

WAR ON LEAKS PROGRAMME

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BACKGROUND

- 🔥 High water losses due to internal plumbing leakages are found in historically disadvantaged areas
- 🔥 Much of this leakage finds its way into the sewers and may create overloading in the wastewater system
- 🔥 The problem is further exacerbated in areas that are not metered or billed at a fixed tariff, or where cost recovery is low

BACKGROUND

- 🔥 Typically, these losses vary between 250 and 550 liters per household per day.
- 🔥 Internal plumbing leakage occurs after the point of consumer connection (meter) and is therefore “consumption”
- 🔥 If the consumer is not taking responsibility for such losses, they fall to the municipality becoming a financially crippling factor

QUOTES TO THINK ABOUT

- 🔥 A tap drip or invisible water leak that totals only tablespoons a minute can amount to 68 liters per day or 24820 liters of wasted water over a year (American Water Works Association)
- 🔥 The trouble with water is that they are not making it anymore (Marq deVilliers)

WAR ON LEAKS CONCEPT

- 🔥 DWA appointed Rand Water as an Implementing Agent for the war on leaks programme in the following municipalities:
 - Ekurhuleni Metro; Randfontein local municipality; Mqohaka Local Municipality and City of Matlosana
- The War on Leaks is programme aimed at fixing leaks within domestic consumer households' environment

Strategic Approach

- 🔥 Employ local youth and empower them with plumbing skills.
- 🔥 Utilise the trained plumbers to fix the leaks within the targeted areas
- 🔥 Educate and empower the community through the interaction with youth from the same community

OBJECTIVES

- 🔥 Decrease water losses and improve the overall water use efficiencies within townships
- 🔥 Organize and provide training to the local labour . Create jobs for youth
- 🔥 Assist the municipality to develop tools for managing and monitoring water savings

WHAT HAS BEEN ACHIEVED TO DATE

- 🔥 To date about 6000 households in total have been retrofitted and 3 projects are ongoing
- 🔥 27 schools plumbing fixtures were fixed and retrofitted with smart devices for sustainability
- 🔥 113 people in total have been equipped with theoretical and on the job plumbing training.
- 🔥 Reduction in average consumption for household and schools

EXAMPLES OF LOGGING RESULTS

- 🔥 Pre- and post-intervention sewer logging

Date	P1	P3	P4	P5	P6	P7	Total outflow from Project area (Ward 83)
12-Jan-14	1 511	16	39	67	43	193	1 969
15-Jan-14	4 380	37	119	157	76	373	4 932
18-Jan-14	5 307	47	164	231	271	667	6 427
17-Jan-14	5 750	42	169	260	648	899	7 568
18-Jan-14	6 520	37	194	292	648	1 139	8 530
19-Jan-14	5 078	36	162	292	699	846	6 993
20-Jan-14	5 679	38	194	292	776	899	7 888
21-Jan-14	6 209	40	208	293	1 110	1 000	8 140
22-Jan-14	4 295	12	65	84	489	299	4 743
Total	43 857	305	1 347	1 818	4 652	6 424	44 181

* Total outflow from project area = (P1 + P3 + P4 + P5) + (P6 (1/3) + P7 (1/4))

** P6 & P7 are inflow into the project area at approximately one third & one quarter respectively.

Date	P1	P3	P4	P5	P6	P7	Total outflow from Project area (Ward 83)
11-Mar-14	2 440	16	39	154	43	193	2 985
12-Mar-14	5 015	37	119	262	76	373	5 534
13-Mar-14	5 002	47	154	260	271	667	5 200
14-Mar-14	4 918	42	168	253	548	699	4 987
15-Mar-14	4 998	37	194	276	648	1 139	5 007
16-Mar-14	5 348	36	182	256	699	846	5 350
17-Mar-14	5 233	38	194	256	776	899	5 241
18-Mar-14	5 296	40	208	228	1 110	1 000	5 144
22-Jan-14	2 499	12	65	89	489	299	2 441
Total	40 747	305	1 347	2 063	4 652	6 424	41 310

	Total outflow from Project area (Ward 83)
Pre-intervention Total Outflow	44 181
Post-intervention Total Outflow	41 315
Difference (M)	2 865

CHALLENGES

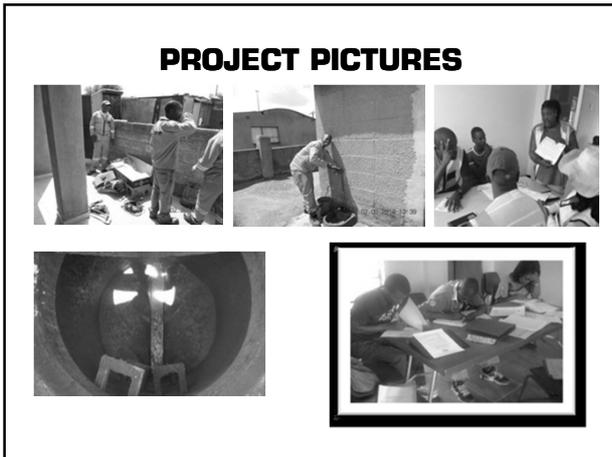
- 🔥 Vandalism even after extensive education
- 🔥 Resistance from communities especially after realizing they will have to pay for services after project completion
- 🔥 Availability of funds for the projects
- 🔥 Availability of meters on site

WAY FOWARD

- 🔥 Households consumer demand reduction is important and essential
- 🔥 Technology and innovation of water saving devices is essential for sustainability
- 🔥 War on leaks programme is therefore an essential contributor to water loss reduction
- 🔥 A holistic approach that requires funds and commitment from stakeholders

PROJECT PICTURES





- Thank You -