

Management Information System (MaJI's)



Eng. Mutaekulwa T.K Mutegeki

EWURA

Tanzania

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- Background
- Users of MaJI's
- Data Collection, Verification and Use
- Key Components of MaJI's
- Benefits
- Challenges
- Planned Improvements

Background..

- Compilation of data for performance monitoring was introduced by the Ministry of Water in 1994 after the establishment of three semi-autonomous water utilities (Tanga, Moshi and Arusha)
- Performance monitoring was pegged on tracking improvement on revenue collection and expenditure.

- **In 1997**
 - 19 fully autonomous water utilities were established
 - Intensification of performance monitoring by the Ministry of Water - 50 performance indicators
 - Data and indicators were reported in paper form

Background..

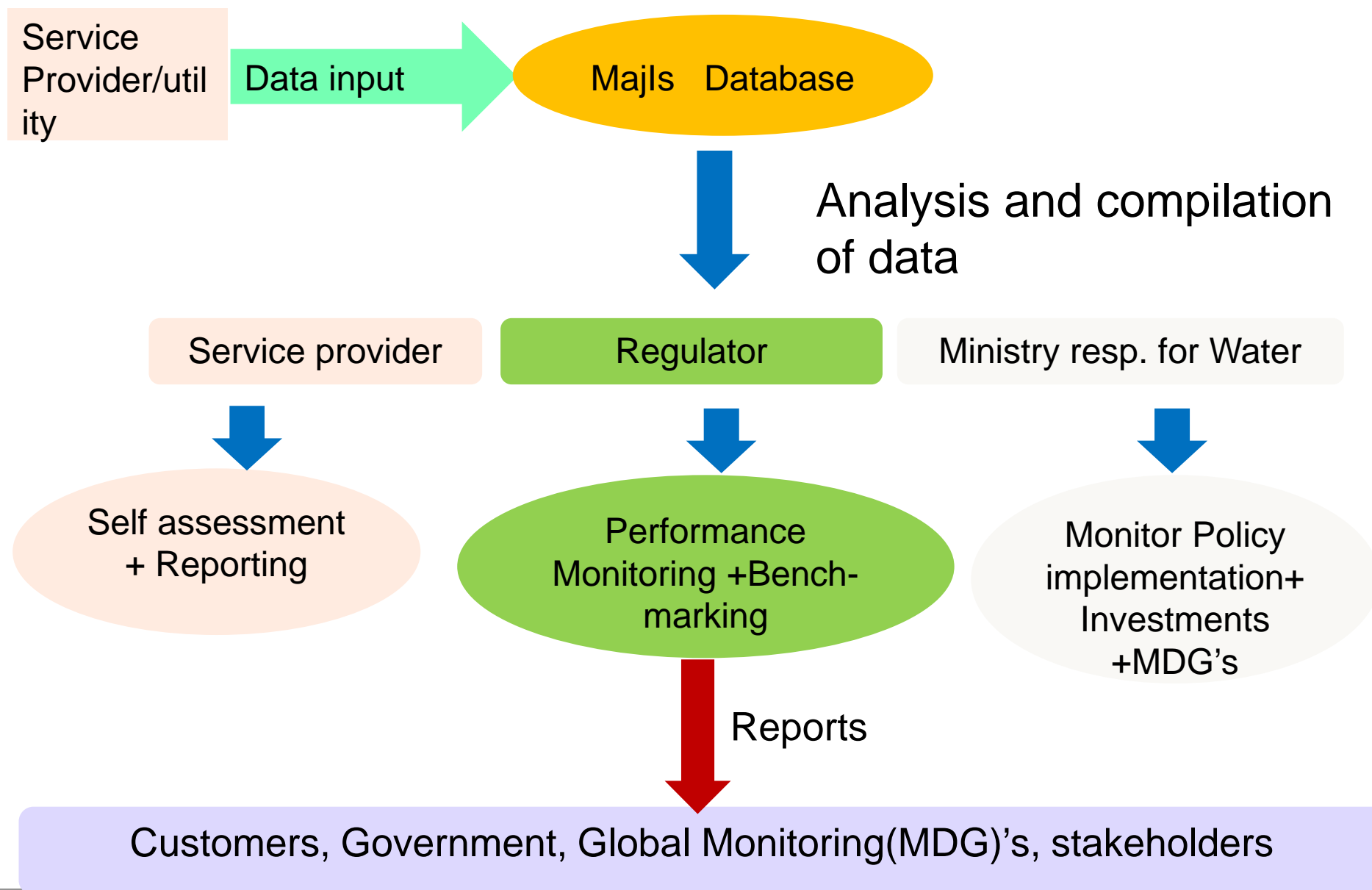
- Management Information system (Majl's) was launched in 2006;
 - Software based
 - Tailor made database developed locally on the basis of data and indicators which were reported in paper form.
 - For 19 regional water utilities, DAWASA and DAWASCO..

Background.

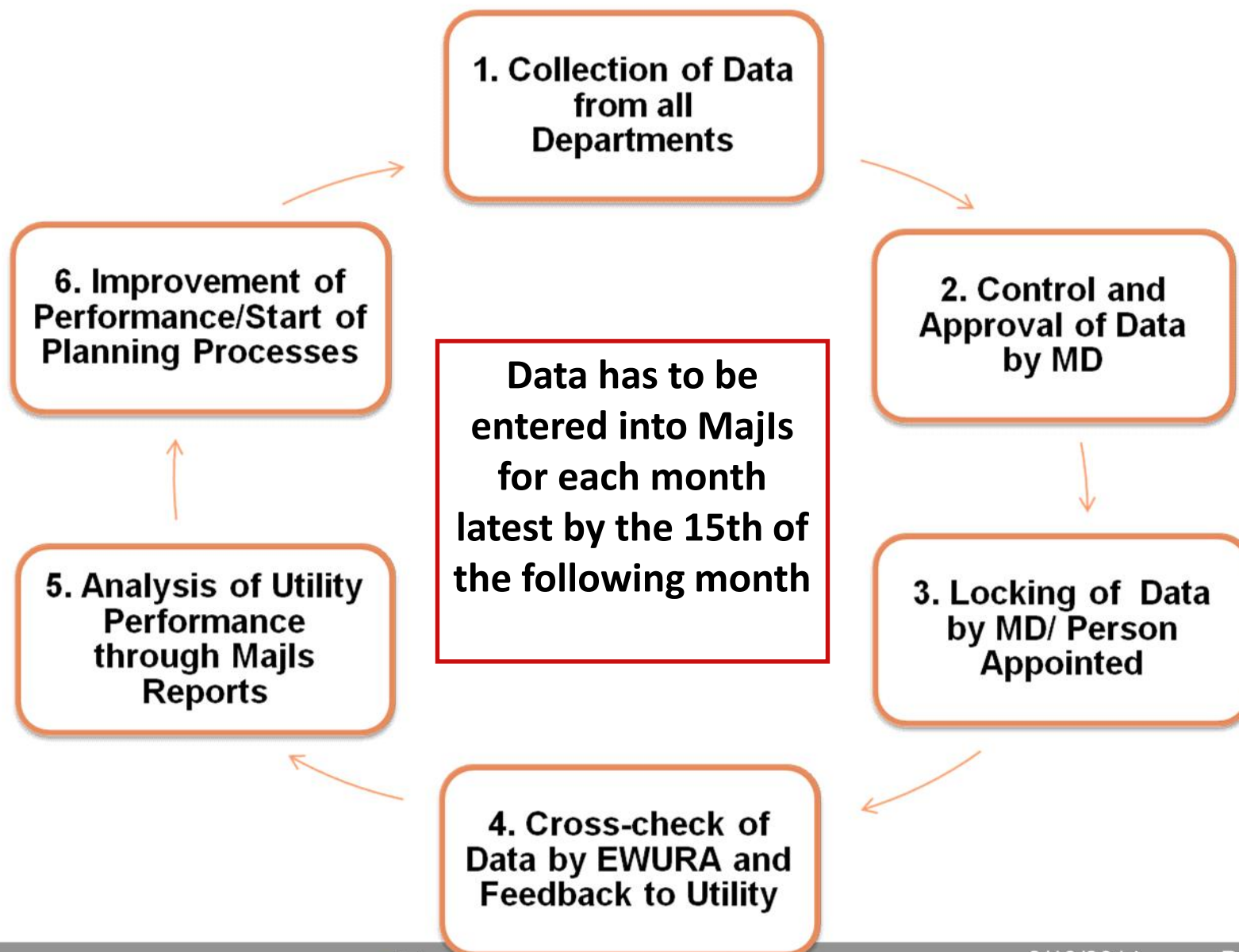
- In June, 2013, web-based MaJI's was launched by EWURA
 - Includes all water supply and sewerage authorities (130 utilities).
 - Revised indicators.

- EWURA
- Ministry of Water
- Regional Water Utilities
- DAWASA/DAWASCO
- Small, District Towns and National Projects
Water Utilities
- MaJI's is managed by EWURA

Users of MaJI's



Data Collection, Verification and Use



Key Components of MaJI's..

- **Data Comparison:** Data entry forms includes a comparison column showing the values of the previous record

http://196.41.43.90/FinOandM.aspx?m1=f&provider=SON1&yea Financial - O & M Expenses

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General Technical Commercial Personnel **Financial**

Income **O&M expenses** Financial Expenses Depreciation

Provider Name : Songea Year : 2013 Month : January **LOCKED**

O & M Expenses

O & M Expenses	Unit	January 2013	August 2011
Water Production Expenses			
Electricity for Water Production	Tshs	12,000,000	208,029
Chemicals	Tshs	13,703,440	0
Fuel & Lubricants (Generator)	Tshs	0	1,937,500
Water User Fee	Tshs	0	0
Laboratory	Tshs	0	0
Water Source Upkeep	Tshs	135,000	
Other Water Production Expenses	Tshs	1,384,000	2,475,700
Total Water Production Expenses	Tshs	27,222,440	4,621,229
Water Distribution Expenses			
Electricity for Water Distribution	Tshs	0	0
Fuel & Lubricants (Generator)	Tshs	0	101,500
Pipe lines	Tshs	0	888,000
Water Meter Installation	Tshs	1,915,600	8,468,907
Other Water Distribution Expenses	Tshs	2,827,000	135,000
Total Distribution Expenses	Tshs	4,742,600	9,593,407
Sewerage Disposal and Sanitation Expenses			
reatment	Tshs	0	0

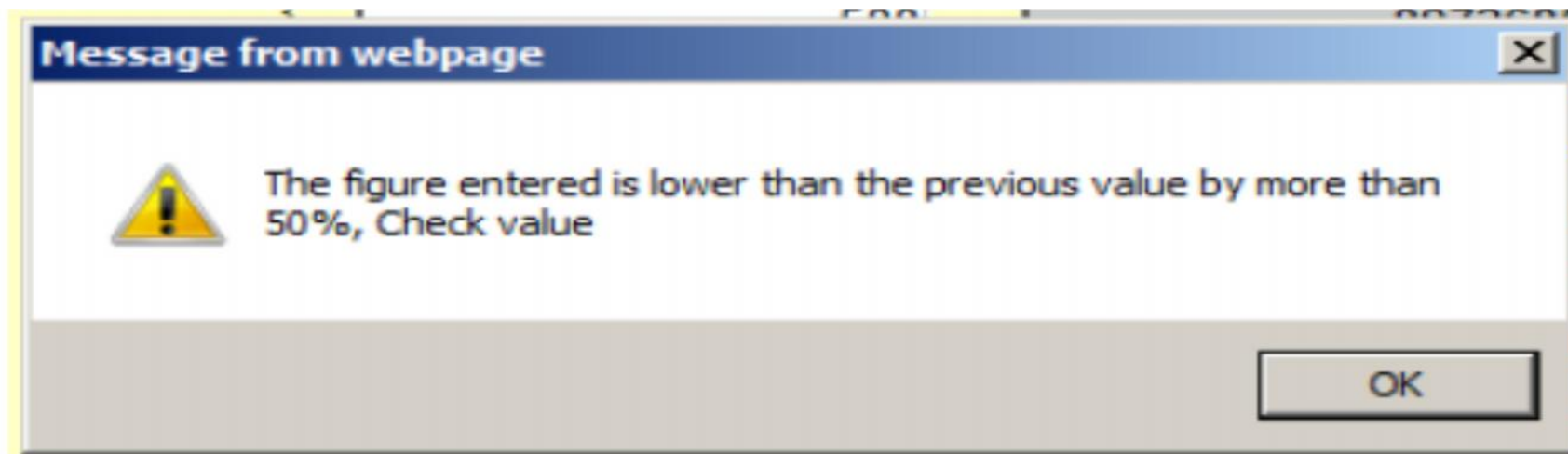
Print

Key Components of MaJI's...

Data Validation

§ Any figure entered in entry sheets that contain a comparison column will be compared with the previously reported figure

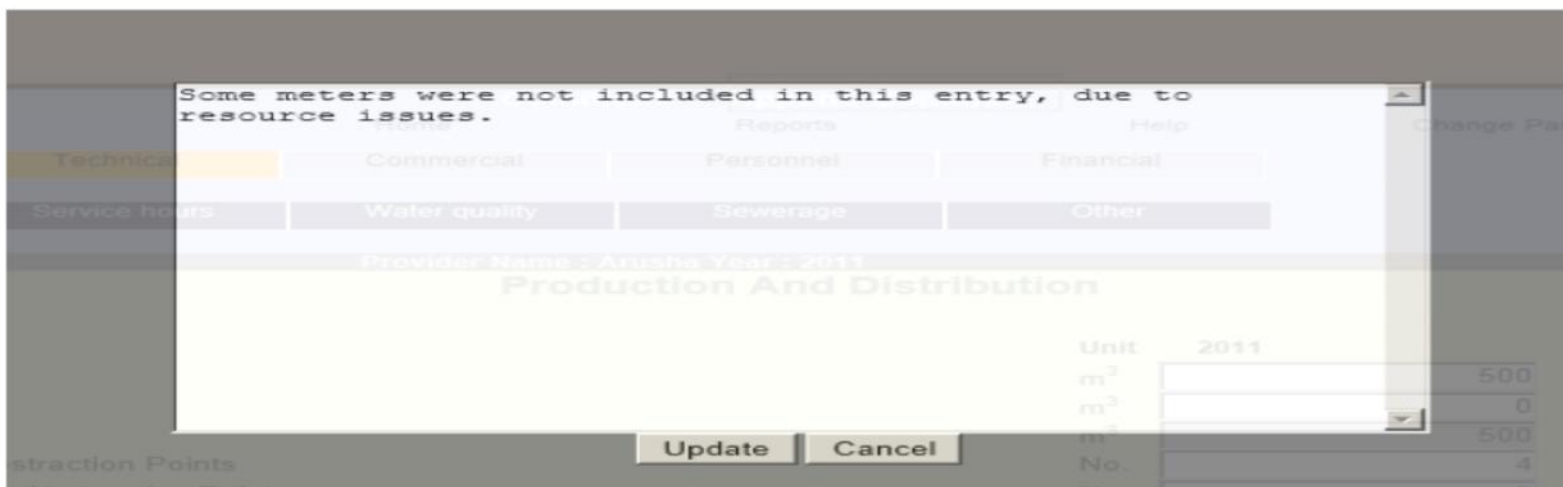
§ Deviations of more than +100% or -50% will require the user to confirm the correctness of the entered information.



Key Components of MaJI's..

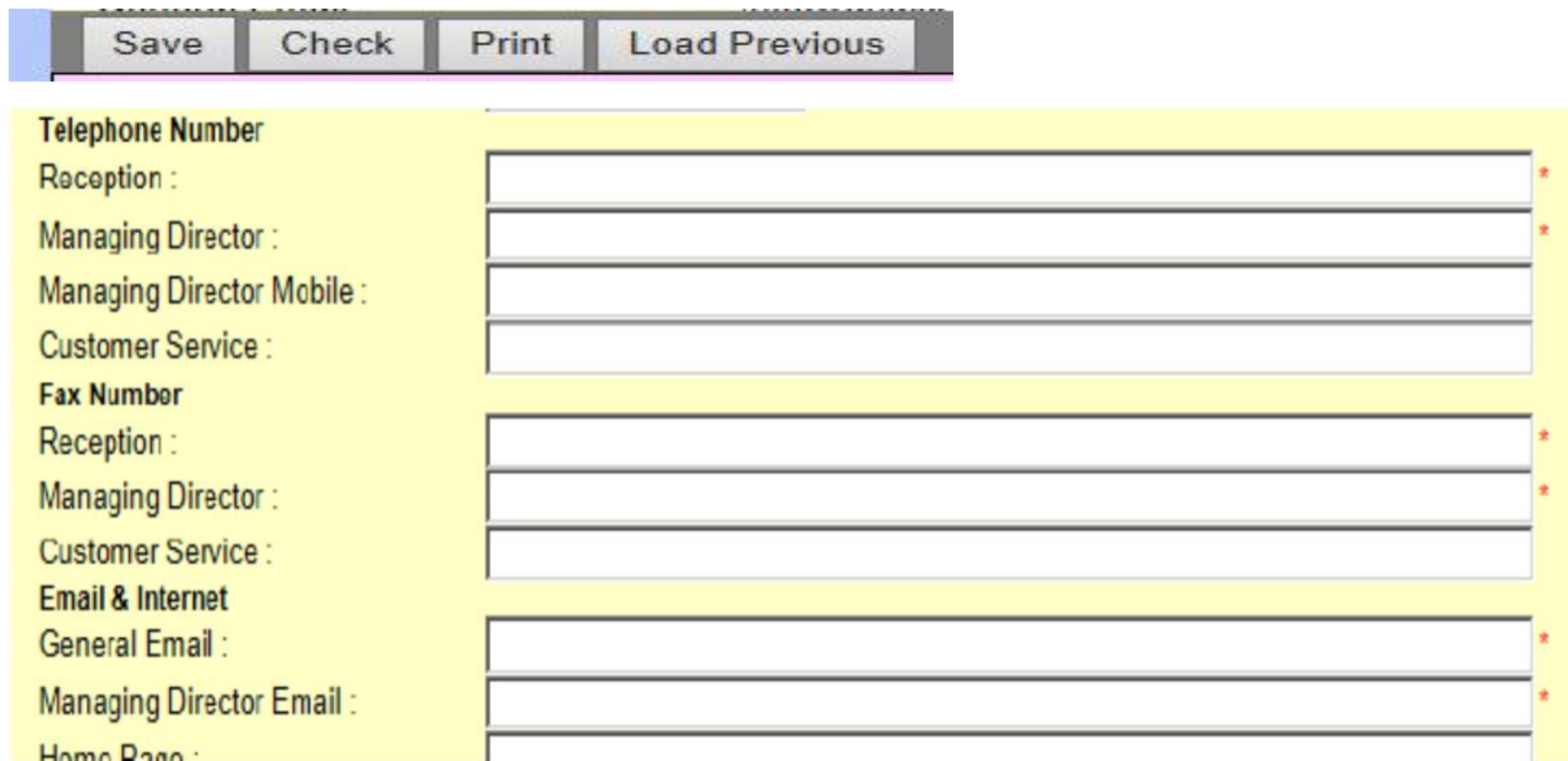
Comment Function

- The comment allows users to view and comment on the monthly record.



Mandatory data field

- Some of the data entry fields have been defined as mandatory data fields. A record can only be locked and sent to EWURA, if least all mandatory fields have been filled in.



The screenshot shows a web-based data entry form. At the top, there is a navigation bar with four buttons: "Save", "Check", "Print", and "Load Previous". Below this, the form is divided into several sections, each with a yellow background. The sections are: "Telephone Number", "Fax Number", and "Email & Internet". Each section contains three input fields: "Reception :", "Managing Director :", and "Customer Service :". The "Reception :" and "Managing Director :" fields are marked with a red asterisk (*) on the right side, indicating they are mandatory. The "Customer Service :" field is not marked with an asterisk. The "Email & Internet" section contains two input fields: "General Email :" and "Managing Director Email :", both of which are marked with a red asterisk (*) on the right side. The "Home Page :" field is not marked with an asterisk.

Key Components of MaJI's...

- **Identification of data inaccuracies** by analyzing trends and provide early feedback

Key Indicators Report

Provider: Tabora
Reporting Period: June - 2011 And June - 2012
Record Type: Monthly Record

Indicators	Unit	June - 2011	June - 2012	Abs.Diff	Diff (%)	Category
Population with direct access to domestic connections or kiosks (%)	%	75.40	86.40	11.00	14.59	Commercial
Population with direct access to domestic connections (%)	%	58.80	71.60	12.80	21.77	Commercial
Population with access to kiosks	%	16.60	14.80	-1.80	-10.84	Commercial
Population living in area with network	%	86.50	86.50	0.00	0.00	Commercial
Sewerage coverage	%	1.50	4.20	2.70	180.00	Commercial
Non revenue water (NRW)	%	25.70	28.90	3.20	12.45	Commercial
Commercial losses	%	5.70	8.90	3.20	56.14	Commercial
Metering ratio	%	81.30	80.90	-0.40	-0.49	Commercial
Collection efficiency	%	79.30	153.50	74.20	93.57	Commercial
Disconnection	%	26.90	48.70	21.80	81.04	Commercial

Key Components of MaJI's...

- Easy to make **comparative analysis** and benchmarking of different Utilities

Comparison report

Reporting period	January-2008							
Record type	Monthly record							
Provider Name	Technical water losses per km of mains per month (m3)	Average service hours (Hrs)	Water losses per active connection per month (m3)	Connections per km of network (No.)	Energy consumption per m3 distributed (kWh/m3)	Drinking water quality – Residual chlorine (%)	Leaks per 100 km of mains per month (No.)	Percentage connection with 24 hrs supply (%)
Mukoba	1,175	22	26	68	0.54	78.6	31	
Mudoma	422	24	10	76	1.24	100.0	74	1
Muinga	667	23	18	65	0.64	100.0	233	
Mwigoma								
Mibeya	559	22	15	60	0.42	100.0	0	
Mtorogoro	912,348	21	13	112,634	0.41	100.0	160,976	
Moshi	384	23	16	54	0.10	93.3	147	
Mtwara	157	8	7	33	0.96	100.0	3	
Musoma	766	20	23	62	0.61	100.0	11	
Mtwanza	825	22	24	75	0.49	88.6	17	
Mhinyanga	416	12	5	37	0.49	100.0	0	
Mingida	308	5	20	47	0.58	100.0	77	
Mlongea	62	24	15	98	0.00	92.0	2	1
Mumbawanga	431	21	13	45	0.00	87.5	101	
Mabara	354	20	15	41	0.53	100.0	13	
Manga	315	24	13	40	0.23	78.0	4	1

Key Components of MaJI's.

Table 7.1: Report types and content

Report name	Available for	Content records	Content indicators/ data	Content providers
Key indicators report	Provider, MoW, EWURA	Monthly OR annual	User defined selection of indicators	single provider
Secondary indicators report	Provider, MoW, EWURA	Monthly OR annual	User defined selection of indicators	single provider
Accumulated indicators report	Provider, MoW, EWURA	Monthly OR annual	Pre-selected indicators and data	single provider
Progress report	Provider, MoW, EWURA	Monthly OR annual	Indicators and data	single provider
Monthly vs. annual records	Provider, MoW, EWURA	Monthly AND annual	Pre-selected data	single provider
Single indicator report	MoW, EWURA	Monthly OR annual	1 indicator or data	several providers
Comparison report	MoW, EWURA	Monthly OR annual	Indicators and data	several providers
National/ category report	MoW, EWURA	Annual (1 year only)	Pre-selected indicators and data	All providers OR all providers of one category
Report follow-up	MoW, EWURA	Monthly OR annual	/	several providers

Benefits of MaJI's..

- The proper use of MAJIS allows utilities to get away with persisting problems in:
 - *Delays in submission of reports*
 - *Minimize calculation errors for indicators*
 - *Data inconsistency*
- Main input for the preparation of Water Utilities Performance benchmarking reports which are available at www.ewura.go.tz

Benefits of MaJI's

- Facilitates the utility's internal monitoring and planning processes.
- Computation and analysis of requested tariff increases.
- To track the attainment of performance targets
- To make realistic projections e.g. for project proposal and loan applications

Delays have been encountered in the submission of reports mainly due to:

- Lack of dedication by CEO's
- Frequent change of staff knowledgeable with Majls.
- In some utilities, IT staff are the ones responsible for data entry and verification.
- Frequent fallout of internet availability at the Utilities.

Planned Improvements - MaJI's

- To provide an additional field for all raw data entry sheets on which service providers will be indicating their data quality in terms of accuracy and reliability. The combined effect of data accuracy and reliability will give the confidence grading of that particular data.
- EWURA is working on a possibility for the public to access selected data of water utilities by logging into MaJI's website.
www.majis.ewura.go.tz