

The Geomorphological and Eenvironmental characteristics of the basin of Wadi Al Samin, Al Thahrieh, Abu Al Assja and Abu Al Ghozlan as

a case study in South Hebron.

Abstract

The study aims at identifying the reasons and factors causing pollution in the valleys of Wadi Al Samin, Al Thahrieh, Abu Al Assja and the influence on the surrounding communities. In addition, it aims at detecting the environmental effects resulted from the stone quarries. So as to introduce suitable solutions to get rid of the environmental dangers of Wadi Al Samin sewage water at Al Thahrieh, Abu Al Assja and Abu Al Ghozlan. The descriptive approach is used to achieve the goals of this study to describe the area and its environmental characteristics and changes. In addition to that, the study aims at studying the behavior of the residents around the valleys and measure their environmental awareness and whether they are involved in polluting the valley or not. The study focuses on creating simple and cheap solutions. The analytical and field method is implemented during this study to cover the area through observation to get clear and right data.

Many geomorphological forms appeared in the study due to environmental factors ,like dissolvment processes that result from the interaction between the waste water and lime stones that cause stone to disintegrate into fragments especially in summer because of floods of Wadi An Nar in Al Thahrieh that causes soil erosion and poisoning sedimentation in the area of the study.

Another sample from the soil was taken from the settlements of Karyat Arbaa and stone quarries in the industrial zone of Hebron to study the percentage of the heavy minerals so as to compare them with the international standards. The study shows that the soil of Wadi Al Thahrieh, Abu Al Assja is heavily polluted with heavy materials, compared with the percentage of change according to percentage of the World Health Organization .The increase of pollution because of the waste water comes from the Israeli settlements. The samples included Chromium, Cadmium, zinc, manganese and lead. The increase of high

pollution comes from the waste water mixed with dangerous active materials from detergents, aluminum and quagents eretries of the settlement of Karyat Arbaa. This causes dangers on peoples' health and the soil fertility like destroying more than 450 dunnums(Applied Research Institute _ARIJ-2012) of farming lands and the destruction of olive and apricots trees as a result of sludge from stone quarries.