

IMPROVING COMMUNITY SPATE IRRIGATION

Impact of Rehabilitation
Wadi Zabid
9 April, 2008 CAIRO

Khalid H. Al-Attas

PROJET IMPLEMENTATION UNIT WADI ZABID

PROGRESS OF WORKS:

- PIM Progress
- Design works
- Construction
- Agricultural demonstrations
- O&M activities

Complete

Complete

Under construction

Complete

On-going



المسح الميداني Cadastral survey

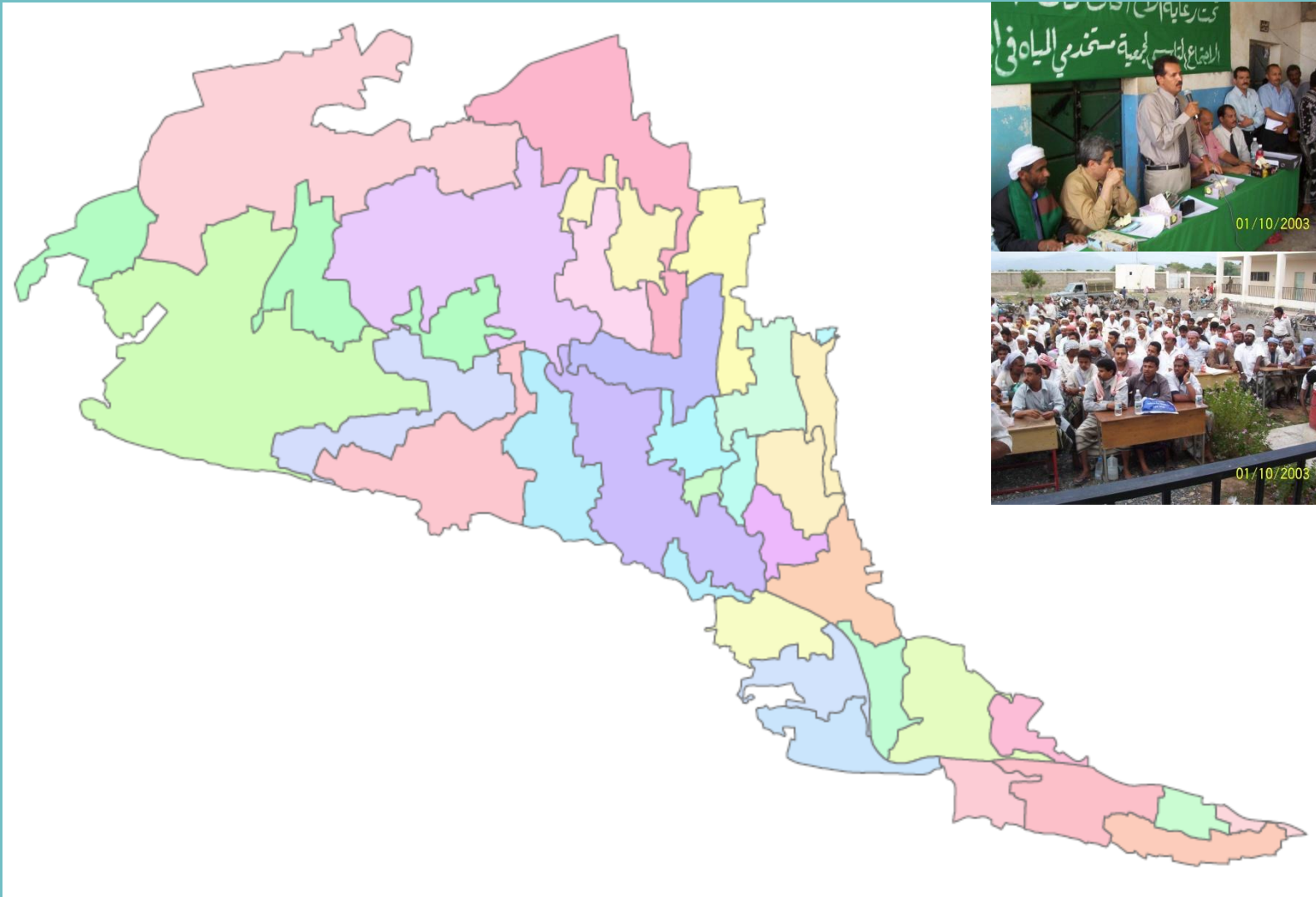


مجموعات مستخدمي المياه

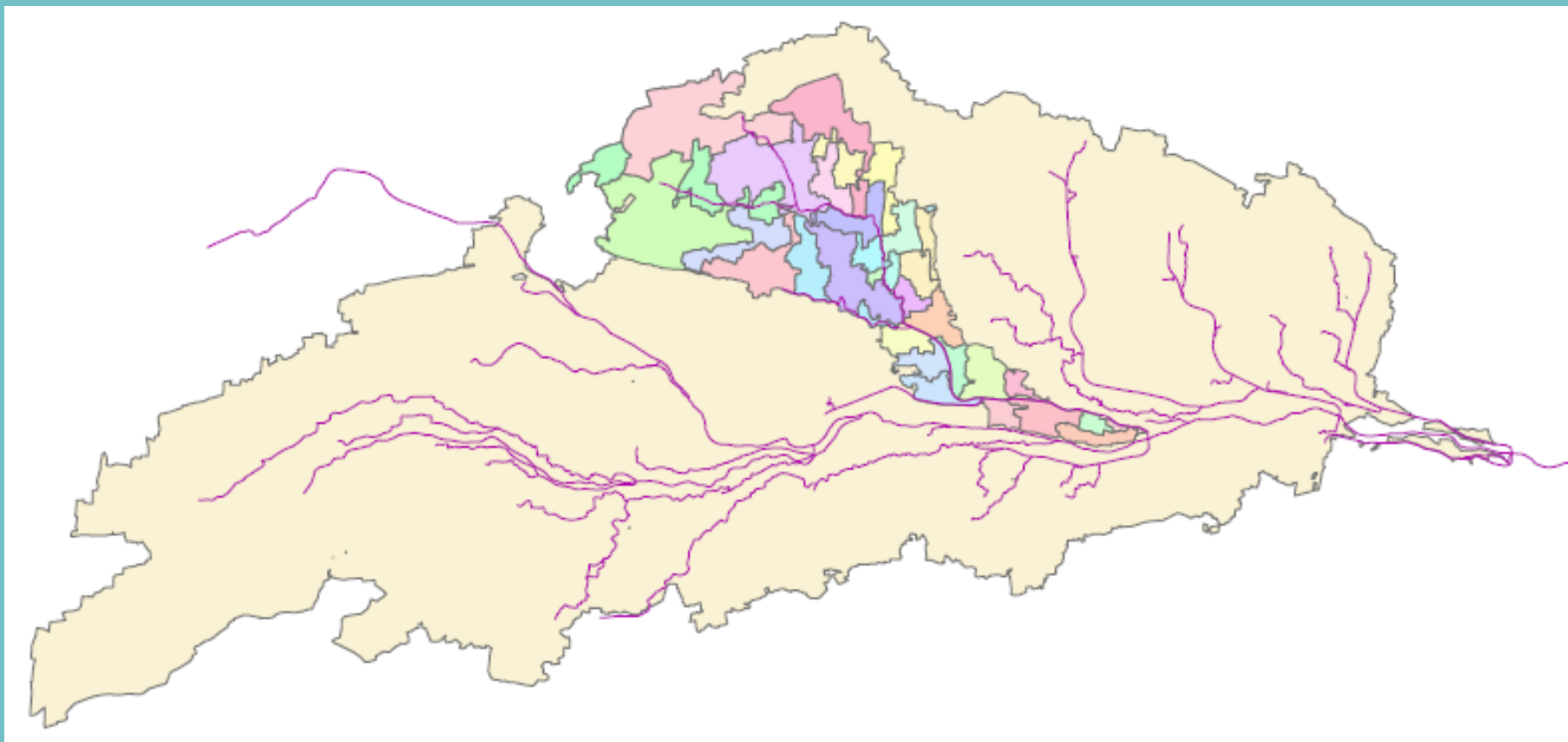
Water User Groups



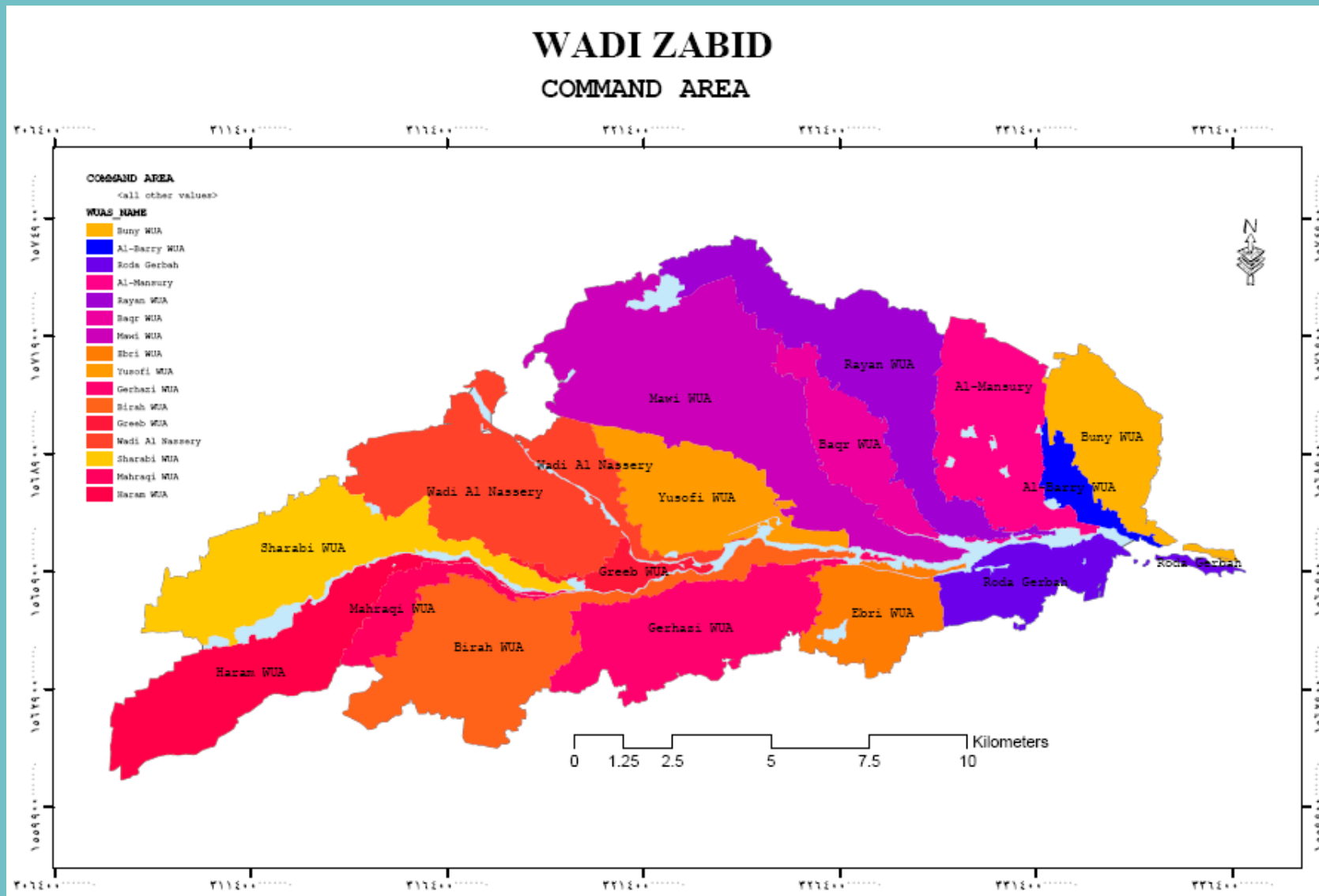
جمعية مستخدمي المياه Water User Association



المساحة المستهدفة للمشروع Command Area



المساحة المحددة لمشروع وادي زبيد



خطوات أعمال الري بالمشاركة

Participatory Irrigation Works

FarmerDesign Committee
WUG, PIU, WMS

Ranked list of irrigation problems
WUG, FDC, WMS, PIU

Walk-through
FDC, DE, PIU

Design meeting
FDC, DE, WMS, PIU

Agreement on
beneficiary
contribution
FDC, WMS, PIU

Final list of requested works
FDC, WUG, PIU, WUAs

PMU Approval
SDE, PMU

PIU - WUA
WUA Board, PIU

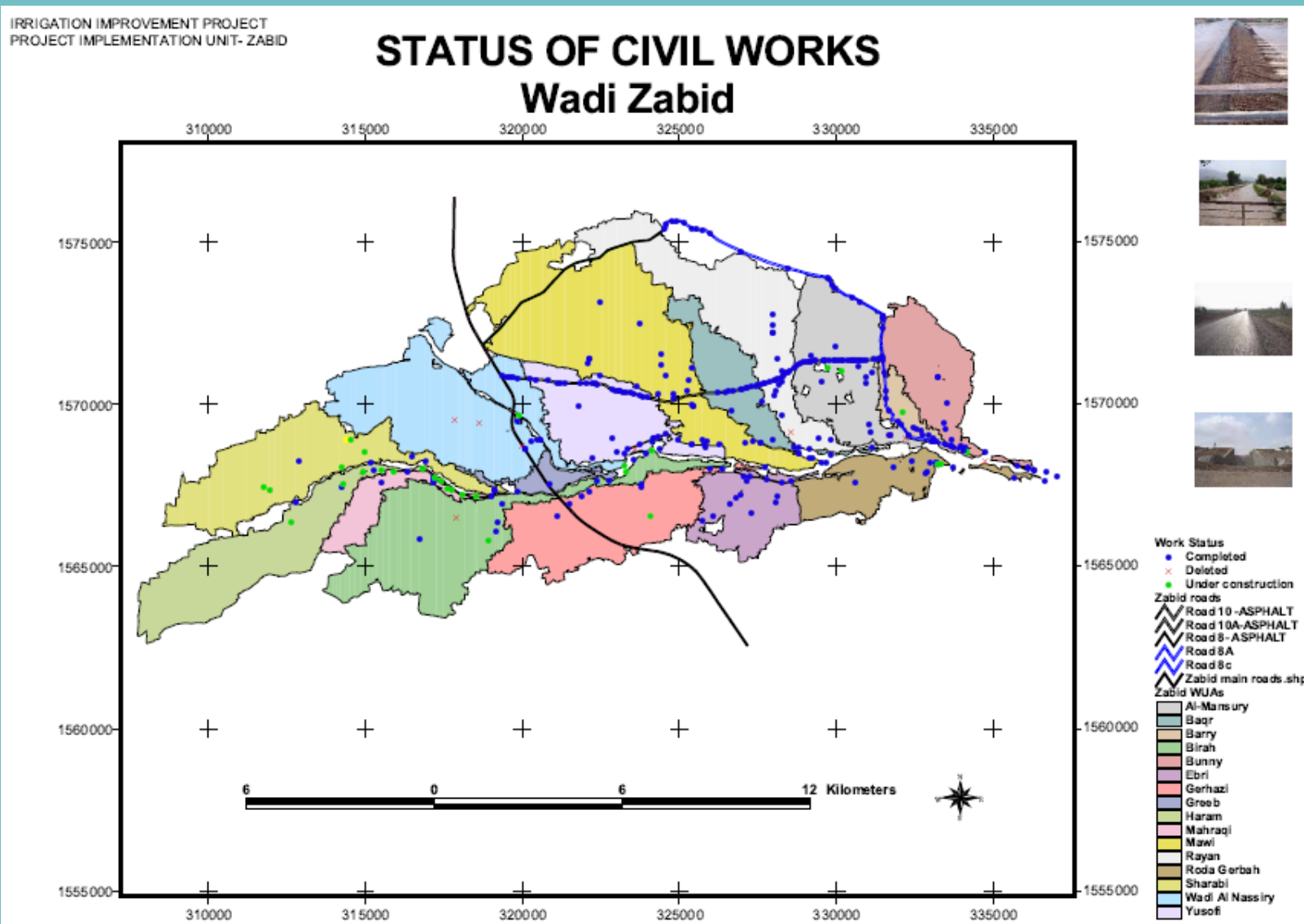
- Contribution categories:
 - Community contracts (<10,000 US\$)
 - 30% Water user contribution
 - 60% Cridet
 - 10% Government
 - Farmer's works
 - 100% water user contribution by labor or etc.
 - Cash

تقدم العمل في البناء المؤسسي وتنفيذ مساهمات المزارعين وادي زبيد

Table (2) Progress of WUAs membership & Work Contracts up to 29/2/2008 - Wadi Zabid

No	Diversion Structure (WUAs)	Wiers	Area (ha)		Total farmers	Land Tenure				No. of WUGs	No. of WUG Members	No. of WUAs	No. of WUAs Members	membership %	Total Area of WUA Members (ha)	Area (%)	WUA-PIU (IMT) Agreements	WUA Participatory Work Contracts			
			Gross Area (ha)	Net Area (ha)		Owner-operators	Non-operators	Share-croppers	Tenants									Total	Completed	Under implementation	Stumbling
1	2	3	4		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	Bunay Canal	1	883	855	523	140	175	188	7	15	354	1	151	29%	532	60%	13/7/05	5	3	2	0
2	Barry Canal		247	230	341	40	94	125	11	6	109	1	270	79%	247	100%	25/8/05	5	1	3	1
3	Rodha-Gerbah Canal		680	565	693	226	148	231	23	21	440	1	544	78%	510	75%	14/5/05	7	2	5	0
4	Mansury Canal	2	1,254	1,078	744	448	4	291	1	10	487	1	560	75%	972	78%	14/8/05	8	2	6	0
5	Rayyan Canal		1,663	1,125	959	238	247	449	10	15	662	1	204	21%	571	34%	14/5/05	14	12	1	1
6	Bagr Canal		698	432	350	67	92	163	2	6	174	1	140	40%	501	72%	16/3/05	2	2	0	0
7	Yuesfi canal	3	1,067	1,000	825	152	255	410	5	13	516	1	142	17%	437	41%	12/4/05	8	1	6	1
8	Mawi Canal		2,736	2,160	1372	281	448	576	15	33	824	1	580	42%	1,620	59%	11/4/05	8	4	4	0
9	Ebry Canal		712	700	1220	510	301	350	14	25	632	1	305	25%	611	86%	16/3/05	7	6	0	1
10	Gerhazi Canal		1,415	1,080	1289	626	289	371	3	11	314	1	231	18%	620	44%	16/3/05	3	2	0	1
11	Wadi Nasri	4	2,075	2,050	813	58	293	437	5	13	379	1	190	23%	966	47%	21/8/05	4	1	1	2
12	Greeb Canal		199	195	143	15	41	65	0	2	50	1	62	43%	180	90%	28/9/05	2	2	0	0
13	Bira Canal		1,741	1,330	1049	243	380	426	0	10	390	1	73	7%	853	49%	5/12/05	9	2	2	5
14	Sharby Canal	5	1,547	1,266	856	315	188	349	4	23	551	1	181	21%	862	56%	9/10/05	5	2	3	0
15	Mahragi Canal		358	300	226	118	18	77	0	3	145	1	147	65%	214	60%	13/8/05	3	3	0	0
16	Haram Canal		1,416	634	483	117	110	168	7	7	283	1	402	83%	1,416	100%	7/9/05	6	4	1	1
16	Totals		18,691	15,000	11,886	3,594	3,083	4,676	107	213	6,310	16	4,182		11,112		16	96	49	34	13
	Percentage (%)		1.3 ha/Farmer			30%	26%	39%	1%	100%	53%	100%		35%		74%	100%	100%	51%	35%	14%

الأعمال المدنية لإعادة تأهيل مشروع وادي زبيد



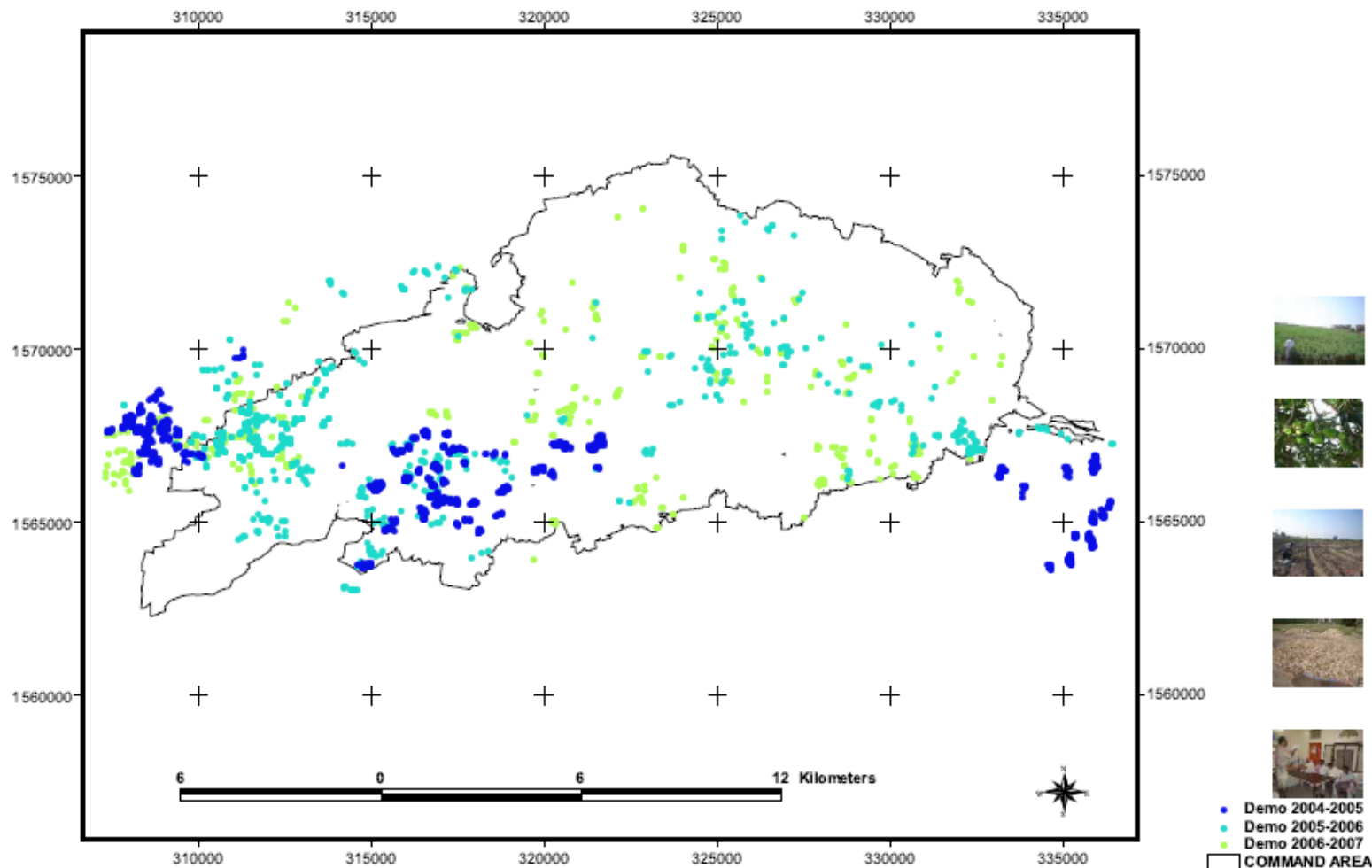
تقدم العمل في العقود الرئيسية Progress of civil works

Contract	Contract Price	Value of Works		Contract period	Time elapsed		Remark	Type of Works
Z01	302,773	291,240	96%	150	352	235%	Completed	Village Protection "Matea, Mahl Al Sheikh & Al Mazraa
Z02	453,961	78,877	17%	180	261	145%	Terminated	Rehabilitation of Roads 8A & 8C (Earthworks & ancillary structures)
Z03	309,168	296,742	96%	180	332	184%	Completed	Rehabilitation & improvement of Weir 3
Z04	805,429	777,207	96%	180	412	229%	Completed	Rehabilitation of Roads 10 & 10A (Earthworks & ancillary structures)
Z05	172,501	173,557	101%	180	355	197%	Completed	Rehabilitation & improvement of Weir 3
Z2005/01	425,303	476,862	112%	180	326	181%	Completed	Rehabilitation of Roads 8A & 8C (Earthworks & ancillary structures)
Z07	765,406	795,909	104%	275	577	210%	Completed	Rehabilitation & improvement of Main canals (Ebri, Jarhazi and Birah)
Z08	1,073,112	1,156,119	108%	275	693	252%	Completed	Rehabilitation & improvement of Main canals (Baqr, Mawi, and Yusufi)
Z09	1,227,433	1,030,103	84%	275	835	304%	Slow progress	Rehabilitation & improvement of Main canals (Wadi nasseri, Sharabi, Greeb, Mahraqi and Haram)
Z10	1,058,613	872,578	82.4%	452	456	101%	Completed	Rehabilitation & improvement of Main canals (Buny, BarryMansuray, And Rodhah -Gerbbah)
Z11	23,120	23,717	102.6%	90	77	86%	Completed	Development of new monitoring wells at wadi Zabid
Z12	476,030	445,167	93.5%	180	166	92%	Completed	Asphalting of road 10 & 10A
Z13	89,515	89,131	99.6%	180	410	228%	Completed	Construction of Building
Z14	486,823	0	0.0%	180	42	23%	Started	Asphalting of road 8A & 8C
7,669,186		6,507,207	89%		84044.88249	17710500		197.8495224

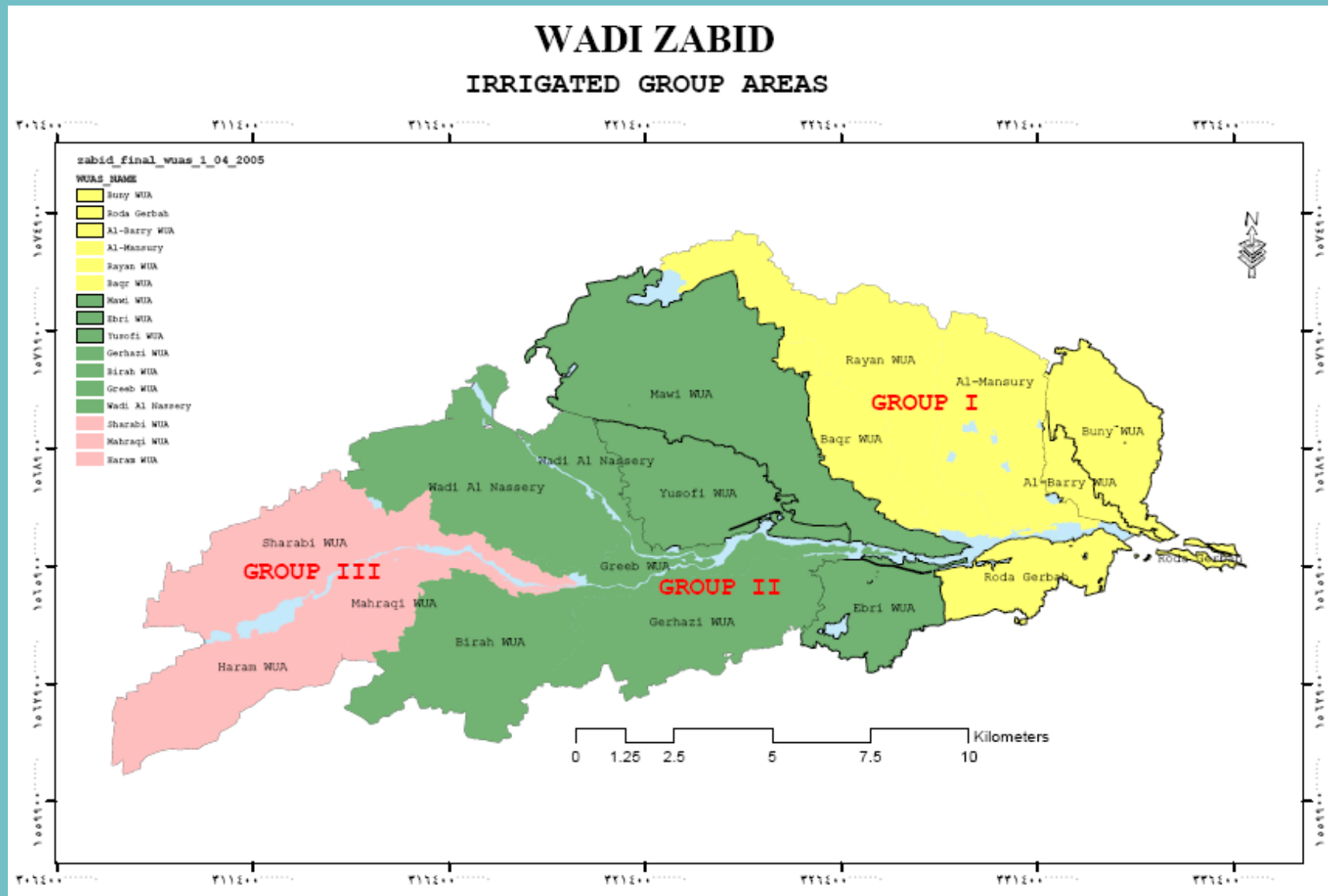
برنامج المشاهدات الزراعية المكثفة

IRRIGATION IMPROVEMENT PROJECT
PROJECT IMPLEMENTATION UNIT- ZABID

AGRICULTURAL DEMONSTRATION PROGRAM WADI ZABID

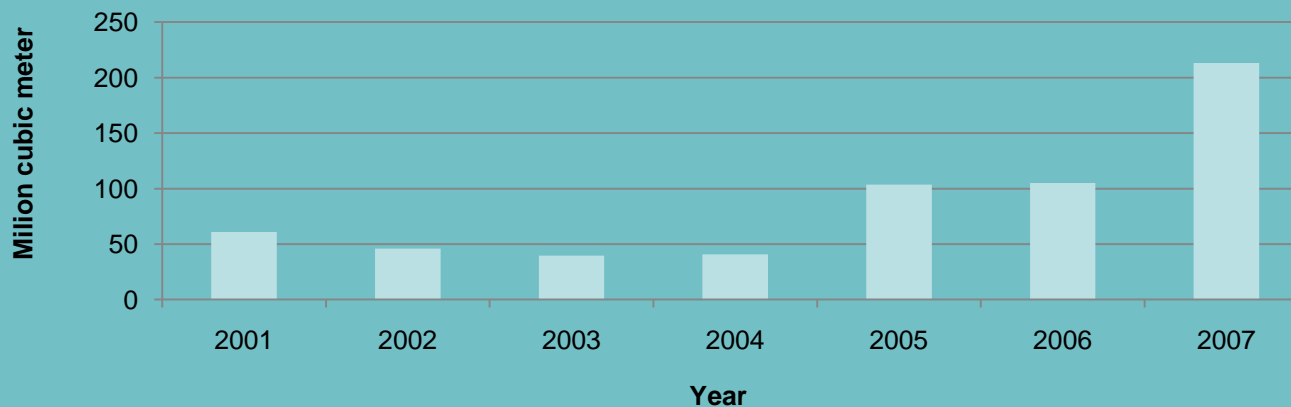


الحقوق المائية في مشروع وادي زبيد



المياه السطحية الواصلة الى محطة الكولة بوادي زبيد

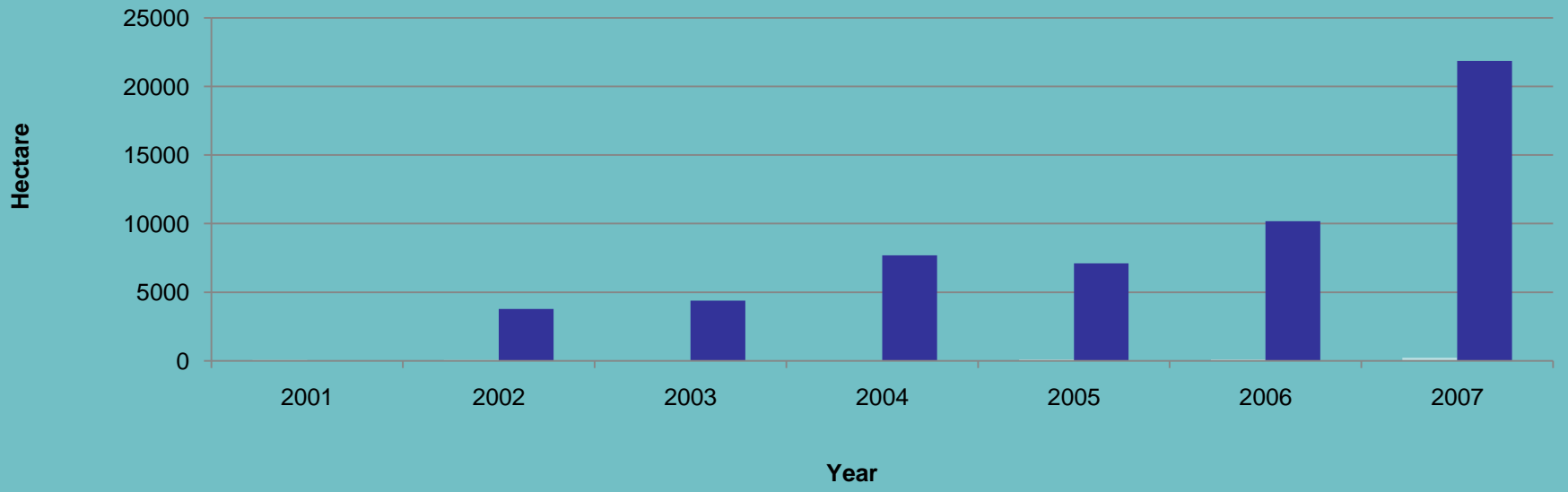
Surface flow of Wadi Zabid



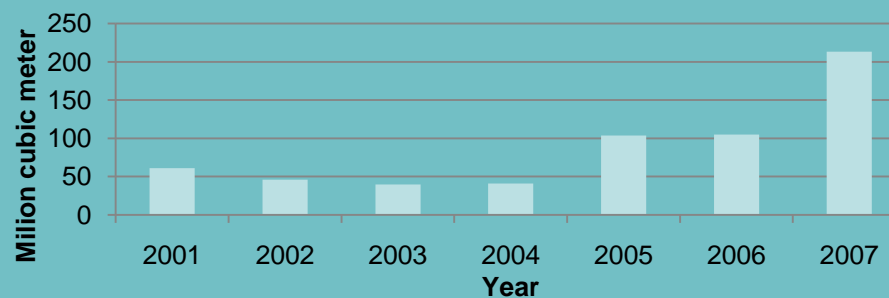
Irrigated Area

الأراضي المروية

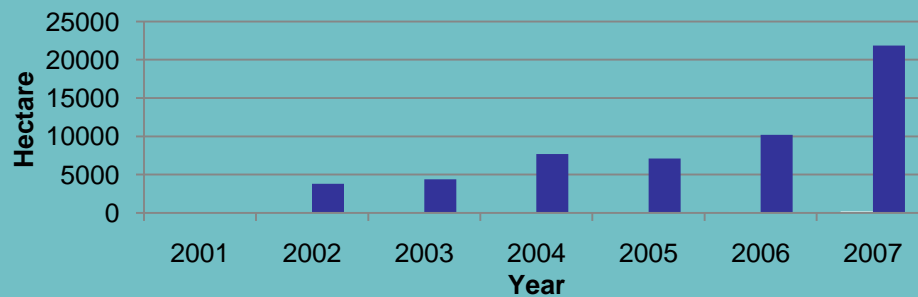
IRRIGATED AREAS Wadi Zabid



Surface water flow Wadi Zabid

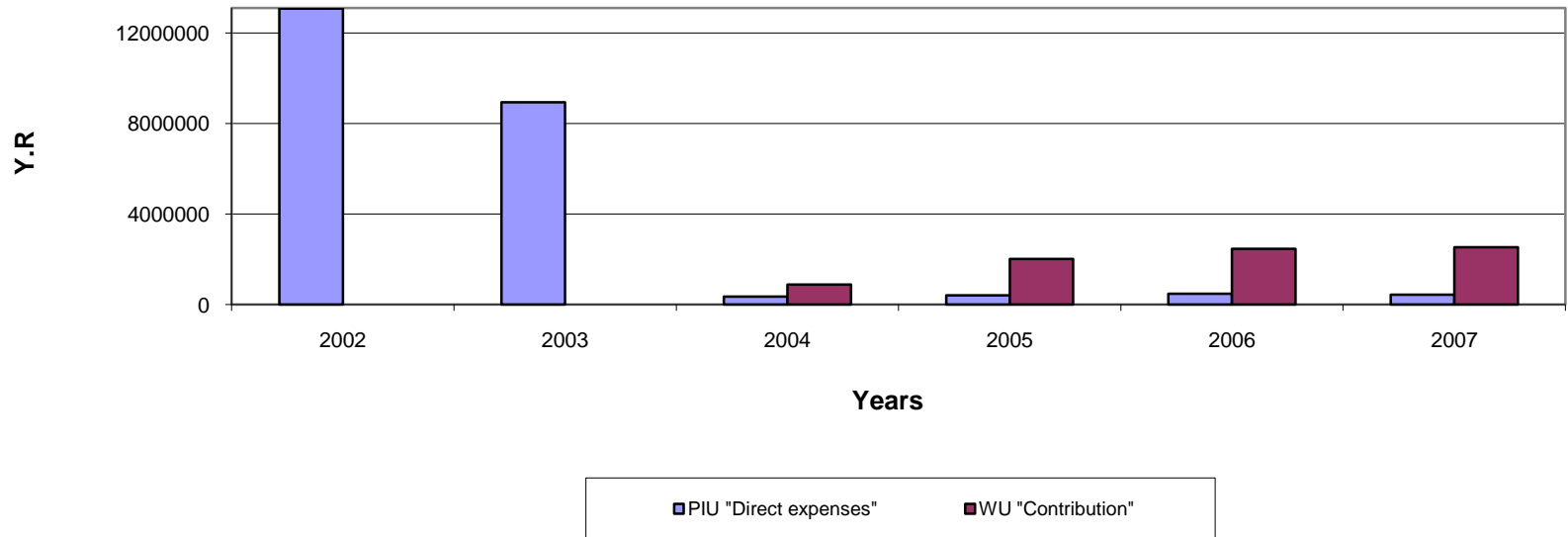


IRRIGATED AREAS Wadi Zabid

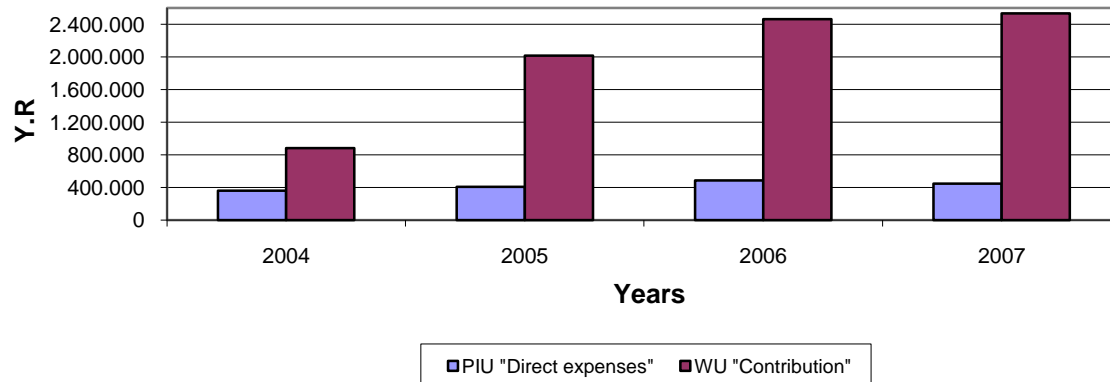


تنفيذ برنامج الصيانة بالمساهمة وادي زبيد

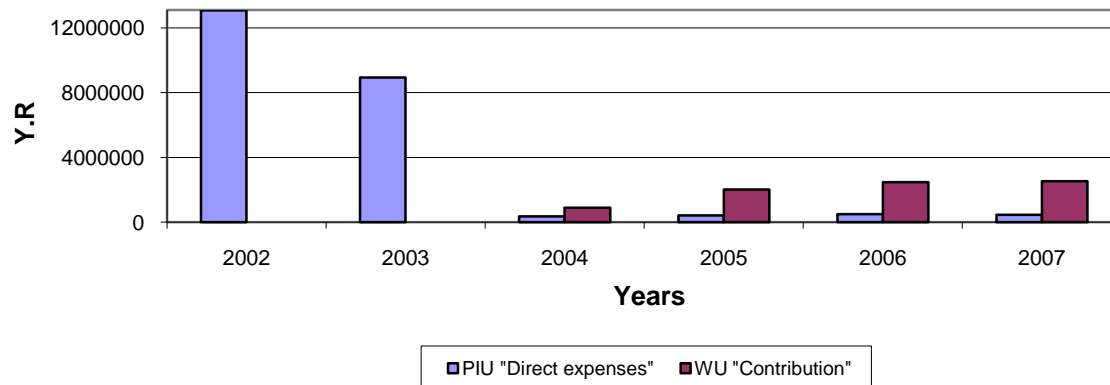
Wadi Zabid
Participatory O&M Program



Wadi Zabid Participatory O&M Program



Wadi Zabid Participatory O&M Program



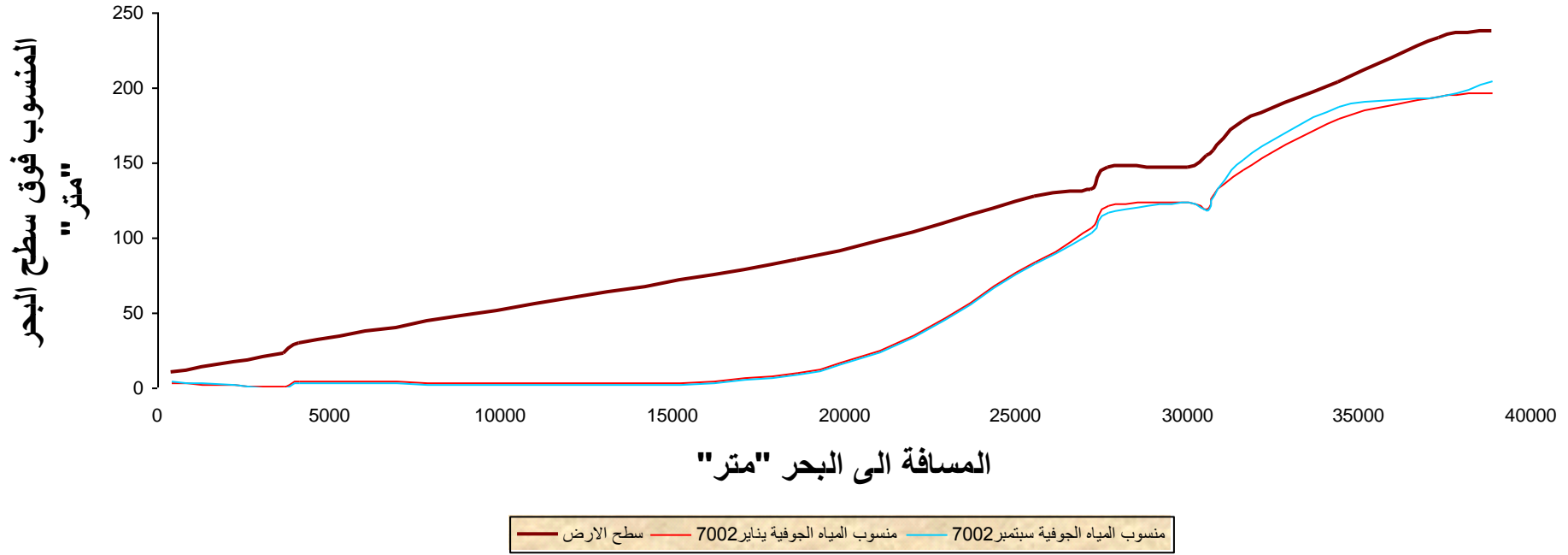
Wadi Zabid water balance for year 2007 for (14906Ha)					Command		15215 Ha
	Crop Water Requirement (mm)		Land use (Ha)		Water Balance		Annual
	Seif	Kharif	Seif	Kharif	Seif	Kharif	
					(Jan-Jun)	(Jul-Dec)	
Water into command area (CA)							
Surface Inflow at Al-kolah station					39.8	171.5	211.3
Direct Rainfall on CA of 15215 ha					16.1	30.5	46.6
Zabid station 5000 ha					21 mm	64 mm	
Gerbah station 10215 ha					93 mm	165 mm	258 mm
Total water into CA (= 1)					55.8	202.0	257.9
Water leaving command area							
1-Surface outflow					0	0	0
2-Etm from field Crops (delta & CI):							
2.1-Cotton	710	710	0	200	0.0	1.4	1.4
2.2-Sorghum: grain	420	420	0	3,100	0.0	13.0	13.0
2.3-Sorghum: fodder	240	240	505	1,501	1.2	3.6	4.8
2.4-Sesame	410	410	100	600	0.4	2.5	2.9
2.5-Maze	717	717	100	500	0.7	3.6	4.3
2.6-Watermelon	400	400	0	100	0.0	0.4	0.4
2.7-Ocra	2304	2304	0	200	0.0	4.6	4.6
2.8-Tomato, etc	548	548	0	200	0.0	1.1	1.1
2.9-Mango	1410	1410	1300.00	1,300.00	18.3	18.3	36.7
2.10-Banana	1709	1709	2600.00	2,600.00	44.4	44.4	88.9
Subtotal			4,605	10,301	65.1	93.0	158.1
3-Evaporation & ET from non-irrigated land, wadi bed, etc	300	300	10610.0	4914.0	31.8	14.7	46.6
Subtotal					96.9	107.7	204.6
IMBALANCE					-41.1	94.3	53.2
Total water out of CA(=2)					55.8	202.0	257.9
Net Inflow (1-2=3)					0.0	0.0	0.0
			15,215	15,215			

The water balance of 2007 season indicated that 53.2 MCM is surplus

The water use efficiency= 61% Assuming imbalance is wasted > 59% of mean year
82% Assuming imbalance is used > 74% of mean year

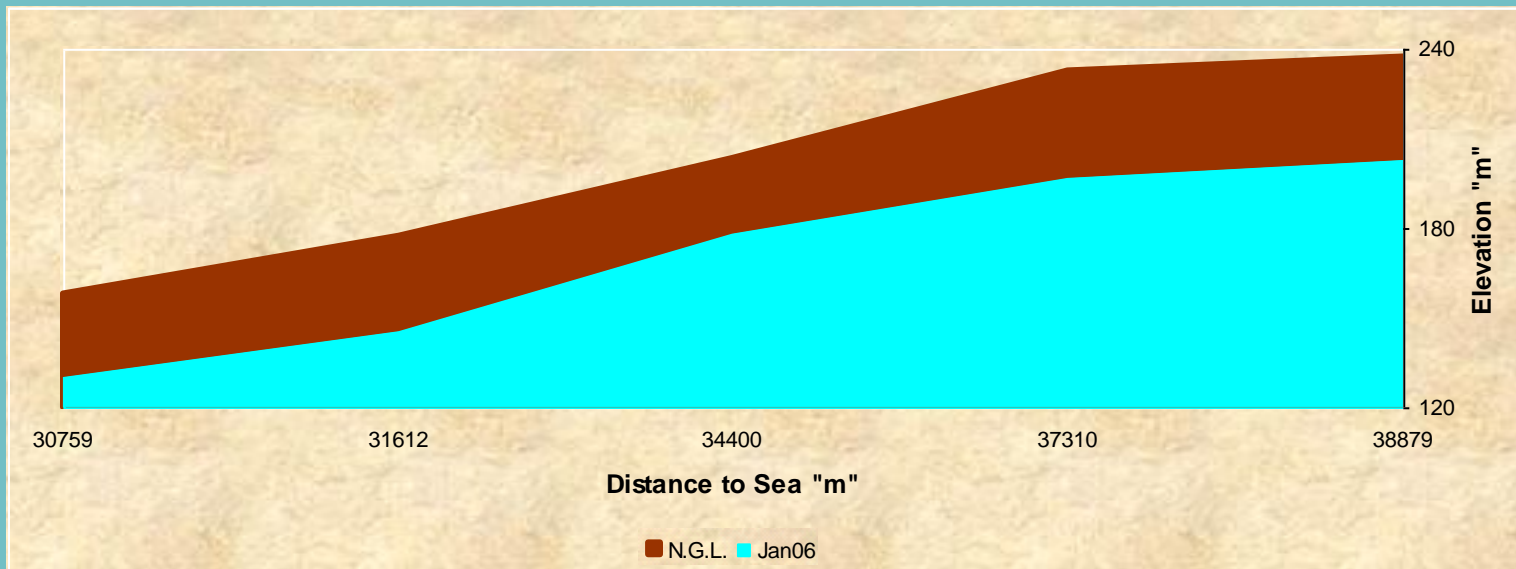
Ground Water Monitoring

المياه الجوفية في حوض وادي زبيد
7002



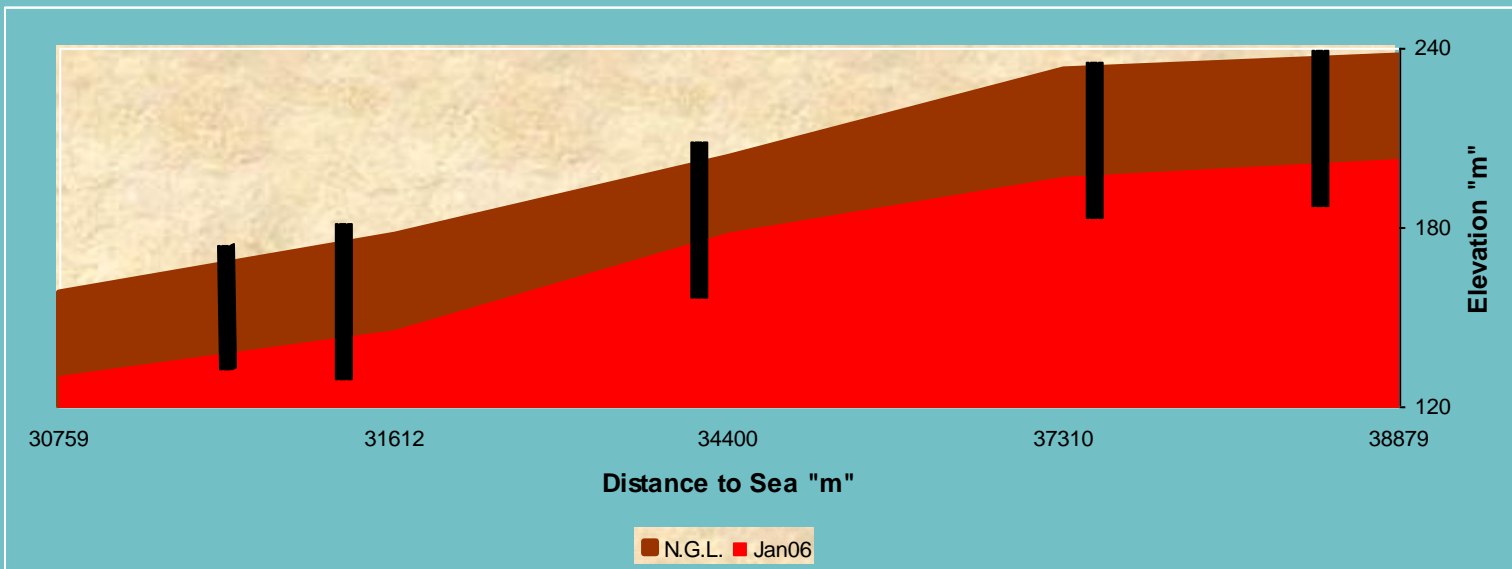
مراقبة المياه الجوفية في وادي زبيد

Ground Water Monitoring



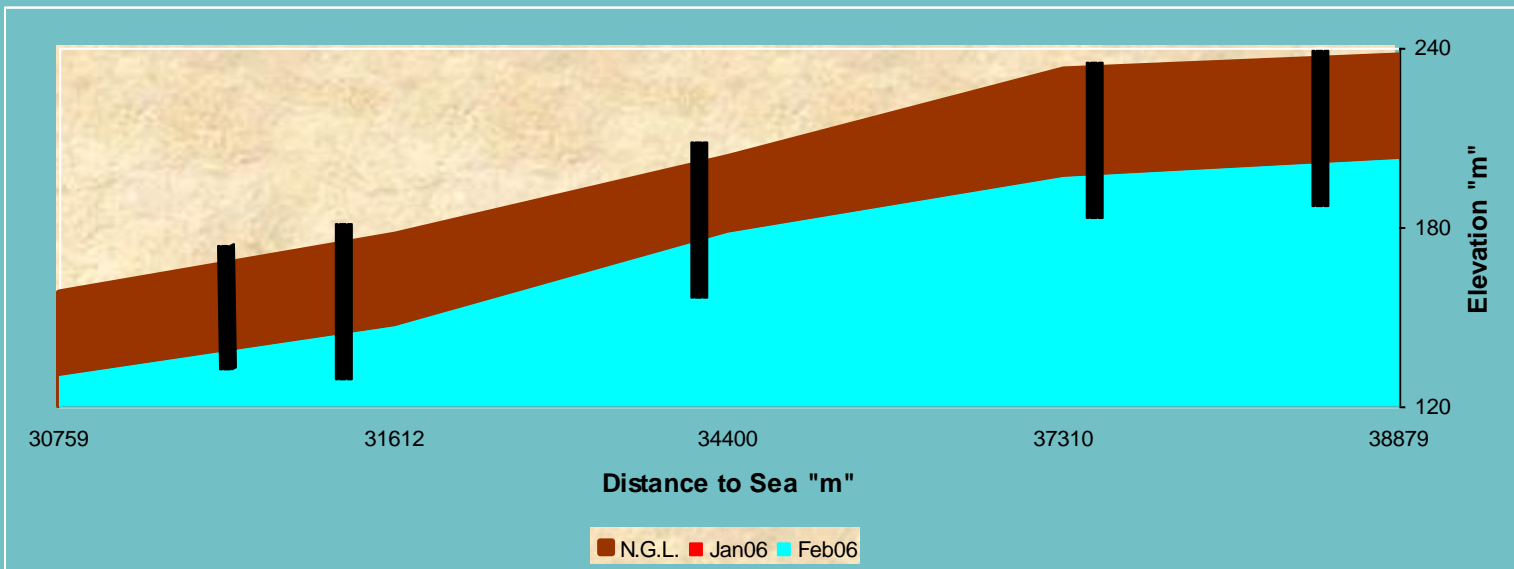
مراقبة المياه الجوفية في وادي زبيد

Ground Water Monitoring



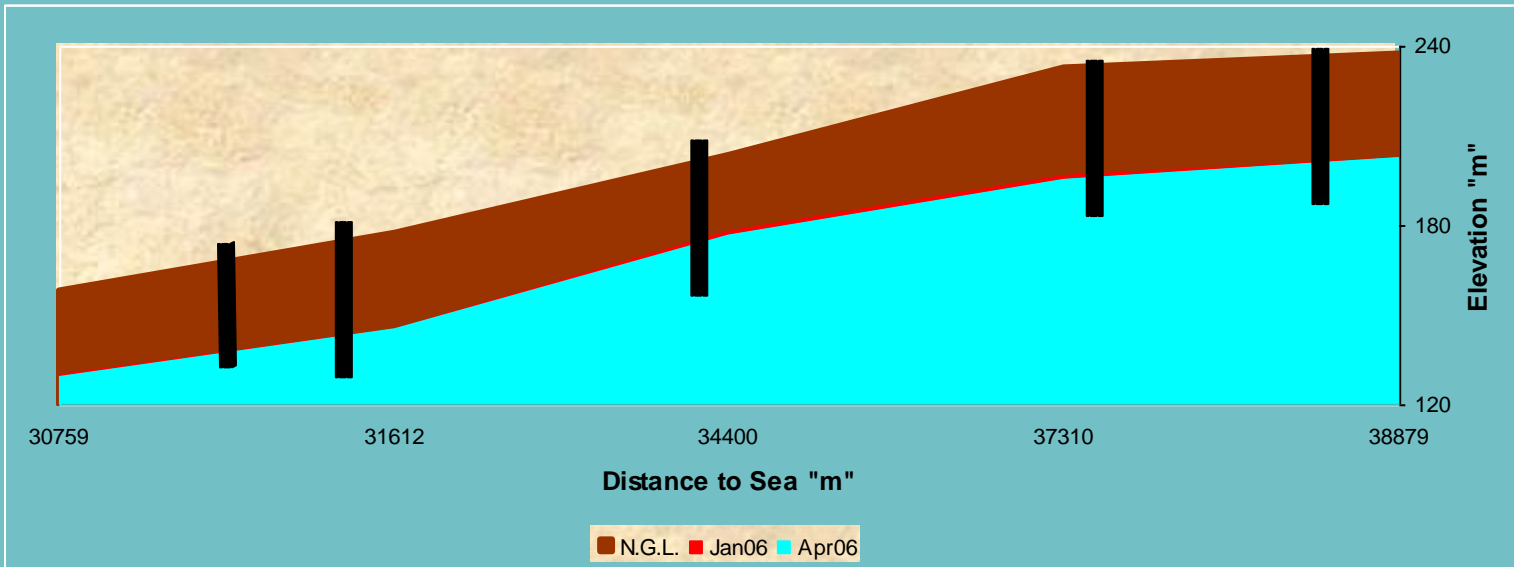
مراقبة المياه الجوفية في وادي زبيد

Ground Water Monitoring



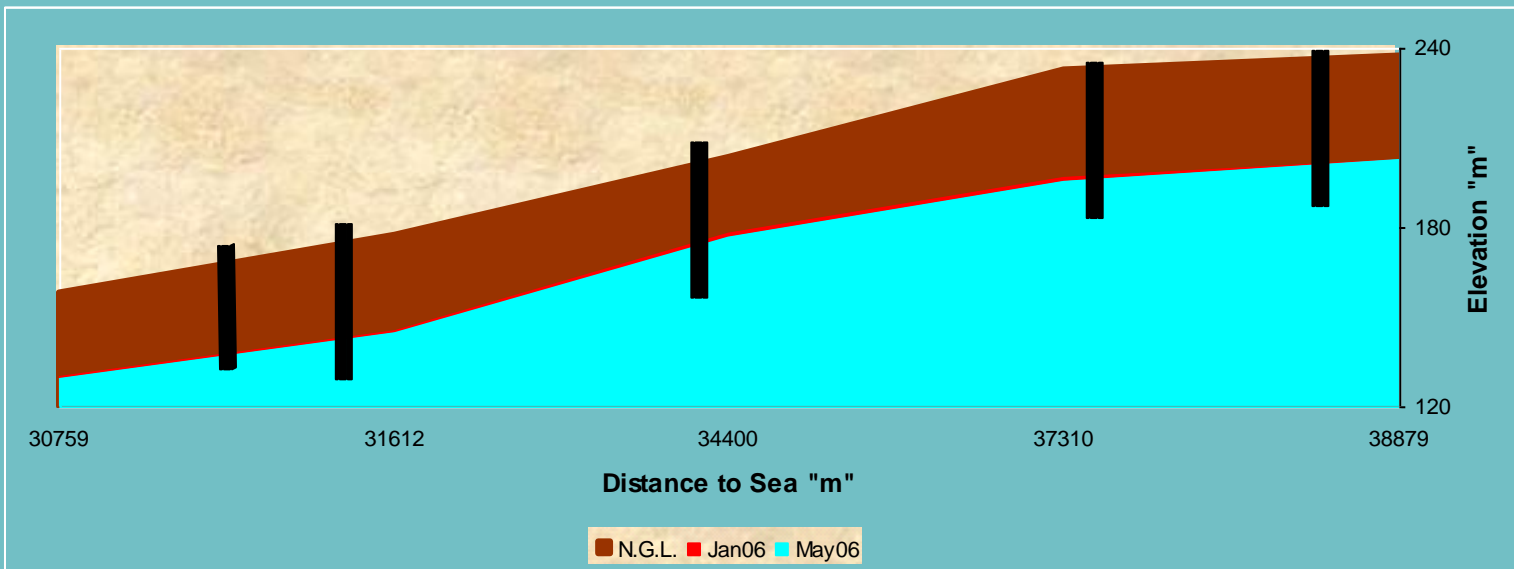
مراقبة المياه الجوفية في وادي زبيد

Ground Water Monitoring



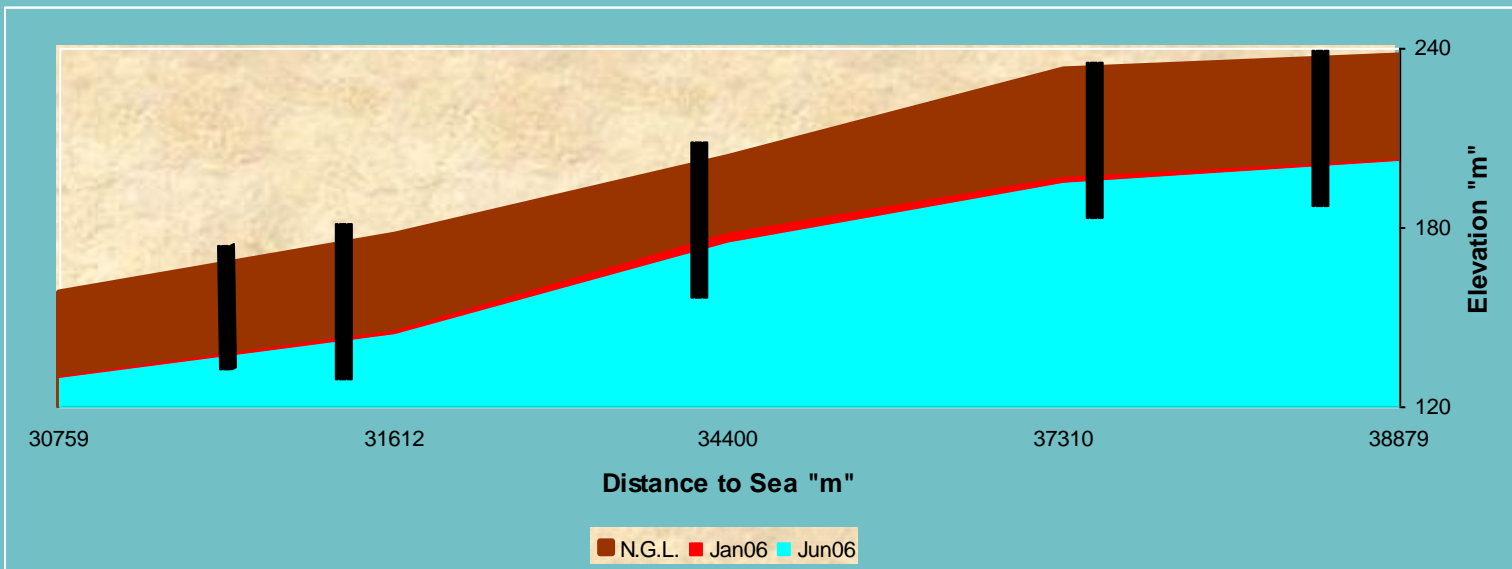
مراقبة المياه الجوفية في وادي زبيد

Ground Water Monitoring



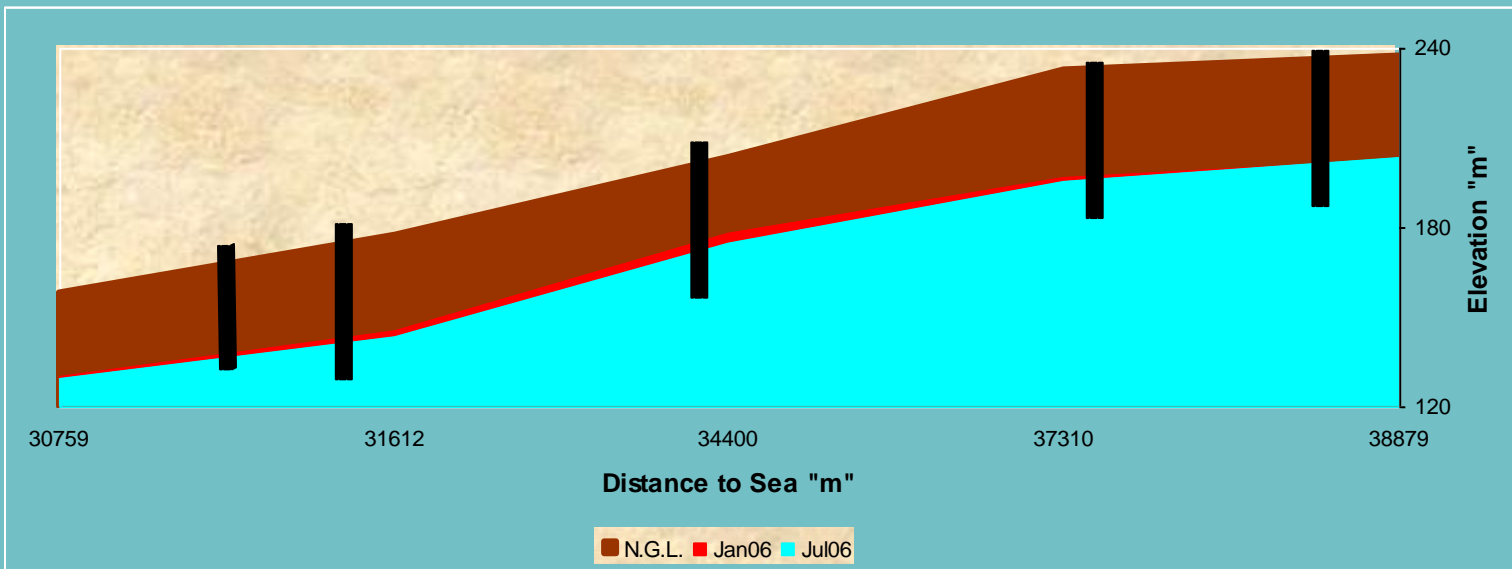
مراقبة المياه الجوفية في وادي زبيد

Ground Water Monitoring



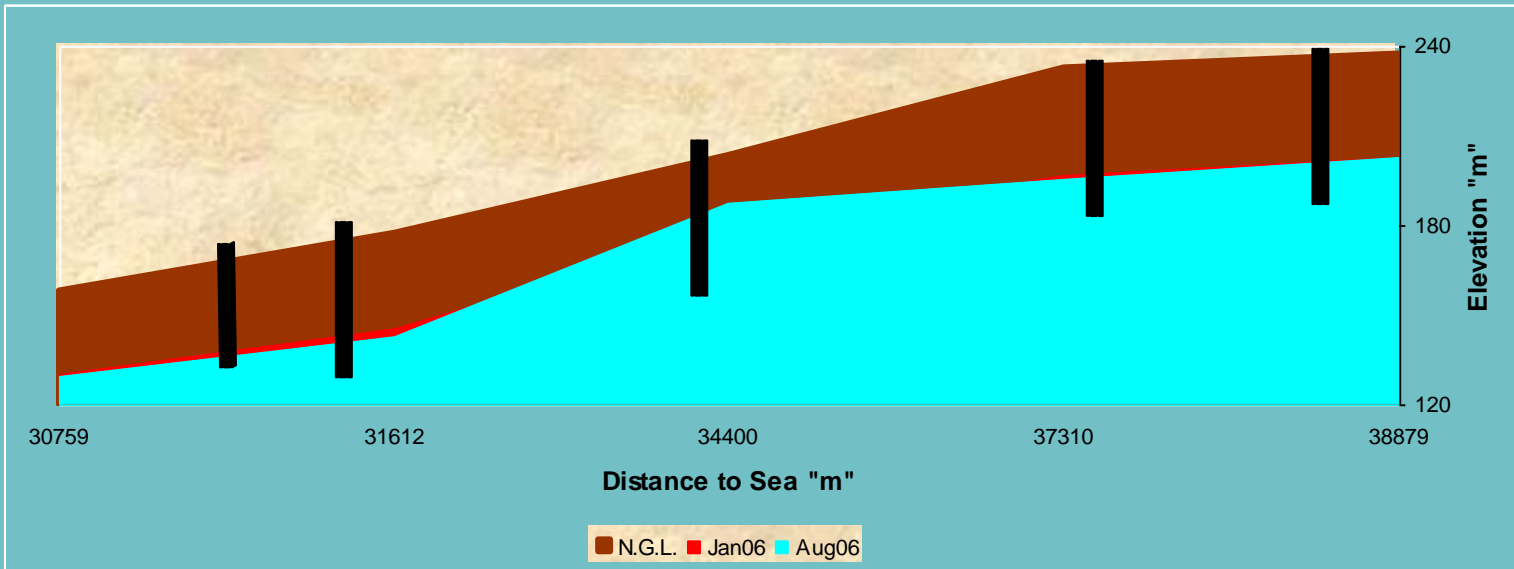
مراقبة المياه الجوفية في وادي زبيد

Ground Water Monitoring



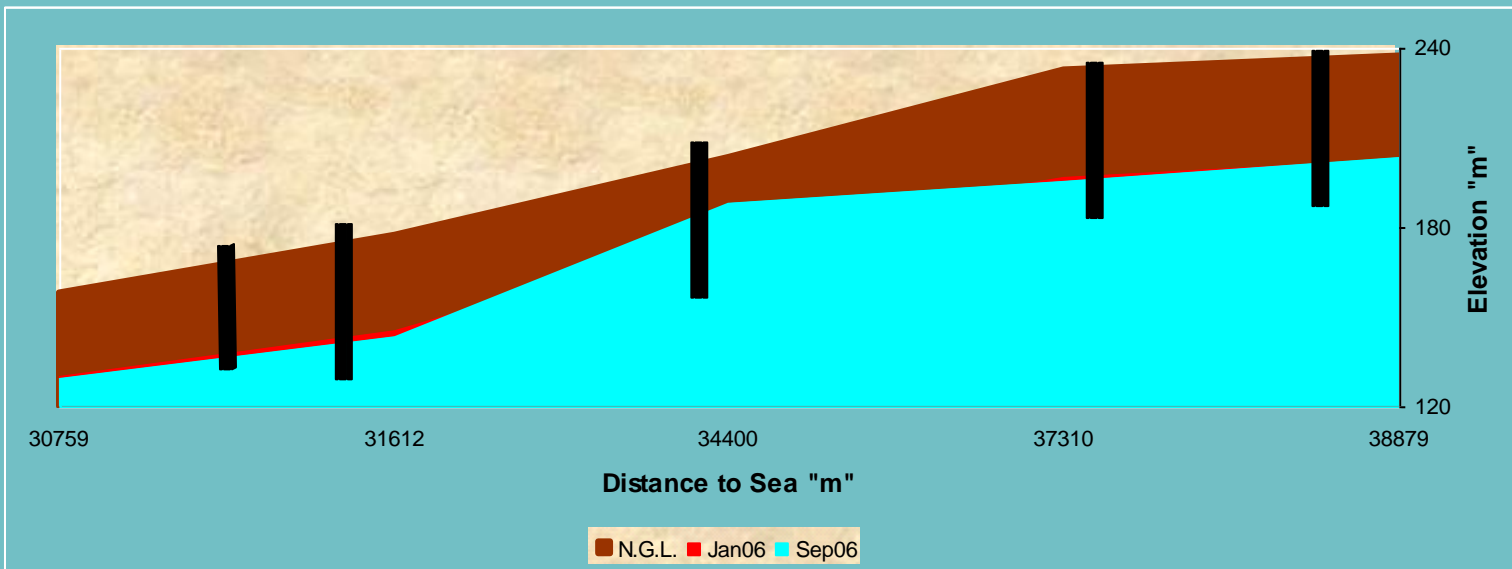
مراقبة المياه الجوفية في وادي زبيد

Ground Water Monitoring



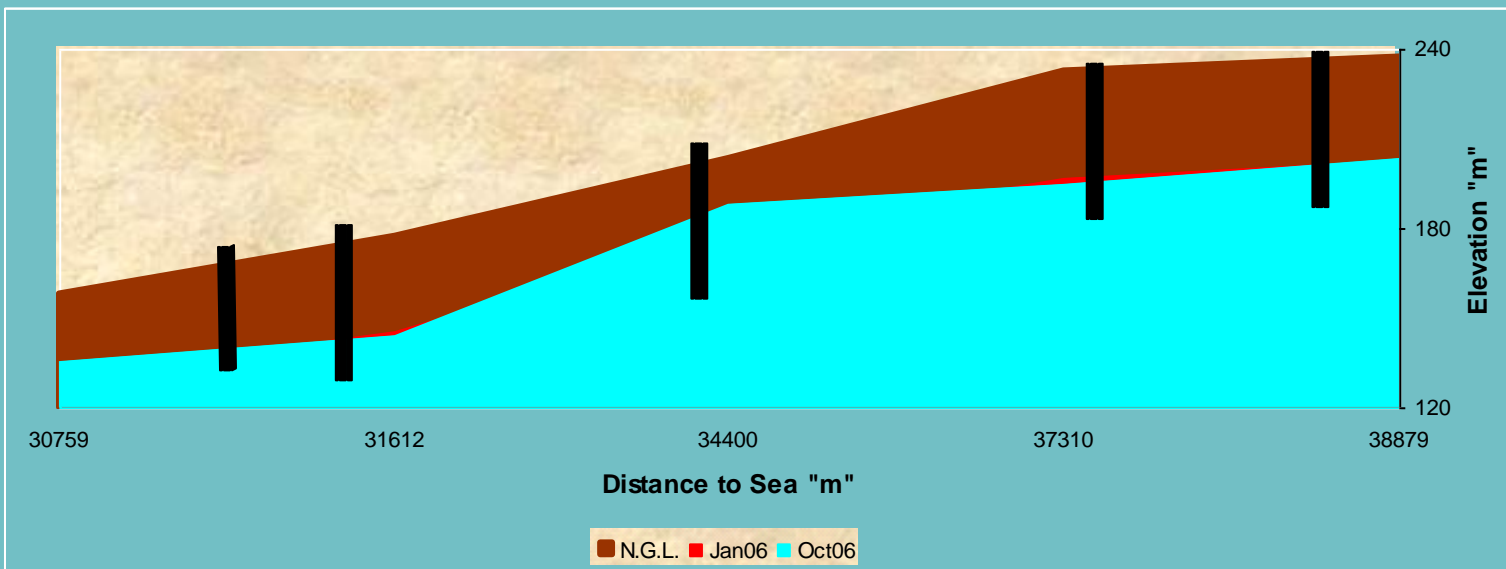
مراقبة المياه الجوفية في وادي زبيد

Ground Water Monitoring



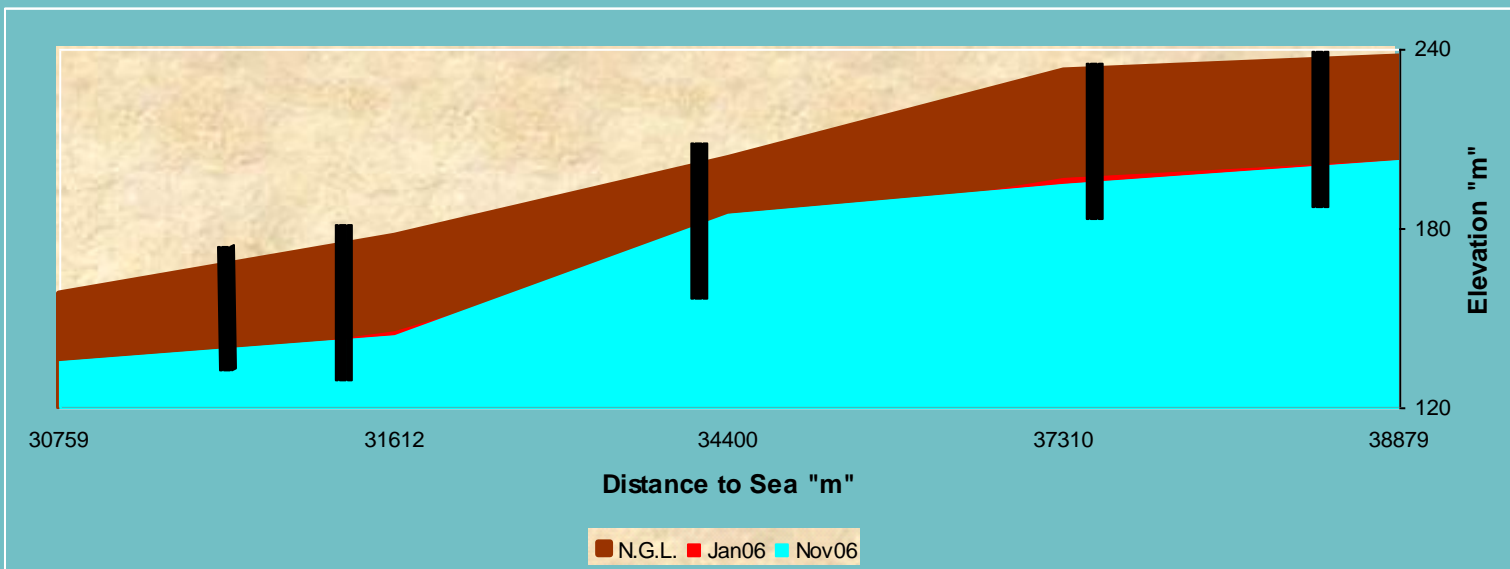
مراقبة المياه الجوفية في وادي زبيد

Ground Water Monitoring



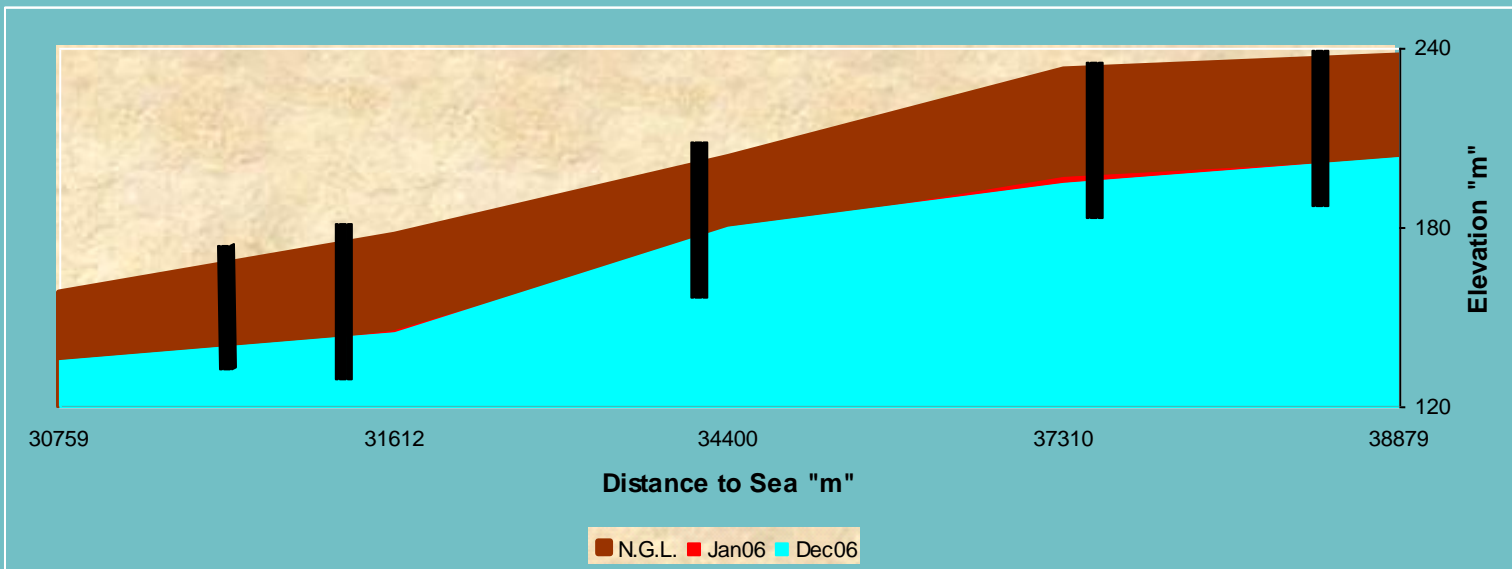
مراقبة المياه الجوفية في وادي زبيد

Ground Water Monitoring



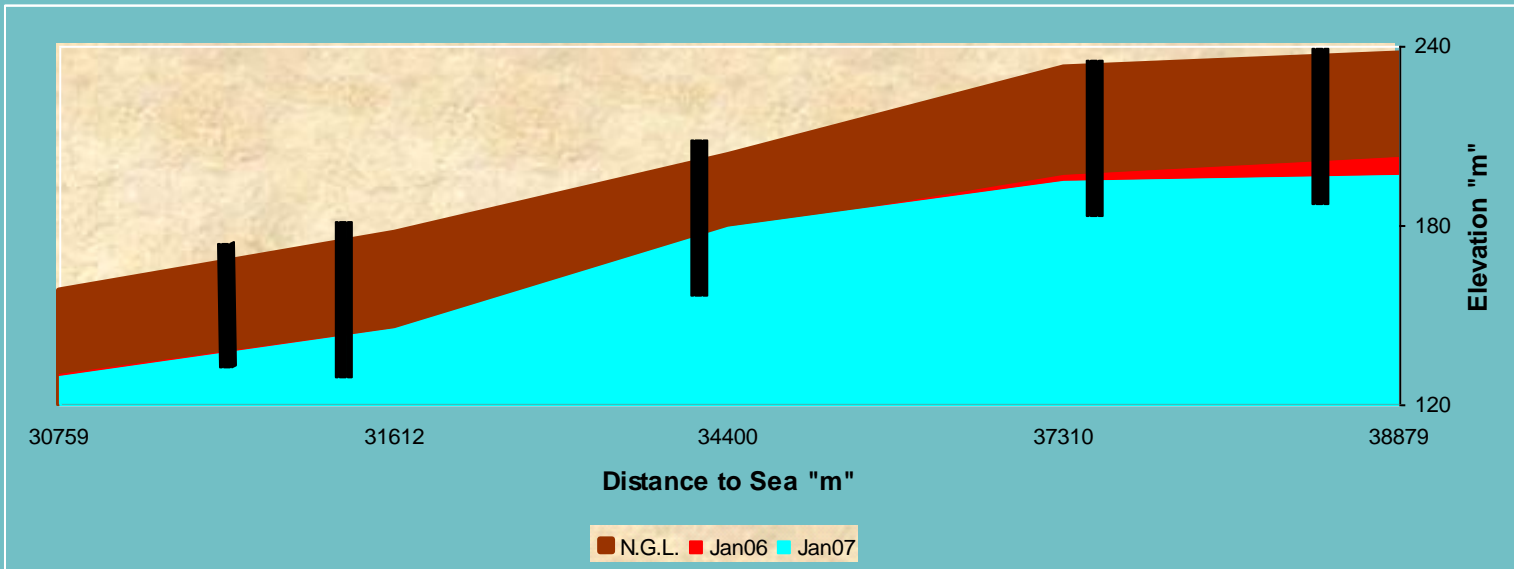
مراقبة المياه الجوفية في وادي زبيد

Ground Water Monitoring



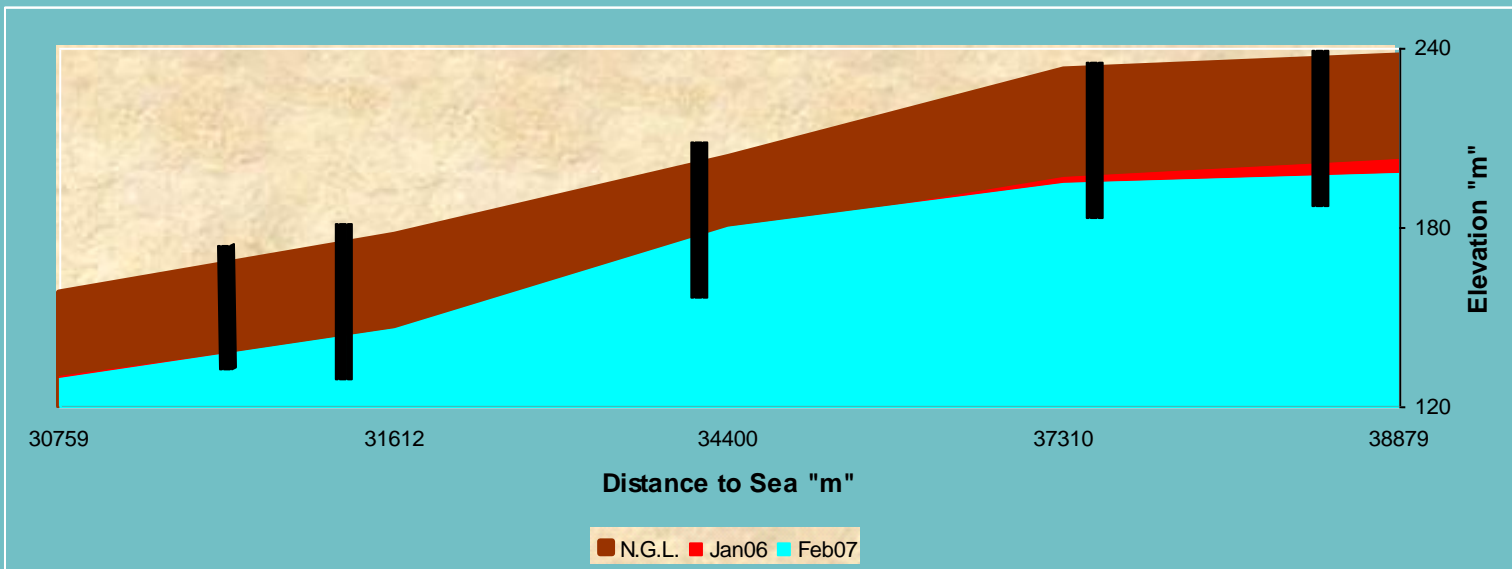
مراقبة المياه الجوفية في وادي زبيد

Ground Water Monitoring



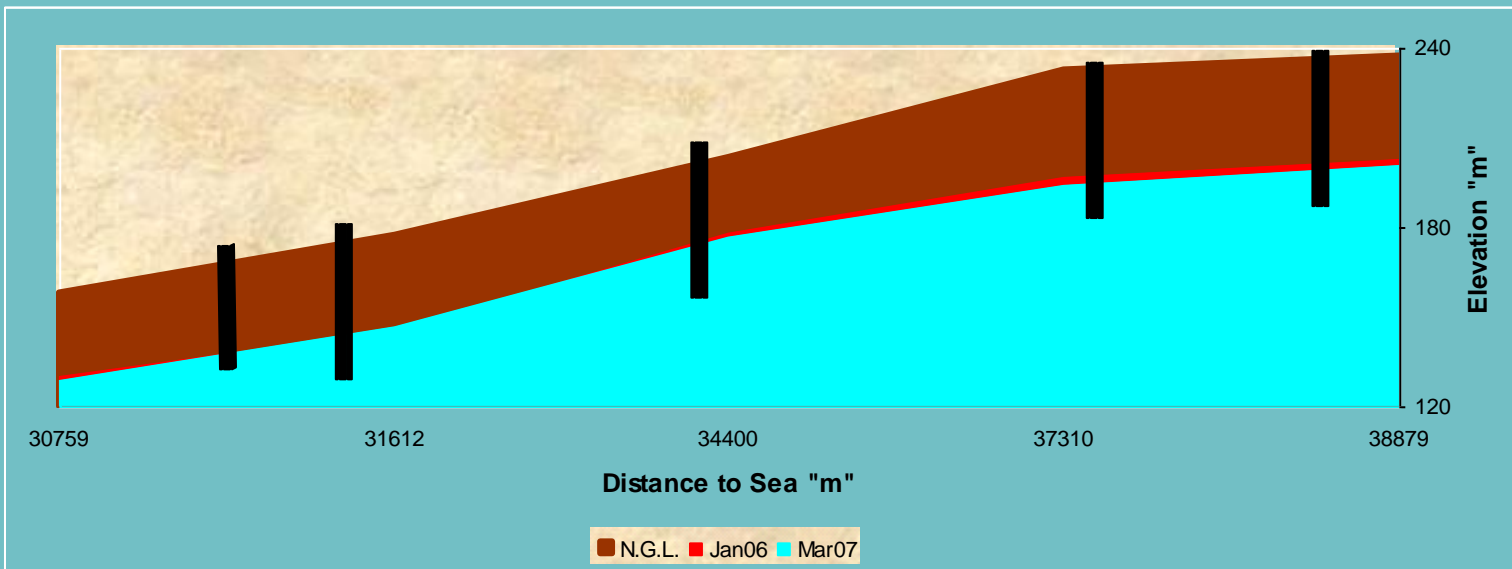
مراقبة المياه الجوفية في وادي زبيد

Ground Water Monitoring



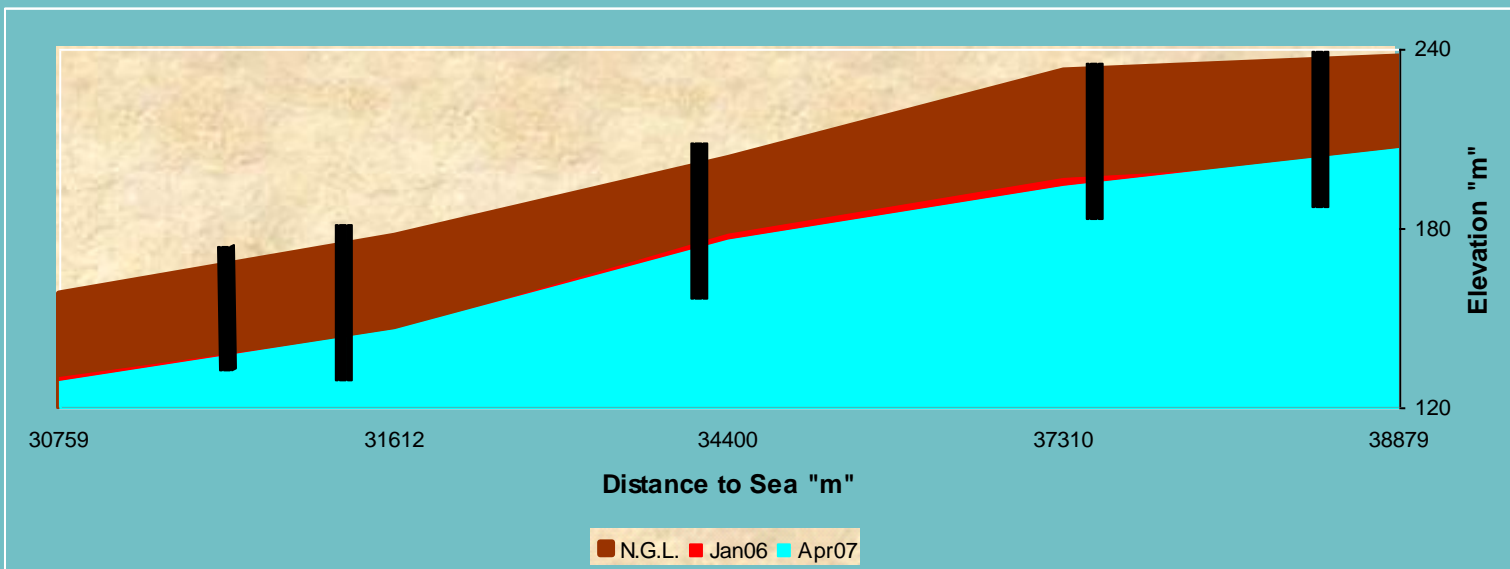
مراقبة المياه الجوفية في وادي زبيد

Ground Water Monitoring



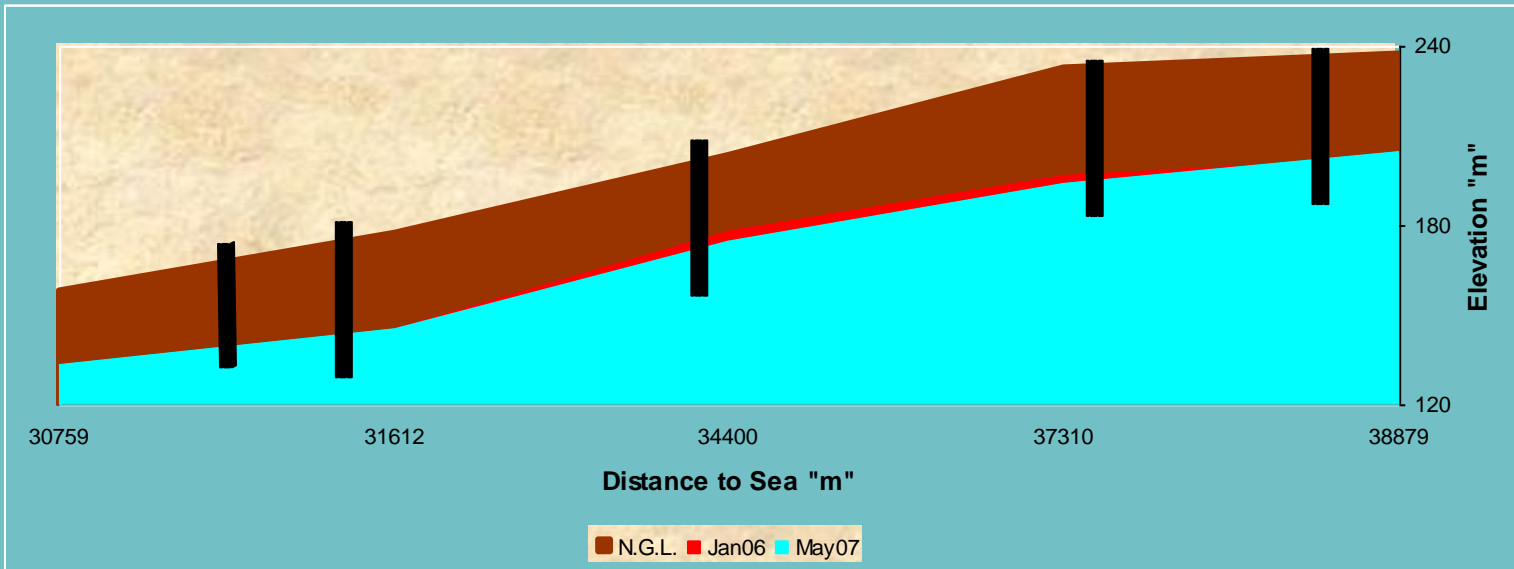
مراقبة المياه الجوفية في وادي زبيد

Ground Water Monitoring



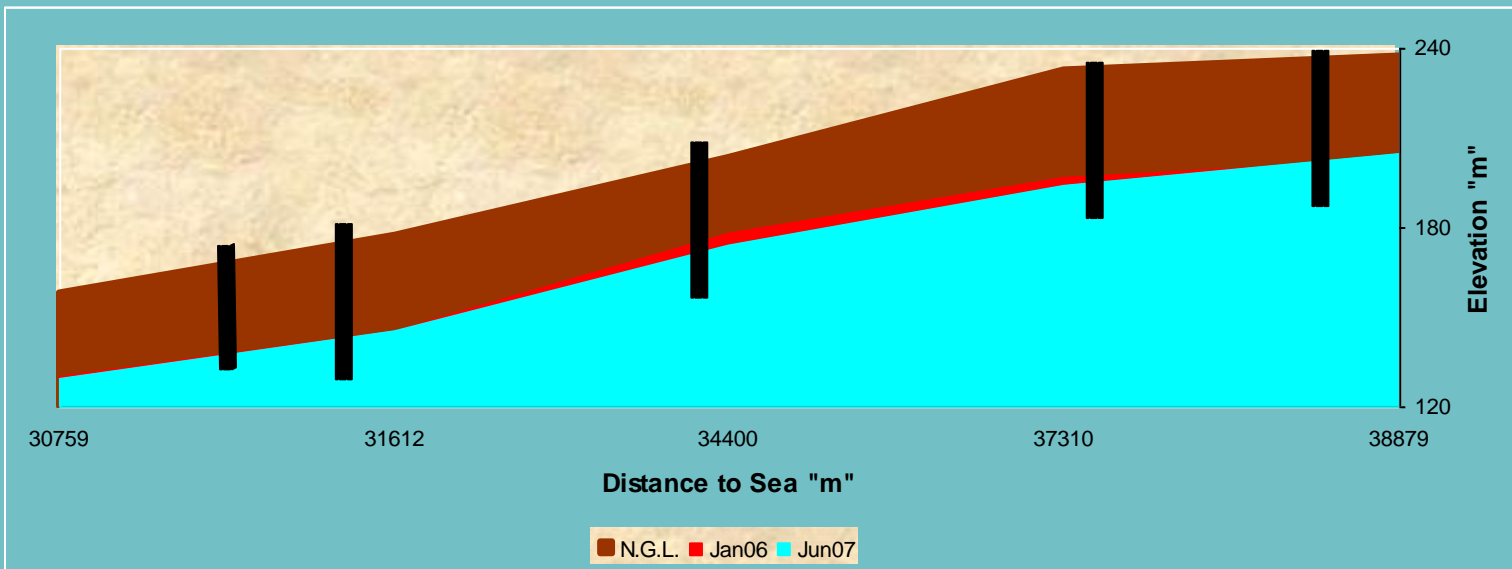
مراقبة المياه الجوفية في وادي زبيد

Ground Water Monitoring



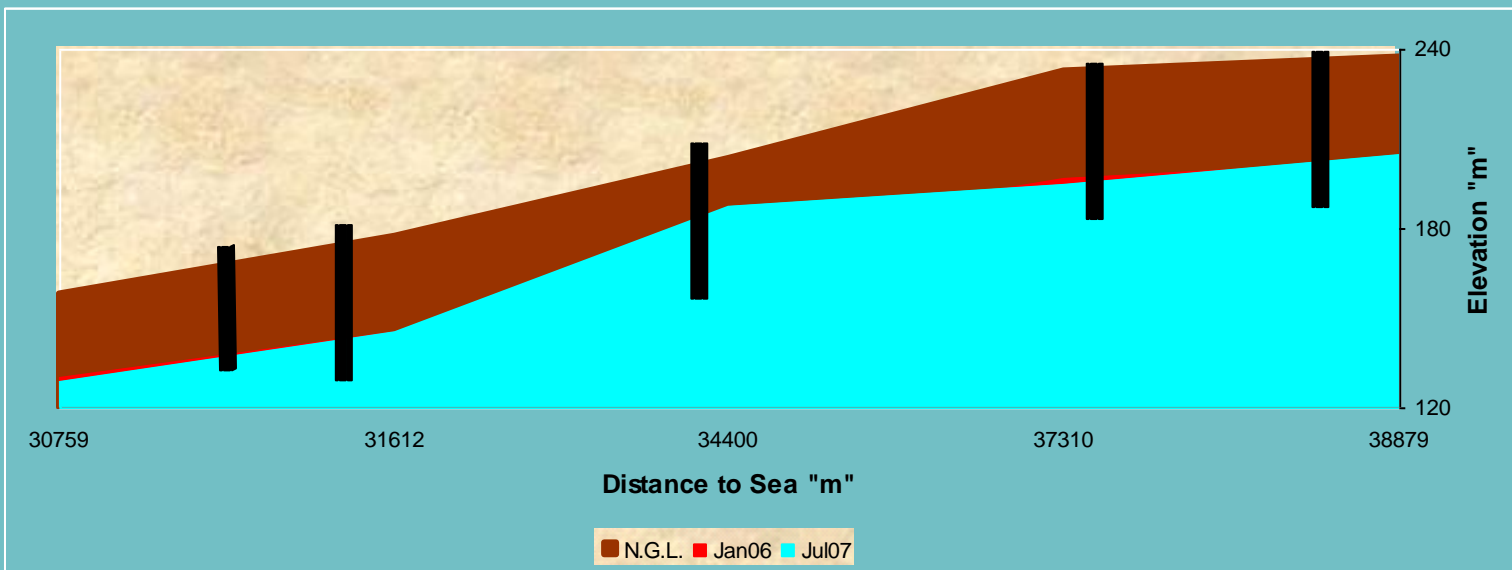
مراقبة المياه الجوفية في وادي زبيد

Ground Water Monitoring



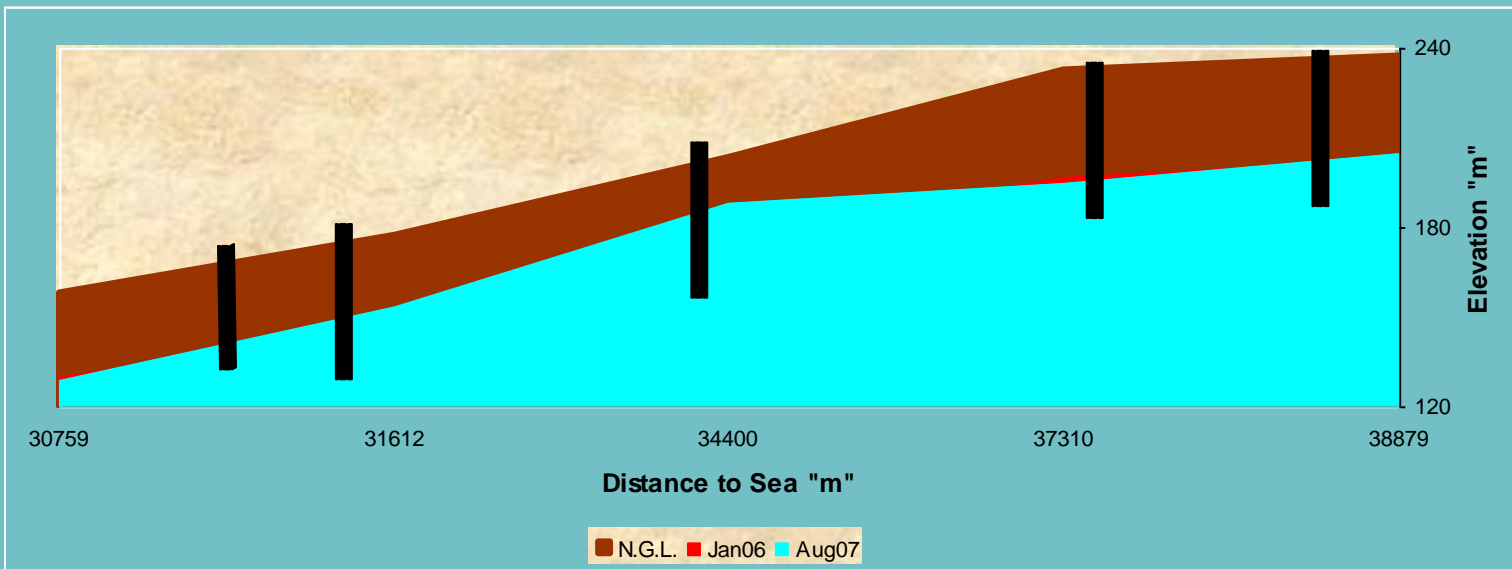
مراقبة المياه الجوفية في وادي زبيد

Ground Water Monitoring



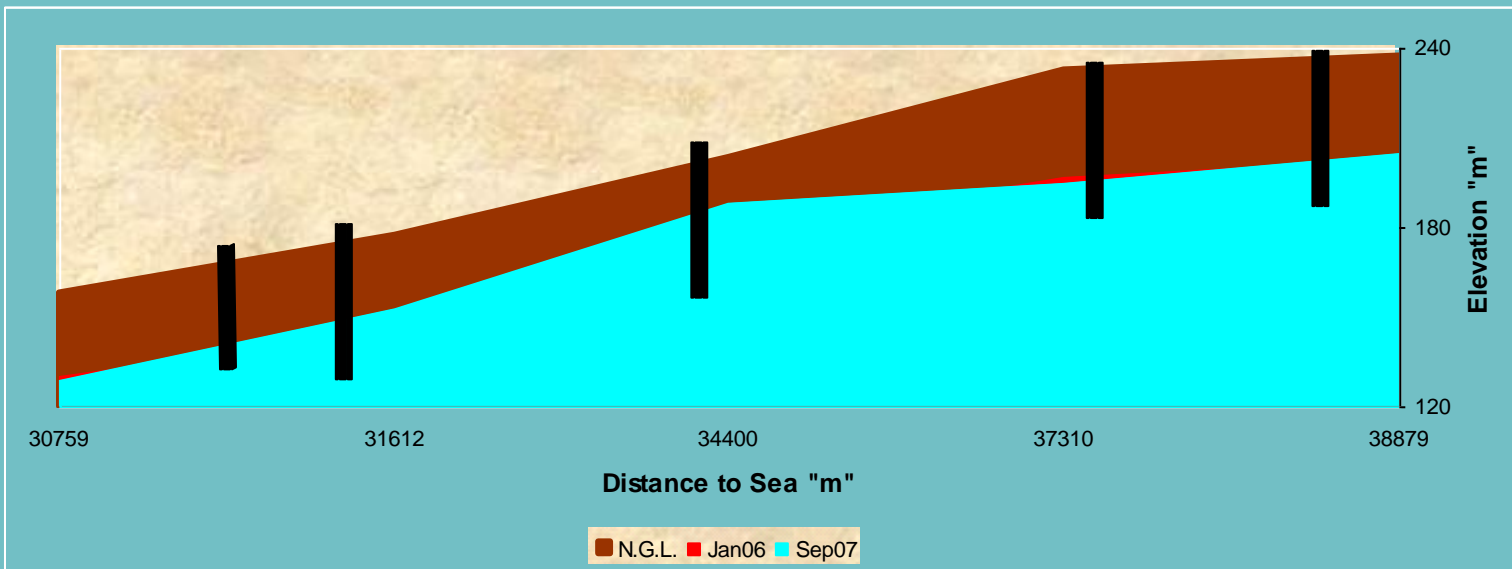
مراقبة المياه الجوفية في وادي زبيد

Ground Water Monitoring



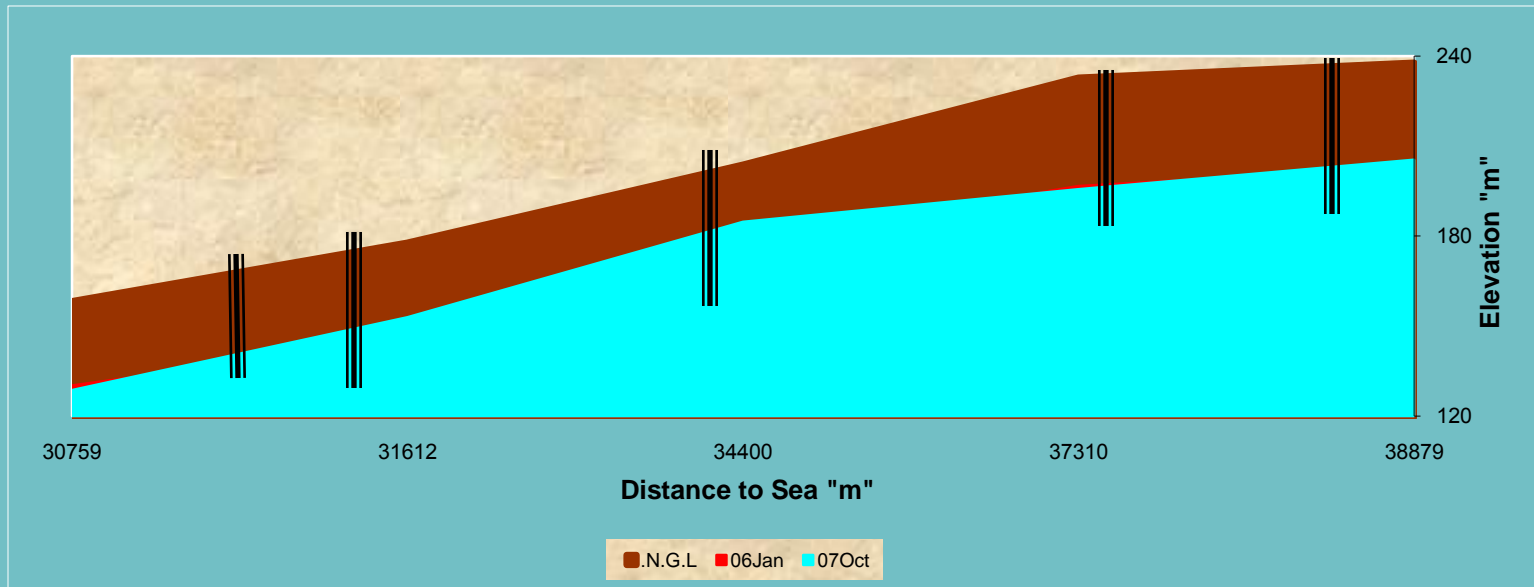
مراقبة المياه الجوفية في وادي زبيد

Ground Water Monitoring



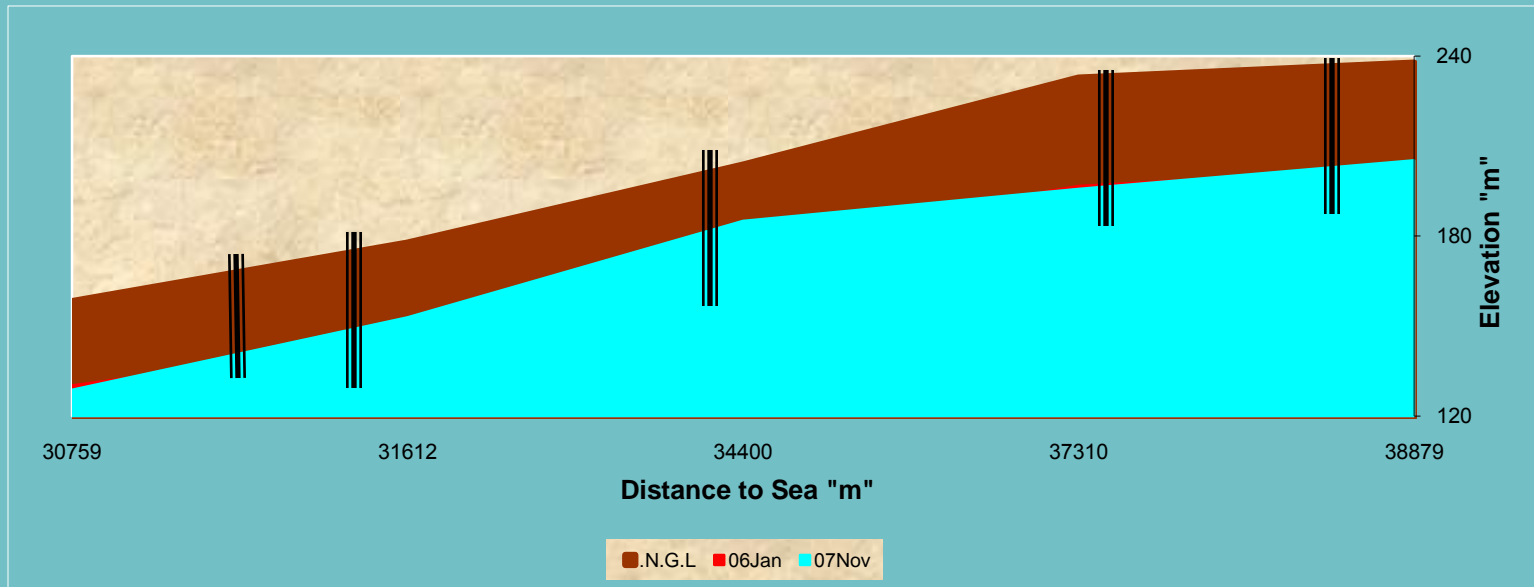
مراقبة المياه الجوفية في وادي زبيد

Ground Water Monitoring



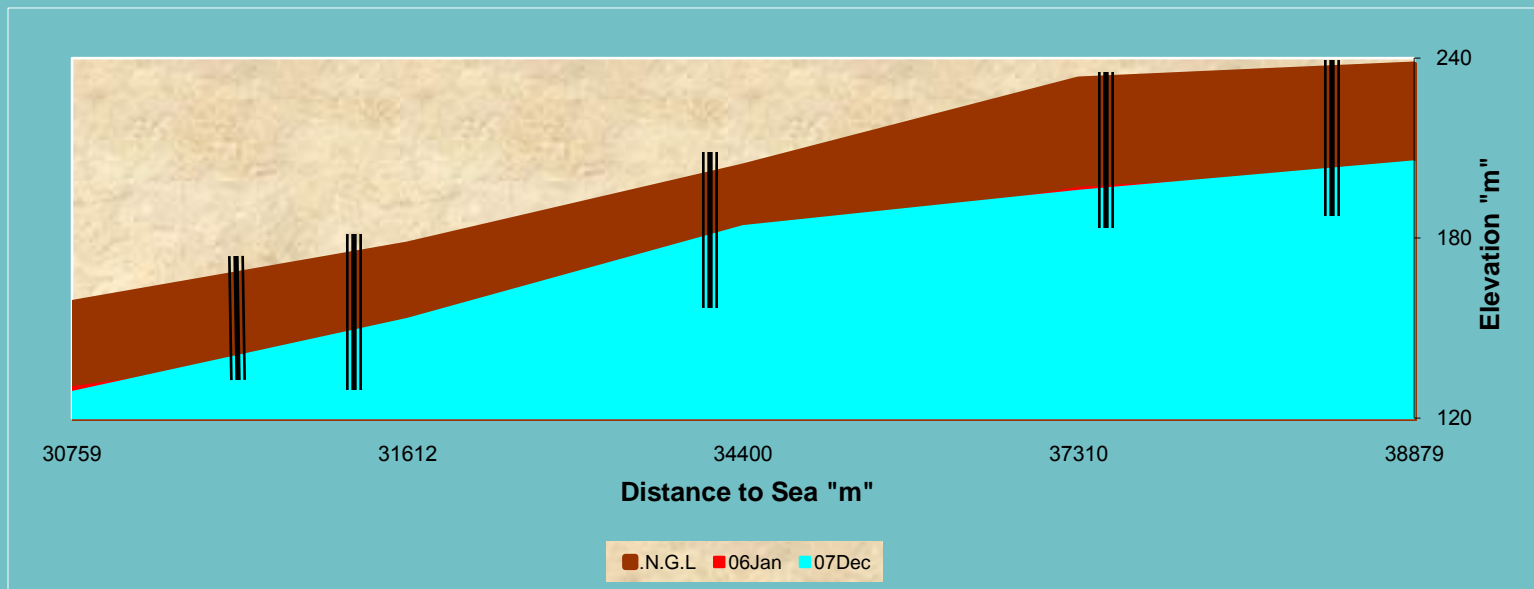
مراقبة المياه الجوفية في وادي زبيد

Ground Water Monitoring



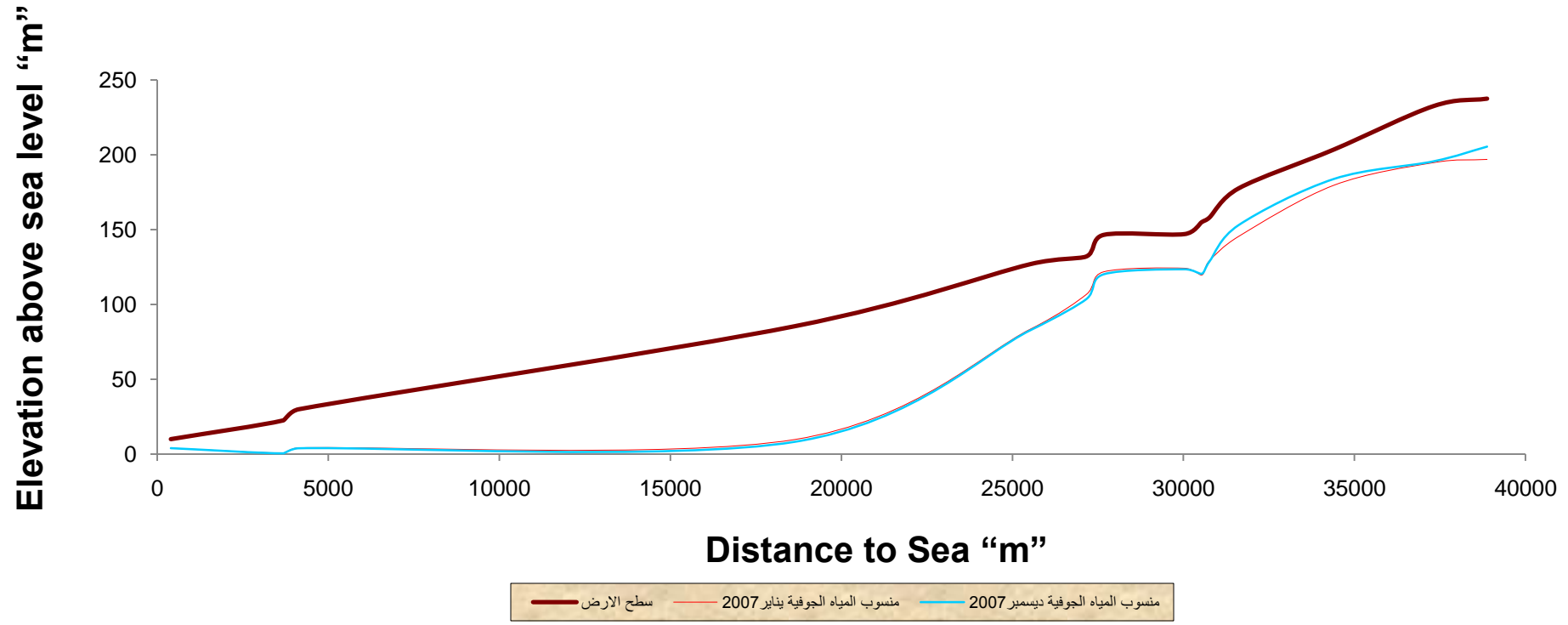
مراقبة المياه الجوفية في وادي زبيد

Ground Water Monitoring



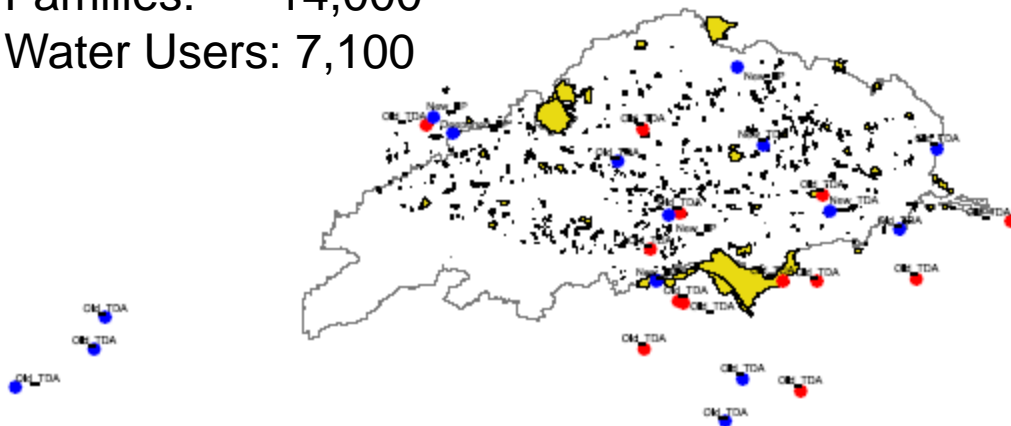
Ground Water Monitoring

Wadi Zabid Aquifer 2007



Wadi Zabid Monitoring Wells

Population: 76,000
Families: 14,000
Water Users: 7,100



- Monitoring Wells**
- dry
 - Wet
 - Villages
 - Project Area

8 0 8 16 Kilometers

Wadi Zabid Monitoring Wells

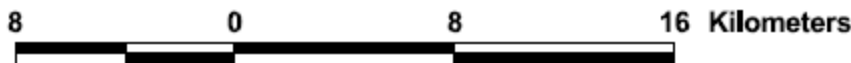
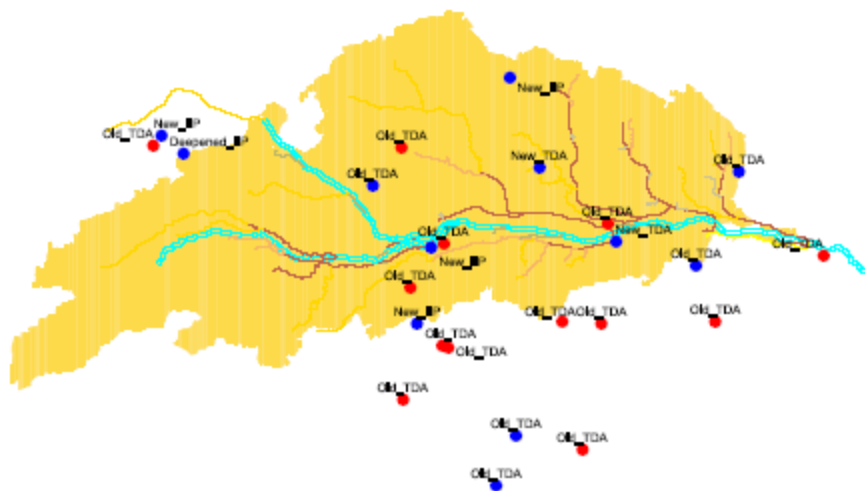


Monitoring Wells

- dry
- Wet

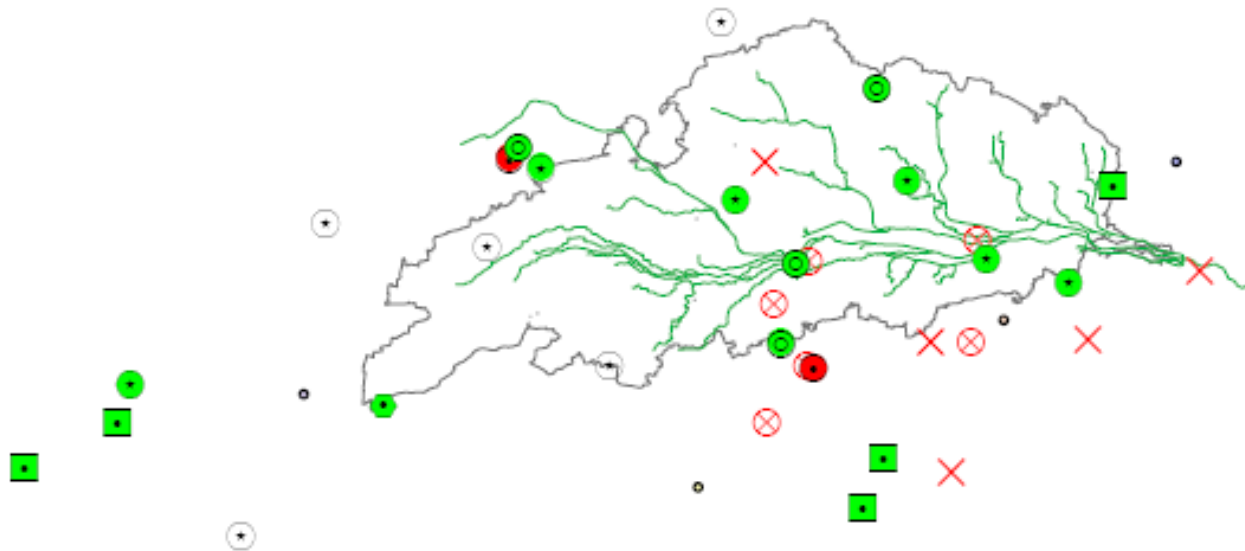
Conveyance System

- main
- maqam_canal
- ogma
- secondary
- tertiary
- wadi
- Zabid Project Area



الآبار المقترحة لوادي زبيد

Proposed additional stations for ground water Monitoring



مفتاح الخريطة

الآبار المقترحة

موقع البئر، العمق م، المقترح

التحيتا، ١٥٠، تمام

الجبيلية، ١٥٠، تمام

القزازعة، ٠٠، تحول بيرة

الكلية، ٠٠، الغي

المغرس، ٠٠، موجود

بيره محرقى، ١٥٠، تمام

قرية الحمى، ١٥٠، تمام

قرية القره، ٠٠، الغي

قرية المسلب، ١٥٠، تمام

قرية شعب الدالى، ٠٠، الغي

Restrictions
Recommendations