

RMEL WATERSHED SIMULATION

Table of P values, cost, and efficiency of SWC techniques

Technique	Local name	P value	Source for P value	Implementation cost (TND)		Maintenance cost (TND)		Source of cost information	Ordinary maintenance frequency (years)	Life-time of the structure* (years)	Time of 50% efficiency decay** (years)	Source of maintenance-related information
Slope management	Aménagement des versants											
Mechanical bench terrace	Banquette mécanique	Table below	Zante & Collinet, 2001 and 2003	ha	500	Ha	300	Med Bechir Tarchi Head of department of SWC in Zaghouan	The maintenance is very costly. They prefer to do rehabilitation works and build new ones in the same spot of the old ones.	10-15	They do not this sort of studies	
Manual bench terrace	Banquette manuelle	Table below	Zante & Collinet, 2001 and 2003	ha	1300	Ha	300		In perfect conditions every 2-3 months/ at least once a year	3-5		
Stone bunds	Cordon pierre sèches	0.35 0.15/0.2 (cordons de pierres, cactus et reboisement/cordons	Zante & Collinet 2001 (« cordons de pierres sèches »)	Ha	1300	ha	200		Once a year (1)	5		

		meet the guy from the forestry department to see with him.										
Stream bed and bank management	Aménagement des voies d'eau											
Check dam (gabions or stones)	Ouvrages de recharge (gabion et seuils en pierre sèches)			m3 (#)	60 (gabion) 70 (stone)	M3	For contouring 30		Once a year (1)	20		
Gully restoration	Protection de ravins : It is basically through cactus/ Acacia	I think it is better to meet the guy from the forestry department to see with him because the guy we met does not give any number and give not that precise informations		ha	400							
Gully bank fixation	Fixation biologique des	I think it is better to		ha	400							

	berges :It is basically through cactus/ Acacia	meet the guy from the forestry department to see with him because the guy we met does not give any number and give not that precise informations										
Hill lakes and reservoirs	Lacs et barrages collinaires	0 (water body)	na	Unit (dam +equipment.)	350,000	Unit (I mean lake/reservoir)	20,000/30,000		For lakes every 5 years For reservoirs 5-10 years	15		

* Average number of years after which the structures are expected to break or to lose efficiency to such extent that they are no longer useful (useful time span)

** Average number of years after which the structures are expected having lost half of their technical efficiency.

(#) Volume of the structure.

Wischmaier and Smith 1978 table for contour farming (page 35), recommended by FAO

Slope %	P value	Max length (feet)
1-2	0.5	400
3-5	0.5	300

6-8	0.5	200
9-12	0.6	120
13-16	0.7	80
17-20	0.8	60
21-25	0.9	50

	slope	P (Zante & Collinet, 2001)
Benches and Terraces or Benches and Forest plantation	0-10%	0.1
	10-15%	0.12
	15-25%	0.16
	25-35%	0.18
	35-45%	0.28 (Zante & Collinet, 2003)

Mr Tarchi said that the maintenance works are divided into:

- Immediate intervention during the extreme events which can be devastating for some works that I did witnessed in the trip report.
- Regular maintenance: the numbers that I gave are for this type independently from any extreme event which can occur.