



**Integrated Project** 

## Time line at Al-Mujellis:

Time	Spat water	Agriculture activities			Groundwater status			Des.	Imm.
		Area	C.T	Yield	Total Depth	W.L	W.Q	Des.	
1977	Floods comes from the heavy rainfall around the area	All agriculture lands	Palm	100%	0.5m No drilling till 1975	Near the surface till (<0.5m)	Fresh	Non	Non
۱۹79	Same as above	All agriculture lands	Palm	100%	As above	0.5m	Fresh	Non	
1985	Same as above	The start of agriculture lands shrinking	Palm	100%	6- 8m	5m	Fresh	Start to cover Palms	Few (10 P)
1990	Same as above	As above	Palm	25%	12m	7- 8m	Fresh	As above	30%
2000	Rainfall shortage	Continuous decreased in agriculture lands	Palm	25%	16- 17m	5- 9m	Fresh	Continuous cover Palms	60%
2011	Rainfall shortage	The most decreased in agriculture lands	Palm	10%	30- 50m	12	Fresh	It remain 15% Palms	0070

C.T= Crop type, W.L= water level, W.Q= water quality, Des.= Desertification, Imm.= Immigration, P= Persons

## - Daily calendar at Al-Mujellis:

Career	Time (hr) and daily activities								
Calter	5:00 AM- 6:00 AM	6:00 AM- 9:00 AM	10:00AM- 12:00 AM	1:00 PM - 3:00 PM	3:00 PM- 6:00 PM				
Farmer	Dawn Prayer	Farm work	Shopping	Rest	Chewing Qat				
Employer or worker	Dawn Prayer	Go to the work	At work	Rest	Chewing Qat				
Jobless	Don't do anything								
Fisherman	Go to the sea for fishing in the fishing seasons								





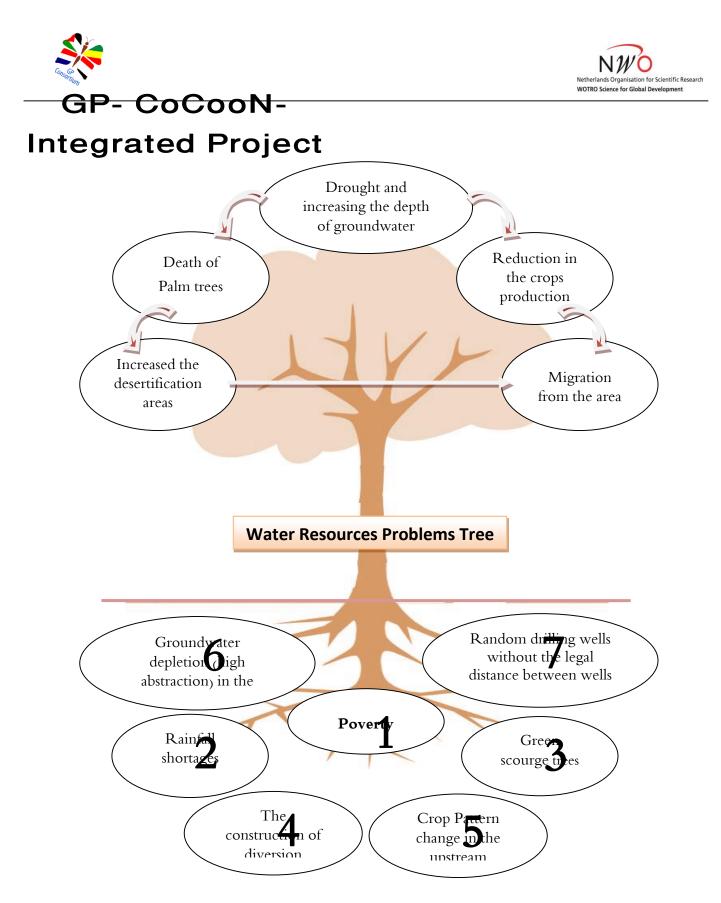


Figure 1A: Water resources problems tree with problems ranking, group 1: Al-Tefaf schools





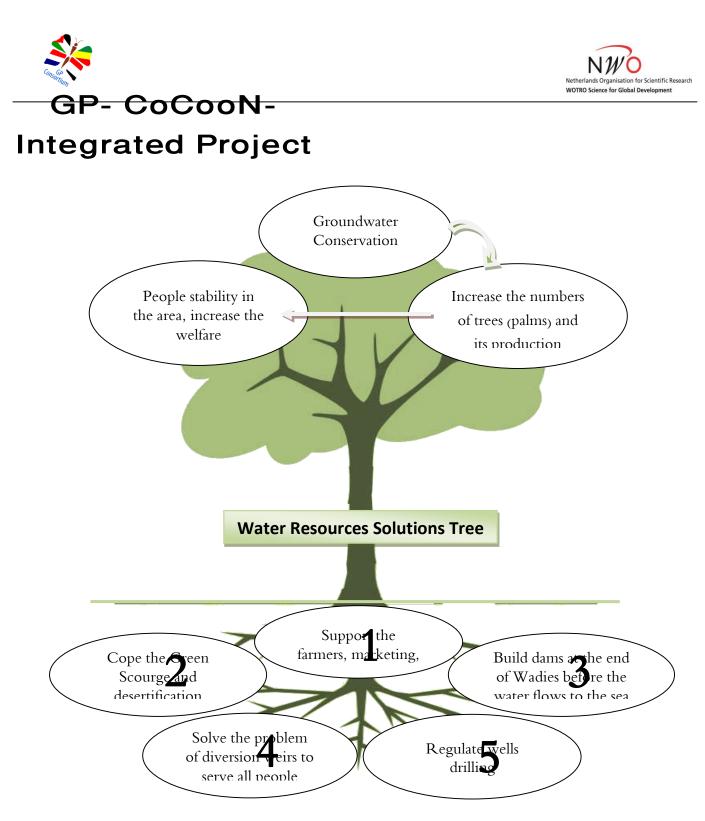


Figure 1B: Water resources solutions tree with solutions ranking, group 1: Al-Tefaf schools





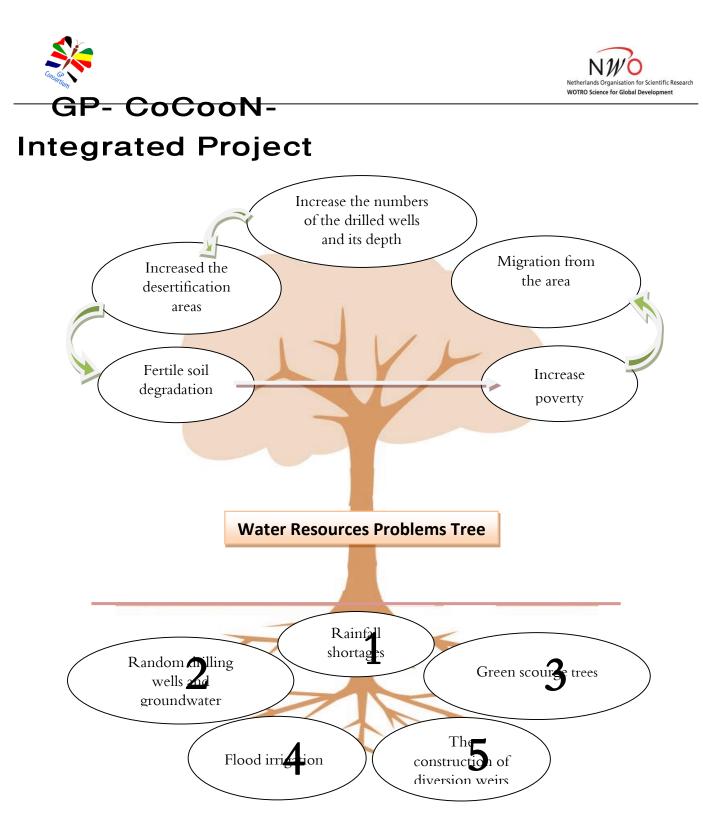


Figure 2A: Water resources problems tree with problems ranking, group 2: Al-Mujilles hamlet







**Integrated Project** 

P- CoCooN-

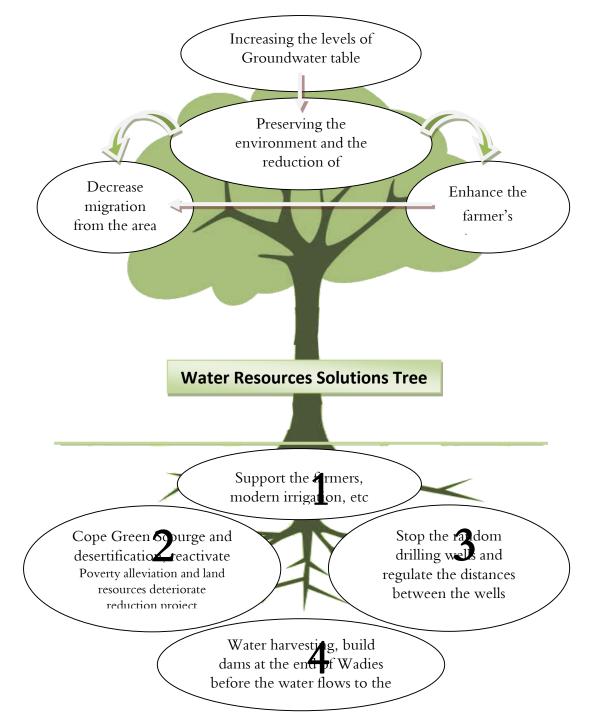


Figure 2B: Water resources solutions tree with solutions ranking, group 2: Al-Mujilles hamlet



Republic of Yemen Sana'a University Water and Environment Centre







## **Integrated Project**

