



# Maintenance System Project In Malawi

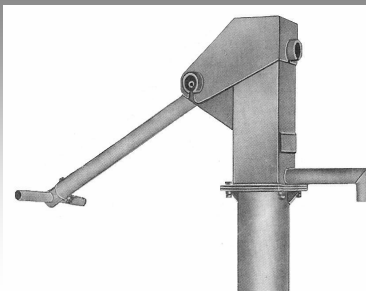
## Objectives of the project since 1991

Inter Aide and Baseda begun the maintenance projects in 1991 as part of WASH projects. In 2008 the Maintenance Projects became independent.

Our objectives are:

- ✗ To improve health and sanitary living conditions of vulnerable rural families,
- ✗ To increase access to maintenance services of water points,
- ✗ To increase protected water points' functionality rate.

**Afridev pump**



## Main activities

We act at 2 levels:

- ✗ To insure the maintenance of Afridev and Malda pump in the villages thanks to a network of Area Mechanics:
  - ✗ This Area Mechanics are trained and equipped,
  - ✗ They are independent workers but practice reasonable prices for communities,
  - ✗ We insure a monthly follow up of their work in order to support them and to develop and evaluate the activities in the district,
  - ✗ We work with officials and communities to inform them on existing services for maintenance.
- ✗ To improve the availability of spare parts thanks to a network of partners shops:
  - ✗ Selling points are selected and trained on pump maintenance, hygiene and stock management,
  - ✗ We organize the spare parts supply system
  - ✗ We monitor the sales



## Geographical situation

The maintenance projects are operational in 5 districts in Malawi:

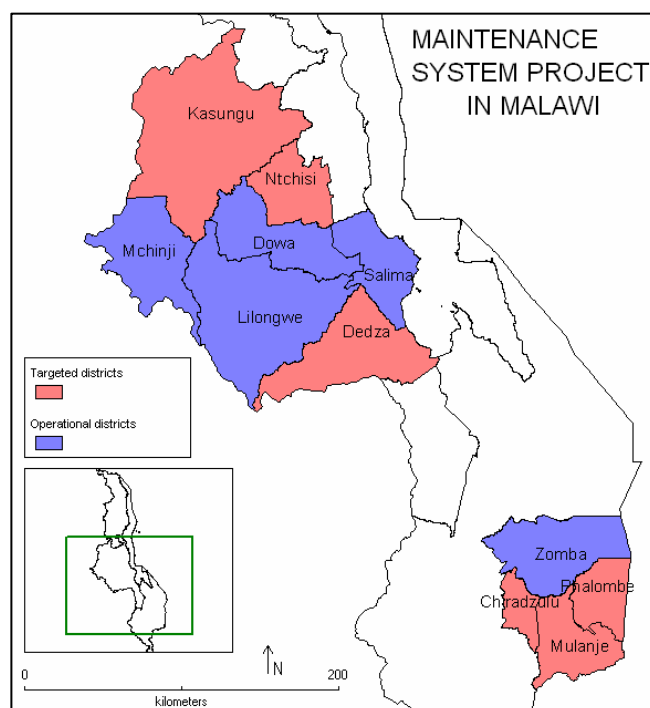
- ✗ Dowa district,
- ✗ Lilongwe district,
- ✗ Mchinji district,
- ✗ Salima district,
- ✗ Zomba district.

We target other 6 districts before 2012:

- ✗ Chiradzulu district,
- ✗ Dedza district,
- ✗ Kasungu district,
- ✗ Mulanje district,
- ✗ Ntchisi district,
- ✗ Phalombe district,

The network is now composed of:

- ✗ 149 Area Mechanics,
- ✗ 85 Partner shops,





# Maintenance System Project Dowa, Mchinji, Salima and Kasungu districts

## Composition of the team

Baseda is the local partner of Inter Aide. They lead the maintenance projects in Lilongwe district and Zomba district.

Inter Aide leads the project in Dowa, Mchinji and Salima district. We will soon open it in Kasungu and Ntchisi district.

Our team is composed of 5 persons:



Franck Banda  
Maintenance Assistant  
in Mchinji District



Ernest Chimbia  
Maintenance Assistant  
in Salima District



Spencer Mazemero  
Maintenance Assistant  
in Dowa District



Marie Bouvet  
Project officer



Macmillan Chikhoza  
Maintenance Coordinator

## Shop Management

In order to be affordable to the communities, the prices of spare parts are also fixed by the project:

Prices for MALDA spare parts	Prices to community
Handle rod	920
Handle sleeve	3,950
Pipe coupling (Socket)	360
Foot valve (Body)	1,180
Plunger adaptor	580
Rod Coupling	380
1 m Rod	1,700
2 m Rod	2,160
Guide bush (Main bush)	1,050
Plunger seal	380
Return ring	360
O-ring	270
Shock absorber	680

## Maintenance services

The Area Mechanics can propose to the community 3 kinds of contracts:

- ✗ Repair contract in case of break down,
- ✗ Preventive maintenance contract for one year
- ✗ Community Based Maintenance training

They charge between 800 and 1 500 MK depending on the type of the intervention. The community have to provide the spare parts for the repair.

Prices for AFRIDEV spare parts	Prices to community
Bobbin	88
Bolt and nut (10x35)	70
Bolt and nut (12x40)	70
Bush bearing	188
Cup seal	100
Cylinder naked	7,300
Double end socket	235
Fishing tool	1,222
Flat spanner	270
Hook for foot valve	500
Fulcrum pin	1,295
Hanger assembly	1,492
Hanger pin	998
O-ring	47
Plunger body plastic	820
Plunger body brass	1,500
Pump handle	6,873
Pump head	9,546
Pump head cover	2,526
Pump pedestal	9,165
PVC raising main pipe	1,510
Rod centraliser	135
Rod galvanized	1,290
Rod stainless steel	3,348
Rod plunger stainless steel	1,833
Rope	1,800
Socket spanner	1,222
Solvent cement(100ml)	240
Solvent cement(200ml)	410
Suction pipe	1,400
U-seal	58

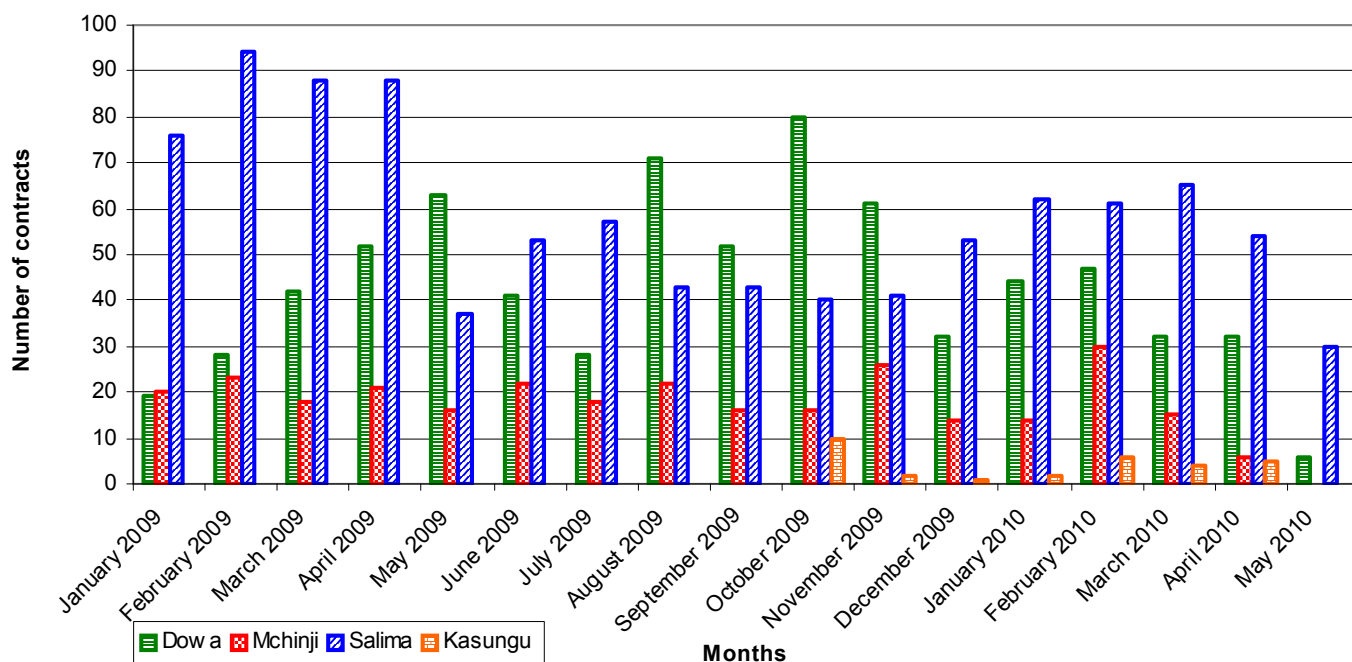


# Maintenance System Project Dowa, Mchinji, Salima and Kasungu districts

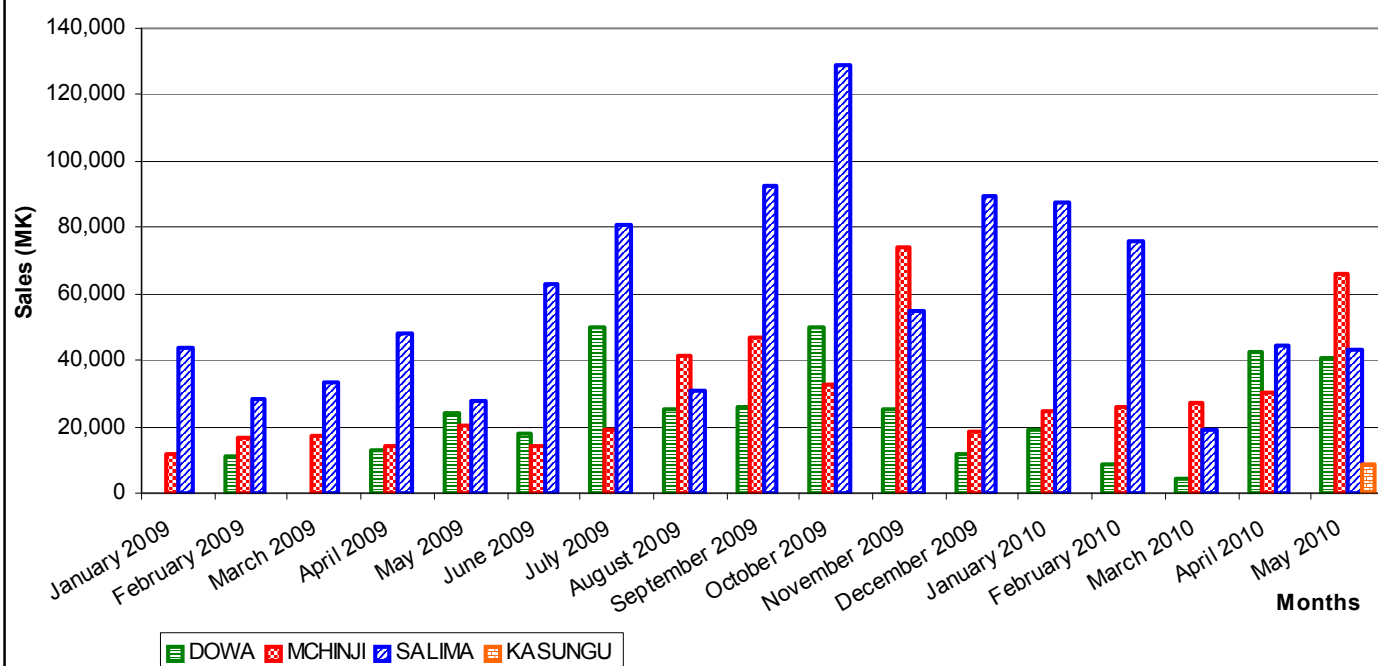
## Comparison of the results in the 3 districts

These charts present the number of contracts and the sales of spare parts in the districts of Dowa, Mchinji and Salima since January 2009. As we begun to train Area Mechanics in the south of Kasungu district (Santhe) some contracts begun in Kasungu from October 2009.

**CONTRACTS BETWEEN JANUARY 2009 AND NOW**



**SALES OF THE DISTRICTS BETWEEN 2009 AND NOW**





# Maintenance System Project In Mchinji district

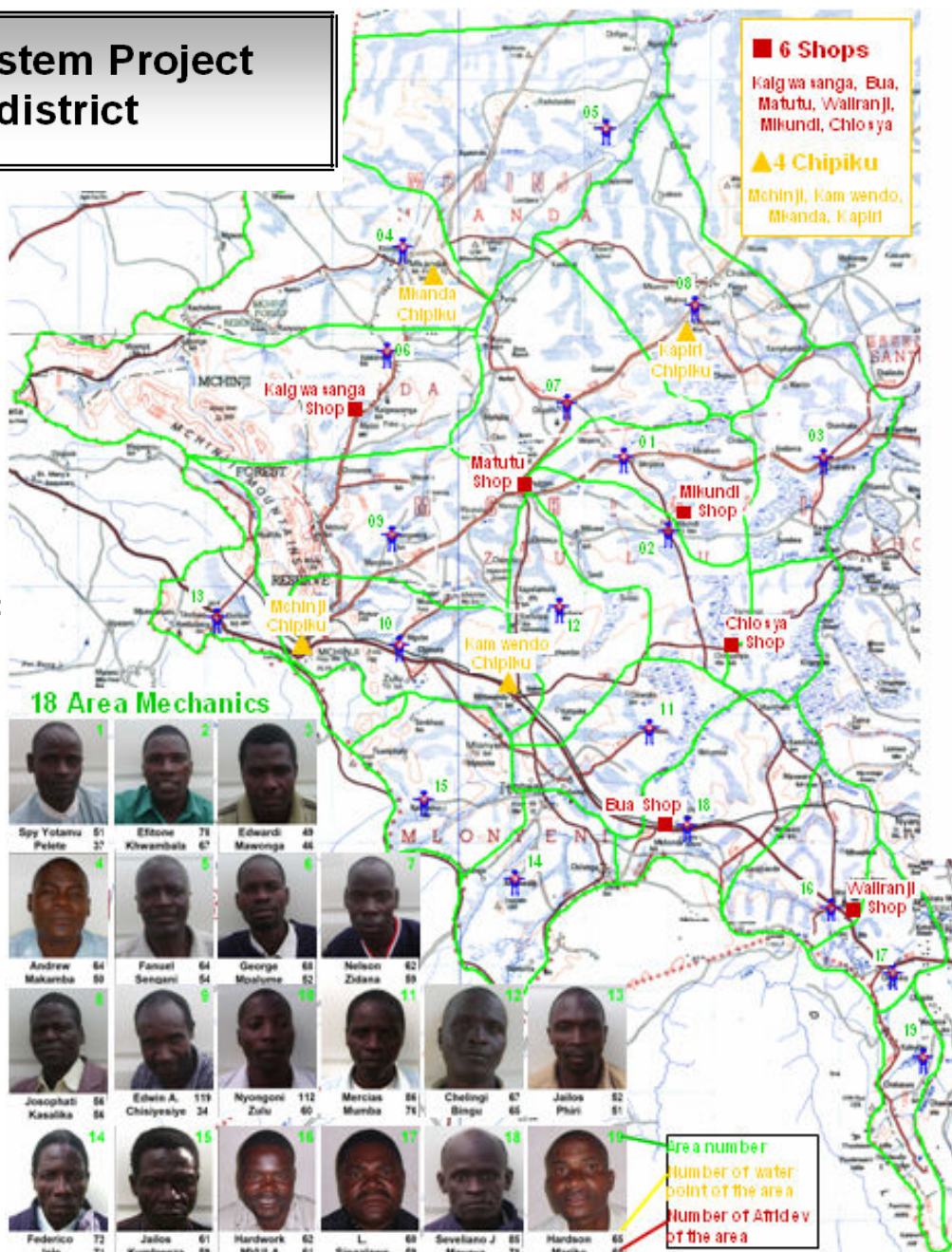


## Mchinji district Since April 2008

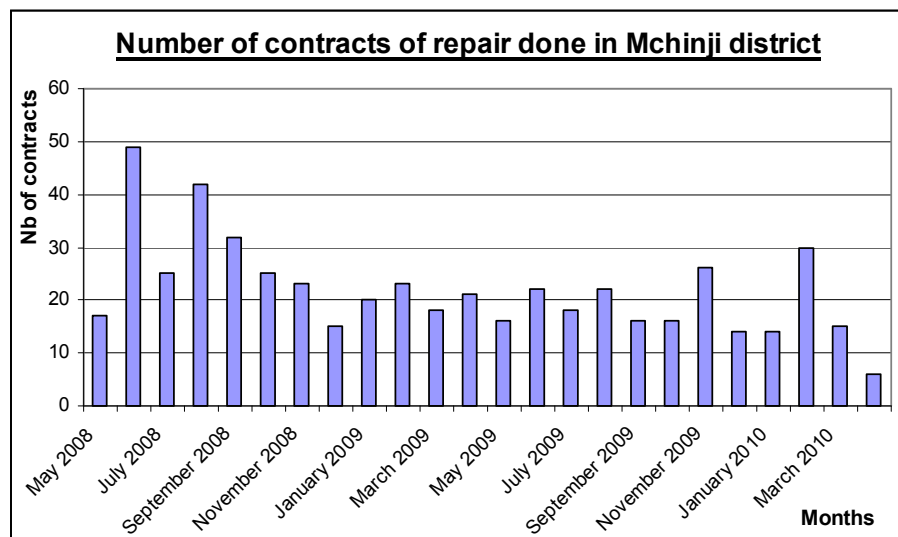
In partnership with the water department, we implemented the project in Mchinji District in April 2008.

Now, the network is composed of:

- ✗ 19 Area Mechanics
- ✗ 6 partners shops
  - ✗ Kaigwasanga
  - ✗ Bua
  - ✗ Matutu
  - ✗ Waliranji
  - ✗ Mikundi
  - ✗ Chiosya
- ✗ 4 Chipiku stores:
  - ✗ Mchinji
  - ✗ Kamwendo
  - ✗ Mkanda
  - ✗ Kapiri



The Area Mechanics have done more than 525 repairs since the opening of the project in Mchinji district and the shops have sold more than 1025 U-seal:



Main spare parts sold	Total
A_Bobbin	57
A_Bush bearing	469
A_Cup seal	91
A_Cylinder naked	12
A_Double end socket	116
A_Fulcrum pin	87
A_Hanger pin	21
A_O-ring	93
A_Plunger body brass	24
A_Plunger body plastic	116
A_PVC raising main pipe	20
A_Rod centraliser	651
A_Rod galvanized	170
A_Rod plunger stainless steel	7
A_Rod stainless steel	3
A_Solvent cement(100ml)	126
A_Solvent cement(200ml)	23
A_U-seal	1,025



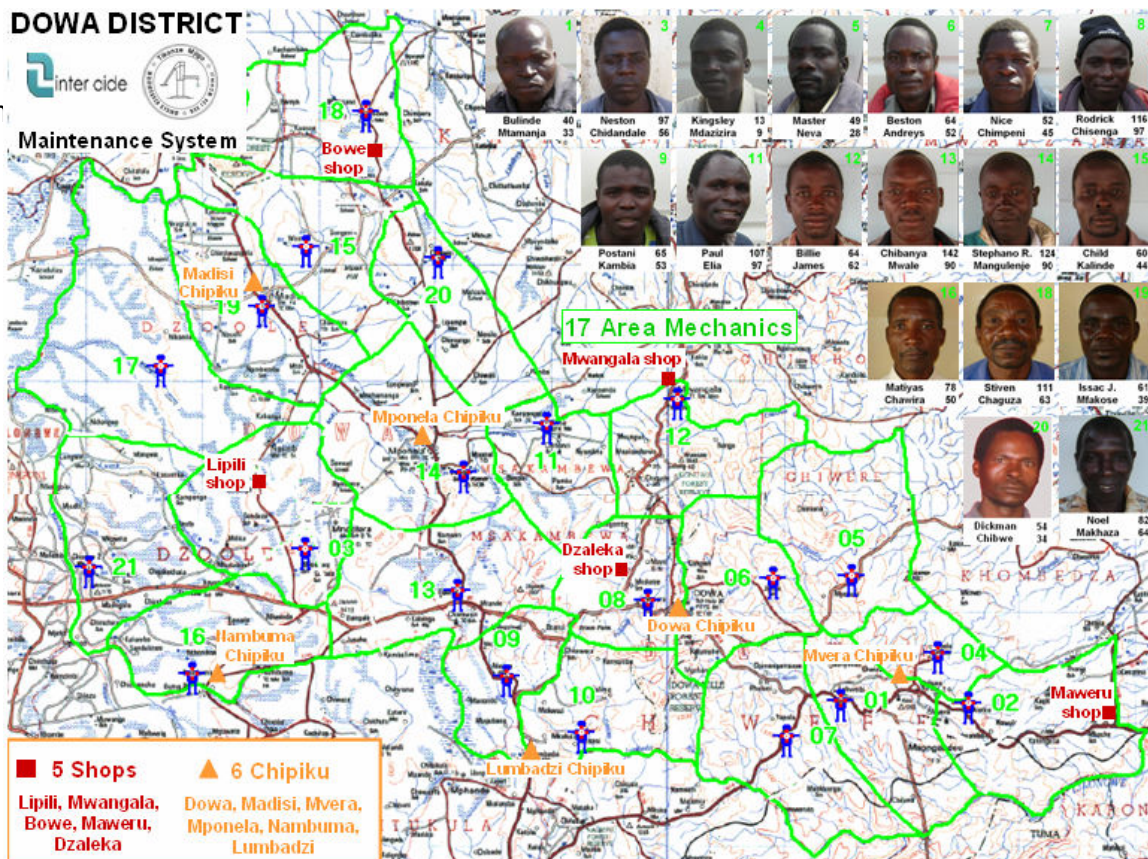


# Maintenance System Project In Dowa district

## Dowa district since June 2008

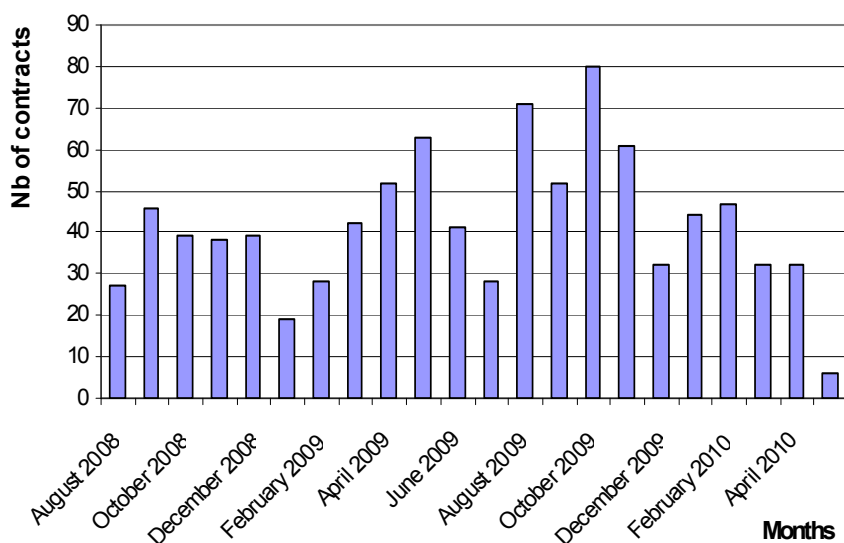
In partnership with the water department, we implemented the project in Dowa District in June 2008. Now, the network is composed of:

- ✖ 21 Area Mechanics
- ✖ 5 partners shops
  - ✖ Mwangala
  - ✖ Dzaleka
  - ✖ Maweru
  - ✖ Lipili
  - ✖ Bowe
- ✖ 6 Chipiku stores:
  - ✖ Nambuma
  - ✖ Lumbadzi
  - ✖ Madisi
  - ✖ Mponela
  - ✖ Mvera
  - ✖ Dowa



The Area Mechanics have done more than 919 repairs since the opening of the project in Dowa district and the shops have sold more than 344 U-seal.

**Number of contracts of repair done in Dowa district**



Main spare parts sold	Total
A_Bobbin	80
A_Bush bearing	224
A_Cup seal	98
A_Double end socket	52
A_Fulcrum pin	27
A_Hanger pin	12
A_O-ring	60
A_Plunger body brass	23
A_Plunger body plastic	68
A_PVC raising main pipe	14
A_Rod centraliser	122
A_Rod galvanized	58
A_Rod plunger stainless steel	2
A_Rod stainless steel	15
A_Solvent cement(100ml)	59
A_Solvent cement(200ml)	48
A_U-seal	344



# Maintenance System Project In Salima district

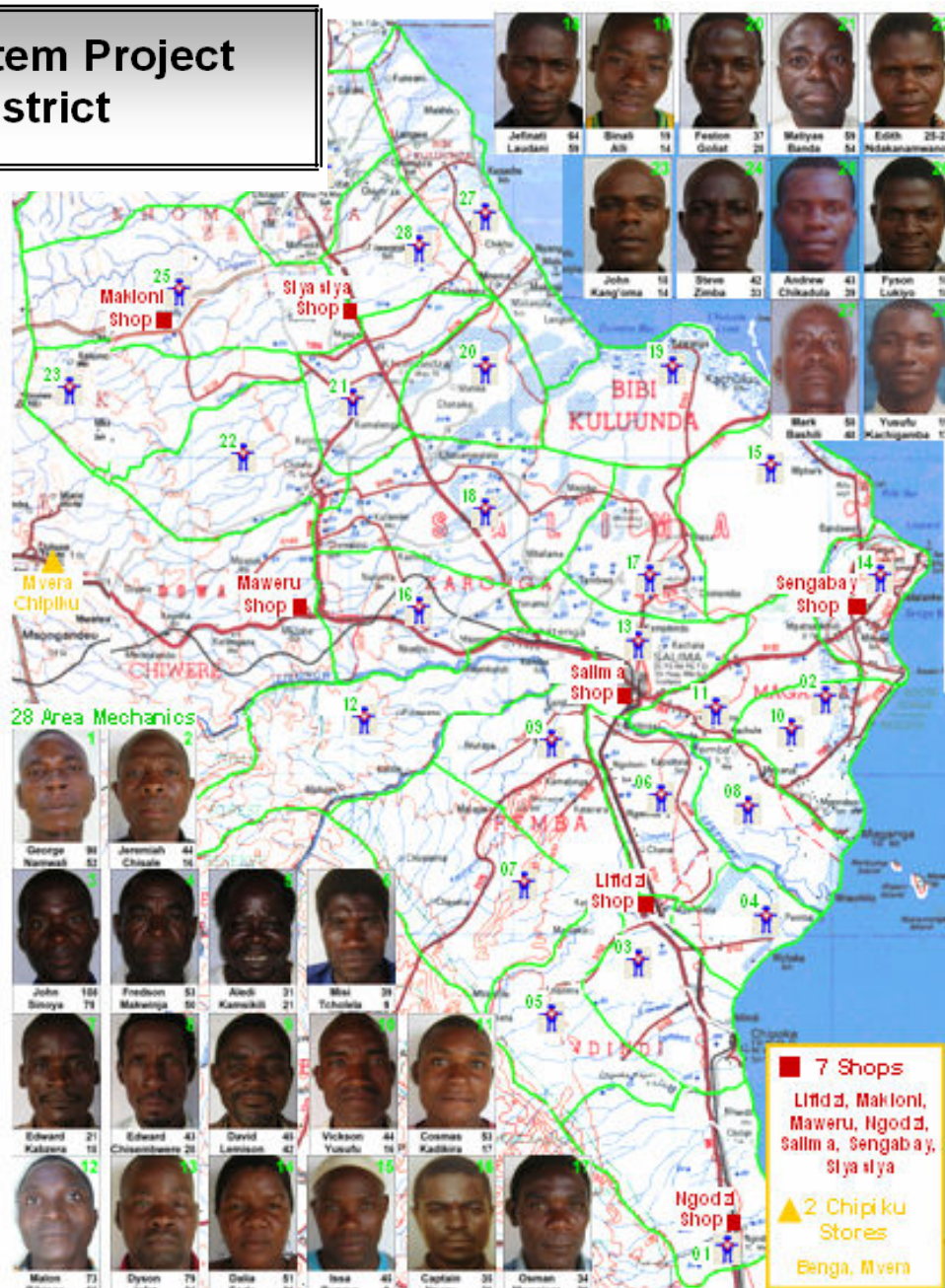


## Salima district Since December 2008

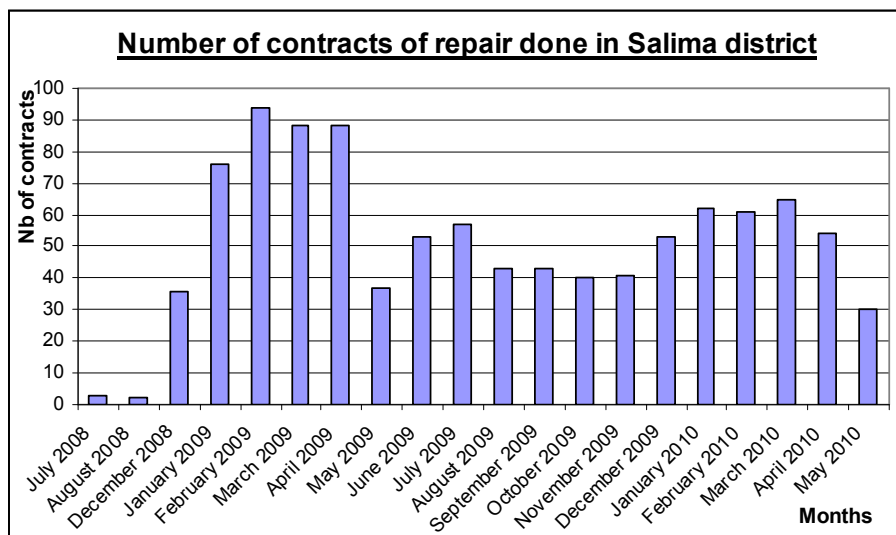
In partnership with the water department, we implemented the project in Salima District in December 2008.

Now, the network is composed of:

- ✖ 28 Area Mechanics
- ✖ 7 partners shops
  - ✖ Lifidzi
  - ✖ Makionu
  - ✖ Maweru
  - ✖ Ngodzi
  - ✖ Salima
  - ✖ Sengabay
  - ✖ Siyasiya
- ✖ 2 Chipiku stores:
  - ✖ Benga
  - ✖ Mvera



The Area Mechanics have done more than 1026 repairs since the opening of the project in Salima district and the shops have sold more than 1368 U-seal:



Main spare parts sold	Total
A_Bobbin	262
A_Bush bearing	643
A_Cup seal	135
A_Cylinder naked	9
A_Double end socket	200
A_Fulcrum pin	58
A_Hanger pin	25
A_O-ring	194
A_Plunger body brass	29
A_Plunger body plastic	178
A_PVC raising main pipe	108
A_Rod centraliser	500
A_Rod galvanized	213
A_Rod plunger stainless steel	9
A_Rod stainless steel	36
A_Solvent cement(100ml)	154
A_Solvent cement(200ml)	93
A_U-seal	1,368