



PROBLEMS OF INDIAN RED CLAY POTTERY (TERRACOTTA) INDUSTRIES AND POLICIES FOR DEVELOPMENT

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Abstract: *In the present day, the Indian red clay pottery (Terracotta) industry has been put forward as a major cottage industry for use & throw product for catering, artifacts, garden products etc. In a predominantly rural country with a very low income and simple needs, red clay pottery plays an important role. The artisan himself is the proprietor and works on his own initiative and with his own capital. As scientific and technical knowledge is lacking due to illiteracy and poverty, the techniques of production remain the same age-old inferior and the products lack in standardization along with reproducibility of the same quality. The objective of the present study is to examine the characteristic features of the Indian red clay pottery industry, problems of the sector and recommend appropriate suggestions and guideline for its appropriate technological development, adoptability by poor potters and implementation.*

Keywords: *Indian Red Clay Pottery Industry, Red Clay Terracotta, Problems, Technologies and Machines for Red Clay Terracotta Industry, Policy*

1. INTRODUCTION

Red clay pottery (Terracotta) is one of the ancient and older concepts that man evolved at the beginning of the civilization. Pre-civilized men abandoned their nomadic life and for a long time they did not have any idea of vessels or pots to cook or to store. But their intelligent brains must have felt an acute need of some kinds of clay pots or vessels to solve their problem of storage and cooking because the clay is the most abundant and easily available material which Mother Nature stored.

The Kumbhar caste is found all over India; almost every village will have a potters' community or settlement. Potters are further divided into groups depending on the kind of pottery they make and the labour they provide. They makes a range of objects ranging from utilitarian, votive, decorative, and religious to playful toys and items for festivals, births,



deaths, weddings and large terracotta's for votive purposes. Therefore their skills are incredibly versatile. Qualities of clay also vary across the subcontinent.

The present status of Indian red clay pottery industry is traditional age-old in nature; the industrial activities are carried on household basis and are characterized by low technology and low levels of production. The artisan himself is the proprietor and works on his own initiative and with his own capital. As scientific and technical knowledge is lacking due to illiteracy and poverty, the techniques of production remain inferior and the products lack standardization. The market of the products is mainly local and partly extended to urban areas. Besides, middlemen play a powerful role in marketing these indigenous products. They usually place order with the artisan and collect materials at less than the market price. The competition from the substitutes like plastic items is a major problem for its development (Lakhsman, 1966). Under such a situation the decay of this particular sector of employment poses a serious problem and obviously the rational solution seems to develop and make viable the household industries (Suresh, L B., 2010). Younger potters prefer to work in factories, or take up menial jobs in construction to get away from the stigma attached to craft.

2. OBJECTIVES

The main objectives of the present study are:

- to examine the characteristic features of Indian red clay pottery industry.
- to scrutinize the present situation of Indian red clay Pottery industry related to availability of raw materials, production system, product diversification, marketing strategy, etc.
- to recommend appropriate suggestions and guideline for the development of Indian red clay potter industry.

3. DATABASE AND METHODOLOGY

The present study is focused to analyses the general and economic performance of the Indian red clay pottery industry based on a primary data of Chhattisgarh, Karnataka, Maharashtra, Madhya Pradesh, Odisha, Punjab, Rajasthan, Utter Pradesh and secondary data of Andhra Pradesh, Assam, Bihar, Bengal, Kerala, states of India. The primary data was collected through a survey during the period from January to December, 2014 and more than seven hundred & fifty samples have been drawn from different parts of Chhattisgarh,



Karnataka, Maharashtra, Madhya Pradesh, Odisha, Punjab, Rajasthan, and Uttar Pradesh with random sampling method without replacement. The secondary data was collected from published and unpublished scientific articles.

4. CHARACTERISTIC FEATURES OF INDIAN RED CLAY POTTERY INDUSTRY

Analysis of the data obtained from the field survey reveals the following characteristic features of the Indian red clay pottery industry.

- The unit of production of Indian red clay pottery industry is of home scale level.
- Maximum older people whose age is above 45 years are continuing in the occupation. This occupation is providing average 150 working-days of employment per annum on an average to each family. None of the respondents is willing that their children should learn this age-old traditional occupation.
- This occupation is not providing adequate employment for the respondents who are completely dependent on this occupation. On an average only 40 per cent families are continuing in this occupation, and the rest are engaged in other professions as an unskilled labour. Some families who do not themselves produce pots prefer to purchase pottery products from other villages for the purpose of selling in their own villages to continue their caste tradition.
- Out of the total workers engaged in pottery production 10 per cent are highly skilled 50 per cent are semi-skilled and rest 40 per cent are unskilled workers. For up-gradation of their skill, no systematic HRD programmes were organised by any agencies.
- The classification of home scale level pottery industry based on the techno-economic status is summarized as table 1.
- Several agencies are involved under product development programme but till date less than 10 percent artisan have diversified their product.
- Around 70 percent products are traditional, 20 percent is moderate and hardly 10 percent contemporary products are produced by the potters and they are either staying in the city or close to city.
- No modern technology and new techniques of production have been introduced so far under any development scheme of the government.



Table 1: Techno-economic classification of pottery industry

Category	Description	Percentage
Type A	Individual potters working alone or with family with own limited facilities.	95
A-1	Individual potters working alone or with family with own Facilities. ➤ Low Socio-economic status. ➤ Ancient traditional technology: simple but-crude. ➤ Self-employment with their family members	70
A-2	Individual potters running with fairly large facilities. ➤ Technology—Simple but improved. ➤ Produce 2-3 trucks load per month. ➤ Self employed as well as hiring semi-skilled workers.	23
A-3	Individual potters manufacturing artistic wares prefer to cherish independence. - Master craft man ➤ Technology—Simple but improved. ➤ Self-employed. ➤ Producing better designs but inferior in quality.	2
Type B	Several individual potters though using common facilities for firing but manufacturing & marketing individually. ➤ Traditional Technology with higher production. ➤ Manufacturing and marketing the products individually. ➤ Limited common facilities up to the use of common kiln, procurement of clay etc.	3
Type C	Several potters working collectively with group facilities. ➤ Traditional Technology with improved facilities & higher production. ➤ Manufacturing on piece basis or collectively. ➤ Collective marketing on Industrial pattern.	2 Formation of SHG based business is under progress

- Average 70 percent potters are collecting clay for pottery from within 10 kilometres distance and 30 percent potters purchase the clay from more than 75 kilometres distance.
- Villages nearer to forest are using fire wood and others are using cow-dung cake as fuel for baking of products.
- Energy efficient and home scale level machines suitable for Indian pottery industry are hardly available.
- The average distance covered for sale of products is around 12 kilometres.



- Personal savings is the main source of working capital for majority of the units. Investment in fixed capital is very small. Government support and schemes are not available in any region.
- Average 90 percent potters come below poverty line because they are not able to earn their minimum daily wages from traditional pottery industry.
- The standard of literacy is very poor among the potters. More than 60 per cent potters were found below high school level or to tally or illiterate. From childhood they are forced to take up the family business because they are economically backward.

5. PROBLEMS OF VILLAGE POTTERY INDUSTRIES

The Indian pottery industry is facing profuse problems. Almost 60% artisans have already left the traditional business and if proper measures are not taken in due course in the next few years it may cross even 75%. The problems which the potters are facing can be categorized in to several phases like availability of raw materials, production system, product diversification, marketing strategy, etc. Some of the problems are described as follows-

5.1. Problems of management

In an overwhelming majority of the units surveyed, the artisan is both an entrepreneur and labourer. They raise their own finance, purchases the raw materials, attending the production and organising the marketing. Their margin of profit is rare and somehow they are managing a small part of their daily wages. If they happen to be out of station in such a situation the unit will be totally shutdown and their source of earning become almost zilch. Hence it's difficult for them to attend the out station training programmes and workshops regarding technological up gradation, product diversification, availability of government schemes, different loan facilities, etc, and due to all these reason they are not able to upgrade their production unit with time. The long term field trials and technology demonstration programmes organised at their own village responded big success after due course of time.

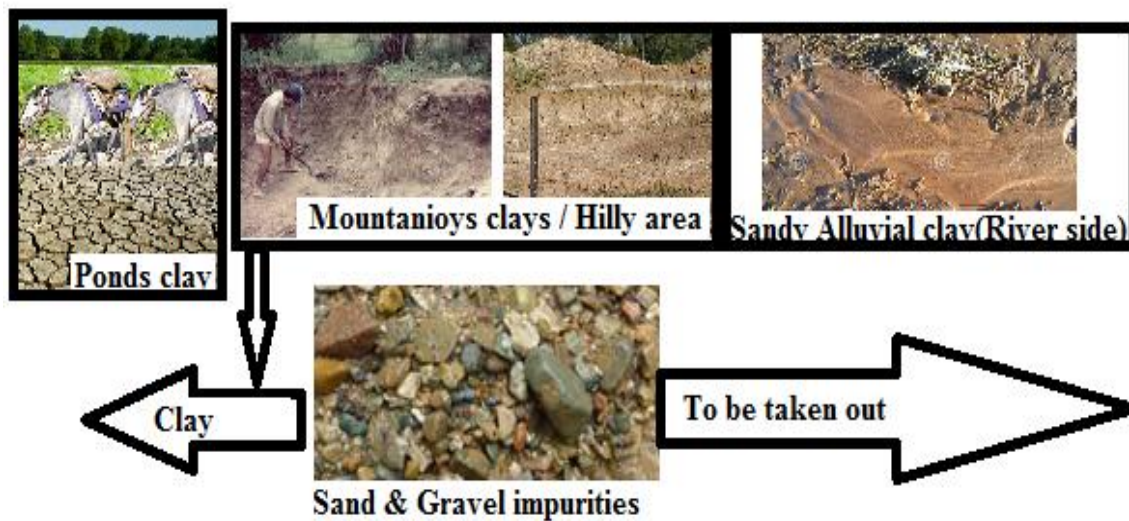


5.2. Non-availability of clay

In the past the potters collected the clay from paddy land or other locations from their own village. It was justified in that time but on today's scenario it is completely unjustified because in past they served the need of their own jajmans of that particular village only. The jajmans made available the clay for their own requirements. At that time the most of the red clay pottery products were baked to serve the demands for a short period like khular for functions, house hold red clay pottery for one time (Use & Throw) because of all these reason this red clay pottery was baked on lower temperate like 600 to 750 degree centigrade. Baking on lower temperature makes it easy to recycle the product. So in olden days neither the clay was transported to other places nor it disturbed the ecology of location.

But in present situation the baked clay articles are transported out of village in large quantity and continuous digging for collection of raw clay at village site is disturbing the ecology of that area. In this situation the clay should not be collected from paddy field but it should be collected from other natural sources like mines, safe river beds, ponds, etc, which may not be disturb the village ecology.

Now around 70 percent potters are bringing the clay for red clay pottery within 10 kilometres distance and at some places they have to travel even more than 75 kilometres to get suitable clay. Earlier they use to get it free of cost at their own village itself, but now they have to face the transportation costs.



5.3. Obsolete technology

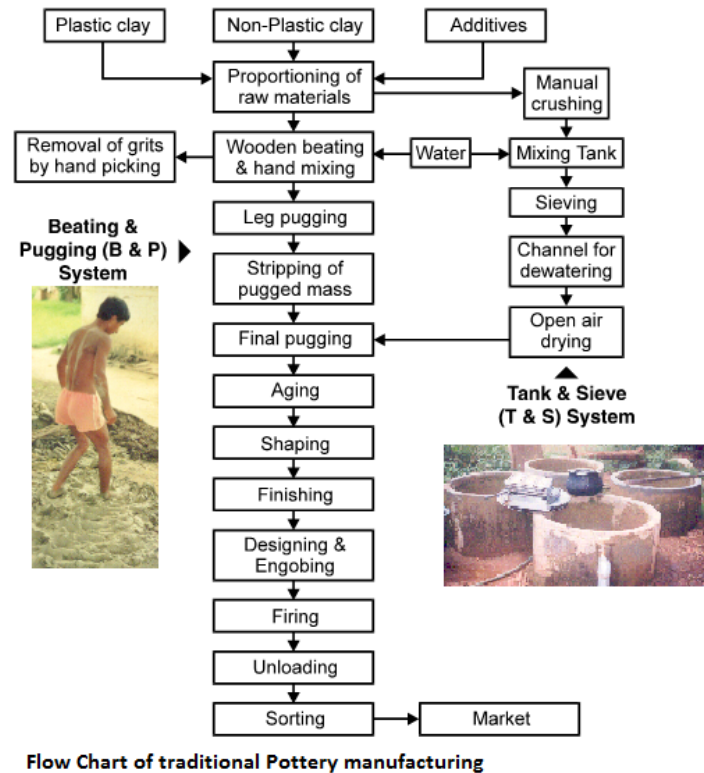
The method of production followed by the artisans is old and inefficient. Obsolete technology has a very important bearing on the productivity and cost aspects (Kasemi, N, 2014). The crude and obsolete tools chiefly operated by hand and the technique of production far below the standards have considerably affected the productivity and the quality of output of home scale red clay pottery units. The field trials of latest technologies developed by MGIRI, Wardha, have made many success stories and increase their income. The increased income is more than 300 percent which raised the living standard very quickly. Besides this the entire family got involved in their traditional business. Now it is an established fact that, for viable business of home scale red clay pottery unit there is a need of latest technologies which will increase the production, decrease the cost of production and increase the profit margin. So there is need to develop a series of the technologies, based on the problems of different regions, because for rural industries so many parameters are independent like clay, pot making techniques, techniques for preparation of natural colour, firing technique, etc.

5.4. Lack of research and development efforts

For the progress of home scale red clay pottery industry adequate research and development efforts are needed. Few R&D institutes are involved but the red clay pottery does not come under their main objective. So there is an urgent need to establish a specialised institute to conduct R&D on home scale red clay pottery units only. All other related R&D institutes, Mati Kala Boards, DRDA, KVIC, and KVIB should work for the

common mission programme. Different nomenclature for traditional techniques, Test standard, codes and other guidelines must be developed and it should be mandatory for all the concerned departments. Due to lack of this, Indian home scale red clay pottery industry could not develop in spite of their potentiality.

Mahatma Gandhi Institute of Rural Industrialisation (MGIRI), Wardha, has developed a series of technologies for red clay pottery (Terracotta) and recorded several success stories during its field trials. The list of newly developed technologies is as follows –



- 1) Energy efficient home scale blunger,
- 2) Energy efficient solar blunger,
- 3) Low cost small blunger made by “used PVC drum”,
- 4) Hand operated blunger
- 5) Energy efficient solar potter’s wheel for small pottery works,
- 6) Heavy duty energy efficient potter’s wheel run by multiple power sources
- 7) Energy efficient AC power operated potter’s wheel
- 8) Low cost pottery clay granulator machine
- 9) Natural clay colour for terracotta product made by wet process
- 10) Natural clay colour for terracotta product made by dry process
- 11) Natural clay colour for earthen sculptures,
- 12) Energy efficient up-draft kiln
- 13) Energy efficient gas kiln up to 5kg capacity
- 14) Low cost energy efficient gas kiln up to 50 kg capacity etc.



5.5. Lack of technology dissemination programme

There is a need of standardisation and effective field trials for the technologies of red clay pottery (Terracotta) developed by different government R&D institutes and commercial organisation. Different technologies will be tested in different regions and based on the feed-backs of artisans the machine will be further modified. After certain modification different improved versions will be developed for specific regions or condition because a single technology is not suitable for the whole country. Then for a specific region a series of technology will be available for recommendation. After that State and Central government will come up with several schemes and subsidies because the artisans are not competent enough to afford the commercially viable technology. They need subsidies and payment on instalment basis. The successful SHG module of Bangladesh may be adopted for the payment of instalments.

5.6. Clay processing machines

In the Indian condition, clay is processed manually which causes high production cost, poor quality products and human drudgery. Under several governments schemes industrial size blungers are installed but almost all are in an idle position, because the main reason is payment of heavy charges of electric supply during idle period. So the clay should be processed by small home scale machines which can be operated by domestic electric supply and family labour. So that when the machine is not in use, they will not have to pay the extra bills of electricity and manpower.



MGIRI, Wardha, developed the energy efficient home scale blunger and low cost small blunger (made by “used PVC drum”) which is operated by domestic electric supply. The energy efficient solar power operated blunger has successfully completed the lab trial and the field trial is under progress. The hand operated blunger is still under development.

5.7. Non-availability of cost effective technology for production

The production pottery made by wet clay process is highly knotty and the production is directly dependent on perfection of skill. So it needs regular training and a practice because of this reason the income of potter is dependent on the finishing and innovative mind of the



potter. The production of pottery made by semi-dry process is cost effective but with the help of different press it was observed that only thick products can be made which may not be acceptable as an alternative of wet clay pottery product. Other techniques like slip casting, jigger jolly, etc, needs higher initial investment which is not viable for any home scale unit. So there is an urgent need to develop cost effective technology for the production of pottery products.



5.8. Non-availability of fuel

Previously fire wood or cow-dung cakes were easily available at village site at free of cost. But now days, the villages are near to forest area, are getting their fuel free of cost and artisans of other villages have to purchase the fire wood and cow-dung-cakes. Due to non-availability of appropriate quantity of fuel in the nearby area, potters have to pay up to Rs 6/- for per kilogram of fuel. There is urgent need to develop the cost effective techniques for production of briquettes from agro waste or any alternate fuels to be used in cost effective manners.

5.9. Non-availability of energy efficient low cost kiln

Most of the potters in different regions are using the traditional awa kilns. In this kiln there is no provision to control the temperature and percentage of breakage is around 10 to 40 percent which increases the cost of finished product and reduces the profit margin. The fuel efficiency of these kilns is very poor.

The Matikala board, Gujarat, has modified the traditional awa kiln and this has saved around 40 percent of fuel. MGIRI, Wardha, has modified the up-draft kiln and reduced the fuel consumption around 33 percent. Also MGIRI, Wardha, had developed energy efficient low cost small gas kiln for value added terracotta products. Still there is a need to develop different size of energy efficient, low cost kilns. For big clusters and viable units there is a need to develop a low cost tunnel kiln.

5.10. Lack of shed facility

In India most of potters live in a very small house and the average size of the house is less than 500 square feet per family. Also 90 percent potters come under the category of below



poverty line because the Indian home scale red clay pottery (Terracotta) unit's are not able to generate the minimum daily wages and for them the construction of separate shed for production is not possible. So due to lack of shed facility, pot making process cannot be kept up in rainy season, as a result the potters face unemployment in rainy season and they are force to migrate for casual employment out of their village.

5.11. Low investment in fixed capital

In the recent years small machines have been developed by MGIRI, Wardha, and 20 percent potters of home scale red clay pottery (Terracotta) units are able to invest in small machine but due lack of demonstration and dissemination strategy, these machines are still out of reach of interested and needy potters. On the other hand 80 percent potters have low capabilities for mobilization of finance; the fund available to them for investment in fixed assets is very-very low. Many artisans are aware of improved technique of production, but do not apply them, as it will require fresh investment in fixed capital, which they cannot afford.

5.12. Understanding Local Skills and Recognising Indigenous Technical Knowledge

It is vital to gain an understanding of the potter's skills, tools, materials, shapes, methods and indigenous technical knowledge (ITK). In most of the scenarios this knowledge has been passed from generation to generation. Sadly the transference of skill has slowed down, due to increasing industrialisation, lack of patronage and the caste system that affects craft.

There is a need to nurture the master craftsman / regional artist as a designer in each locality; they can study the trend of market and develop the product as per the present demand of market. With the help of master craftsman of different region MGIRI, Wardha, studied their ITK regarding colouring of red clay pottery (Terracotta) products and developed the commercial application of this knowhow (Mishra, 2013).

5.13. Evolution of skills

A longer-term support of government schemes on development of contemporary product based on the latest demand of market provides hope for communities, which will be a very strong motivator and affect the dynamic of the community and can change its outlook. An approach that is focused on the evolution of local skills encourages work to continue in the long term. Also trends of western markets are powerful and it is a quick moving business. Craft processes are quicker in adapting to changes; they do not have the high development



costs found in larger factories where moulds etc. are used hence making them more flexible. It is possible to keep up with trends whilst developing innovative products, which uses the existing or introduced skills to evolve the craft.

5.14. Lack of diversification of products

Few decades back potter family supplies around 150 numbers of products to each households of the village. But today hardly three to four products are used by any house hold which is due to lack of diversification of the product also accounts for slow growth of the red clay pottery (Terracotta) sector. Now the market of eco-friendly products of potters has been taken by the hazardous industries of plastic and metal, due to this reason the potter's community is not getting enough employment and during slack season the artisans are forced to remain idle or search some causal jobs of unskilled labour. In present scenario the products of red clay pottery (Terracotta) is almost outdated. No one likes to purchase the red clay pottery (Terracotta) products because so many options are easily available to serve their needs. Secondly, the quality of red clay products, manufactured by the potters is not reproducible and they are not able to supply generally in time due to various reasons as mentioned above. Maintenance of red clay pottery (Terracotta) is also little difficult due to their low durability. Therefore the red clay products do not occupy the centre stage in present scenario and the potters are bound to select a big area for marketing of their products

5.15. Competition from the organized sector

In this age of globalisation, cheap machine made goods have captured the market of goods, produced by household industrial sectors. Cheap plastic articles from the highly mechanised sector introduced unhealthy competition to the detriment of decentralised production of articles by red clay pottery sector. In such a situations, the aspect like cheapness of the synthetic plastic goods of the organised sector emerged as the strongest competitor of the un-organised household industrial sector. To count this competition public awareness as well as strong actions from government regulatory body must be implemented.

5.16. Problems associated with marketing mechanism

A good market for the products of red clay pottery industry is important to promote the well-being of the artisans or small entrepreneurs. But marketing in this field has certain limitations. Firstly, due to the absence of organised trade facility centre at their own



location most of the unit are selling the finished products through local haat / market, or the middlemen. Secondly, the demand for the various products of these industries is mostly seasonal and limited only to the locality, as majority of their products are substandard. Thirdly, the competition from the organised sector as well as inter unit competition is keen. Thus, in the absence of any logical marketing organisation, the workers of various household industries are forced to sell the products to the middlemen who manage to get away with the major part of the profit.

6. SUGGESTIONS

After interaction with several artisans, government organisations and NGOs following facts were observed and the details are as follows -

6.1. Formation of regulatory body

Some of the state governments are distributing potter's wheel, free of cost but feedback of artisan about this is very bad these machines are substandard and within a years or two it becomes non-operational. So there is an urgent need of standardisation and quality control of all available machines. There is a need to establish some common regulatory body, to guide and control the Central and State Government agencies, various Mati Kala boards and privet manufacturers. Also the government R&D institutes are working in isolation and they are not interested to share their achievements with the government agencies, which make repetition of R&D and wastage of government money. So there is an urgent need to establish a common forum, to which all related organisation will report and the available information will be used in the common interest of public and nation.

6.2. Formation of specialised R&D institute on Red Clay Pottery (Terracotta)

There is an urgent need to establish a specialised institute to conduct R&D on red clay pottery only. All other related R&D institutes, Mati Kala Boards, KVIC, and KVIB should work for common mission programme. Different test standards, codes and other guidelines must be developed and it should be mandatory for all the line departments.

6.3. Formation of Trade Facility Centre

Based on the success story of ITC's e-choupal a new concept "Trade Facility Centre" (TFC) at each and every village and region should be established. TFC will support not only the artisanal based industry but it will support the farmers and also other trades (Mishra, 2012). A networking of TFC will serve the entire rural India in terms of trade, technology and



service. In future it will be a lifeline of India. TFC will connect the rural India with entire world. For village red clay pottery (Terracotta) industry TFC will support in following terms –

- The TFC will motivate the different experts of R&D organisation to develop house hold size, energy efficient, low cost, solar power operated, hand operated machines.
- The TFC will identify the safe location of clay with the help of experts of R&D organisation. TFC will make effective field trials on different locations, villages and make the machines available on subsidised rate as well as on instalment payment basis.
- TFC can promote to different fabricators of the region, for manufacturing and supply the quality machine with proper specifications.
- TFC will make available all sorts of technologies, finance, training & education, quality control through different government schemes.
- TFC will organise the marketing on both sides “rural to urban” and “urban to rural”.
- TFC will take up the promotion of “eco-friendly products” and to create awareness regarding environmental degradation caused by the wide spread use of plastics.
- TFC will encourage and make available on a large scale use of “eco-friendly products” to the customers of rural as well as urban.
- TFC will share the information for development of appropriate schemes to different government agencies.
- TFC will provide common shed facilities at village level to continue the production during rainy season.
- TFC will take necessary steps for the development of red clay pottery industries based on techno-economical inputs and the management issues.

7. FUTURE RESEARCH & SCHEMES

Three areas can be considered for future research details as follows-

7.1. Identification of eco-friendly fuel and energy efficient kiln.

A comprehensive R&D on fuel and energy efficient kilns will be greatly helpful for potters. It could be worthwhile to explore eco-friendly fuel by using local materials such cow dung, briquettes from agro waste, etc. for consistent firing results.

7.2. Future research on product diversification

New product should be developed as per the demand of market. Although in the face of mass-produced cheaper objects available in markets, artisanal craft production may appear



to be dying, but with careful consideration and a systematic and authentic involvement with craftspeople an exciting future of diverse opportunities for crafts communities, new and useful products which are economically viable and culturally desirable could be a well-balanced way forward. Also to make the industry viable different cost effective techniques for home scale units must be developed according to characteristic of different products.

There is a need to organise a product development workshop and different items made by plastic must to be thoroughly studied and against these products, new terracotta products should be developed. Workshops on “Industrial Module of Red Clay Pottery (Terracotta) Industries” can be organised at different red clay pottery (Terracotta) clusters / regions with following main objective–

- I. to identify the present market demand of red clay pottery (Terracotta) products.
- II. to develop red clay pottery (Terracotta) product based on the present market demand like new patterns of Kulhar, Diya, Terracotta Utensils, etc.
- III. to demonstrate the newly developed technologies of different R&D institutes like different kind of clay processing machines, energy efficient low cost potter’s wheels, natural clay colours, improved energy efficient kilns, clay granulator machine, semi-dry process and hand press for red clay pottery products like different pattern of Diya, etc.
- IV. to develop new products with the support of newly developed technologies and tools.
- V. to assess the newly developed products with respect to quality, finishing and desire of market.
- VI. to identify different problems of home scale pottery industries and make appropriate solution with the help of different R&D institutes,
- VII. to increase the productivity, reduce the cost of production as well as human drudgery and make the home scale pottery industries commercially viable.

The following benefits of newly developed technologies will come on the record –

- I. Application of low cost home scale machine will improve the quality of product, reduced the cost and increased the production, reduce the cost of production which will fetch higher profits margins, and make the home scale pottery industries commercially viable.



- II. The natural clay colour will improve the overall appearance and quality of red clay pottery (Terracotta) products which will increase the market demand.
- III. Significantly human drudgery will be reduced which attracts youths for better source of employment.

7.3. Formation of special scheme for artisans

So far as caste system in India is concerned, Brook J.S. (2005) states that – The four major caste formations in India ramify into enormous number of sub-divisions. The basic castes are called Varnas or colours, Sub-castes or Jaties are subdivision of the varnas. The Brahmin or priestly caste is at the apex, the Kshatriya or warrior, Baishya or traders and then the Sudras, who are labourers and servants, are in the second, third, and fourth ladder of the caste hierarchy.

The Bhagavat Gita states that the work of a Brahmin is for peace, acclaim and purity, loving, forgiveness and righteousness, vision, wisdom and faith. The work of a Kshatriya is to safeguard nation with heroic mind, inner fire, constancy resourcefulness, courage in battle, generosity and noble leadership. The work of a Baishya is trade, agriculture and rearing of cattle. The work of the Sudra is service. Beneath them are the untouchables. It is significant that the higher castes are distinguished by their qualities or virtues, the lower by their functions. By this type of differentiation of works the society was divided into upper, lower and working classes.

Singh Darshan (2009) in 'Development of Scheduled Castes in India: A Review', viewed that the gap between the mainstream and scheduled caste population still persists significantly in our traditional society. The self-reliance is essential to bring these downtrodden into the national mainstream. These values will help them in proper utilization of the various developmental schemes, which, in turn lead to the stability/improvement in their lives.

But the categorisation of caste in Indian constitution is not followed for professional developments of different community for example the two communities, Hira from Scheduled Caste Group and Kumar from Other Backward Class (OBC) Group in Assam have been practising red clay pottery (Terracotta). The Hiras make household articles by using the compression method while Kumars use their potter's wheel to make images, idols for worship and other earthen wares. It is observed that Hira pottery has more demand than Kumars for its utilitarian value. Here the different developmental schemes will promote the



Hira community but in the same place the Kumars community of Assam, will not get any support from most of schemes.

So at this juncture for the progress of rural India there is a need to bring all artisanal community under one umbrella and plan a complete scheme to promote them as an industrialist. Then only the face of complete India will change otherwise promoting half work will fetch zilch.

8. CONCLUSION

The present study shows that the Indian pottery industry is suffering from irregular supply of raw materials, lack of working capital, obsolete technology, lack of diversification of products, competition from the organized sector, lack of good marketing facilities, and lack of Research and Development efforts, management problems, etc. The artisans are often exploited by the middlemen who always squeeze the profit. There is a need of capital for increased productivity of the sector. The Government and non-government initiatives can solve the problem and develop the industries at its best level. It goes without saying that realization of policies will need very efficient and committed functionaries. Since the artisans are in the hands of stereo type machinery it may be necessary that the entire programme for the development may be organized through various governmental institutions.

Now actually needed is multi directional approach with an overview on the entire system of input - process - production - management and e-marketing elements. The technological, financial and marketing supports to village industries should be made available by a permanent organisation of the particular village or location i.e. Trade Facility Centre (TFC) and it will be managed by a progressive entrepreneur of the area. The TFC will work in similar fashion to ITC's e-choupal. The network of TFCs will be managed by independent professional organisation supported by Government of India.

The Central Government and different State Governments of India should create a new "Ministry of village industries and artisan welfare" which will arrange the overall holistic development of village industry because for artisan and village industry's overall development no single ministry is responsible.

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