CHAPTER 1

INTRODUCTION
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Paper has become an indispensable part of life. Its use in communication and information, storage and transfer, science and technology, industry and education is very well established. It would not be incorrect to say that paper is a vehicle on which modern civilisation moves. Percapita consumption of paper has become indicator of the standard of living, literacy, advancement in science and technology of any country.

The percapita consumption of paper in various countries in 1994 is given below:

India-3Kg, China-18Kg, Singapore-218Kg, Japan-225Kg, U.S.A-315Kg, the world average percapita consumption is 45Kg.

HISTORY OF HAND MADE PAPER INDUSTRY

The origin of paper making is somewhat obscure. According to Newne, it is certain that paper was made before Christ. Professor H.R. Kapadia in his article on "Outline of Paleography" indicates that the preparation of paper was known to Indians as early as third century B.C. Maurice Dumas in "A History of Technology and Invention Progress through ages" states that in the third century B.C. various types of paper were made from different raw materials on a small scale in Asia. David Dringer in "The Alphabet, key to the History of Mankind" says that scholars date its invention as far back as 123 B.C.
Encyclopedia Britannica also indicates that convention of paper has been traced back to the second century B.C.\textsuperscript{3}.

In the fields of language, book binding and such other technical aids could have influenced the art of paper making. It is well known that during the fifth century B.C. the Kharoshtri script originated in India. Sir M.A. Stein, British archaeologist who worked in Iran Afghanistan, India, Turkestan and China found many manuscripts written in "Kharoshtri" in Turkestan and China in the early part of the first century A.D. or even before "Kharoshtri" became the national script in Turkestan and China. In addition to that "Parsachi" the Indian colloquial language was also used in those centuries then.

According to Dr. Stein, in "Turkestan" which means "Hinterland" of India, paper was employed from the 1\textsuperscript{st} century onwards. Besides the felted paper was made directly from the raw vegetable substances. Sir M.A. Stein found these specimens of rag paper prepared from imperfectly disintegrated tissue of fabrics, composed of vegetable fibres belonged to the second century A.D., possibly. Therefore, the paper may have been used in India long before the coming of Moguls though its use was limited. It is noteworthy that paper manuscripts as a rule were cut to the pattern of those from palm leaves and were strung together and bond like them. These paragraphs of L.P.Barnetts, "Antiquities of India to Turkestan and China along with the script and language\textsuperscript{7}. Indian art of book binding was being praised by Chinese during the 2\textsuperscript{nd} century AD\textsuperscript{8}, according to P.K. Gode's, "Migration of paper from China to India\textsuperscript{8n}.\]
Dr. Stein received manuscripts on paper from central Asia, date of which is fixed as the third century AD. This paper was prepared only from cotton rags. This paper had been of very good quality and was not processed by any sizing material. Prof. Wenker analysed them and found out that paper was made up of rags and fixed its date as first Century AD. These documents are in Sogadian script. So Dr. Stein labeled them as "Sogadian Papers". H.A. Meddox ("Paper") and L.D. Barnett ("Antiquities of India") states that these papers belong to first century AD, and Barnett observes that these papers are from India.

In 327 BC, Alexander's invaded India. Nearchos, the ambassador of Alexander the Great, was in Punjab for some years and states that Indians used to make paper by beating cotton fabrics. Megasthenes represented Senece Nicator from 306 BC for 5 years in Chandragupta's court at Palimbotra (Patna). In his report he indicated that Indians used paper for writing horoscopes and almanacs. This shows that the paper was quite durable, because those documents were to be preserved for a long period. It is popularly believed that paper as we understand today was first developed in 102 AD, by T' Shai Turn at Lie-Yang in Honah Province in China. Some experts say that he was working as a clerk for registering important entries in the state record and he took the credit for the invention though he was working as a confidential secretary to the emperor and subsequently he was made Director of Imperial Workshop and he announced the invention of paper in 105 A.D. After the invention of paper in China, for 3 to 4 centuries the quality of paper was very poor, and so many books written on this non-durable paper had failed to survive and knowledge contained therein was lost, according to Joseph Needham,
Science and civilisation in China references are found in many books on paper technology and that the art of paper making was kept secret till the eighth century AD. Then some Chinese soldiers were captured by Arabs and these Chinese prisoners taught this art to the Arabs. It is from these Arabs that the paper making art spread all over the world.

In A.D.793, a factory was functioning at Baghdad, in which Haroun-el-Raschid introduced Chinese workmen. The next centre was Damascus, which was the main source of supply for Europe for several centuries (particularly of that paper known as Charta Damascene). From Damascus the art travelled westwards, by way of Egypt, to Morocco. In Egypt in the ninth century paper gradually displaced papyrus which had been the common writing material for about 3000 years. From Morocco (in about A.D.1100) the Moors introduced the art to Europe. They were also responsible for the stamping mill at the town of Xativa in about 1150, the first example of the use for the disintegration and beating of the fibrous raw material. Further progress of art will be appreciated from the following table showing the dates of the earliest mills in various countries,

<table>
<thead>
<tr>
<th>Country</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>AD 105</td>
</tr>
<tr>
<td>Spain (Xativa)</td>
<td>1150</td>
</tr>
<tr>
<td>France (Herald)</td>
<td>1189</td>
</tr>
<tr>
<td>Italy (Fabriano)</td>
<td>1260</td>
</tr>
<tr>
<td>Germany (Nuremberg)</td>
<td>1389</td>
</tr>
<tr>
<td>Switzerland (Marly)</td>
<td>1400</td>
</tr>
<tr>
<td>Belgium</td>
<td>1407</td>
</tr>
<tr>
<td>Holland (Gennep)</td>
<td>1428</td>
</tr>
<tr>
<td>Great Britain (Herefordshire)</td>
<td>1490</td>
</tr>
<tr>
<td>Sweden (Morala)</td>
<td>1532</td>
</tr>
<tr>
<td>Denmark</td>
<td>1540</td>
</tr>
<tr>
<td>Russia (Moscow)</td>
<td>1690</td>
</tr>
<tr>
<td>U.S.A. (Germantown Pa)</td>
<td>1690</td>
</tr>
</tbody>
</table>
barber paper made in Nepal and Bengal in India contributed to Indian sizing of paper and Italian mills about 1270 made valuable contribution too to paper making namely use of glue Cor tub sizing and introduction of stamping mills. Whereas Japanese had contributed by the use of mucilage (vegetable mucilage) for art and decorative paper making.

b. Where wrapping papers and packing boards were manufactured. No attempt was made for making while paper out of white pulp. In 1800 Matluas Koops published in London, "Historical account of the invention of paper", which was printed on papers made from straw, wood and other fibres. In neither case would the paper be described today as a satisfactory printing paper, its colour was poor and much undisintegrated material was present. Koops took out a patent for the pulping of straw in 1K02. In his book he also mentions the repulpmg of old paper for remaking, of new paper.

Until the end of eighteenth century white paper could be made only from white rags as no practicable methods of bleaching the pulp had been devised. In one way this was an advantage as it avoided deterioration of paper by the bleaching agent, although it accentuated the shortage of good rag's.

The discovery of chlorine by Scheele in 1774 and the invention of bleaching powder by fennant in 1770 led to the use of bleaching
processes and enabled coloured materials to be used for the production of white paper. This eased the problem of supplies, but it led to the production of paper which tended to deteriorate due to attack by the bleaching solutions and to complaints of the quality of paper. At this time comparatively little was known as the action of bleaching agents, but later investigations have shown that it is possible to bleach pulps with little detriment to the permanence of the paper.

It is not known when exactly paper making was introduced in India. It is said that Mohammad of Ghazni introduced it in the tenth century during his first invasion of India. If the Chinese are credited with the invention of paper, to the Muslims goes the credit of spreading it to Europe and India. Through the Moguls the art spread to the different parts of India. The history of paper making and its spread in this country, however, still remains shrouded in mystery, although during the Mogul and the Peshva period it flourished in the whole country, giving employment to thousands of people, men and women of all ages and children. The industry flourished mostly in the Punjab. It is reported that during Jahangir's time, paper produced in Sialkote alone was worth about Rs. 9 Lakhs. Paper was also produced at Multan, Ravalpindi, Jaipur, Delhi, Lahore and several other places. During the Sikh period about 1200 grinders (Denkis) were working in Sialkote alone. Each Denki produced about 20 mounds of pulp and brought an annual income of about Rs. 120 to the owner. Later on during the British period, paper making was also introduced in the jails of that province. In U.P., Paper making was practised at several places in Mutlira, Kanoj, Agra, Kalpi, Bareilly, Bijour, Budaon, Ghazipur,
Benaras, Azamgarh, Mirzapur, Kurra, Faizabad, Lucknow, Rahimabad
and also in several jails of that province.

In C.P., Paper factories existed at Zaubavad and Panchamnagar, Chanda, Akola and Buldana. In Madras, Paper was made at Chingalpet, Saidapet, Kancheevaram, Vellore, Gudiatam, Lalapet, Paliyur, Nainavarum, Ramnad, Dindigul, Karoor, Tirunelveli and several other places. Paper was also made at Bangalore. In Bombay and Sind, paper was made at Ahmedbad, Ankleshwar, several villages in Kaira, Surat, Thana, Mahad, Nasik, Erandol, Junnar, Poona, Satara, Wasi, Karad, Belgaum, Gokak, Kolhapur, Shahapur, Karachi, Hyderabad, Narapnr, Kandiano, Shikarpur, Larkhana, Rohri. The paper made at Daulatabad (Deccan) was famous at one time.

It spread to Nepal from China through intercommunication between the two countries. The Nepalese and the Bhutan make paper out of young bamboos and barks of certain plants such as Daphne, Cannabina and edgewortha gardener. The paper made from these is very strong, tough and durable. It is proof against ants, worms and rats. Nepal paper is famous for its strength and toughness. The sheets are as thin as the Oxford India proof paper. The industry is still being carried on in those parts.

The art of paper making practiced by the Muslim Kagazi is under the patronage of the Mogul Emperors. They had their settlements which were known as "Kagazipuras" indicating that they were the centres of paper production in those days. They were situated on the important trade routes. The trade at that time was carried on pack
animals by a community known as "Vanzars". Owing to its strength,
sun-hemp was used for gunny bags. The paper makers chiefly used
gunny bag wastes which were no longer of any use to "Vanzars". The
arrangements of the factories and the processes of paper making were
almost the same everywhere.

Up to the middle of the nineteenth century the paper requirements
of India, besides being met locally were supplied by China. But
afterwards, her requirements were supplied by the British and other
European manufacturers and during Skir Charles Woods' (Lord
Halifax) time (as secretary of State of India), all Government supplies
were ordered to be brought from Great Britain. Scientific discoveries
both mechanical and chemical, revolutionised the industry in foreign
countries. The policy of the Government of buying their supplies from
abroad and the import of cheap machine-made goods affected
adversely the Indian paper manufacturers in the villages.

As narrated earlier, paper is made entirely by Mohammadians.
Before their arrival, the natives, in their writing, appear to have used
only the leaves or bark of trees. In these district there were between 80
and 100 families employed in making paper and they were nearly
adequate to supply the demand. The people who made it were in decent
circumstances and required little or no capital. The manufacturers sold
10 or 12 quires for a rupee of 24" x 10" size papers.

The material is Pat (Jute) in its rough state. A sufficient number
of bundles is thrown into a large jar that is sunk in the ground, and they
are covered with a mixture of lime and water, in which they are
allowed to soak for 2 to 9 days according to the heat of the weather; the hotter the less time being required.

The bundles are then dried and the time that adheres is separated from them by beating and shaking. They are then moistened with water and beaten with a Dhengki which has a cap of iron and falls upon a stone slab. While beating, it is reduced to a kind of pulp. This part of the operation is performed entirely by women.

The pulp, after coming from the mortar, is thoroughly washed and a portion of it is thrown into a wide-nioulhed vat made of potter's ware that is sunk to the level of the yard. A large proportion of water is added and it is stirred until the pulp is properly diffused. In fact the pulp with a little stirring, is allowed to soak for 5 hours and is then brought into paper.

The workman's mould is made out of bamboo's split fine and tied together paralleled to each other and this is extended by a movable frame, made also of bamboo, which serves a ledge to confine the pulp. The workman holding his mould with one hand stirs up the pulp with the other; then immerses his mould and takes up a quantity sufficient to make a sheet.

When he has allowed the water to escape he lays aside the frame and turning over the mould, places his new sheets of paper above those that he has already made and he repeats the operation until the pulp in the vat is exhausted.
In this heap the paper is allowed to dry. It is then taken sheet by sheet and immersed in a decoction or starch made of rice and having been dried, is placed on a smooth plank and rubbed with a round stone.

As per T.B Bhatt's narration, paper manufacture carried on at Patna at about 1800 AD in Bihar, the paper most commonly is made out of 'Duftui' which is 19 by \(17 \frac{1}{2}\) inches a sheet and is used in common business. Other kinds of larger size and superior quality are made when commissioned. The material is old bags of the Crotolaria Juncea. These are cut into small pieces and, having been soaked in water, are beaten with the instrument called a Dhengki. The pulp is then put on a cloth strainer washed with water and dried on a rock. This substance is then put into a cistern with some lye of soda, and is trodden with feet for hours, after which it is in the same manner washed and these operations are performed 6 times. The bleached pulp is then put into a cistern with a large quantity of water, and is diligently stirred with stick for about three quarters of an hour, when it is wrought off into sheets as usual. The moist sheets are stuck on a smooth wall and dried. Having been rubbed with a paste made of flour and water they are smoothed by placing them on a plank and rubbing them with a stone.

At Arval, twenty families keep on equal number of beaters (dhenkies) and the estimated produce depends on the work performed by each of these. On the opposite side of the same river, in Shahabad are fifty beaters and the whole produce of these is sold as Arval paper which although made of the materials is whiter and more durable than that made at Bihar and is commonly used by Persian writers all over
Bengal. Each beater usually makes five bales in the year, and each bale contains twenty reams.

The indigenous paper industry would have disappeared had it not been for Sawkar who generally used Indian hand made paper for his account books. Credit goes to Sawkar for being instrumental in keeping this industry alive here and there.

THE DECAY OF THE INDUSTRY AND ITS CAUSES

Under the British rule this industry, just like the other indigenous industries, received a mortal set-back. The use of Hand Made Paper for state records was replaced by the Mill made paper imported from U.K. This blow was severe, and the industry began to crumble. To add to this the appearance of cheap machine-made paper and the establishment of paper mills in India in the last quarter of the Nineteenth Century, there was an accentuated decline of the industry.

THE RE-BIRTH OF THE INDUSTRY

It was at this critical juncture, that the 'Swadeshi' movement launched under the leadership of Mahatma Gandhi came as a success to the families of 'Kagazis'. Hand made paper making was also included in the list of Village Industries to be resuscitated by financial assistance and patronage of the products. Considering the remote possibilities of establishing large paper mills non-availability of conventional raw-materials, huge capital investment, long gestation period, increase of cost of transportation, constraints on financial
resources effluent problems. Hand made paper industry can play a vital role in production of paper by utilising agricultural waste and residues for the production of pulp at the distant place, even in the remote corners of the country.

The All India Village Industries Association, VVardha established in 1934 had a demonstration unit for hand made paper making, where NOIIIC improvements were attempted. However, it was soon realised that mere financial assistance and patronage could not go far, unless other techniques were also radically modified.

Towards this purpose the Association established the Hand Made Paper Research Institute at boonu in 1939. Simultaneously some efforts were also being made in Iff and other states. Designing small Hollander healers, screw presses and calendar machines and use of rags and oilier raw materials were attempted. However before sound designs and processes were reached, the Second World War broke out. In the wake of acute scarcity of paper experienced during the war, the hand made paper Industry received a powerful fillip and for a while it appeared that the industry was regaining its old prominent position. Though the new units were adopting, the above named mechanical improvements, they had not advanced enough to sustain the industry in its post war period. Consequently the boom proved short-lived and towards 1946 the position again became quite worst.
POST INDEPENDENCE EFFORTS AND THE REJUVANATION OF THL INDUSTRY

After the attainment of independence, the governments, both at the centre and the state took a keen interest in rejuvenating this limping industry. As such, the India Made Paper Research Institute at Poena took the lead and successfully carried on the work of evolving new designs of machines suitable for modern and changed needs and also processes for the manufacture of special paper like artists’ drawing paper, permanent document paper, quality bond paper, superior cards and filter paper. The production wing of the institution was actually run as a commercial unit to demonstrate the possibilities.

The establishment of the All India Khadi and Village Industries Board in 1953 by the Government of India, ushered in its planned scientific development of the industry all over the country. Since then a new phase in the life of the hand made paper industry commenced.

ROLF OF KHADI AND VILLA INDUSTRIES COMMISSION

Khadi and Village Industries Commission (KVIC) is a statutory body created by an Act of Parliament (No. 63 of 1956 and as amended by Act No. 12 of 1987). It is charged with the planning, promotion, organisation and implementation of programme for the development of Khadi and Village Industries in the rural areas in coordination with other agencies engaged in rural development wherever necessary. Established in April 1957, it took over the work of the former All India Khadi and Village Industries Board.
FUNCTIONS ()F KVIC

KVIC's functions comprise building up a reserve of raw materials and implements for supply to producers, creations of common service facilities for processing of raw materials as semi-finished goods, provisions of facilities for marketing of KVI products apart from organisation of training, of artisans engaged in these industries and encouragement of cooperative efforts amongst them. To promote the sale and marketing of Khadi or products of Village Industries or handicrafts, the KVIC may forge links with established marketing agencies wherever necessary and feasible.

The KVIC also charged with the responsibility of encouraging and promoting research in the production techniques and equipments employed in the Khadi and Village Industries Sector and providing facilities for the study of the problems relating to it including the use of non-conventional energy and electric power with a view to increasing productivity, eliminating drudgery and otherwise enhancing their competitive capacity and arranging for dissemination of salient results obtained from such research.

Further, the KVIC is entrusted with the task of providing financial assistance to institutions and persons through them to engage in the development and operation Khadi and village industries and guiding them through supply of designs, prototypes and other technical information.
In implementing KVI activities, the KVIC may take such steps as to ensure genuineness of the products and to set standard of quality and ensure that the products of Khadi and village industries to confirm to the standards.

The KVIC may also undertake directly or through other agencies studies concerning the problems of Khadi and Village Industries besides experiments or pilot projects for the development of Khadi and village Industries.

The KVIC is authorised to establish and maintain separate organisations for the purpose of carrying out any or all of the above matters besides carrying out any other matters incidental to its activities.

INDUSTRIES UNDER THE PURVIEW OF KVIC

1. Khadi’ means any cloth woven on handloom in India from cotton, silk or woollen yarn handspun in India or from a mixture of any two or all of such yarns.

2. Village Industry means any industry located in rural area (population of which does not exceed 20,000 or such other figure as per 1991 censes) which produces any goods renders any services with or without the use of power and in which the fixed capital investment (in plant and machinery and land and building) per head of an artisan or a worker does not exceed 50,000 rupees.
The KVIC had broadly re-grouped various village industries for the purpose of implementation of its programme. The list of industries including the newly added ones is as under.

**GROUP I: MINIMAL BASED INDUSTRY:**

1. Collate Pottery Industry
2. Lime stone and other lime products industry
3. Stone cutting, crushing, carving and engraving for temples and buildings
4. Utility articles made out of stone
5. Slate and slate Pencil making
6. Manufacture of Plaster of Paris
7. Utensil washing powder
8. Fuel briquetting
9. Jewelry made out of Gold, Silver, Stone, Shell and Synthetic materials
10. Manufacture of Rangoh
11. Manufacture of bangles
12. Manufacture of paints, pigments, varnishes and distemper.

**GROUP II: FOREST BASED INDUSTRY:**

13. Land made paper
14. Manufacture of Pallia
15. Manufacture of Jams and Resins
16. Manufacture of fireworks
17. Cottage Match Industry
18. Bamboo and Sedge work
19. Manufacture of paper cups, plates, bags and other paper containers
20. Manufacture of exercise book, binding envelope making, register making including all other stationery items made out of paper
21. Khus tattis and broom making
22. Collection, Processing and Packing of forest products
23. Photo braining
24. Manufacture of Jute products (under Fibre Industry)

**GROUP II AGRO BASED AND FOOD INDUSTRY:**

25. Processing, packing and Marketing of cereals, pulses, spices condiments and Masala
26. Pahngur making and other palm products industry

**GROUP - IV: POLYMER AND CHEMICAL BASED INDUSTRY:**

**GROUP - V: ENGINEERING ND NON CONVENTIONAL ENERGY:**
(50) Carpentry (51) Blacksmithy (52) Manufacture of Household Aluminium, utensils (53) Manufacture and use of manure and methane (gobar) gas from cowdung and other waste products (such as flesh of dead animals, night soils (54) Manufacture of paper pins, clips, safety pins,. Stove pins (55) Manufacture of decorative bulbs, bottles and glass (56) Umbrella assembling (57) Solar and Wind energy implements (58) Manufacture of Fland made utensils of Copper (60) Manufacture of Hand made utensils of Bell metal (62) Production of Radios (63) Production of cassette player whether or not filled with
Radio (64) Production of cassettes recorder whether or not filled with radio (65) Production of voltage stabilizer (66) Manufacture of electronic clocks and Alarm time pieces (67) Carved wood and Artistic Furniture making (68) Tin smithy (69) Motor winding (70) Wire Net Making (71) Iron (Tills Making (72) Manufacture of Rural Transport Vehicles such as Hand carts, Bullock carls, small boats, Assembly of bicycles, cycle riksha, motorised carts etc., (73) Manufacture of Musical instruments.

GROUP- VI : TEXTILE INDUSTRY (EXCLUDING KHADI): (74) Poly Vasslnf which means any cloth woven on handlooni in India from yarn handspun in India from a mixture of man made fibre with either cotton., silk or woolen yarn handspun in India or with any two or all of such yarn (75) Manufacture of Iok vastra cloth (76) Hosiery (77) Tailoring, and preparation of Ready made garments (78) Batik work (79) Toys and Doll making (80) Thread Balls and Woollen balling, Lacclu Making (81) Fmbridery (82) Manufacture of Surgical Bandages (83) Stove wicks.

GROUP VII : SERVICE INDUSTRY: (84) Laundry (85) Barber (86) Plumbing (87) Servicing of electrical wiring and electronics domestic appliances and equipment (88) Repairs of diesel engines, pumpsets (89) Tyre vulcanising unit (90) Agriculture servicing for sprayers, insecticide, pumpsets (91) Hiring of sound systems like loud speaker amplifier, nuke (92) Battery charging (93) Art Board Painting (94) Cycle repair shops and (95) Masonary.
Khadi and Village Industries Commission provides financial assistance to the traditional kagazis (paper makers), trained technocrats, co-operative societies and Registered Institutions through State Khadi and Village Industries Boards for promoting the cause of hand made paper industry. The Registered Institutions under the direct list of the Khadi and Village Industries Commission receive funds directly from the Commission.

Khadi and Village Industries Commission also arranges for training of supervisory personnel and artisans to facilitate establishment and smooth running of hand made paper units.

Managerial Training:

This training is of one year duration is arranged at hand made paper Research Institute situated at K.B. Joshi Road, Agriculture College Compound, Shivaji nagar, Pune - 5, Maharastra State. The candidates sponsored by Hand Made Paper production units and also to those identified by State Khadi and Village Industries Board for assistance are given preference for admission to the course. The qualifications prescribed are Higher Secondary (XII Std.) with Science or equivalent. A stipend of Rs.650 per month is paid to candidates admitted for training (plus travelling expenses for joining the training and returning after completion of training in case of north eastern region trainees).
Artisan Training:

This training is of three months duration and is meant for training the workers of hand made paper production units in different processes of the industry. The training is conducted at selected Hand made paper production units in different regions of the country. A stipend of Rs.400 to Rs.500/- per month is paid to trainees plus travelling expenses for joining the training depending upon the situation of training centre or unit in "A" Class TV class cities and other places in India.

Management (irant on sliding scale for a period of four years as under is provided to the registered institution/co-operative societies to meet the salaries of the trained persons appointed by them in initial stages on fulfilling certain terms and conditions.

- first year : Rs.1000 per month
- Second year : Rs. 750 per month
- Third year : Rs. 500 per month
- Fourth year : Rs. 500 per month

The above facility is also extended to the trained technocrats setting up their own units with the financial assistance from KVIC/KVIB.

Kliadi and Village Industries commission also recognises genuine hand made paper production units which makes the units eligible for exemption from central excise.
Pattern of financial assistance:

Till 1994-95 KVIC was assisting the beneficiaries in the following pattern.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Category</th>
<th>Grant</th>
<th>Capital expenditure loan Rs.</th>
<th>Working capital loan Rs.</th>
<th>Total loan Rs.</th>
<th>No. of persons to be employed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tiny unit</td>
<td>10,000</td>
<td>30,000</td>
<td>2,500</td>
<td>55,000</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>Small unit</td>
<td>-</td>
<td>2,65,000</td>
<td>1,25,000</td>
<td>3,90,000</td>
<td>26</td>
</tr>
<tr>
<td>3</td>
<td>Medium unit</td>
<td>-</td>
<td>5,42,000</td>
<td>1,50,000</td>
<td>6,92,000</td>
<td>41</td>
</tr>
<tr>
<td>4</td>
<td>Cylinder Mould vat unit</td>
<td>-</td>
<td>10,74,000</td>
<td>3,50,000</td>
<td>14,92,000</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Manufacture of paper machine</td>
<td>-</td>
<td>1,000</td>
<td>5,000</td>
<td>6,000</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>Paper cups/plate(Saucers) making unit</td>
<td>-</td>
<td>66,000</td>
<td>20,000</td>
<td>86,000</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>Paper Bags Making unit.</td>
<td>-</td>
<td>20,000</td>
<td>15,000</td>
<td>35,000</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>File covers, file boards letter pads making unit.</td>
<td>-</td>
<td>32,000</td>
<td>40,000</td>
<td>72,000</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>Exercise books registers making unit.</td>
<td>-</td>
<td>66,000</td>
<td>50,000</td>
<td>1,16,000</td>
<td>6</td>
</tr>
<tr>
<td>10</td>
<td>Envelopes making unit.</td>
<td>-</td>
<td>52,000</td>
<td>40,000</td>
<td>92,000</td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>Photo Framing unit.</td>
<td>-</td>
<td>1,000</td>
<td>5,000</td>
<td>6,000</td>
<td>2</td>
</tr>
</tbody>
</table>
Pre-requisites borne by the implementing agency:

**Land:**

(Quarter to half acre land with open well / lube well or other sources of soft water per day to the time of 50,000 litres, power supply around 55 II.I throughout the year shall have to be arranged by the implementing agency, in case of small hand made paper unit with the following project cost.

1. land Rs 50,000
2. Building and water storage tank Rs. 4,50,000
3. Machinery and equipment Rs. 9,65,000
4. Working capital for three months requirement (approx.) Rs. 5,00,000

Total Rs.1 9,65,000

And that of six tonnes annual capacity of Tiny unit. Land 2000 square feet multi constructed area of 700 square feet including water and power arrangements (5000 litre soft water per day and nine H.P. power) throughout the year shall have to be arranged by the implementing agency.

Hiuldmg, with 500 square feet area is required for housing file cover/file boards and letter pad manufacturing unit, exercise books and register making unit, manufacture of paper cups and paper plates (saucers) unit, and to that of paper bags manufacturing unit, envelope making unit, photo framing unit and manufacture of paper machine
300 square feet built-up area is required. As usual water and electricity arrangement is to be made by the implementing agency.

**KV1C ASSISTANCE**

The KVK through budgetary support of the government of India provides budget to all the state boards and directly aided institutions as per the provisions of various schemes and pattern which are incorporated in its final budget agreed in favour of the implementing agency for a particular year, the sources of funds and funds under interest subsidy bank finance scheme.

All loans extended to the implementing agencies carry a rate of interest for village industries at the rate of four per cent per annum. As regards to interest subsidy bank finance scheme, the KVIC bears the difference of interest for funds availed by the implementing agency which for village industries sector are charged by the banking institutions at 16 per cent.

**Tenure of Loans:**

The repayment schedule of the loans availed of under capital expenditure and working capital are as under.

A. **Capital expenditure**

1) Building pucca construction 10 years
   Kacha construction 5 years

2) Machinery and equipment 10 years.

3) Tools and implements 5 years.
B) Working capital :- Village Industries - 5 years
C) Share capital 5 years.

All loans are repayable in equal instalments by the implementing agencies., the lender institution is required to execute legal documents such as hypothecation deed and/or mortgage deed covering movable and immovable properties as security for the loan applied for. In this regard the state boards to frame-up suitable legal formalities that are required to be executed before availing of loans for implementation of V.I. Programme.

SPECIAL SCHEMES PROMOTED BY KVIC

The concept of mother unit and production unit have come into existence consequent to amendment of KVIC Act in 1987. As per the provision of the Act, such of the mother unit which is meant for extending common facility needs of tiny units functioning in rural area and can be located even in urban area. Under the mother unit institutional, individual and entrepreneurial production units as per provision of the pattern can be tied up so that the service needs of individual production units can be coordinated and extended by the mother unit.

These mother units could be considered in favour of registered institutions, societies, state public undertakings corporations, panchayal samitis and so on., b'ven federation and associations of village industries units can also have such mother units.
Under such project oriented scheme, the following schemes introduced by KVIC can be taken up for implementation.

(1) The Integrated Artisan Cluster Scheme:

Individual artisans located in a particular area may form a federation of themselves and can implement individually existing Vd. Schemes under the umbrella of a mother unit which can be formed/established by the federation for common service extension to the individual production units.

(2) Educated Artisans Cluster Scheme:

Registered institutions/co-operative societies and state public undertakings and panehayats may identify certain discipline of village industries and rehabilitate them in a particular plot of land and render such common facilities as indicated above and thus may form cluster of village industries activities which will be in real sense termed as adopted by the promotional agency can be undertaken as a project oriented schemes.

(3) Village Industries Industrial Estate Schemes:

KVIC has introduced a new scheme for establishment of village industries industrial estate and effective steps are under way for establishment of such V.I., estates clusters in various states. In so far as modalities and guidelines for establishment of such estates are concerned, such of the village industries units located in a particular
estate would form into a federation and may opt to have a mother unit for such of the Facility, service coordination as indicated above and hence if a proposal is received for establishment of V.I., estate in a joint manner from such of the association it is to be promoted as project oriented scheme.

(4) KVIC / DOE in Association with Department of Electronics, Government of India:

The KVIC has formulated a scheme whereon on project basis, the scheme implemented for creation of rural employment. Under the scheme the capital expenditure requirement of the mother unit is met from DOE, government of India and production societies, assisted by KVIC as per its pattern. The production units are tied-up with lic mother unit for all common facility services like raw material, design know-how, spare components, marketing and follow-up service assistance and so on.

ADDITIONAL SERVICES

(I) Low Cost Practical Consultancy Scheme:

The KVIC has formulated scheme of providing KCPC to the prospective beneficiaries who desire to avail of the facilities such as installation, erection of machinery and equipment, product development, preparation of dies, tools and related allied technical services for establishment of village industries activities. Under the scheme a low cost artisan/technician from good institution having a
thorough technical know-how is made available to the needy institutions/agencies who proposes to implement V.I.programme.

(2) Transport Subsidy Scheme of Government of India:

The Khadi and Village Industries Commission/ State Boards have been declared as promotional agencies for eligibility of transport subsidy to industries/units certified and assisted by KVIC/KVIB set-up in specified areas are eligible for transport subsidy.

(3) Investment Subsidy Scheme of Government of India:

Government of India has introduced a scheme of central grant/subsidy for industrial units to be established in selected backward areas/districts with a view to promote growth of industries in these areas. As per the scheme, the subsidy is made available on the investment made in land/building and machinery/plants. The rate of subsidy is admissible as per category A, B and C cities, towns and rural areas.

(4) Refinance Scheme of National Bank for Agriculture and Rural Development (NABARD):

Re-finance scheme of NABARD is made available for all the approved schemes of KVIC. The refinance scheme is classified into three broad categories namely,

(1) General refinance scheme which envisages assistance in the form of composite loan of up to Rs.50,000 to rural artisans
and individual entrepreneur. The scheme for infrastructure and promotional support which envisages assistance for construction of workshed up to Rs. 3,000 to artisan and tiny entrepreneurs and

(2) The assistance is also available for promotional organisations such as registered charitable institutions for setting up of infrastructure for supply of raw material, marketing, technology input and others.

(3) Integrated Rural Development Programme (IRDP) Training /TRYSEM/DWACRA.

Under the IRDP Scheme, various training programs for development and implementation of village level craft and industry are extended. The recent scheme in this regard is Jawahar Rojgar Yozana. The KVIC scheme could be tied up for implementation of various IRDP schemes to maximise the availability of support assistance from other similar rural development agencies related to KVIC activities promotional agencies.

DEVELOPMENTS IN KVIC IN THE RECENT PAST

To improve the working condition of the KVIC sector a high power committee constituted under the chairmanship of Prime Minister of India and the highlights of High Power Committees' recommendations are as follows:

The Khadi and Village Industries sector should be able to create 10 million new jobs during the remaining years of the eighth five
year plan. The target of covering 50 districts under the special employment programme creating 10,000 jobs in each district. To cover 125 blocks for development of Khadi and Village Industries employment should be provided to at least 1,000 persons per block. The production of Khadi should be increased from the present level of 105 million square metres to 200 million square metres by the terminal year of the present plan. Development of Khadi should be given top priority by KVIC. Intension of Khadi programme in the future should be primarily through special employment programme in selected backward districts. Rebate may be replaced by Market development assistance. Raw material banks may be opened near the production centres. Production of best quality Khadi for export should be taken up by selected institutions and they should be free to fix their own prices. The certification system should continue. The existing definition of village industry may be modified to raise the per capita investment limit in plant and machinery from the existing level of Rs. 15,000 to Rs. 50,000.

The committee recommends that during the remaining period of the K\textsuperscript{III} plan 17.53 lakhs additional jobs should be created in village industries sector. The pattern approach has to be gradually changed and KVIC/KVIIIs have to concentrate their attention on a few selected industries for which they have developed necessary expertise and infrastructure. KVIC should give proper attention for development and transfer of appropriate technology.
NEW INITIATIVES

KVIC has taken various initiatives for implementation of the recommendations of High Power Committee by launching area specific programme in Districts and Blocks and National Programs for important village industries in addition to the various steps taken for strengthening and expansion of existing Khadi and V.I. programme.

125 priority Block Development Programme:

The High Power Committee constituted under the chairmanship of Prime Minister of India recommended to take up 125 blocks in the country for intensive development of KVI programme to commemorate the 125th Birth Anniversary of Gandhiji.

The objective of the programme is to take up intensive development of both Khadi and V.I. programme in the selected blocks and to generate sustainable employment for about 1000 persons in each block during the period of 3 years.

The programme is to be implemented by KVIC through the institutions, NGOs under KVIC/KVIBs. All institutions of the block and other agencies operating in the area are to be associated with the programme.

Main thrust of the programme is to comprehensive by developing the blocks, by creating employment opportunities through Khadi and Village Industries. Programme is financed by KVIC’s budgetary resources, DRDA, Consortium Bank Credit and own
contribution of beneficiaries. Budgetary support of KVIC is available for Margin Money, Interest subsidy, Training and infrastructure and Capital expenditure. DRDA assistance is sought for Training under TRYsBm and for capital subsidy for Tools/liquipnent and infrastructure for vorksliebGodovvn.. Commercial Banks/Consortium should be made available for, i) working capital requirement and ii) Capital bxpenditure in project. The total cost of creation of 1,000 jobs in three years is estimated at Rs.3.00 crores. Broadly about one third of the requirement of funds for the programme will be met from budgetary resources and the rest from DRDA and Banks.

HAND MADE PAPER INDUSTRY IN TAMIL NADU

I land made paper Industry in Tamil Nadu lias been controlled by three operational sources namely., Tamil Nadu Khadi and Village Industries Board, registered institutions controlled by Tamil Nadu Khadi and Village Industries Board, Cooperative Societies ami other registered institutions and charitable trusts and private units. The Tamil Nadu Khadi and Village Industries Board and other institutions produce different varieties of paper. The Tamil Nadu State Khadi and Vilkm Industries Board net assistance from Khadi and Village Industries Commission as well as from the State Governments" funding allocation under different social development programs. The band made paper industry is being encouraged by the State government because it could give sustainable employment opportunity to rural masses at their door steps, wealth is created from waste and requires very less capital investment compared to larger paper mills where the disposal of effluent is a problematic one. Catering to the requirement
of the different Government departments, the Tamil Nadu Khadi and Village Industries Board units produce mostly impression paper, bond paper, blotting paper, card boards, straw boards and certain value added items such as envelopes, file covers, file boards, pads, carry-bags, letter-head pads whereas most of (lie private units are concentrating on production of industrial utility papers, packaging industry's requirements catering to the demand.
REFERENCES


7. ibid., p.229.


