

THE GEORGE WASHINGTON UNIVERSITY
SCHOOL OF BUSINESS
CENTER FOR LATIN AMERICAN ISSUES
THE INSTITUTE OF BRAZILIAN ISSUES

Case study of the “Water for All Program”: A public policy aiming to give freedom to the poorest

Altamir Santos Filho¹

Paper presented as a partial fulfillment of the requirements for the conclusion of “The Theory and Operation of a Modern National Economy” course, held in the framework of the Minerva Program – Spring Class

Paper direct by
Steve Suranovic, PhD

April 22, 2014
Washington, DC

¹ The author holds the post of specialist in public policy and government management in the Brazilian Federal Public Administration and performs his tasks in the Secretariat of Regional Development of the Ministry of National Integration, based in Brasília.

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ABSTRACT

This research paper presents a case study of the public policy “National Program to Promote Universal Access and Use of Water” - Water for All Program carried out by the Ministry of National Integration in Brazil. The Water for All is part of the Brazil Without Misery Plan and comprises a set of actions seeking to broaden access and use of water for human consumption, agricultural production and animal consumption, in rural areas. Its overall goal, until the end of 2014, is to deliver 750,000 cisterns and other equipment for water supply to extreme poor people in rural areas. The Program is funded by the Brazilian Federal Government and has a budget of about R\$5,2 billion. Its main geographic target is the Brazilian Northeast Semiarid, a region that suffers severe drought seasons most of the year. The paper is organized in introduction, three sections and conclusion. Introduction discusses poverty as an economic issue and presents some aspect of the Brazilian poverty problem. Section 1 briefly contextualize the Water for All Program. It presents a bird’s-eye view of the semiarid region in Northeast Brazil, a discussion on poverty line setting up and introduces the main mandates of the Ministry of National Integration. Section 2 concerns directly the Water for All configuration and how it works. In order, Section 3 depicts some official reviews done by control agencies, namely the Office of the Comptroller General (CGU) and the Federal Court of Accounts (TCU). Lastly, it is clarified the paper limitations, as well as, offered suggestions for future researches, empirical, mainly, that could bring more data and uptake to the subject. It is also addressed some issues and challenges the Program has faced.

Keywords: Brazil, cistern, poverty, public policy, rural, semiarid, water.

ACKNOWLEDGMENTS AND DEDICATION

Making success in Brazil is personal offense

Tom Jobim – Brazilian musician

The Minerva Program, a study program, not other sort of program, was a remarkable experience, academically, professionally and personally.

However, perhaps the combination between the Brazilian way of behaving ("jeitinho"), teenage cliques included, and the American merit-based approach may have failed to provide good or fair results. There will always be contamination coming from the first.

Overall, it was a learning experience for life.

Very fortunately there are many people who I must thank.

To the Brazilian Federal Government, through the Ministry of National Integration, particularly the Executive Secretariat and the Department of Human Resources. The Ministry strategic staff members understood the proposal of the Minerva Program and agreed, for the first time, to send one of its employee to attend the Program, endorsing a fair and transparent selection process.

To my colleagues in the Secretariat of Regional Development, explicitly to Walber Santana for his awesome imperturbability with me and to Miguel Ivan for backing me all the time.

To my colleagues in the Water for All Program team, in particular to Daniela Carvalho for her remarkable unwillingness cooperation with me, since ever.

A special thanks to Andrea Fernanda for her terrific support since the very beginning, for the mock interviews, for the miscellaneous of hard intelligence works and for the proofreading. Alex is included in this thanks.

To the Program supporters in Brazil, in particular to Fernanda Abubakir, and to Alexandre Barros.

To James Ferrer, Kevin Kellbach and Roy from the Institute of Brazilian Issues.

To Professor Steve Suranovic, my mentor in this paper.

To you Celina for your passionate friendship; for having understood me (a little, at least); for having defended me. What an amazing human being you are. It was a hard course, but without you it would be an impossible one.

To Erica for her passion for Belem, for the talks. To Joao for the ice skiing sessions that never happened. To Paula and Jose for the warm friendships; to Katia and Jorge. To you all for the pleasant meal times. To Marcello for the basketball court moments.

I planned to come here to accomplish objective and material goals. I leave with meaningful friendships for life. I shall understand and recognize this someday.

To Pipi.

I dedicate everything to my family.

I am convinced that we can accelerate progress in the fight against poverty and towards social equity, taking advantage of the knowledge that already exists in the world. Making this happen will not be easy, but Brazil is leading the way.²

Jim Yong Kim
World Bank President

² Taken from article published in Valor Econômico newspaper on March 24, 2014, p. A11.

INTRODUCTION

“WEALTHY AND POVERTY are the prime concerns of economics, but they are subjects too vast and vital to be left to economists alone.”

By this opening sentence, Gilder (1981) addresses not only the main concerns of economic studies, but also the main problems for human society since ever. The quest for a higher standard of living, whatever the meaning of this is, has always lead the human action to the edge of what to do, whether something had to be done, in order to deal with those too rich on one side, and those too poor on the other side.

This paper is about the outskirts side of Economics, namely, poverty. More precisely, a focused public policy to tackle one dimension of poverty, the deprivation of water supply in a rural semiarid region.

Although poverty is nothing new in general economics or in development economics specifically, mainstream economics (those in charge of macroeconomics policies) usually did not deal openly with the issue of poverty, much less with the extreme poverty³.

The elimination of poverty was taken for granted since the macroeconomic aggregates were growing toward its potential.

Poverty issues were left for any other government agency than those related with economic matters, primarily, for social assistance work.

This scenario suffered a radical change in 1998, when Amartya Sen was awarded the Nobel Prize in Economics Sciences for his works in welfare economics and choice theory.

In his economic view of welfare, he argues that the key for development is to entitle people of the basic conditions so as to enable them to seek for freedom and individual development by themselves. His main welfare economic thought could be summed up by the idea that we need to build up a country that works for everybody, not only for those who, by chance, were born in the “right” region, “right” city, “right” neighborhood, and thus had, from the very beginning, an extremely greater endowment of opportunity. The fate of someone cannot be defined in a deterministic way due to his or her place of birth.

³ Extreme poverty is the more commonly expression used by the World Bank, although we can see the same phenomena designed by some authors as ultra-poverty.

Since then, the branch of economic development in Economic Science has received significant intellectual and material contributions, such as research centers within universities, to study the question of poverty in different societies.

Authors more geared to the areas of business economics have already identified the economic potential of the poorest branches of the population. As an example, Prahalad (2010), with the book *The Fortune at the Bottom of the Pyramid* in which he tells how companies are doing many profitable businesses, to the extent that they meet the specific needs of income and consumption volume of that social segment.

Also, De Soto (2000) addresses the poverty economic issue arguing that, in reality, poor individuals may not be a problem for society, but indeed a solution.

Subsequently, when the poorest catch up with those who already have a good economic standard of living, the whole society shall gain.

More recently, economists, such as Abhijit Banerjee and Esther Duflo from Massachusetts Institute of Technology, are looking for a different approach, a more empirical method to study the impact of public policy experiences on poverty reduction.

Banerjee and Duflo's research shows that macroeconomic programs are insufficient to fight poverty. And keep waiting for poverty to end by its own is hopeless. Accordingly it is decisive to convey public policies focused on the poorest in order to give them opportunity in a way that they could free themselves from poverty. To challenge narrow problems with focused initiatives would be a more efficient way to solve the poverty as whole.

On the other hand, it is possible to identify authors such, as De Soto (2000), who essentially argues for macro changes to alleviate poverty, instead of piecemeal solutions⁴. Notably, De Soto touts for legal reforms to ensure an efficient system of property rights. In a capitalist structure the property right system would be the fundamental element for economic development.

The point is we are required to recognize that poverty is indeed an economic challenge which can also be addressed with specialized techniques and focused public policies.

⁴ De Soto (2000). Pg. 75.

The World Bank indicated that in 2010, 20.6% (1,215 billion people) of the world's population lived below the international poverty line (set at US\$1.25 a day in 2005 Purchasing Power Parity terms).

According to the same data, the World Bank estimates that in 2015 extreme global poverty will be lowered from 20.6% to 15.5%. But also draws attention to the fact that the Middle East and the North of Africa will fail to reduce their levels of poverty, actually, those levels will increase.

The following table details the percentage of the population in each region below the poverty line.

TABLE 1

Percentage of population below poverty line across regions

Region	1990	1993	1996	1999	2002	2005	2008	Estimate (2010)	Forecast (2015)
Poverty rate (percent of population)									
East Asia and Pacific	56.2	50.7	35.9	35.6	27.6	17.1	14.3	12.5	5.5
Europe and Central Asia	1.9	2.9	3.9	3.8	2.3	1.3	0.5	0.7	0.4
Latin America and the Caribbean	12.2	11.4	11.1	11.9	11.9	8.7	6.5	5.5	4.9
Middle East and North Africa	5.8	4.8	4.8	5.0	4.2	3.5	2.7	2.4	2.6
South Asia	53.8	51.7	48.6	45.1	44.3	39.4	36.0	31.0	23.2
Sub-Saharan Africa	56.5	59.4	58.1	57.9	55.7	52.3	49.2	48.5	42.3
Total	43.1	41.0	34.8	34.1	30.8	25.1	22.7	20.6	15.5

Source: World Bank (World Development Indicators: Poverty rates at international poverty lines Part 2)

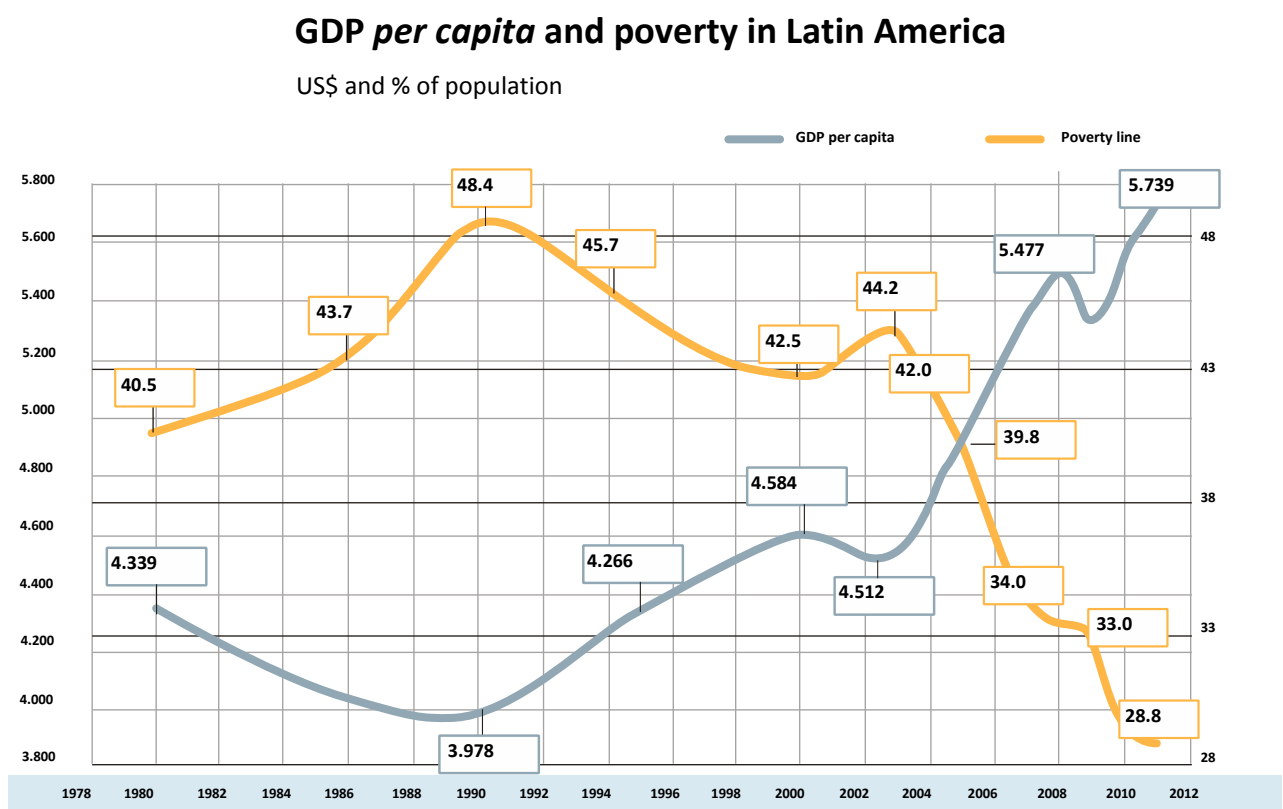
These numbers are a hint of how much prosperity could be added in the world whether governments succeed in implementing economic development public policies.

Latin America has been able to reduce the number of people in poverty situation, although at a slower pace than what society would expect. It is noticeable the advancement in this area from the 90s, by reason of, in large measure, by public policies denominated conditional cash transfers - CCT, or by policies of minimum income guarantee for survival.

World Bank Report⁵ has called this tendency CCT Wave: In 1997, there were three countries with expressive CCT programs. Then, in 2008, that number exceeded a dozen. Examples of these programs are Oportunidades (Mexico), Familias en Acción (Columbia), and Program of Advancement through Health and Education (Jamaica).

In the chart it is presented an overview of how Gross Domestic Product - GDP *per capita* and poverty (people living below poverty line) reduction have evolved in Latin America.

CHART 1



Source: ECLAC

Source: Valor Econômico newspaper. Issue of April 2, 2014, pg. A14.

In Brazil, in the last ten years, more than 20 million people left the poverty line because of public policies implemented by the Federal Government⁶.

⁵ Fiszbein, A., & Schady, N. (2009). *Conditional Cash transfers: Reducing present and future poverty. A WORLD BANK POLICY RESEARCH REPORT 47603*. Washington-DC: World Bank.

⁶ This figure comes from the number of beneficiaries of the Bolsa Família Program.

A significant contribution towards this reduction was given by the Bolsa Família Program⁷. Set up in 2004, Bolsa Família is the most important social program of the Brazilian Government and aims to guarantee a minimum income of survival for all families under the poverty line.

However, despite its social improvements, Brazil still regrets the existence of 16.27 million (8% of the population) people living in extreme poverty. Out of this total, 4.8 million have nominal monthly income equal to zero, and 11.3 million earn between R\$1,00 to R\$70,00⁸. The challenges for public policy in this field seem to be far from over.

Who and where are the extremely poor in Brazil? We display below, with data from 2011⁹.

TABLE 2

Extreme Poverty Profile in Brazil

Who they are	How Many
Individuals with income up to R\$70,00 Brazilian minimum wage (2011): R\$545,00 ¹⁰	16,267,197 out of a Brazilian population of 190,755,799 ¹¹ = 8.5% of the population
	Northeast: 9,609,803.....18.1%

⁷ Bolsa Família Program is a conditional cash transfer program, by which the government monthly transfers cash for families enrolled in the Single Register of Social Programs, subject to compliance by the families of actions relating to health, education and social assistance.

For a quick, but comprehensive understanding of the Bolsa Família Program: Brière, B. d. liter. Hobbs, J., Linder, A. & Lindert, K. (2007). The nuts and bolts of Brazil's Bolsa Família Program: Implementing Conditional Cash Transfers in a Decentralized Context. SP DISCUSSION PAPER. No. 0709. World Bank. Available in <http://siteresources.worldbank.org/SOCIALPROTECTION/Resources/SP-Discussion-papers/Safety-Nets-DP/0709.pdf>. Accessed on April 3, 2014.

⁸ <http://g1.globo.com/politica/noticia/2011/05/brasil-tem-1627-milhoes-de-pessoas-em-situacao-de-extrema-pobreza.html>. Accessed on April 10, 2014.

⁹ Data from Brazilian Institute of Geography and Statistics (IBGE), published on <http://www.estadao.com.br/noticias/nacional,brasil-tem-16-2-milhoes-em-situacao-de-pobreza-extrema-aponta-ibge,714242,0.htm>. Accessed on April 10, 2014.

¹⁰ Nowadays, the minimum wage is R\$724,00 (equivalent to US\$330,00 - nominal exchange rate of 2,19 BRL/USD, on April 11, 2014).

¹¹ Currently, Brazilian population is 202,410,175. IBGE webpage. Accessed on April 13, 2014.

<p style="text-align: center;">Where they are</p> <p>Urban area: 8,674,845 (5.4 % of the urban population) Rural Area: 7,593,352 (25.5% of the rural population)</p>	<p>Southeast : 2,725,532.....3.4% North: 2,658,452.....6.7% South: 715,961.....2.6% Midwest: 557.449.....4.0%</p>
<p style="text-align: center;">Age Range (years)</p> <p>0-4.....12% 5-14.....27.90% 15-17.....7.20% 18-19.....3.70% 20-39.....27.60% 40-59.....6.50%</p>	<p style="text-align: center;">Skin color</p> <p>Brown.....61.80% White.....26.10% Black.....9.00% Native.....2.00% Yellow.....1.10%</p>

Besides Bolsa Família, the Federal Government has developed others programs to jointly deal with poverty challenges and income inequality throughout the country.

Accordingly, it was in this context that the **Water for All Program** was designed.

With this perspective in mind this paper offers a case study of the Brazilian Federal public policy titled **National Program to Promote Universal Access and Use of Water - Water for All Program**.

Its overall goal is to deliver 750,000 cisterns and other equipment for water supply to extreme poor people in rural areas. The Program is funded by the Brazilian Federal Government and has a budget of about R\$5,2 billion.

The Water for All Program is a sectorial public policy carried out by the Ministry of National Integration, focused on the poorest people in the poorest rural region of the country, the Northeast Semiarid, an area that faces drought most of the year.

Coordinated by the Ministry of National Integration through the Secretariat of Regional Development, the Water for All Program is part of the Brazil without Misery Plan¹² in addition to the Acceleration Growth Plan, Phase 2 (PAC 2)¹³.

¹² Brazil without Misery Plan (Plano Brasil Sem Miséria) was released by Decree No. 7,492/2011. It aims to overcome extreme poverty by the end of 2014. Coordinated by the Ministry of Social Development and Fight Against Hunger (MDS- Ministério do Desenvolvimento Social e Combate à Fome), it is organized in three axes: Income security, with immediate

The Program ultimate goal is to provide cisterns and other water storage technologies, for both drinking purposes and for small irrigation systems, flourishing small scale food production.

Cisterns are receptacles to capture and store rainwater during drought.

Providing the most basic of inputs that a human being needs to survive, the Program intends to offer the poorest minimum initial conditions so they are able to leave the poverty trap, reaching a higher quality of life.

Poverty trap can be defined as a situation in which the individual can hardly overcome the poverty situation by his own action, because he or she does not have the tools, the power, or even the knowledge about his precarious standard of living, compared to others individuals. Such crossroad traps the individual in the poverty condition, in a way that he will probably never leave it, unless he receives some help from outside.

Banerjee and Duflo (2012) exemplify how a poverty trap works: “The inability of the poor to feed themselves properly is also one of the most frequently cited roots causes of a poverty trap. The intuition is powerful: The poor cannot afford to eat enough; this makes them less productive and keeps them poor.”¹⁴

In reality, The Abdul Latif Jameel Poverty Action Lab (J-PAL) at the Economics Department at the Massachusetts Institute of Technology, where Banerjee and Duflo perform their innovative experimental researches, is already carrying out a study, not yet completed, about the installation of cisterns in Northeast Brazil¹⁵.

Collier (2008) categorizes poverty traps, but in the perspective of countries.

According to his studies there may be: a) A conflict trap: political conflicts, costly and repetitive can trap the country in poverty; b) Natural resource trap: countries, regardless being poor or rich in natural resources may end up in a poverty

assistance to people living in extreme poverty; Access to public services such as education and; Productive inclusion, providing job opportunities and income generation. Its articulation involves 22 ministries, besides states and municipalities.

¹³ Acceleration Growth Plan (PAC) was launched by the Brazilian Federal Government on January 28, 2007. It comprised a set of economic policies, planned for a four years period, which intended to accelerate Brazil's economic growth, predicting investments of R\$503.9 billion until 2010, with a priority to infrastructure investment in areas such as sanitation, housing, transportation, energy and water resources, among many others.

In turn, PAC 2 (Acceleration Growth Plan, Phase 2) was launched on March 29, 2010 and provided funds of R\$1.59 trillion in several strategic sectors of the economy, such as transport, energy, culture, environment, health, social and housing. There are six segments in PAC 2 investments: Better City, Citizen Community, My House, My Life, Water and Light for All (expansion of the Light for All), Transport and Energy.

¹⁴ Banerjee and Duflo (2012). Pg. 20.

¹⁵ <http://www.povertyactionlab.org/evaluation/harvesting-rainfall-experimental-evidence-cistern-deployment-northeast-brazil>. Accessed on April 12, 2014.

trap; c) Bad neighbors trap: when the country is landlocked and its neighbors are poor, pretty much the country will find itself in a poverty trap; and d) Bad governance in a small country: while bad policies and bad governance need not to be a trap (societies can learn from failure), usually in many countries bad governance tends to lead the country to ruin, placing it in a poverty trap.

Bowles *et al.* (2001) follow the same line of poverty trap classification, by institutional environment and by neighborhood effects. But he adds a mathematical exposition of the critical thresholds, by which a person, or a country is unable to leave poverty while not achieving a minimum level of overall wealth or of human capital - depending on the setting.

The Water for All Program embraces the concept known as **coexistence with the Semi-arid region**, meaning that the best alternative for an endogenous development is to formulate and to execute public policies associated with the actors and characteristics of the region, as an alternative to simply promote emigration from Semi-arid region to urban centers. The coexistence with the semi-arid is a paradigm concept for Federal public policies.

Concerning the paper methodology, it was essentially based on bibliographically research in books, journal articles and in official reports, plus interviews with Brazilian Federal officials in charge of the Program.

The author has professional and personal reasons for choosing this issue to work on.

Firstly, he is a federal civil servant dealing with regional development programs in the Ministry of National Integration, based in Brasilia, and commonly has been in touch with the Water for All Program. Hence, a fully understanding of how the Program works would bring valuable improvements for his career and possibly for the policy arrangement.

Secondly, the author strongly believes that regional economic inequalities, converted into inequalities on the opportunities a person receive when he or she is born are still major problems in Brazil and these societal dysfunctions are hampering Brazilian pathway in catching up with developed countries. Therefore it is worthwhile to support a program which targets lowering such inequalities.

Additionally, it is certainly worth it the attempt to show in the English language what measures the Brazilian Federal Government have made to lessen the country`s regional inequalities.

The paper is organized in this introduction, three sections and in a conclusion.

Section 1 briefly contextualizes the Water for All Program. It presents a bird's eye view of the Semiarid region in Northeast Brazil, presents a discussion about poverty line setting up and introduces the main mandates of the Ministry of National Integration.

Section 2 concerns directly the Water for All structure and how it works.

Following, Section 3 depicts some official reviews done by control agencies, namely the Comptroller General (CGU) and the Federal Court of Accounts (TCU), including assessments by the Ministry of National Integration itself.

In the conclusion, we return to central ideas explained throughout the text, clarify the paper limitations and offer suggestions for future researches, empirical, mainly, that could bring more data and uptake to the subject. We also address some problems and challenges the Program has faced.

SECTION 1 - CONTEXTUALIZATION

1.1 THE BRAZILIAN POVERTY LINE

There is abundant discussion across countries, both in Academia as in official agencies, regarding which income threshold should be adopted to characterize a person as poor, i.e., what the poverty line is. This results from the fact that to set up a poverty line is neither an economic or political easy task.

Garroway & Laiglesia (2012) expose that a relative poverty line, rather than an absolute one, is more effective for understanding the problem. The authors propose a relative poverty line in the fixed proportion of the median selected metric welfare (income or consumer expenditure), particularly whenever this line is above an international absolute poverty line.

A pattern of absolute poverty line is the one embraced by the World Bank, the international poverty line, for which the threshold is US\$1.25 (by Purchasing Power Parity) a day.

For Brazil, as an example, Gentilini & Sumner (2012) calculated 11.87 million people living below international poverty line, in 2009¹⁶.

But soon came the challenge of conceptualizing poverty beyond the requirement of income or consumption levels. It needed to go further than these one-dimensional measures.

Then, to fulfill this gap, indexes with more holistic elements, such as living conditions and access to education and health care, were built up to depict a multidimensional poverty.

Professor James Foster from George Washington University created the Multidimensional Poverty Index (MPI) to complement measurements based solely on the level of individual income or wealth. The MPI has been adopted by various countries and institutions, such as The United Nation Development Programme. The MPI is structured around the Human Development Index, thus reflecting deprivation in health, education and standard of living, and it has the conceptual framework of capability approach developed by Amartya Sen.

¹⁶ Gentilini & Sumner (2012). Pg. 39.

Regarding Brazil, De Barros (2006) undertook a classic study on the multidimensional poverty in which he argues that even multidimensional synthetic indicators, such as the Human Poverty Index-HPI (later on replaced by the Multidimensional Poverty Index-MPI), would be unable to estimate the level of deprivation of each family; only average for a country, state, city or even neighborhood level could be calculated. Therefore, for Brazil an indicator of multidimensional poverty would be more effective if it had as its basis the National Sample Survey (PNAD)¹⁷.

The Brazilian Institute of Geography and Statistics (IBGE) takes into account the multidimensional approach to identify those living in poverty and in extreme poverty in Brazil. National Sample Survey (PNAD), for example, identify those with no bathroom in residence; without connection to sewage system or to septic tank; living in urban areas without connection to the public grid of water; in rural areas and not connected to the general network of water distribution and having no well or spring on the property.

Despite this discussion, when it comes to Brazilian Federal public policies, the problematic definition of poverty line was basically decided in a simple and direct way. Decree No 7,492/2011, which established the Brazil Without Misery Plan (Plano Brasil sem Miséria), defined, objectively, that families with monthly per capita income up to R\$70,00 are considered in extreme poverty.

And those who make up to R\$140,00 of *per capita* family income are considered to be in poverty situation.

1.2 THE SEMIARID REGION

The Semi-arid is a geographic division drawn by the Ministry of National Integration targeted as a parameter to focus its public policies.

The Semi-arid municipalities exhibit the following aspects:

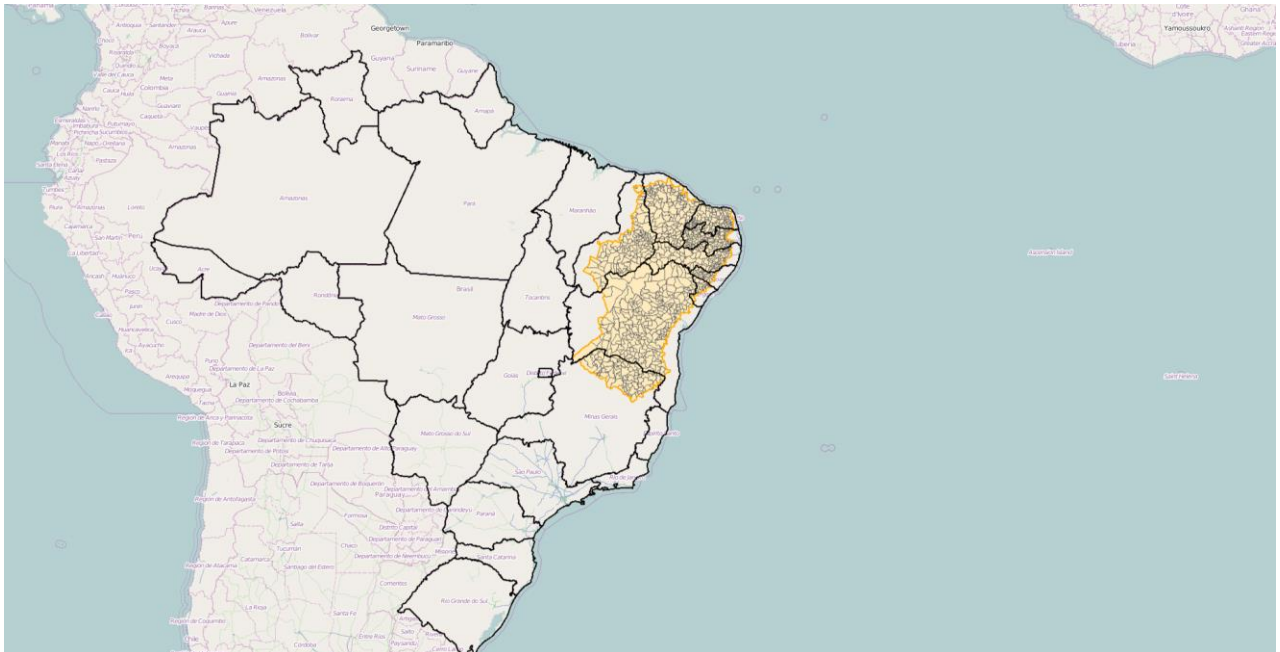
- a) Annual Average rainfall precipitation lower than 800 mm;

¹⁷ About a critique to multidimensional poverty index, the importance of defining a poverty line for public policies in Brazil and in the world, and the caloric poverty line, we refer the reader to: SOARES, S. S. D. (2009). *Metodologias para estabelecer a linha de pobreza: Objetivas, subjetivas, relativas, multidimensionais* (Texto para discussão No. 1381). Rio de Janeiro: Instituto de Pesquisa Econômica Aplicada.

- b) Aridity of up to 0.5, calculated by the water balance which relates the precipitation and the potential evapotranspiration in the period 1961-1990; and
- c) Drought risk greater than 60%, based on 1970-1990 period.

MAP 1

Brazilian Semiarid region (shaded area):



Source: Prepared by the author using the Monitoring for Regional Development website (Observatório do Desenvolvimento Regional) - <http://odr.integracao.gov.br/>¹⁸

The Brazilian semiarid region covers an area of 969,589.4 km² and comprises 1,137 municipalities spread over nine states: Alagoas, Bahia, Ceará, Minas Gerais, Paraíba, Pernambuco, Piauí, Rio Grande do Norte and Sergipe.

There are approximately 22 million people¹⁹ living in that area, which represents 10% of the Brazilian population, according to IBGE. It is the most populated semiarid area on the planet.

The semiarid region has most of its territory covered by Caatinga, a biome found exclusively in Brazil.

¹⁸ The Monitoring for Regional Development website is a database powered by geo-referencing tools, supported by the Secretariat of Regional Development of the Ministry of National Integration, with the purpose of providing manipulable multi-sources data, especially for researchers and professionals.

¹⁹ Data shown in this passage are from IBGE, taken from <http://odr.integracao.gov.br>

The main characteristic of the Brazilian semiarid region is the water deficit. Although it does not mean complete absence of water. Rather, it is the wettest semiarid region on the planet.

According to studies of the National Institute for Space Research (IMPE)²⁰ has shown that the semiarid Northeast is the Brazilian region with the lowest rainfall levels.

The average rainfall precipitation ranges from 200 mm to 800 mm *per* year, depending on the area. Though, the rains are irregular in time and space. Furthermore, the amount of rain is less than the rate of evaporation, which is 3000 mm per year, that is, the evaporation is three times higher than rainfall.

This means that families need to prepare for the raining season. Having tanks to capture and store water is critical to ensure water security in drought times. Some types of these water storage tanks are, plastic tanks, boardwalk cistern (cisterna “calçadão” in Portuguese), underground dams and stone tanks. These different types of tanks are called “social technology”²¹ to deal with the drought²².

In the following pictures we can see models of these water storage tanks:

²⁰ <http://www.inpe.br/ingles/>

²¹ Social technology has this name because the receiving family of the technology attend proper training to help in the construction of the equipment and of its maintenance.

²² For a brief background of public policies combating drought in Semiarid, since the Empire period, we refer the reader to page 101 of Finan & Nelson (2001).

PICTURE 1

Sorts of Water Storage Equipment in the Semi-arid

<p>Plastic tanks</p>	<p>Boardwalk cistern (Cisterna calçadão)</p>
 <p>Source: http://www.canabranews.com/2012/10/localidades-do-interior-sao.html. Accessed on April 2, 2014.</p>	 <p>Source://www.asabrazil.org.br/. Accessed on April 2, 2014.</p>
<p>Underground dams</p>	<p>Stone tanks</p>
 <p>Source: http://redeglobo.globo.com/globoecologia/noticia/2011/11/saiba-o-que-e-como-funciona-e-vantagens-da-barragem-subterranea.html. Accessed on April 2, 2014.</p>	 <p>Source://www.asabrazil.org.br/. Accessed on April 2, 2014.</p>

Moreover, the Semi-arid is marked by social inequalities.

The Ministry of National Integration reports that more than half (58%) of the poor population of the country lives in that region. Studies of the United Nations Fund

for Children (UNICEF) show that 67.4% of children and adolescents in Semiárid are affected by poverty²³. About 450,000 children study in schools deprived of piped water or proper toilet in the Brazilian semiárid²⁴. There are nearly nine million children and youngsters deprived of basic human and social rights, essential elements for a full development.

The Human Development Index (HDI) in the Semiárid is considered low in 82% of the municipalities since they have HDI up to 0.65.

Half of the Semiárid population, or more than ten million people, have no income or have government aids as their sole source of income. The majority who receive government aid are women.

The Gini coefficient, which measures the level of inequality from income, is above 0.60 for more than 32% of municipalities in the Semiárid, meaning a high concentration of income in the region. The closer to 1, the greater the inequality.

There are more than one million and seven hundred thousand agricultural establishments, 33% of the country. From those, 73% are owners who concentrate 93% of agricultural land.

Approximately 67% of rural households in the states comprising the Semiárid do not have access to universal water supply systems; 43% use wells or springs; and 24% use other forms of access to water, which includes long walks to search for water that sometimes are unsuitable for human consumption.

Semiárid is still a region heavily dependent on federal assistance, as an example there is the distribution of water with tanker trucks by the Brazilian Army.

The Semiárid population, due to their socio-economic specificities, is the target audience of the Water for All Program.

1.3 THE MINISTRY OF NATIONAL INTEGRATION

²³ <http://g1.globo.com/brasil/noticia/2011/02/brasil-tem-38-dos-adolescentes-vivendo-em-situacao-de-pobreza.html>. Accessed on April 10, 2014.

²⁴ <http://epoca.globo.com/tempo/noticia/2013/10/450-mil-criancas-do-semi-arido-estudam-sem-agua-alerta-unicef.html>. Accessed on April 10, 2014.

The Ministry of National Integration²⁵ incorporates the Federal Executive Branch Cabinet and its top-headed official, called Minister of State, has the constitutional mission to assist the President.

Law No. 10,683/2003 defines the Cabinet organizational structure, with its 39 ministries and 5 agencies with ministerial *status*.

The regimental structure of the Ministry of National Integration was established by Decree No. 8,161/2013.

Following, are presented the main bodies of the Ministry, with its responsibilities.

Ministry mission as a whole	To promote national integration, sustainable development and overcome regional inequalities in the country, ensuring social and economic inclusion, improving the quality of life, civil protection and water security for residents.
Secretariat of Regional Development	To raise the National Policy for Regional Development to the condition of state policy in a coordinated and articulated manner with the country development agenda.
Secretariat of Regional Funds and Tax incentives	To strengthen production chains and local clusters, linking them to structured investments in the regions of lesser economic and social dynamism.
National Secretariat of Protection and Civil Defense	To reduce vulnerability to disasters through prevention policies.
	To widen and to improve the responsiveness to disasters.
Secretariat of Hydric Infrastructure	To universalize the provision of water for various usages.
	To strengthen the program of revitalization of watersheds.
National Secretariat of Irrigation	To implement sustainable and innovative management models in the irrigated public areas
	To multiply the irrigated area in the country

²⁵ www.mi.gov.br

The Water for All Program is managed by the General Coordination of Programs and Special Projects in the Regional Development Program Management Department within the Secretariat of Regional Development.

The Ministry of Integration, as part of the so called direct administration, operates on the planning and formulation level of public policies. To implement the policies the Ministry counts with indirect entities. These entities are the Superintendence for the Amazonia Development - SUDAM (headquartered in Belém-PA); Superintendence for the Northeast Development - SUDENE (headquartered in the city of Recife-PE); Superintendence for the Midwest Development - SUDECO (headquartered in Brasília-DF); National Department of Works Against Drought - DNOCS (headquartered in Fortaleza-CE); and Development Company of the São Francisco and Parnaíba Rivers - Codevasf (headquartered in Brasília-DF).

DNOCS and Codevasf are linked to the Ministry of Integration authority and are more directly involved in the Water for All Program actions.

1.4 FEDERAL SINGLE REGISTRY FOR SOCIAL PROGRAMS (CadÚnico)

Knowing about the Single Registry for Social Programs is important because it is the system that contains the record of those who are attended by federal social programs.

The Single Registry is coordinated by the Ministry of Social Development and Fight Against Hunger (MDS) and it is used for selection of beneficiaries of all of the federal government social programs, primarily the Bolsa Família.

It is run by Caixa Econômica Federal, a state owned bank, with capillarity of agencies in all regions of the country, and is supplied with information by municipalities through the visit of social agents.

Although it was conceived as a tool for federal public policies, the Single Registry has increasingly been used by states and municipalities because of the volume of registered data along with its reliability.

Besides being a database with information (name, address, income, social data, etc.) of all federal social programs beneficiaries, the Single Registry is also a

management tool to control the conditionalities²⁶ imposed on each family within the Bolsa Família Program.

The table below presents the quantity of families enrolled in the Single Register.

TABLE 3

Quantity of families enrolled in the Federal Single Register (CadÚnico)

	Quantity	Reference Month
Registered families	27,294,078	01/2014
Registered families with <i>per capita</i> monthly income of up to half the minimum wage	24,340,226	01/2014
Registered families with <i>per capita</i> monthly income of up to R\$140,00 ²⁷	18,755,294	01/2014
Registered families with monthly <i>per capita</i> income between R\$70,01 and R\$140,00	5,395,751	01/2014
Registered families with <i>per capita</i> monthly income of up to R\$70,00 ²⁸	13,359,543	01/2014
Total individuals registered	85,230,127	01/2014
Individuals enrolled in households with <i>per capita</i> monthly income of up to half the minimum wage	80,082,893	01/2014
Individuals enrolled in households with <i>per capita</i> monthly income of up to R\$140,00	63,121,602	01/2014
Individuals enrolled in households with monthly <i>per capita</i> income between R\$70,01 and R\$140,00	19,242,171	01/2014
Individuals enrolled in households with <i>per capita</i> monthly income of up to R\$70,00	43,879,431	01/2014

Source: Report of Social Information. Ministry of Social Development and Fight Against Hunger <http://aplicacoes.mds.gov.br/sagi/Rlv3/geral/index.php>. Accessed on April 04, 2014.

²⁶ Conditionalities are the commitments made by the beneficiary families, such as, a) In health care: follow the vaccination card and growth of children and perform prenatal exams; b) In education: all children and adolescents between 6 and 15 years old must be properly enrolled in a school and maintain a monthly minimum attendance of 85% of the workload; and c) In the area of social care: children and adolescents up to 15 years old at risk or withdrawn from child labor should participate in the Living Services and Strengthening Linkages Program with minimum attendance of 85% of monthly workload.

²⁷ About US\$63.00. Nominal exchange rate of 2,19 BRL/USD, on April 11, 2014.

²⁸ About US\$31.00.

SECTION 2 – THE WATER FOR ALL PROGRAM

The National Program to Promote Universal Access and Use of Water - Water for All, like most public policies, was not born from scratch. It is, in fact, a public policy of incremental type, such as we grasp by the definition of Lindblom (1979).

The massive distribution of cisterns to households in the Semiárido by the Federal Government began in 2003 with the One Million Rural Cisterns Program (Programa Um Milhão de Cisternas Rurais - P1MC), led and supported by the Ministry of Social Development and Fight Against Hunger in collaboration with the Non-Governmental Organization Articulation for the Semiárido (Articulação para o Semiárido - ASA).

From its birth in 2003 until March 2014 P1MC has built 523. 654 cement board cisterns in the Semiárido²⁹.

The Water for All Program is a sectorial and cross-cutting public policy, managed by the Secretariat of Regional Development (SDR). The SDR coordinates several other governmental agencies such as the Ministry of Social Development and Fight Against Hunger, Ministry of Agrarian Development, Development Company of the São Francisco and Parnaíba Rivers (Codevasf), National Department of Works Against Droughts (DNOCS), Banco do Brasil Foundation and National Health Foundation.

The Water for All program has national coverage in order to meet the population group that is characterized by families enrolled in CadÚnico, with a per capita income of up to R\$140,00.

The program was formalized by Decree No 7,535/2011 and its major goal is to delivery 750,000 cistern until the end of 2014. Out of this 750,000, the Secretariat of Regional Development is in charge itself of delivering 300,000.

Using data from IBGE, the Secretariat of Regional Development states the following potential demand of rural households without access to water supply systems: **1,294,830 families in extreme poverty**; and **881,288 families living in**

²⁹ http://www.asabrasil.org.br/Portal/Informacoes.asp?COD_MENU=1558&WORDKEY=Resultados. Accessed on April 12, 2014.

poverty, which totals a potential demand of **2,176,118 households for the Program**³⁰.

Its resources come from the 2069 Program - Food and Nutrition Security - appearing in the Multiyear Plan; and from Budgetary Action 12QC - "Implementation of Construction and of Equipment for Water Supply - Plan Brazil without Poverty".

Since the Program was launched it reached 2.5 million people through the installation of different technologies to water access: 497,000 cisterns, 399 collective supply systems, 181 wells, 1,387 irrigation kits, and 478 pits ("barreiros" in Portuguese).³¹

The Water for All join in the Brazil Without Misery Plan and is comprised of a set of actions seeking to broaden access and use of water for human consumption, agricultural production and animal consumption, in rural areas.

The Program qualitative goal is to provide quality water to improve food and nutritional security for those in a position of social vulnerability, in the Northeast Semiarid.

Essentially, the Program purpose is to install:

- a) Cisterns;
- b) Drilling, rehabilitation and operation of wells;
- c) Simplified systems for water supply;
- d) Small dams; and
- e) Irrigation kits.

Out of these equipment listed above, the cisterns, because of the quantity and volume of invested resources are the most important ones.

The Program implementation is through terms of agreements with states and terms of cooperation with institutions linked to the Ministry, such as Codevasf. And also through coordination with federal agencies and institutions working in the subjects of food and nutrition security, water infrastructure, public water supply, regulation of water use, health and environment.

³⁰ Secretaria de Desenvolvimento Regional (Secretariat of Regional Development). Pg. 39

³¹ <http://www.codevasf.gov.br/noticias/2014/acao-de-acesso-a-agua-no-sertao-cearense-ira-beneficiar-quase-oito-mil-familias>. Accessed on April 15, 2014.

Terms of agreements (convênios in Portuguese) are legal instrument that bind the Ministry of Integration and the executing agency/state in charge of delivering the cistern.

In 2012, SDR concluded 27 agreements with 14 state level government. There was also budget transfer for Codevasf and Dnocs. These agreements reached about R\$1 billion and 1,494 pits; 5,931 collective supply systems; 1,595 wells; and 54,920 cisterns³².

2.1 1st WATER

These are equipment to provide water for human consumption. They are polyethylene cisterns with storage capacity of 16,000 liters (4,226.76 gal) and collective supply system. This volume seeks to meet the United Nations recommendation for the minimum amount of water *per* day a person should have, 20 liters.

These cisterns serve dispersed populations. It is delivered one cistern per household.

Below is a picture of a collective supply system, which, usually provides service to 40 families:

PICTURE 2

Collective Supply System for Human Consumption

³² Secretaria de Desenvolvimento Regional (2013). Pg. 40, 41.



2.2 2nd WATER

They are called equipment to provide water for small scale irrigation and animal consumption, in others words, water for production. They are the folowing:

- a) Pit (“barreiros” in Portuguese) or small dams;
- b) Cistern for production; and
- c) Irrigation kits.

2.3 THE CISTERN

Polyethylene cisterns installed by Codevasf are described by the simplicity of its installation process, resistance and sealing for water storage. The catchment occurs during the rainy season: rainwater is trimmed on the roof and conducted by gutters and pipes into a tank. Providing compliance with basic maintenance - that are communicated to beneficiaries in specific training - the water is fit for food preparation and for drinking. Its durability is estimated at 30 years.

The previous program for delivering cisterns, supported by federal funds, P1MC, operated cement boards cisterns, as shown below.

PICTURE 3

Board Cement Cistern Delivered by the One Million Rural Cisterns Program:



Source:

[http://www.asabrazil.org.br/Portal/Informacoes.asp?COD_MENU=5622&WORDKEY=Cisterna.](http://www.asabrazil.org.br/Portal/Informacoes.asp?COD_MENU=5622&WORDKEY=Cisterna)

Accessed April 15, 2014

Following is presented pictures of the cisterns to a better understanding of what the Water for All Program is about.

PICTURE 4

Polyethylene Cistern Delivered by the Water for All Program:



Source: Ministry of National Integration website: <http://www.integracao.gov.br/pt/noticias/> Accessed on March, 12, 2014.



Source: Ministry National Integration website: <http://www.integracao.gov.br/pt/noticias/> Accessed on March, 12, 2014.

The property right to use the cistern is given to the dweller, which, according to the economic theory of property rights, enhances the likelihood the dweller properly keeps the cistern in good working condition.

After the end of the term of agreement, the strategy is to give the dweller full ownership over the cistern through disclaimer of donation.

A properly allocation of property rights for a society, in general, and for the poorest in particular, is key point on arguing De Soto (2000) for a nation to achieve prosperity and to raise the standard of living of the poorest. For a society embedded in the capitalist system the allocation and protection of property rights are means not sufficient, but absolutely necessary to diminish poverty levels.

2.2 GOVERNANCE ARRANGEMENT

The Water for All has a Governance Committee comprised of a representative of the following entities:

- Ministry of National Integration (Secretariat of Regional Development);
- Ministry of Social Development and Fight Against Hunger (National Secretariat for Food Security and Nutrition);
- Ministry of Cities (National Secretariat of Environmental Sanitation);

- Ministry of Environment (Secretariat of Water Resources and Urban Environment);
- Ministry of Health (National Health Foundation);
- National Confederation of Agricultural Workers - Contag; and
- National Federation of Workers in Family Agriculture - Fetraf.

The Governance Committee duties include, among others: To coordinate initiatives and to articulate the actions of the Program; To set goals for short, medium and long-term; To establish a methodology for monitoring and evaluation of the Program implementation; To evaluate results and to propose measures for the Program improvement; To set up Advisory Boards, on a permanent or temporary basis, to support their decisions.

Delegates of public agencies and of civil society may be invited to compose the Advisory Boards.

There is also an Operating Committee, coordinated by the Ministry of Integration, composed of one delegate from each of the agencies and entities that comprise the Governance Committee.

The Operating Committee is responsible for, among other duties: To evaluate and submit partner agencies and entities proposals to the Governance Committee; To evaluate and to present to the Governance Committee proposals for territorial distribution of crucial targets to guarantee water access; To evaluate and to present to the Governance Committee reports and information necessary to carry out actions under the Program.

There are also local and community committees which gather those directly served by the Program.

This sort of governance structure, through committees, continuously seeking for participation of those directly affected by the Program, provides credibility to the public policy. The beneficiaries need to feel confidence in the government officials when the policy is going to be implemented. This is important for policy success because, as demonstrated by Øyen (2002), through empirical case studies of successful initiatives to reduce poverty, a public policy requests three pillars, Credibility, Stability Programme (over time) and Formal entitlement³³.

³³ Øyen (2002). Pg. 34, 33.

2.3 OUTCOMES

In this section, we present some of the figures that depict the Program overall performance.

Below, the program results, provided by the Ministry of Integration. These data encompass the implementation by all governmental agencies and not only by the Ministry of Integration. The reference date is December, 2013.

TABLE 4

Program total amount (R\$) 2011 - 2013 – (all summed players)

BUDGET FORECAST	COMPROMISED RESOURCES ³⁴	PAID VALUE TO CONTRACTORS
5,2 Billions	4,4 Billions	1,7 Billions

TABLE 5

Quantity of cisterns installed - (all summed players) 2011-2013

STATE	GOAL	INSTALLED
AL (Alagoas)	40,690	27,996
BA (Bahia)	213,542	125,225
CE (Ceará)	151,947	120,127
MA (Maranhão)	4,165	4,295
MG (Minas Gerais)	71,860	38,981
PB (Paraíba)	56,008	30,245
PE (Pernambuco)	115,231	86,828
PI (Piauí)	55,475	17,180
RN (Rio Grande do Norte)	28,270	21,723
SE (Sergipe)	12,812	8,431
TOTAL	750,000	481,031

³⁴ “Recursos Empenhados” in Portuguese.

TABLE 6

**Quantity and value of cisterns installed - (only the Ministry of Integration)
2011 – 2013**

Technology	Contracted with states (Quantity)	Quantity Installed	Compromised resources (R\$)*	Amount already paid*
Cisterns	304,675	137,554	2,215.7	882,8
Simplified Supply System	9,566	329	1,122.4	295,8
Pits (Barreiros)	4,661	466	313,8	40,1
Underground dams	485	0	13.1	-
wells	2,460	181	35.8	4,9
Irrigation kits	4,017	647	2.0	2,0
TOTAL	325,864	139,177	3,7 BI	1,2 BI

*In millions

TABLE 7

Simplified supply systems by the entity in charge for delivering

Entity in charge for delivering	Resources Agreed (R\$)	Municipalities (quantity)	States	Quantity
CODEVASF	39,390,000	101	AL, BA, MG, PE	303
DNOCS	67,780,000	154	BA, CE, MG, PB, RN, SE	531
SUDENE	43,290,000	111	PB, PI, PE	333
Total	150,460,000	366		1,167

TABLE 8

Simplified supply systems dispersed across municipalities by states

State	Municipality (quantity)	Value (R\$ mil)	Systems delivered (quantity)	Families assisted (quantity)
AL	20	7,670	60	2,400
BA	45	17,550	135	5,400
CE	34	17,680	136	5,440

MG	40	14,500	120	4,800
PB	73	33,000	254	10,160
PE	48	18,720	144	5,760
PI	50	19,500	150	6,000
RN	36	14,040	108	4,320
SE	20	7,800	60	2,400
TOTAL	366	150,460	1,167	46,680

In 2013, approximately 120,000 families were benefited from the installation of 91,985 cisterns for drinking purposes; construction of 329 collective supply systems; 436 small dams; 181 wells; and distribution of 1,387 irrigation kits.

Also in 2013, funds amounting to R\$1.4 billion invested in the Program enabled the hiring of over 117,000 cisterns for drinking purposes; 2,200 supply systems and wells; 2,000 kits and irrigation systems; 1,200 small dams and subsurface dams, which will benefit approximately 250,000 families in the Northeast states, and Minas Gerais, Amazonas, Goiás and Rondônia.

For the year 2014, the Ministry will work to reach the goal of 300,000 cisterns for human consumption installed.

Thus, the goal for the Ministry of Integration (through its partner agencies) is the installation of 164,972 cisterns in 2014 (Semiarid states).

SECTION 3 – CONTROL REVIEWS

This section seeks to present the results of audits and assessments conducted on the program. The data are public and can be easily obtained through the Ministry of National Integration, or in the cases of The Office of the Comptroller General (Controladoria Geral da União)³⁵ or the Federal Court of Audit (Tribunal de Contas da União)³⁶, through the Information³⁷ or Transparency³⁸ website of each entity.

3.1 REVIEW PERFORMED BY CGU

The Office of the Comptroller General (CGU) made a different monitoring procedure regarding the Water for All.

The CGU sectorial body within the Ministry of Integration collaborated in designing the Program, and helping to understand the risks the Program would be exposed to. Until then, generally, CGU, as a control agency, oversaw acts only after some time a program was in operation.

This type of strategic partnership brings to policy makers the control agency perspective, and thus it is possible to prevent errors, relatively easy to detect by the control agency, but not so visible by the executing agency working in the program formulation.

As a result of this partnership CGU released in 2012 the document WATER FOR ALL PROGRAM - DOCUMENTATION, advancing some of the risks involved in implementing the program.

³⁵ The Office of the Comptroller General (<http://www.cgu.gov.br/english>) is in charge of “assisting the President of the Republic in matters which, within the Executive Branch, are related to defending public assets and enhancing management transparency through internal control activities, public audits, corrective and disciplinary measures, corruption prevention and combat, and coordinating ombudsman’s activities.”

³⁶ The Federal Court of Accounts of Brazil (Tribunal de Contas da União - TCU) audits the accounts of administrators and other persons responsible for federal public funds, assets, and other valuables, as well as the accounts of any person who may cause loss, misapplication, or other irregularities that may cause losses to the public treasury. Such administrative and judicative authority, among others, is provisioned in article 71 of the Brazilian Constitution.

³⁷ By browsing the Federal Government Access to Information website (www.acaoainformacao.gov.br) any person can request any information created or saved by the Federal Government.

³⁸ By browsing the Federal Government Transparency website (www.portaltransparencia.gov.br) it is possible to monitor the budget execution of each government program.

Regarding to audit reports, it is possible to access them through CGU website³⁹.

In 2012, CGU prepared report No. 201203503 (Procedure No. 59500.000612/2012-56), targeting to audit in Codevasf. Through some recommendations this report already anticipated some of the management challenges Water for All Program would need to overcome:

- a) To enlist rural households in extreme poverty, noting the lack of supply system distribution previously to the distribution and installation of cisterns in each municipality contemplated; (pg. 27)
- b) To analyze the convenience of delivering cisterns directly to municipality governments by signing agreements with the City, aiming to reduce costs for Codevasf; (pg. 27)
- c) To georeference each installed cistern, making the photographic record. Such information could feed a digital database to be made available to the public, providing total transparency concerning the governmental program and to making possible social control; (pg. 27)
- d) To present the technical studies that were the basis for choosing this type of cistern, in the case, the one made from polyethylene. "(p. 27)

In 2013, CGU issued report No. 201305815 (Procedure No. 59500.000612/2012-56), concerned to Annual Accounts Audit Report undertaken in the Secretariat of Regional Development in which it pointed out new alerts about risk managements of the Water for All Program. The policy maker should take precautions about the following procedure failures:

- a) Fragility in planning mechanisms, because no forecasting of risks was identified in the budget action execution; and lack of indicators and of timely monitoring routines in the fulfillment of planned targets. (pg. 12);

³⁹ <http://sistemas.cgu.gov.br/relats/relatorios.php>

- b) Budget Action 12QC - Construction and delivering of equipment for water supply – Brazil Without Misery Plan, the biggest budget action of the Secretariat of Regional Development is under responsibility of this department [Regional Development Program Management Department]. For this action, was reported disability of control and of monitoring to compliance with targets implementation of government actions. This finding is because of the weakness in the mechanisms of planning, risk identification, performance indicators and lack of timely follow-up routines. (Annual Audit Certificate of Accounts)

3.2 REVIEW PERFORMED BY TCU

The Federal Court of Accounts (TCU) has the power to suspend an act of any federal agency within the Executive Branch when evidence of serious irregularities is detected. That is what happened, for instance, in a Codevasf bidding for the purchase of 187,495 cisterns, totaling R\$600 million in mid-2013⁴⁰. Soon after the bid was canceled by a Minister act.

This case clarifies how the administrative decisions have to comply with control rules, and mainly those enacted by TCU.

No audit report about the Water for All program was found on the TCU website much likely because the Water for All Program is relatively recent as a functioning public policy.

3.3 ASSESSMENT PERFORMED BY THE MINISTRY OF NATIONAL INTEGRATION

Until the beginning of 2014 the Ministry of National Integration has run only monitoring actions, not yet having developed a comprehensive evaluation of the Program.

⁴⁰ TCU Acórdão 2789/2013-Plenário.

<http://oglobo.globo.com/pais/cisternas-sob-suspeita-tcu-suspende-pregao-de-600-milhoes-9767329>. Accessed on April 15, 2014.

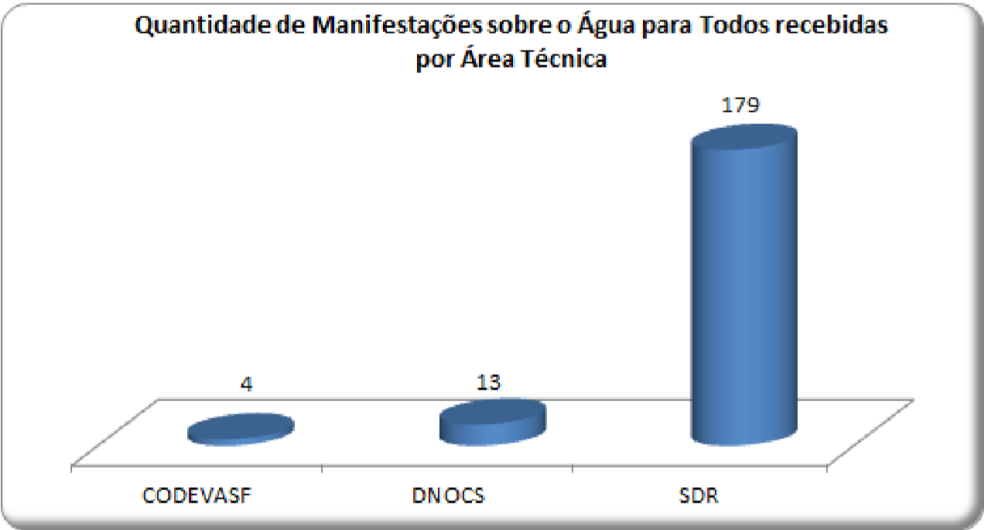
Such a failure in evaluating was recognized by the Ministry in its Management Report for the year 2012: “Currently, relating to information management, the Program`s main problem consists of a series of disintegrated, fragmented and non-standardized data sets, dispersed among implementing agencies - preventing an efficient monitoring of all actions.” (Pg. 42)

The complaints received by the Ministry of Integration Ombudsman are handled by the Secretariat of Regional Development.

Below, we show some figures received by the Ombudsman:

CHART 2

Manifestations (information requests, complaints, misconduct allegations, compliment) received by the Ministry of National Integration (Jan/2013 - Mar/2014)



Source: Ombudsman of the Ministry of Integration

Usually, all manifestations about the Water for All received by the Ombudsman are forwarded to the Secretariat of Regional Development to answer them.

From January 2013 to March 2014 it received: 143 information requests; 39 complaints; 13 misconduct allegations; 1 compliment.

CONCLUSION

The main purpose of this work was to provide a bird`s-eye view of the Brazilian federal public policy Water for All performed by the Ministry of National Integration.

Regarding the paper limitations we based the research on bibliographic queries and databases on Internet, plus interviews with government officials. The author also took advantage of the fact he works in the Ministry.

Consequently, a sort of research, outside the scope of this work, and that could contribute greatly to the thematic, would be an exploratory research, *in loco*, in order to investigate the impact of the policy on distribution of cisterns. An economic and social empirical study with control groups, random selection, etc.

An analysis we strongly advocate is one related to the costs of the program. As we have shown the *per capita* cost for unit of cistern is roughly US\$2,164.50 (R\$5.000,00)⁴¹, which might not to be an insignificant amount of money. Thus, we have no doubt that a comparative cost analysis will lead to improvements in government budgetary management.

Another point that deserves scrutiny in the near future is concerned to the program sustainability. To be precise, concerning to water supply assistance, at the end of 2014, will the Federal Government be absent from Semiarid when Water for Wall Program is supposed to be completed? And then, will people have a relatively dignified and independent life without constant government actions, at least in regard to water supply?

Ex post and sustainability assessments of public policies still require considerable attention from the policy makers.

A significant challenge, or somewhat a risk, for the Program is to avoid the possibility that it could become an endless public policy, making the semiarid households forever dependents of governmental material assistance, and turning a capital expenditure, thus temporary, into a current expenditure.

As Merton (1957) identified, a dysfunctional bureaucracy can only serve its own interests, not making every effort to solve the problem which required their creation, because the prevailing thought of bureaucrats is that if the problem is eliminated, the bureaucracy itself, in consequence, should be terminated.

⁴¹ Nominal exchange rate of 2,31 BRL/USD, in March 25, 2014. Source: Central Bank of Brazil (Banco Central do Brasil).

A dysfunctional bureaucracy tends to serve its own interests rather than the citizen interests, even if those citizen are precisely the ones most need government action.

There is a fair amount of public policies in Brazil that target a presumably temporary problem but end up perpetuating itself precisely because the policies are infective in solving the problem. The country (the taxpayers, more precisely) pays in two ways: a) By the problem continuity; and b) Now for the maintenance of a bureaucratic structure that does not eliminate the problem.

As an example, there is the transposition of the São Francisco River, which is also responsibility of the Ministry of Integration and is under construction since 2007. It has already consumed more than R\$5.0 billion (Brazilian currency) and suffers constant delays.

Also, there are worries regarded to the durability of the polyethylene, material from which the cisterns are made. Since there are complaints that some cisterns are getting twisted due to the semiarid heat⁴². The Ministry of Integration rejects these complaints grounded on the position of the cistern manufacturer who argues the cistern holds durability of 35 years. Nevertheless, the government may be facing absence of more robust technical studies on the durability of the cisterns. Such studies could prevent the government to redo the entire program in a couple of years ahead, consequently perpetuating the program, as it is typical of a dysfunctional bureaucracy.

Cost analysis combined with sustainability analysis is critical to public policies in which the budget reaches nine digits. Brazilian public management needs to learn from past mistakes to not keep repeating them in the future, as happened, for instance, with the Maracanã⁴³ Soccer Stadium in Rio de Janeiro, or even with several others public works or policies, so called "white elephants" or "bridges that connect nothing to anywhere".

Garfi (2011) paper is a sharp model of how multi-criteria analyses can be adapted for use in a public policy as the Water for All Program. A multi-criteria

⁴² <http://noticias.uol.com.br/cotidiano/ultimas-noticias/2012/03/18/mais-caras-cisternas-de-plastico-doadas-pelo-governo-deformam-no-semiarido-e-sao-alvo-de-criticas.htm>. Accessed on April 10, 2014.

⁴³ The Maracanã stadium was renovated in 2007 at a cost of millions of dollars, but five years later it was demolished for the construction of an entirely new stadium to attend the Olympic Games in 2016, at costs of over ½ billion dollars burden by taxpayers.

analysis benefitting from analytic hierarchy process would bring valuable advantages to the monitoring and impact evaluation of the Water for All Program.

It is important to highlight the amount of experiences provided by this public policy cycle. The lessons learned in the Semiarid Northeast ought to be systematized by the Ministry of Integration when it comes the time to expand the Program to the Southern half of Rio Grande do Sul state, another area constantly plagued by prolonged periods of drought.

In final words, through this short piece of work, we hopefully have brought some contribution to the understanding and improvement of the National Program for Universal Access and Use of Water - "WATER FOR ALL"

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INTERNET DATABASES:

Abdul Latif Jameel Poverty Action Lab: <http://www.povertyactionlab.org/>

Global Issues: <http://www.globalissues.org/article/26/poverty-facts-and-stats>

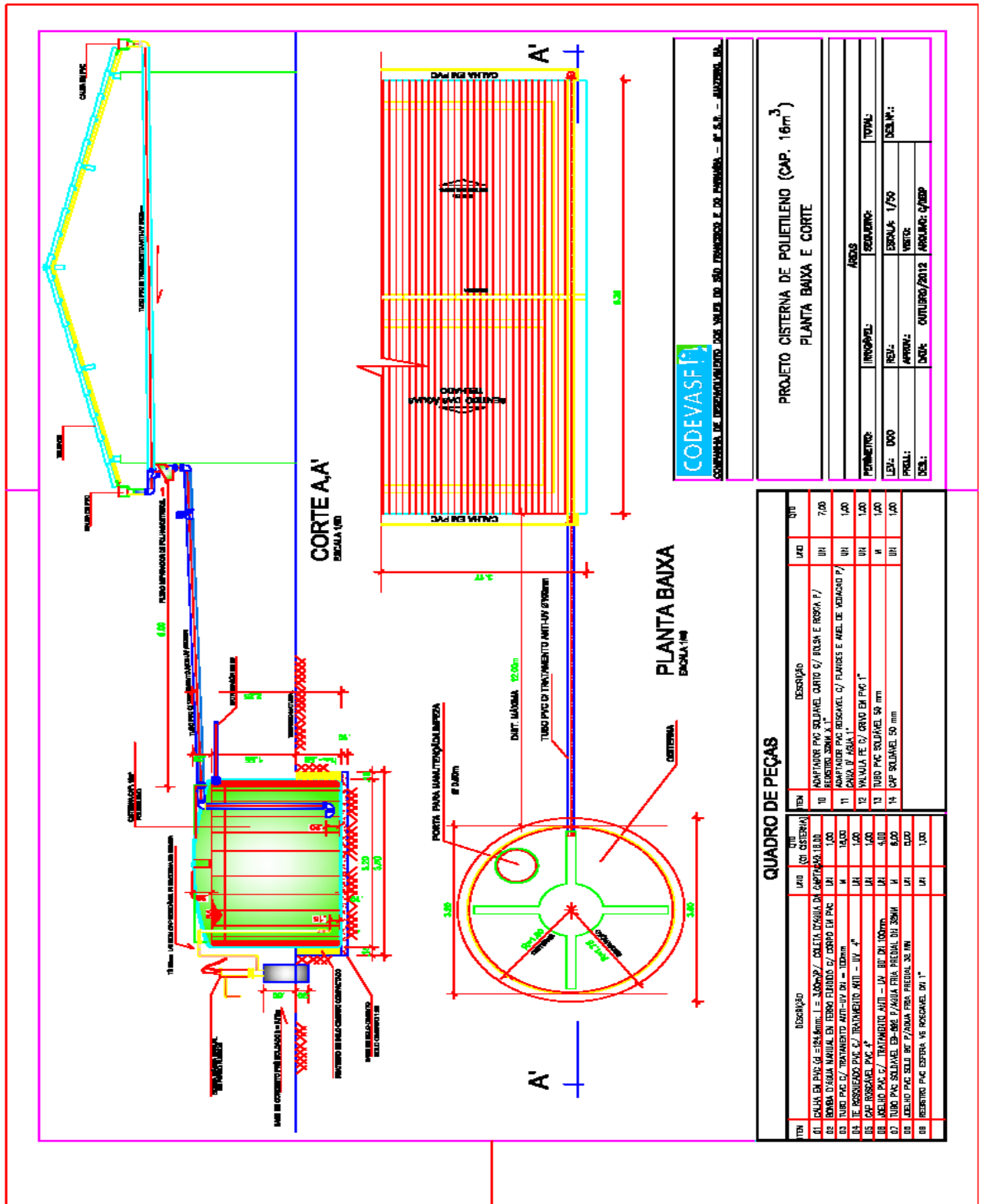
Brazilian Institute of Geography and Statistics (IBGE): www.ibge.gov.br

The World Bank: <http://www.worldbank.org/en/topic/poverty>

The World Bank Development Indicators: <http://data.worldbank.org/data-catalog/world-development-indicators>

World Without Poverty: <https://www.wwp.org.br>

ANNEX - Cistern blueprint



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