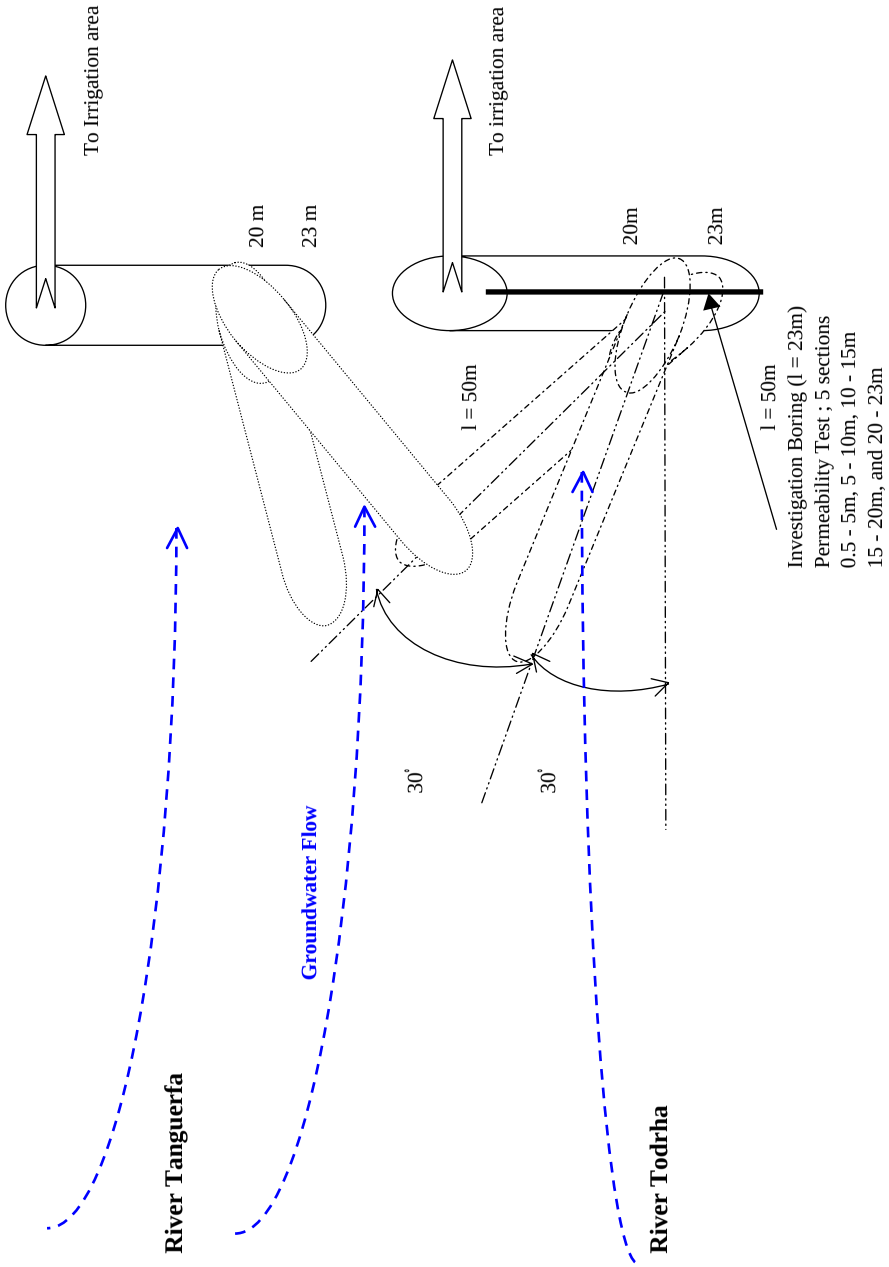

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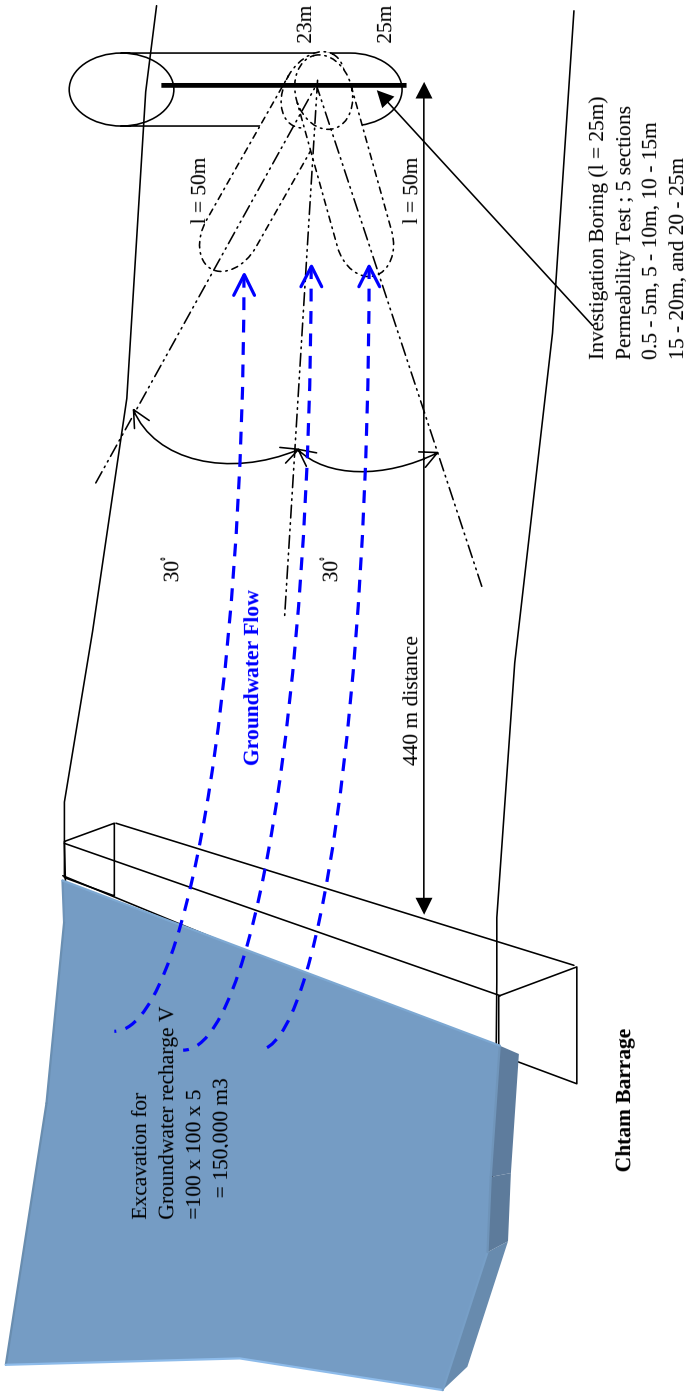
Figure XI4.7.10
Conception de puits (Confluence d'Oued Tanguerfa et Tinjdad)



FEASIBILITY STUDY ON WATER RESOURCES DEVELOPMENT IN RURAL AREA	**Figure XI4.7.11** **Conception du puits (Site de Barrage Chtam)**
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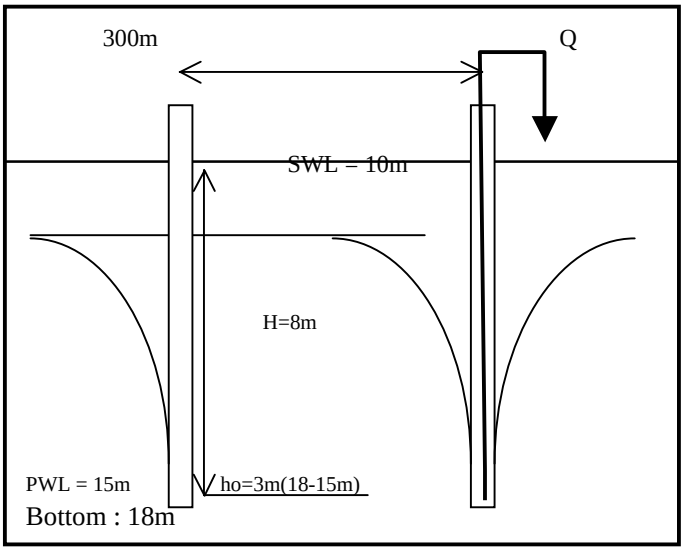

Q = π K(H2-ho2)/Loge(R/ro)=33 l/sec

Q : discharge

K: Permeability (=1 x 10-1 cm/sec)

H and ho : Thickness of aquifer

ro : Radius of well (=0.75m)

S : drawdown (=5m)

FEASIBILITY STUDY ON WATER RESOURCES DEVELOPMENT IN RURAL AREA	**Figure XI4.7.12** **Infleunce de l'Intervalle des puits**
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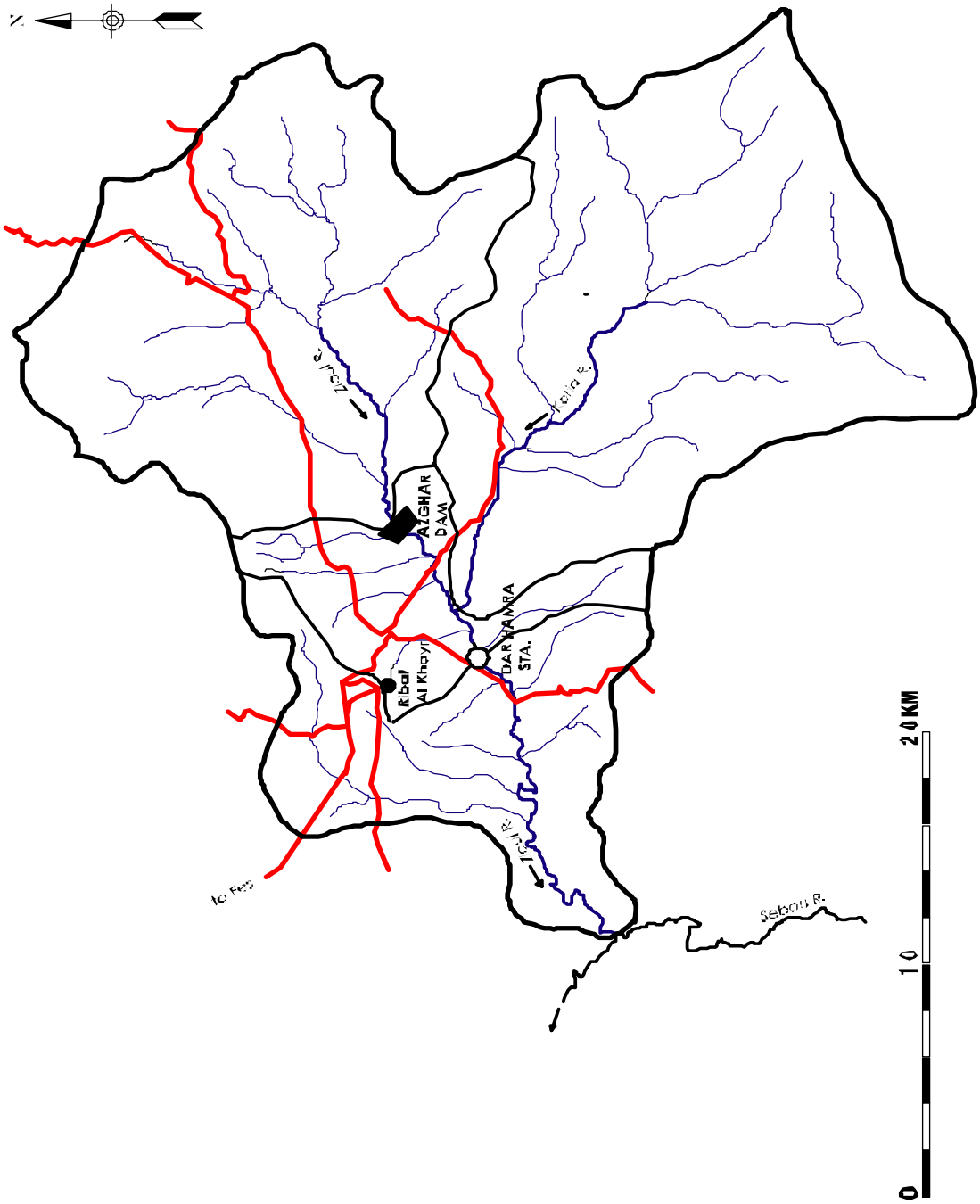

FEASIBILITY STUDY ON WATER RESOURCES DEVELOPMENT IN RURAL AREA	**Figure XI5.1.1** **Carte de situation Generale: Zloul Bassin Fluvial**
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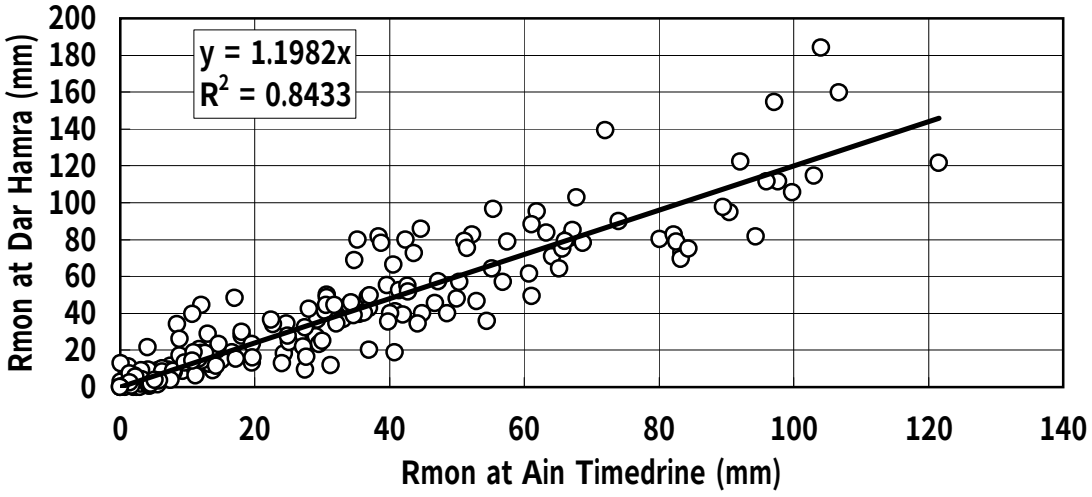

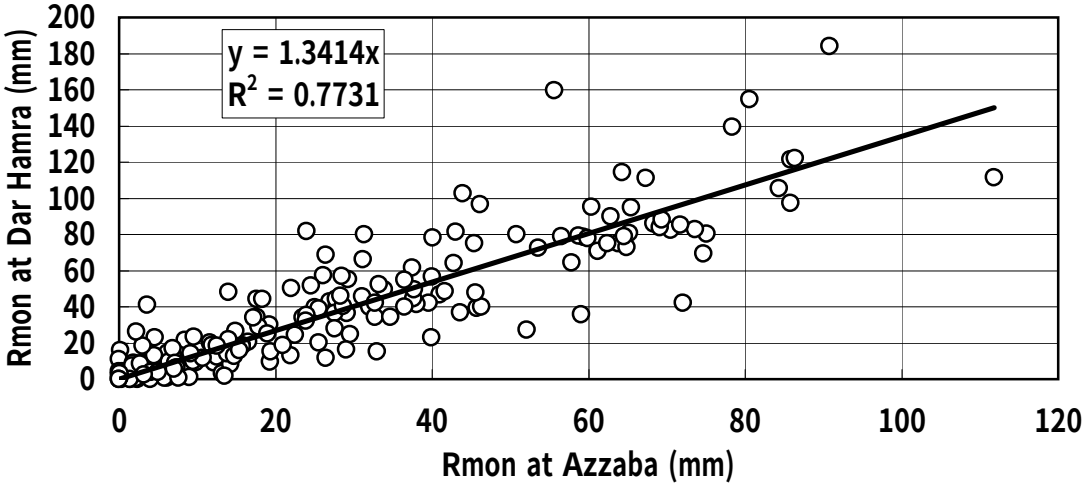

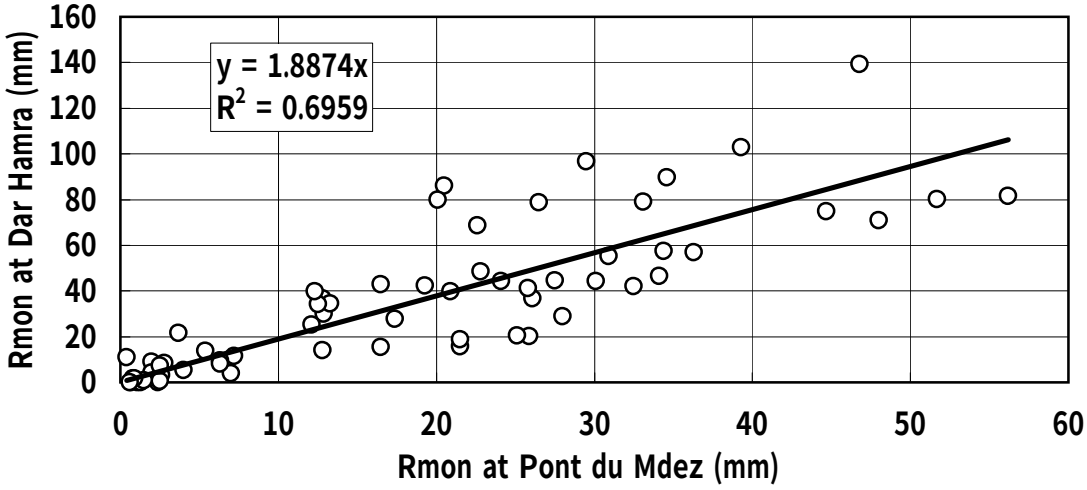

FEASIBILITY STUDY ON WATER RESOURCES DEVELOPMENT IN RURAL AREA	**Figure XI5.3.1** **Corrélation de pluie Mensuelle**
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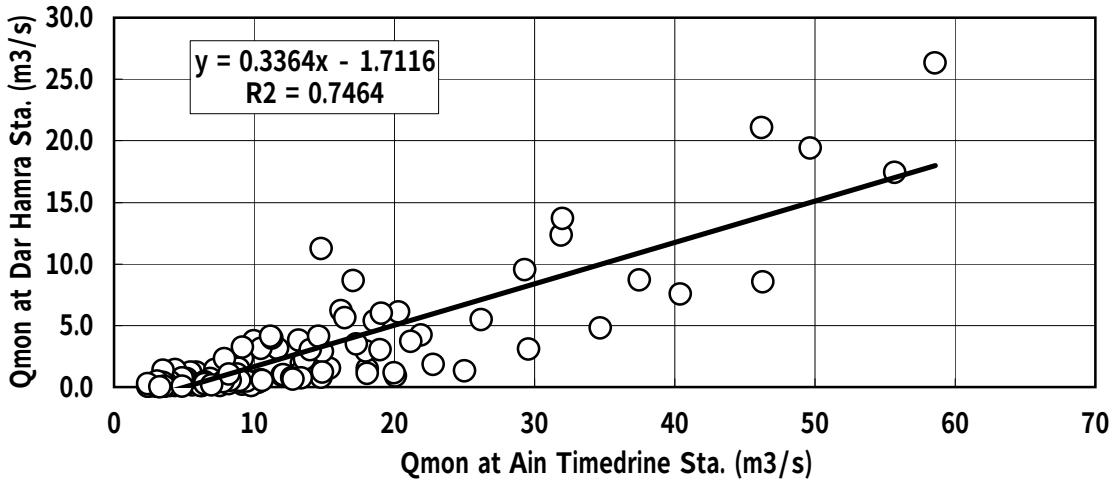
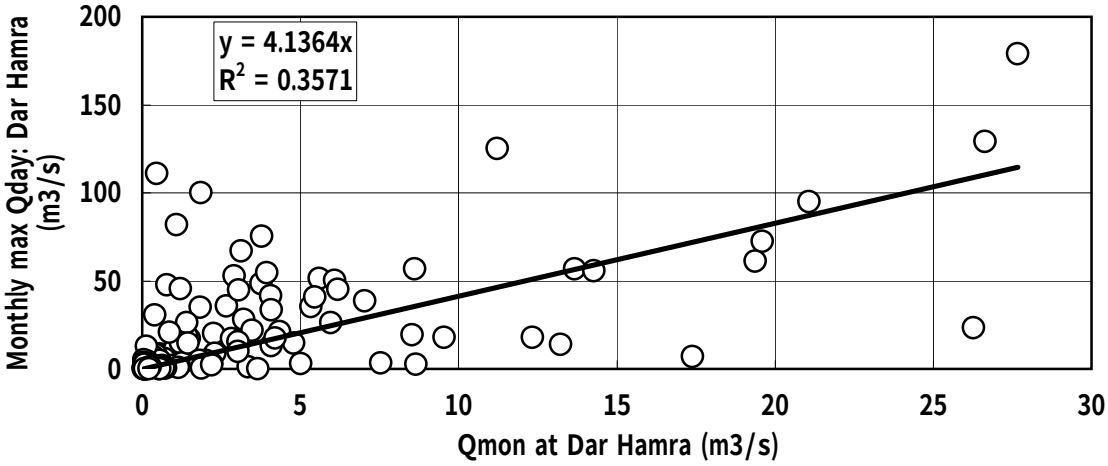
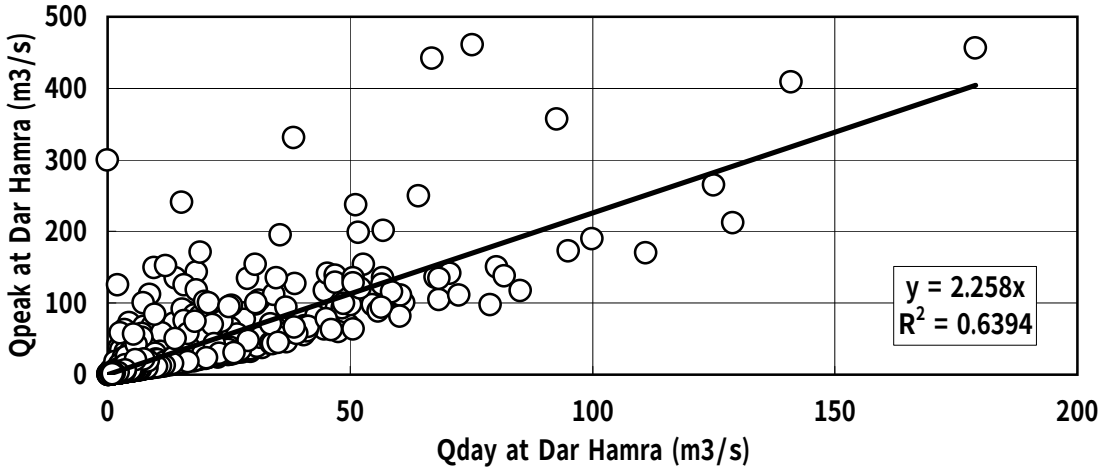
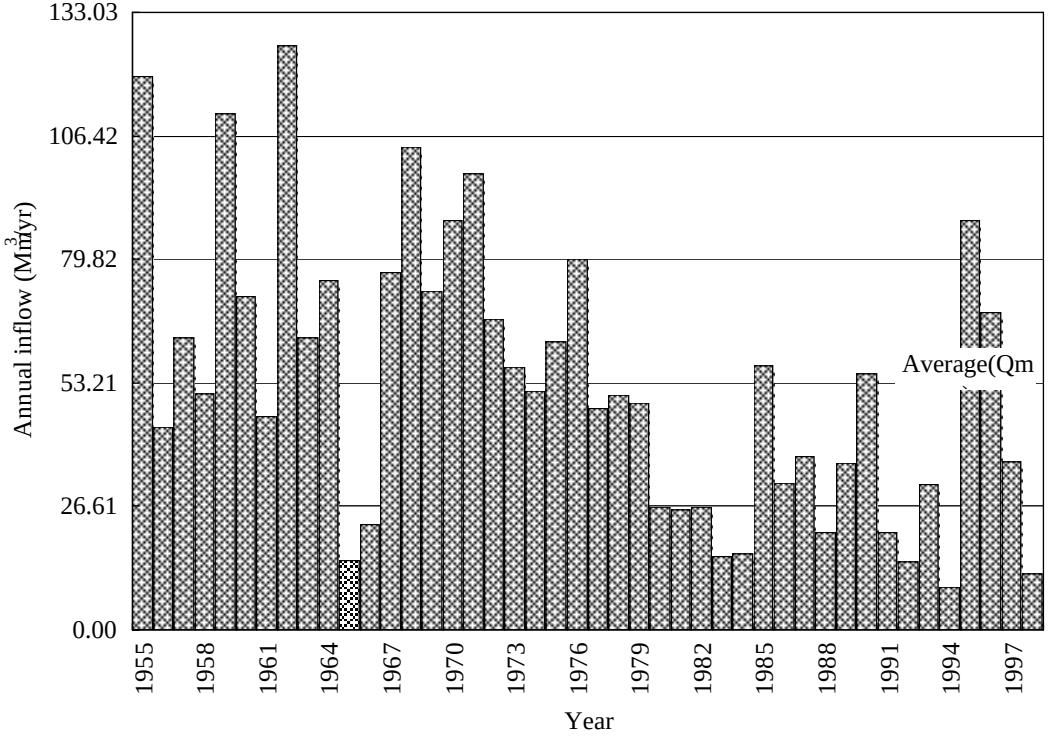






FEASIBILITY STUDY ON WATER RESOURCES DEVELOPMENT IN RURAL AREA	**Figure XI5.4.1**
JAPAN INTERNATIONAL COOPERATION AGENCY	**Corrélation de Débit : Qmois, Qjour, Qpointe**



Ratio to Qm	Total years	Frequency (yrs)	Frequency (%)
2.0	3	3	7
1.5	8	5	11
1.0	20	12	27
0.5	32	12	27
0.0	44	12	27

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Figure XI5.4.2
Apport Annuel : Barrage Azghar

Mean = 225.58 mm

Observed data arranged in the order of magnitude		
Year	DAR HAMRA (m³/s)	Return period (year)
1987/88	461.0	11.60
1995/96	456.0	11.16
1985/86	331.0	4.41
1989/90	265.0	2.82
1994/95	241.0	2.42
1993/94	237.0	2.37
1996/97	212.0	2.04
1986/87	173.0	1.66
1990/91	170.0	1.64
1991/92	154.0	1.52
1992/93	83.4	1.18
1988/89	81.2	1.17
1984/85	68.0	1.13

Calculation results	
Return period (year)	DAR HAMRA (m³/s)
1000	1019.0
500	933.0
250	846.9
200	819.2
100	733.0
50	646.4
30	582.3
25	559.2
20	530.9
15	494.2
10	441.7
5	348.7
4	317.2
3	274.6
2	208.2
1.500	151.1
1.333	122.2
1.250	103.8
1.111	59.3
1.071	39.0
1.053	27.0
1.042	18.1
1.034	10.5
1.020	-7.0
1.010	-26.8
1.005	-44.1
1.004	-49.1
1.002	-63.8
1.001	-76.8

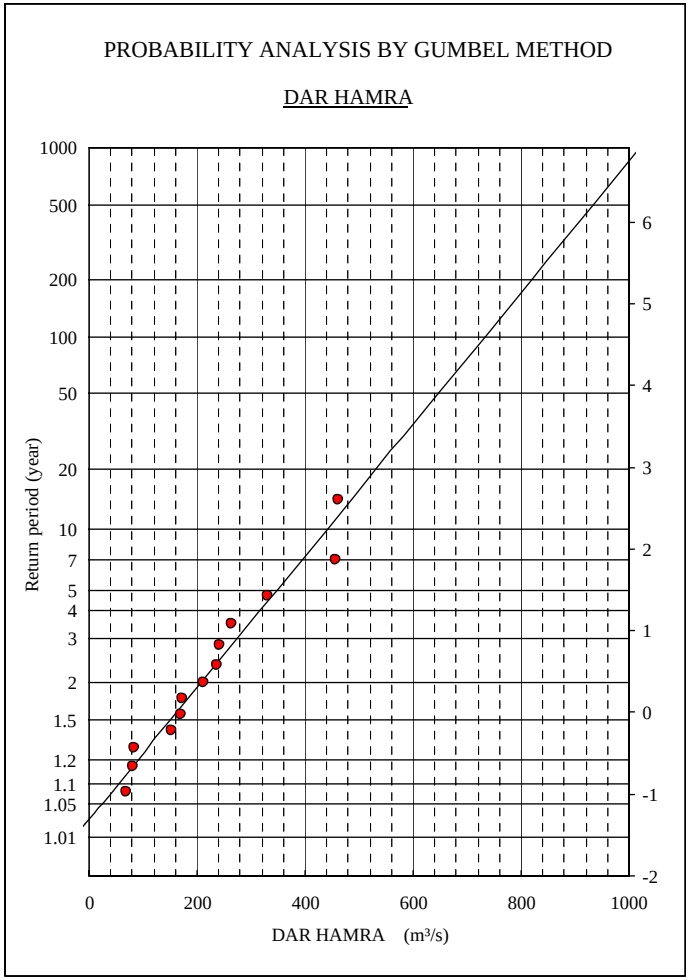

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Figure XI5.4.3
Analyse de Probabilité par la Méthode Gumbel