



WATER SYSTEM MANAGEMENT
IN GUINEA-BISSAU

BAFATÁ CASE STUDY

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GUINEA BISSAU

GUINEA-BISSAU

West Africa

- 36.125 km² of area;
- GDP of \$641 *per capita* (World Bank 2016);
- 177^o place in HDI (UNDP, 2018).



SOCIAL CONTEXT

- 1.845.698 inhabitants (World Bank, 2016)
- Average Life Expectancy of 55 years (UNDP 2016)
- Portuguese as official language, but creolo is most commonly spoken;
- More than 11 ethnic groups, but around 75% are Foola, Balanta, Mandinga and Papel;
- Religions – Islam (≈40%), Cristianism (≈22%), Animist (≈ 15%), Others (≈ 18%).



Ethnicity *Papel*

Ethnicity *Balanta*

Ethnicity *Mndinga*

Ethnicity *Fula*

5 CENTURIES OF COLONIZATION

1446 – Discovery of Guinean Islands and rivers by the Portuguese;
1588 – Occupation (Cape Vert and Guinea-Bissau under the same administration);
1878 – Administrative separation of Cape Vert and Guinea Bissau and constitution of the Portuguese Guinea.

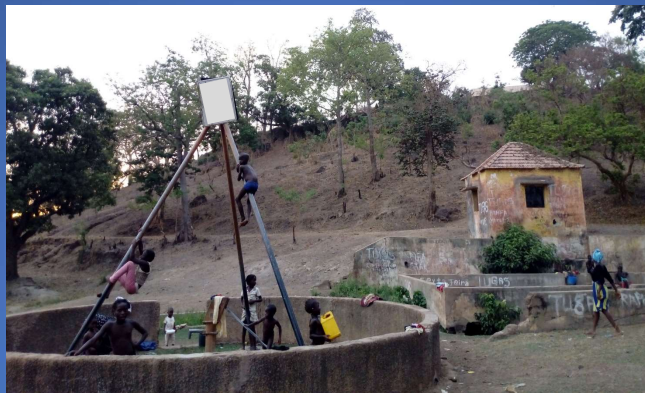
INDEPENDENCY

1974 – First Independent Portuguese Colony.
1980 – First **coup d’etat**.
1990 – First steps towards democracy.
1998 – 1999 – Civil War.
2000 – Elections.
2003 – **Coup e’etat**.
2004 – Elections.
2005 – New President.
2009 – The President is murdered. New President.
2010 – Militar conflinct.
2011 – Attempt of **coup d’etat**.
2012 – Military **Coups D’Etat**. New presidente.
2014 – Elections.
2015 – Government fired. New Prime Minister.
2016 – 2017 – 4 Governments.



POLITICAL CONTEXT

THE WATER SECTOR in Guinea Bissau



WEAK LEGAL FRAMEWORK

Regulations → PENDING

WATER CODE

Law - Decret No. 5-A/92



Plan for Water and Sanitation

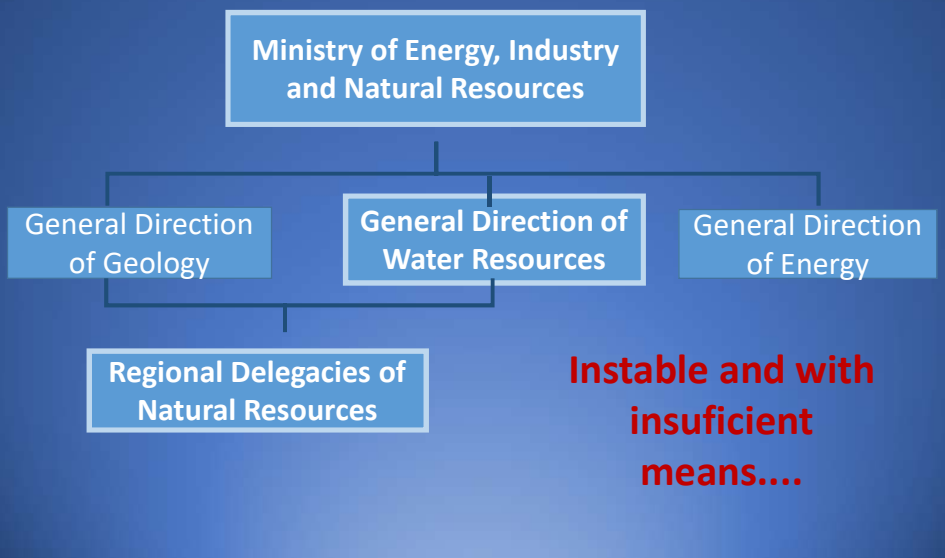
- Period of 1997- 2006 (1991, revised in 1997)
- Period of 2010-2020 (2011) – includes the “Action Plan for the SDG”, the “Strategic Politic for Hygiene and Sanitation” and the “National Politique for Water” – **never got approved;**

Norm for Human Consumption Water Quality (2008) – **Never got implemented;**

Norm for Concession Contracts (2017) – **Waiting for approval;**

National Fund for Water (2017) – **Waiting for approval.**

Water Resources Institutional Framework.....currently



WATER SUPPLY

EAGB - Energy and Water of Guinea Bissau
(national public company, however only operating in Bissau)

With a poor Water Governance.....



SOCIETY takes action!



WATER SUPPLY in Bafatá



CONTEXT BEFORE 2010

More than 80 % of population without access to safe water

More than 85 % of population without access to basic sanitation



Big Incidence of
Waterborne diseases
Obstacles to social and
economical



RESPONSE FROM SOCIETY

ASPAAB

Association for Basic Sanitation, Water and Environment
Protection of Bafatá



- Created in 2005 on the following of a project created to dinamize the cleaning and maintenace of good sanitary conditions in Bafatá, so the activities could continue after the project end;
- Non governmental, no party, no religion, no ethnicity;
- Composed by studentes, teachers and technicians of several areas, with the motivation and energy to make their city better!

BAFATÁ WATER SUPPLY SYSTEM (WSS)

Characterization done in 2009 by TESE

Sub-system	Origin Year	Source		Reservoir	Observations
		Springs	Boreholes		
Central (Boma and Praça)	1959	2 (Boma and Tricilim)	1	Elevated – 72 m ³ Ground level – 102 m ³ (Boma)	One spring and borehole not working Ground level reservoir not working, that supplies Praça.
Ponte Nova	1994	-	1	Ground Level – 50 m ³ (Palhota)	Badly managed (by local committee); Unneficient supply
Bairro 4	1994	-	1	Elevated – 23 m ³	Borehole supply not working due to electrical pump problems. Supplied by central system (Boma)

- Managed by ASPAAB, except for Ponte Nova Sub-system;
- The sub-systems have fountains and household conections;
- Sales of water on fountain done by volume (2,5€/m³);
- Sales of water through household connection done by volume (0,9€/m³), plus a fee for the water meter (1,45€/month), or a monthly fee of 5,35 €/10,7€, depending on the number of people in the household.

BAFATÁ WATER SUPPLY SYSTEM (2)



Elevated Reservoir of Bairro 4



Elevated Reservoir of Boma and ground level reservoir of Praça



Boma Spring

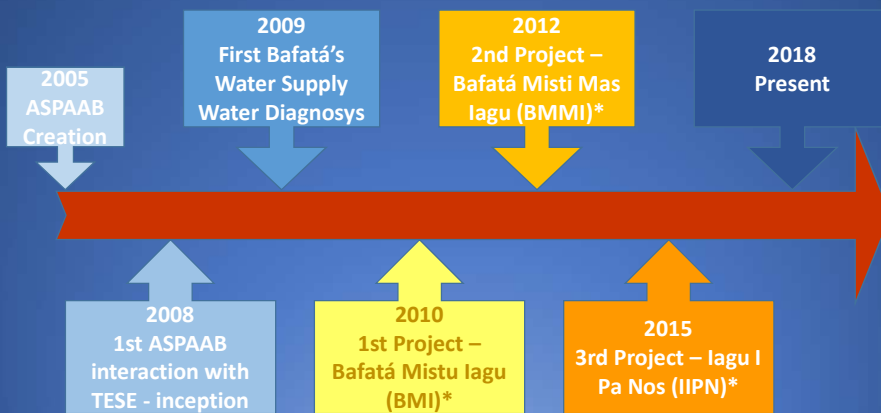


Fountain of Ponte Nova

COOPERATION FOR DEVELOPMENT in Bafatá Water Supply



DEVELOPMENT WITH A MEDIUM TERM PUSH OF COOPERATION



* Financed by European Union and Portuguese Cooperation



BAFATÁ WSS INFRASTRUCTURES INTERVENTIONS

BMI

- General rehabilitation in ruptures and water meters instalation;
- Rehabilitation and solar panels instalation for water puming in Bairro 4
- Boma spring rehabilitation (including the pumping system)
- 10 fountains rehabilitation;
- 3 new fountains constuction;
- Manual pump instalation in Tricilim.

BMMI

- Ponte Nova borehole rehabilitation (new) and solar pump instalation;
- Praça borehole rehabilitation and instalation of solar pump;
- Boma and Palhota reservoirs rehabilitation;
- General rehabilitation in network, and water meters instalation;
- Optimization of water supply in Boma reservoir;
- 2 New fountains;
- Rehabilitation of 9 fountains.

IIPN

- Reinforcement of the water supply in Boma Reservoir;
- Connection between Praça and Ponte Nova Sub-systems – optimization of supply;
- Household connections kits acquisition;
- Instalation of chlorine injector in all sub-systems
- General rehabilitation and optimization in the network.

BAFATÁ WSS INFRASTRUCTURES INTERVENTIONS



Elevation of Palhota Reservoir



Bairro 4 Borehole Solar Panels



Water meter in Ponte Nova Borehole



Rehabilitation of Boma Spring



New fountain

BAFATÁ WSS MANAGEMENT INTERVENTION

BMI

- Social-Economic characterization study in Bafatá (Demand, WTP, etc);
- Community sensibilization (ASPAAB)
- Development of an improved Water Supply Management Manual (WSMM;)
- Capacitation on the job of ASPAAB for the implementation of the Manual Procedures;
- Training of ASPAAB in several tematics pertinent to WSS management.

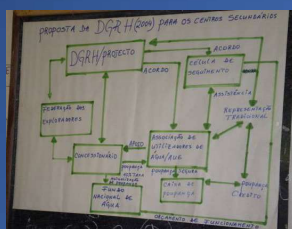
BMMI

- Development of a *Plan of Strategic Investment for Water Supply to Human Consumption in Bafatá*;
- Continuation of ASPAAB capacitation with relevant trainig for WSS management;
- Continuation of population sensibilizatio (ASPAAB)
- Review of ASPAAB status as an association, and regulations, approved in assembly;
- Aquisiton of WSS management software.

IIPN

- Review of the MMWS procedures;
- Continuation of ASPAAB capacitation with relevant trainig for WSS management;
- Development of a Quality Management Control Plan (in progress).

BAFATÁ WSS MANAGEMENT INTERVENTION



Bafatá WSS Management Model analysis



Certificated training



Water Quality training



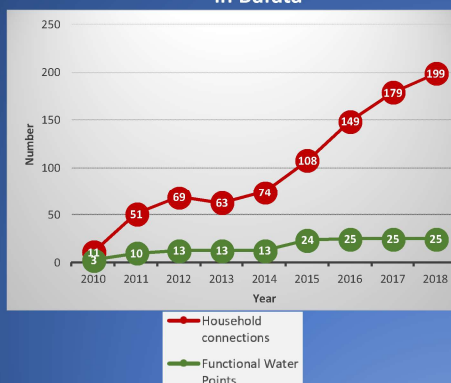
Sensibilization campaign



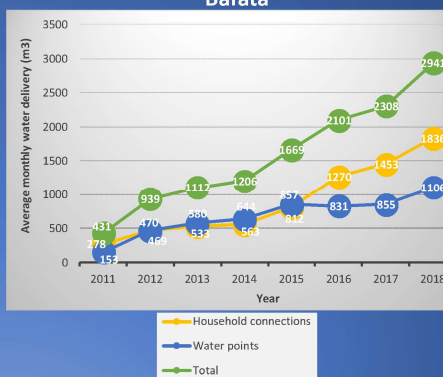
Social economic study - Questionaires

EVOLUTION IN THE WATER SUPPLY

Water Supply Infrastructures
in Bafatá



Average monthly delivery in
Bafatá



- Number of fountains increased around 8 times and the water delivery form those increased 720%;
- Number of household connections increased around 18 times and the water delivery form those increased 660%;

Final considerations

- With medium term cooperation support, the results are very positive with ASPAAB and their work on Bafatá WSS Management;
- Importance of having a good data base of all the information gathered and activities executed, specially important that ASPAAB has it in their hands;
- ASPAAB became a reference in Guinea Bissau as a Water Suply Management Association. ASPAAB also became a reference in Guinea Bissau on what comes to participative work with comunity, for sensibilization, usually for WASH topics (handwashing, CLTS, etc);
- The fact of being an association composed by young people, with education, without political, religious or traditional power connections, might have a part in the positive results;
- The Strategic Investment Plan is a very usefull tool for ASPAAB, as guideline on the best interventions to improve Bafatá WSS. Important that the SIP is suitable and according to the local reality and means;
- Currently ASPAAB is quite solicited to provide technical training, promote associativism for infrastrutures management or comunity participative sensibilization. Too much demand as other services providers might interfere with their responsibility on Bafatá's WSS management.

FUTURE

Will **ASPAAB** be able of, by itself, without more cooperation investment, maintain or even improve the services of water supply on Bafatá?

