

Turkey Achieves EU Standards till 2023

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1.	Current environmental situation	102
2.	Principles of national environmental strategy	105
3.	Waste management	106
3.1.	Objectives and strategies in waste management	107
3.2.	Investment requirements	108
4.	Views	108
5.	References	109

The Republic of Turkey with about 75 million inhabitants covers an area of 814,578 km², of which the greater part is on Asia Minor and the smaller is on Europe. Its neighbours are Greece and Bulgaria in the north-west, Georgia, Armenia and Azerbaijan in the north-east, Iraq and Syria in the south and Iran in the east. Since 1964, it has the status of an EU associate member and has been a candidate for EU membership since 1999; the accession discussions have been held since 2005. The country became a member of the United Nations in 1945 and joined NATO in 1952.

Since its establishment in 1923, Turkey, as the successor state of the Ottoman Empire, carried out far-reaching social, legal and political reforms and repeatedly made great efforts to develop democracy and economy.

The industry and the service sector form the basic pillars of the Turkish economy with approximately 28 percent respectively 63 percent share of the gross national product, while agriculture has around nine percent. An intensive program of privatization in the last decade has reduced the government's share of basic industry, the banks, freight transport and telecommunications drastically. In particular, the vehicle manufacturing sector, construction and electronics have pushed back the importance of the textile industry in Turkey's export mix. With a total coastline of 8,333 km, over seventy percent of industrial production takes place within the coastal strip.

The specific gross national product tripled within ten years and rose to about 15,000 USD in 2012. 25.5 percent of the working population are employed in agriculture, 26.2 percent in industry and 48.4 percent in the service sector. The average life expectancy is 72.7 years; population growth is about 1.2 percent per year. The industrial growth rate amounted to about 9.2 percent in 2012.

While the share of household income in the total income in the bottom ten percent is about 2.1 percent, it amounts in the top ten percent to 30.3 percent (2008). The deficit in the state budget of 2.6 percent is specified for 2012 on revenues of 179.9 billion USD and expenditures of 200.4 billion USD. The public debt is low with 40.4 percent of the gross national product (2012). Goods and services exported in 2012 amounted to 154.2 billion USD, while imports amounted to 225.6 billion USD, the difference was mainly caused by energy imports. Around 45 percent of Turkey's exports go to the European Union (EU); the imports from EU account for about forty percent of total imports, while Germany is the largest trading partner within the EU. The impact of the recent financial crisis did not spare even Turkey, but it lasted shorter than in the rest of the OECD area, thanks to the stability of the banking sector and government measures.

Regarding economic power, Turkey is currently ranked sixth in Europe and sixteenth worldwide.

OECD estimates that the yearly average growth of the gross national product of the country in the next sixteen years will be 4.4 percent.

1. Current environmental situation

In the 1990's urban agglomerations constituted 51.2 percent of the population; this proportion reached 61.3 percent in the 2000's. For 2015, urbanization level is expected to be the average of the EU countries. The population increase is not as rapid as in the past decades; in 2030 a population of around hundred million is forecasted.

The urbanization, population growth and the continued development of industrial production are the main stressors for the environment. The drinking water supply has been and is being expanded; the goals are not yet reached. In addition, Turkey is not a water-rich country. Today's total available amount of water per capita per year is estimated at about 1,500 m³. By 2023, this amount will be reduced to little more than 1,000 m³, which is generally classified as the problematic limit. The construction of sewage systems and wastewater treatment plants have made tremendous progress in the last decade in the cities, but still the general condition is not yet fully satisfactory. Further substantial efforts are being made to increase the quality of waters, including the coastal zone.

In the solid wastes, direct deposit is still the preferred method of disposal and recycling or circulation management is still in its infancy.

Air pollution decreased markedly in major cities after conversion of the combustion for heating purposes from lignite to natural gas; however, the traffic emissions have increased in parallel to the increase of vehicle numbers.

At the end of 2009, the EU negotiations with Turkey in the environmental sector were recorded.

The goal is to meet all the EU requirements for full membership until year 2023, which is the centenary of the Republic of Turkey.



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2. Principles of national environmental strategy

In preparing the environmental strategies to meet the EU standards, the country can be guided by the principles listed below:

- The right to live in a healthy environment, which is in equilibrium;
- the mutual integration of various relevant sectors such as industry, agriculture, energy, transport, education and training to accelerate;
- Polluter pays principle;
- Prevention measures;
- Protection of natural resources;
- Sustainable development;
- Cooperation between the public sector and the private economic sector and
- Increasing the environmental awareness of the public and enhancing public participation.

The steps to achieve the set of goals can be summarized as follows:

- Environmental laws and regulations are gradually brought into an EU-compliant form, and new ones are adopted;
- On the basis of common but differentiated responsibilities, commitments made in international agreements are integrated into the national environmental strategy;
- Taking into account the needs of future generations, rules for the use or protection of natural resources are established and an environmental management is sought, which allows all to receive its fair share of the resources and live healthy;
- the national environmental plan is brought into conformity with the regional and local plans;
- the environmental policy is integrated into economic and social policy,
- Economic instruments to protect the environment and promote sustainability are developed and used;
- Existing institutional experience is further developed in scope and quality and utilized;
- Appropriate information and control systems are established to utilize and control the application of environmental standards;
- Systems are established in terms of monitoring, evaluation and documentation to control the application of EU directives;
- Institutional coordination and cooperation among the relevant actors are taken forward;

- the financial possibilities of the environmental sector are expanded, investments in the base and in related sectors are realised; in all stages, from production to consumption, care is taken to protect the environment and cooperation between the public and the private sector is preferred;
- the best technologies for the prevailing conditions in the country are preferred in the construction of facilities: treatment of sewage and waste, reducing air pollution, etc.;
- Solid wastes and chemicals hazardous to human health and the environment are monitored at all stages from manufacture to disposal and attention is paid for a controlled use;
- Flora and fauna and their ecosystems are kept in balance of protection and use; the preservation of biodiversity is identified as a priority and
- the public's sensitivity to environmental issues is increased, information tools such as print media, television, etc. provide an in-depth look.

Particular attention is paid to the harmonization of the Turkish environmental policy, laws and regulations with the EU directives, as well as the implementation of legislative requirements into practice by establishing adequate financial resources, professionally qualified institutions that perform necessary controls and are able to enforce prescribed sanctions when necessary, and developing financial instruments for the necessary environmental investments.

During the planning and coordination phase, the general coordination of the adaptation of the Turkish laws and policies to the EU directives is currently the responsibility of the Ministry of Environment and Urbanisation.

3. Waste management

According to statistical surveys, the specific accumulation of municipal solid waste is 1.34 kg/E.a (2004). Around 95 percent of this amount were disposed mostly in wild landfills, 1.4 percent were composted, 0.3 percent was burned and 0.4 percent was openly disposed in a water body. 70,000 tons of hospital waste were collected in 2004; twenty percent of them found their way into combustion, the rest was deposited together with household waste.

The city of Istanbul in 2013 had tendered a waste incineration plant with a daily capacity of 1,000 tons. The tender was cancelled in the spring of 2014 upon receipt of price offers.

A nationwide survey showed an annual generation of hazardous waste in the amount of approximately 1.2 million tons in 2004. Existing cement plants are currently in a position to accept 400,000 t/a . The only hazardous waste incineration plant across the country is in Izmit, with a capacity of 30,000 tons per year. With the inclusion of existing facilities in oil refineries, it can be assumed that currently a total of about 90,000 t/a of hazardous waste can be subjected to thermal treatment.

In 2011, the union of the metal employers has planned a plant for the incineration of hazardous waste with a capacity of 60,000 t/a . The environmental impact study necessary for the realization of the project has already been approved of by all responsible authorities; it only lacks the signature of the Minister of Environment and Urbanisation for final approval.

The EU calls on the waste management measures by Turkey, essentially the development of a general waste plan, the implementation of declared actions and objectives into practice, striving for quantitative waste reduction at the source, quantitative restrictions on reduction of the organic constituents in the waste before disposal, rehabilitation of landfills and realization of a meaningful prevention, detection, recovery and disposal system for hazardous waste.

Various relevant EU directives have already been transferred to the Turkish law. Soon, the guidelines on the management of mine wastes, electrical and electronic waste, waste transport, underground waste storage, rehabilitation of former waste disposal sites, technical principles of sanitary landfill, and separate collection of waste components will be put into effect.

3.1. Objectives and strategies in waste management

The targeted waste management objectives and strategies can be summarized as follows:

1. Reduction of waste generation by
 - a. Registry of quantities and qualities.
2. Recovery and controlled landfilling
 - a. Reduction in the organogenic content in waste,
 - b. Building a financing system based on the polluter pays principle,
 - c. Implementation of a licensing system for waste recovery and disposal,
 - d. Developing appropriate mechanisms to increase public awareness on waste.
3. Reduction of use of hazardous substances in
 - a. Packaging, batteries, car scrap, electrical and electronic devices,
 - b. Forms of packaging that can be recycled and are more environmental friendly.
4. Dangerous wastes are
 - a. Covered by a suitable system,
 - b. Recovery and disposal facilities are built,
 - c. Recovery and disposal facilities are licensed,
 - d. Wastes are administratively monitored from cradle to grave,

- e. A general plan on hazardous waste is worked out,
 - f. Infectious waste is registered and systems for their environmentally sound management and disposal are built.
5. The institutional base is further developed and significantly strengthened.

3.2. Investment requirements

The below is a rough calculation by the responsible Ministry for the Environment for investment needs of a proper waste management till 2023.

Sanitary landfilling	7,574
Packaging	655
Combustion	1,257
Dangerous wastes	74
Sum	9,560 million EUR

This amount of 9.56 billion Euros corresponds to about 16 percent of the investments that are needed in total for the environmental sector in Turkey to meet EU criteria.

It is expected that the private sector accounts for about twenty percent and the public sector for about 80 percent of the investments deemed.

The intention is to use thirty percent of the Environmental Fund of the EU for solid waste projects. Furthermore twenty percent of total loans awarded by Iller Bankasi and forty percent of loans from abroad shall be used for the improvement of the waste sector. Local governments have to spend 22 percent of their own income to improve the waste management situation.

For a grip on the upcoming various tasks in the waste sector, an additional employment of around three thousand people is targeted. The costs therefore are estimated for the first twenty years as 340 million EUR, which must be paid by the Ministry of Environment and local authorities according to a distribution key to be negotiated.

4. Views

Turkey as a candidate for EU membership has within a decade managed to effectively develop its economy, stabilize the banking sector and maintain the indebtedness of the state low. It currently represents the sixth largest economy in Europe. Globally it is standing in the sixteenth place. The negative balance of payments is classified as problematic, a major part of the deficit is due to energy imports (natural gas, oil).

The goal is to economically move up to the centenary of the Republic in 2023 worldwide to the tenth position and become a serious regional power. This is an ambitious goal. While it perhaps cannot be achieved so quickly, at a forecasted average annual growth rate of 4.4 percent, the Eurasian country most probably will shine 2023 even

much better than today, as in the next years it is going to complete new infrastructure projects such as nuclear power plants, the third bridge over the Bosphorus, expansion of the nationwide fast-rail network, construction of the great airport in Istanbul, the tube under the Bosphorus for rail and motor vehicles, erection of additional pipelines for the transport of oil and natural gas from the producing countries through Turkey to Europe etc., and last but not least the accelerated development of rural areas.

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