

**CLIMATIC IMPLICATIONS OF
GROUNDWATER RECHARGE AND
DISCHARGE IN THE ESCARPMENT
AREAS OF SOUTHEASTERN, NIGERIA**

BY

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FEATURES OF THE STUDY AREA

- ✓ THE STUDY AREA FALLS WITHIN SOUTHEASTERN NIGERIA**
- ✓ CHARACTERIZED BY RAINFOREST VEGETATION**
- ✓ TWO SEASONS ARE PREVALENT**
- ✓ PRESENCE OF NORTH SOUTH TRENDING CUESTA**

CONT'D

- ✓ SANDY AND SHALY DOMINATED GEOLOGY**
- ✓ WATER SCARCITY AND HIGH DEPENDENCE ON GROUNDWATER**
- ✓ INCREASED DEFORESTATION FOR WOOD FUEL**

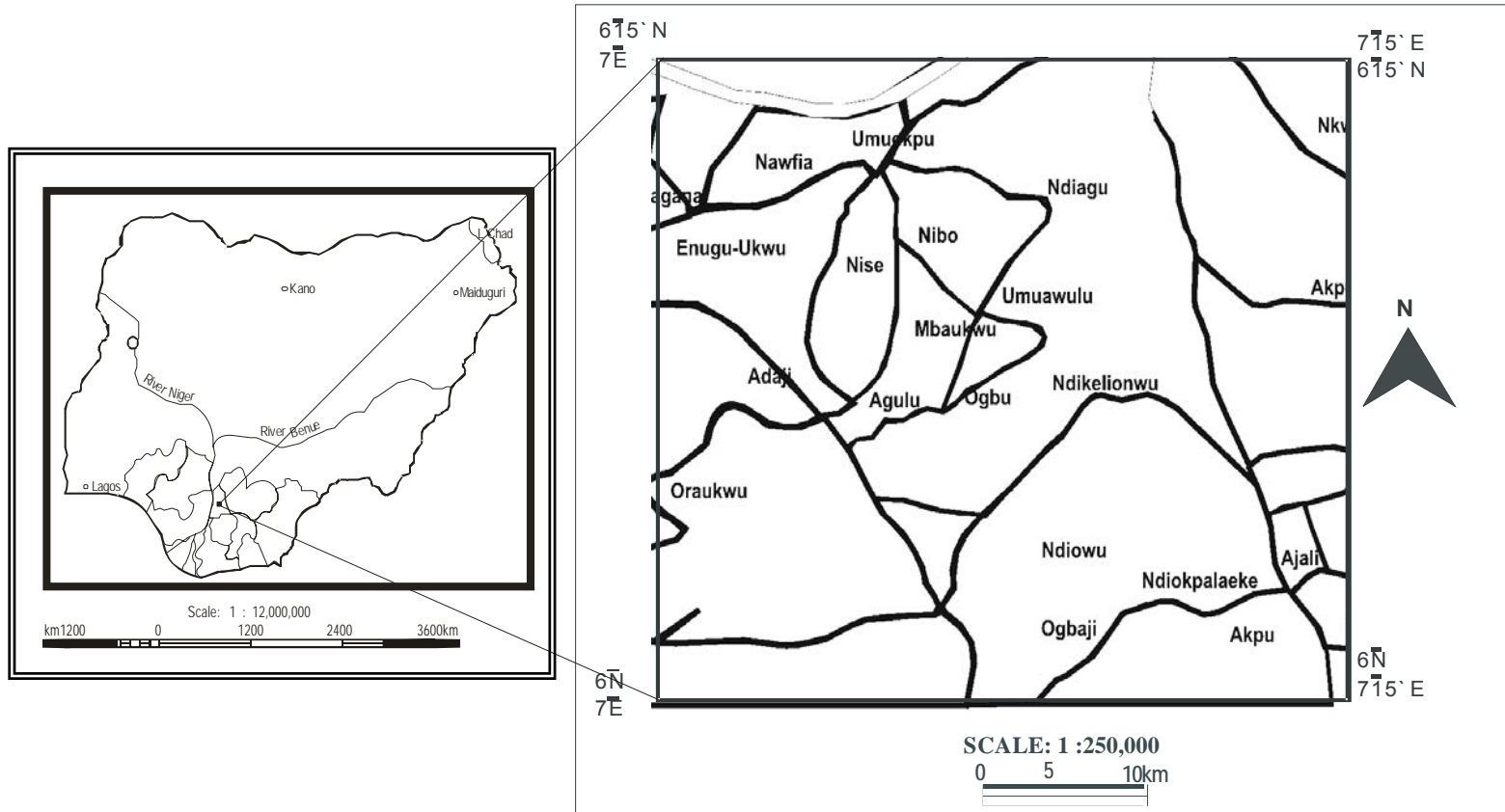


Fig. 1 Location Map of the area

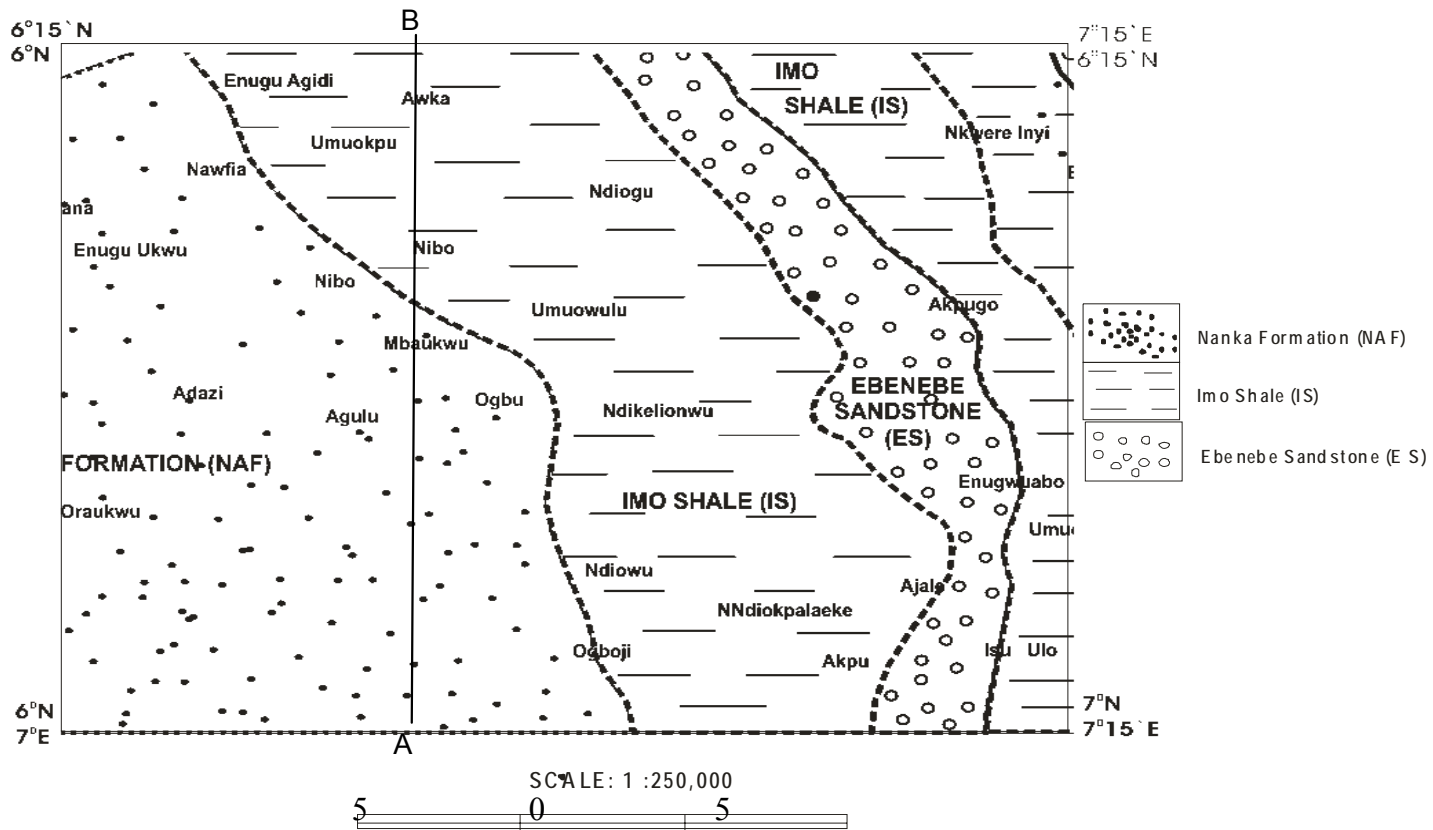


Fig. 2 Geologic map of the area

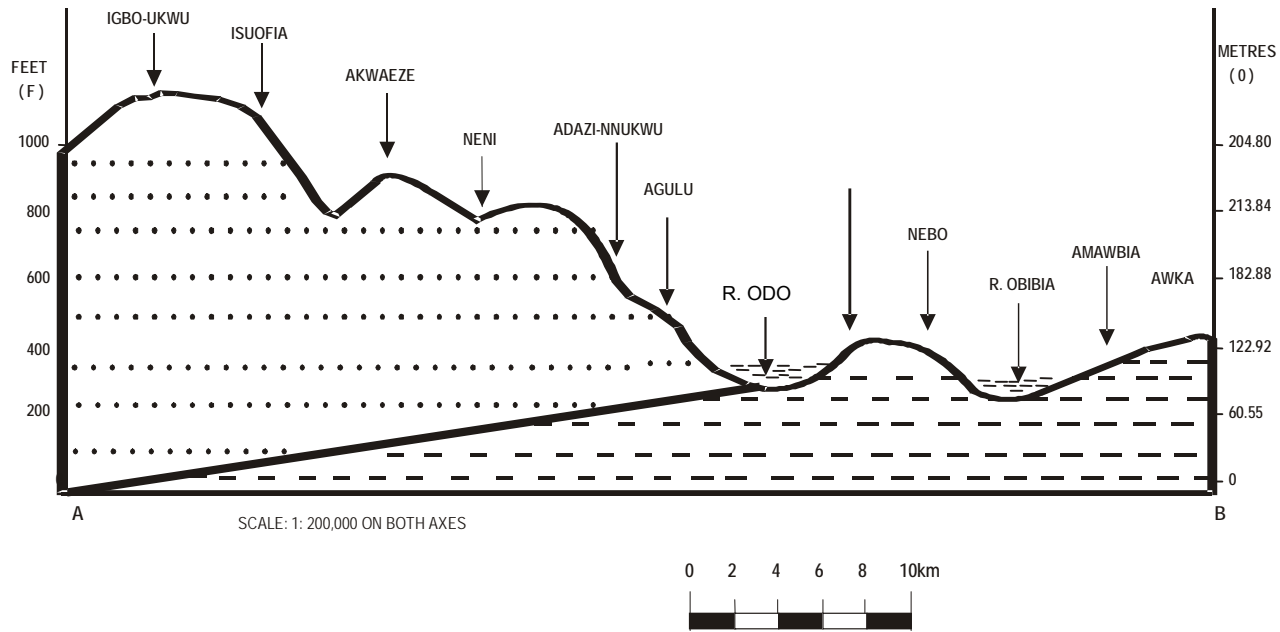


Fig. 3 Section of elevation through the escarpment

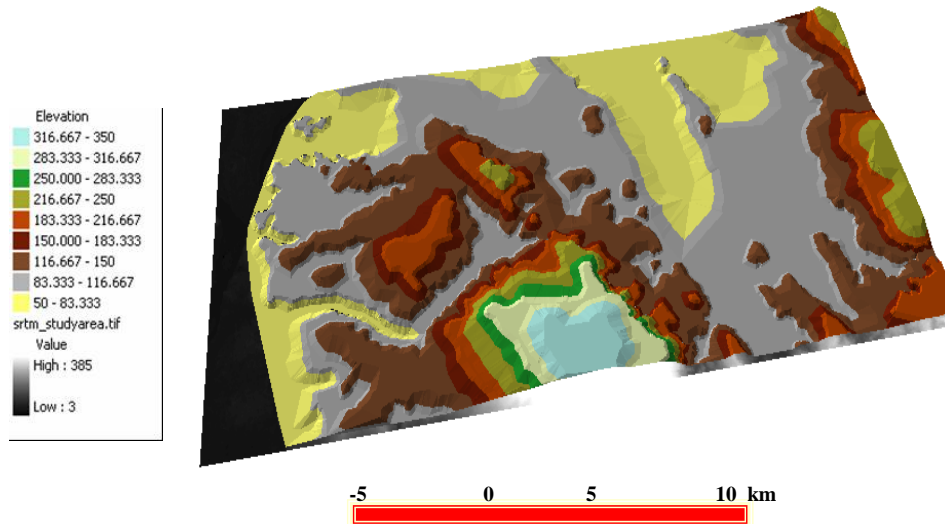


Fig. 4 elevation model of the area

- **THE ESCARPMENT FORMS THE MAIN TOPOGRAPHIC HIGH IN THE AREA.**
- **THE DISTRIBUTION AND FLOW OF SURFACE WATER AND GROUNDWATER DEPENDS ON THIS RIDGE THAT FORMS A DIVIDE**
- **RECHARGE AND DISCHARGE DUE TO THE POROUS NATURE OF THE AQUIFER IS ALSO ENHANCED.**

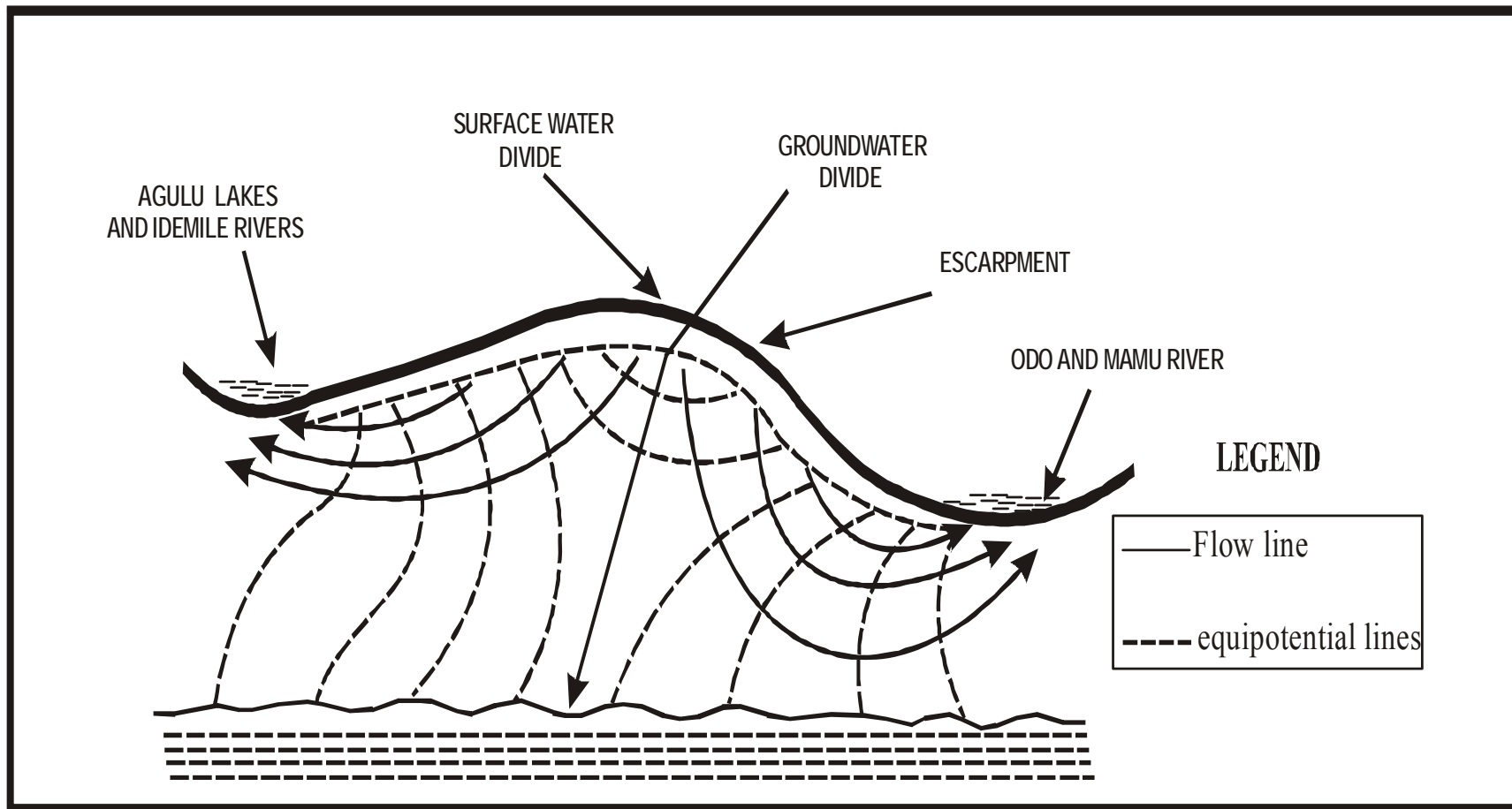


Fig. 5 Idealized two-dimensional flow net of the escarpment

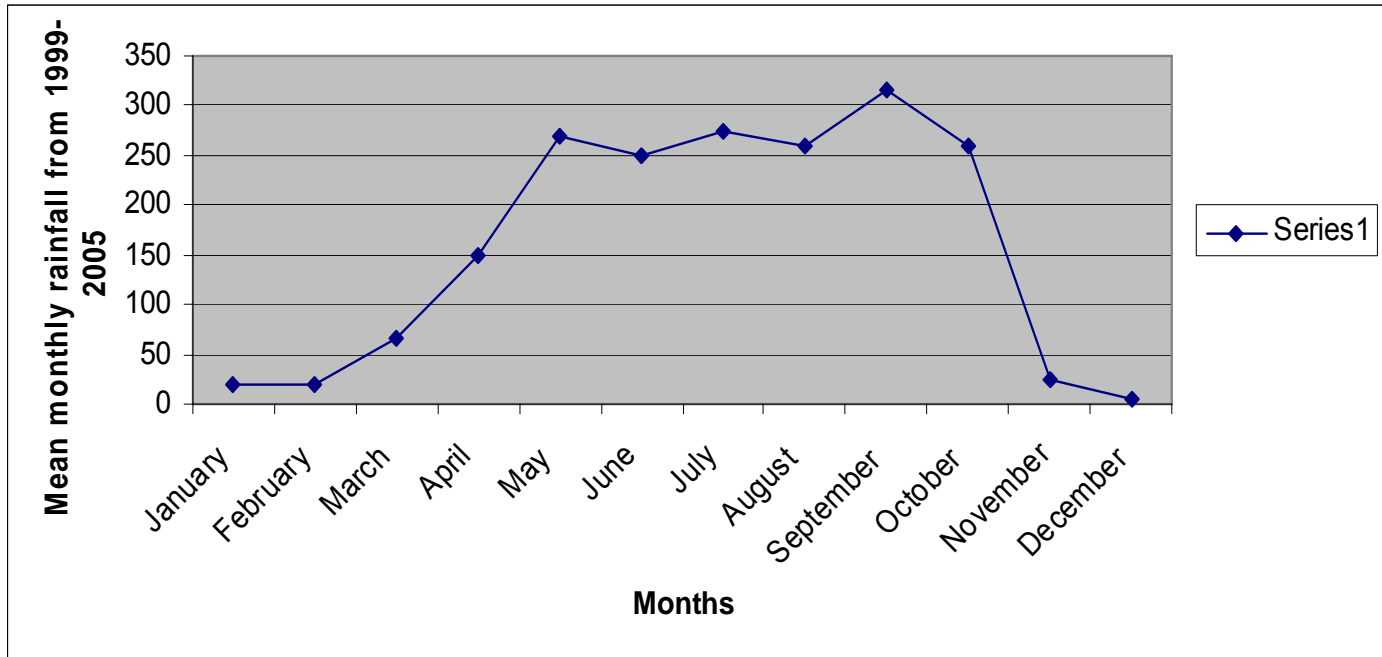


Fig. 6 Mean monthly rainfall of Onitsha Zone



PIC. 1 GROUNDWATER DISCHARGE AT THE BASE OF THE ESCARPMENT

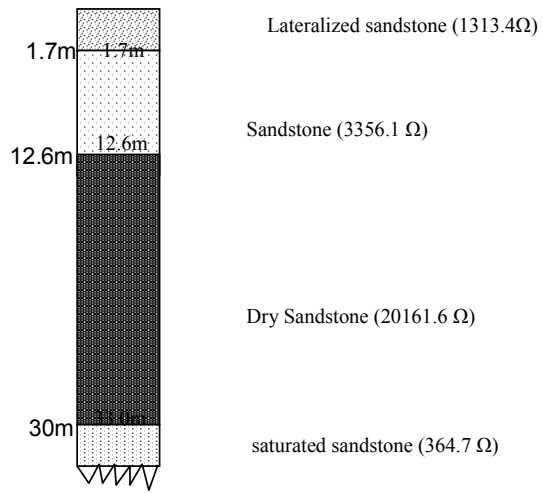


Fig.7a Geoelectric section from Ekwulobia

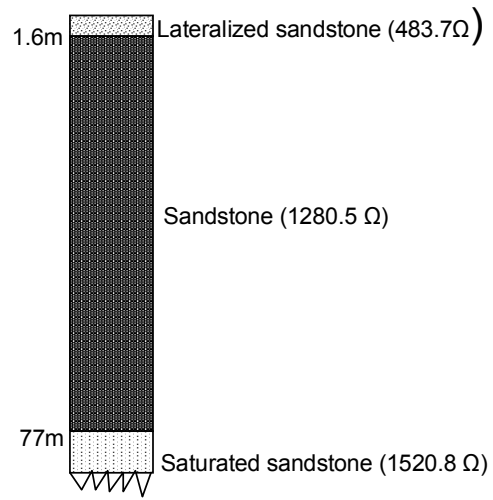


Fig. 7b Geoelectric section from Agulu

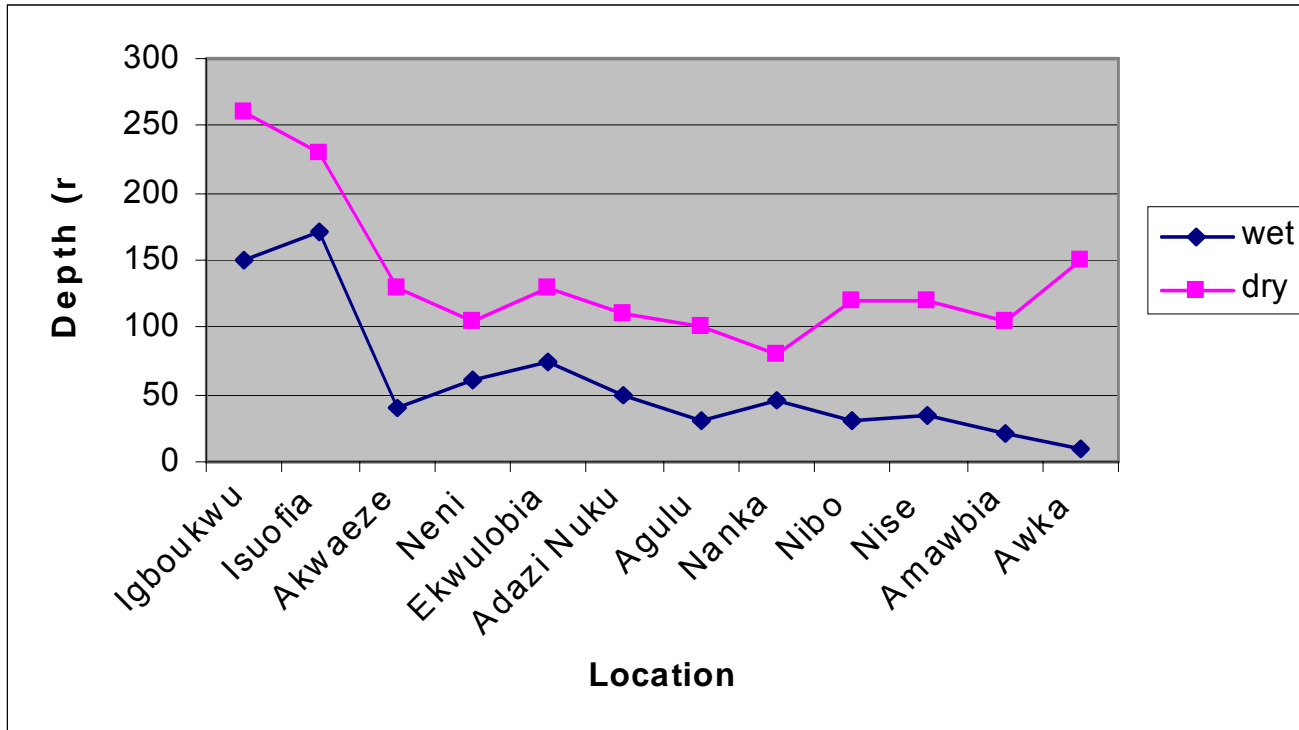


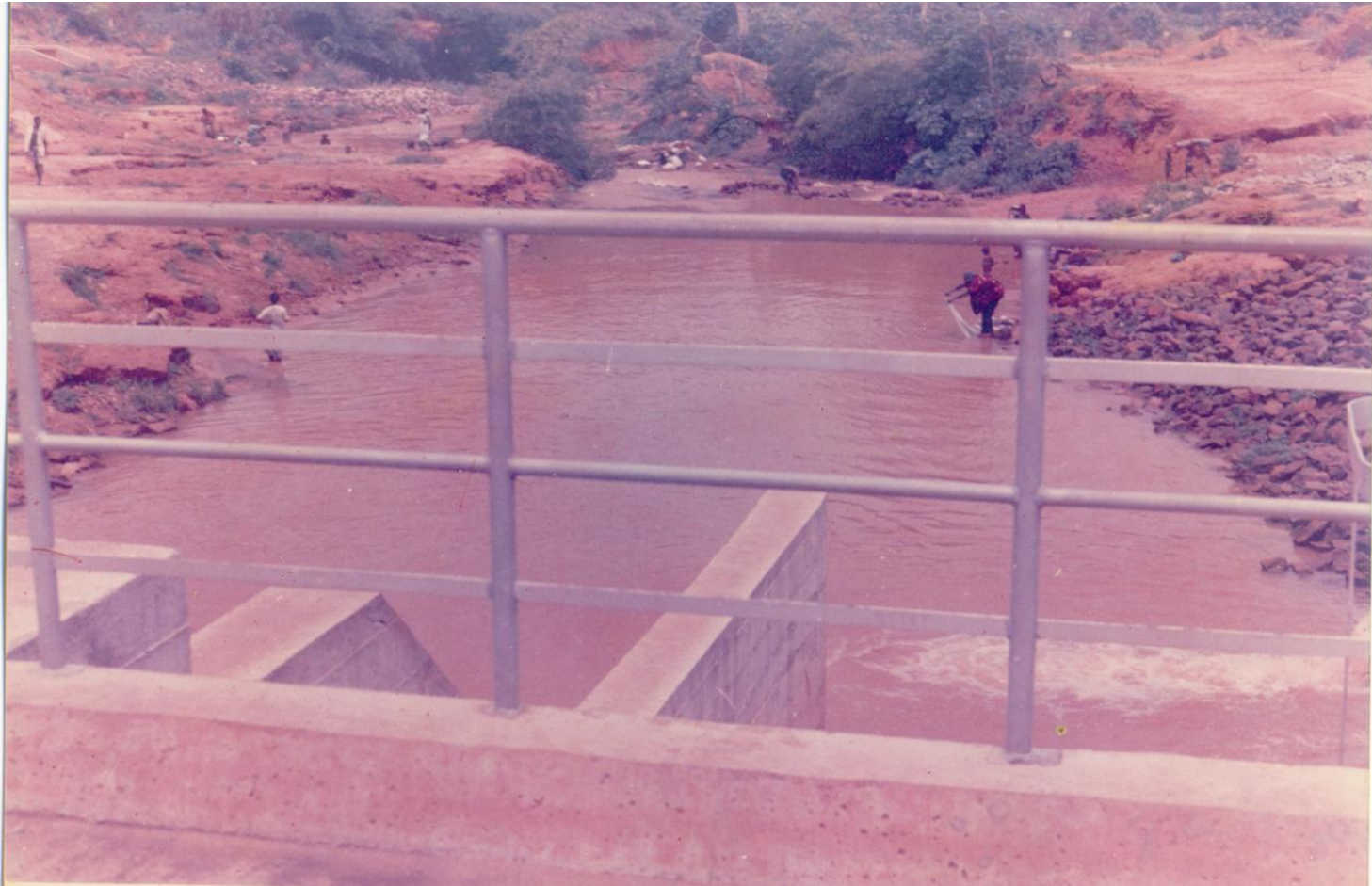
FIG. 8 DEPTH TO WATERTABLE

SUGGESTIONS

**CONSTRUCTION OF BASIN
CATCHMENT STRUCTURES**

PROHIBITION OF DEFORESTATION

**USE OF ALTERNATIVE SOURCE
OF ENERGY THAT WILL BE
AVAILLABLE AND AFFORDABLE.**



Pic.1 Climate change and surface water depletion



Pic. 2 Dried water bed of Odo River



Pic.3 Surface water and climate change impact



CLIMATE CHANGE AND GULLY DEVELOPMENT

THANK

YOU

FOR

LISTENING