



Keskinođlu Tavukculuk ve Damizlik  
Isletmeleri Sanayi ve Ticaret Anonim  
Sirketi, Turkey

Egg-Laying Poultry Facility Project  
Non-Technical Summary

Prepared for:  
**Kesinoglu**  
**Akhisar, Turkey**

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# 1 Introduction

Keskinöđlu Tavukculuk ve Damizlik Isletmeleri Sanayi ve Ticaret Anonim Sirketi (Keskinöđlu or “the Company”) has plans to expand its current production capacity including poultry breeding, egg production and slaughtering within the Akhisar area of Turkey. When the expansion programme is completed, it will increase Keskinöđlu’s egg production capacity from 2 to 5 million eggs per day.

Keskinöđlu is seeking financing from the European Bank for Reconstruction and Development (EBRD) for its expansion programme. The loan from the EBRD will support the Company’s capacity expansion programme for 2011-2012 including:

- Cogeneration: New co-generation plant at the Organised Industrial Zone (OIZ) Akhisar and upgrade to the existing co-generation plant at the current processing site at Akhisar;
- Auto warehouse for cold storage adjacent to the current processing site at Akhisar;
- Egg Production: Increased egg production and egg packing plant at Rahmiye;
- Layer Rearing: Conversion of existing broiler breeding houses to layer rearing at Kapakli is planned, providing a total of 900,000 birds (rearing) in 10 houses;
- Hatchery: New hatchery (3rd phase) at Kayislar;
- Egg breaking and pasteurisation: New egg breaking and pasteurisation unit adjacent to the current processing site at Akhisar.
- Manure drying system: An overall environmental improvement (aimed at odour reduction) across all cage houses.
- Live bird handling modernization: An overall environmental improvement for the transfer of broilers from the rearing farms to the slaughterhouse.

As a next step, Keskinöđlu has plans to continue with its investments in 2013 to further contribute to the industrialisation of its vertically integrated activities by construction of an industrial slaughterhouse, and further expansion of the Kayislar hatchery and Osmançali breeding facility. At this stage, Keskinöđlu is not seeking finance from the EBRD for these facilities.

This document provides a Non-Technical Summary (NTS) for Keskinöđlu’s expansion programme ) as part of the Company’s environmental and social disclosure programme in line with international best practice requirements, and undertaken in addition to all necessary permits as required by Turkish legislative requirements. It has been prepared as part of a package of documents that have been released in the public domain, with the purpose of providing an overview of the Project and summarising the main potential environmental and social impacts and Keskinöđlu’s approach to the management of those impacts.

## 2 Project Description

### 2.1 Overview

Keskinoğlu is the largest Turkish egg producer and exporter as well as a leading poultry meat producer in Turkey with estimated sales of ca. EUR 268m in 2010. Company activities are conducted at 16 different locations, all within a 10km radius of Akhisar, Turkey.

Keskinoğlu's current operational facilities include:

- Processing Site – approximately 8.3km to the south-west of Akhisar town centre, comprising the slaughterhouse, processing, rendering plant, wastewater treatment plant, further processing (cooked products), co-generation plant, packing and distribution of meat products;
- Main Campus – located approximately 5km to the south-west of Akhisar town centre, comprising a hatchery, egg laying houses, egg box production, egg packing, manure processing plant, feed production, wind turbine and general storage;
- Organised Industrial Zone (OIZ) – located to the west of the Processing Site on the north-eastern area of the OIZ, approximately 7.8km to the south-west of Akhisar town centre. Comprising feed production plant, new egg box production (due to open end 2012) and project construction areas (see below);
- A second manure processing plant and layer rearing house located near Kapakli, 12km south of the Processing Plant;
- Breeder farms (both layer and broiler) at Kuyucak, Kemiklidere, Mecidiye, Pember, Bordo and Sergirdim;
- A hatchery at Kayislar;
- Laying hen houses at Rahmiye and Kayalioglu; and
- Akhisar Gida broiler rearing farm.

A map showing the location of the planned upgrades considered within the capacity expansion programme (listed in Section 1) are presented in Figure 1.

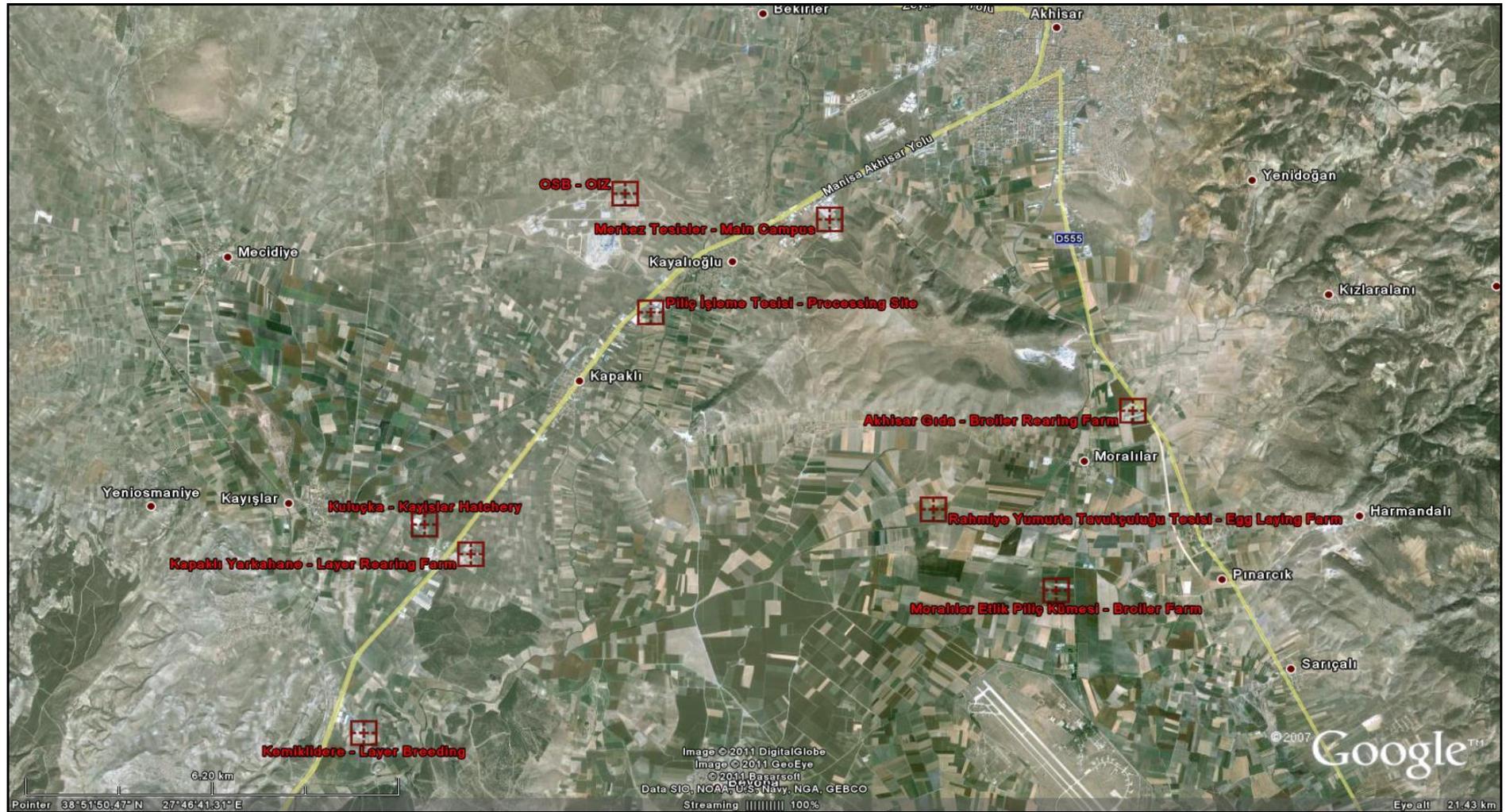


Figure 1. Locations of facilities of Keskinoğlu including the Egg-Laying Poultry Facility Project Area

## 2.2 Environmental Setting

Akhisar is located in the Manisa province in the Aegean region of western Turkey at 38°55'05"N 027°50'15"E. It has an elevation of approximately 93m (305ft) and has a population of around 100,900 (2009). The surrounding area is largely rural with some scattered villages. The district is located on the Akhisar plain. The fertile alluvial soil produces about 10% of total Turkish tobacco production, whilst olives are also an important crop grown in the area. The Demirci and Golcuk mountains are present in the north of the area and the Yunt mountains on the west.

In the Aegean region, rainfall averages 645 mm (25 inches) per year and temperatures range from -8C (18F) to 43C (109F), with average humidity of 69%. Turkey is in a seismically active region and Akhisar experiences periodic small earthquake activity. On the 4<sup>th</sup> August 2011 a 3.5 magnitude earthquake was recorded at Akhisar by Bogazici University Kandilli Observatory and Earthquake Research Institute.

Gordük Creek flows from north to south in the area and joins the Gediz River approximately 40km to the south-west of Akhisar at Yenimahmudiye. From maps viewed and discussions with site personnel, Gordük Creek is the main watercourse in the area of Akhisar and passes directly to the east of the Keskinöglü Processing Site. According to site personnel, industrial sites in Akhisar (including the Keskinöglü Processing Site) and the Akhisar municipal waste water treatment plant discharge into Gordük Creek; it is occasionally used for abstraction by local farmers for irrigation purposes.

The Hydrogeology Map of Turkey developed by the General Directorate of Mineral Research and Exploration classifies the region as having rich aquifer (groundwater resources). Groundwater is the main source of water supply in the area. The Keskinöglü facilities get their water supply from groundwater wells, which are all permitted by the State Hydraulic Works.

The facilities in the three main campuses (and these campuses themselves) are all sites designated for industrial activities in the development plans of the municipality. The OIZ has its own site selection process and infrastructure establishment. In this regard the Sanitary Protection Zones for all the facilities were defined together with the commission established by the competent authorities including the municipality, the governorship and related provincial directorates of the Ministries. The width of the zones show differences from facility to facility (based on the activity conducted), but these sanitary protection zones are included in the fence area for each facility, which is the general requirement so that no other activities are allowed in these zones. All the facilities in operation have establishment and operation licenses/permits.

The Project areas are not known to be located within any sensitive, protected and/or conservation areas including national parks, natural parks, wetlands, nature conservation areas, wildlife conservation areas, biogenetic reserve areas, biosphere areas and tourism areas. There are also no known monuments or cultural artefacts within the Project areas.

## 2.3 Socio-economic Setting

Manisa Province of Turkey is located within the Aegean Region, which is home to 15% of the industrial production in the country. Manisa is the second largest trade centre in the Aegean Region after Izmir. The Province has always been an attraction for trade of various

products, textile industry, food items, leatherying and production of agricultural equipment. In the last years, the Province has also been open to foreign investments, with its growing industrial potential.

There are highways passing through Manisa, which connect İzmir to İstanbul and Ankara, which are the three largest cities in Turkey. These roads are within the main transportation networks of Turkey considering the traffic load. In addition being on the major highways, Manisa is directly connected to the railway system, which extends from İzmir to Ankara.

The heart of industry in Akhisar District is the Akhisar Organised Industrial Zone (OIZ), which is an important factor in lowering the rates of unemployment in the district and its surroundings. The type of industries within the OIZ range from agricultural crop processing to stock breeding farms, from Meat and Fish Authority facilities to textile plants, all of which are considered at worldwide standards in terms of their applicable technology and employment capacity.

The majority of Akhisar's population consists of immigrants from the Balkans. Furthermore, Akhisar's district centre is highly populated with Roma. In the past 10 years, there has been an extensive labour force migration to the district from Eastern Anatolia and South-eastern Anatolia. These migrations took place due to the job opportunities in the area both in the industrial sector, such as Keskinöglü, and the agriculture sector. There have been no considerable problems between different ethnic groups.

Distances from expansion sites to the nearest settlements are given in Table 1.

**Table 1. Distance to Settlements**

Site	Distance	Description
Processing Site	0.8km	The site is adjacent to the current operational site, located on a main highway. Nearest settlement is Kayalioglu.
OIZ, Akhisar	1.7km	The site is in a designated industrial area, surrounded by agricultural land. Nearest settlement is Kayalioglu.
Rahmiye Facility	2.8km	Nearest settlement is a small rural village. Whilst traffic from the facility will utilise the roadways passing through the settlement, the production facility is located in an area surrounded by farmland.
Kayislar	1.4km	The site is located at the current operational facility and is surrounded by agricultural land. Nearest settlement is Kayislar, a predominantly rural village.
Kapakli	2.0km	The site is located at Kaynak in Kapakli village. The closest settlements to the site are Kayislar and Kapakli villages, which are located at 2 km north-west and 2.6 km north-east of the Project site respectively

## 3 Summary of Overall Findings

### 3.1 Overview

The following are the key findings of the Environmental and Social Due Diligence (ESDD) and the proposed mitigation measures, where applicable to project sites. Findings are based on information obtained during a site reconnaissance of selected Keskinoğlu operations during the week of 1-5 August, 2010 and interviews with Keskinoğlu personnel held at this time. Sites visited included the Processing Site (slaughterhouse, processing, further processing (cooking), wastewater treatment, rendering and existing co-generation plant), Main Campus (feed factory, viol manufacture, egg sorting and packing, manure drying pilot plant and manure plant), Organized Industrial Zone (construction works for new viol plant, new logistics centre and new co-generation plant), free laying hen rearing house at Kayalioglu (under construction), farmers visit (to observe live bird handling), Kayislar Hatchery, Kemiklidere layer breeding house, Kuyucak broiler breeding house (under construction), Akhisar Gida broiler rearing house and Rahmiye laying hen house.

### 3.2 Current Operations

The results of the following findings have been primarily addressed through the Environmental and Social Action Plan (ESAP) as described in Section 4.1 below.

Keskinoglu operations are not currently certified to a formal **environmental management** system (EMS). Staff members have designated environmental responsibilities and are keen to improve environmental management across the company, including the implementation of a formal EMS.

A number of potential **compliance and best practices issues** were identified during the ESDD. These include:

**Permitting:** Keskinoglu received a fine from Provincial Directorate of the Ministry of Environment and Forestry (Ministry) in June 2010 relating to the Main Campus as they did not have an emissions permit. Since then, the corrective actions required by the Ministry have been taken. The facility is currently working on the required revisions to get the overall environmental permit. An emissions permit is also required for the Processing Site.

**Waste Management:** Non-compliance issues were noted relating to the temporary storage of waste oils, hazardous wastes, and construction and demolition wastes on the Processing Site; there are compliance issues for on-site handling of the contaminated packaging wastes and sending them for recycling; and, it was observed at the Rahmiye site that solid wastes (general waste) were being disposed of by on-site burial without any controls. Medical wastes are also collected by the Municipality for disposal with the general waste. Waste management and reduction will be included in the environmental management system.

**Packaging Waste:** Cardboard boxes are widely used for packaging. The company has identified this and is in the early stages of reviewing this cardboard usage with a view to using reusable plastic trays.

**Wastewater:** There is a main wastewater treatment plant at the Processing Site where wastewaters are treated prior to discharge to Gorduk Creek. Whilst noted to be in compliance with the Turkish regulated discharge consent, the observations made near

Gorduk Creek both upstream and downstream of the Processing facility discharge showed that there are considerable differences in the appearance of the water. The stream is not monitored by the company. Based on these visual observations (in the absence of formal sampling of the receiving water) it is considered that the discharge to Gorduk Creek does not meet the requirements of the EU Urban Wastewater Treatment Directive (91/271/EEC). The improvement of operation of the Wastewater Treatment Plant is included in the ESAP.

**Water Supply:** It was understood that water supply is closely monitored by Keskinoglu and the required quality water is being supplied to processing units as well as broiler and layer facilities. All water supply boreholes are subject to a permit from the Local Authority.

**Planning and Reporting:** . According to Turkish Legislation, construction activities cannot start before obtaining an “EIA Positive Decision” and obtaining necessary construction permits following that decision. For the Rahmiye layer hen facility, however, operations at 3 layer houses and construction activities at two other plots commenced prior to the EIA Positive Decision was taken in January 2012.

**Hazardous Materials Storage:** In general secondary containment was not provided for hazardous materials storage (both bulk and small scale), in addition, redundant tanks were present which may still contain products and a full inventory of all hazardous materials stored was not available. The improvement of hazardous materials storage (including the provision of secondary containment and removal of redundant tanks) is included in the ESAP.

**Asbestos Containing Materials:** The Company has not undertaken any asbestos surveys and have not implemented an asbestos management plan. However, potential corrugated asbestos cement roofing sheets were observed by ENVIRON to be present at the viol factory (main campus), manure plant (main campus) and the Akhisar Gida broiler rearing houses where roofing material was in the process of being replaced by a building contractor.

**Contaminated Land and Groundwater:** ENVIRON identified the following potential areas of concern (PAOC) associated with both current and historical activities at the sites visited:

- Lack of insight into historic land use at the sites and surrounding premises which may have impact soil and/or groundwater quality;
- Current site uses (leakage and spills of oil, lack of adequate secondary containment, lack of controlled site drainage, etc.)
- Presence of former and current transformers and electrical substations;
- Inadequate waste storage at the processing site, in particular the observation of open oil drum storage on unsurfaced ground;
- Waste burial practice observed at Rahmiye; and
- Poor integrity of potential ACM roofing material on unsurfaced ground at Akhisar Gida.

All these items will be included in the Environmental Management Plan for current and on-going management.

**Energy Saving:** The company is aware of the need to reduce its carbon footprint and has embarked on some energy and carbon saving projects such as switching to energy saving lighting, heat recovery from the rendering plant to produce hot water, and swapping coal or fuel oil boilers to ones using natural gas.

**Health & Safety:** From site inspections undertaken, various poor H&S practices were observed. However, no significant issues of concern were reported by the company representatives. Various improved health and safety practices and programmes are included in the ESAP.

### 3.3 Planned/Future Operations

The following comprise the Project sites/activities..

### 3.4 Cogeneration Plant

#### *Facility Description*

A new cogeneration plant, comprising two gas fired engines housed in a concrete building, is in the Organised Industrial Zone (OIZ), Akhisar. It will generate electricity (6MW) from the burning of natural gas within the two engines. The electricity will then be used to power Keskinoglu's operations at the OIZ, including the new egg box manufacturing plant.

Improvements to the current cogeneration plant located on the Processing Site are also being planned. This would involve the installation of a further three engines with the construction of a new concrete base and installation of equipment. This is intended to power the new egg pasteurisation unit and auto warehouse.



#### ***Environmental Impact Assessment (EIA) Status, Impacts and Mitigation Measures***

The new cogeneration plant and the improvements in the present plant are exempt from EIA based on Turkish EIA Regulation due to their low capacity. A letter has been received from the Provincial Directorate of the Ministry of Environment and Forestry (Manisa) to confirm that the project is exempt from EIA so there is no additional work needed with regard to EIA.

No significant impacts are expected during construction or operation. Construction would be small scale for this facility which can cause noise, dust, waste generation and socio-economic impacts (which would be mainly beneficial). For mitigating construction phase impacts for all facilities construction environmental management plans (including health and safety and monitoring) should be prepared and implemented in all construction activities. The major impacts during operation would be air emissions, water use, and waste generated. Since natural gas is used the air emissions would be of limited significance. The water would be supplied from groundwater from artesian wells with permits. The wastes

would be collected such that waste minimization and recycling would be given attention and otherwise wastes would be disposed by the municipality. Wastewater would be sent to the sewage system of OIZ.

### **3.5 Auto Warehouse for Cold Storage**

#### ***Facility Description***

Located on parcel of land adjacent to the current Processing Site, this will comprise a warehouse for packaged meat products produced from the company's slaughterhouse and processing plant. It will have space for 10,000 pallets and have a freezer unit using ammonia gas systems.

#### ***EIA Status, Impacts and Mitigation Measures***

The new auto warehouse for cold storage is exempt from EIA based on Turkish EIA Regulation due to the low capacity. A letter has been received from the Provincial Directorate of the Ministry of Environment and Forestry (Manisa) to confirm that the project is exempt from EIA so there is no additional work needed with regard to EIA.

No significant impacts are expected during construction or operation. Construction would be small scale for this facility which can cause noise, dust, waste generation and socio-economic impacts (which would be mainly beneficial). For mitigating construction phase impacts for all facilities construction environmental management plans (including monitoring) should be prepared and implemented in all construction activities. During operation the adjacent infrastructure of the Processing Site would be used for managing the wastes and wastewaters from this facility.

### **3.6 Egg Production**

#### ***Facility Description***

Keskinöglu plan to construct an egg packing plant and a further 18 egg laying houses at Rahmiye where 3 million layer hens will be placed. This is in addition to the 3 houses currently present here.



It is planned to rear 3,530,131 laying hens within the Rahmiye Project, which covers a total area of 34,148 m<sup>2</sup>. The whole project area is considered as “Absolute Agricultural Land”. The permit to use the land for agricultural purposes was acquired under the provision of the Law on Soil Conservation and Land Use, with the condition that the necessary measures will be taken in order not to impact neighbouring lands and agricultural practices.

### ***EIA Status, Impacts and Mitigation Measures***

The EIA Positive Decision for Rahmiye was obtained in January 2012.

The **construction phase** primarily causes impacts from site preparation activities such as clearing, excavation, earthmoving, dewatering, temporary workshop areas, and developing borrow and fill areas (if required). During the construction, environmental and social impacts to be caused will be the typical impacts for any small/medium-scale construction project. Dust may be emitted from general site works, road improvements and transportation. Workers, inhabitants in residential areas (although some distance from the site) as well as local flora and fauna could be affected. Due to the distance to the settlement, noise from construction activities is not considered to present an issue of concern. Accidental spills of fuels or other materials could contaminate soils and waters. Construction of buildings and facilities will generate construction waste. In addition, solid wastes will be generated at site, although with little expected to be hazardous. Generation of local employment is one of the social benefits associated with the construction activities and should be treated as a positive impact if these construction works are contracted to local companies. Full details are provided in the disclosed Supplementary Information Pack.



The preparation and implementation of Construction Environmental Management Plans (CEMPs) would provide the chance to manage the impacts in a systematic way. The CEMPs would cover waste, emissions, water and wastewater, traffic and health and safety management. In addition, controlled access to site would contribute to community health and safety management.

During the **operational phase**, impacts will be typical of those specific to the poultry production industry, including the production of solid waste, wastewater management, emissions to air, ammonia and odours, energy and water resource consumption, hazardous materials and animal diseases. It is anticipated that the proposed facility will positively affect the living conditions of the local population by decreasing unemployment, causing a growth of overall income of the population, improving living standards and by providing additional opportunities for prospective development of rural settlements, implementation of social programs. Full details are provided in the disclosed Supplementary Information Pack.

A summary of actions is described in Section 4.

### **3.7 Hatchery**

#### ***Facility Description***

This project relates to the construction of a 3<sup>rd</sup> egg hatchery unit at the company site at Kayislar. The new hatchery will be operated in the same way as the current hatcheries at Kayislar where fertilised eggs are kept for 21 days for hatching. Once hatched, chicks are immunised and taken to the company's rearing farms.



#### ***Impacts and Mitigation Measures***

The hatchery is exempt from EIA based on Turkish EIA Regulation. A letter has been received from the Provincial Directorate of the Ministry of Environment and Forestry (Manisa) to confirm that the project is exempt from EIA so there is no additional work needed with regard to EIA.

This would be the third unit at this site and no additional impacts that would need a different management than the present units are of concern.

### 3.8 Egg Breaking and Pasteurization

#### *Facility Description*

The new egg breaking and pasteurization facility will be located on a parcel of land adjacent to the current Processing Site. Once complete it is intended to process 864,000 eggs per day for packaging and sale as liquid egg. Once constructed, this unit will use the existing wastewater treatment plant, rendering plant (for processing of egg shells) and co-generation unit (for electricity supply) located on the current Processing Site. Water will be supplied by boreholes located at Rahmiye via a 3.5km transmission line.

#### *Impacts and Mitigation Measures*

The new egg breaking and pasteurization facility is exempt from EIA based on Turkish EIA Regulation. A letter has been received from the Provincial Directorate of the Ministry of Environment and Forestry (Manisa) to confirm that the project is exempt from EIA so there is no additional work needed with regard to EIA.

The wastewaters and wastes that would be generated would go to the present wastewater treatment plant and rendering plant at the adjacent Processing Site. The rendering plant is modern and would therefore be capable of handling the increased material; the Company plans to improve the performance of the wastewater treatment plant in order to meet the increased demand. The electricity would be supplied from the existing co-generation unit so related impacts would not be of concern either.

### 3.9 Logistics Centre

#### *Facility Description*

Located at the OIZ, this will provide a 1,500m<sup>2</sup> warehousing unit plus the purchase of 15 refrigerated lorries. Keskinöglu products will be despatched from here to a range of customers.



#### *Impacts and Mitigation Measures*

This project is exempt from EIA based on Turkish EIA Regulation. Increases in the traffic load would be managed through a traffic management plan. However, extra traffic load would not be significant when the Manisa Akhisar state highway is considered connecting the OIZ to the Processing Site and the Main Campus.

### 3.10 Manure Drying System

#### *Facility Description*

This project represents an overall environmental improvement (aimed at odour reduction) across all cage houses. A pilot plant is currently in operation at two egg laying houses at the Main Campus whereby chicken manure from the hen houses is collected on a conveyor system and dried for 12 hours on a system of 4 “floors”; a total of 2 days drying. It is intended to decrease the humidity from 70% to 20%, with the resulting manure taken to the existing fertiliser factory.



#### *Impacts and Mitigation Measures*

Once the pilot plant is proved to be successful, this project would be implemented to cage houses. With the decreased humidity, both the odour problem would be decreased and handling/management of manure would be more effective and efficient. This would also contribute to decrease the odour impacts of the fertiliser factory.

### 3.11 Live Bird Handling Modernization

#### *Description*

This project represents an overall improvement for the transfer of broiler chickens from the rearing houses into crates to transport to the slaughterhouse. Keskinoğlu plan to implement the use of specially designed forklifts to enable the packing of birds within the barns to crates and then the transfer of crates to the lorry via the forklift.

The company currently collect birds manually. Chicken catchers are sent in and pick up about 6 birds at a time by the feet and load them into cages on the back of a truck. This causes some distress and discomfort to the birds while they are being collected. The company are looking to invest in a pallet truck which is capable of going into the broiler house.



### ***Impacts and Mitigation Measures***

The company will be able to stack the transport cages on the pallet truck which will reduce the amount of distance the chicken catcher has to walk holding the birds upside down. It also means that the birds can be caught and caged in the barn in a semi dark environment which causes less stress to the birds.

### **3.12 Layer Rearing Facility at Kapakli**

#### **Facility Description**

The Project will involve the conversion of the existing Broiler Breeding Facility (having a capacity of 40,000 birds per production cycle in 10 breeding houses) to a Layer Rearing Facility with the improvements to be made on existing houses to install appropriate cage systems. The Project will not entail construction of any additional closed buildings (i.e. houses) so that the number and size (i.e. height and footprint) of the existing houses will be maintained. The Project may be described as a change in the existing operations and construction activities will be limited to the conversion of the existing houses and facilities and upgrade and improvements to operational systems (e.g. heating, ventilation).

This facility will be integrated with other Keskinoglu operations for supply of chicks and feed, management and disposal of manure and distribution of mature layers.

### **3.13 EIA Status, Impacts and Mitigation Measures**

An EIA process has been completed for the proposed conversion of the existing broiler breeding facility to a layer rearing facility at Kapakli. The EIA covers the conversion and upgrade of the existing buildings and states that no new construction is required. The Final EIA Report has been approved by the Ministry. Under normal conditions, this guarantees the issuance of EIA Positive Decision by the Ministry.

The Kapakli EIA Report includes consideration of the full range of environmental issues that would be expected in an EIA of this kind (e.g. Biological Environment, Geology, Water Environment, Water Use and Wastewater Management, Waste Management, Air Quality, Noise Management, Hygiene and Health Aspects, Socio-economics) however there are a number of areas where further supplementary information would be required to support some of the assessment results. The Supplementary Information Pack together with the ESAP addresses these issues.

There will be no new construction required as part of the conversion of existing broiler breeding facilities to layer rearing facilities, however limited impacts typical to any small/medium-scale construction may be expected during the installation of project boiler houses; boiler emission stacks; septic and waste water tanks; external areas surfacing; feed silos; drainage infrastructure. The Project will not involve any excavation or fill activities during the construction phase as the construction activities will be limited to the conversion and improvements to be made to the existing houses and facilities. Additionally, all the improvement works will be conducted indoors (i.e. within the houses). Therefore, air emissions (e.g. dust or gaseous emissions) will not be a concern during the construction phase of the Project. Due to the distance to the settlement, noise from construction activities is not considered to present an issue of concern. Accidental spills of fuels or other materials could contaminate soils and waters. Construction of buildings and facilities will generate construction waste. In addition, solid wastes will be generated at site, although with little expected to be hazardous. Generation of local employment is one of the social benefits associated with the construction activities and should be treated as a positive impact if these construction works are contracted to local companies. Full details are provided in the disclosed Supplementary Information Pack.

As in the case of Rahmiye, the preparation and implementation of Construction Environmental Management Plans (CEMPs) would provide the chance to manage the impacts in a systematic way.

During the **operational phase**, impacts will be typical of those specific to the poultry production industry, including the production of solid waste, wastewater management, emissions to air, ammonia and odours, energy and water resource consumption, hazardous materials and animal diseases. It is anticipated that the proposed facility will positively affect the living conditions of the local population by decreasing unemployment, causing a growth of overall income of the population, improving living standards and by providing additional opportunities for prospective development of rural settlements, implementation of social programs. Full details are provided in the disclosed Supplementary Information Pack.

A summary of actions is described in Section 4.

### **3.13 Cumulative Impacts**

The cumulative impacts are generally not considered in the EIA studies for poultry production and processing facilities. This is because the EIA studies are much more focused on the site of the specific project and where the impact areas are not coinciding, the impacts are not considered together.

From a review of the Rahmiye EIA, there is no consideration of cumulative impacts. Based on the location of the facility and the current use of the site, it is not expected that there would be any significant cumulative impact apart from the project specific impacts.

If looking at the Project as a whole, the proposed facilities/upgrades are located at scattered locations and implementation of each project has an effect on the other projects since they all serve for increasing output production and it is a chain process starting from breeding to end product. Thus, even these projects can be assessed together in the form of cumulative assessment. The cumulative impacts in general have to be addressed based/focused on the sensitive environment to be impacted.

Particular issues worthy of consideration include:

- Increased traffic movements. When it is assessed from more of a macro scale, there might be impacts on the traffic load. This would mainly be of concern for the main roads in terms of cumulative impacts. The proposed processing facilities are on main highways so the increase in traffic load is not expected to create significant impact on the capacity of these highways.
- Management of manure (and in particular the availability of agricultural land to accommodate manure) - the Company already operates two manure plants and produces fertilizers and their estimation is that they have sufficient means to manage the manure to be produced.
- The risks of cross contamination between sites and facilities to prevent the spread of infectious disease between animals (including disposal of diseased animals). In all its facilities the Company conducts serious biosecurity measures to minimize any risk of cross contamination and the regulatory distances to residential areas and other such facilities are considered for establishing such facilities. Thus, it can be anticipated that this risk in terms of cumulative impacts would be minimized.
- Pressure on infrastructure (roads, rail, waste reception facilities, healthcare providers). During the site visit the Company representatives stated that especially for waste and wastewater management there is already sufficient capacity in the available facilities. In this regard there would be some pressure on traffic, but the main highways are expected to carry these loads without significant risks.
- Socio-economic impacts including employment and inflationary pressures. The socio-economic impacts assessed by the company considers the whole district so it can be counted to consider these impacts to a degree.
- Water use. The impacts on water use is one of the important issues for the whole region, but all boreholes used for water extraction from groundwater are permitted by the State Hydraulic Works as the competent authority for use of water resources. In issuing these permits they have to take into account the water availability and overall use in the area.
- Air emissions including odours. The facilities are of a sufficient distance to each other that a cumulative effect is not expected.

## 4 Summary of Actions

### 4.1 Environmental and Social Action Plan (ESAP)

The environmental assessment work identified a number of potential impacts that require careful management through the preparation of new programmes or specific actions. These are captured in the ESAP which has been disclosed as part of the disclosure package. The Company has committed to implement the ESAP in full if EBRD decide fund the Project.

One of the overarching requirements of the ESAP is the implementation of an accredited environmental management system (EMS) and formal appointment of an Environmental and Health and Safety Manager/Team. The EMS will provide a formal framework for environmental management, monitoring and on-going environmental improvement for which the company can be accountable. Under this EMS the company should include other items listed in the ESAP in particular training for staff, implementation of Construction Environmental Management Plans (CEMPs) for all construction activities, auditing of construction contractors and current operations, waste, water and energy reduction projects and the monitoring of compliance with environmental permits.

The ESAP also requires the completion of all required EIA works and studies for the Rahmiye project and obtaining an EIA Positive Decision from the Ministry of Environment and Urban Planning and the implementation of the Stakeholder Engagement Plan (see Section 4.2 below).

### 4.2 Stakeholder Engagement Plan (SEP)

In accordance with best international practice (EBRD's Performance Requirement 10 'Information Disclosure and Stakeholder Engagement' for Category A projects), Keskinöglu has developed a Stakeholder Engagement Plan (SEP) to outline the Project's plans for disclosure and consultation as part of the overall ESIA process.

#### Summary of Previous Stakeholder Activities

Keskinöglu carried out a Public Participation Meeting on May 24, 2011 in Rahmiye Village at Muhtarin Kahvehanesi. The objective of the meeting was defined as informing local people about the investment and to gain their opinions and suggestions with respect to the project. The only concern raised during the meeting was noted as flies that might increase in number due to the planned facility. However, it was explained to the public that the manure drying system will be in place to prevent any negative impacts.

In line with the national Environmental Impact Assessment Regulation, a public participation meeting for the Layer Rearing facility was held in Kapakli village in November 2011. The aim of the meeting was to inform local people about the potential impacts of the Project and measures proposed to be taken to mitigate those impacts and receive their views and recommendations to be considered throughout the EIA process. The prominent subjects raised by local people during the meeting covered concerns about manure and odour management issues. These concerns were taken into consideration in the scope of EIA studies and detailed descriptions about the measures to be taken are provided in the EIA Report.

All other activities carried out by Keskinöglu to date were undertaken according to the local requirements and with respect to consultation practices in the region. The new project allows

Keskinöglü the opportunity to develop a more structured approach to information disclosure and public consultation. In addition, a new mechanism for handling public complaints and grievances, should they arise, has been developed.

### **Future Consultation Activities**

Stakeholders have been identified as detailed in the SEP. The stakeholders are individuals, entities and organizations that may be directly or indirectly affected by the Project in a positive or negative way, and who wish to express their views, concerns, suggestions and opinions about the Project and would like their input to be taken into consideration.

During construction Keskinöglü will participate in disclosure and consultation for the new developments to all stakeholders concerned and the public as a whole. Key environmental and social impact assessment documents (a 'disclosure package' of which this document forms part) will be released into the public domain to provide a basis for informed consultation. A grievance procedure (see Grievance Form below) will remain in place throughout the life of the Project.

## Public Grievance Form

<b>Reference No:</b>	
<b>Full Name</b>	
<b>Contact Details</b> <b>Please mark how you wish to be contacted (mail, telephone, e-mail).</b>	<input type="checkbox"/> By Post: Please provide mailing address: _____ _____ _____ <input type="checkbox"/> By Telephone: _____ <input type="checkbox"/> By E-mail _____
<b>Preferred Language for communication</b>	<input type="checkbox"/> Turkish <input type="checkbox"/> English <input type="checkbox"/> Other (.....)
<b>Confidential YES /NO</b>	
Grievance lodged (please underline as appropriate) : in person, by phone, at community meeting, by mail, by email, <u>other (please describe)</u> .....	
Confirm that the Grievance has been acknowledged and a copy of this form provided to the complainant? Yes/No ..... Date: .....	
<b>Description of Incident or Grievance:</b> What happened? Where did it happen? Who did it happen to? What is the result of the problem?	
<b>Date of Incident/Grievance</b>	
	<input type="checkbox"/> <b>One time incident/grievance (date _____)</b> <input type="checkbox"/> <b>Happened more than once (how many times? _____)</b> <input type="checkbox"/> <b>On-going (currently experiencing problem)</b>
<b>What would you like to see happen to resolve the problem?</b>	
Response	
Date	
Action Under Taken	
Name and Signature of the officer	
Grievance Closed	
Date	Signed off

## 5 Summary

Project is largely concerned with the expansion and upgrade of existing sites and activities. It has the potential to generate a number of adverse social and environmental impacts although these will be either short-term and/or relatively minor if managed properly.

The key negative impacts are presented in the table below along with a summary of mitigation measures and actions required to address the impacts.

**Table 2. Summary of Impacts and Mitigation Measures**

Potential Impact	Actions/Mitigation Measures
Demolition and construction activities	Preparation and implementation of CEMPs, good construction practice and monitoring including: <ul style="list-style-type: none"> <li>- Waste management for non-hazardous/hazardous wastes;</li> <li>- Traffic management;</li> <li>- Good housekeeping and Health and safety practices</li> <li>- A code of conduct for construction workers; and</li> <li>- Site reinstatement following completion of works</li> </ul>
Animal welfare	Address animal welfare policies and incorporate the new EU policies to meet the higher standards being introduced in Jan 2012.
Groundwater and soil contamination	Obtaining permits and regular monitoring.
Emergency response measures	Establishment of emergency response plans (including assignment of teams).
Air emissions, including odours	Installation of relevant systems for management air emissions (especially odours) and regular monitoring.
Water use and waste water treatment	Establishment of a program for decreasing/efficient water use and monitoring of influent quality; recycling of non-contaminated water; proper treatment and disposal of wastewaters and monitoring of effluent quality.
Social Impacts	Implementation of the Stakeholder Engagement Plan, and establishment and implementation of a formal grievance mechanism.

As indicated in Table 2 above, the identified impacts can be largely managed through the development of an environmental health and safety management system that includes, amongst others, detailed emergency response and manure management plans. Further detail of appropriate actions and mitigation measures to ensure responsible management of environmental and social concerns are outlined in an Environmental and Social Action Plan.

The Project should also bring a number of benefits to the region through additional employment opportunities and generally promoting economic development in the area.