

PRODUCING PAPER FROM BANANA STEM A TRADITIONAL KNOW HOW RESCUED ALL OVER THE WORLD

The traditional knowledge of extracting fiber from banana to produce an environmentally friendly paper is being rescued in several countries of the world. This technologies are also being adapted to be less time consuming and to give a result corresponding to modern needs. The possibility to make use of a by-product of a plant which is largely grown in tropical areas to produce a basic good as paper is, reduces the phenomena of deforestation and reduce damage to the environment by the use of chemicals. It also represents a great opportunity for local economies because the banana stems are discarded after every harvest, creating an extra income for the farmers.



In India, as underlined by the [ecoideaz website](#), paper consumption was expected to go down steadily with the onset of the electronic age, but it is hardly near reduction. The agricultural sector in India produces a vast range of natural fibers that can be utilized to produce both pulp and paper. Among these, banana fiber has emerged as a new eco-friendly innovation since it is produced from banana stem, which is a waste material after harvesting the banana fruit.



The production of banana paper is one of the projects of [Eco Green Unit](#), a Community Based development program. Mostly the fibre is extracted in India by manual process and the yield of fibre is very low and this kind of manual process needs skilled labours. Eco Green Unit developed a Banana fibre extracting machine, by using German technology, which uses 1 HP single phase motor to power it. The machine can be easily operated by an unskilled labour, gives maximum output, has less maintenance and it is safe to operate. The stems are cut and divided into pieces, inserted into the machine and extracted as fibre. Around 5-6 stems are needed to extract 1kg of fiber, depending upon their quality and the water content.



India produces around 18% of the worldwide crop. Although about 500,000 hectares are used for banana cultivation, only 10% of the banana stem waste is processed into fiber. If farmers decide to supply banana stems to these fiber processing units, they would not only clear waste without any cost, but also would benefit from their earnings.

Many Companies, with an ecologically and socially oriented approach, have encouraged farmers with projects in support of their banana paper production, ensuring an access to the market in industrialized countries. For example in Zambia the [One Planet Café](#) Company is



working since 2011 to develop a high quality sustainable paper that integrates both environmental and social values. The project is realized in the South Luangwa area, in collaboration with local people and organic banana farmers. The project collaborates with Japanese paper factories specialized in the 1500-years Washi old paper making technology. By working with local people in the villages and printing firms in Japan, the initiative created an entire *eco system supply chain* from the organic banana farmers and people of rural villages in Zambia, to the paper factories in Japan. In 2012, the company started to sell One Planet Paper® on the Japanese market. Thanks to the high quality reached, Japanese companies and organizations like Toyota, Panasonic, Shiseido and Ricoh, natural cosmetic maker LUSH Tokyo University of Arts and United Nations HABITAT now use the Zambian-Japanese Banana Paper.

The [RCL Trading Company](#), a social enterprise from Belgium, is working in Philippines with small farmers who produce biological bananas to fulfil their goal of producing natural banana paper. The farmers plant the saved seedlings that will produce a new harvest in 3 to 4 months. Farmers discard the leaves and the stems, but roots are saved as weeks later new seedlings will spawn from it. RCL requests the farmers to collect the stems and cut in into smaller pieces and buys the chopped stems. RCL does not use any chemicals, bleachers or paints during this fabrication process resulting in pure natural banana paper.

Even international cooperation organisations, as the [Helvetas Swiss Intercooperation](#), sustain the banana paper production. In particular Helvetas has been working in banana farming value chain for enterprise development and job creation in eight districts of Terai area of Nepal. Involving a group of potential entrepreneurs and training 60 unemployed people on necessary skills, 10 new enterprises producing banana paper were established in Kanchanpur, Kailali, Chitwan, Sarlahi, and Dhanusha districts. Response from market is very good for product marketing and Nepali media gave good coverage to disseminate the knowledge throughout the country. Today, other development organizations and private entrepreneurs are showing interest to replicate banana paper making enterprises in other areas of Nepal.

All these experiences show the great potential of the technologies using the banana fibres to produce environmentally friendly paper. Traditional practices based on manual processes for the banana paper production could be enhanced through local enterprises in order to answer the big demand of this everyday good of our modern societies.

To know more

[Ecoideaz website](#)

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