

# Training Module on *Lute Products*



नमामि  
गंगे



भारतीय वन्यजीव संस्थान  
Wildlife Institute of India



जलज















*Jalaj: Supporting conservation and livelihood through sustainable resource use*



## **JALAJ-WII, NMCG INITIATIVE**

The Ministry of Jal Shakti, Government of India through the National Mission for Clean Ganga (NMCG) entrusted the Wildlife Institute of India, (WII) a project entitled “Biodiversity Conservation and Ganga Rejuvenation” for developing a science-based aquatic species restoration plan for Ganga River by involving multiple stakeholders. This project successfully integrates livelihood and skill enhancement activities in alignment with conservation of the Ganga River and its biodiversity, employing both traditional livelihood centers and the innovative mobile livelihood unit known as "Jalaj." This pioneering business model has garnered recognition and adoption by district and state administrations across the Ganga River states. The core objective of the initiative is to interconnect local livelihoods with the conservation initiative, achieved through comprehensive training and the establishment of livelihood centers. These endeavors have been identified as a potential model for the broader "Arth Ganga" program. Consequently, this endeavor actualizes the Arth Ganga vision within the Ganga River basin by fostering a mutually beneficial relationship between the river and its communities, epitomized by the innovative "Jalaj" approach.





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## **PREFACE**

The Ganga River, an embodiment of spiritual significance for millions, faces an ever-growing threat from pollution, deforestation, and unsustainable practices. In response to this critical juncture, Ganga Prahari endeavors to use the chemical free handcrafted soaps to not only captivate hearts but also to raise awareness and resources for the conservation of the purity of the Ganga River. This training module aims to empower participants with the knowledge and skills needed to embark on a journey into natural soap making for both personal and commercial purposes. By understanding the principles, techniques, and business aspects of soap making, participants can explore various avenues for livelihood opportunities while contributing to sustainable and eco-friendly practices in the beauty and skincare industry

We invite individuals, enthusiasts, and advocates of environmental conservation to embrace this practice as a symbol of their commitment to a sustainable and eco-friendly future. As we celebrate the beauty of these handcrafted soaps, let us also weave a narrative of hope and responsibility for the Ganga River – a river that embodies the soul of our nation and deserves our collective efforts to ensure its continued vitality. Together, let us create a brighter, cleaner, and more sustainable future for the Ganga River.





## ***Harnessing the Potential of Jute: A Comprehensive Training Module on Jute Products***

### ***Module Overview:***

This training module is designed to equip individuals with the skills and knowledge required to prepare Jute based products for both personal and commercial purposes. The module aims to provide a comprehensive understanding of the Jute making process using natural fiber and other ingredients, including the necessary safety precautions and techniques for creating high-quality products. By this training module, participants will be able to start their own Jute products business or integrate Jute into existing livelihood opportunities.



### ***Module Objectives:***

- Understand the basic principles of Jute making.
- Identify and select natural fiber and ingredients for the products.
- Learn the sourcing, nature and processing of Jute.
- Acquire knowledge on safety precautions and hygiene practices.
- Develop skills in formulating and producing Jute products.
- Explore potential avenues for marketing and selling Jute products.



## Module 1: Introduction to Jute

### Overview of Jute:

**Origin and History:** Jute, a vital natural fiber, finds its origin in the fertile delta regions of the Ganges and Brahmaputra rivers in the Indian subcontinent. Historically cultivated for centuries, its roots trace back to ancient civilizations in the Bengal region. With a robust growth in tropical climates and a high cellulose content, jute became a staple crop, valued for its versatility in textiles, packaging, and construction. The British colonization era propelled jute to global prominence, establishing it as a key cash crop. Today, jute's eco-friendly attributes and sustainable cultivation practices continue to make it a prized resource in various industries worldwide.



Figure 1: Handcrafted Jute Bag with Species motifs

**Significance in Global Trade:** Jute holds significant importance in global trade due to its versatile applications and eco-friendly characteristics. As one of the most affordable natural fibers, it serves as a crucial material in industries such as textiles, packaging, and construction. Jute's biodegradability, renewable nature, and low environmental impact make it increasingly favored in the context of sustainability and corporate responsibility. Moreover, jute-producing countries, particularly Bangladesh and India, play key roles in the global jute market, exporting jute products to numerous countries worldwide. Its widespread use contributes to economic

development, employment generation, and the promotion of environmentally conscious practices on a global scale.

### **Sustainable Aspects of Jute Cultivation:**

Jute products offer a plethora of environmental benefits, making them a preferred choice for sustainable alternatives in various industries. Firstly, jute cultivation requires minimal chemical inputs, reducing the use of synthetic pesticides and fertilizers that can harm soil health and ecosystems. This eco-friendly cultivation method helps preserve biodiversity and maintains soil fertility. Additionally, jute plants act as carbon sinks, absorbing carbon dioxide from the atmosphere and mitigating the impacts of greenhouse gas emissions.



Figure 2: Jute Cultivation along Ganga Floodplains

Biodegradability is another key feature of jute products. Unlike synthetic materials such as plastic, jute fibers naturally decompose when disposed of, minimizing environmental pollution and waste accumulation in landfills and oceans. This inherent biodegradability significantly reduces the environmental footprint of jute products throughout their lifecycle. Moreover, jute has a low carbon footprint compared to other materials. Its cultivation requires fewer resources and emits fewer greenhouse gases, contributing to lower carbon emissions per unit of material produced. Additionally, jute products are often manufactured using energy-efficient processes, further reducing their environmental impact. Overall, the environmental benefits, biodegradability, and low carbon footprint of jute products make them an attractive choice for environmentally conscious consumers and businesses striving to reduce their ecological footprint and promote sustainability.



## Module 2: Jute Processing

### Cultivation and Harvesting: Understanding the Cultivation Process

Cultivation and harvesting are crucial stages in the processing of jute, ensuring the production of high-quality fibers for various applications. Jute cultivation primarily occurs in the fertile delta regions of the Ganges and Brahmaputra rivers, where the climate and soil conditions are favorable for its growth. The cultivation process typically begins with the selection of suitable land and the preparation of the soil through plowing and leveling.

Jute seeds are sown during the monsoon season, as the plant thrives in warm and humid conditions. Adequate irrigation is essential during the initial growth stages to support healthy plant development. As the jute plants mature, they require minimal additional water, making them relatively low-maintenance crops compared to others.

The harvesting of jute typically occurs within approximately 150 days after sowing, depending on the variety and local climatic conditions. Harvesting is usually done manually by cutting the jute plants close to the ground level. Careful timing is essential to ensure optimal fiber quality and yield. Delayed harvesting can lead to fiber degradation, while premature harvesting may result in underdeveloped fibers.



Figure 3: Cultivation and Harvesting of Jute

After harvesting, the jute plants undergo a process called retting, where they are soaked in water to facilitate the separation of fibers from the woody stalks. Retting can be done in ponds, rivers,

or specially constructed tanks, and the duration varies depending on factors such as water temperature and microbial activity.

Once retting is complete, the jute fibers are extracted from the stalks through a process called stripping. This involves manually removing the outer bark to reveal the inner fibers, which are then washed, dried, and bundled for further processing.



Figure 4: Retting, washing and drying the Jute during cultivation

In summary, cultivation and harvesting are integral parts of jute processing, ensuring the production of high-quality fibers that meet the demands of various industries. Proper management practices and attention to detail are essential to maximize yield and fiber quality while minimizing environmental impact.

### **Best Practices and Harvesting Techniques:**

Jute cultivation requires adherence to best practices and careful implementation of harvesting techniques to ensure optimal yield and fiber quality. Here are some key considerations:

**Land Selection and Preparation:** Choose well-drained, fertile soil with a pH level between 5.0 and 6.8 for optimal jute growth. Proper land preparation through plowing, leveling, and weed removal is essential to create an ideal growing environment.

**Seed Selection and Sowing:** Select high-quality jute seeds from reputable sources, preferably treated with fungicides to prevent seed-borne diseases. Sow seeds evenly at the recommended spacing and depth during the monsoon season, ensuring adequate soil moisture for germination.

**Irrigation Management:** Provide timely and adequate irrigation, especially during the initial growth stages. Avoid waterlogging, as it can lead to root rot and reduced yields. Implement drip or furrow irrigation systems for efficient water use.

**Weed and Pest Control:** Monitor the crop regularly for weed infestations and employ mechanical or manual methods for weed control to minimize herbicide usage. Implement integrated pest management practices to control common jute pests and diseases, including borer insects and fungal infections.



Figure 5: Weed infested Jute crop

**Fertilizer Application:** Conduct soil tests to determine nutrient deficiencies and apply fertilizers accordingly. Use organic fertilizers such as compost or well-decomposed manure to improve soil fertility and promote healthy plant growth.

**Harvesting Techniques:** Time the harvest carefully, typically 120-150 days after sowing, depending on local conditions and variety. Harvest jute plants when they are fully mature but before the onset of flowering to ensure optimal fiber quality. Cut the plants close to the ground using sharp sickles or knives, and bundle them for retting.

By following these best practices and harvesting techniques, jute farmers can optimize crop yields, minimize environmental impact, and produce high-quality fibers for various industrial applications.

**Retting and Fiber Extraction:** Retting is a process to get fibers from plants like flax and hemp. In water retting, the plant stems are soaked in water for days or weeks, letting bacteria break down the glue (pectin) holding the fibers together. This old method can pollute water if not done carefully. Chemical retting uses substances like alkalis or enzymes to speed up breaking down the pectin. It's quicker and more controlled than water retting, but it can be costly and harmful to the environment if the chemicals are not disposed of properly. Both methods are important for making high-quality fibers. Both water and chemical retting methods significantly affect fiber quality. Proper water retting can produce strong, smooth fibers, but improper management can lead to uneven quality and environmental issues. Chemical retting offers consistent and faster results, but can be expensive and potentially harmful to the environment if not handled properly.



Figure 6: Retting and Fiber Extraction for Jute cultivation

**Fiber Cleaning and Grading:** Cleaning jute fibers involves washing and drying to remove impurities like dirt and plant residues. This is followed by softening, often using oils or emulsions. Grading jute fibers is based on quality parameters such as fiber length, strength, color, and fineness. Higher grades have long, strong, and bright fibers. Sorting methods include manual and mechanical techniques. Manual sorting relies on skilled workers to assess and categorize fibers, while mechanical sorting uses machines to separate fibers based on set criteria, ensuring consistency and efficiency.



### Module 3: Types of Jute Fibers and products

Jute is primarily classified into two types: white jute (*Corchorus capsularis*) and tossa jute (*Corchorus olitorius*). White jute has a lighter color and is commonly used for making sacks, bags, and ropes. Tossa jute, darker and softer, is preferred for finer textiles and high-quality jute products.

**Sacking:** Jute sacks come in various types, including hessian, sacking, and canvas bags. Hessian sacks are lightweight and used for packaging agricultural products like coffee and spices. Sacking bags are heavier and used for storing bulk items such as grains, sugar, and cement. Canvas bags, made from tightly woven jute, are durable and used for industrial purposes and transporting heavy goods. These sacks are valued for their biodegradability, strength, and breathability, making them ideal for packaging and storage in agriculture and industry.



Figure 6: Jute Sacking Fiber

**Hessian (Burlap):** Hessian fabric, also known as burlap, is a coarse, woven material made from jute fibers. Its key characteristics include durability, breathability, and biodegradability. Hessian fabric is widely used in textiles for creating bags, rugs, and upholstery. In home decor, it's popular for crafting rustic curtains, table runners, and wall coverings. In agriculture, hessian is used for making sacks, erosion control, and protecting plants. Its versatility makes it a valuable material across various industries



Figure 7: Jute Sacking Fiber

**Carpet Backing Cloth:** Jute plays a crucial role in carpet manufacturing due to its strong, durable, and eco-friendly properties. As a natural fiber, jute provides a sturdy backing material for carpets, enhancing their structure and longevity. Its natural resilience and ability to hold dyes make it suitable for producing both backing and decorative elements in carpets. Benefits of using jute include its sustainability, biodegradability, and cost-effectiveness, making it an attractive choice for eco-conscious consumers and manufacturers in the carpet industry.



Figure 8: Jute Carpet Backing

### **Geo-textiles: Use of jute in erosion control, soil stabilization, and landscaping**

Jute geo-textiles are biodegradable fabrics made from jute fibers, used in civil engineering and environmental applications. These eco-friendly materials are employed for soil erosion control,

soil stabilization, and promoting vegetation growth. In erosion control, jute geo-textiles cover slopes and embankments, reducing runoff and soil loss. For soil stabilization, they reinforce weak soils, support construction projects, and improve drainage. Additionally, in landscaping, jute geo-textiles prevent weed growth and enhance soil moisture retention. Their biodegradability and cost-effectiveness make them a sustainable choice for environmental management and infrastructure projects.



Figure 9: Jute geo-textiles are biodegradable fibers

Jute is widely used in erosion control, soil stabilization, and landscaping due to its biodegradable and environmentally friendly properties. Jute mats and nets are laid over soil to prevent erosion by stabilizing the surface and promoting vegetation growth. In soil stabilization, jute helps retain soil moisture and supports root development. For landscaping, jute products like weed barriers and plant protectors enhance garden aesthetics while ensuring sustainable soil management. These applications showcase jute's effectiveness in promoting ecological balance and soil health.



## **Module 4: Procedure for Making the Jute Products**

Jute manufacturing involves harvesting jute plants, retting to extract fibers, spinning into yarn, weaving or knitting into textiles, and finishing for various applications like bags, rugs, and textiles. The procedure for making jute products involves several steps, from preparing the raw jute to the final product. Here's an overview of the process:

### **1. Harvesting and Retting**

Jute plants are harvested when they are at their peak, typically around four to six months after planting. In retting the harvested jute stalks are soaked in water for about 10-20 days. This process separates the fibers from the stalks. After retting, the fibers are stripped from the stalks by hand.



Figure 10: Harvesting of Jute Fiber

### **2. Fiber Extraction and Washing**

The retted stalks are beaten to loosen the fibers, which are then separated by hand, the process is termed as stripping. The extracted fibers are thoroughly washed to remove any dirt and impurities.



Figure 10: Harvesting, washing of Jute Fiber and drying

### 3. Drying

The washed fibers are spread out in the sun to dry completely. Proper drying is crucial to ensure the quality of the jute fibers.

### 4. Carding and Spinning

Spinning jute fibers into yarn involves traditional methods like hand spinning using spinning wheels or charkhas. In modern manufacturing, automated spinning machines are employed. Initially, fibers are carded to align them, then drawn into thin strands and twisted to form yarn. The dried fibers are combed to remove short fibers and impurities, aligning the long fibers for spinning, the process is termed as carding.



Figure 11: The process of Carding and Spinning of the Jute Fiber

The carded fibers are spun into yarns using traditional spinning wheels or mechanized spinning machines. Advanced machinery ensures uniformity and efficiency in the spinning process. Both traditional and modern techniques contribute to the production of jute yarns used in various industries, ranging from textiles to packaging.

## **5. Weaving and Knitting**

The spun yarn is woven into various types of jute fabric using handlooms or power looms. Weaving can produce different patterns and textures. Weaving jute fabrics involves interlacing jute yarns on a loom to create patterns and structures. Hessian, a coarse fabric, is commonly woven for sacks, curtains, and upholstery. Sacking, a heavier fabric, is used for durable bags and packaging. Carpet backing cloth, a sturdy fabric, is woven to provide support and stability for carpets. Knitting jute involves interlocking loops of jute yarn with needles to create fabrics like rugs and mats. Both weaving and knitting processes contribute to the production of versatile jute fabrics with applications in textiles, packaging, and carpet manufacturing. For certain products, jute yarn can be knitted instead of woven.



Figure 12: The process of Weaving and Knitting of the Jute Fiber

## **6. Dyeing and Finishing**

Understanding dyeing methods for jute products, including natural and synthetic dyes, and printing techniques for adding designs and patterns. The jute fabric or yarn can be dyed using natural or synthetic dyes to achieve the desired color. This can be done before or after

weaving/knitting. The fabric is treated to enhance its properties, such as softness, shine, and durability. This may involve processes like calendaring (pressing) or coating.

## **7. Cutting and Sewing**

The jute fabric is cut into the required shapes and sizes for different products. Sewing: The cut pieces are sewn together to create the final products, such as bags, mats, or home decor items. This step may involve adding additional features like handles, linings, or decorations.



Figure 13: Ensure the Fine Quality, Packaging and Distribution of the Product

## **8. Quality Control**

Each product undergoes a thorough quality check to ensure it meets the desired standards of craftsmanship and durability.

## **9. Packaging and Distribution**

The finished products are then packaged appropriately and prepared for distribution to markets, retailers, or direct consumers.

This process can be adapted and modified depending on the specific type of jute product being made and the level of craftsmanship or mechanization involved



## Module 5: Quality Control

**Parameters for Quality Assessment:** Quality assessment of jute products entails evaluating various parameters crucial for their performance and durability. Strength is a fundamental criterion, assessing the tensile and tear strength of jute fabrics to ensure they withstand stress and wear. Color fastness is another vital aspect, ensuring that dyes used on jute maintain their color intensity and do not bleed or fade over time, especially when exposed to light or moisture. Weave consistency is assessed to ensure uniformity in the fabric's texture and structure, avoiding irregularities or flaws that could compromise its integrity. Additionally, parameters like fiber length, fineness, and moisture content are considered for yarns and fabrics to ensure optimal processing and performance. By meticulously examining these quality parameters, manufacturers can guarantee the reliability, longevity, and aesthetic appeal of jute products across various applications, from textiles and packaging to carpeting and erosion control.



Figure 14: The Quality and Designing on the Product is Crucial

**Quality Assurance in Manufacturing:** Quality assurance in jute manufacturing involves a systematic approach to ensure consistent product quality from start to finish. It begins with rigorous raw material selection, where jute fibers are carefully inspected for purity, strength, and uniformity. Throughout processing, quality control measures are implemented at each stage,

including cleaning, spinning, weaving, and finishing. Regular testing and monitoring of key parameters such as fiber strength, color consistency, weave integrity, and dimensional accuracy help identify any deviations from standards and allow for timely adjustments or corrections. Additionally, adherence to standardized production protocols and best practices ensures consistency and reliability in product performance. Final inspection and testing of finished jute products further validate their quality before they are released to the market. By prioritizing quality assurance throughout the manufacturing process, jute producers can uphold customer satisfaction, build trust, and maintain competitiveness in the market.

## **Module 6: Market Analysis**

**Global Jute Market Trends:** The global jute market is witnessing steady growth driven by increasing awareness of sustainable and eco-friendly materials. Demand for jute products is rising across various industries such as textiles, packaging, agriculture, and construction due to their biodegradability, durability, and versatility. In the textile industry, jute is gaining popularity for its natural appeal and breathability, especially in the production of bags, rugs, and home decor items. In packaging, jute sacks are preferred for their strength and eco-friendliness, particularly in agriculture for storing grains and produce. Additionally, the use of jute in erosion control, soil stabilization, and landscaping is expanding due to its effectiveness and environmental benefits. Emerging markets in Asia-Pacific and Africa present significant growth opportunities, driven by increasing disposable income, urbanization, and government initiatives promoting sustainable practices. Overall, the global jute market is poised for further expansion fueled by growing environmental consciousness and the shift towards sustainable materials.

**Consumer Preferences and Market Segmentation:** Consumer preferences for jute products vary across regions and market segments due to factors like cultural influences, economic conditions, and environmental awareness. In regions with a strong tradition of jute cultivation, such as South Asia, there is a higher preference for jute textiles and handicrafts due to their cultural significance and natural appeal. In developed economies, growing environmental consciousness drives demand for eco-friendly alternatives, making jute products increasingly popular in sectors like fashion, home decor, and packaging. Market segmentation reveals diverse preferences, with environmentally conscious consumers favoring jute for its sustainability and biodegradability, while others may prioritize affordability or aesthetics. Understanding these preferences enables targeted marketing strategies and product innovation to cater to specific consumer needs and enhance market penetration. As consumer awareness of sustainability continues to grow globally, the demand for jute products is expected to expand across diverse market segments, creating opportunities for sustainable growth in the jute industry.

**Competitor Analysis:** In the jute industry, key competitors include both traditional jute manufacturers and newer entrants offering innovative jute-based products. Established players often focus on producing traditional jute textiles, sacks, and carpets, leveraging their experience,

infrastructure, and supply chain networks. They maintain market dominance through economies of scale and long-standing relationships with customers.

However, newer entrants are disrupting the market with innovative jute-based products targeting niche segments like fashion accessories, home decor, and eco-friendly packaging. These companies emphasize sustainability, design, and functionality to appeal to environmentally conscious consumers and differentiate themselves from traditional offerings.

Competitors employ various market strategies such as product diversification, branding, and partnerships to gain market share and expand their reach. Additionally, investments in research and development enable them to create new jute products with enhanced performance and aesthetics, catering to evolving consumer preferences and market demands. Understanding competitor strategies is crucial for jute manufacturers to identify opportunities, mitigate threats, and maintain competitiveness in the dynamic jute industry landscape.

**Marketing and Sales Strategies:** Marketing and sales strategies in the jute industry involve highlighting the sustainability, durability, and versatility of jute products. Utilizing digital platforms, targeted advertising, and partnerships with eco-conscious brands enhance market visibility and appeal. Direct engagement with customers through promotions, exhibitions, and educational campaigns fosters brand loyalty and drives sales.

**Branding and Positioning:** Branding jute products involves emphasizing their eco-friendly attributes and unique selling propositions. Creating a brand identity centered on sustainability, durability, and versatility helps differentiate jute offerings in the market. Positioning jute as a premium, environmentally conscious choice for fashion, home decor, and packaging appeals to eco-conscious consumers seeking sustainable alternatives. Utilizing storytelling, visual imagery, and partnerships with environmental organizations reinforce the brand's values and resonate with target audiences. Effective branding and positioning strategies establish jute products as desirable, aspirational choices that align with consumers' values, driving brand loyalty and market growth.

**Distribution Channels:** Jute products reach consumers through diverse distribution channels like wholesalers, retailers, and e-commerce platforms. Wholesalers facilitate bulk orders and distribution to retailers, who sell jute products in physical stores. E-commerce platforms offer

convenient access to a global market, allowing direct sales to consumers. Leveraging these channels ensures broad market coverage and accessibility for jute products, catering to diverse consumer preferences and shopping habits. Strategic partnerships with distributors and online marketplaces further expand reach and visibility, maximizing sales opportunities and enhancing brand presence in the competitive retail landscape.

**Promotional Activities:** Promotional activities for jute products involve comprehensive campaigns across various platforms. Trade shows offer opportunities for direct engagement with industry stakeholders and showcasing product offerings. Social media strategies leverage platforms like Instagram and Facebook to reach wider audiences, highlighting the eco-friendly attributes and unique designs of jute products. Collaborations with influencers and eco-conscious brands amplify visibility and appeal. Additionally, targeted advertising, email marketing, and educational content enhance consumer awareness and drive sales. By integrating diverse promotional channels and strategies, jute manufacturers can effectively communicate their brand values, attract customers, and foster long-term relationships in the competitive marketplace.



Figure 15: The display and exhibition of product is also essential to promote

## **Module 7: Environmental Sustainability**

**Circular Economy Approach:** Adopting a circular economy approach, jute manufacturers promote the reuse, recycling, and upcycling of jute products to minimize waste and environmental impact. By designing products for longevity and facilitating end-of-life recycling, they ensure materials are diverted from landfills. Initiatives like collection programs, product take-back schemes, and partnerships with recycling facilities enable the recovery and repurposing of jute fibers into new products or materials. Additionally, promoting upcycling encourages creative reuse of jute products, extending their lifespan and reducing resource consumption. Through these efforts, jute manufacturers contribute to a sustainable economy by closing the loop on production, consumption, and waste.

**Eco-friendly Packaging Solutions:** Advocating for eco-friendly packaging solutions, jute emerges as a sustainable alternative to plastic and synthetic materials. Its biodegradable and renewable nature makes it an environmentally conscious choice. Jute packaging offers durability and versatility, suitable for various products ranging from food to fashion. By reducing reliance on plastic, jute helps mitigate pollution and environmental degradation. Advocacy efforts highlight jute's benefits, encouraging businesses and consumers to embrace sustainable packaging practices. Through widespread adoption, jute packaging contributes to a greener future by minimizing waste and preserving natural resources, aligning with global efforts towards sustainability and environmental stewardship.

**Corporate Social Responsibility (CSR):** Encouraging companies to integrate jute cultivation and manufacturing initiatives into their Corporate Social Responsibility (CSR) endeavors fosters positive impacts on rural livelihoods and environmental conservation. Supporting jute cultivation not only bolsters income opportunities for rural communities but also promotes sustainable agricultural practices and biodiversity conservation. By investing in jute manufacturing, companies stimulate local economies, create employment, and contribute to skill development. Furthermore, promoting jute products aligns with CSR goals centered on environmental sustainability, reducing carbon footprint, and supporting eco-friendly alternatives to synthetic materials. Through CSR initiatives focused on jute, companies demonstrate their commitment to social and environmental stewardship while fostering positive socio-economic impacts in jute-growing regions.



## LINKING LIVELIHOOD AND CONSERVATION

Linking livelihoods with the conservation is paramount for the sustainable future of both people and the environment. The Ganga sustains millions of livelihoods through different sectors such as agriculture, fishing, tourism. However, these activities often harm the river and its diverse ecosystems. To ensure the health of the Ganga River and its biodiversity, it is essential to promote eco-friendly livelihoods. Initiatives like Jalaj that implements practices like organic farming, sustainable fishing practices, and responsible tourism can provide economic opportunities while safeguarding the river. Additionally, raising awareness and involving local communities in conservation efforts can create a sense of ownership, fostering a collective commitment to conserve the rich biodiversity of the Ganga River, ensuring a harmonious coexistence between humans and nature.







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