

Evaluation of the water resources and water balance of the Northern part of Lebanon (Akkar)

MROUEH, M.A. CRAMPON, N. Lebanese University
Faculty of sciences (I) Liban - Institute Universitaire de
Technologie, Bethune (France)

The water resources have been regarded in their relation with the needs of the population of Akkar, and studied for the characteristics of the aquifer and surface runoff. The work has been done in the area between River Bared and the northern border of the country.

The water balance of the aquifer was calculated based on measurements done on 7 climatic stations spread over the region.

These measurements were taken for over 38 years. A great help in this aspect gave the data from about 157 water wells and the flow measurements of more than 48 sources with their flow ranging between

3 L/S and 240 L/S.

The average precipitation is about $53 \text{ Mm}^3/\text{year}$. The quantity of outflowing from the sources is about $3.5 \text{ Mm}^3/\text{year}$. The exploited quantity from the operating wells is estimated $12 \text{ Mm}^3/\text{year}$. The quantity lost by runoff is estimated about $1.5 \text{ Mm}^3/\text{year}$. Accordingly, the effective water balance of the region is considered $36 \text{ Mm}^3/\text{year}$.