EVALUATION OF THE GROUNDWATER FOR AGRICULTURE

BY

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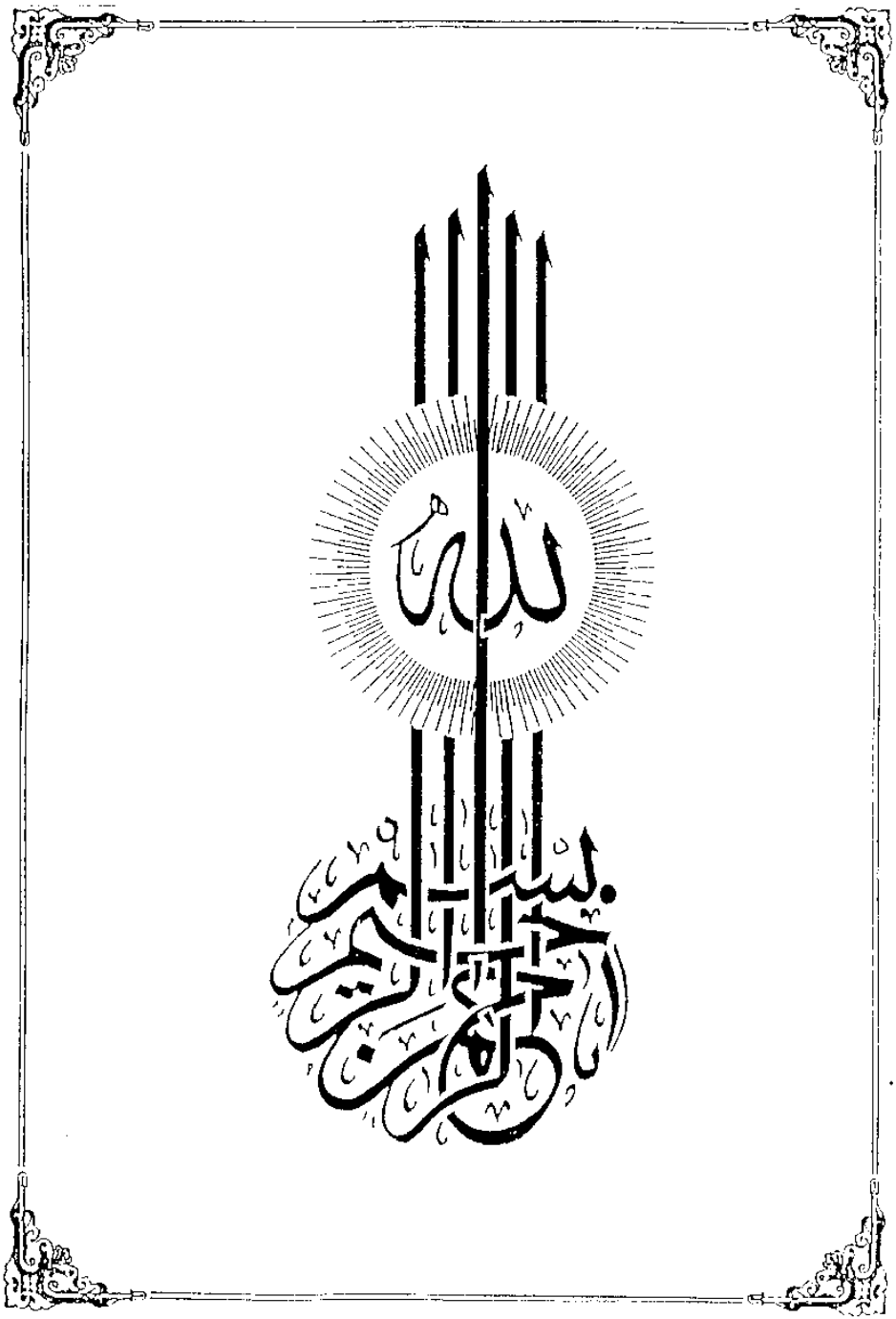

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Index

Contents

List of Tables

List of Maps

List of Figures

1- INTRODUCTION.

I- INTRODUCTION

People have long ignored pollution and its effects on the environment. Pollution has increased along with population until it can no longer be neglected. Much studies has done into pollution problems in recent years and a great deal of concern has been expressed for our environment.

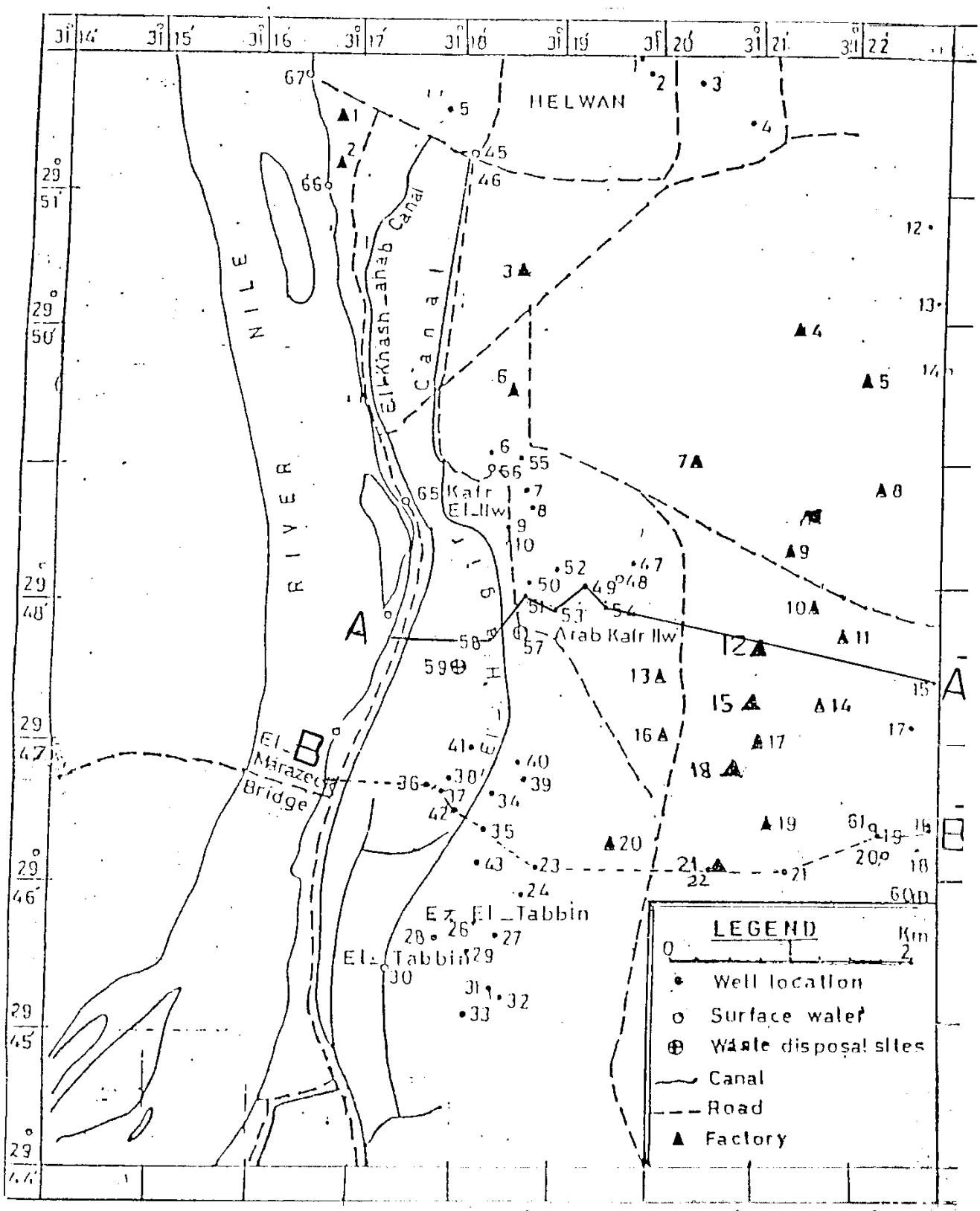
Pollution is such a complex and persistent problem, it is so far-reaching that everyone is affected, and united efforts are needed to control pollution.

Concerning groundwater pollution, it is known that the groundwater is generally considered to be a safer source of drinking water than surface water while groundwater can be contaminated by bacteria and has often caused epidemics. It is obvious that protection areas around groundwater pumping stations were originally intended to prevent the contamination of groundwater by bacteria. Now the topic of groundwater protection within the frame of nature and environment protection is connected with growth in the negative impacts of mineral extraction, industry, transport, agriculture and urbanistic development which is going on with growing intensity in most countries of the world. Harmonization of relations between economic

development and environment protection has become an extremely difficult task especially in countries with a dense population and with concentrated industrial and agicultural potentials. From the point of the kinds of contaminating substances in the groundwater it is most frequently subdivided into chemical compounds contamination (inorganic, organic, radioactive substances and gases), vegetable and animal contamination; (degraded organic substances, excrements, fatty acids, carbohydrates, etc.) living organisms pollution (protozoa, bacteria, viruses). In other words, the pollution may be chemical, radioactive, and biologic.

1.1 Location of the studied area :

This study was carried out to study the chemical pollution of the groundwater in the south areas of Cairo city, (Map 1). These areas are very fast developing into an industrial state with the establishment of many medium to large industries. The haphazard establishment of industries is disturbing the environmental balance and may be resulting in the pollution of the groundwater. The industrial units are discharging their effluents on the surface which through seepage reaches the groundwater reservoir. In most of this region, the surface clay layer



KEY MAP (1)