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C.P.R. ENVIRONMENTAL EDUCATION CENTRE

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EIACP *Newsletter*

Thematic Area: Conservation of Ecological Heritage and Sacred Sites of India

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In this issue

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From the EIACP Desk...

The **Environmental Information, Awareness Capacity Building and Livelihood Programme (EIACP)** at CPREEC of the Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India is the Programme Centre – Resource Partner (RP) for the thematic area of "Ecological Heritage and Sacred Sites of India".

Heritage is the cultural, social and spiritual legacy that we inherit from our past and pass on to the future. Indian heritage is unique in its reverence for Mother Nature in all her manifestations. Ancient traditions, rituals and practices have embedded this reverence in religion and even in normal day-to-day living. The respect for nature and the belief that every organism on earth has a special role in life's cycle forms the core of our ecological heritage.

To maintain humankind's resilience in the face of change, it is necessary to draw on the best available knowledge, regardless of its origins. The process of updating knowledge systems provides opportunities to develop a deeper understanding of observed events and their consequences. It facilitates and leads to a joint assessment of information, resulting in new insights and innovations, and in better informed actions.

The main purpose of this **Newsletter** is to bring forth and publish articles concerning all aspects related to the knowledge of ecological traditions in India as well as novel interpretations and theoretical issues related to the conservation of the same.

This issue covers the articles, **"A Cultural Map Drawn with Rice" and "Lifestyle for the Environment (LiFE) - Adopt Sustainable Food Systems – Include millets and nutri cereals in diets".**

A Cultural Map Drawn with Rice – Rice is a cereal grain and the staple food for the majority of people in India. The earliest remains of rice in India have been found in the Indo-Gangetic plains dating to 7000 to 6000 BCE. Rice is deemed a sacred symbol to denote auspiciousness, wealth and fertility. Hindus associated with Goddess Annapoorna and Goddess Lakshmi and refer to the grain as Dhanya Lakshmi. In south India, rice is so sacred and essential to life that the two deities are combined and called Annalakshmi. Many Hindu rituals utilise rice. These include akshata, rice grains mixed with turmeric that are sprinkled on the head of young persons by their elders; naivedya or the ritual food offering to the deity at the home and temple; kumbham or kalasham, the sacred pot which is filled with water and placed on rice; havis, the boiled rice offered to the sacrificial fire; and kolam, the ritual designs drawn on the floor. It is one of the navadanya or nine sacred grains. There are numerous festivals connected with the sowing, planting, and harvesting of rice. The most important harvest festivals include Pongal in Tamil Nadu, Onam in Kerala, and Hurti in Coorg. Rice is a part of living traditions. Many myths, oral histories and ceremonies relate to it. From birth to death, all rituals in an Indian's life are associated with rice. As the prayer goes, 'Annam bahu kurvita', or may the rice be plentiful – for it is essential for our survival.

Lifestyle for the Environment (LiFE) - Adopt Sustainable Food Systems – Include millets and nutri cereals in diets - Millets are group of small grained cereal food crops which are highly tolerant to drought and other extreme weather conditions and pest-resistant. It is the traditional grains, grown and eaten in the Indian subcontinent and an important food crop worldwide with a significant economic impact on developing countries. Millets are primarily categorized as major millets, minor millets and pseudo millets. Millets are considered as high-energy yielding nourishing foods which help in addressing malnutrition and considered as potential prebiotic and probiotic with prospective health benefits. India celebrated 2018 as 'The Year of Millets' and the Food and Agricultural Organization (FAO) declared 2023 as "International Year of Millets". All these substantiate the importance of millets. One of the actions which comes under the Mission LiFE theme, 'Adopt Healthy Lifestyles' encourages the inclusion of millets and nutri cereals in diets. Mission LiFE seeks to channel the efforts of individuals and communities into a global mass movement of positive behavioural change. By taking such actions to protect the environment and promote sustainability, we can help to create a better world for ourselves and future generations.

CPREEC EIACP PC – RP has already published books on the Ecological Traditions of the sixteen (16) states of India, The Centre has, over the years, promoted and encouraged communities to adopt local traditions, practices and rituals that possess ecological significance.

The Centre also focuses on eco-restoration, conservation, creation of environmental assets and advocates the sustainable use of natural resources. The Centre has restored several degraded sacred groves in Andhra Pradesh, Karnataka and Tamil Nadu.

The Centre has also documented sacred groves / forests (10,470), sacred gardens (64), sacred plants (94), sacred animals (57), sacred rivers (33), sacred water bodies (365), sacred mountains (203), sacred cities / sites (234), sacred seeds (10), sacred caves (209) and green pilgrimages (20), traditional ecological knowledge (44) and UNESCO World Heritage Sites in India (40) till date.

We would like to thank our readers for sharing their articles, photographs and also for their queries and feedback regarding our newsletters, publications and about information provided in our website: **http://cpreecenvis.nic.in/**

We cordially invite other scholars and interested persons to share their knowledge and information by contributing popular articles and good quality photographs on the subject areas present on our website.

Cover Story

A CULTURAL MAP DRAWN WITH RICE

Photo | Pixabay

India observes Sankaranti as a mid-winter harvest festival. Celebrated with kites in Gujarat, prayers in the north and Pongal in Tamil Nadu, the festival symbolises new beginnings and prosperity. Sankranti marks the transition of the Sun into *makara rashi* or Capricorn and the beginning of Uttarayan, when the sun 'enters' the northern hemisphere. It is a prayer, offering thanks to our star.

Rice was probably domesticated first in the Yangtze basin in China around 7,000 BCE. In the subcontinent, It is said to have been domesticated along the Ganga by 6000 BCE. By 3500 BCE, it spread to Southeast Asia.

Today, the grain is a staple for 65% of India's population. Its production, processing and trading is a major employer across the country. There is a wondrous variety of rice cultivars, too. For example, in the Kuttanad region of Kerala, it is uniquely cultivated below the sea level. It is also a global staple with a bigger market that wheat, and hence is important for food security everywhere.

The cultivation and sanctity of rice is as old as Indian culture. Sita in the *Rigveda* means furrow. In the Ramayana, the childless Janaka finds a baby in the furrow and names her Sita. Ahalya, created by Brahma, means 'unploughed'. Rabindranath Tagore suggested that Rama's release of Ahalya from a stone probably refers to the reclamation of uncultivated land.

The plough was so sacred that kings made pacts by swearing on the plough, according to Kautilya. The *Atharvaveda* describes rice as a healing balm, "the sons of heaven who never die".

The *Taittiriya Upanishad* says the Supreme being or purusha is formed of rice, and that all that is born comes from, lives on and merges into rice. The *Mahabharat* says there is no gift greater than rice, while the *Bhagavat Gita* reaffirms that all beings are formed of rice. Krishna gifts Draupadi an *akshaya patram*, a bowl of limitless rice. In the Tamil epic *Manimekalai*, sage Aputran owns a similar bowl that he disposes off when stranded on an island; thereafter, it comes to *Manimekalai*.

Rice is symbolic of prosperity, whose goddess is Lakshmi. Annapurna, holding a bowl of rice in one hand and a spoon in the other, is the goddess of Kashi on the Ganga and worshipped all over the country. In Bengal, she is depicted as providing rice to Shiva and his assistants. Annalakshmi, created by Vishnu to ensure that humanity does not suffer from hunger holds a sheaf of paddy in one hand, or a rice bowl

and spoon like Annapoorna. Dhanyalakshmi has many arms and holds several sheaves of paddy and other grains. There are also local rice deities all over India. Ponni Amman is celebrated in northern Tamil Nadu and southern Andhra Pradesh, depicted as a head placed on earth, which is her body. In Manipur, there is Phouoibi of lady of the paddy for the Meitei people.

Rice is also associated with male deities. *Taittriya Aranyak* describes Annadevata, the rice god, as the progenitor. According to the *Shatapatha Brahman*, rice originated from the body of Indra. Nellaiappar of Tirunelveli is worshipped as a form of Shiva.

Not just India, almost every east Asian country has a unique legend about how rice came to their land; communities in most of these countries pray to a benevolent rice deity.

Dewi Sri, a Southeast Asian name for Sridevi or Lakshmi, is a Balinese, Javanese and Sundanese Hindu goddess of rice and fertility, still widely worshipped in parts of Indonesia. She is two-armed holding a spring of paddy in one hand, with the other in a gesture of giving. The stories of Dewi Sri are associated with the mythical origin of the rice plant. All useful plants essential for humans are said to have come from Dewi Sri's body. Traditional Javanese homes have a small shrine called *pasrean* or the place of Sri. Worshippers offer food and prayers to her so that she may grant the family health and prosperity.

Inari is a Japanese Shindo deity, identified with the Buddhist Dakiniten, who rides a white fox and protects rice cultivation. Mae Posop is the rice goddess of Thailand, a mother figure who provides food and is worshipped with offerings to ancestral shrines, the spirit of the land, or monks. In Laos, the story goes that when a farmer trapped a golden fish king gave rice to humans in exchange. Guanyin, the Chinese Avalokiteshvara, sent a dog down to Earth during a great flood with rice grains clinging to its tail, which led her to be worshipped as a rice goddess.

In 2022, Apsara Arts of Singapore staged a dance drama called *Arisi* in Balinese and India dance styles, with Chinese, Balinese and Indian music, about *Oriza sativa* or rice dominating society and culture.

Rice is a part of living traditions. Many myths, oral histories and ceremonies relate to it. From birth to death, all rituals in an Indian's life is associated with rice. As the prayer goes, 'Annam bahu kurvita', or may the rice be plentiful – for it is essential for our survival.

Source: Nanditha Krishna, "A Cultural Map Drawn with Rice", The New Indian Express Chennai edition, January 19, 2025, pg.8.

https://www.newindianexpress.com/opinions/2025/Jan/18/a-cultural-map-drawn-with-rice with-rice

Accessed on 25 February, 2025.

Cover Story

Lifestyle for the Environment (LiFE) - Adopt Sustainable Food Systems – Include millets and nutri cereals in diets

EIACP Team

C.P.R. Environmental Education Centre, Chennai

https://www.deccanherald.com/international/unga-adopts-india-sponsored-resolution-declaring-2023-as-international-year-of-millets-957798.html

Introduction

Millets are group of small grained cereal food crops which are highly tolerant to drought and other extreme weather conditions and pest-resistant. It is the traditional grains, grown and eaten in the Indian subcontinent and an important food crop worldwide with a significant economic impact on developing countries. Millets are primarily categorized as major millets, they include sorghum, bajra, and ragi and minor millets include foxtail, kodo, barnyard, proso, browntop, little millet and pseudo millets include buckwheat and amaranth. Millets are considered as high-energy yielding nourishing foods which help in addressing malnutrition and considered as potential prebiotic and probiotic with prospective health benefits. India celebrated 2018 as **'The Year of Millets'** and the Food and Agricultural Organization (FAO) has declared 2023 as **"International Year of Millets"**. All these substantiate the importance of millets.

One of the actions which comes under the Mission LiFE theme, 'Adopt Sustainable Food Systems' encourages include millets and nutri cereals in diets. The concept of 'Lifestyle for the Environment (LiFE) was introduced by Prime Minister Narendra Modi at COP26 in Glasgow on 1st November 2021, urging the global community of individuals and institutions to make LiFE a global movement of "mindful and deliberate consumption, rather than mindless and destructive consumption" in order to protect the environment. Mission LiFE seeks to channel the efforts of individuals and communities into a global mass movement of positive behavioural change. By taking such actions to protect the environment and promote sustainability, we can help to create

a better world for ourselves and future generations.

Our Millets

FINGER MILLETS

Botanical name :	*Eleusine coracana* (L.) Gaertn
Family :	Poaceae
Common names:	Mandua (Hindi); Kezhvaragu/Keppai (Tamil); Ragulu (Telugu); Ragi (Kannada); Panji Pullu (Malayalam).

https://pixahive.com/photo/finger-millet-field/
https://www.asiafarming.com/finger-millet-cultivation

- Finger millet is an annual plant widely grown as a cereal in the arid areas of Africa and Asia.
- Finger millet is originally native to the Ethiopian Highlands and was introduced into India approximately 4000 years ago.
- It is very adaptable to higher elevations and is grown in the Himalayas up to 2,300 m altitude.
- It is a robust tillering grass and can reach 1.7 m (5.6 ft) in height.
- The leaves of the plant are dark green, linear and mainly smooth with some hair along the leaf edges.
- The inflorescence of the plant is a cluster of 3–26 'fingers' composed of dense spikelets where the grain or seed is produced.
- The grains contain higher amount of calcium compared to other major cereals.

Nutritional Value

Nutrition information for 100 grams	
Calories	320 kcal
Fat	1.92 gms.
Calcium	10-38 mgs.
Carbohydrates	66.82 gms.
Fibre	11.18 gms.
Protein	7.16 gms.

Significance

- Finger millet is the main food grain for many people and is often referred to as a "crop for the poor" or "famine food".
- It provides a sustaining diet, especially for people doing hard work.
- It is usually converted into flour and made into cakes, puddings or porridge.
- Malted grain flour is used as a nourishing food for infants.
- It is considered an especially wholesome food for diabetics.
- A fermented drink or beer is made from the grain.

Health Benefits

- Finger millet is one of the most healthy food items for individuals with diabetes.
- Helps in getting relief from constipation.
- Prevents osteoporosis.
- Aids in regulating blood pressure.
- Improves the body's metabolism and promotes weight loss.

PEARL MILLET

Botanical name :	*Pennisetum glaucum* (L.) R. Br.
Family :	Poaceae
Common names:	Bajra (Hindi); Kambu (Tamil); Sajjalu (Telugu); Sajje (Kannada); Kambam (Malayalam).

https://www.smartfood.org/project/pearl-millet-can-withstand-climate-change-chaos-better-than-wheat/
https://www.healthline.com/nutrition/benefits-of-bajra

- Pearl millet is an erect grass, reaching up to 3 metre height with a profuse root system.
- It is native to the Sahel region of Africa from Sudan to Senegal.
- The species has been cultivated for over 4,000 years and is grown in tropical and subtropical countries world-wide.
- It is a major food crop in parts of Africa and India.
- Stems are of 1/2–1 inch diameter. It is a leafy plant with leaf blades that are 8–40 inches long and 1/2–3 inches wide.
- The grains are 3–4 mms. long and 2.25 mms. wide, usually yellowish-grey in colour.

Nutritional Value

Nutrition information for 100 grams	
Calories	348 Kcal
Fat	5.43 gms.
Carbohydrates	61.78 gms.
Fibre	11.49 gms.
Protein	10.96 gms.

Significance

- It is one of the coarse grain crops and is considered to be poor man's food.
- It is nourishing.
- It is popular at the dry or hot climate demographics as it is considered to cool off the body and provide required supplements.
- It is also used as poultry feed, cattle feed and in alcohol extraction.

Health Benefits

- Treats iron deficiency
- Reduces blood sugar levels
- Aids in weight loss
- Reduces cholesterol
- Relieves constipation
- Prevents insomnia

PROSO MILLET

Botanical name :	*Panicum miliaceum* (Linn.)
Family :	Poaceae
Common names:	Barri (Hindi); Panivaragu (Tamil & Malayalam); Variga (Telugu); Baragu (Kannada).

https://freshon.in/product/proso-millet-unpolished-%E0%B2%AC%E0%B2%B0%E0%B2%97%E0%B3%81/
https://www.indiamart.com/proddetail/proso-millet-25231880630.html

- Proso millet is an erect grass growing up to 1.2-1.5 metres tall, usually free-tillering and tufted, with a rather shallow root system.
- It has been cultivated in eastern and central Asia for more than 5000 years later spread into Europe.
- It is a warm-season grass with a short growing season and low moisture requirement that is capable of producing food or feed where other grain crops would fail.
- Its stems are cylindrical, simple or sparingly branched, with simple alternate and hairy leaves; flower is a slender panicle with solitary spikelet.
- The grains are broadly ovoid, up to 3 mms. x 2 mms., smooth, variously coloured but often white and shed easily.

Nutritional Value

Nutrition information for 100 grams	
Energy (Kcal)	309 Kcal
Protein	8.30 gms.
Carbohydrates	65.90 gms.
Crude fibre	9.00 mgs.
Calcium	27.00 mgs.
Iron	0.50 mgs.

Significance

- It is an underutilized crop used for human consumption, bird seed and / or ethanol production.
- Grains of proso millet are a rich source of vitamins, minerals and essential amino acids, starch and phenolic compounds.
- Grains also contain components with healing benefits, which decrease the level of LDL cholesterol and injury to liver and high lecithin content which supports the nervous system.

Health Benefits

- It is rich in magnesium, which helps to lower blood pressure and reduces risk of stroke, heart attack and prevents hardening of arteries.
- Proso millets contain lignans, which help to prevent chronic diseases.
- Reduces the risk of type 2 diabetes.
- Improves gastrointestinal health and prevents bloating, constipation, cramps and gas.
- Contains antioxidants that neutralize cancer-causing free radicals and removes toxins from liver and kidneys.
- Helps to keep the respiratory health in check, has anti-ageing properties and strengthens bones since it is an excellent source of calcium.

BARNYARD MILLET

Botanical name :	*Echinochloa esculenta*, (A. Braun) H. Scholz
Family :	Poaceae
Common names:	Sanwa (Hindi); Kuthiraivali (Tamil); Kodisama (Telugu); Oodalu (Kannada); Kavadapullu (Malayalam).

https://postinshort.in/news/agriculture/barnyard-millet-farming-methods-and-its-benefits
https://ooofarms.com/products/barnyard-millet

- Barnyard millet is an ancient millet crop grown in warm and temperate regions of the world.
- The barnyard millet was domesticated some 4,000 years ago in the temperate regions of Japan.
- Barnyard millet is widely cultivated in Asia, especially India, China and Japan.
- The height of barnyard millet is 50-95 cms. The stem as well as leaves are green in colour. Leaves are flat, glabrous or slightly hairy.
- The grain is white or yellow in colour.
- There is a mention of barnyard millet in ancient Tamil literature.

Nutritional Value

Nutrition information for 100 grams	
Calories	300 kcal
Fat	3.6 gms.
Calcium	22 mgs.
Carbohydrates	55 gms.
Fibre	11.18 gms.
Protein	11 gms.
Iron	18. mgs.
Vitamin B1	0.33 mgs.
Vitamin B2	0.10 mgs.
Vitamin B3	4.2 mgs.

Significance of Barnyard Millet

- It is the fourth most produced minor millet, providing food security to many poor people across the world.
- Has excellent nutritional and agronomic value.
- Generally, has potential resistance against various biotic and abiotic stresses.
- A fermented drink or beverage is made from the grain.
- Grain may also be malted and a flour of the malted grain is used as nourishing food.

Health Benefits

- Barnyard millet is significant in digestible protein and helps one feel gentle and energized.
- It is a high-fibre food with a great balance of soluble and insoluble fragments.
- Barnyard millet is a rich source of iron.
- Barnyard millet is gluten-free and also is good for diabetic patients.

FOXTAIL MILLET

Botanical name :	*Setaria italica* (L.) P. Beauv.
Family :	Poaceae
Common names:	Kangni (Hindi); Thinai (Tamil); Korra (Telugu); Navane (Kannada); Thina (Malayalam).

https://www.feedipedia.org/node/382;
https://himalayancrops.org/mandate-crops/foxtail-millet/

- This grass originated from China, where its cultivation dates back to 5000 BC. It probably spread from the highlands of Central China towards India and Europe.
- It is a warm season crop and can be grown in arid and semi-arid regions of the country.
- Foxtail millet is an annual grass with slim, vertical, leafy stems which can grow to a height of 4 feet to 6.5 feet.
- The seeds are convex, oval or elliptical and light yellow to brown, rusty or black in colour.
- This crop can be harvested for green fodder or hay after 70 – 75 days of showing, depending on the variety.
- It has strong adaptability to abiotic stresses, especially drought and poor soil.

Nutritional Value

Nutrition information for 100 grams	
Calories	351 Kcal
Fat	4 gms.
Carbohydrates	63.2 gms.
Fibre	6.7 gms.
Protein	11.2 gms.

Significance

- The husked grain of foxtail millet is used as food in Asia, south-eastern Europe and Africa.
- The grain may be cooked and eaten like rice.
- The flour is also made into cakes, porridges and puddings.
- It is considered a nutritious food and is often recommended for the elderly and for pregnant women.
- It is also used in the preparation of beer and alcohol, especially in Russia and Myanmar and for vinegar and wine in China.

Health Benefits

- Strengthens nervous system
- Manages diabetes
- Promotes digestion
- Boosts cardiac health

KODO MILLET

Botanical name :	*Paspalum scrobiculatum*
Family :	Poaceae
Common names:	Kodra (Hindi); Varagu (Tamil); Arikelu (Telugu); Harka (Kannada); Koovaragu (Malayalam).

https://www.youtube.com/watch?v=TiXK8-DMSpY
https://naturebiofoods.organic/organic-kodo-millet/

- Kodo millet was native to Africa, tropical and sub-tropical Asia to Australia.
- Kodo millet was introduced in India approximately 3000 years ago.
- Kodo millet grows to a height of approximately 4 feet.
- It has an inflorescence that produces 4-6 racemes that are 4-9 cms. long.
- They have slender, light green leaves, 20-40 cms. long.
- It requires four months until maturity and harvesting.
- Kodo millets contain high amounts of polyphenols.

Nutritional Value

Nutrition information for 100 grams	
Calories	353 kcal
Fibre	5.2 gms.
Protein	9.8 gms.
Carbohydrates	66.6 gms.
Fat	3.6 gms.
Iron	1.7 mgs.
Calcium	35 mgs.

Significance

- It is termed as a wholesome food, introduced for its medicinal, therapeutic and culinary properties and is recommended for diabetic to beat fatigue and heal wounds faster.
- It increases *vata dosha*; it balances issues caused due to *kapha* and *pitta doshas*.
- It is cold in nature.

Health Benefits

- It controls diabetes.
- It fights chronic ailments.
- It aids in weight loss.
- It helps to bring down the levels of bad cholesterol and regulates blood pressure.
- It contains antioxidant properties.

LITTLE MILLET

Botanical name :	*Panicum sumatrense* Roth.
Family :	Poaceae
Common names:	Kutki (Hindi); Saamai (Tamil); Samalu (Telugu); Saame (Kannada); Chama (Malayalam).

https://www.crops.org/news/science-news/big-potential-little-millet/; https://shop.organicmandya.com/products/little-millet

- Herbaceous plant grows straight or with folded blades to a height of 30 cms to 1 metre.
- It is present in the temperate zones of Asian countries like China, East Asia, India and Malaysia.
- The largest cultivation is in central India.
- The leaves are linear, with a hairy layer.
- The crop is ready for harvest in 65 – 75 days after sowing.
- It is a wonderful millet suitable for people of all age groups.
- It helps to prevent constipation and heals all problems related to stomach.

Nutritional Value

Nutrition information for 100 grams	
Calories	329 Kcal
Fat	5.2 gms.
Calcium	17 mgs.
Carbohydrates	60.9 gms.
Fibre	7.6 gms.
Protein	9.7 gms.
Iron	9.3 mgs.

Significance

- Little millet is rich in insoluble dietary fibre and resistant starch which helps promote regular gut health.
- The nutri-cereals are major food and feed sources in the developing world especially in the semi-arid tropical regions of Africa and Asia.
- It is mostly consumed as rice.
- Little millets can be milled into flour for making roti, baked and fried items.
- Little millet based value added products could enhance the income, empower millet farmers and contribute to nutrition in rural India.

Health Benefits

- Helps in treating diabetes.
- Helps to detoxify the body.
- Treats asthma.
- Helps in weight loss.
- Rich in antioxidants

SORGHUM

Botanical name :	*Sorghum bicolor* (L.) Moench
Family :	Poaceae
Common names:	Jowar (Hindi); Cholam (Tamil & Malayalam); Jonna (Telugu); Jola (Kannada).

https://www.freepik.com/premium-photo/sorghum-bicolor, https://www.feedipedia.org/node/224

- Sorghum is a cane-like grass, up to 6 metres tall with large, branched clusters of grains usually an annual but some cultivars are perennial.
- The individual grains are small, about 3-4 mms. in diameter.
- They vary in colour from pale yellow through reddish brown to dark brown depending on the cultivar.
- It is an African crop, which is widely distributed throughout the world.
- Different cultivars are found in different regions depending on the climate. It is mostly a plant of hot, dry regions, but will survive in cool climates and in waterlogged habitats.
- It is an important crop providing food and fodder in the semi-arid tropics of the world.

Nutritional Value

Nutrition information for 100 grams	
Calories	316 Kcal
Fat	3 gms.
Sodium	2 mgs.
Carbohydrates	69 gms.
Fibre	7.5 gms.
Protein	10 gms.

Significance

- It is a staple food source in Africa and Asia where the grain can be boiled and eaten in a manner similar to rice, roasted or popped.
- It can also be used to produce flour to make bread, rotis, etc.
- It is used extensively as animal feed and as fodder.
- Sweet sorghum varieties can be processed into syrups and molasses.

Health Benefits

- Helps in inhibiting tumour growth
- Natural cure for patients of diabetes
- Lowers blood cholesterol
- Staple food for celiac patients
- Helps to provide strong bones

BROWNTOP MILLET

Botanical name : *Urochloa ramosa* (L.) Nguyen
Family : Poaceae
Common names: Makra (Hindi); Pala pul (Tamil); Andu Korralu (Telugu); Kooralu (Kannada); Chama Pothaval (Malayalam).

https://gonefarmers.com/products/brown-top-millet-andu-korralu
https://www.grainculture.store/products/browntop-millet-andi-koral

- Browntop millet is widely found in the tropical world.
- It originated in Southeast Asia.
- It was introduced and cultivated in Africa, western Asia, Arabia, China, and Australia.
- Introduced to the United States from India in 1915.

- It is a loosely clustered annual grass, with a height of 10-70 cms.
- Leaf-blades are broadly linear, 2-25 cms long, 4-14 mms. wide.
- Inflorescence of 3 racemes, borne on an axis 3-10 cms. long.

Nutritional Value

Nutrition information for 100 grams	
Calories	320 Kcal
Fat	2 gms.
Carbohydrates	61.37 gms.
Fibre	12.5 gms.
Protein	11.5 gms.
Iron	0.65 mgs.
Mineral	4.2 gms.

Significance

- They have high fibre and vitamin content, low simple carbohydrates.
- It is a rich source of natural fibre, nearly 8.5%.
- It is a good source of calcium, zinc, magnesium.
- It can be considered as a dietary component which may support the prevention and management of certain non-communicable diseases.
- Browntop millets are rich in phytochemicals, also known as secondary metabolites such as flavonoids, phenols, tannins, alkaloids, besides carbohydrates and proteins.

Health Benefits

- A perfect grain for all diabetic patients.
- Promotes digestion process.
- Is good for heart.
- Helps in weight loss.
- Acts as a detoxifier.

BUCKWHEAT MILLET

Botanical name :	*Fagopyrum esculentum* Moench.
Family :	Polygonaceae
Common names:	Kuttu (Hindi); Maragodhumai (Tamil); Kittu (Telugu); Niru Kanigalu (Kannada); Thaninnu (Malayalam).

https://krishijagran.com/agripedia/buckwheat-kuttu-cultivation-how-to-grow-this-indigenous-crop-a-complete-guide/
https://www.daily-harvest.com/content/what-is-buckwheat

- Buckwheat is an herbaceous annual flowering plant.
- The origin of buckwheat millet is in south-central China and Tibet.
- It is a short-season crop that grows well in low-fertility or acidic soils.
- Buckwheat has a growing period of only 10–12 weeks.

- It grows 75 to 125 cms. (30 to 50 inches) tall.
- The leaves are arrow-shaped.

Nutritional Value

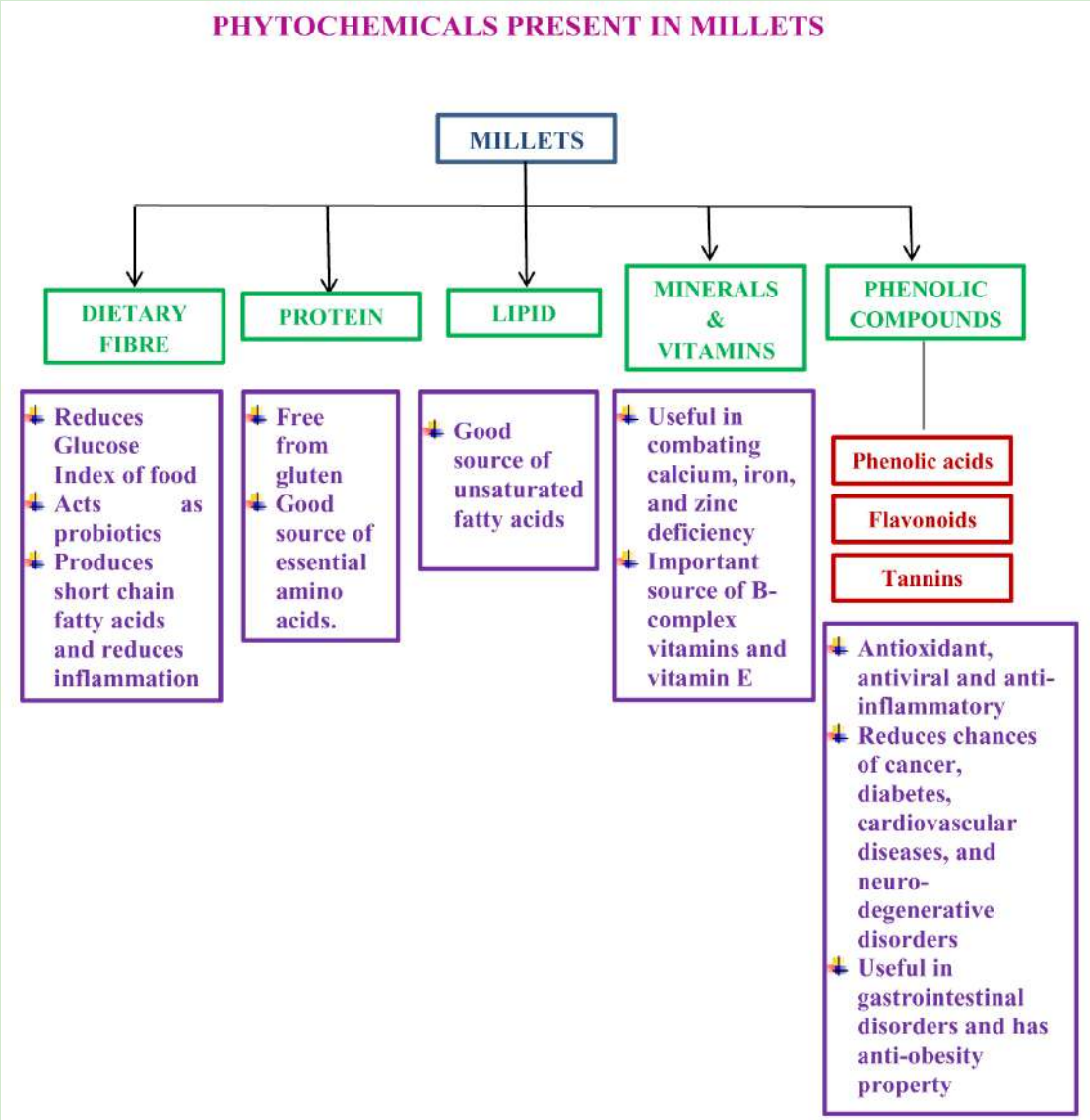
Nutrition information for 100 grams	
Calories	320 Kcal
Fat	3.4 gms.
Calcium	18 mgs.
Carbohydrates	71.5 gms.
Iron	2.2 mgs.
Protein	13.25 gms.

Significance

- It is also used as an ingredient in many grain-free dog treats and foods.
- It is a gluten-free millet and it has been used as a substitute for other grains in gluten-free beer.

Health benefits

- Helps in maintaining blood sugar.
- Boosts immunity.
- Helpful for heart health.
- Rich in antioxidants.
- Prevents cardiovascular disease.



LIMITATIONS

❋ People can consume millets at any time of the day, preferably in the morning, at noon and at night.
It is best to consume millets in moderate amounts; three or four times a week is ideal. Courtesy: (https://www.linkedin.com/pulse/limitations-millets-dr-shilpa-thakur-phd-medical-nutritionist).

❋ While millets have several health benefits, they also have certain limitations that should be considered:

❖ **Anti-nutrients:** Millets contain certain anti-nutrients like phytic acid and tannins. These compounds can interfere with the absorption of minerals such as iron, zinc, and calcium. Soaking, fermenting, or cooking millets can help reduce the levels of anti-nutrients and enhance mineral absorption.

❖ **Digestive issues:** Some people may experience digestive issues when consuming millets, especially if they are not properly prepared or cooked. This is due to the presence of certain compounds that can be difficult to digest. Gradually introducing millets into your diet and ensuring proper cooking techniques can help minimize digestive discomfort.

❖ **Goitrogens:** Millets, particularly pearl millet and finger millet, contain compounds known as goitrogens. These compounds can interfere with thyroid function by inhibiting iodine uptake, especially in large amounts. However, the impact of goitrogens on thyroid function is usually negligible unless consumed in extremely large quantities or in individuals with existing thyroid conditions.

❖ **Gluten-free but not grain-free:** Millets are gluten-free, making them a suitable alternative for those with gluten intolerance or celiac disease. However, it is important to note that millets are still grains, and individuals following a grain-free diet (such as the paleo diet) would need to exclude millets as well.

❖ **Availability and familiarity:** In some regions, millets may be less readily available or less commonly consumed, which can make it challenging to incorporate them into the diet. Familiarity with cooking methods and recipes for millets may also be limited, requiring some experimentation and adaptation.

Source: http://cpreecenvis.nic.in/PublicationCommon.aspx?LinkId=1260

News

Sacred Orans – Biocultural heritage of Rajasthan

- by Gajendra Singh, Social Investment Professional

In a significant step towards environmental protection and protection of cultural heritage, the Supreme Court in December 2024 directed the Government of Rajasthan to provide legal protection to Oran as a forest. This decision is an important step towards protecting these ancient community sacred forests, which have been serving as important ecological reserves for centuries. Orans are the traditional sacred forests of Rajasthan that present a unique confluence of cultural practices and environmental conservation. According to traditional estimates, there are more than 25,000 orans in Rajasthan, covering about 6 lakh hectares of land. These community-protected areas, usually spanning 10 to 400 hectares, have been preserved through traditional customs and religious beliefs for generations. They act as an important centre of biodiversity in the arid landscape of Rajasthan. More than 300 plant species are found in them, including rare medicinal plants like guggal, kjejdi and rohida. These forests provide essential habitat for various wildlife, including the endangered Great Indian Bustard, Desert Fox, Black Deer and various reptile species.

Beyond their ecological value, orans hold deep cultural significance to local communities. These are often associated with local deities and are traditionally governed by community-based management systems. These sacred sites have historically served as meeting places for community decisions, celebrate festivals, and keep their cultural traditions alive.

More than 300 plant species are found in them, including rare medicinal plants like guggal, kjejdi and rohida. These forests provide essential habitat for various wildlife, including the endangered Great Indian Bustard, Desert Fox, Black Deer and various reptile species. The ecological services provided by these sacred forests go far beyond their role as wildlife sanctuaries. The orans act as natural water harvesting systems and ground water recharge zones, which are important in the water-scarce environment of Rajasthan. Their dense vegetation prevents soil fertility, and maintains the healthy soil biodiversity needed for natural nutrient cycling.

In the context of climate change, orans play an important role in greenhouse gas mitigation. These forests act as natural carbon sinks, absorbing an estimated 2-3 tonnes of carbon per hectare annually. Mature trees and elaborate root systems provide long-term carbon storage. In addition, ores help build climate resilience by acting as a buffer against extreme weather events, reducing local temperature fluctuations, and providing shelter during heat waves. Looking ahead, the protection of Orans sets a precedent for similar conservation efforts across India. These sacred groves represent an elegant solution to multiple environmental changes from biodiversity conservation to climate change mitigation. Their preservation ensures that future generations can benefit from their ecological services while maintaining the cultural heritage represent. The success of this initiative could serve as a model for protecting similar traditional conservation systems

throughout the country, demonstrating how ancient wisdom and modern environmental needs can align for the benefit of both nature and society. The reported Supreme Court decision thus marks not just a victory for environmental conservations but also recognizes the foresight of traditional ecological knowledge systems. As India and the world grapple with environmental challenges, the protection of Orans showcases how indigenous conservation practices can contribute to global efforts in biodiversity preservation and climate change mitigation while maintaining cultural continuity.

Source: First India Jaipur, 11/01/2025, pg.10.

News

World's smallest cat makes debut in West Bengal's wild

Bengal has recorded the first presence of the world's smallest and lightest cat rusty – spotted cat – in the wild.

Weighing between 0.9 kilograms and 1.6 kilograms, this cat species is considered near threatened on IUCN Red List. It is the lightest in the world with a new-born kitten weighing less than a chicken egg and an adult weighing substantially less than a typical domestic cat.

Its picture was taken by one of the camera traps during an assessment of pangolin status in Purulia's Kotshila range by city based NGO. Human and Environment Alliance League (HEAL). "West Bengal has eight wild cat species. We have just added the ninth to this list," Vasudha Mishra, a researcher at HEAL, said.

Rusty-spotted cats are present in only three countries in the world – Sri Lanka, Nepal, and India – with India providing the maximum proportion of its habitat in the world. They were previously documented in states like Gujarat, Rajasthan, UP, MP, Jharkhand, Karnataka, and Kerala, among others.

Source: The Times of India Chennai, January 30, 2025, pg.13.

News

Leopard absence disrupts ecology in Kambalakonda

Leopards have not been sighted in the Kambalakonda Sanctuary for about 10 years leading experts to conclude that the abscense has significantly increased the deer population in the area. (Image: DC)

Leoards have not been sighted in the Kambalakonda Sanctuary for about 10 years leading experts to conclude that the absence has significantly increased the deer population in the area.

"Between 2020 and 2021, there were five to six leopards in Kambalakondda. Ten years earlier, there were 10 to 15 leopards and tigers. However, no pug marks have been observed in the area in recent months," stated B. Bharata Laxmi Professor Emeritus of Zoology at Andhra University.

Forestry and environment specialists suggest that leopards may have migrated to other areas due to vehicular traffic and the expansion of human settlements. "If leopards were present here, they would have hunted smaller animals like deer, wild goats, and rabbits in Kambalakonda, explained D.E. Babu retired principal of science and technology.

Experts believe that the absence of leopards, considered a keystone species in Kambalakonda, has caused ecological imbalances, rapidly increasing the deer population.

Kambalakonda Sanctuary, covering 1,400 hectares, surrounds the Visakha Valley School Junction, Mudasarlova, Adivivaram, Sonthyam, Gambhiram, Kommadi, and Endada. Earlier, leopards and tigers roamed the hills from Simhachalam to Kailasagiri and the hills of Seethakonda, rushikonda, and Kapuluppada. People once feared leopard in areas such as Nandigiri Nagar, MVP Colony, Kailasapuram, and NSTL. The forest department intervened by transferring them to a zoo.

Source : https://www.deccanchronicle.com/southern-states/andhra-pradesh/leopard-absence-triggers-eco-imbalance-in-kambalakonda-1863092

In-focus

World Wetlands Day – 02 February, 2025

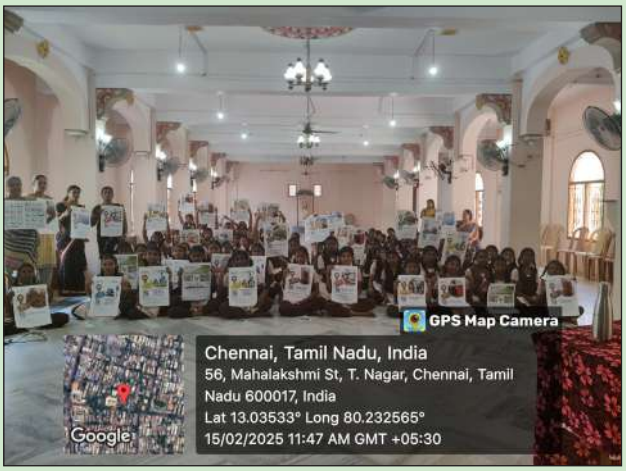
Every year, World Wetlands Day is celebrated on February 2nd, to raise awareness among all sections of the society about values and functions of wetlands, utilization of their resources and their environmental importance. As part of observing World Wetland Day-2025, CPREEC EIACP PC –RP, Chennai developed an awareness poster on the theme - **Protecting wetlands for our common future.**

The knowledge product has been uploaded in EIACP website https://cpreecenvis.nic.in.

Link for the same is given below:
http://cpreecenvis.nic.in/PublicationDetails.aspx?SubLinkId=2365&LinkId=6370&Year=2025

Mission LiFE Awareness Programme – February 15, 2025

CPREEC EIACP PC–RP, Chennai conducted LiFE Mission Awareness Programme under the seven themes at Sri Ramakrishna Mission Sarada Vidyalaya Girls Higher Secondary School, Burkit Road, T Nagar, Chennai-600017 on 15.02.2025. A total of 135 students and 6 teachers participated and took the pledge on Mission LiFE. Awareness posters and a booklet on the theme of "Mission LiFE" were distributed.

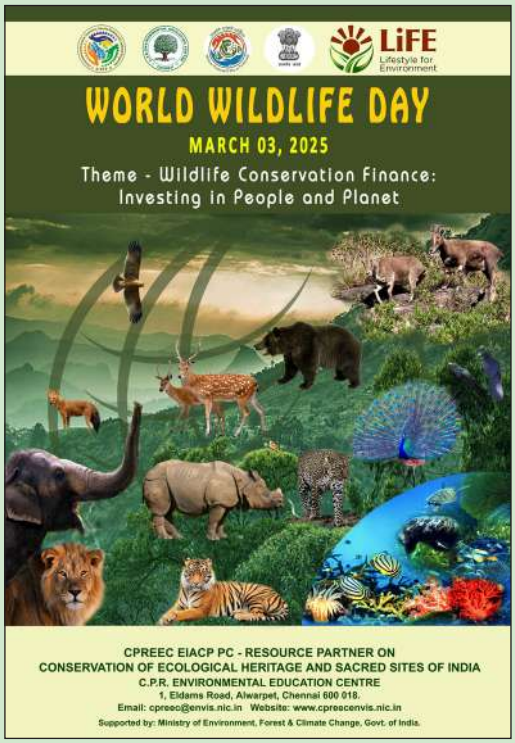


Mission LiFE Awareness Programme – February 18, 2025

CPREEC EIACP PC–RP, Chennai conducted LiFE Mission Awareness Programme under the seven themes at Lady Sivaswamy Ayyar Girls' Higher Secondary School, Mylapore, Chennai – 600004 on 18.02.2025. A total of 168 students and 7 teachers participated and took the pledge on Mission LiFE. Awareness posters and a booklet on the theme of "Mission LiFE" were distributed.

World Wildlife Day – 03 March, 2025

World Wildlife Day (WWD) is celebrated every year on 3 March to celebrate wild animals and plants. Every year, we recognize the unique roles and contributions of wildlife to people and the planet. As part of observing World Wildlife Day-2025, CPREEC EIACP PC –RP, Chennai developed an awareness poster on the theme – **Wildlife Conservation Finance: Investing in People and Planet.**



The knowledge product has been uploaded in EIACP website https://cpreecenvis.nic.in.

Link for the same is given below:
http://cpreecenvis.nic.in/PublicationDetails.aspx?SubLinkId=2366&LinkId=6370&Year=2025

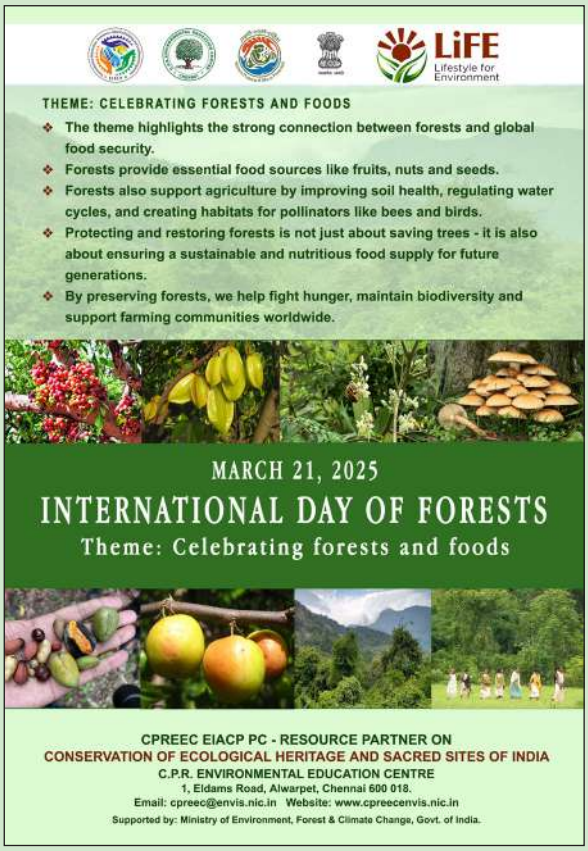
As part of observing **World Wildlife Day 2025**, CPREEC EIACP PC-RP, Ooty Field Office organized an awareness programme at **St Antony's Middle School, Kotagiri, The Nilgiris**. Mr. Selvaraj, Forest Range Officer, Mr Ramadass, Organic Farmers Association, Mr. S.K. Bojan, Nakkubetta Association, Kotagiri, Mr. M. Kumaravelu, CPREEC Ooty Field Officer, and a total of **195 students and 15** teachers attended the programme and awareness posters were distributed.

கோத்தகிரியில் நடுநிலைப்பள்ளியில்
மாணவ, மாணவிகளுக்கு விலங்குகளை பாதுகாக்க விழிப்புணர்வு நிகழ்ச்சி

News Clipping (Dinakaran - Coimbatore Edition dated March 6, 2025) pertaining to the Awareness programme organised at CPREEC EIACP PC-RP, Ooty Field Office as part of World Wildlife Day 2025.

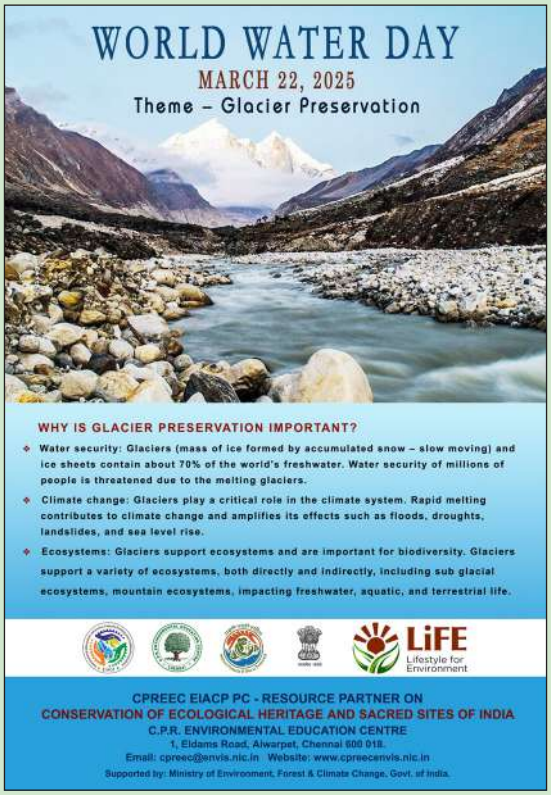
International Day of Forest – 21 March, 2025

Every year on March 21, the world celebrates the International Day of Forests to celebrate all types of forests, recognize the importance of trees and forests, and take action to protect them. Every year a new theme is chosen by the Collaborative Partnership on Forests. The theme for this year is "Forests and Food," which emphasizes the deep connection between forests and global food security. As part of observing International Day of Forest-2025, CPREEC EIACP PC –RP, Chennai developed an awareness poster on the theme – **Celebrating forests and foods.**



The knowledge product has been uploaded in EIACP website https://cpreecenvis.nic.in.

Link for the same is given below:
http://cpreecenvis.nic.in/PublicationDetails.aspx?SubLinkId=2367&LinkId=6370&Year=2025



World Water Day – 22 March, 2025

World Water Day, held on 22 March every year since 1993, is an annual United Nations Observance focusing on the importance of freshwater. World Water Day celebrates water and raises awareness of the 2.2 billion people living without access to safe water. It is about taking action to tackle the global water crisis. A core focus of World Water Day is to support the achievement of Sustainable Development Goal 6: water and sanitation for all by 2030. Every year, UN-Water — the UN's coordination mechanism on water and sanitation — sets the theme for World Water Day. The theme for this year is "Glacier Preservation," As part of observing World Water Day-2025, CPREEC EIACP PC –RP, Chennai developed an awareness poster on the theme – **Glacier Preservation.**

The knowledge product has been uploaded in EIACP website https://cpreecenvis.nic.in.
Link for the same is given below : http://cpreecenvis.nic.in/PublicationDetails.aspx?SubLinkId=2368&LinkId=6370&Year=2025

GSDP and Capacity Building courses - Coconut shells and Fibre handicraft:

CPREEC EIACP PC-RP, Chennai is organizing the Certificate Course on "Micro-Entrepreneur NTFP (Non Timber Forest Produce): Plant Origin – Coconut Shells & Fibre Handicraft" at Uppatti, Pandalur, The Nilgiris.

Trainees involved in processing the Coconut shells

Trainees involved in handling the tools

Leading Tamil Newspaper Dinamalar's YouTube channel covered the GSDP Course on Coconut Shell handicrafts being conducted by CPREEC EIACP at CPREEC Field Office, Uppatti, Pandalur, The Nilgiris.

As part of the GSDP Certificate Course on Coconut Shells and Fibre handicraft, the trainees were taken on an exposure visit.

VALEDICTORY FUNCTION

The valedictory function of the Certificate Course on "Micro-Entrepreneur NTFP (Non Timber Forest Produce): Plant Origin – Coconut Shells & Fibre Handicraft" was held on **25.02.2025** at Uppatti, Pandalur, The Nilgiris.

Dr. P. Sudhakar, Director and EIACP Coordinator, CPREEC, Chennai presided over the valedictory function

Dr. P. Sudhakar, Director and EIACP Coordinator, CPREEC, Chennai distributed the Course Completion Certificates to the GSDP trainees

Display of Coconut shell artefacts made by GSDP trainees




Display of Coconut shell artefacts made by GSDP trainees

Trainees with their GSDP Course completion certificate at the valedictory function

GSDP and Capacity Building courses - Bamboo Handicrafts

CPREEC EIACP PC-RP, Chennai is organizing the Certificate Course on **Micro-Entrepreneur NTFP (Non Timber Forest Produce): Plant Origin – Bamboo Handicrafts** at Sri Vijayapuram (Port Blair), Andaman & Nicobar Islands.

Trainees involved in Bamboo Processing

Trainees involved in making Bamboo products

Bamboo Handicrafts made by GSDP trainees

Trainees involved in making Bamboo artefacts

Sri Vijayapuram, Andaman & Nicobar Islands DD News channel covered the GSDP Course on Bamboo Handicrafts being conducted by CPREEC EIACP at CPREEC Field Office, Sri Vijayapuram (Port Blair), Andaman & Nicobar Islands.

Shri. Ameesh, Resource Person, Andaman and Nicobar State cooperative Bank Ltd interacted with GSDP trainees on the available scheme for micro entrepreneur and support at CPREEC Field Office, Sri Vijayapuram (Port Blair).

Bamboo artefacts made by GSDP Trainees at CPREEC Field Office, Sri Vijayapuram, Andaman & Nicobar Islands

As part of the GSDP Certificate Course on Bamboo Crafts, the trainees were taken on an Exposure Visit / Field Trip

News AAP TAK ANDAMAN channel covered the GSDP Course on Bamboo crafts conducted by CPREEC EIACP at CPREEC Field Office, Sri Vijayapuram (Port Blair).

News AAP TAK ANDAMAN channel covered the GSDP Course on Bamboo crafts conducted by CPREEC EIACP at CPREEC Field Office, Sri Vijayapuram (Port Blair).

VALEDICTORY FUNCTION

The valedictory function of the GSDP Certificate Course on "Micro-Entrepreneur NTFP (Non Timber Forest Produce): Plant Origin – Bamboo Crafts" was held on **March 4, 2025** at the Auditorium of Tagore Government College of Education (TGCE), Sri Vijaya Puram (Port Blair), Andaman & Nicobar Islands.

Dr. S. Dinesh Kannan, IFS, CCF (WL, R&WP), Department of Environment and Forest, A&N Administration was the Chief Guest and Dr. P. Sudhakar, Director and EIACP Coordinator, CPREEC, Chennai presided over the function

Government of India

Ministry of Micro, Small and Medium Enterprises

UDYAM REGISTRATION CERTIFICATE

UDYAM REGISTRATION NUMBER: UDYAM-AN-01-0012467

NAME OF ENTERPRISE: ROY'S HANDICRAFT CHARM

TYPE OF ENTERPRISE *

S.No.	Classification Year	Enterprise Type	Classification Date
1	2024-25	Micro	13/02/2025

MAJOR ACTIVITY: MANUFACTURING

SOCIAL CATEGORY OF ENTREPRENEUR: GENERAL

NAME OF UNIT(S)

S.No.	Name of Unit(s)
1	BAMBOO CRAFT

OFFICAL ADDRESS OF ENTERPRISE

Flat/Door/Block No.	Pathergudda	Name of Premises/ Building	[illegible]
Village/Town	Pathergudda	Block	PROTHRAPUR
Road/Street/Lane	Pathergudda	City	SRI VIJAYAPURAM
State	ANDAMAN AND NICOBAR ISLANDS	District	SOUTH ANDAMANS, Pin 744105
Mobile	[illegible]	Email	[illegible]@gmail.com

DATE OF INCORPORATION / REGISTRATION OF ENTERPRISE: 28/12/2024

DATE OF COMMENCEMENT OF PRODUCTION/BUSINESS

NATIONAL INDUSTRY CLASSIFICATION CODE(S)

S.No.	NIC 2 Digit	NIC 4 Digit	NIC 5 Digit	Activity
1	32 - Other manufacturing	3290 - Other manufacturing n.e.c.	32909 - Manufacture of other articles n.e.c.	Manufacturing

DATE OF UDYAM REGISTRATION: 13/02/2025

* In case of graduation (upward/reverse) of status of an enterprise, the benefit of the Government Schemes will be availed as per the provisions of Notification No. [illegible]

Disclaimer: This is computer generated statement, no signature required. [illegible] & Date of printing: 13/02/2025

All the trainees were registered with Ministry of Micro, Small and Medium Enterprises MSME - UDYAM registration.

Chief Guest distributing the Course Completion Certificates and UDYAM Registration Certificate to all the trainees.

Display of Bamboo crafts made by the trainees

Trainees with their tools, GSDP Course completion certificate and UDYAM Registration Certificate during the valedictory function

THE ECHO OF INDIA-SRI VIJAYA PURAM
Thursday- March 6, 2025

Valedictory function of green skill development prog on Bamboo Crafts Training held

SRI VIJAYA PURAM, MAR 5/--/ The CPR Environmental Education Centre (CPREEC), under the Environmental Information, Awareness, Capacity Building, and Livelihood Programme(EIACP-RP), successfully concluded the two-month Certificate Course on Micro-Entrepreneur-NTFP(Non-Timber Forest Produce) Plant Origin: Bamboo Crafts. Sponsored by the Ministry of Environment, Forest and Climate Change, Government of India, the programme aimed at equipping trainees with sustainable livelihood skills in bamboo craftsmanship.

The valedictory function was held at the Auditorium of TGCE, Sri Vijayapuram, graced by esteemed dignitaries, trainers, and trainees. The event commenced with a welcome song by GSDP trainees, setting the tone for the occasion. Dr. P. Sudhakar, Director & EIACP Coordinator, CPREEC, Chennai, delivered the Welcome Address, emphasizing the role of skill-based environmental education in fostering entrepreneurship and sustainability. This was followed by an overview of the course by Shri A. Gopal, Project Officer, CPREEC, ANI, who elaborated on its objectives, impact, and achievements.

Trainees shared their experiences, highlighting the valuable skills acquired and their plans for entrepreneurial ventures in bamboo crafts. The awarding of Course Completion Certificates, Udyam registration certificates (MSME), and Tool Kits was a moment of pride, with Dr. S. Dinesh Kannan, IFS, presenting them to the successful participants.

The Guest of Honour, Shri Avinash Kumar Singh, Superintending Engineer, SVPMC, commended the initiative for its role in promoting eco friendly skill development. The Chief Guest, Dr. S. Dinesh Kannan, IFS, underscored the significance of non-timber forest produce and the economic opportunities in bamboo craftsmanship. Other distinguished guests included Mrs. Kavita Udai Kumar, Ward Councillor, Dr. Manjulata Rao, Principal, TGCE, Shri Kumaravelu, Assistant Director, Ministry of Textiles, and Shri Anoop Kumar, Entrepreneur.

A major highlight of the event was the Bamboo Craft Exhibition, wherein an impressive array of handcrafted bamboo artifacts created by trainees was displayed. The exhibition was well received by dignitaries and visitors, providing a platform to explore market linkages and future collaborations.

The function concluded with a Vote of Thanks by Shri A. Gopal, Project Officer, CPREEC, ANI, expressing gratitude to all stakeholders for their contributions. The successful completion of the training marks a significant step towards empowering individuals with green skills, promoting environmental sustainability, and nurturing self-reliant bamboo-based entrepreneurship.

Press Clipping on Valedictory of the GSDP Certificate Course on Bamboo Crafts conducted by CPREEC EIACP at CPREEC Field Office, Sri Vijayapuram (Port Blair).

Abstracts of Recent Publications

❖ Pooja Singh. (2024). **"Spiritual Tourism as Popular Culture: Making of Destination with Special Reference to Varanasi"**. In Book: *Religion Tourism and Pilgrimage in India* (pp.202-212) Publisher: Bharti Publications, New Delhi, India.

Spiritual tourism has always been highly valued in India, a country renowned for its numerous temples and spiritual destinations. Varanasi, also known as Kashi, is a globally popular destination that attracts both domestic and international travellers. Over the years, tourism has emerged as a prominent form of human engagement and a crucial element of contemporary society as key aspect of 'popular culture', which encompasses popular and widely accepted activities within a social context. In recent years, the transformation of social media platforms has had a profound impact on the branding of spiritual locations and the decision-making process of travellers. The present research focuses on the cultural experience of Western tourists visiting Varanasi, aiming to understand tourism within its popular cultural framework. To gather data, a semi-structured questionnaire was administered to 129 travellers at various sites in Varanasi, providing a quantitative approach to collect information from a substantial sample size and obtain statistical insights. Additionally, 20 in-depth interviews were conducted to gain a more profound understanding of the tourists' perspectives and experiences. The study investigates how media, particularly social media, influences the final decision-making process of tourists. With the advent of social media, travellers increasingly rely on these platforms to gather information, read reviews, and seek recommendations before making travel decisions. The research explores how these online platforms have shaped the perception of Varanasi as a spiritual destination and how they influence tourists' decision to visit. Furthermore, the study analyzes the characteristics of visitors to Varanasi in terms of their cultural, religious, and tourist experiences. This involves examining the motivations behind their visit, their expectations, the activities they engage in during their stay, and the overall impact of the experience on their cultural and religious understanding. This research aims to explore the influence of media, particularly social media, on the decision-making process of Western tourists visiting Varanasi. It also aims to analyze the characteristics and experiences of these tourists in terms of their cultural, religious, and overall tourist experiences.

Keywords: *Spiritual Tourism, Social Media, Popular Culture, Varanasi.*

❖ Mhatre, R. D., and Thakur, CK. (2023). **"A research study of forts and caves in Raigad district with architectural perspective"**. *International Journal of Food and Nutritional Sciences*, Vol. 12, pp. 1-8.

Foreign records regarding Konkan can be found. Dr. Daud Dalvi, Dr. Jamkhedkar, P.K. Ghanekar, Vidya Dehjiya, Dr. Dhavalikar, Dr. Prabhakar Dev have studied the architectures but architectures of Raigad region have not been studied specially. Architectures include forts, caves. The presented research project will be useful to the society, historical scholar, Gri Premi and college students. Exploring them as architectures, forts, caves. The role behind this research is to promote historical work. Maximum forts and caves in Raigad District have been ignored due to lack of amenities like water management, residential, transportation, security, electricity.

Keywords: *Architecture, Perspective, Durg, Ignored, Heritage.*

❖ Shougrakpam, D., Chaudhary, N., Goswami, R., and Gogoi, R. (2024). **"Sacred Groves of Rajasthan through folkloric beliefs: An overview"**. *International Journal for Multidisciplinary Research*, Vol. 6 (3), pp. 1-9.

Sacred groves or sacred woods are groves of trees, related to traditional, religious & cultural beliefs & these areas are dedicated to local deity & ancestor spirits. They can be found as a section

of a forest. They are excellent illustrations of in-situ conservation. These groves, which are around the nation in villages & cities, plains and mountain areas, represent a priceless genetic diversity which helps to preserve our environment in many ways. Many extinct species that could have perished otherwise have been saved because of these virgin forest regions. Besides protecting biological diversity, the entire ecosystem aids in water & soil conservation. In case of Rajasthan, sacred woods can be considered as one of the preservers of priceless ancient religious practices & traditional beliefs. Therefore, sacred forests offer humanity certain crucial ecological functions. In the recent times, drastic changes around the globe have also impacted both religious practices and biological integrity. The destruction of the historic heritage has several causes, some of which need to be investigated, including changes in social beliefs, modernity, and the eroding of cultural practices. It becomes important to spread the awareness of management and conservation of various ecosystem services as well as to suggest management and conservation as an alternative strategy for the sustainability of forestry around human settlements.

Keywords: *Sacred groves, Beliefs and Customs, Biodiversity, Ecosystem services, Folkloric beliefs*

❖ Gaurav, S., Pandey, A. K., and Priyanka, S. (2021). **"The Rich Heritage of Landscaping in India: from 'vanas' to Green Cities".** *International Journal of History and Cultural Studies*, Vol. 8(1), pp. 24-31.

Gardens have been in existence for a long time and evolved over time. The oldest types of gardens were probably the "forest garden" of the pre-historic period. The '*Agni Purana*', written about 4000 years ago, mentions that human should protect trees to have material gains and religious blessings. In India, the history of gardening dates back to the Indus Valley Civilization, which flourished between 2500 BCE and 1500 BCE. The Aryan's epics (*Ramayana* and *Mahabharata*) of the Vedic period have also references to palaces which had beautiful gardens, trees, flowers, fruits and lakes filled with lotus flowers. During the Buddhist period, the gardens were commonly called as '*vana*'. The great emperor Asoka (273-232 BC), developed arboriculture as well as avenue plantation in his time. During the Gupta dynasty, Kalidas (about 57 BC) had written a famous play '*Shakuntala*' in which there is a mention of pleasure garden, whereas, '*Amarakosha*' a thesaurus of Sanskrit considered as encyclopedia of nature, which covers investigation of plants and gardens, was also written by scholar Amarasimha. The Chola Dynasty was also fascinated towards gardens and flowers and made gardens around their palaces. In Acharya Sarngadhara 's *Sarngadhara-Paddhati* (1300 AD), a whole chapter is dedicated to 'The Upavana-Vinoda', a Sanskrit treatise on Arbori-Horticulture. With the arrivals of Mughal rulers in India, Mughal garden in formal style of gardening was introduced. Some of the magnificent formal gardens viz., Aram Bagh, Nasim Bagh, Shalimar gardens were created. Apart from Mughals, other major contribution was from Firoz Shah Tughlaq who developed gardens around Delhi and also Sher Shah Suri, who planted avenue trees on both sides of Grant trunk road made by him. The Rajput kings were also great admirer of gardens. King Man Singh began the famous garden at Amber Fort which was later finished by Jai Singh II (1699-1743 A.D.). Raja Abhai Singh (1724-1749 A.D.) designed The Mandor garden near Jodhpur whereas Suraj Mal built the garden palace at Deeg, Rajasthan, which had fountains and also water courses. At Orchha (in Madhya Pradesh), The Rai Praveen Mahal overlooks the large garden i.e. Anand Mahal Bagh. The Ahhichatragarh Fort (Nagpur) also had beautiful garden with lotus pools and water tanks. The long history of gardens and aesthetic sense which evolved later during the British India and after independence particularly evolving of green cities in modern India has been compiled in this paper.

Keywords: *Gardens, green cities, India, history.*

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