

THE SUMMARY IN ENGLISH

Introduction

a- Location and area:

The study area lies in the south west of the peninsula of Sinai at the southern part of Suez Gulf. It's delimited by the basin of sidri and waiteer from the north and from the east the basins kid, dahab and waiteer and from the southern east the basins of Ait el gharby and Om toriter and the Suez Gulf from the west.

The study area extends between $28.44.33^{\circ}$ and $27.50.12^{\circ}$ degree of latitude and between $33.10.08^{\circ}$ and $34.09.15^{\circ}$ degree of longitude from the east. The region is formed as a rectangle in a north western and south eastern direction. Its area is 5982.68 Km^2 which occupies 9.81 % from the area of the peninsula of Sinai. It includes thirty-five basin from the valley of Firan in the north to the basin of the valley Ait el gharby in the south.

In this study it has named some of these basins as they have no names on the topographical map. The names were chosen so carefully that they imply a Geographical indication, they are as follows:

- 1- South Firan valley basin. It has such name because it lies directly off the basin of Firan.
- 2- The basin of Balaem. As for the name of region.

These basins are of great importance as they are considered places where the nomads can settle to practice pasture and agriculture. Its also has a notable importance in the different fields of development as it includes two main cities which are El Tur, St.Cathreen and some villages as El wadi, Om Gabail, Firan, Mair, El Tarfa, El hsawa, Sahab and the beach mining areas,oil fields and companies, factories, roads, telephones net, electricity lines, oil and water pipelines and health draining systems .

But all these advantages are subjected to the floods which destroy the roads and the civilization aspects. Moreover they block the use of many lands as they destroy farms and fill up wells. They also affect other fields like mines which threaten peoples life. Besides they harm other social aspects and that makes floods a natural disaster

which block the development endeavors made by the government in this region. But the necessary need of each water drop in this desert and dry region makes the use of floods water very necessary as it is one of the water available resources. Thus good planning enables us to reduce flood dangers and their consequences. However, it enables us to make use of floods in the different fields of development.

The research topic:

The research consists of one part that includes topics, figures, maps, photographs, in addition to a conclusion and reference sources. The research topic includes an introduction and eight chapters, a conclusion and a research summary in English:

- 1- The first chapter deals with the geology of the study area regarding its external geological forming focusing a certain age or time, the geological structures were also studied. Then climatic factors in the basins of the study area such as rains, the rainfall days, the maximum rain quantity in one-day, and the natural plant. After that the landscape properties such as mountains, basins, and El qaa plan .
- 2- The second chapter deals with the features of the morphometric analysis of the basins, such as the basin area, the basins parameter, the length, width and perimeter. Then it adopts many studies such as the study of the basins shapes and modules such as the circulation and the elongation rate, form coefficient, relief ratio relative ruggedness ratio, surface slope, the study of the hypsometric curve to discover the phases through which the basin pass and the study of the matrix correlation of variables. Then the morphometric analysis of net work through orders, channel numbers, bifurcation ratio, stream frequency ratio, drainage density, the channel slopes texture ratio and the maintenance. The chapter ends with the study of the matrix correlation that has carried out network variables and also a matrix correlation that has carried out between network and basin variables.
- 3- The third chapter focuses on the hydrological factors which influence the flood flowing such as the lag time, the concentration time, the drainage rate, the drainage size, drainage time, the flood speed in the basins, then the study of matrix correlation between basins system features and the hydrological factors that influence floods.

It also deals with the water balance in the drainage basins regarding the maximum quantity of rain. Then, it studies the losses, the evaporation loss and the infiltration losses, After that the net flow on the base of the maximum quantity of rain falling in one day, then the net flow of the middle annual rain in the year in the study area. It also studies the flow expectation on the base of the geomorphological and geological aspect according to the pattern suggested by Ibrahim Zakaria Al Shamy. It ends with the study of the relationship between floods and the groundwater in study area.

4 -The fourth chapter deals with the degrees dangerous in the drainage basins according to some factors which influence the flood flowing such as the basins features. The danger degrees were studies on the base of four factors circulation rate, relive at danger degrees according to all the variables, the drainage basins and the danger degrees of network systems factors then the danger degrees of hydrological factors then it discusses the general dangerous degrees according to all the hydrological factors following by studing the danger degrees on the region subjected to the flood flowing danger. Afre that it discusses the general danger degrees of all these factors. Its ends with the study of the final danger degrees of all factors in the basins of study area, so as to know dangerous ordrs of drainage basins.

5 -The fifth chapter deals with the Applied Geomorphology on the structures and the way to protect them such as cities, villages, roads system, airport, drains pipes, farms, ground water, oil filed and companies, industrial cities, tourist villages, water lines, electricity lines and how to protect now and in the future through some solution and suggestions with low costs and permanent life and how to use flood water to develop it. An evaluative study has been made about the expected growth population until 2025 in the two centers of study area, El Tur, St.Cathreen and Firan village. The risk zones play and active part as obstacles for the area development. The study discussed the water resources in the region and how to keep and develop them. The agricultural area capabilities and its reclaimable lands were highlighted. Many suggestions were presented to be away towards industrial, the agricultural development. It ends with stressing on the importance of the study area tourist map where it has the different tourist field sites.