



7. Afforestation, Green Belts and Areas

introduction

Cairo low geographical location – surrounded by the desert from one side and Moqatam hills from the other – makes it prone to dust from the desert and Moqatam hills, particularly during sand storms, which adversely impact air quality. In an attempt to limit such adverse impacts on the one hand and preserving natural wealth sources in the form of treated wastewater on the other, Ministry of State for Environmental Affairs (MSEA) is regulating and supporting many afforestation, green belts, and green areas activities as wind barriers; at the same time these trees and green areas absorb an amount of carbon dioxide generated by different development activities.

In this respect, MSEA has implemented the following activities:

1. Greater Cairo Green Belt (Cairo, Giza, and Qalioubeya)

The project aims at planting a one hundred kilometers green belt around Greater Cairo including the planting of 500,000 trees using treated wastewater instead of wasting it in the desert, providing working opportunities for youths and achieving environmental and economic benefit. The work started in 2005, and in 2006 about 65,000 trees including Eucalyptus, Casuarinas, Cupressus and Acacia trees were planted using drip irrigation by treated wastewater.

2. Afforestation Using Treated Wastewater

The three Ministries, Ministry of State for Environmental Affairs (Egyptian Environmental Affairs Agency), Ministry of Agriculture and Land Reclamation (under secretary of state for Afforestation and Environment), and Ministry of Housing, Utilities and Urban Communities are cooperating together to implement the National Program for Safe Use of Treated Wastewater for Afforestation through a protocol signed by the three parties.

In 2004 the infrastructure was implemented and 10,350 feddans were planted with tree forests irrigated by treated wastewater. Another 845 feddans were planted in 2005. In 2006 infrastructure was completed and planting started for another 890 feddans. These forests were focused in Matrouh, Qena, Minya, Assyout, and New Valley governorates.

During 2006, the participation of the investment and private sectors continued in Afforestation in Attaqa forest (Suez governorate) over an area of 400 feddans, planted by *Jatropha* to produce bio-oil of high economic return.



Photo (7-1) Cupressus trees in the GC Green Belt project

3. Afforestation and Planting of Green Areas and Parks

The Ministry of State for Environmental Affairs contributed in the World Environment Day celebrations on June 5, 2006, with the slogan "Deserts and Desertification, Do Not Desert Dry Lands", distributing 150,000 trees on the five desert governorates of (North Sinai, South Sinai, Red Sea, Matrouh, and New Valley) to benefit from them in planting green areas and parks.

In cooperation with Local Governments, MSEA has contributed in establishing international and public parks with historical nature and children parks in all governorates countrywide. Total park area reached 20,000 feddans. Most significant of these parks are "All Religions Park" in Fustat and "Al Dawahi District Park" in Port Said on an area of 8.5 feddan, after being transferred from a dumpsite into a park. The Ministry has also developed the 15-feddan public park (El Salam Park) in Kharga city entrance in The New Valley governorate.

MSEA has also contributed in establishing nurseries and green houses in the different governorates in Egypt, whether for the Government or non-governmental organizations, with areas ranging between 1 to 10 feddans per nursery. In 2006, MSEA participated in establishing 21 nurseries to produce trees, shrubs, and ornamental plants.

MSEA has also tree planted many schools (72 schools) in residential areas, in front of mosques, inside monasteries, hospitals, and security units. It has also provided trees to many NGOs (2000 trees). The most distinguished of these

works was contributing in tree planting Children’s Cancer hospital park in Sayyda Zainab, the One-Day Surgery Hospital in Marg, and Child Library’s parks in Shubra El khema and the development of waste collectors (zabaleen) area in Manshayet Naser district.



Photo (7-2) Child Library Park in Shubra El khema



Photo (7-3) One-Day Surgery Hospital park in Marg in Greater Cairo.

The Ministry has also contributed in tree planting and beautification of some universities and colleges, including completing the development and tree planting of Fayoum University campus, Faculty of Law in Beni Suf University, Faculty of Mass Communication, Cairo University, Faculty of Applied Arts and the Leadership Training Institute in Helwan.



Photo (7-4) University of Fayoum Campus.

The Ministry has also contributed in tree planting and beautification of many desert roads, to protect them from sand encroachment such as Cairo–Fayoum road (10.9 Km) and Ismailia desert road and the first phase for tree planting some roads and cities in North Sinai governorate (40 km). The planning and implementation of irrigation networks and planting 60 feddans with olive trees in Cairo International Airport runway has been completed.



Photo (7-5) Ismailia–Cairo Desert Road

In the framework of testing the kinds of plants mentioned in the Egyptian Code for using treated wastewater in farming, issued in 2005 by the Ministry of Housing, Utilities and Urban Communities, a set of tests on different kinds of those

corps has been implemented among the Integrated Water Resources Management Project (LIFE), implemented by the Ministry on an area of 10 feddans in Luxor forest. *Jatropha curcas*, Jojoba, Linen, Rose, Bird-of-paradise flower, *Gladius*, white *Duranta*, Sorghum fodder, Mulberry and African mahogany trees were planted. Evaluation of these crops for the economical and environmental green and fruitful growth started in the beginning of 2006, Initial results indicate the success of planting such crops.



Photo (7-7) Jojoba watered by treated wastewater in Luxor



Photo (7-6). *Jatropha* irrigated by treated wastewater



Photo (7-8) Linen plantation on the treated wastewater in Luxor