



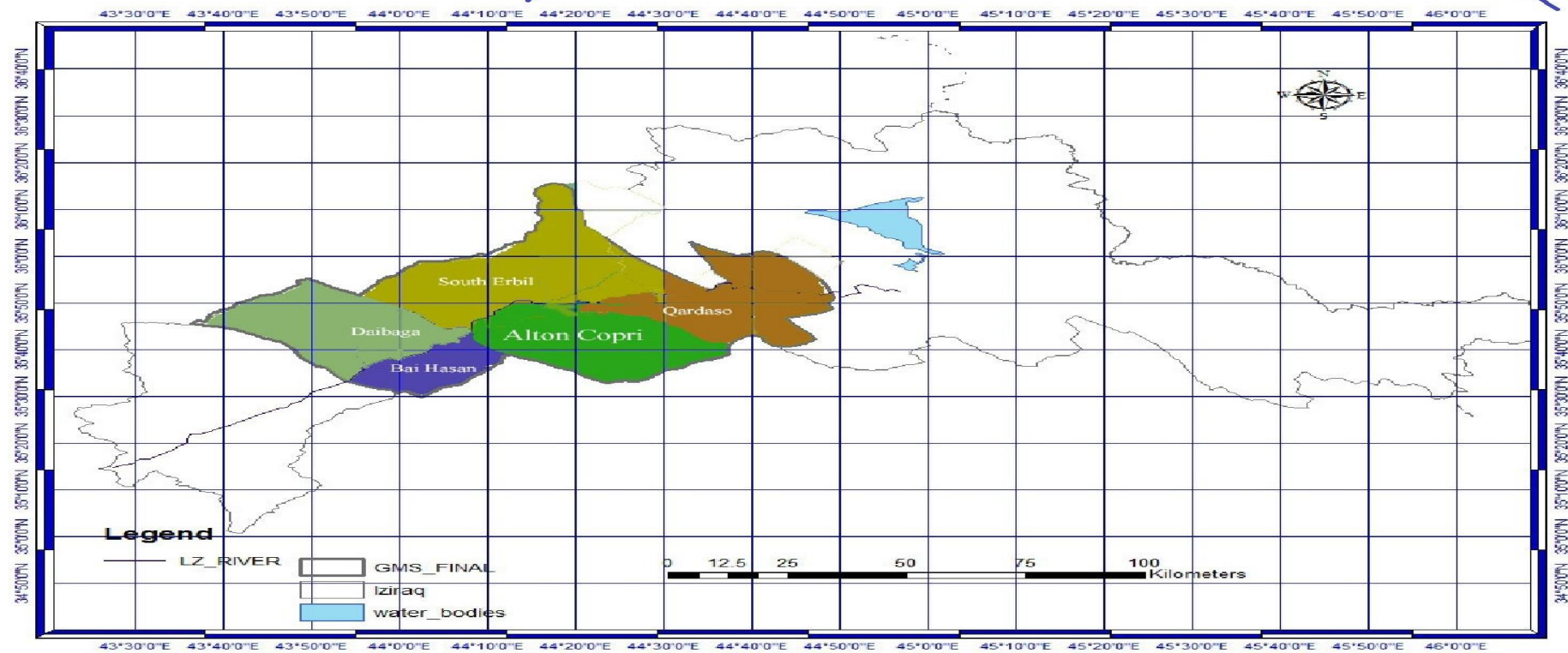
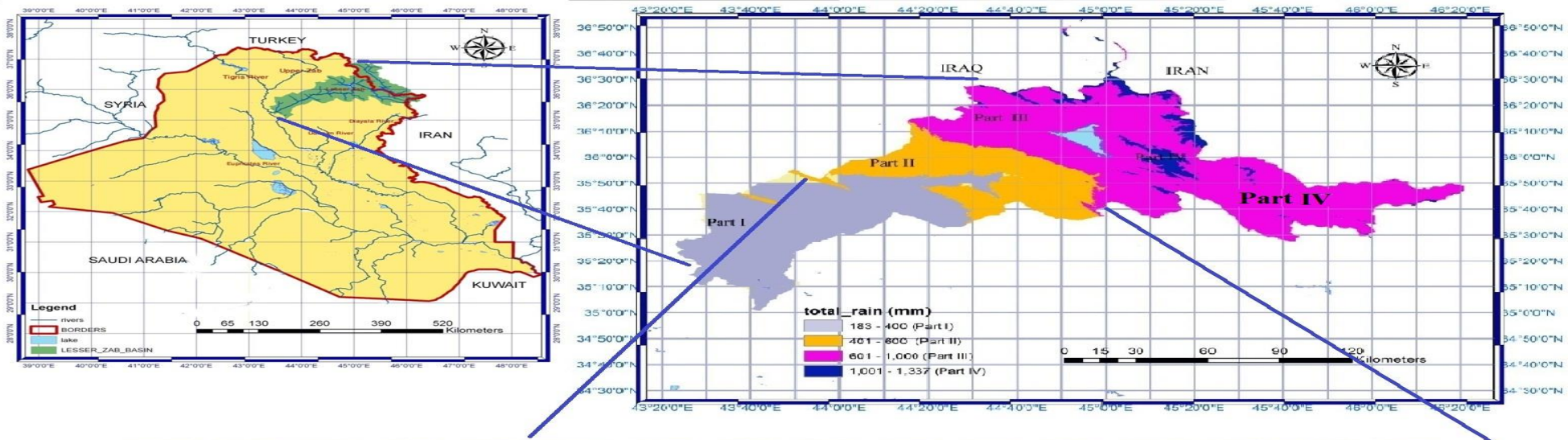
MANAGEMENT OF BAI HASSAN UNCONFINED AQUIFER , LESSER ZAB RIVER BASIN USING GROUND WATER MODELING SYSTEM, KURDISTAN R., IRAQ.

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Location Map

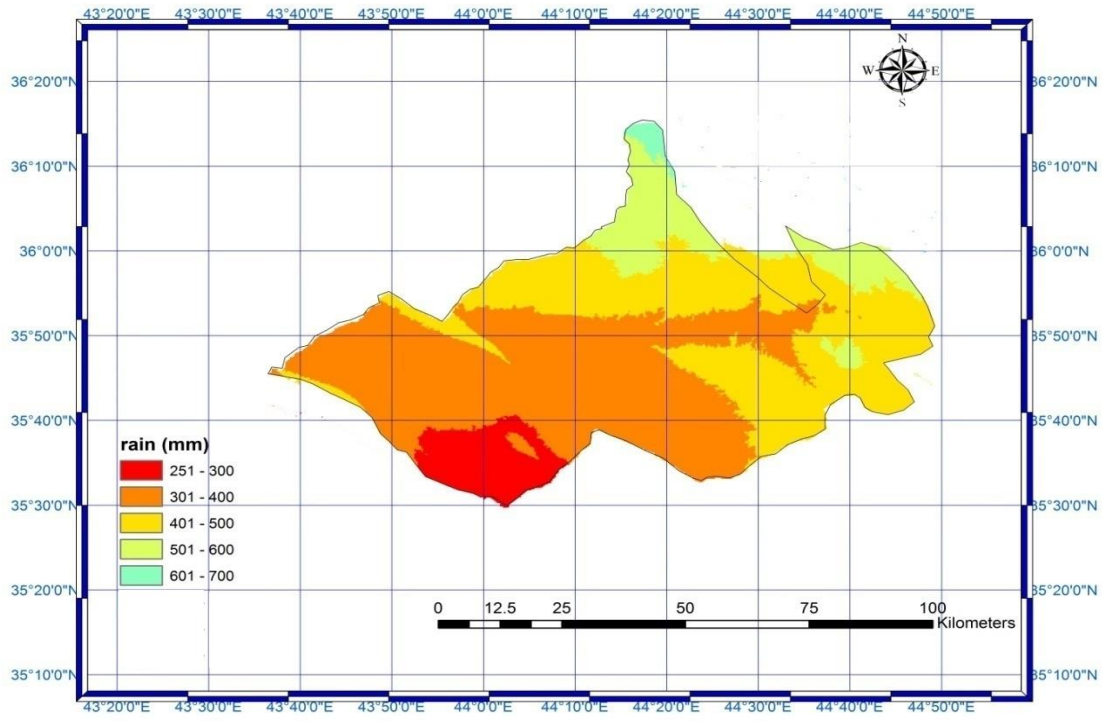


Figure 6: Rainfall distribution in the modeled area.

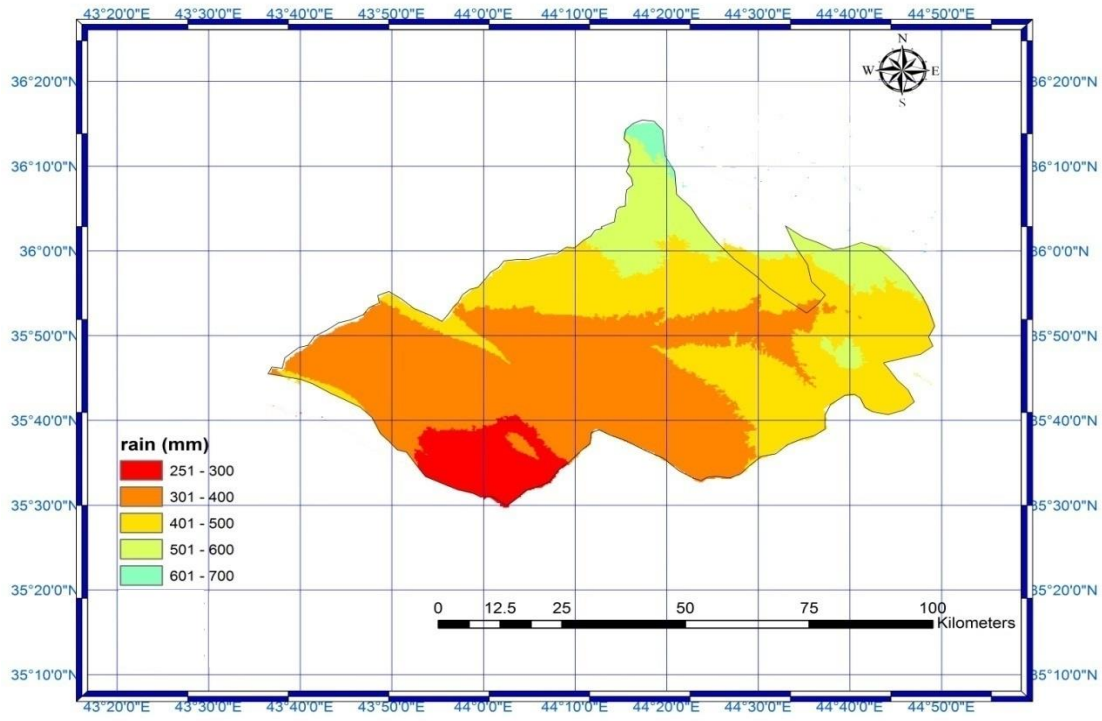


Figure 6: Rainfall distribution in the modeled area.

Starting Heads

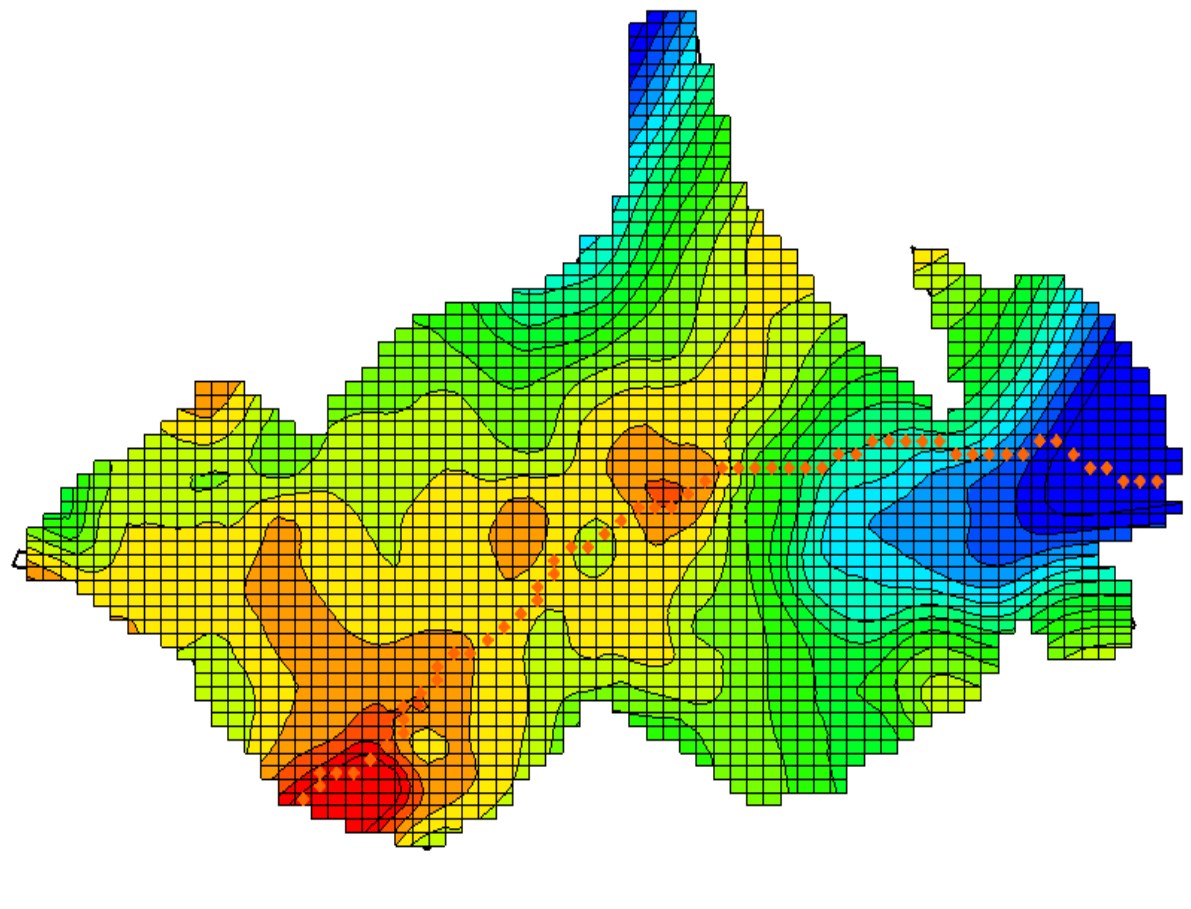
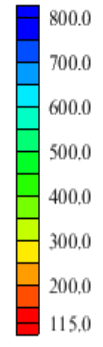


Figure 9: Predictive simulation after 5years.

Starting Heads

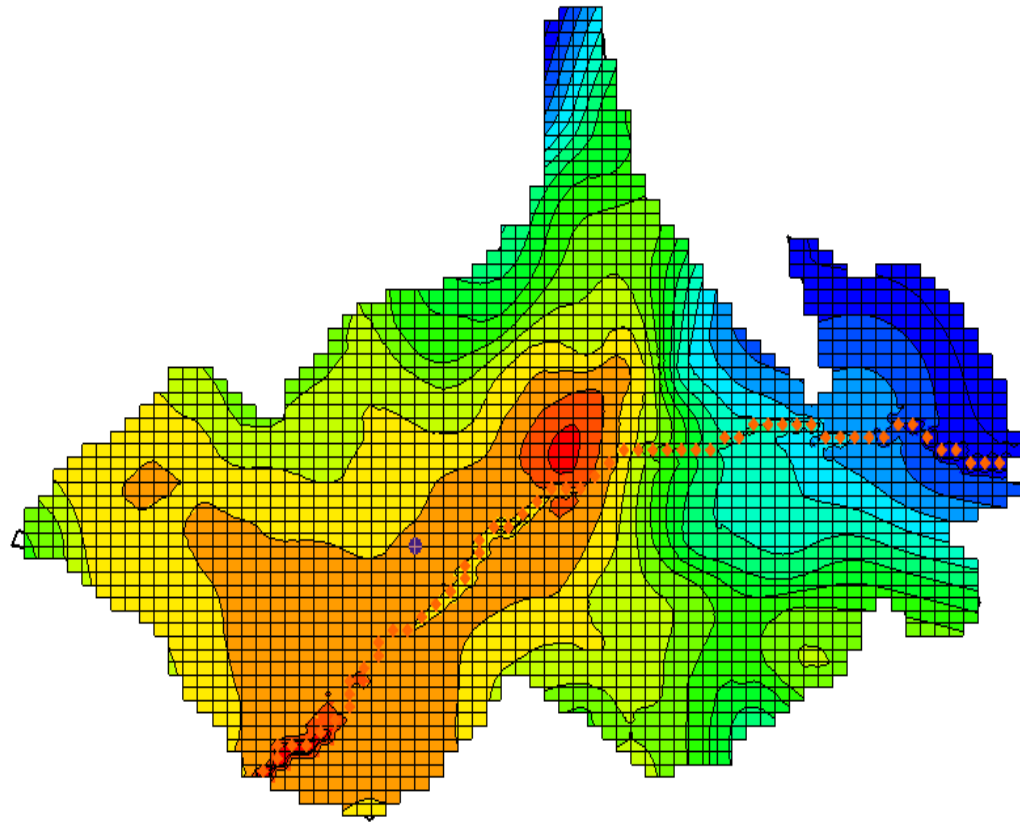
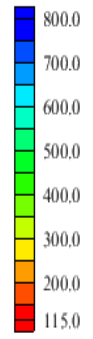


Figure 10: Predictive simulation after 10 years.

CONCLUSIONS

- 1- The groundwater flow patterns of the unconfined aquifer in the upper areas of the Low Folded Zone, point to the source of recharge of the Lesser Zab River.
- 2- Toward the south of the area, the flow pattern is parallel to the river flow which means that it is possible there is no impact between ground and surface water except during the natural elevations of both of them.
- 3- The mathematical model shows that there will be a decrease in hydraulic head of the unconfined aquifer in the modeled area on the two sides of the river.



Thank You

Babylon Iraq