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BRAZIL LEARNING INITIATIVE

WWP Series: M&E Use Reports

From Cecad to the Social Tariff for Energy in the Santa Marta Community (Rio de Janeiro/RJ)

WWP Series: M&E Use Reports[1]
From Cecad to the Social Tariff for Energy in the Santa Marta Community (Rio de Janeiro/RJ)[2]

OBJECTIVE: Allow access to the Unified Registry via aggregated and individualized information to managers and other data systems.

DATE: Launched in 2012, with monthly updates.

PREPARATION: Secretariat for Evaluation and Information Management (SAGI) in partnership with the National Secretariat for Citizenship Income (SENARC), both from the Ministry of Social Development and Fight Against Hunger (MDS).

USE: Subsidizes various social programs users of the Unified Register, such as the Bolsa Família Program (Family Grant Program)*, the Social Tariff for Energy, Retirement for Housewives, among others. Helps states and municipalities to plan and implement local policies from the Unified Registry data. Allows other computer systems to have access to the Unified Registry information.

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Context of Tool Creation

For many years, the management of social policies in Brazil was done in a fragmented manner, without coordination between the needs of individuals and families, without taking into account the particularities of each location. In this process, various public agencies produced and used information from various isolated sources, resulting in the inadequate assistance of the low-income population.

The Unified Registry for Social Programs of the Federal Government[3] represented a turning point in this scenario and filled an information gap on the socioeconomic conditions of poor families across the country. This information is now grouped into a single database, which access enables the provision of diagnoses and drawings of federal, state and municipal social programs, and closer proximity of the real living conditions and needs of the poor and extremely poor population.

In recent years, the Unified Registry data have been used to plan, focus, implement and monitor actions and social programs, since the poverty of families could be analyzed in a more complete manner, adding information of income, household characteristics, education, situation in the labor market, etc. With database access, the municipality may, for example, locate families with poor households to direct them to housing policies or identify adults with low level of education to offer literacy courses[4].

There are many ways to use the Unified Registry information. However, up until 2012, it was not possible to generate detailed reports for the managers of social policies. Although municipalities fed the Unified Registry system[5] with information from low-income families, the data was not accessible for a broader use of the states, municipalities and other MDS's partner agencies. Even the more systematic use by the Federal Government was committed due to the lack of a report that make the Unified Registry information available in a customized and user friendly manner.

In this context, the Unified Registry Department of the National Secretariat for Citizenship Income (Decau/Senarc) of the MDS contacted SAGI to discuss the possibility of creating a Unified Database data viewer. That is when the development of Cecad – Consultation, Selection and Extraction of the Unified Registry Information – began.

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3   The Unified Registry is a tool for the identification and characterization of Brazilian low-income households, defined as those with monthly income of up to ½ minimum wage per person or 3 minimum wages of total income. In April 2015, there were about 27 million families enrolled in the Unified Registry, which corresponds to almost 82 million people registered (data taken from the Social Information Report).
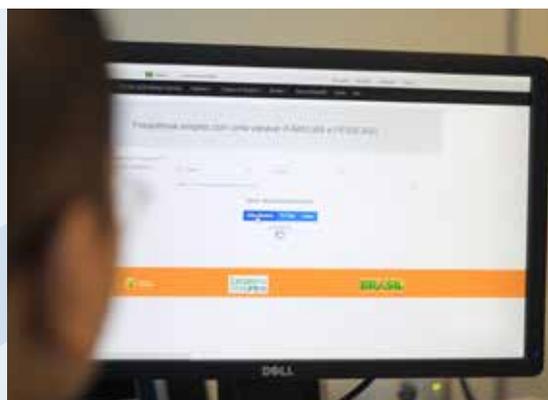
4   BRAZIL, 2012.

5   Implemented in 2011, Version 7 of the Unified Registry system is 100% online, allowing the municipality to perform data update, transfer and deletion of people / families directly in the national base registration.

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The tool building process[6]

The SAGI's Department of Information Management accepted the challenge made by Senarc and began working in partnership with Decau. There were great expectations of the Unified Registry staff, which needed various types of reports. In the beginning, it was decided that an incremental development strategy should be followed, in which each developed functionality was available for internal validation and then to Unified Registry's team managers.

In less than a year, the basic features began to be used: the initial meeting between Senarc and SAGI took place in August 2011 and the first version was released in March 2012. The team that developed the tool was small: one SAGI professional and three Senarc professionals.

Thus, the Cecad was born, a system used to access Unified Registry data and assist in the planning and implementation of actions, programs, plans and social policies in all government levels[7].

Cecad was developed in less than a year by a team of four people.

At the beginning of the system development, the official database for the Unified Registry in MDS was STAGE[8], which operated in a IBM DB2 Database Management System. This was an unfamiliar environment for the the SAGI team[9], which until then had never accessed the system. Thus, the SAGI's development environment had to be changed in order to accept connectivity with DB2.

After implementing the form of access to DB2, SAGI started the data survey to create the necessary settings to Cecad, based on tables available with the forms of the Unified Registry and the information provided by Decau. Managers of Decau tested each module implemented and, since then, SAGI has been permanent monitoring the use of the features within time[10].

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6   Section written based on reports of Caio Nakashima and the presential meeting with Caio Nakashima (SAGI) and Katia Vaz (Senarc) that occurred on June 24th, 2015. Both were responsible for the construction of Cecad.

7   Users have access to Cecad in different ways. Municipal and state managers of Bolsa Família, Unified Registry and Unified Social Assistance System may delegate the access profile to their employees; Senarc provides access to each user of the social programs' partner agencies.

8   STAGE is a database created by the Information Technology Board (DTI) of the MDS to store the Unified Registry data.

9   At that time, SAGI did not have full access to the Unified Registry database.

10   The frequency of the use of implemented modules is the indicator considered for the relevance of the information provided.

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The selection of the Unified Registry fields that would be accessed by Cecad demanded time and many internal discussions. In order to give more flexibility, the SAGI's team created a control table with all these fields so that the Decau's managers would be able to decide what information would be important to provide to Cecad. With this solution, Senarc could at any time insert or remove fields for tabulation, presentation, selection, filters and export of the Unified Registry data.

However, the original data of the Unified Registry did not inform if the registered family is a beneficiary of the Bolsa Família Program (Family Grant Program) (PBF)[11]. There is information on family income and the number of people in the family, but the per capita income, income level and age were processed and included in Cecad database to help in users' tabulations.

Along Cecad's building process, Decau's team identified problems in the Unified Registry that had never been noticed, because it had not been explored systematically. Thus, the

system enabled the expansion of the scope of research, analysis and identification of patterns, such as the number of persons in the family and percentage of single-parent families. Thus, one may say that Cecad helped qualify the Unified Registry, since opening the base allowed the identification of errors and gaps[12].

After these definitions, tab fields related to filters, export, labeling, among others, were programmed. In the middle of this process, the DB2 Database Management system had to be replaced by POSTGRES[13], causing a series of adjustments and new programming code to perform consultation on another database.

Many challenges, many achievements. Since its launch in 2012, Cecad received several improvements, presenting a monthly growth, according to the different uses given to the tool. Currently, Cecad has about 500,000 hits per month[14], being used by federal, state, municipal managers, electricity companies[15], the National Social Security[16], by researchers, among many others. These are some of the effects of the tool, which also had unexpected positive impacts, which will be detailed when we review the report related to the use of Cecad by the electric company Light.

CECAD's features

The Cecad allows the tabulation of data of registered families from a variable or by the crossing two variables present in the various blocks of the forms of the Unified Registry,

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11   Therefore, Decau added a marker on the base that identifies which families are beneficiaries of PBF.

12   However, if information monitoring is not permanent, the identified errors could reappear.

13   Cecad was ready, but STAGE's data was not reliable, thus, Decau released a server / computer with POSTGRES and the Unified Registry database.

14   The average time of page views is 16 minutes and 38 seconds.

15   For monitoring of the beneficiaries of the Social Tariff for Energy.

16   To grant retirement to an optionally insured low-income person, popularly known as "housewife retirement".

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such as income, education and household characteristics. Cecad's information is extracted monthly from the base of the Unified Registry and from the payroll of the Bolsa Família Program (Family Grant Program).

Cecad allows the extraction of the Unified Registry database for each state and municipality.

Cecad features five levels of consultation[17]:

I.   **Tabulator:** allows the crossing of two variables of the Unified Registry and application of filters. For example, Maroon Community (quilombos), water supply form and the family income level filter. In this case, it is possible to know how many registered families from a Maroon Community do not have adequate access to water, according to their income level[18].

II.   **Simple frequency:** allows the tabulation of only one variable of the Unified Registry and the application of filters. For example, one could obtain the number of Disabled Persons in a given municipality and then apply the income filter.

III.   **Data Extractor:** allows the extraction of the Unified Registry database, with identification information of the registered families as well as some filters.

IV.   **Search Name / NIS[19]:** allows information check of the person and his family by his/her full name, NIS or social security number (CPF);

V.   **Summary:** Generates aggregate data for cities, states, regions and Brazil, from 2012 to the latest available data.

Since Cecad contains identification data of the registered persons, the system is not accessible to everyone. To use it, you must first log in the Management System of the Bolsa Família Program (Family Grant Program) (SIGPBF) with a personal password[20].

There are three access to information profiles available in Cecad:

I.   **Cecad's Federal Manager:** the wider profile, allows you to access all of Cecad's features and view information from all municipalities and states;

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17   BRAZIL 2012.

18   In the new version of Cecad, it is possible to know, through the tabulator and simple frequency, how many families / people are in the situation researched and which are these families / persons (for authorized users). This functionality facilitates the use of Cecad by users who are not experts in data tabulation and spreadsheet operation.

19   The search by Name / NIS is responsible for 83% of the access to Cecad. The Social Identification Number of the Unified Registry (NIS) is personal and nontransferable. This number is granted in an integrated manner with the PIS / PASEP numbering system. When the person is included in the Unified Register, the assigned number is the NIS. However, if such person already has the PIS or PASEP number, this shall be the person's NIS number.

20   Cecad could be accessed at: www.mds.gov.br/sistemagestaobolsafamília. Access can also be done through the Accreditation and Authorization System of the National Secretariat for Social Assistance (http://www.mds.gov.br/sagi).
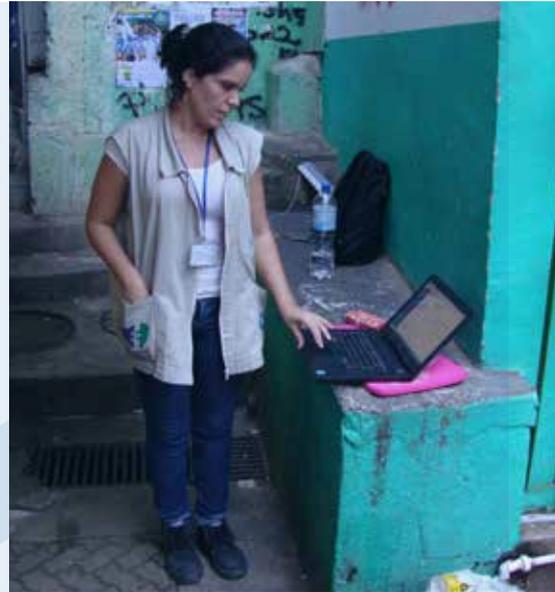
II.   Cecad's State Manager: is the profile that allows you to view information for a specific state and municipalities within their area; and

III.   Cecad's Municipal Manager: display the information of a specific municipality.

SAGI also developed the application called TabCad - Information Tabulator of the Unified Registry[21]. Without the need for a password, this application allows free access to the following features: "Tabulator", "Simple Frequency" and "Summary". Only "Data Extractor" and "Search Name / NIS" are not accessible, since they give access to the identification data of the registered families[22].

Most federal social programs use the Unified Registry to identify the target population. Therefore, Cecad is used by many programs for consultations, check the granting of benefits, as well as data cross-examination.

Next, we will show how Light, the electric utility company in Rio de Janeiro, uses Cecad to include beneficiaries in the Social Tariff for Energy.

Tatiana Clericuzi, an employee of Light, uses Cecad to verify if the residents of the Santa Marta Community (RJ) are enrolled in the Unified Registry, and have the profile to participate in the Social Tariff for Energy.

The Social Tariff for Energy

One of the main programs using Cecad, the Social Tariff for Energy[23] provides discounts on the electricity bill for families with a monthly income of up to ½ of a minimum wage per person, which are included in the Unified Registry, with information updated in less than two years, or that have a family member that is beneficiary of the Continuous Welfare Benefit for the Elderly and Disabled (BPC)[24]. The discount varies between 10% and 65%, according to the power consumption. The lower the consumption, the higher the discount, as shown below:

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21   The TabCad could be accessed at http://aplicacoes.mds.gov.br/sagi/cecad/sobre_tabcad.php link.

22   The identified data of the families included in the Unified Registry are confidential and may be used only for the development and management of public policies; studies and research (BRAZIL, 2015).

23   Created by Federal Law 12.212 / 2010.

24   The BPC guarantees a minimum wage to an elderly or disabled person who receives less than ¼ of the minimum wage income per capita/monthly.

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MONTHLY CONSUMPTION	MONTHLY CONSUMPTION
Up to 30 KWh	65%
31 KWh to 100 KWh	40%
from 101 kWh to 220 kWh	10%

Indian families and families from Maroon Communities that are registered in the Unified Registry with a per capita income of up to ½ of the minimum wage are entitled to 100% discount on the electricity bill, up to the consumption limit of 50 kWh / month. The discount is also granted to families with the total monthly income of up to three minimum wages that have a family member who is under health care at home, continuously using hospital equipment.

Light's experience in the Social Tariff for Energy

Light is an electric utility company that operates in 31 cities in the state of Rio de Janeiro. The standard procedure for inclusion in the Social Tariff is that families already included the Unified Registry visits the company in order to request their participation in the program. Realizing that this process complicated the family's access to the discount of electricity, Light began to use other means to include families in the program.

In educational classes, developed in low-income communities, an itinerant customer service that gives advice on ways to save electricity is available. Educators forwards the requests for participation in the Social Tariff of families that are already included in the Unified Registry and have the due profile. Low income families who are not in the Unified Registry are forwarded to the closest Reference Center for Social Assistance (CRAS) to register, and afterwards, to be included in the Social Tariff for the electricity bill.
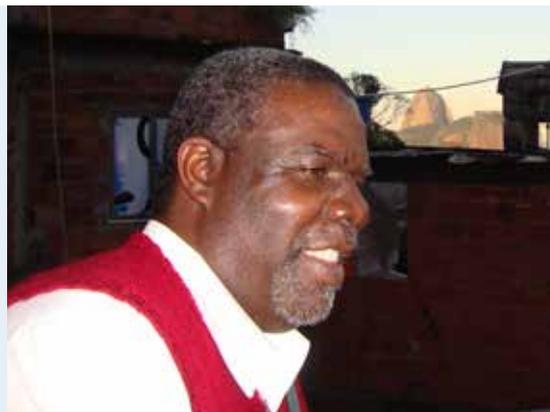

On May 2015, 226,000 households received discounts in their electricity bill by Light. This represents savings of R$4,000,000.00 (four million reais) to low-income families that are beneficiaries.

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Mass registration is responsible for 54% of the inclusions[25] by Light of the beneficiaries of the social tariff, equivalent to approximately 123,000 beneficiary families. To develop this innovative strategy, Light's technical team uses Cecad to measure the Social Tariff's target population's size. Then, a cross-check examination is made between Light's customer base and Cecad's base[26] (loaded with families included in the Unified Register, income of up to ½ of the minimum wage per capita and updated registries with less than two years) and a list is extracted with the names that meets the social tariff's entry criteria, but is not a beneficiary yet. In the mass registration, the benefit is automatically granted to the family, which receives a communication in their electricity bill demonstrating that they now have the discount of the Social Tariff for Energy.

With this procedure, the amount of low-income families who have received the discount on the electricity bill has tripled in a year. In 2011, there were 40,000 beneficiary families. Light has partnered with municipalities of Rio de Janeiro, and in two months it was possible to include almost 80,000 families in the program.

The mass registration process has become increasingly more efficient: in 2011, the cross-checking allowed to include one thousand families in the Social Tariff within an hour. In 2015, with more automated activities, Light's team is able to include five thousand families in twenty minutes. In May 2015, 226,000 families were receiving discounts on Light's electricity bill. This represents savings of R$ 4,000,000.00 (four million reais) to low-income beneficiary families.

Raimundo Santa Rosa, social manager of Light, conducts the dialogue with low-income communities of the State of Rio de Janeiro to participate in the Social Tariff for Energy and energy efficiency projects.

Families that are included in the social tariff become part of energy efficiency projects[27], which makes educational work to raise awareness of electricity use, replacement of refrigerators and lamps, electrical and even house reforms with precarious wiring[28]. From

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25   The data regarding Light presented herein were informed by the company's team to SAGI during a technical visit to Light's headquarters in Rio de Janeiro on June 18, 2015.

26   When Cecad's data extractor is not available, Light's team uses a base provided by Aneel. Alexandre da Silva, Light's technician, informs that it is preferable to use Cecad's base, since it is more complete and has a friendlier platform.

27   As informed by Light's technicians, 0.5% of Light's net operating revenue should be applied to energy efficiency programs. In addition, at least 60% of resource efficiency programs should be used in units benefited by the Social Tariff (Law 9.991/2000 and 12.212/2010).

28   Another initiative worth mentioning is Light Recycles ("Light Recicla"), a project that provides locations where users of low-income communities deliver recyclables and receive credit on electricity bills. In 2014, 2,717 tons of recyclable materials and 11,500 liters of vegetable oil were exchanged, which led to energy savings of 10.6 GWh/year.

the moment that bills became more accessible to the low-income public, the Social Tariff contributed to the reduction of default and illegal connections (the "gatos de luz")[29]. This resulted in increased safety in electrical wiring and the possibility of the beneficiary to complain whenever there is a power outage or damages to household equipment due to electrical discharges. Next, Light's experience in the Santa Marta Community, which was pacified by the police in Rio de Janeiro in 2008, will be presented.

The Social Tariff in the Santa Marta Community in Rio de Janeiro

"The rich want peace to continue rich, the poor want peace to continue living."

Inscription on a wall in the Santa Marta Community.

For many years, the Santa Marta community, which received the 1st Pacifying Police Unit (UPP) in Rio de Janeiro, was the scenery of

violence associated with drug trafficking in Rio de Janeiro. Located in Rio's South Zone, with strong influence of the Red Command ("Comando Vermelho"), Santa Marta lived under the shadow government of the drug traffickers. While the community was obliged to live with the brutality of organized crime, there were no public services to residents of Santa Marta.

Since 1935, in the beginning of the community, the sewage flowed into large trenches in the open and there was no effective garbage collection. In 1960, the first joint effort was made to build a water tank in the community[30]. In 1964, it was installed an improvised energy station. However, the energy station was not as successful as the water network:

"The entire energy distribution network was also made by the locals, but in this case, the result was not something to be proud of. The team responsible for the energy installation forgot protective devices against power overloads and short circuits. Two years later, without proper maintenance, part of the wiring had been eaten away, wiring boxes were loose and unstable energy posts let to a sad and unforgettable fire. With no fire brigade in the community, the fire destroyed dozens of shanties close to the garbage dump and killed a couple and two children. The tragedy was not only bigger because workers and drug traffickers managed to contain the spread of the fire with buckets of water."[31]

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29   As reported by Light's team.

30   "Upon the completion of the water tank, the community locals themselves built a water distribution network, in a collective action involving workers, unemployed persons, scoundrels and bandits in the proudest project in the history of Santa Marta" (BARCELLOS, 2003).

31   BARCELLOS, 2003.

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Between 1982 and 1986, the shanties made of wooden were transformed into brick shanties, again through the help of the community's task forces. The government was still absent: the community remained under the command of drug lords. While drug traffickers owned the community, residents – mostly workers with no relation to drug trafficking – were at the mercy of the idiosyncrasies of the commanding drug lord, without no access to basic rights of any Brazilian citizen.

> *"Hidden in the heart of the richest region of the city, the south, the residents of Santa Marta lived 53 years without a single school or hospital and without any of its 84 alleys paved by the government. All concrete that covers the alleys was done by the community's task forces."[32]*

For decades, the community was in the hands of one drug lord to another. Not coincidentally, the 1st UPP[33] of Rio de Janeiro was installed in the Santa Marta community. In December 2008, the police took control of the community, established partnerships with the three levels of government, social movements and NGOs in order to bring the government to the community. With the pacification, many public services now exist in Santa Marta: Post office, street lighting, garbage collection, as well as infrastructure projects and social development.

According to Jose Mario dos Santos, president of the Association of the Santa Marta Residents since 2007, "Santa Marta is not a risk area anymore. Today we have real utility services. As a representative, I have to claim for the community's rights."

Santos remembers how the power distribution worked in the community before the pacification: "It caught fire every time, the lights were unstable, it was a palliative energy service. Today we pay for energy, but it has quality."

The Association of the Santa Marta Residents have strengthened after the pacification. In the photo, José Maria dos Santos shows the residents' mailboxes that receives deliveries of the post office.

In the photos above, Mrs. Dora, a beneficiary of the Social Tariff for 4 years, and Antonio Ferro, that exchanged his refrigerator last year in the energy efficiency program.

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32   BARCELLOS, 2003.

33   The public security program that led to the UPPs began working in 2008, when the first UPP was installed in Santa Marta. Since then, 38 UPPs have already been implemented in Rio de Janeiro.

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Currently, Light has a team that dialogues directly with the low-income communities, including Santa Marta. Educational classes answer questions and provide information about rights that many people do not know that they have, such as being included in the Unified Registry. After the pacification, several actions were taken inside the community, such as the reform and extension of low and medium voltage networks, installation of transformers and building posts. Raimundo Santa Rosa, a Light educator and social manager since 1982, reports that it was necessary to adapt various facilities to Santa Marta, which had a very steep terrain, with winding streets. Underground networks were made and special posts to go through many winding spaces and reach the community homes.

In addition to the Social Tariff for Energy, Light performs other actions that combine energy efficiency, environmental and social sustainability. The Efficient Community program replaces refrigerators and light bulbs for more efficient ones and orients residents about rational and safe use of electricity. Maria das Dores Bacelar, better known as Mrs. Dora, is a domestic worker and resident of Santa Marta.

She is a beneficiary of the Social Tariff for four years: she usually pay between R$ 10 and R$ 16 per month and replaced the light bulbs in her house a few months ago. Antonio Ferro, a neighbor of Mrs. Dora, also gets discounts on his electricity bill and changed his refrigerator last year.

Accessible and integrated information enhances results and generates impacts on social reality. Without the mass registration, 54% of beneficiary families would not be getting the discount on Light's bills. Both Cecad as well as Light's actions in granting the Social Tariff – through the mass registration and educational classes – got unexpected positive effects. Everyone benefited: the families who are in the Unified Registry receive discounted electricity bills without requesting; Light increases safety in power distribution, reduces "gatos" and default.

This is the role of Cecad: deliver data from the Unified Registry, technically support the teams of the states, municipalities and partner agencies to plan actions and include low-income families in social programs, thus contributing to improve the living conditions of the more vulnerable Brazilian citizens.

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Bibliographic references

BARCELLOS, Caco. **Abusado**: o dono do morro Dona Marta. Rio de Janeiro: Record, 2003. ISBN: 85-01065-20-X.

BRASIL. Ministério do Desenvolvimento Social e Combate à Fome (MDS). **Manual de gestão do Cadastro Único para programas sociais do governo federa**l. 2. ed. Brasília, DF: MDS, Secretaria Nacional de Renda e Cidadania, 2012.

BRASIL. Presidência da República. Casa Civil. **Decreto n. 6135**, de 26 de junho de 2007. Dispõe sobre o Cadastro Único para Programas Sociais do Governo Federal e dá outras providências. Disponível em: <http://www.planalto.gov.br/ccivil_03/_ato2007-2010/2007/decreto/d6135.htm>. Acesso em: 15 jul. 2015.

List of interviewees

TECHNICAL VISIT TO LIGHT IN RIO DE JANEIRO ON JUNE 18TH, 2015:

Alexandre da Silva

Aline Passos

Antonio Carlos Nocera

Bianca Magalhães de Castro

Rafaela Cristina Bonifácio Albergaria

Raimundo Santa Rosa

Tatiana Cleuricuzzi

VISIT TO THE SANTA MARTA COMMUNITY IN RIO DE JANEIRO ON JUNE 18TH , 2015:

Antonio Serafim Ferro

José Mário Hilário dos Santos

Maria das Dores Castelo Branco Bacelar

MEETING IN SAGI ON JUNE 24TH, 2015:

Caio Nakashima

Katia Cristina da Silva Vaz

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