Section 1: Introduction

1.0 Introduction

In 1986, member countries of the "Organization for Economic Co-operation and Development" OECD agreed to ensure that:

"development assistance projects and programmes which, because of their nature, size and/or location, could significantly affect the environment, should be assessed at as early a stage as possible and to an appropriate degree from an environmental standpoint" [OECD 1985].

The aim of EIA's is to examine the environmental effects, adverse and beneficial, of new projects and to ensure that these effects are taken into account in an appropriate way at all stages of the project cycle.

Also, environmental impact assessment can be defined as the systematic examination of the unintended consequences of a development project or programme, with a view to reducing or mitigating the negative consequences and capitalizing on the positive ones. The basic purpose of EIA is to strengthen the development process. That is to improve development, not prevent it. Unfortunately, the perception is some times otherwise. Environmental assessment is sometimes seen as "anti" development or opposed to growth. But this ought not to be the case. The fundamental reason for carrying out an EIA is to try to ensure that development is sustainable - "to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs".

Thus, Environment and development are really two sides of the same coin. On the one hand, development cannot take place without its affecting the environment or context in which it occurs. On the other hand, if the environment is affected, then that results in over exploitation of the natural resources and limits the range of development opportunities available in the future.

In other words, environmental impacts are not necessary a sign of a poorly designed project. On the contrary, some such impacts may be inevitable in most development projects and programmes.

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Socio economic development programs and population growth during the 1980s have stimulated the increase in demand for petroleum products, natural gas and electricity, which grew at average annual rates of 5 %, 15 % and 10.5 % respectively.

Egypt's energy policy has therefore been developed to promote the expansion of natural gas and to substitute liquid fuels in various economic sectors.

This is to realize the following objectives:

- Achieve self-sufficiency in LPG.
- Establish important strategy industries (e.g. cement, fertlizer, and steel industries) that rely on natural gas as a convenient fuel.
- Reduce petroleum imports of some products (e.g. gas oil) that are used in power generation.
- Reduce environmental pollution.

To realize these objectives, EGAS has pursued a set of strategies that include:

- Developing a gas infrastructure.

- Expanding the local gas market and developing gas demand all over Egypt

- Prompting investment in gas exploration and production.

- Encouraging private sector participation in different aspects of the gas industry.

1.1 DEVELOPMENT OF NATURAL GAS CONSUMPTION

Due to the sharp increased in gas production as a result of more gas reserve development and the promotion of natural gas use in key consuming sectors, gas consumption growth rates have experienced a boom since the early 1980's.

The main natural gas consuming sectors are:

- Industrial sector.

- Electricity sector.

- Residential & commercial sector.

1.2 ENVIRONMENTAL CONSIDERATIONS OF NATURAL GAS

Natural gas is an environmentally benign fuel. It is composed of at least 90% methane and small amounts of other hydrocarbons (e.g. ethane, propane and butane). Since methane is a relatively pure components, natural gas produces much lower emission levels of CO, CO_2 , NO and hydrocarbons than competing fuels when burned. In addition, the lack of sulfur produces no (or negligible) SO emission during burning.

Based on the above mentioned facts, it can be concluded that natural gas switching policy is considered to be a mitigation option for green house gas emissions.

1.3 OBJECTIVES

The main objectives of this EIA are to:

- Develop a complete understanding and a clear definition, of the proposed project including both construction and operation phases.
- Gain a complete understanding of the affected environment, including both biophysical and socio-economic characteristics.
- Conduct an assessment of the potential impacts from the proposed project.
- Recommend the required mitigation measures to eliminate and / or minimize the potential environmental impacts.
- Report the results of the study and produce the required documented EIA.

1.4 WORK

The work accomplished to produce the report includes:

- Data concerning the prevailing environmental conditions of the study area was collected such as topography, geology, hydrology,etc.
- During the baseline environmental survey the general ecosystem of the study area was described and evaluated.

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- The pertinent regulations and standards governing the environmental quality was reviewed and presented.
- The expected environmental consequences from the proposed project were assessed.
- The mitigation measures with an integrated plan for managing the identified environmental hazards and effects were accomplished.
- An environmental monitoring plan for the proposed project was suggested.