

CONSTRUCTING THE POVERTY AND OPPORTUNITIES/PUBLIC SERVICES MAPS

Background: “Brazil Without Extreme Poverty Plan”

The “Brazil Without Extreme Poverty” Plan (BSM), designed to overcome extreme poverty, is a major effort by the three levels of government. Created in 2011, it involves over one hundred actions and programs structured in three main areas of activity: **cash transfer, access to public services and productive inclusion**. The goal is to provide access to basic social rights for the poorest sector of Brazil’s population, often living in places that are difficult to access or on the periphery of big cities and in remote rural areas.. The Plan aims to do more than ensure survival levels of income. It promotes access to nurseries, schools and health services, as well as providing opportunities for productive inclusion through *inter alia* vocational training, access to productive microcredit and rural technical assistance.

One of the first great challenges of the Plan was to identify pockets of poverty in order to detect potential beneficiaries of cash transfer programs or services access. Information was also needed about places where beneficiaries attended in Reference Center for Social Assistance (CRAS) or Specialized Reference Center for Social Assistance (CREAS) could be referred for specific treatment. To do this, it was necessary for CRAS or CREAS officials to retain up-to-date lists of the locations and the services available in educational institutions, healthcare clinics, hospitals, drug treatment units, homeless people’s refuges, community restaurants and other places designed to cater for the social assistance target audience. It was also necessary to post information in the CRAS and other social assistance facilities about training opportunities and job vacancies in Brazil’s towns and cities that could be consulted either directly by professionals or citizens themselves.

The need for informational tools

While many of the Internet information systems contain aggregated data on municipal areas, the managers’ main need was for more detailed material on the actual location of public services utilities within a given municipality and the location of the most vulnerable populations at the intra-municipal level.

These specific requirements resulted in the decision to develop the **Poverty Map** and the **Opportunities and Public Utilities Map**, both aimed at providing the municipal social assistance managers and technical staff with tools for improving identification of ‘social intervention’ areas by their relevant teams. The maps were also intended to ensure that proper guidance was available to the poorer population to access public services, including those services that facilitated access to citizens’ rights and productive inclusion employment opportunities. The overall idea was for the maps to play a key role in the medium and long-term strategies for overcoming poverty in Brazil.

Constructing the maps: the quest for a solution

Based on the knowledge accumulated from the previous experience of the Secretariat for Evaluation and Information Management (SAGI), it was decided to meet this challenge with the use of two modular, integrated applications:

- » An Identification of Vulnerable Households Map (IDV), and
- » An Opportunities and Public Utilities Map (MOPS).

Developed with open-source software, the above tools possess features that enable them to be used in a simple, straightforward manner on the standard computer equipment that can be found even in Brazil's poorest municipalities. The two applications were designed and launched in 2011, with subsequent improvements, particularly with regard to new data-loading methods and functions. Both tools are available on the SAGI site: www.mds.gov.br/sagi.

Identification of Vulnerable Households (IDV): designing the poverty maps

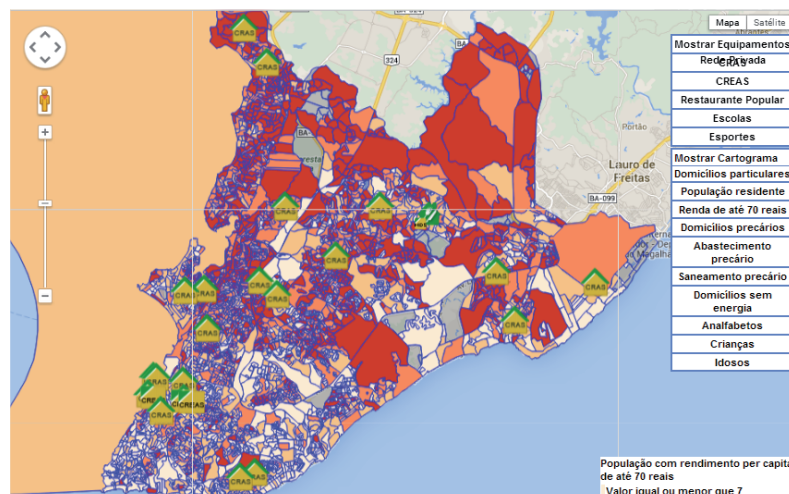
The IDV is an application that can build municipal poverty maps using 2010 Demographic Census data. The IDV makes it possible to locate, scope and describe populations living in extreme poverty and other situations of vulnerability in areas of different sizes (states, municipalities, etc) or on a larger scale (e.g. census sectors¹). Several layers of social indicators are available according to need (e.g. "Brazil Without Extreme Poverty" Plan 'active search' operations, referrals to social assistance services, youth-oriented services, etc). In short, the IDV enables all the country's municipalities to construct a Social Vulnerability Map in a timely way, as shown in Figures 1 and 2.

Figure 1: Example of accessible census information

Setor 292740805230103:	
Situação do Domicílio	Urbana: Área urbanizada de cidade ou vila
Domicílios particulares permanentes	282
População residente em domicílios particulares permanentes	884
População com rendimento per capita de até 70 reais	134
Domicílios particulares permanentes em outra condição de ocupação (não são próprios, alugados, nem cedidos)	0
Domicílios particulares permanentes com outra forma de abastecimento de água	162
Domicílios particulares permanentes sem banheiro de uso exclusivo dos moradores e nem sanitário	12
Domicílios particulares permanentes sem energia elétrica	2
Pessoas Responsáveis analfabetas	68
Crianças de 0 a 6 anos	104
Pessoas com 65 anos de idade ou mais	40
Aglomerados Subnormais	null
Ponto inicial	ENCONTRO DA ESTRADA PEDREIRA ARATU-CEASA COM RUA CORACAO DE MARIA OU RUA RIACHO DA TAPERA.
Descrição do Perímetro	DO PONTO INICIAL SEGUE PELA RUA CORACAO DE MARIA OU RUA RIACHO DA TAPERA, ESTRADA DA BARRAGEM DE IPITANGA, RODOVIA BA-526, ESTRADA DO RAPOSO, ESTRADA DO BONSUCESSO, ESTRADA PEDREIRA ARATU-CEASA ATE O PONTO INICIAL.

¹ The census tract is the smallest territorial unit, formed by continuous area, fully contained in urban or rural area, with a size suitable for research operation and which together exhaust the entire national territory, which ensures full coverage of the country (Ipea, 2011).

Figure 2: Social Vulnerability Map (population with per capita income of up to R\$70)



The maps contain a substantial amount of data, including the results of the Year 2000 and 2010 Censuses, numbers of people with per capita monthly incomes of up to R\$70, homes with no own toilet facilities, homes without electricity, numbers of illiterate heads of household, numbers of children aged 0-6 years and seniors over 65. Users can also access data on unemployment figures, the percentage of households receiving the *Bolsa Família*, and the mortality rates of low-income youths and elderly people in each area. The IDV can be accessed via the link: <http://aplicacoes.mds.gov.br/sagirmsps/idv/> (in Portuguese only).

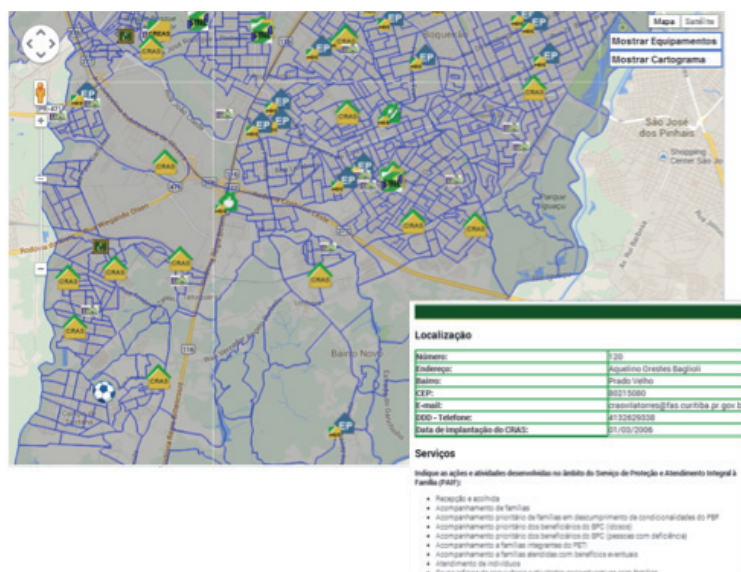
Opportunities and Public Services Map (MOPS)

Designed and deployed in late 2011, the MOPS is a site that collects and organizes data on productive inclusion opportunities and the availability of services, facilities and public programs (social assistance, education, health, employment, etc) in Brazil's municipalities, micro-regions and states.

The site also displays information on job vacancies, courses run under the National Program for Access to Technical Education and Employment (PRONATEC) and productive inclusion opportunities available in the municipalities.

The MOPS has adopted a procedure whereby data on all the institutions is loaded from available ministerial administrative records and cadasters. It also employs 'robots' to gather data from ministries' online sites, thus ensuring that the data supplied for mapping is always as current as the data sources themselves allow. Figure 3 illustrates the type of data accessible by MOPS users.

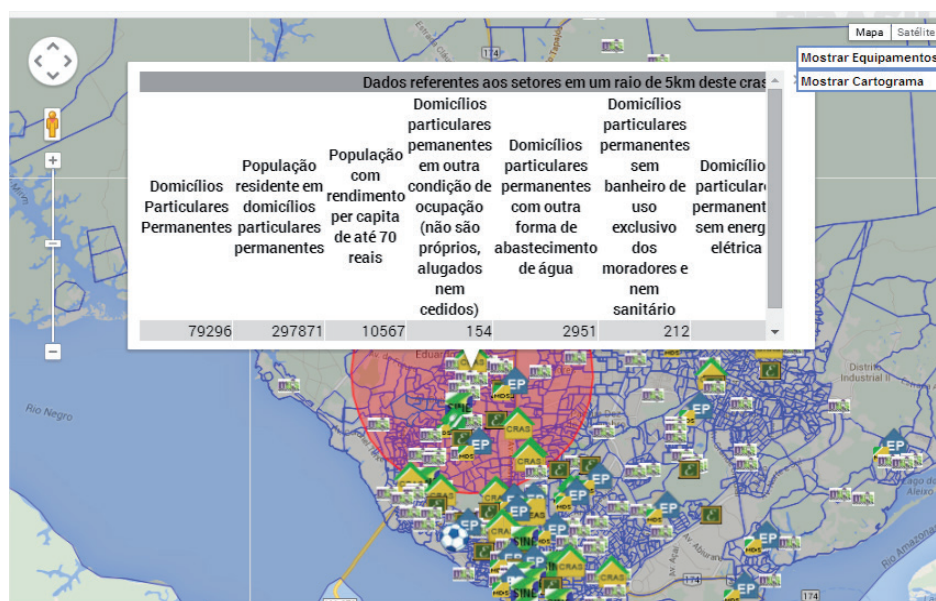
Figure 3: Facilities and public services available in a municipality



The MOPS can be accessed on: <http://aplicacoes.mds.gov.br/sagi/FerramentasSAGI/Mops/> (in Portuguese only).

The IDV/MOPS interface makes it possible to cross-reference data on the geolocation of CRAS, CREAS, the Community Restaurants and the Private Social Assistance Centers with actual Census information. This makes it feasible to determine, for example, whether a facility is located in an area with a high concentration of children, elderly people, illiterates, etc. For each geo-referenced institution, socio-territorial searches can cover areas of between 1, 2 and 5 km, with the indicators computed in the specified areas of influence.

Figure 4: Examples of indicators computed for CRAS catchment areas



Assessment (after 3 years) of the usefulness of the mapping tools

The strategy of centralizing viewable data from various sources such as the MDS, the Ministries of Health, Justice, Education, the Brazilian Institute of Geography and Statistics is an unprecedented initiative for Brazil. While all the components of these tools are available separately online, the main advantage is that they can be viewed together in a single environment.

The ability provided by the maps to identify people living in extreme poverty has helped managers and their staffs to record the details of 2,5 million very low-income families in the municipalities, thus ensuring their increased access to social assistance, health and education programs.

The information on vacancies on the PRONATEC courses displayed in the MOPS led to the vacancies being taken up by Brazil Without Extreme Poverty Plan beneficiaries. In 2014, for example, PRONATEC was operating in over 3,000 towns and cities, providing dozens of vocational training courses, each lasting 160 hours or more.

Furthermore, the tools have made a valuable contribution to decision-making regarding the location and construction of public facilities and the allocation of task forces. They helped the Ministry of Sport, for example, to rank public sports facilities in order of priority based on the proximity of the facilities to pockets of poverty and the presence of youths and children. The Ministry of Health has also shown interest in using the tools to allocate medical teams throughout Brazil, while the Ministry of Cities was able, with the assistance of the IDV and MOPS, to register details of the housing development programs for low-income families.

Finally, the IDV and MOPS have contributed to critical decision-making in the deployment of the “Brazil Without Extreme Poverty” Plan. Municipal managers and technical staffs have certainly made effective use of the two applications: on the one hand, by using them to identify concentrated pockets of the poorest people living in the municipalities; and, on the other, by providing information to low-income families on how to access social programs and take advantage of opportunities in the labor market.

Source: JANNUZZI, Paulo de Martino et al. *Construindo Mapas de Pobreza, Serviços Públicos e de Oportunidades para o Plano Brasil Sem Miséria*. In: BRAZIL. Ministry of Social Development and Fight against Hunger. Secretariat for Evaluation and Information Management. **Cadernos de Estudos: Desenvolvimento Social em Debate**. No. 19. Brasília, 2014.