NWFP Environmental Protection Agency

Environmental Assessment Checklists and Guidelines

Poultry Farms

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1. Introduction

1.1 Scope of the Guidelines

These guidelines are applicable to the future developments of commercial poultry farms having a total cost of Rupees ten million or less.

1.2 How to use these Guidelines

It is suggested that the project proponent should consult the guidelines while planning the project. Once the project design is complete, follow these steps:

Step 1: Provide information on project [use **Section I**]

Step 2: Determine Applicability (*Are you sure that IEE or EIA is not required?*) [use **Section II**]

Step 3: Describe the physical, biological and social environment [use **Section III**]

Step 4: Assess potential impacts and applicable mitigation measures [use **Section IV**]

Step 5: Provide undertaking to the EPA on mitigation measures and compliance [use **Section V**]

Completed form is to be submitted to the NWFP Environmental Protection

Agency for evaluation before commencing any construction on the project. NWFP EPA may request for additional information or decide to undertake visit to the proposed project site in order to assess the environmental impact of the proposed project before granting its approval.

1.3 Glossary

Act means the Pakistan Environmental Protection Act, 1997

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

Regulations means the Pakistan Environmental Protection Agency Review of Initial Environmental Examination and Environment Impact Assessment Regulations, 2000

Rice Hull dry outer covering of rice seed

2. Project Profile

2.1 Project Description

Poultry farms are categorized into two types:

- Broiler poultry farms
- Breeder poultry farms

In the broiler type of farm, chicks are reared into chickens for meat requirements while in breeder chickens are reared to produce eggs. Chicks from hatcheries are brought on to the farms and grown in sheds under a controlled environment and with prescribed diets. Temperature is regulated in accordance with the age of the chick and so is the space requirement. Feed is either purchased pre-mixed or formulated on site.

Poultry farms consist of single or multiple sheds for housing the birds. Each shed is further partitioned into compartments where chickens are kept according to their age. Arrangements for feeding and watering of the birds are made within the sheds. For layers arrangements for laying of the eggs are also made.

Sheds can be made of variety of materials, including wood, metal and bricks. In Pakistan concrete flooring with brick walls and variety of roofing (thatched, mud, fibrous sheeting, or tile or combinations) is common. Orientation of the shed is kept in accordance with the location so that passive control over light and temperature can be maintained.

Ground is whitewashed to deter the insects from the rice hulls, wood shavings or straw, which are used to provide a 100-150 mm layer of litter for the poultry. Wet or broken down litter is replaced immediately and all of it is changed about once a year. The shed itself must be easy to clean as regular cleaning and disinfections are required to ensure protection against build up of disease causing organisms and external parasites such as mites, lice, fleas and ticks.

2.2 Environmental Aspects

During poultry farm operation following environmental issues are usually encountered:

- Disposal of contaminated rice hulls/litter
- Odor from the farm
- Disposal of solid waste
- Contaminated run-off from the farm

Disposal of contaminated rice hulls/litter

Rice hulls/litter or similar material is spread over the ground in poultry farms. It becomes contaminated with the droppings of the chickens. Disposal of this contaminated rice hulls/litter pose some environmental threats. It is rich in organic matter. Improper disposal may lead to breeding of flies and insects, bad odor, and water pollution.

Odor

Water drops over the litter on the floor while chickens drink water from water

troughs or hanging waterers. When this litter becomes wet, it gives rise to an unpleasant odor, which can be a source of annoyance for the workers and nearby communities.

Solid waste

Solid waste generated mainly includes wrappers and packets of medicines used for treatment of chickens' diseases, empty feed bags etc. Waste is usually burnt in the open outside the poultry farm. Smoke emitted could contain such toxic products as dioxin and effect any residents or animal life in the neighborhood.

Run-off

Poultry farms located in hilly areas are often the source of pollution of the streams and rivers. Run-off from the poultry farm carries various pollutants to the stream during rainy season.

2.3 Mitigation Options

Disposal of contaminated litter

- Contaminated litter should be disposed off properly. Options available include converting to compost to be marketed as excellent garden fertilizer and incineration in a proper incinerator.

Odor

- Poultry farms are to be located at least 500 meter away from the human settlements and on the leeward side
- Contaminated or wet litter to be replaced just as quickly as it is generated

Solid waste

- Solid waste is to be handed over to the municipal authorities, buried or incinerated in appropriate incinerator

Run-off

- All waste should be stored in a covered area.
- For large uncovered areas that is likely to contain organic waste, construct a trap for suspended particles.

Environmental Assessment Checklist

Section I: Project Description

File No _____ (To be filled by EPA)

Date _____

General Information

1. Project Name or Title_____
2. Project Proponent (Department, organization, or owner) _____
3. Address _____
4. Telephone _____
5. Fax _____
6. E-mail _____
7. Representative of the Proponent_____
8. Designation _____
9. Name of the person who conducted this assessment _____
10. Designation _____
11. Qualification_____

Project Information

12. Project Location_____
13. Cost of the Project_____
14. Area of the proposed land for the farm

    Total _____ m^2

    Proposed covered _____ m^2

    Open space _____ m^2
15. Brief Project Description _____

    _____

    _____

Please attach a plot plan of the proposed project site showing the location of the key structures, access, utilities, units, etc.

16. Design production capacity of the farm _____
17. Number and qualification of required staff to run the project?_____

    _____

18. What will be the expected water requirement for the project?_____m^3/d
19. What is the proposed source of water? _____
20. Where the wastewater from the unit be disposed? _____
21. Please describe any treatment system planned for the wastewater? _____
    _____
22. Please describe the solid waste expected during operations:

No	**Waste**	**Expected Weekly Quantity**	**Proposed Disposal** (Municipal Dump, Waste Contractor, Recycle, etc.)

Construction

23. Who owns the proposed land for the project? _____
24. What is the present use of the land? _____
25. Are there any squatter settlements on the land? _____
    If yes, please specify
    Number of settlements _____
    Will any compensation be paid to them? _____
26. Are there any structures on the proposed site now? ☐ Yes ☐ No
    If yes, will any structure be demolished? ☐ Yes ☐ No
    If yes, where the demolition waste will be disposed? _____
27. Are there any trees on the proposed site? ☐ Yes ☐ No
    If yes, how many trees will be removed?_____
28. Period of construction (start and end dates) _____
29. Is construction work during the night planned? ☐ Yes ☐ No

Section II: Screening

Is the proposed project located in an ecologically sensitive area?

☐ Yes ☐ No

Is the total cost of the proposed project Rupees 10 million or more?

☐ Yes ☐ No

If the answer to the above questions is yes, then the project would require an initial environmental examination or an environment impact assessment. Refer to the Pakistan Environmental Protection Agency Review of Initial Environmental Examination and Environment Impact Assessment Regulations, 2000 for appropriate category or consult the NWFP EPA.

Section III: Environmental Profile

1. Describe the terrain of the project area: ☐ Flat or Level (Slope < 3%)
   ☐ Level to moderately steep (Slope 3%-30%)
   ☐ Moderately steep to mountainous (Slope > 30%)
2. Are there signs of soil erosion or landslide anywhere within 500 m of the proposed site?

   ☐ Yes ☐ No

   If yes, please describe (where, nature) _____
   _____
3. Is there any surface water body (river, canal, stream, lake, wetland) within 1,000 m of the proposed site?

   ☐ Yes ☐ No

   If yes, describe each water body:

Name (including type, ie, river, canal or stream)	**Dimensions**	**Status and Uses** (Is it polluted? Is domestic or other wastewater discharged to it? What are its uses, eg, agriculture, domestic, industrial, washing, fishery

4. Is there any groundwater well on the proposed site or within 500 m of the proposed site?

   ☐ Yes ☐ No

If yes, describe each well:

Type (Dug well, tube well, hand pump)	**Location** (Village, road, mohalla, etc. and distance from the site)	**Depth and Yield**	**Uses** (Drinking, agriculture, domestic, industrial, washing, livestock)

5. Based on the interview of the surrounding population or a wildlife expert, is any form of wildlife found on, or around the proposed site of the project?

   ☐ Yes

   ☐ No

   If yes, please describe _____

   _____

   Person consulted _____

6. Are there any reserved forest or protected area within 1,000 m of the proposed site?

   ☐ Yes

   ☐ No

   If yes, please describe?_____

7. Please provide the traffic count for all main roads adjacent to the proposed site or roads that will provide access to the site. The count should be based on data collected, for both directions, on at least three typical working days. Use the following format:

Road_____ Count Location _____

	6:00 am-9:00 am	9:00 am-12:00 noon	12:00 noon-3:00 pm	3:00 pm-6:00 pm	6:00 pm-9:00 pm
Large vehicles (trucks, buses, tractor trolleys, Minibuses)					
Medium sized vehicles (Suzuki pickups, cars, jeeps, taxis)					
Small vehicles (Rickshaws, motorcycles, scooters)					
Slow vehicles (animal-driven carts, tongas)					
Others					

(*Please use separate sheet for every road*)

8. What is the present land use in the vicinity (roughly a radius of 500 m) of the proposed site?

	Residential (Thick, Moderate, Sparse)	**Commercial** (Office, Shops, Fuel Stations)	**Open Land** (Parks, Farmlands, unutilized plots, barren land	**Industrial**	**Other**
Description					

(*Please attach a map of the proposed project site, if available, and indicate roughly the area that you have considered for this evaluation*)

9. For any agricultural farmland on the proposed site and a radius of 500 m around it, provide the following information:

   Crop(s) and average yield _____

   Source of irrigation water_____

   Area affected by salinity or water logging _____

10. Please describe all the sensitive receptors within 500 m of the proposed site:

Type (schools, colleges, hospitals, and clinics)	**Name**	**Size** (Number of students or number of beds)	**Location** (Village, road, mohalla, etc.)	**Distance from Site**

11. Roughly, how many houses are within a radius of 500 m of the proposed site?
    _____

12. What proportion of the houses in the area are *pukka, semi-pukka, and* kutcha? _____

13. How are the general hygienic conditions of the project area?

    ☐ Generally clean

    ☐ Fair

    ☐ Poor

14. Is there any bad odor in the project area?

    ☐ Yes

    ☐ No

    What is the source of the odor?_____

15. What are the main sources of income of the surrounding community?_____
    _____

16. Is there any site of cultural importance (graveyard, shrine, mosque, archeological site) within 1,000 m of the proposed scheme?

    ☐ Yes

    ☐ No

    If yes, please describe?_____

17. What are the main existing sources of pollution within a radius of 500 m of the proposed site:

Name of the Source	**Type of Pollution** (Noise, air, water)	**Location** (Village, road, mohalla, etc.)	**Distance from Site**

Section IV: Impact Assessment

Potential Negative Environmental Impacts	*Tick, if relevant*	*Mitigation Measures*	*Tick, if proposed*	*Monitoring*
Disposal of contaminated rice husk	☐	Contaminated rice husk will not be disposed off in open	☐	
		Contaminated rice husk will be sold to farmers for use as fertilizer	☐	
		Contaminated rice husk will be burnt in areas where there are no human settlements	☐	
		Contaminated rice husk will not be disposed off into a water body	☐	
Odor	☐	Poultry farm will be located at least 500 m away from the human settlements and on the leeward side	☐	
		Contaminated rice husk will be replaced frequently	☐	
Solid waste	☐	Solid waste will be handed over to the municipal authorities	☐	
		Solid waste will not be burnt close to human settlements	☐	
Run-off	☐	All waste should be stored in a covered area such that it is not exposed to rain or run-off	☐	
		For large uncovered areas that is likely to contain organic waste, a trap wil be constructed for suspended particles	☐	

Section V: Undertaking

I, _____ (*full name and address*) as proponent for _____ (*name, description and location of project*) do hereby solemnly affirm and declare:

1. The information on the proposed project and the environment provided in Forms I, II and III are correct to the best of my knowledge
2. I fully understand and accept the conditions contained in the Guidelines for _____ (*name, number and version of the guidelines*)
3. I undertake to design, construct and operate the project strictly in accordance with the project described in Form I, submitted with this undertaking.
4. I undertake to implement all mitigation measures and undertake monitoring stated in Form IV, submitted with this undertaking.

Date _____ Signature _____

Name _____

Designation _____

(with official stamp/seal)

Witnesses:

	Signature	Name	Address
1	_____	_____	_____
2	_____	_____	_____