



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 DAIRY FARM WITH 40 AND ABOVE BUFFALOS/COWS

Purpose of Guidelines & Checklist

The guidelines and checklist are developed to clarify the location, site suitability, and suitable location for setting developmental projects in terms of environmental issues, and to provide the solution of remedy. The aim of Guidelines is to developed mitigation measures to control any sort of environmental pollution created in vicinity due to setting of a developmental project. Guidelines and checklist is the basic tool to assess the environmental pollution and to prepare and cope up with environmental issues. The basic aim & objective of guidelines is to promote sustainable development and to safe guard the residents of a locality with the impacts of ongoing projects.

In Light of Khyber Pakhtunkhwa Environmental Protection Act, 2014 and Khyber Pakhtunkhwa Environment Assessment Rules, 2021 the guidelines are the basic tools and legal requirement for the projects fall in the categories of Schedule-IV project where General Environmental approval (GEA) is required for a project at planning stage and Schedule-III categories project up to some extent where Initial Environmental Examination Report (IEE) is required at the planning stage of the project.

Definitions:

Act : means the Khyber Pakhtunkhwa Environmental Protection Act, 2014

Environment Assessment Rules: Khyber Pakhtunkhwa Assessment Rules-2021

Guidelines means Environmental Protection (Diary farm/cattle farm) Guidelines

Dairy Farm/farming : is a class of agriculture for long-term production of milk, which is processed (either on the farm or at a dairy plant, either of which may be called a dairy) for eventual sale of a dairy product.

Cattle farm/farming: agricultural raising of cows (for beef) idiom. Cattle: cows, animals from the cow family.



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

1. INTRODUCTION

These guidelines are meant to address projects that do not qualify for an Initial Environmental Examination (IEE) or an Environmental Impact Assessment (EIA). The Khyber Pakhtunkhwa Environmental Protection Agency and relevant line departments will use these guidelines to make smaller initiatives in the region more environment friendly.

2. BACKGROUND

The Khyber Pakhtunkhwa Environmental Protection Act-2014 (KPEPA-2014) requires that an IEE or EIA be conducted of any development project that is likely to have adverse impacts on the environment. As a result, Khyber Pakhtunkhwa Environmental Assessment Rules 2021 are developed.

However, Dairy farms lie under the Schedule-IV, General Environmental Approvals which do not qualify for an IEE or EIA under the established screening criteria. It was, therefore, considered necessary to develop Sectoral guidelines and checklists for dairy farms. These guidelines and checklists are an effort to make the development process in Khyber Pakhtunkhwa more environmental friendly.

3. METHODOLOGY

A four step methodology was used to develop the sectoral guidelines and checklists:

- The first step focused on an extensive survey of literature. The search was undertaken using the internet, by visiting libraries, and going through relevant documents
- The second step involved meetings with relevant people in different departments and concerned organisations
- The third step involved the field visits experience of dairy farms.
- The fourth step focused primarily on the development of the guidelines and checklists.

Guideline for Dairy Farms

BACKGROUND

Dairy is one of the most rapidly expanding sectors in Khyber Pakhtunkhwa. Most dairy farms are small establishments which serve as providers of raw, unprocessed milk. Contractors collect most of the milk produced and either sell it to various processing industries or disburse it amongst local consumers. A very small percentage of the milk is processed by the dairy industry itself into other dairy products such as butter, cheese, etc.

Small dairy farms are often sited inside the main city, close to or within residential and commercial areas, and service a small number of residents. Cows/ Buffalos are milked twice a day. The milk produced is placed in containers until the contractor arrives. The smaller establishments do not possess cooling facilities and contractors collect the milk within 15 minutes of it being produced. Nonmilking animals are slaughtered. Foot and mouth disease is common and diseased cows are isolated from the rest of the herd to prevent the spread of the infection. However, as most dairy farms are located very close to each other, the disease is transmitted quickly from animal to animal. Hormone injections e.g. the



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

"Boston" shot, is a regular practice among small dairy farmers, as these make animals produce larger quantities of milk.

Waste is drained using water. It is transported via pipe to a paddock where it is dried. The manure thus produced is collected and sold to waste contractors. Cows are vaccinated seven times a year. Outbreaks of foot and mouth disease at the government establishment are rare and animals are quarantined if infected. The bulls are sold for breeding purposes only.

The industry has a high potential for growth. However, attention needs to be focussed on investment in dairy development, breed improvement, hygiene, disease prevention and care, and quality animal feed production. There is also a need to build the capacity of local dairy farmers in vaccination and the treatment of simple ailments. Ideally, all dairy farmers, milk carriers, dairy food manufacturers, distributors and retailers should be a part of an integrated food safety and quality management system.

SCOPE

These guidelines are applicable to all small, medium, and large size dairy farms.

ENVIRONMENTAL/ SOCIAL / HEALTH / SAFETY ASPECTS

Dairy farms can have significant impacts on the surrounding environment. Issues include discharge of contaminated wastewater, potential of groundwater contamination, improper housekeeping, product hygiene, bad odour and noise, etc. The key issues are discussed below:

SITE LOCATION

Most dairy farms are located within city limits, often inside residential areas, causing aesthetic and pollution related problems. The smell, noise and waste generated from such establishments are a major nuisance for neighbouring residents. The government dairy farm and newer establishments are sited on the outskirts to avoid impact on the surrounding population.

LAND CONTAMINATION

Dairy farms operations do not contaminate land in the detrimental fashion industrial processes do. The use of chemicals is practically non-existent for dairy products; however, caustic soda, hydrogen peroxide, hydrogen chloride, nitric acid etc. may be used for the cleaning and disinfecting of utensils and equipment.

For the most part, the waste produced is organic in nature consisting of wasted feed, animal by-products etc. In the rural areas, this waste is useful as manure to help enrich the soil. However, contamination is a major issue in the urban centres, where small dairy concerns are sited within residential areas. Here contamination is more of an aesthetics issue than one of pollution.

WATER CONTAMINATION

A large volume of discharge and pollution loading from various dairy processes characterizes the generation of wastewater at dairy industries. Dairy wastewater is characterized by high alkalinity,



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

organic matter in terms of BOD and COD, sulphates etc. Dairy products present in the wastewater are rich nutrient for bacteria which biodegrade these compounds aerobically and deplete the dissolved oxygen content of water, making it unfit for aquatic species. The increase in bacterial contamination can result in health problems since the wastewater may contain pathogens from contaminated materials or production processes. Generally, wastewater facilities have not been established at dairy farms and the water is discharged without any treatment. Improper disposal of waste also causes groundwater contamination.

AIR EMISSIONS

If a dairy farm has cold storage facilities, so leakage of cooling agents such as Freons (R12 and R22) will contribute to air pollution. However, odour caused by the improper disposal of waste and decomposition of excess feed is a major problem for surrounding populations.

SOLID WASTE

Most of the solid waste produced by dairy farms is organic in nature, consisting of fecal matter and wasted feed, and can be recycled if collected. The waste produced is not hazardous in nature, but its proper disposal is a matter of concern.

NOISE

Noise from the dairy farm can be a nuisance for neighbouring communities. Major sources of noise are the animals themselves, particularly at milking time, and vehicular movement to transport milk (twice a day) from the dairy farm to the markets

HEALTH, HYGIENE AND SAFETY

Lack of hygiene is a major issue. The dairy farm staff does not always practice sanitary methods and is often not careful about personal hygiene. Milking equipment and utensils are not kept clean and appropriate systems to separate milk from diseased animals are not in place. Due to the absence of cold storage facilities at most small farms, the milk can get spoiled before the contractors come to pick it up.

Product safety during transportation is also a significant issue. Due to unhygienic and inappropriate transportation and preservation methods, milk can get spoiled before reaching its destination. Usually, ice prepared from contaminated water is used to keep the milk chilled. This practice not only adds impurities to the milk, but also adulterates it through the addition of excess water.

MITIGATION MEASURES

SITE LOCATION

1. Dairy farms should be located outside populated areas, preferably outside the city premises;
2. The location and previous use of the dairy farm and the activities of neighbouring properties should be considered in order to minimize the risk of environmental contamination of milk;



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

3. Dairy farms should not be located on the banks of a river/canal or any other water body. Minimum distance between water body (Stream, Canal, River, Tributary of river etc) should be at least 300 meters.
4. Minimum distance between dairy farm and single residential house should be at least 100 meters (except the personal house of the owner of dairy farm) and from population/ residential area the distance should be at least 500 meters. (residential area means cluster of 50 houses and above)
5. Dairy farm should be located 1000 meters away from the educational institute and hospital etc.
6. Dairy farm should be located at least 150 meters away from major road (Road constructed by PKHA & NHA).

LAND CONTAMINATION

1. Cattle holding areas should be kept clean and maintained in a manner that minimizes the risk of pollution.
2. Cattle should be parked in a paved area with a liquid collection system. However, for the safety of cattle it should be ensured that the floor is not slippery.
3. An appropriate effluent disposal system should be in place to keep all dairy shed waste on the farm and out of streams/drains that leave the property.
4. If waste needs to be stored before disposal, it should be collected, preferably in an aerated area, to minimize biodegradation and foul smell and avoid issues of an aesthetic nature.
5. The waste storage area should be sprinkled with crushed limestone (Calcium Carbonate) for disinfection purposes.

WATER CONTAMINATION

1. Dairy farm should have a liquid waste collection system to avoid any water discharges outside the premises.
2. The waste collection system should carry the effluent to a retention pond tank sited away from the milking shed for later discharge.
3. Phosphorus-based cleaning agents should be avoided.
4. Milking animals should not be allowed to consume or have access to contaminated water sources.

AIR EMISSIONS

1. Proper aerated storage areas should be built to minimize the build up of odour.
2. Odour controls (such as absorbents/bio filters etc) should be installed where necessary to achieve acceptable odour quality for nearby residents.
3. Trees should be planted around the dairy farm to provide a barrier against the spread of foul smell or noise originating from the facility.
4. Vehicles used for transportation/ distribution purposes should be well maintained to minimise emissions.



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

SOLID WASTE

1. Dispose the solid waste away from residential area/houses on daily bases.
2. Waste storage areas should be sprinkled with crushed lime (calcium carbonate) for disinfection and also to curtail foul smell.
3. Waste products should be collected for use in low grade products such as animal feed or manure, where this is feasible.

NOISE

1. Where possible, trees should be planted around the dairy farms to block the noise emitted from it.
2. Dairy farm walls should be at least seven feet high.
3. Dairy farms should avoid noisy activities such as vehicular movement during night hours.

HEALTH, HYGIENE AND SAFETY

1. Animals of known health status should be bought and their introduction into the herd controlled;
2. People's access to the dairy farm and milking shed should be limited;
3. Cattle handlers should undergo a regular medical checkup;
4. The dairy farm premises and milking equipment/ utensils should be regularly sterilized. The management should ensure proper insect and rodent control inside the production area;
5. Cattle udders/teats should be cleaned and disinfected regularly;
6. Housed animals should be provided with adequate ventilation to remove excess heat, moisture, dust etc and allow them sufficient space to lie down;
7. Person(s) involved in milking should be healthy. They should not have any open wounds nor suffer from infectious disease;
8. Suitable clean clothes should be worn during milking and hair should be covered;
9. Milk should be stored in hygienic conditions, while awaiting pickup;
10. Milk from sick animals should be separated;
11. The milk containers used during transportation should be regularly cleaned and disinfected/Sterilized;
12. Competent stockman ship is essential and appropriate training should be provided to dairy farm staff; and
13. Milk cooling and storage equipment should be properly installed, cleaned and maintained.



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CLIMATE CHANGE, FORESTRY, ENVIRONMENT
AND WILDLIFE DEPARTMENT
(SECTION ENVIRONMENT)

**SCREENING ASSESMENT FORM/CHECKLIST PERFORMA FOR DAIRY
FARMS/CATTLE FARMS**

(To be filled by Proponent)

S. No.	Assessment Questionnaire	Proponent Reply
1.	Name of the Proponent	
2.	CNIC No of the Proponent	
3.	Address of the Proponent	
4.	Cell No	
5.	Address of the Proposed dairy farm/Cattle farm	
6.	GPS Coordinates of proposed site	
7.	GPS Coordinate of nearest house	
8.	GPS Coordinates of nearest school/hospital/ Madrassa/Masjid/Shrine/Archaeological site (if any)	
9.	Total area of Dairy farm/cattle farm (Covered area & open area in square feet)	
10.	Total Project cost including land & construction cost	
11.	Capacity of Dairy farm/Cattle farm in terms of Nos of animals.	
12.	Distance from the single nearest residential house	
13.	Distance from river/canal/any other water body	
14.	Distance from educational institutes	
15.	Distance from Major road (Road Constructed by NHA & PKHA)	
16.	Number of houses within radius of 500 meters.	



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

S. No.	Assessment Questionnaire	Proponent Reply
17.	Mechanism to control bad odor/smell	
18.	Solid waste/Dairy farm waste safe disposal methods	
19.	Safe discharge mechanism/Plan/method for Liquid effluent of dairy farm	
20.	Detail about available facilities in Cattle/Diary farm.	

(Signature)



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

Undertaking/Affidavit

(To be filled by Proponent)

AFFIDAVIT

I, Mr.-----S/o----- CNIC No:-----
----- resident of village----- Tehsil----- & District-----
-do hereby solemnly affirm and declare that the above mentioned information are true and
correct to the best of my knowledge and belief and that nothing has been kept concealed from
the Environmental Protection Agency (EPA),Khyber Pakhtunkhwa.

-sd-

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

Muhammad Ishaq
Section Officer (Environment)