Forest products are known to generate substantial foreign exchange and are increasingly being rewarded as valuable commodities around the world. The Himalayas are well endowed with such forest products diversity. However, ignorance of the potentials of many important species is a great limitation to resource utilization, which largely depends on traditional knowledge of the local people.

Among the many resources available, some species are over utilized and many potential species remain under-utilized, neglected or allowed to waste. Ringal (hill bamboo) is one such species. It grows on steep mountain slopes within temperate zones of 1800 m to 3000 m above sea level in Himalayan states especially Himachal and Uttarakhand.

In Uttarakhand alone it is distributed over 60,000 ha of forest area. Ringal are used extensively in traditional communities in the Garhwal Himalayas and have diverse uses among traditional communities. It provides fibers that are used for making brooms, sticks for making baskets, used in constructions, leaves for fodder especially in winter months, supporting stakes for vegetables and other climbing crops etc. It is a common sight in the villages along the Himalayas to find men and women with these long conical baskets on their backs carrying different kinds of loads to and from their houses. It conserves valuable soil and soil moisture and act as local raw material for artisans sustaining their livelihood. Elaborate root/rhizome systems protect the topsoil from erosion, enrich the water percolation and retention capacity of the soil and slowly discharge feeding the underwater springs.

Despite the importance of ringal in the villagers’ daily lives and the income generated, surprisingly not enough work has focused on their diverse use including ecological importance and management. Before talking about Ringal bamboo let us take a look at the status and importance of bamboo resource in India.

Bamboo Resource in India
Bamboo resources have been rediscovered as a strong and sustainable source for providing ecological, economic and livelihood security to the rural people. Next only China, India has the richest bamboo genetic resource with 136 species including 11 exotics. The total forest area under bamboo is 8.96 million ha that is about 12.8% of the total forest area of our country. It contributes 4% share to the global market with its total growing stock of 130 million tonnes while China with only 3-4% of the total forest share contributes a major share to the global market.

Bamboo is a grass that belongs to the family Gramineae. Our basic food needs are impossible to imagine without this plant family as rice, wheat and millets belongs to this. Worldwide more than 1500 uses of bamboo are recorded included housing, art and craft, food and livelihood economy. Over 2.5 billion people trade in or use bamboo and 7.5 million bamboo artisans are dependent on bamboo for their livelihood. After industrialization bamboo is offering a new opportunity for modern generations to retain and continue their tradition of bamboo. Its use and trade have been growing rapidly in recent years, as it is becoming an excellent substitute for wood, pulp, paper, and board and charcoal industries.

Various reconstituted materials like board and panels are associated with its natural form after preservation treatments. Its characteristic features (like easy availability and transportation), mechanical and physical properties and durability have placed it among the major forest products worldwide. In India, the annual harvest of bamboo is about 13.5 million tonnes, which is predominantly shared by three species: Dendrocalamus strictus is harvested (53%) followed by Bambusa bambos (15%) and finally Melocana baccifera (15%). In India bamboos are cultivated in almost all states except Rajasthan and Jammu & Kashmir.

The traditional Ringal bamboo craft is in desperate need of reinventing itself to adapt to the current scenario along with modern scientific interventions and traditional wisdom.
The Government of India launched the National Bamboo Mission (NBM) as a central sponsored scheme on 27 October 2006 with a total outlay of 568.23 crore over a period of five years. The scheme is being implemented by the Department of Agriculture and Cooperation under the Ministry of Agriculture, Government of India. The aim of NBM is the holistic development of the bamboo sector in India. The Department of Science and Technology (DST) also took a major step by establishing the National Mission on Bamboo Applications (NMBA), a focused mission under the aegis of the Technological Information Forecasting and Assessment Council (TIFAC)—an autonomous body under DST that supports technological up-gradation, develops indigenous capacities and enterprise and provides linkages with markets. NMBA has carried out a review of current and potential uses of bamboos.

Ringal: A Hill Bamboo Resource

Ringal forms a very versatile resource that is put to varied uses. Predominantly, three species of ringals used for various purposes are: Arundinaria talaica (Gole ringal), Arundinaria spathiflorus (Tham ringal) and Arundinaria falconeri (Dev ringal). Some of the major uses of ringal bamboo are enumerated below:

Basketry: Weaving of various kinds of baskets and other articles from the major use of ringal among the Himalayan community for carrying livestock dung, manure, fuel wood and other forest produce, fodder, grass, ration, and clothes for washing. These vary in shape and capacity according to the use. Slightly conical shaped baskets are called ‘Solta’ or ‘Ghida’. The size and shape of ‘Ghida’ or ‘Solta’ varies according to usage requirement such as carriage of water, milk container, carriage of bulky material, carriage of food to fields and pasture lands, storage purposes and collection of fruits etc. Large baskets are harnessed to the back with the help of rope of Dholan (Girardinia diversifolia) and Bhang (Cannabis sativa).

Woven articles: Various articles such as ‘Suppa’ (winnower) for winnowing of grains; ‘Moreta’ (mat) laid down on the earthen floor for sitting purposes and for drying grains and edible items; ‘Bhwanu’ (bloom) for sweeping and cleaning floors, and ‘Kandi’ used for collecting and carrying ceremonial items etc.

Construction, fields and other domestic uses: Ringal is used by villagers for giving support to weak-stemmed cash crops (especially vegetables) to climb up; roofing of temporary house at meadows; dry sticks as fuel wood for cooking purposes; decorative items, and ‘Kalam’ (ink pen) used by local astrologers for writing horoscope.

Fodder: Ringal remains green throughout the year especially during the winters when all other fodder species become dry or start shedding. Foliage of ringal, therefore, forms a very important source of fodder for livestock. It is also preferred by endangered wild life species such as ‘Monal’ pheasant and ‘Musk Deer’.

Medicinal: The entire plant is used to remove the accumulation of pus in body tissues. Ringal is used to heal cuts and wounds also.

Ecological protection: The role of ringal in conserving soil moisture and preventing erosion is well known. People cultivate and plant ringsal along their fields and community lands for controlling soil erosion and preventing crop from wild life. In the Himalayan region, ringal is a very vital constituent of the ecosystem that facilitates carbon sequestration. It is one of the fastest growing carbon sequestering plants that are indigenous to this part of the Himalayas.

Traditional Processing of Ringal

Ringal is collected throughout the year for a variety of purposes. Only well-formed culm of 2-3 cm diameter is preferred for harvesting. Deo ringal is the most collected species. General household tools are used for harvesting. A cut is made up to 10-15 cm above the ground, which helps to facilitate re-sprouting next year. Traditional processing methods involve exposing the bark (light peeling); drying for 3-4 days in sun or kitchen corner; division in 4-12 parts according to the requirements; and weaving or crafting domestic implements.

An average of 8-10 sticks are used for preparing conical baskets (Ghida) of average height. About 5-8 Ghidas can be prepared by 30 kg culms collected in a daylong visit by a person. Each culm splits into 4-8 longitudinal strips and sometimes more depending upon the shape and size of the basket and the culm’s thickness. This is then scraped to smoothen the edges and for having uniform thickness especially at the nodes.

Most of the products prepared by ringal are roughly finished with sharp edges, non-uniform in colour and texture, not standardized in shape and size, poor in strength and durability, have low aesthetic appeal, have limited product range and local utility. Since it takes a long time for processing and manufacturing, it has not remained a profitable business for the local artisans. Therefore, ringal-based artisans need to be exposed to innovative techniques for making ringal craft a profitable practice. This could be supported by improved and innovative tools and techniques, proper mechanization at some level with efficient and standardized harvesting, cleaning and drying and preservation techniques along with a sustainable marketing infrastructure.

The socio-cultural scenario has seen a rapid change in the past one generation. The raw material is depleting and so is the market for traditional products. Lack of systematic extraction is putting environmental pressures on traditional forests. The traditional artisans have to go further into the forests to procure ringal. The tools and techniques used by locals for making the traditional products are rudimentary and not specific for product manufacture.

Lack of scientific data on the mechanical and structural properties of various ringal species of ringal inhibits the appropriate product application of the raw material. Craft friendly species need to be identified. There is need to make products that use relatively less raw material, are easy to transport and are low priced. The artisans need to upgrade their skills with an orientation towards market focused products manufacture. Ringal craft is in desperate need of reinventing itself to adapt to the current scenario along with modern scientific interventions and traditional wisdom.

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After industrialization bamboo is offering a new opportunity for modern generations.