



*Ministry of Water and Irrigation
Jordan Valley Authority*

*Regional Experts Group Meeting
Development of Comprehensive M&E System for
Participatory Irrigation Management & Irrigation
Management Transfer Process
2-4 Sept., 2013, Athens, Greece*

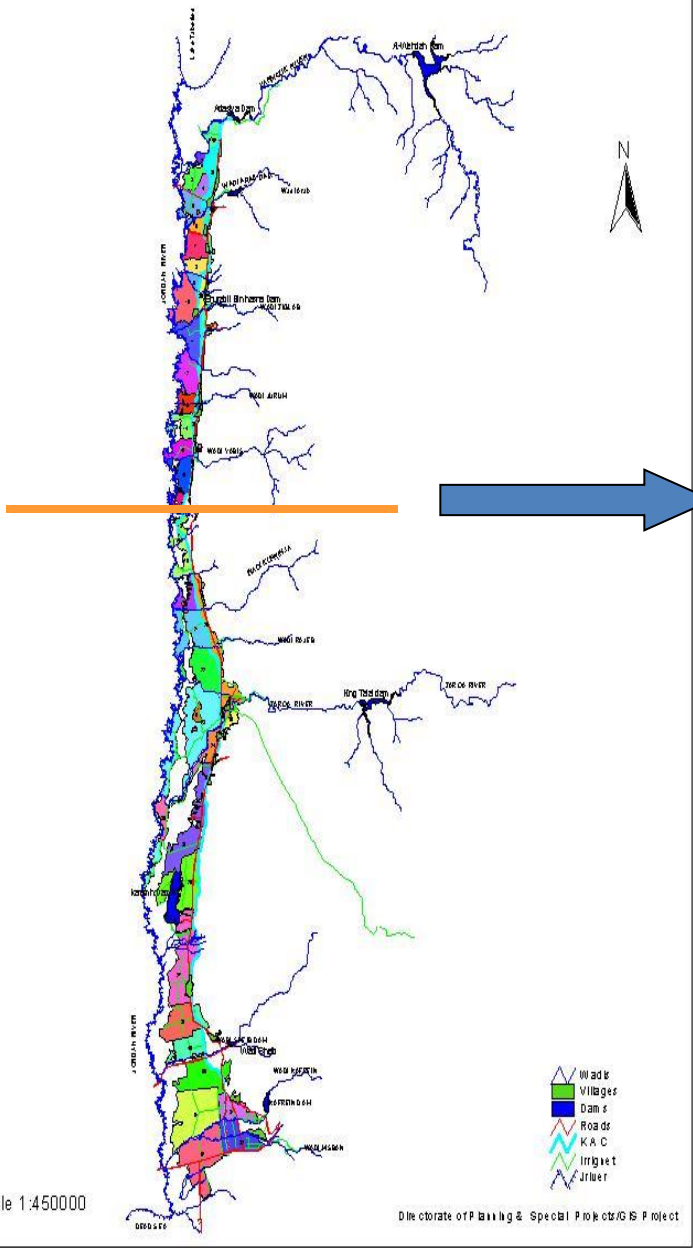
By
Eng. Qais Owais
Secretary General Assistant for Jordan Valley

Jordan Valley: General Overview

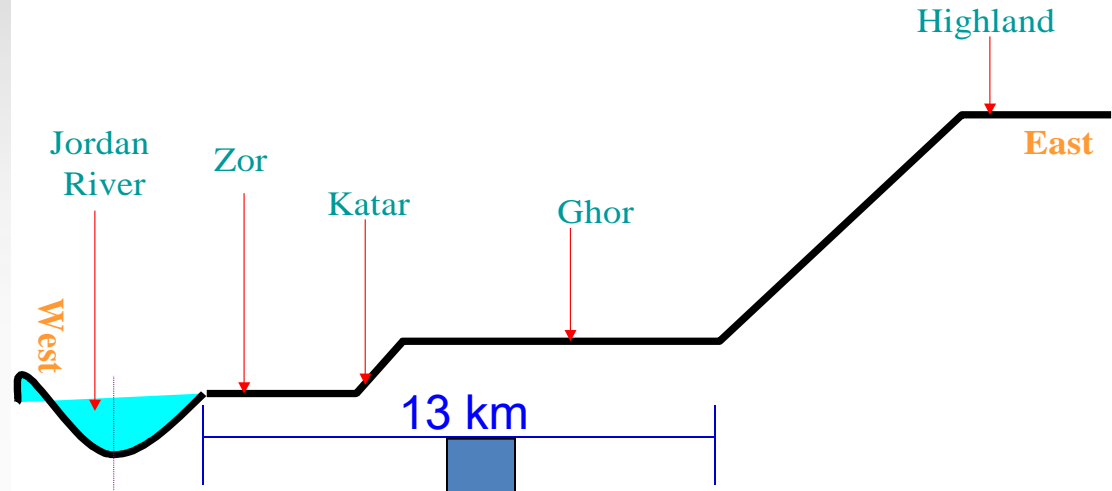
- 360 km long.
- 10 km average width.
- 1.8% over all slope.
- It is comprises of three parts:
 - *Jordan Valley.*
 - *Dead Sea.*
 - *Southern Ghors and Wadi Araba.*



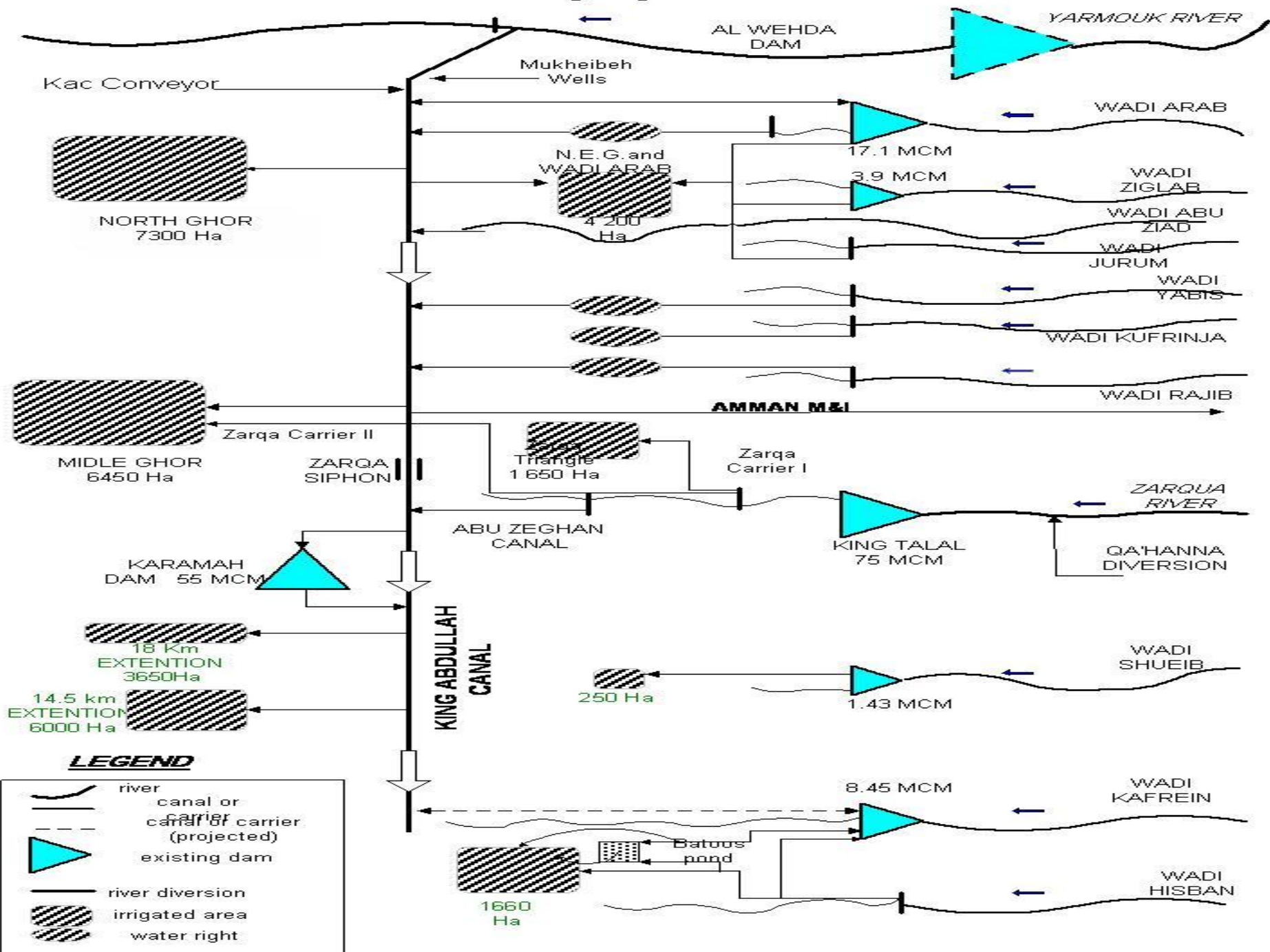
JORDAN VALLEY

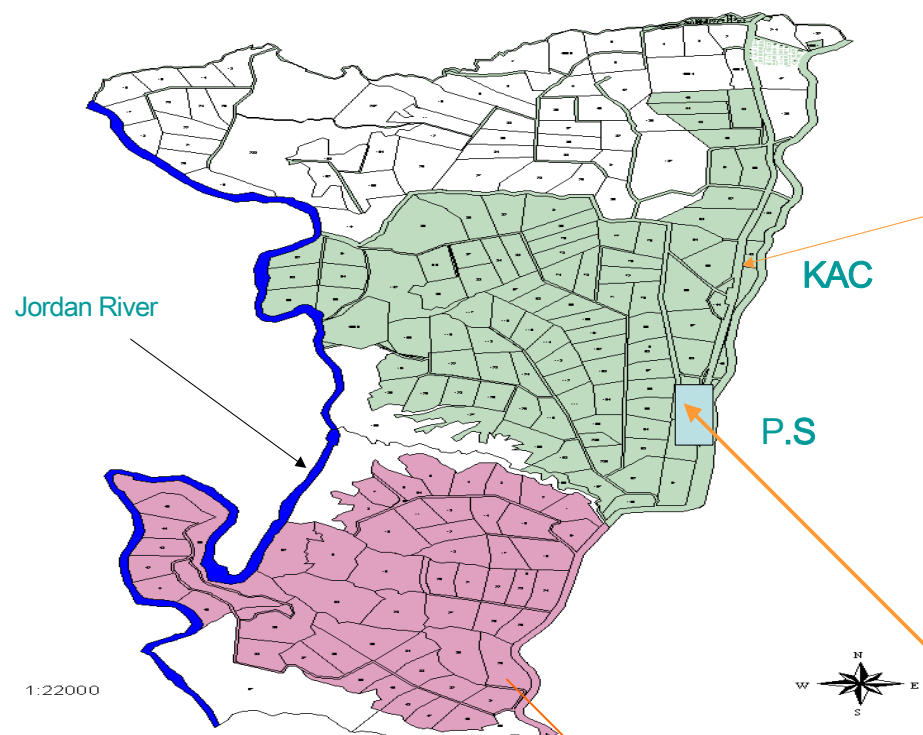


Typical cross section in the Jordan Valley



Jordan Valley Hydraulic Scheme



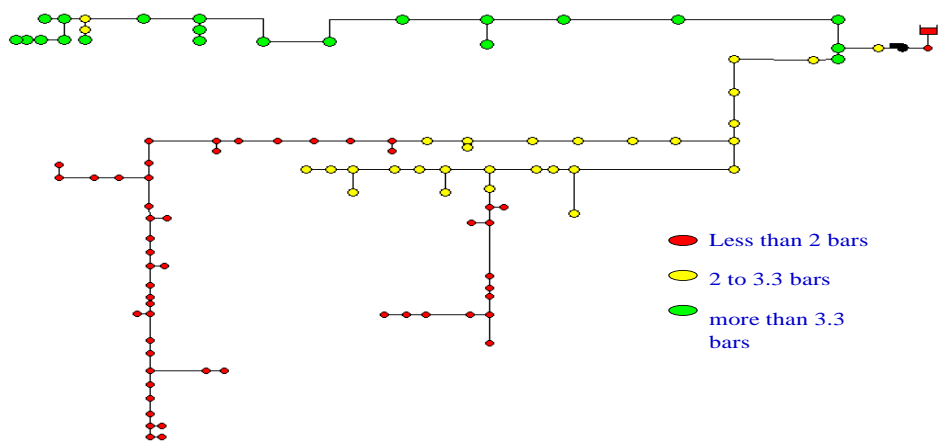


KAC



الضغط الذي يدور في إحدى الشبكات

Hydraulic Operating Pressure Distribution

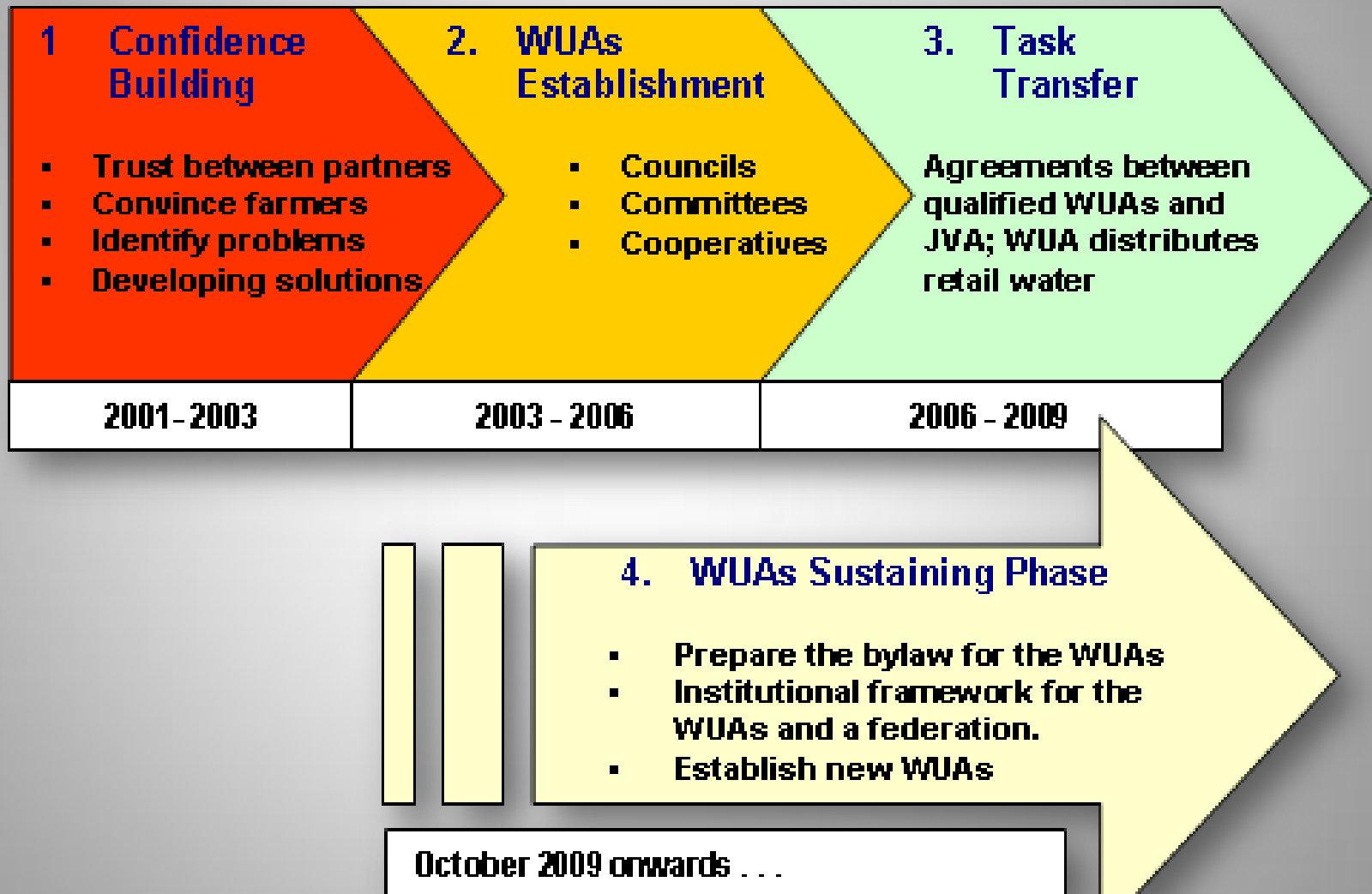


Pump station on KAC



WUAs in Jordan

Implementation phases

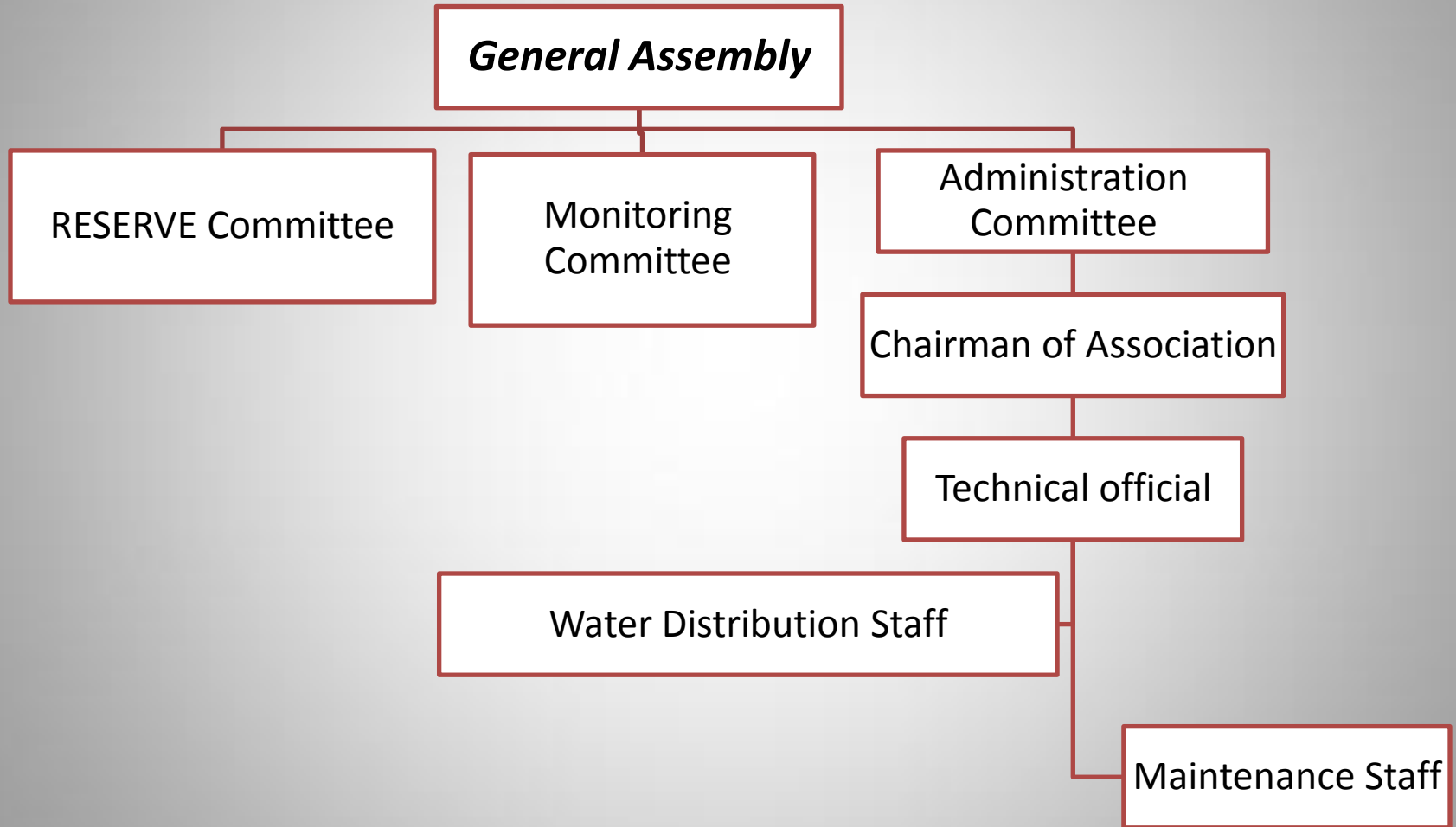


WUA Legal Umbrella:

- WUA's in Jordan are registered in independent financial and administrative cooperative (under cooperative law and by law)- legal umbrella for JCC.
- JCC makes periodic visits to monitor WUAs and monitors the General Assembly Meetings.
- JCC provides auditing services.
- JCC provides training courses (management , accounting, computer skills,...)
- JVA plans to remove WUA's from the umbrella of JCC and bring them under the over sight of JVA (JVA has drafted a set of amendments)
- JVA began to transfer water distribution function to qualified WUA's based on JVA article No.30
- JVA plans to create one representative body for all WUA's covering the JVA.

WUAs Structure

Organizational Structure of cooperative WUA



WUAs Boards

Boards	Total	Elected	Acclamation
Number of management boards	19	11	8
Number of monitoring committees	16	0	16
Number of monitoring members	145	0	145
		Volunteers	Paid by JVA
Number of board members	145	133	12

WUAs Boards Members Qualifications

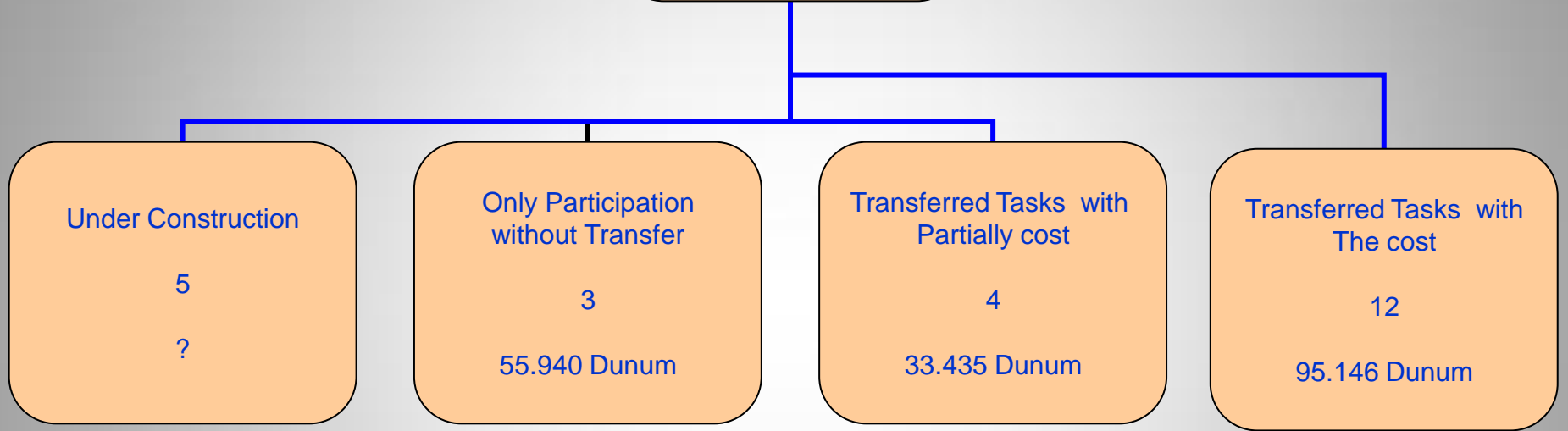
Board Members Education	Number
BSc +	39
High School	57
Below High School	42
“Retired” (from military or civil service)	7
Total	145

WUAs Employees

Employees	Total	JVA employees seconded to WUAs	WUAs employees
Engineers	5	0	5
Distributers	56	16	40
Maintenance	5	0	5
Administrators	14	2	12
Guards	13	0	13
Others	3	0	3
Total	96	18	78

WUAs Categories & Tasks

WUA's Categories in Jordan Valley



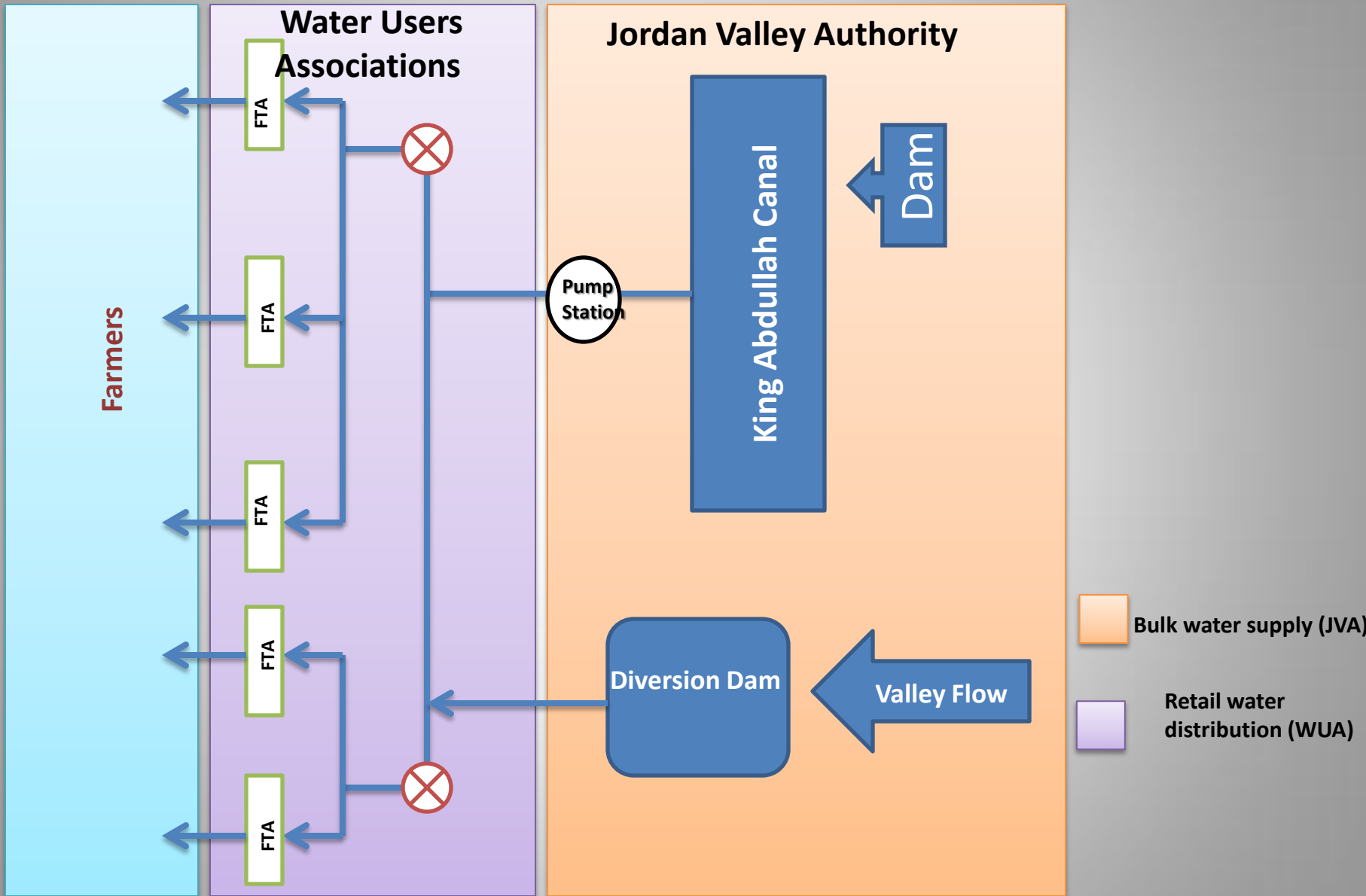
Total
24
184.521
Dunum

➤ Current Tasks of WUA's

1. Distribution of irrigation water by watering program prepared in cooperation between the authority and the association
2. FTA Maintenance
3. Monitoring and control of illegal uses of water and attacks on irrigation facilities
4. Recording and documenting the quantity of consumed water
5. The agricultural cropping pattern documentation
6. Some associations help in collections

Region	Distribution & Maintenance	Distribution only	Maintenance only	Neither
Southern Ghors & Wadi Araba	0	3	0	1
North JV	2	4	0	1
South JV / Karamah	4	0	0	1
Middle JV	2	0	0	1
Total	8	7	0	4

JVA & WUAs Tasks area



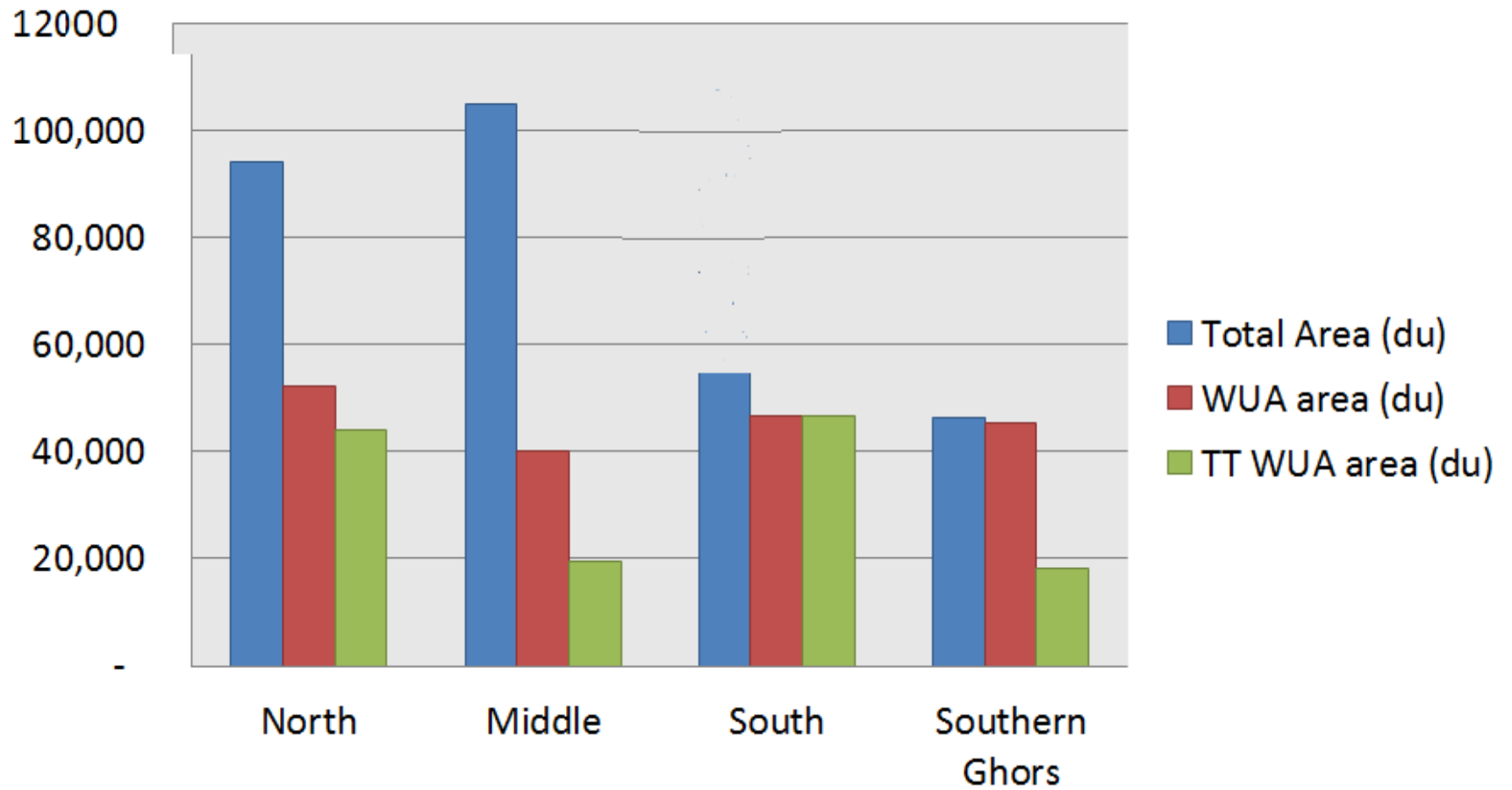
WUAs Coverage & Area Distribution

Coverage Area by WUAs

Category	Number of Farm Units	Percentage
Total Farm Units in JV & S-Ghors	8,422	100%
Farm Units at WUAs	5,987	71% of total units
	Area (du)	
Total area in JV (irrigated)	296,736	100%
WUAs service area (members & non-members)	184,521	62% of total area

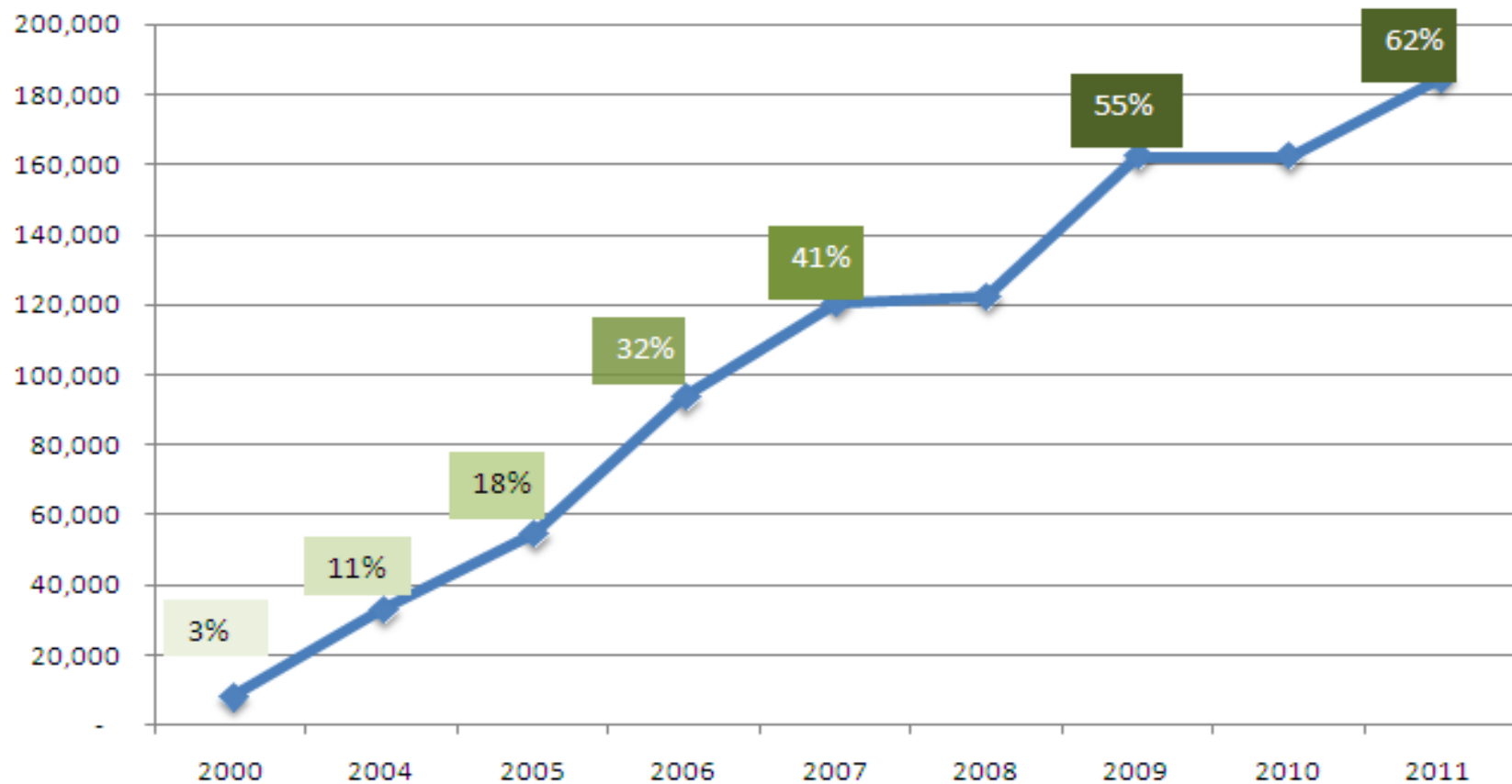
One Farm Unit = 30 – 40 du (1 du = 1000 m²)

Area Coverage of WUA per region

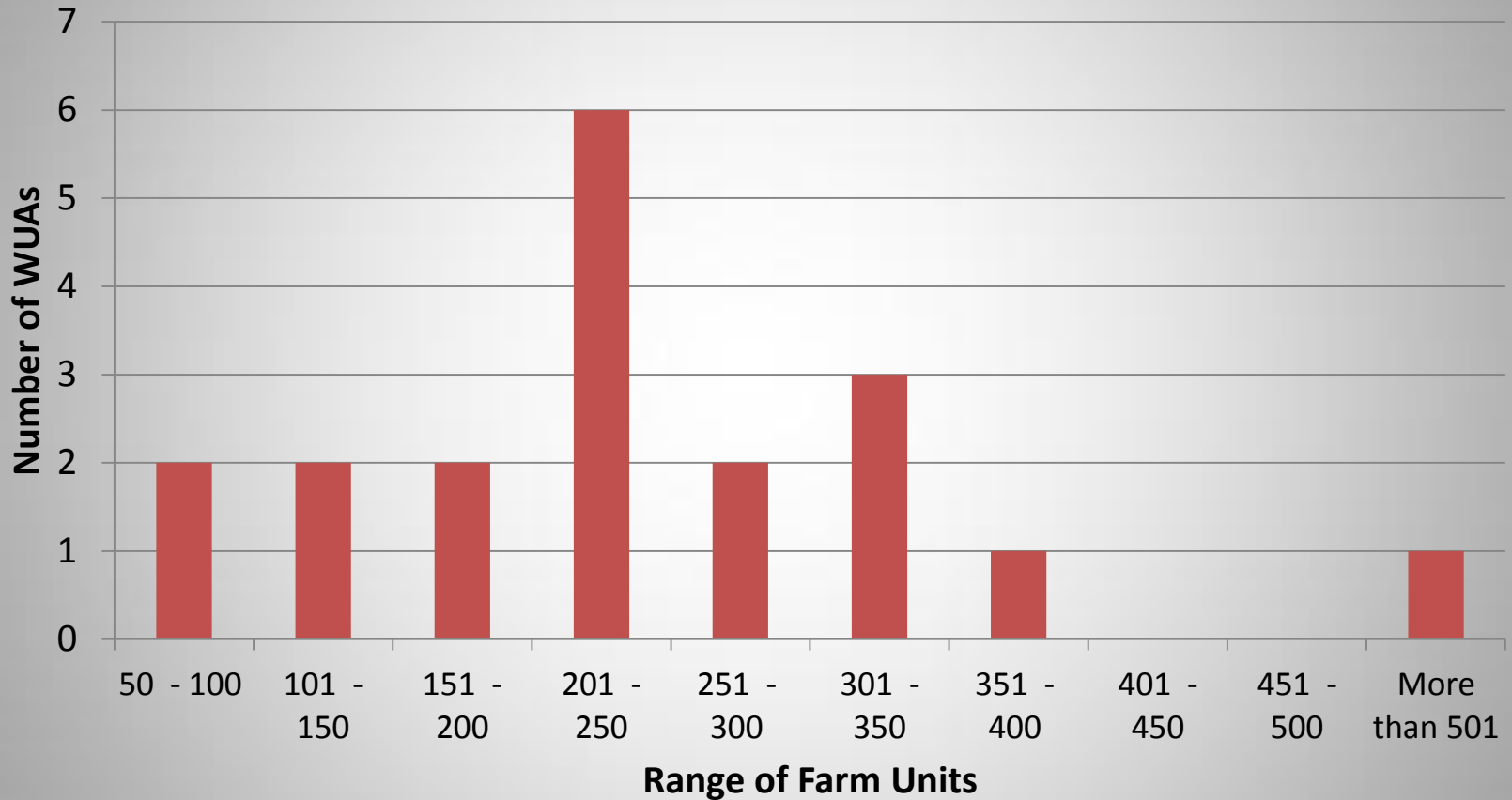


Participation Statistics

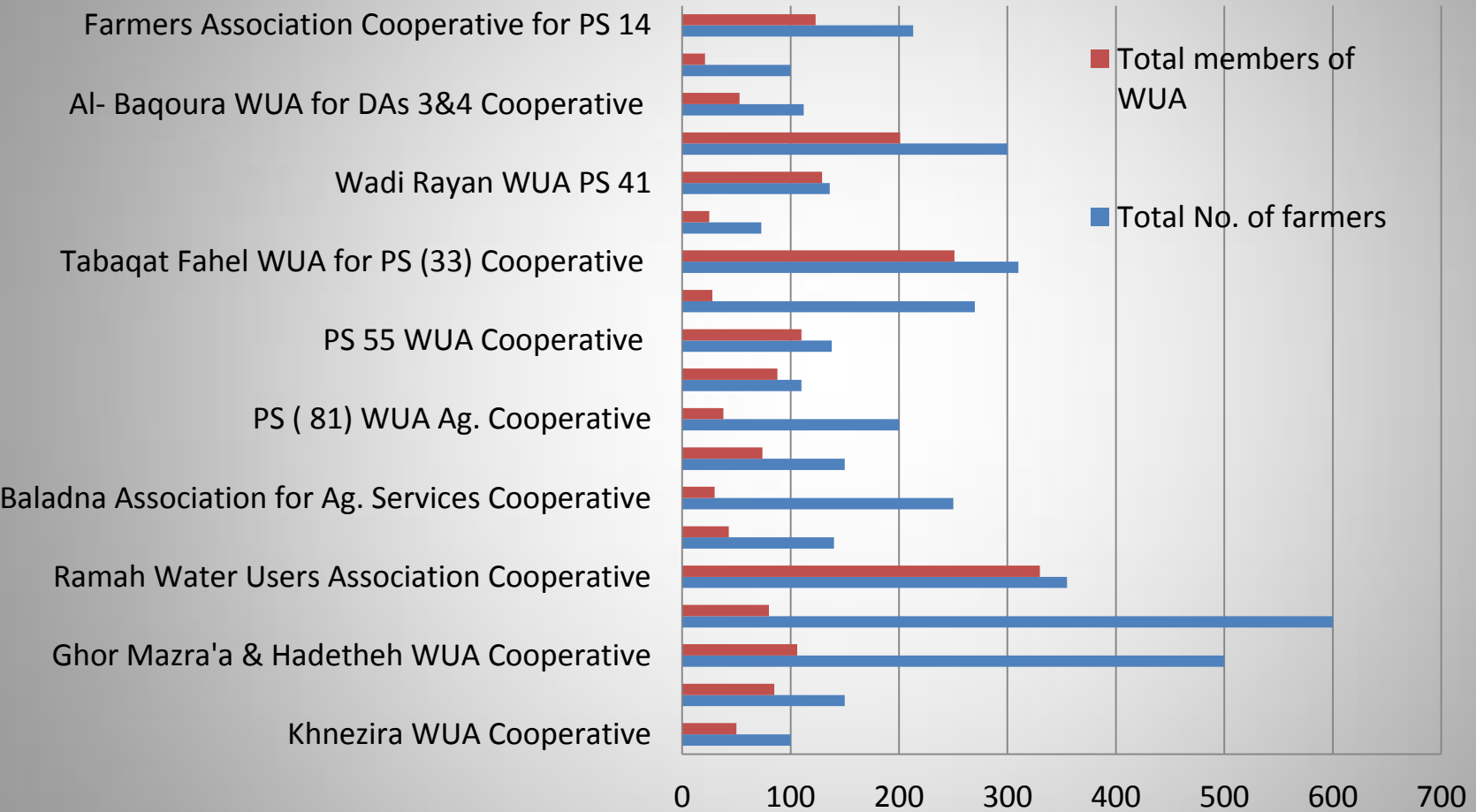
Official Farmers' Participation Cumulative area (du)



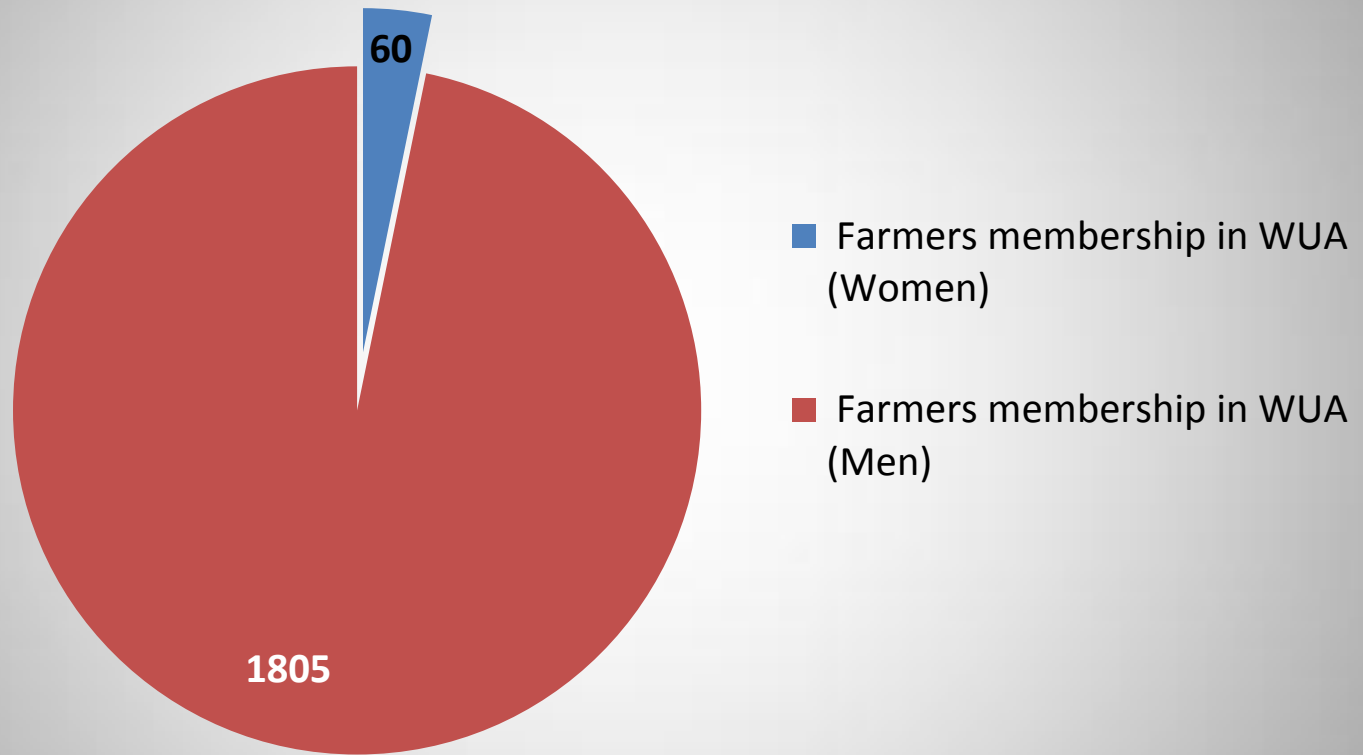
Size distribution of WUAs according to number of farm units



Member and non-member farmers in WUAs



➤ Farmers: Membership of WUA (Gender)

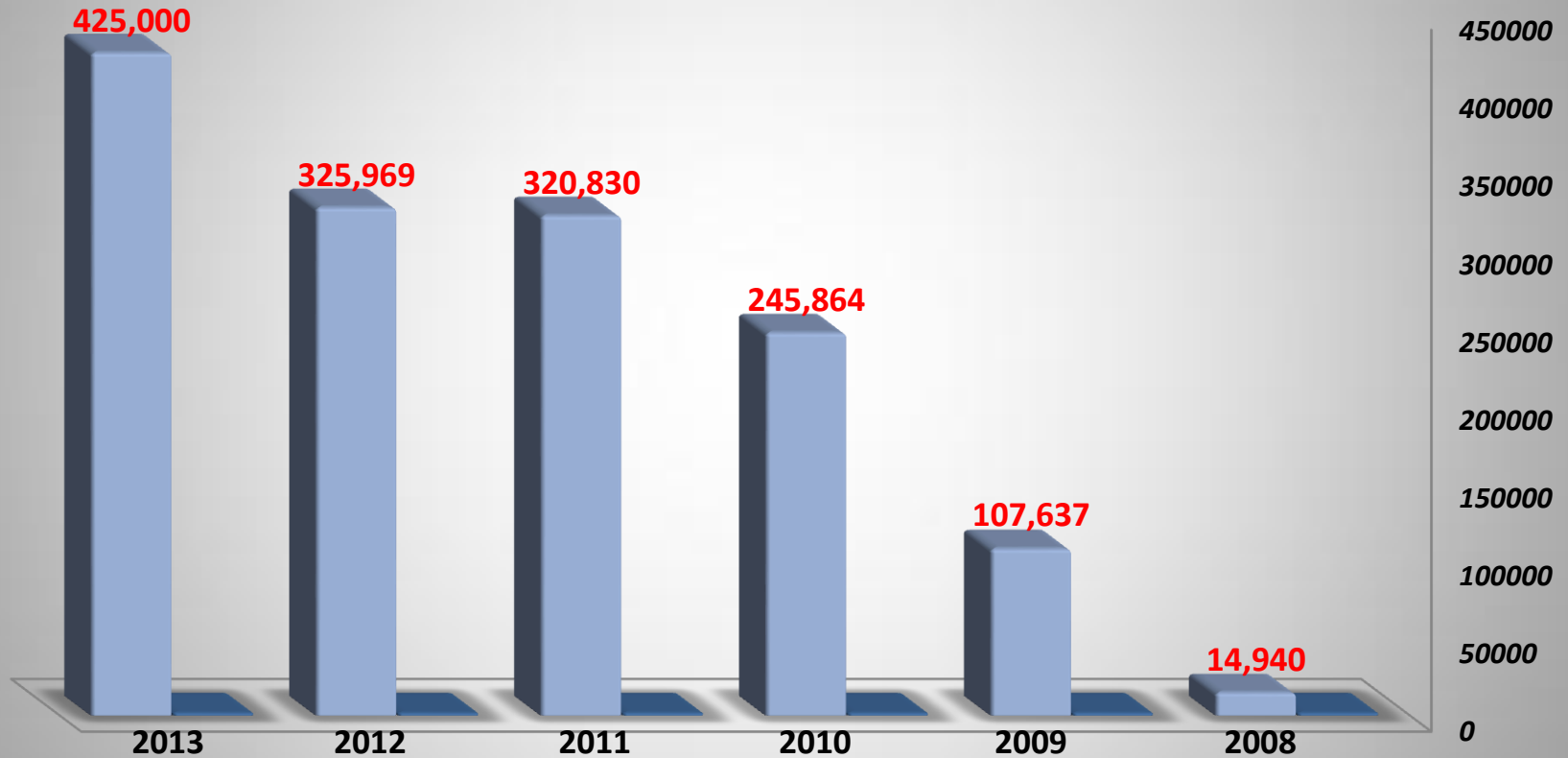


Financing WUA's

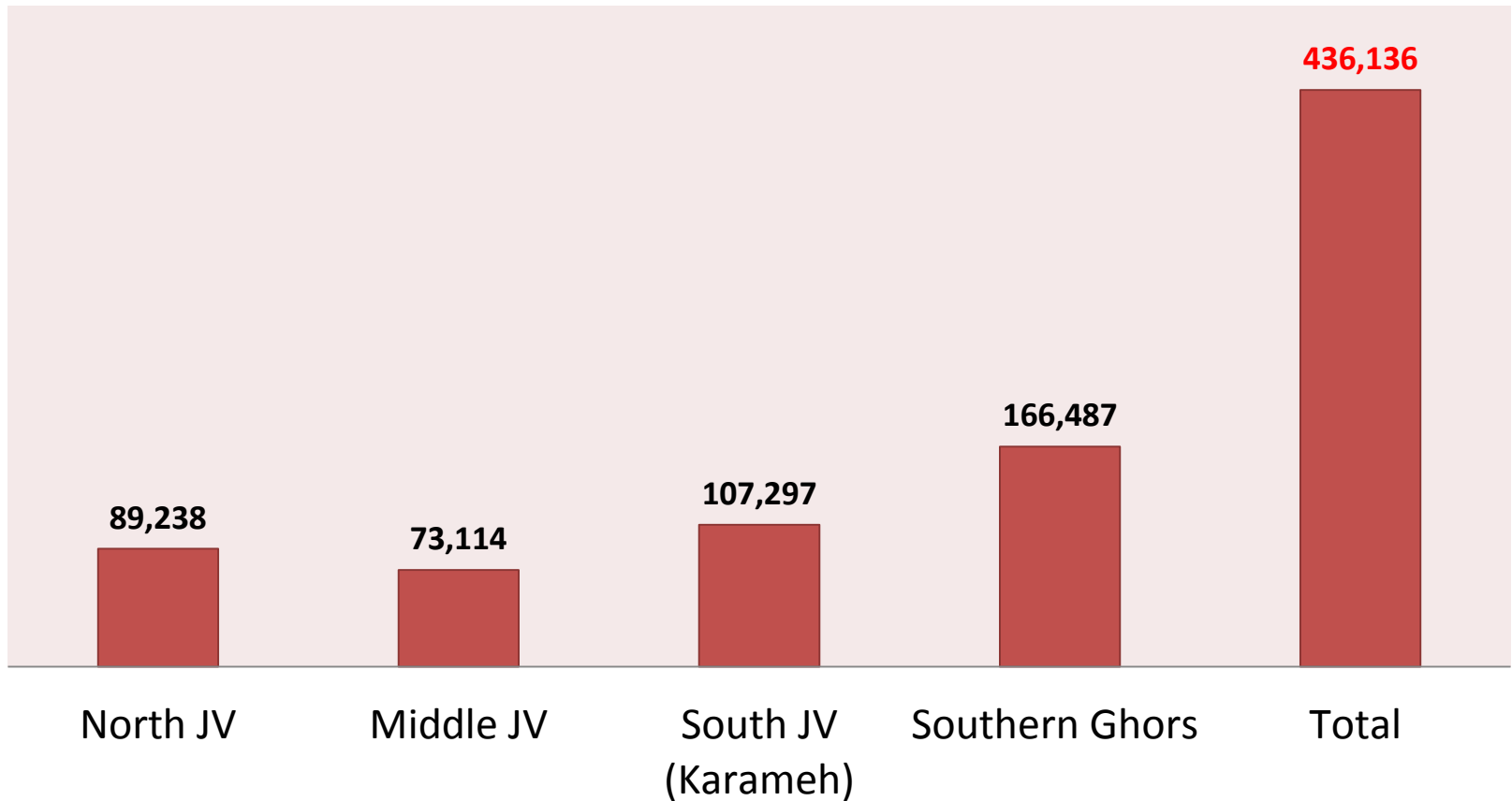
Financing Facts

- WUA's do not have a water quantity agreement with JVA
- WUA's members must pay service fees directly to JVA (for water supplied by JVA and WUA's) at the end at each month
- WUA's are receiving almost all their O&M funding from JVA through TT agreements
- Average irrigation water cost is 65 fils /cm
- Average irrigation water revenue is 12 fils /cm
- JVA is going to reduce the subsidies to WUA's and will increase the irrigation water tariffs

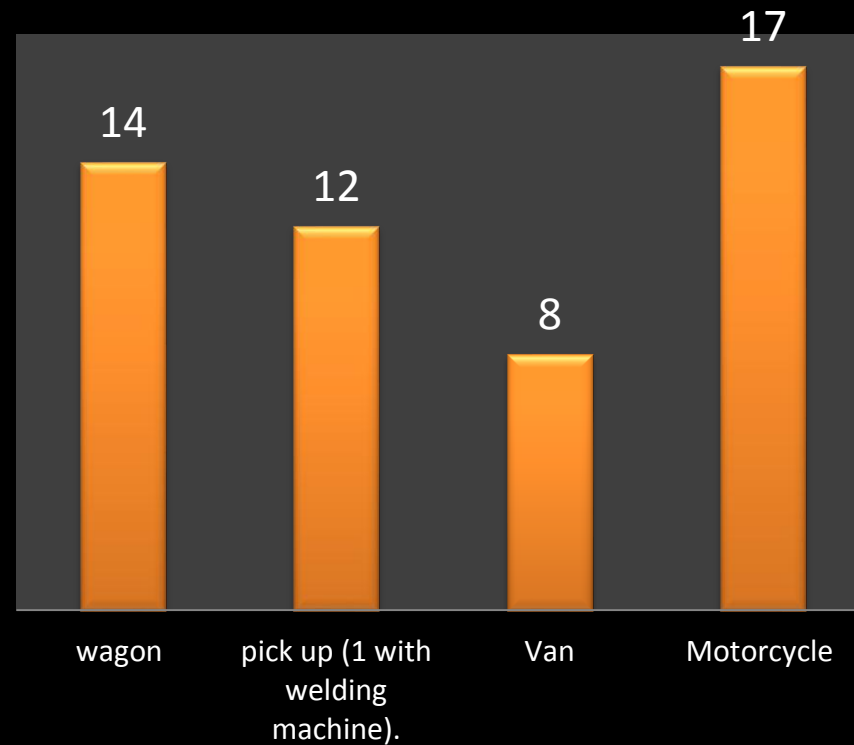
Total Contract Value(JOD/Year) for TT



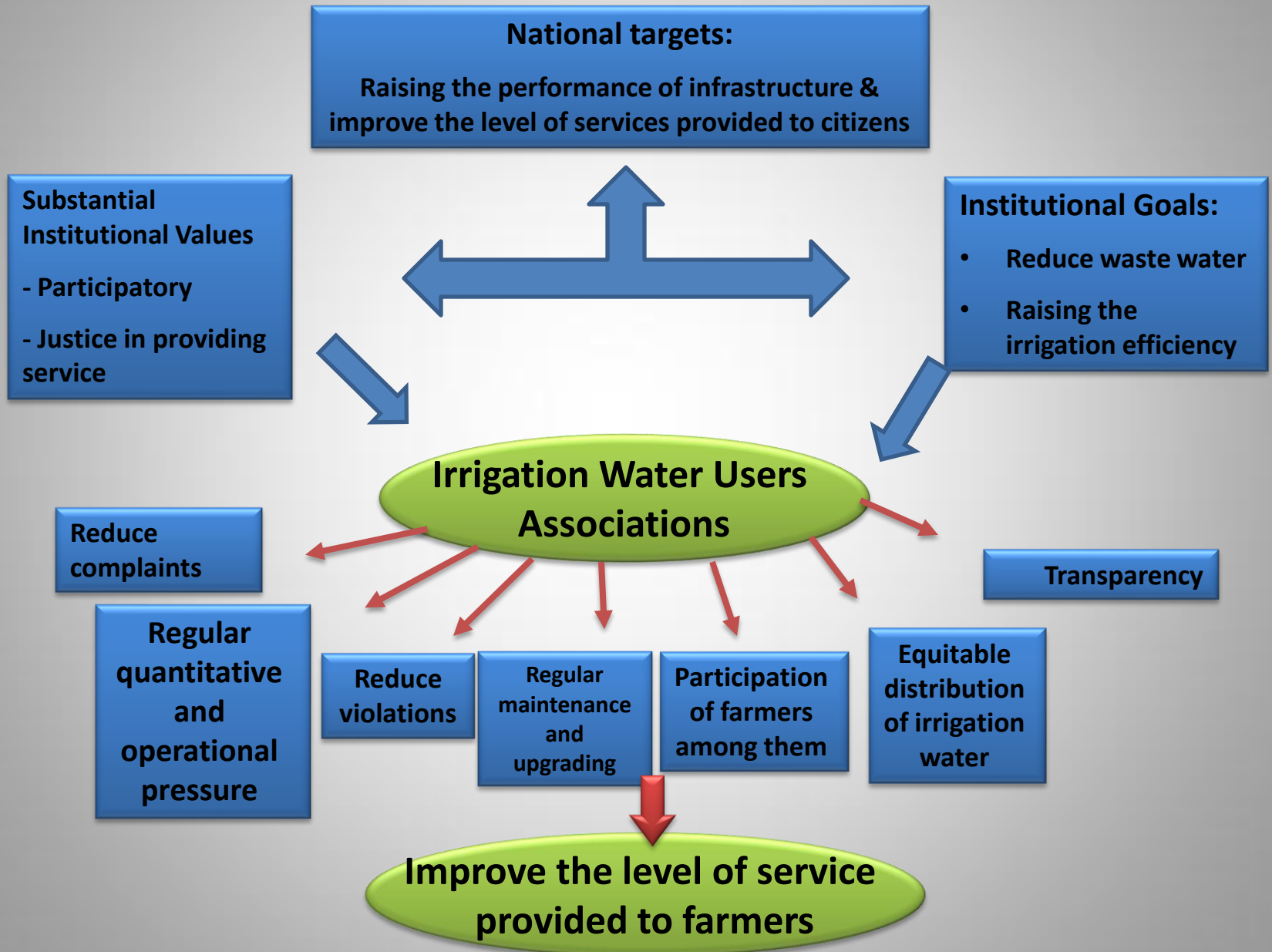
2012 indirect JVA cost (JOD) for 12 TT WUAs



Number and types of vehicles / equipment used by WUA employees



WUAs Performance Evaluation

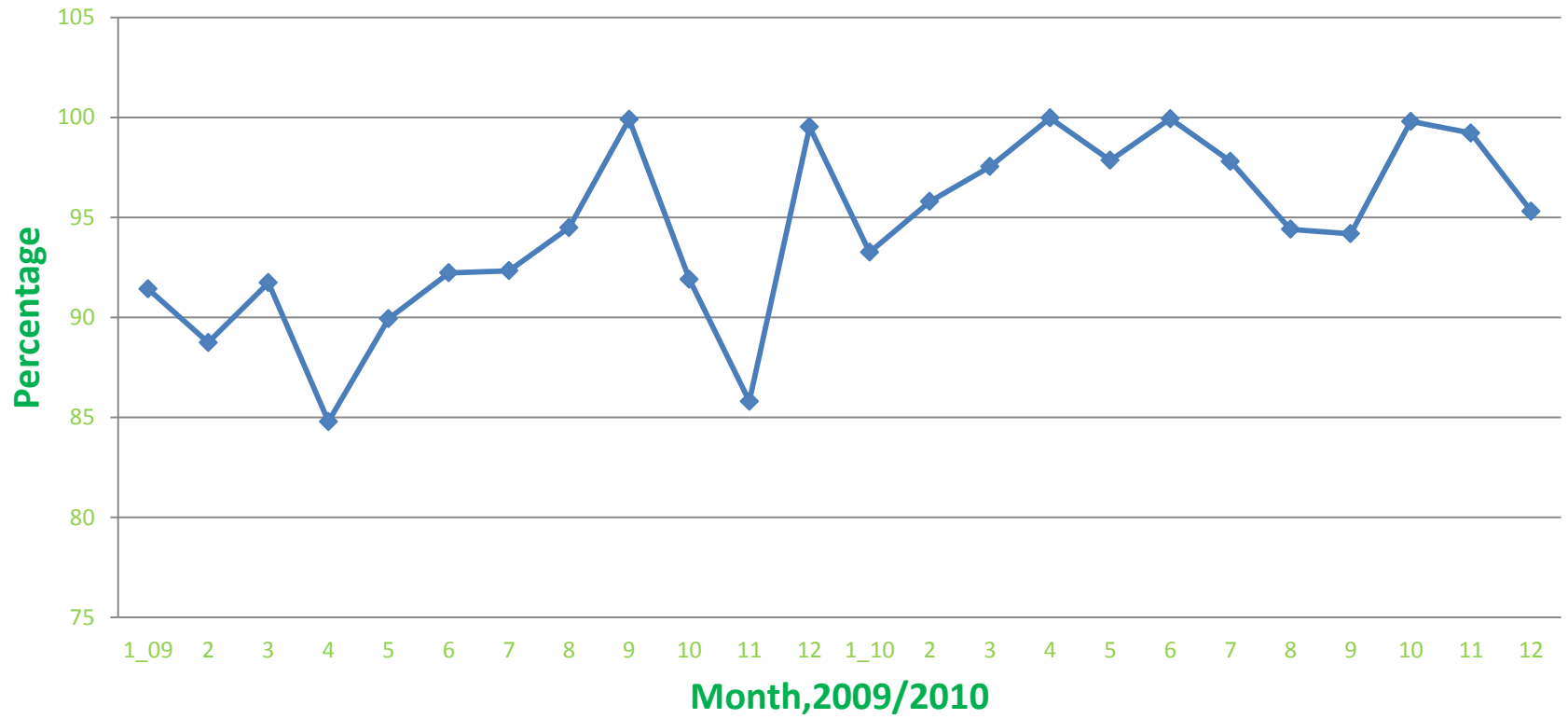


Methodology of Data Collection:

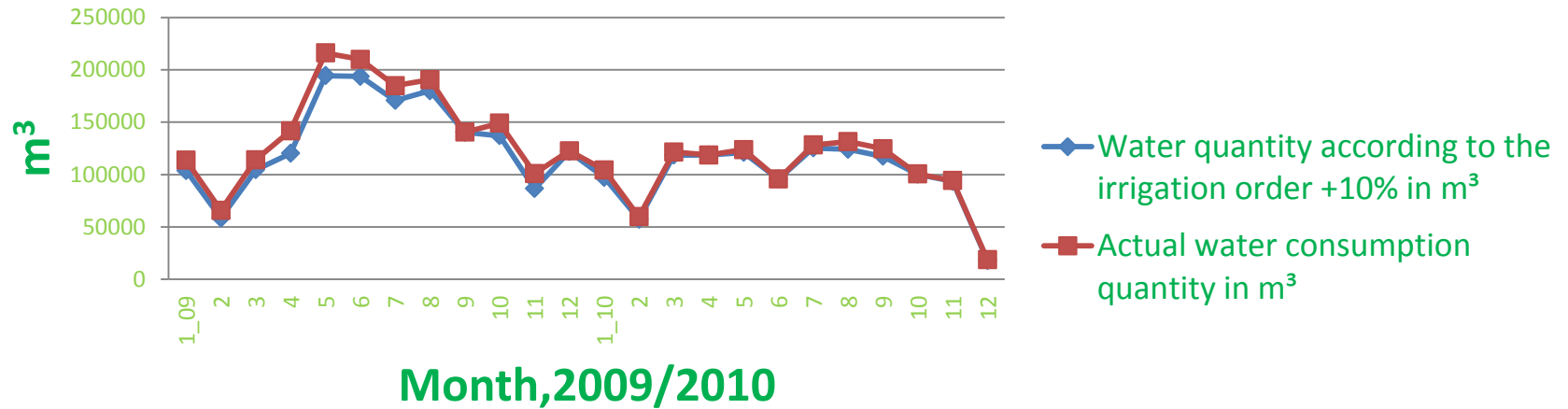
- Interviews
- Daily Site Reports(JVA&WUA's)
- Meetings
- Questionnaires and Field Survey
- Brain Storming
- Focus Groups



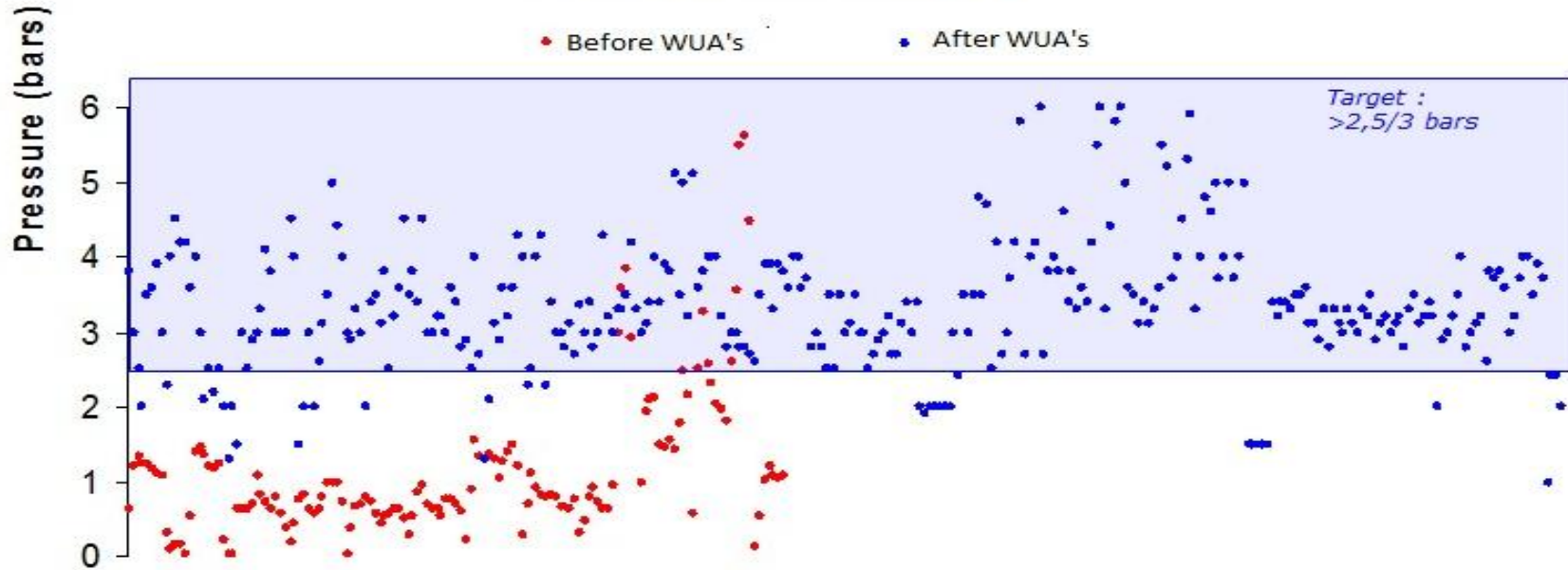
Distribution Efficiency



Indicator: Water consumption

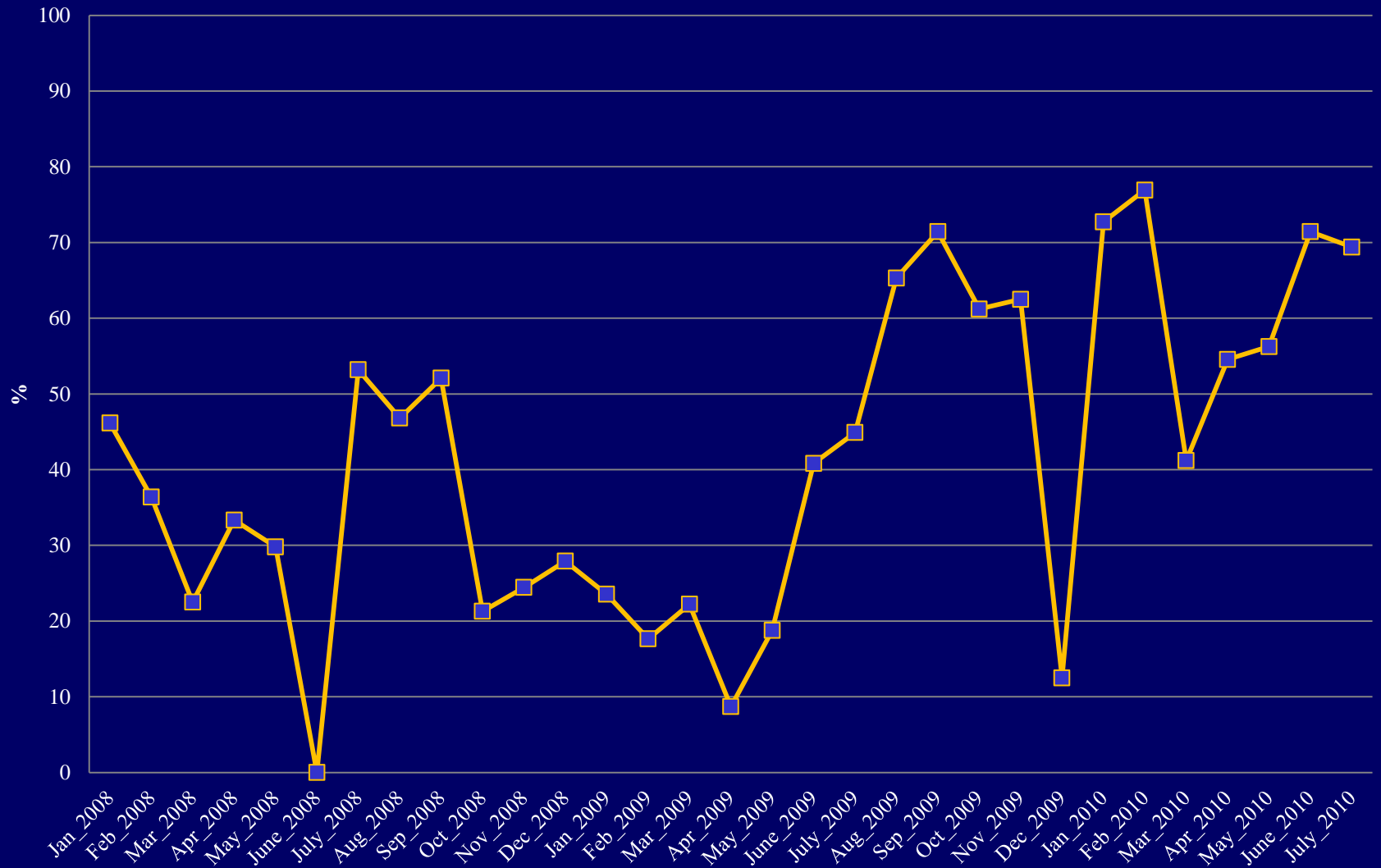


Pressure measurements TO28



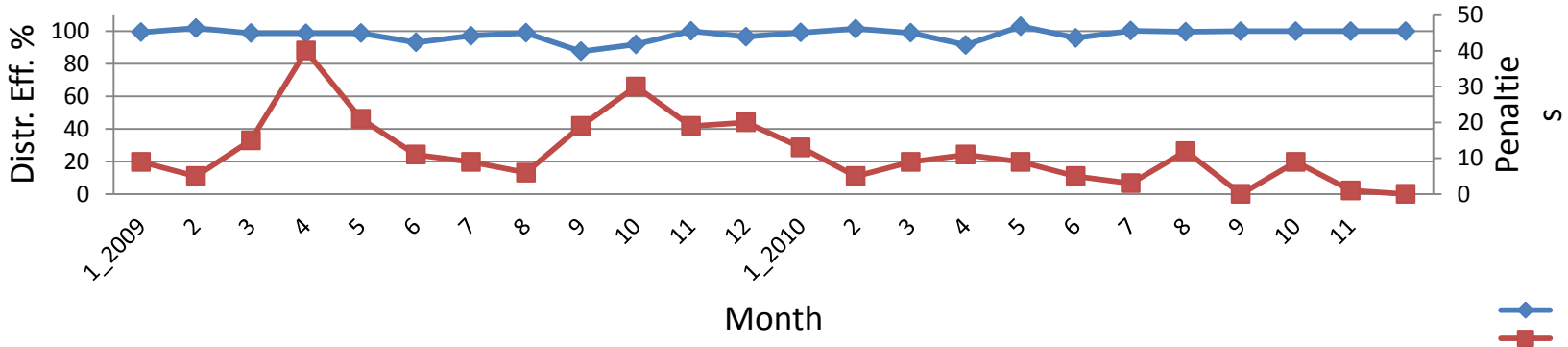
Pump Station 28

Percentage of working flow meter

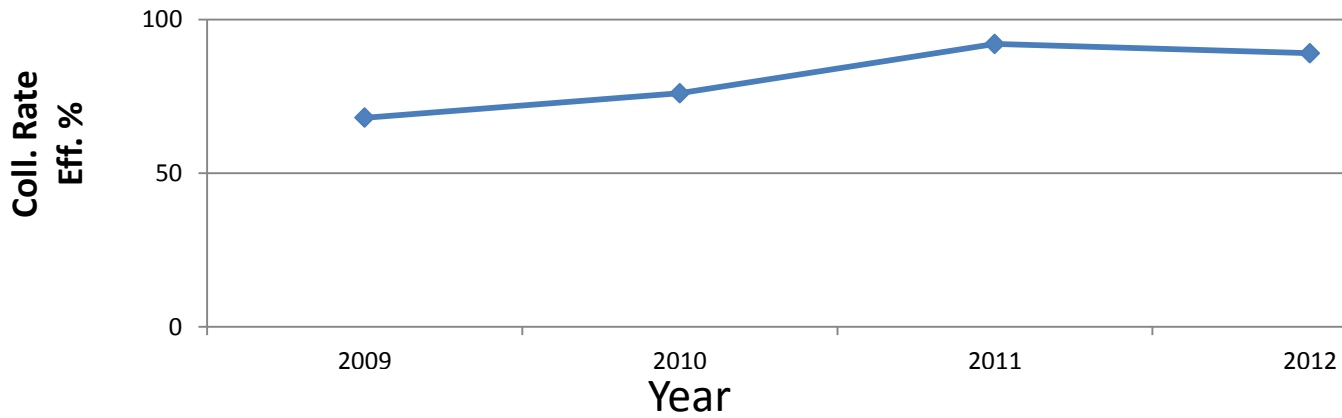


WUA - 55

Distribution eff. And Penalties

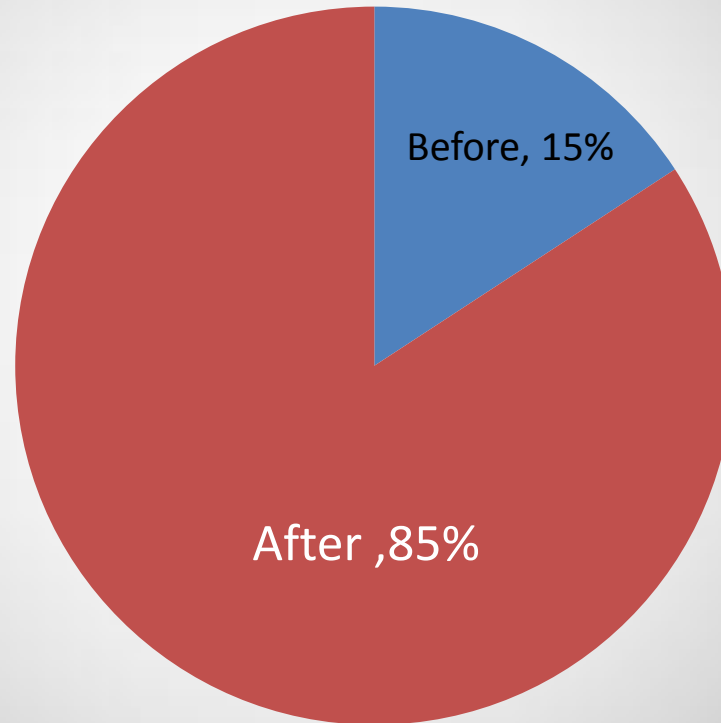


Collection Rate eff. WUA 91 South



Farmer Satisfaction

Which service is better—before or after WUAs?



ISSP Survey, Feb. 2013

Farmer satisfaction
Technical Level / Quantity and Operating Pressure

Indicator	Level of Satisfaction				
	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1. Always I receive the amount of water specified in the irrigation order	7	4	0	12	5
2. There is no fluctuation in the amount of flow	3	11	1	12	1
3. Water is distributed fairly among farmers in accordance with the water quota	2	6	1	14	5
4. Water pressure is consistent and sufficient	0	14	1	9	4
5. Response to maintenance requests for irrigation system are quick enough	0	7	2	10	9
Total	12	42	5	57	24
%	9%	30%	4%	41%	17%

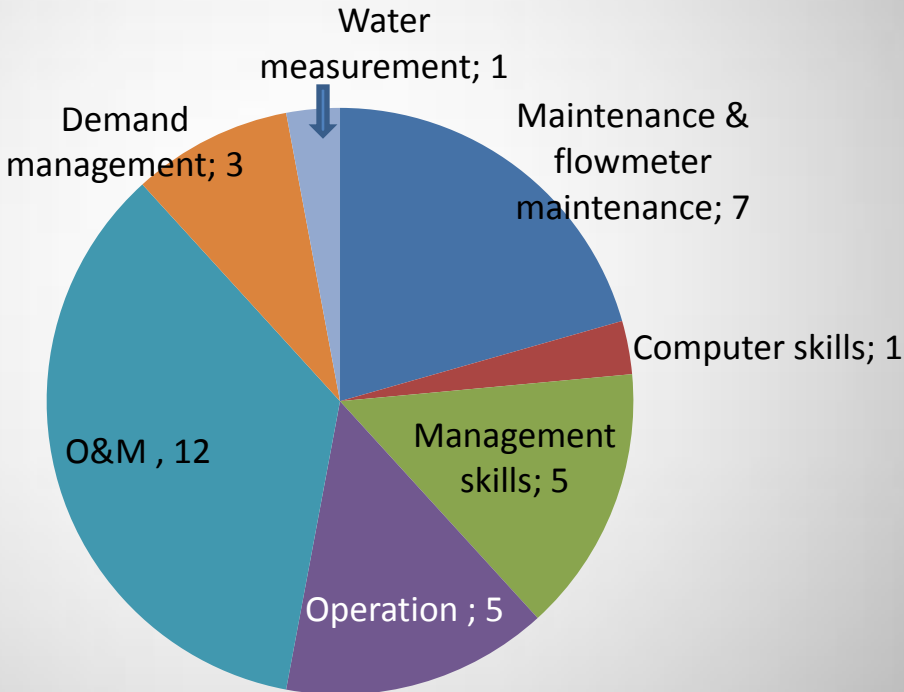
Managerial Level / Staff and Services

Indicator	Level of Satisfaction				
	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1. The Head of the WUA is in constant contact with you	1	1	2	12	12
2. WUA staff are qualified technically	3	2	1	18	4
3. WUA staff respond quickly to maintenance orders and issues related to water distribution	0	0	1	13	14
4. WUA staff show the appropriate level of professionalism and respect in dealing with you	0	0	1	13	14
5. WUA staff treat equally all farmers	0	12	0	2	14
Total	4	15	5	58	58
%	3%	11%	4%	41%	41%

Managerial Level / Staff and Services

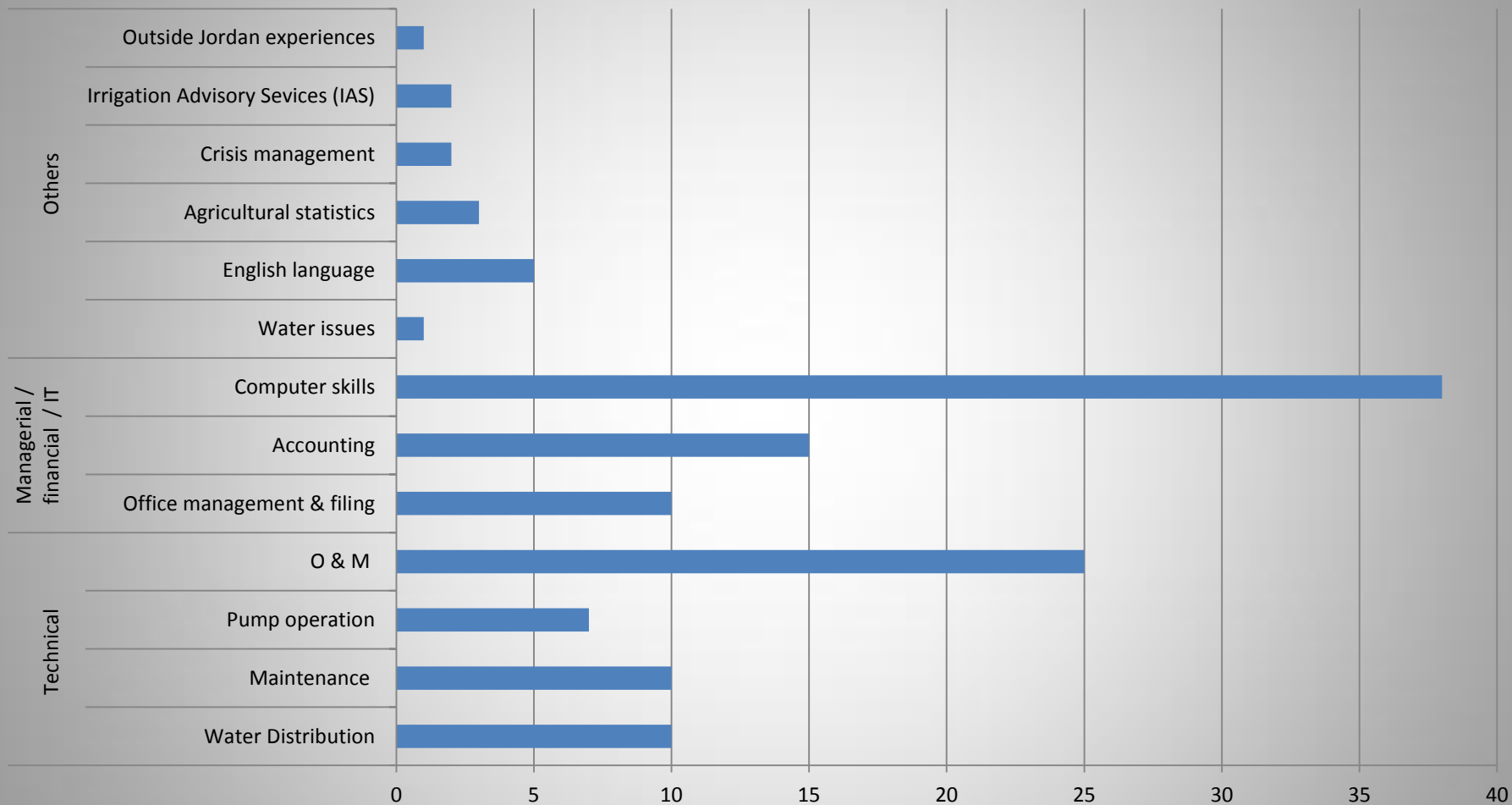


WUA's Capacity Building
Total training courses received by WUAs

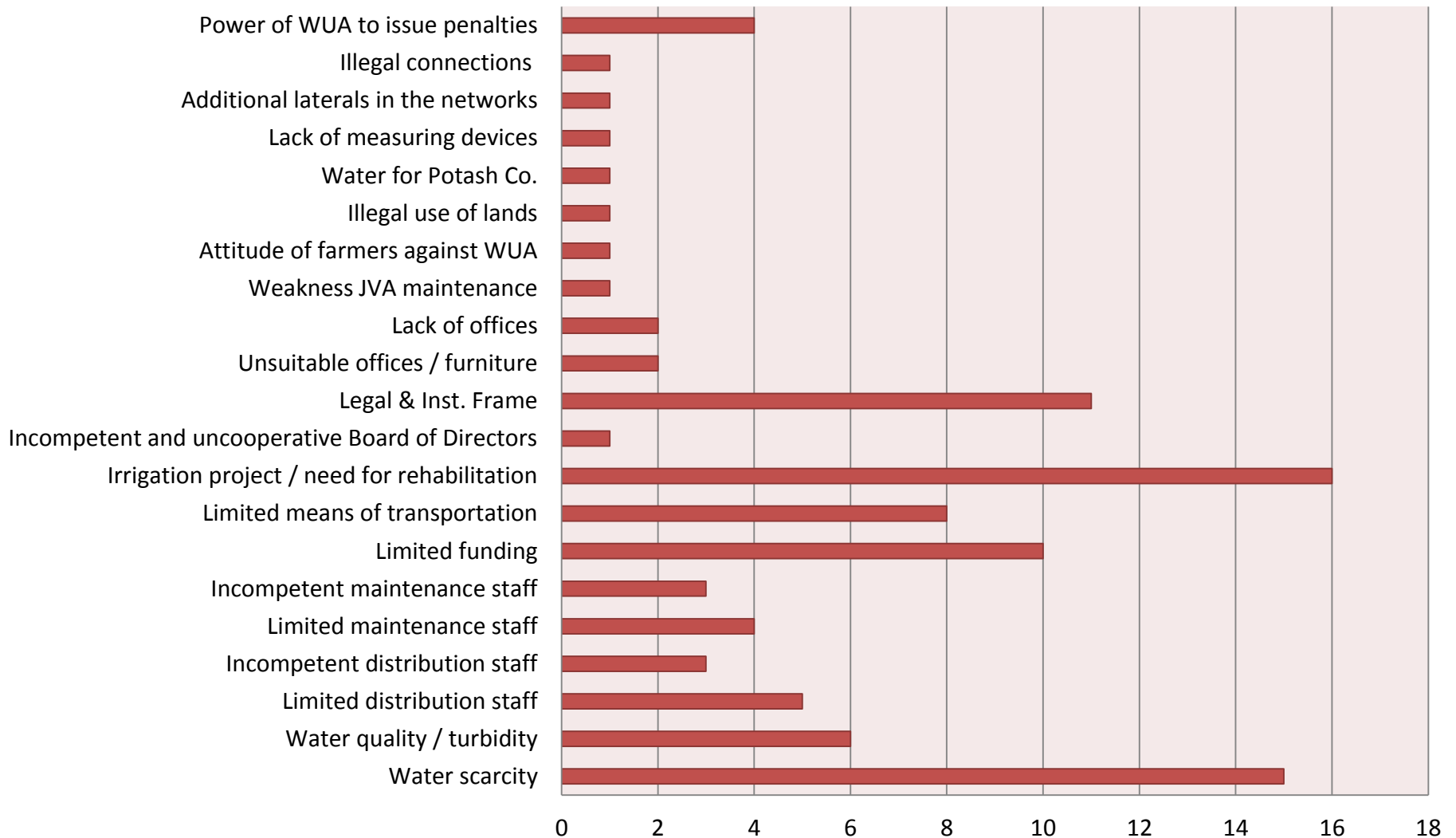


Survey Feb.,2013

Training needs for WUAs (survey, Feb. 2013)



Constraints Facing WUAs (Survey June, 2012)



WUAs Performance Evaluation



Proposals for the Future Tasks of WUAs

- Expanding areas of farmer's participation in horizontal and vertical (geographic coverage and expanding the tasks)
- Self-sustainment cost management of water through (water prices, maintenance, ticket revenues)
- Receive all water management tasks after source
- Pumps Functions
- Collect the Water Prices & Proceeds with tickets.
- Maintenance
- Oversight Functions & Irregularities.



Proposals for the Future Tasks of Water Users Associations

- Receive all water management tasks after source which include in addition to current tasks:
- Pumps Functions.
- Collect the Water Prices & Proceeds with tickets.
- Maintenance
- Oversight Functions & Irregularities.

Key Conclusions & Recommendations to Date

- Improved services by WUAs (effective and efficient)
- Resulted in positive impacts
- Well received / appreciated by members and non-members farmers
- Have to support the experience by
 - Rehabilitation of network (urgent)
 - Provide suitable legal frame
 - Training
 - Allocate necessary funding to WUAs
- Marketing and extension services to farmers
- Expand WUA coverage horizontally and vertically



Disk filter and sand filter

Thank You

