

## CHECKLIST #9 ANIMAL HUSBANDRY

Extensive and intensive animal production and management projects (cattle, poultry, goats, sheep, hogs, camels, wild animals, and so on), using confined, fixed or transhumance systems

### **A. Questions relating to the animal husbandry project site**

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1. What are the land uses, activities and existing infrastructures on the proposed site of the project? What is the land use master plan? How large is the population and the herd? Are the project objectives consistent with government and institutional policies and with the needs, expectations, patterns of consumption and traditional activities of the population? Could the project lead to:
  - changes in ways of life and cultural characteristics (for example, settling of nomad populations without considering the cultural values associated with transhumance of livestock and the adaptive nature of this environmental optimization and management strategy; if traditional herd management practices have not been studied, such as controlled access to water by local authorities in arid regions to limit the size of livestock herds on the basis of available forage, and so on);
  - displacements of the population, loss of territory and/or accentuation of social inequalities (for example, if the characteristics of the division of labour and land are not taken into account; if women or the poorest families are restricted to remote, low-productivity pasture land or to low-income activities, and so on);
  - incompatible uses of land and resources and/or social conflicts associated with values, property rights and land tenure (between users and owners of water sources and plant resources, between farmers and livestock breeders, between nomadic herders and sedentary breeders, between the various uses of livestock (subsistence, transportation, draught power and trade), between common property and private property, poaching problems, and so on);
  - problems associated with the quality and supply of natural resources (water, flora, and so on) and services;
  - a decrease or an improvement in the quality of life;
  - improvement in food security, the nutritional value of diets (increased intake of proteins), agricultural yield (due to animal traction, for instance) and/or increased income for the population and its specific groups depending on market conditions, market opportunities and the development of socio-economic activities;
  - increased community awareness and participation of the population in improving the environment by restoring degraded sites (study and control of animal movements, water conservation measures, erosion control, management follow-up, and so on);
  - optimization of land use through its enhancement for multiple purposes by means of agro-sylvo-pastoral systems that involve, for instance, using manure as fertilizer, combining forage crops and multipurpose trees, using agricultural residues as livestock feed during the dry season, planting live fences, and so on?
  
2. What types of environment and landscape are present in the area? What is their specific importance? Are there bodies of water, waterways, slopes, wooded areas, desertic areas or other vulnerable sites nearby? What are the characteristics of wildlife and livestock (species, abundance, age, nutritional requirements, habitats, and so on)? What are the available sources of water? What are their characteristics in terms of quality, quantity and renewal? What are the characteristics of topography and soils (composition, drainage, and so on)? What are the characteristics of the area's climate (abundance and variation of rainfall, droughts, floods, and so on) and temporal and spatial distribution of vegetation? Could the project have an effect on:
  - environments or sites of economic, ecological, cultural, archaeological or historical importance and the natural resources (water, soil, vegetation, wildlife, and so on) they contain;
  - rare or vulnerable species and/or species of economic, cultural or ecological importance (biodiversity)?

## **B. Questions relating to the animal husbandry project**

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1. What are the different site preparation activities? Will there be demolition of existing buildings, clearing of trees and/or brush, erection of fences, feedlots, manure collection and storage systems, construction of buildings, access roads or water supply points (see appropriate checklists)? What equipment and materials are required? Are they suited to the environment? What species have been selected and what are their origin and characteristics (nutritional requirements, water requirements, growth rate, habitats, reproduction rate, competition and predation, vulnerability, and so on)? Have they been genetically manipulated or selected? What maintenance activities are involved in the project and its management? How will livestock be fed and watered? Will there be resource processing activities (tanneries, slaughterhouses, wool production, and so on; see other relevant documents)? Will there be an increase in population due to migration? Will the project promote spontaneous, unplanned human settlements and/or an unregulated increase in animal populations? Are the size and composition of herds a function of the real, seasonal and temporal availability of water and plant resources, given the various users? Could the project lead to:
  - changes in, encroachments on and/or the destruction of environments or sites of economic, ecological, cultural, archaeological or historical importance and the natural resources they contain (for example, deforestation, desertification and associated climatic changes; destruction of agricultural resources; excessive grazing of natural vegetation, including foliage, fruits, and so on; changes in plant composition; damage to young plants caused by livestock trampling; introduction of domestic animals and/or forage species resulting in a loss of biodiversity, changes in the food chain, competition with native wildlife for habitats, migration routes, food and/or predation, and so on);
  - added or reduced pressures on natural resources (water, flora, and so on) and services;
  - introduction or expansion of forage crops to optimize livestock feeding (see checklist on crop production);
  - any form of overexploitation of plant and water resources that exceeds the environment's carrying capacity, that is, the maximum population that an environment and its components can sustain without compromising their growth, regeneration and roles in ecological regulatory functions (bearing in mind the positive aspects of plant/herbivore relationships, such as seed dispersal and germination, and so on);
  - erosion of fragile or thin soils, on sloping areas or near bodies of water that can be accompanied by increased sedimentation in waters, as a result of destruction of plant cover, failure to provide for vegetated buffer strips, or unregulated, overly frequent and improper burns carried out to eliminate pests and undesirable plant species in favour of species that are palatable to livestock, and so on;
  - compaction of the soil, and changes in its structure, texture, drainage, permeability and/or water-holding capacity due to livestock trampling;
  - depletion of water supplies and degradation of water quality if the number and location of water supply points is not strategically planned, if access is not restricted on the basis of their renewal and/or if access is not prohibited during the wet season when other sources of water are available, if effective contamination prevention measures are not taken, and so on;
  - increased incidence of parasites (such as ticks) and diseases (such as trypanosomiasis, brucellosis, anthrax, fevers, respiratory and skin problems, and so on) in livestock and/or humans caused by inadequate composition of the herd and lack of diversity, pools of stagnant water, water and food contamination, and so on;
  - nuisances (foul odours, noise, dust), risks of accidents, health risks, soil pollution, water pollution (including eutrophication) and/or air pollution due to project activities (improper use of pesticides, antibiotics, hormones, vaccines, epizootic diseases, unsanitary production of milk, faecal coliforms, high concentration of animals on a small area, and so on), harvesting of resources and their subsequent processing;
  - socio-economic and value conflicts if the population's preferences for certain species or their views on genetic selection and manipulation are not taken into account, if there are conflicts between the population's various activities, and so on;

- an increase or a decrease in the local prices of food products and/or forage and an effect on local and regional economies (financial resource management system, credit system, access to markets, start-up of businesses, and so on);
  - sustainable economic development and fair and equitable forms of partnership;
  - involvement of the population and all its specific groups in agreements regarding the use and management of the territory and its resources, payments and control, economic decisions and monitoring of pasture management?
2. More specifically, in the case of confined animal husbandry systems (stables, pens), is there a possibility of:
- overgrazing if overly large quantities of plant resources, intended for too large a confined livestock herd, are harvested on too small an area, whether it is the dry season or not, without considering the site's carrying capacity;
  - surface water and groundwater pollution, methane production, foul odours, and health risks caused by improper storage, collection and use of manure?
3. More specifically, in the case of animal husbandry using transhumance systems, is there a possibility of:
- overgrazing, if the herd is too large; if livestock movements are not synchronized with plant growth and on the basis of the characteristics of common property; if a grazing rotation system is not implemented and if the duration and period of grazing are not regulated to allow plant regrowth and renewal of water sources; if no provision is made for combining domestic species with different food preferences depending on the characteristics of the environment; if provision is not made for deferred grazing areas when necessary, and so on?