GOVERNMENT OF KHYBER PAKHTUNKHWA
CLIMATE CHANGE, FORESTRY, ENVIRONMENT
AND WILDLIFE DEPARTMENT
(SECTION ENVIRONMENT)

NOTIFICATION

Peshawar Dated the 25/07/2025

No. SO(ENVT)/CCFE&WD/1-8/EPC-2025: In exercise of powers conferred under Clause xxii of Section 7 of the Khyber Pakhtunkhwa Environmental Protection Act, 2014, (Khyber Pakhtunkhwa Act No. XXX of 2022), the Khyber Pakhtunkhwa Environmental Protection Council (EPC) in its 3rd Meeting held on 13.05.2025 has been pleased to approve the following guidelines for General Environmental Approval (GEA);

GUIDELINES FOR COTTON/WOOL PROCESSING/ COTTON WASTE PROCESSING

Contents

Introduction

Cotton processing units and wool processing units are industrial facilities that specialize in the processing of cotton and wool fibers, respectively. The cotton and wool processing industries have a long history and are important for the production of textiles and clothing.

Cotton processing units typically receive raw cotton bales from a variety of sources, including cotton farms and cotton gins. The raw cotton is then cleaned and processed to remove dirt, leaves, stems, and other debris present in the bales. The cleaned cotton then undergoes a series of mechanical processes that convert it into cotton fiber. These processes include carding, combing, drawing, and spinning. After spinning, the cotton fiber is usually wound onto large spools or cones, ready for use in the textile industry.

Wool processing units, on the other hand, receive raw wool from sheep and other animals. The raw wool is typically washed to remove dirt, grease, and other contaminants. Once cleaned, the wool is carded to separate the fibers and remove any remaining debris. Next, the wool is spun into yarn or other forms of wool products, such as felt or batting.

Final products made from cotton and wool fibers include textiles, clothing, blankets, carpets, and many other household and commercial items. Both cotton and wool processing industries are typically labor-intensive and require skilled workers to operate and maintain the processing equipment. Countries with a large textile industry often have significant cotton and wool processing facilities to support their domestic and international markets.

Cotton waste processing refers to the process of converting cotton waste products into new usable materials. Cotton waste can originate from a variety of sources, including textile and clothing manufacturing, agricultural production, and consumer waste such as used clothing and towels.

The cotton waste utilized in processing can be in various forms, including yarn waste, fabric scraps, and leftover materials as well as used textiles. Recycling cotton waste lessens the environmental impact by reducing the amount of waste sent to landfills and conserving natural resources.

The process of cotton waste processing starts with sorting and separating the waste according to the type and quality of the cotton material. The selected material is then shredded, cut or opened to break down the fibers into smaller pieces. The pieces go through spinning, weaving, or carding machines to create new yarns or fabrics with varied level of quality based on the cotton fibers quality prior to waste processing.

The final processed products can vary depending on the manufacturing process and application of the material. It can be used in a wide range of applications, including new textiles for clothing or home decor, insulation for buildings or vehicles, paper or packaging materials, and many more.

Cotton waste processing is an eco-friendly process, and it also provides a valuable and sustainable alternative source for cotton materials. The reuse and recycling of cotton mitigate environmental issues associated with cotton waste and also help to reduce the environmental footprint of the cotton industry as a whole.

Scope of guideline

These guidelines are applicable to all agricultural products which involves repacking, mixing, formulation of agriculture products/fertilizers.

How to use these guidelines

The project proponent is obliged to use these guidelines for the preparation and submission of the GEA report along with checklist.

Glossary

Act means the Khyber Pakhtunkhwa Environmental Protection Act, 2014
Contamination introduction of impurities in the environment
Environment means (a) air, water and land; (b) all layers of the atmosphere; (c) all organic and inorganic matter and living organisms; (d) the ecosystem and ecological relationships; (e) buildings, structures, roads, facilities and works; (f) all social and economic conditions affecting community life; and (g) the inter-relationships between any of the factors in sub-clause (a) to (f).
Environmental Assessment a technique and a process by which information about the environmental effects of a project is collected, both by the developer and from other sources, and Taken into account by the planning authority in forming their judgments on whether the development should go ahead.
Impact on Environment means any effect on land, water, air or any other component of the environment, as well as on wildlife harvesting, and includes any effect on the social and cultural Environment or on heritage resources.
Mitigation Measure means a measure for the control, reduction or elimination of an adverse impact of a development on the environment, including a restorative measure.
Pollution the presence in the environment or the introduction into it, of substances that have harmful or unpleasant effects
Rules means the Khyber Pakhtunkhwa Environmental Assessment Rules, 2021
GEA means General Environmental Approval as per schedule IV of KP Environmental Assessment Rules, 2021

Project Description

The processing of cotton/wool involves several steps, and the processing of cotton waste can be slightly different. Here are the steps involved:

1) Harvesting: The first step in the process is to harvest the cotton from the cotton plant or shear the sheep to obtain the wool.

2) Cleaning: The fibers are then cleaned and separated from other materials such as leaves, seeds, and debris using a combination of mechanical and manual methods.

3) Spinning: The cleaned fibers are then spun into yarn using industrial spinning machines.

4) Weaving/Knitting: The yarn is then knitted or woven into fabric, which can then be bleached, dyed, or printed depending on the desired finish.

5) Finishing: After the fabric is dyed or printed, it may undergo additional processes such as sizing or softening to give it the desired texture or feel.

However, the processing of cotton waste may involve additional steps including shredding, tearing, and re-spinning to produce a new fiber. The cotton waste is first collected and sorted based on its fiber composition, then the cotton fibers are torn apart and separated from contaminants, and finally, the fibers are re-spun into a new yarn to produce new fabric. This process is known as recycling and helps reduce the demand for new cotton fiber while addressing environmental concerns.

Environmental Aspects

- **Dust Suppression**
  One of the primary concerns during process of Cotton/Wool processing/Cotton Waste is dust generation.
- **Waste Water**
  Cotton/wool processing units generate wastewater that contains chemicals, dyes, and other pollutants. This wastewater can find its way into rivers, lakes, and groundwater, polluting the environment and affecting the health of aquatic life.
- **Solid waste**
  The unit should ensure that all waste generated during the process is properly disposed of in compliance with regulations.
- **Noise**
  Cotton/wool processing/cotton waste processing units can generate loud noise levels that can be harmful to human health and cause disturbance to the surrounding environment.
- **Storage & Transportation:**
  Proper storage and transportation of the grinding material is extremely important. Improper storage can lead to environmental contamination.

Mitigation options

- **Dust Suppression**
  - The unit must use suitable equipment and technologies to suppress dust emissions from the process.
  - This can include the use of venting systems, dust collectors, and other dust suppression equipment to minimize airborne particulate matter.

- **Waste Water**
- The unit must have a proper wastewater management system in place to ensure that the contaminants are removed before discharge into the environment.
- **Solid waste**
- Mitigation measures such as recycling, reuse, or safe disposal of waste materials may be adopted.
- **Noise**

- Machinery should be installed in enclosed area.
- Generator should be covered and enclosed in canopy.
- Machinery and generator should be properly maintained.

- **Storage & Transportation:**
  - The unit should ensure safe storage and transportation of the material.

Moreover, the project site must be in the designated government industrial estate/zone.

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Secretary to Govt. of Khyber Pakhtunkhwa
Climate Change, Forestry, Environment & Wildlife Department

No. SO(ENVT)/CCFE&WD/1-8/EPC-2025:

Copy for information to;

1. All members of Environmental Protection Council (EPC) Khyber Pakhtunkhwa
2. PS to Secretary Climate Change, Forestry, Environment & Wildlife Department, Khyber Pakhtunkhwa

20/8/25

Muhammad Ishaq
Section Officer (Environment)