Financial Challenges faced by the respondents		

Access to loan & credits	18	36%
High cost of raw materials	14	28%
Fluctuating market price	12	24%
Others	8	16%
Social Challenges faced by the craftsmen		
Lack of community support	28	56%
Cultural barriers	12	24%
Gender discrimination	4	8%
Others	6	12%
Total	50	100%

Source: Field Study

This table presents the various challenges faced by terracotta craftsmen, categorized into four main areas: **weather-related issues, market accessibility, financial difficulties, and social challenges**. **Lack of skilled labor (44%)** is the biggest weather-related challenge, possibly due to seasonal labor migration or unsuitable working conditions. **Financial constraints (22%)** and **poor tools & equipment (18%)** hinder production efficiency. **Raw material quality (16%)** is affected by weather conditions like excessive moisture or extreme dryness. The various challenges faced by the terracotta artisans in their business, highlighting obstacles across environmental, financial, markets and social dimensions. A significant range of artisans i.e. 84% of the respondents faces severe disruption due to the weather conditions as it the process which involves drying and firing of clay so the weather plays a crucial role. A smaller portion i.e. 12% of the artisans faces occasional disruptions and 4% of the respondent artisans have minimized weather related risk through improved production techniques. Weather affects everyone to some extent.

Table 16: Support needed by the artisans

Support	No of respondents	Percentage
Better access to raw materials	6	12%
More training programs	9	18%
Improved market support	11	22%
Financial assistance	18	36%
Others	6	12%
Total	50	100%

Source: *Field Study*

The above table shows that majority of the artisans need financial assistance as support, highlighting the artisans' need for funding to sustain and grow their business. 18 respondents consider funding the biggest hurdle, indicating a need for grants, loans, or subsidies. is the most needed support, indicating that artisans struggle with funding for materials, production, or business expansion. Also 22% of the artisans need assistance in improving market support which reflects a demand for better sales opportunities and visibility. 18% of the artisans need more training program which shows the need for skill development and innovation in areas like design, production, or business management. 12% of the artisans need support in better access to raw materials while remaining 12% of the artisans need other support which includes logistical and specific challenges. Overall financial backing and market access are the top priorities for the artisans in Asharikandi.

Findings

From this research study, it can be said that the economic and socio cultural status of the artisans in Asharikandi remained stagnant and in some cases it deteriorated due to interplay of some negative forces. The terracotta crafts of Asharikandi encompass a range of daily utility items, sacred idols, and decorative objects. It is a home-based cottage industry that requires minimal talent, advanced technology, and capital investment for its formation. The natural raw materials can be readily accessed at a moderate cost

in the riverine region. The terracotta skill serves as the sole source of income for the majority of artisans in the region. Despite the Government's provision of various support to the terracotta craft, artisans encounter numerous challenges, including insufficient financial assistance, inadequate technological innovation, a deficiency in skill development programs, an unstructured production system, and a lack of coordination among artisans, all of which require immediate resolution.

Conclusion

The terracotta crafts possess their own symbolism and undoubtedly represent a source of pride for the craft industries of Assam. It possesses distinct cultural, spiritual, aesthetic, historical, and heritage values that must be preserved and sustained through effective management. It elucidates the intricate connection between traditional craftsmanship and the possibilities for sustainable development. The Asharikandi terracotta hub ought to venture into innovative avenues in marketing and commerce. It necessitates the continuous involvement of the young local artisans in this craft throughout the year to ensure their employment and income prospects. The terracotta craft should be integrated into the organized sector to enhance its development and success. A comprehensive provision of information, financial support, advancements in technology, skill enhancement initiatives, and effective marketing strategies are essential for its efficient and sustainable growth. Interventions among governmental organizations, non-governmental organizations, private enterprises, and the local community are essential to ensure the sustainability of artisans and to preserve Asharikandi's cultural legacy for future generations. This research establishes a basis for subsequent investigations and practical insights aimed at transforming Asharikandi into a sustainable source of rural livelihood, thereby enhancing regional development and safeguarding cultural heritage.

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