

# Food and Nutritional Security and the Human Right to Adequate Food in Brazil

# INDICATORS AND MONITORING FROM 1988 CONSTITUTION TO THE PRESENT DAYS

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# **EXECUTIVE SUMMARY**



#### CONTEXTUALIZATION

The construction of the Food and Nutritional Security System (SISAN) requires the adoption of a monitoring system that will periodically provide indicators on the evolution of the progressive realization of the Human Right to Adequate Food (HRAF) in the country and the promotion of Food and nutrition Sovereignty and Security. This monitoring should include indicators that express the multiple dimensions of food security and nutrition, and captures the cultural, territorial and regional authorities of the country, gender, ethnic and racial inequalities, and the particular condition of indigenous peoples and traditional communities.

To achieve that function of SISAN, the Technical Group (TG) "Indicators and Monitoring" of Consea drafted a proposal for monitoring the progressive realization of HRFA in the country, in the context of the National Food Security and Nutrition Policy (LOSAN - Law No. 11.346/2006). As part of this proposal, the TG developed a matrix for selection, analysis and discussion of monitoring indicators, which has seven dimensions, chosen from the study of theoretical models of the determinants of Food and Nutrition Security (FNS): 1) Production of Food, 2) availability of food, 3) Income and Expenses for Food, 4) Access to Adequate Food, 5) Health and Access to Health Services, 6) education, and 7) Public Policy and Budget related to SAN (Food and Nutritional Security). Decree 7.272/2010 adopted these dimensions to achieve the monitoring of the National Policy on Food and Nutrition Security.

Based on this matrix, we performed an analysis of the evolution of selected indicators and policies. The report presents the major advances that have occurred in the country since the promulgation of the Constitution of 1988 until the present day, while pointing the gaps that remained. The document provides the CONSEA, rulers, and all other social actors involved with this issue, a comprehensive diagnosis on the completion of HRFA in the country, in addition to providing subsidies for the construction of a proposed agenda for the coming years in the field of Food Security and Nutrition.

The committee that prepared the report (established by Resolution No. 001/2010 of CONSEA) is composed of representatives of the directors standing committees from the Executive Secretariat of the Council and representatives of various public institutions and NGOs participating in the TG. It is, therefore, a report prepared jointly by representatives of civil society and government actors.

Great effort was made to overcome a lack of historical population statistics: the lack of disaggregated data by race / color / ethnicity and gender. Several indicators are presented with these cuts, but it is registered the difficulty found for several indicators, which signals the importance of mandatory incorporation of the categories race / color / ethnicity and gender in the conduct of national surveys and in the public information systems.

It is worth mentioning that this report does not intend to exhaust the analysis or make a complete diagnosis of all dimensions and policies that interfere with the guarantee of the food and nutrition sovereignty and security, and consequently, the completion of HRFA. Instead, the report constitutes a first collective exercise in which representatives of civil society and government actors come together to shed light on successful experiences, while placing the magnifier on the critical issues that still expose segments of the population situations of violations of rights.

#### REPORT HIGHLIGHTS

Most of the indicators analyzed describes important advances in the realization of HRFA in the country between the promulgation of the Constitution of 1988 and the present day. Emphasis was given to the period starting in 2003 until mid 2010, in which the Lula administration put the elimination of hunger and the promotion of food and nutrition security in a central position in the government agenda. With this, Brazil is today one of the countries where the number of people in food insecurity has progressively decreased, indicating that appropriate choices were made in terms of public policies and institutional arrangements in the fight against hunger and poverty.

However, the report found that historical challenges remain for the completion of HRFA in the country, as the concentration of land, inequality (income, ethnic, racial and gender), food and nutrition insecurity of indigenous peoples and traditional communities, among others. In addition, new challenges have emerged in Brazilian society, Brazil is the largest buyer of pesticides in the world; there is a risk not yet measurable with the release of transgenic crops; an obesity epidemic set in and there was increased consumption of foods high in salt, fat and sugar, with an alarming increase in the consumption of sweetened beverages and ready meals, and shortage of foods such as rice, beans, fish, fruits and vegetables, among other healthy foods.

### DIMENSION 1 PRODUCTION AND AVAILABILITY OF FOOD

#### A. Indicators

1. Indicator 1.1. Food production - an environment marked by increasing family income, both in the field or in the city, the trend is increasing demand for food in the country, although the pace of growth in agricultural production largely for export is much higher than production of food for domestic consumption. In the period 1990-2008, the production of cane sugar grew 146% and soybeans, 200%, while growth in production of beans was 55%; rice, 63%; and wheat 95%.

2 The planted area of large monocultures increased considerably compared to the area occupied by smaller crops, more commonly targeted to domestic supply. Only four large-scale crops (corn, soybeans, sugarcane and cotton) occupied in 1990, almost double the total area occupied by other 21 crops (randomly selected crops: avocado, banana, fig, guava, lemon, apple, papaya, mango, passion fruit, pear, pineapple rice, oatmeal, sweet potatoes, potatoes, onions, beans, watermelon, cantaloupe, tomatoes and wheat). Between 1990 and 2009, the distance between the monoculture planted area and these same 21 crops increased by 125% while the area of the latter withdrew in relation to 1990. Monoculture has grown not only by expansion of the agricultural frontier, but also the incorporation of areas for other crops.

3 The technology package applied in the booming monocultures led Brazil to be the largest market for pesticides in the world. Among cultures that use them most are soy, corn, sugarcane, cotton and citrus. Between 2000 and 2007, the importation of pesticides increased 207%. Brazil concentrates 84% of sales of pesticides in Latin America and there are 107 companies with permission to use inputs banned in several countries. Records of poisonings increased in proportion to increased sales of pesticides in the period 1992-2000. Over 50% of farmers who handle these products present signs of intoxication.

4 The strategy of large firms include the dissemination of genetically modified organisms (GMOs) linked to the sale of pesticides. As the cost for investment in new active ingredients is very high, there is a tendency to form oligopolies among companies producing pesticides. Brazil is the second largest grower of GM seeds in the world and tends to be the largest payer of royalties from the use of genetically modified soybean seeds.

5 Family farming account for much of the country's food production, allocating almost all of its production to the internal market and contributes significantly to guarantee food and nutrition security of Brazilians: In 2006, the family farmers supplied 87% of the domestic production of cassava, 70% of the production of beans, 46% of corn, 38% of coffee, 34% of rice, of wheat 21%, 58% of cow and goat milk, and 59% of the herd of pigs, 50% of poultry and 30% of the

Culturas aleatoriamente selecionadas: abacate, banana, figo, goiaba, limão, maçã, mamão, manga, maracujá, pera, abacaxi, arroz, aveia, batata-doce, batata inglesa, cebola, feijão, melancia, melão, tomate e trigo.

cattle. Moreover, it absorbs 75% of the whole population engaged in agricultural establishments in the country (16.5 million).

6 The potential for income generation in family farming is revealed in the fact of accounting for 33% of total revenues and 38% of production value, even only having about 25% of the total area and of having access of 20% of the credit offered to the industry.

7 The strengthening of family farming and extractivism is strategic for the food and nutrition sovereignty and security of the population.

8 Indicator 2.1. Domestic availability of food for human consumption - The supply of domestic rice market has been successful in the period 1988 to 2009, as domestic production has provided the largest share of consumption. Today its harvest is centered in the Southern region of the country (75%), which causes susceptibility and high transportation costs. With regard to the beans, there is steady decline in the per capita consumption, which went from 27 kg/capita/year in the 1970s to 18 kg/capita/year currently. Moreover, this has always been low government stocks in relation to the safety stock, leading to the fact that any contingency may cause an imbalance in the domestic market.

9 Analyzing historical data of Brazilian production, there is high degree of specialization and concentration of production in a few states, which, added to the difficulties of infrastructure, logistics and losses in transportation and post-harvest, raises the costs of public spending on grain loading and transport to the consumer centers.

10 Indicator 2.2. Sales volume of fruits and vegetables, by product – in 2009 foods part of the so-called healthy diets were sold in Wholesale Centers (Ceasas), more than 3.8 million tons of fruit, according to records of the Brazilian Program for the Modernization of Horticulture Market (Prohort). It is registered the steady increase of the available information since 1995, from 72 Brazilian wholesale stores, mostly concentrated in the Southeast.

11 Some fruits have a significant geographic concentration, such as apple (South), orange (Southeast), papaya (Northeast) and açaí (North). Others are produced in various parts of the country, such as watermelon and banana.

12 As for vegetables, in 2009, about four million tonnes were sold in wholesale centers. All the analyzed vegetables (tomato, cabbage, cassava, carrots, onions, potatoes and pumpkin) tended to increase the volume traded between 1995 and 2008, except for the pumpkin, that in the last two years, showed a declining trend.

#### B. Public Production Policies and Availability of Food

#### 13. National Programme for the Strengthening of Family Farming (PRONAF)

- Analyzing the past 11 years of agricultural implementation of Pronaf Credit, it appears that were effectively applied R\$ 71.7 billion in financing contracts for family farming, building on an annual R\$ 1.1 billion in the 1998/1999 harvest and gradually increasing till reaching R\$ 10.8 billion in 2008/2009. On the other hand, the number of credit contract presented different behavior. Altogether, there were approximately 13.5 million contracts formalized. The first harvest of the series showed a number of just over 174 000 contracts, amounting to 2005/2006, when it reached its peak: 1.9 million contracts. Since then, there is a gradual process of reducing the number of contracts with the 2008/2009 harvest featuring the figure of 1.4 million contracts.

14 There is, therefore, that the average value of Pronaf Credit contracts has increased over the years, which shows a reduction in the number of contracts, particularly among low-income farmers. A major challenge of this program is how to adapt a policy of agricultural credit to poorer family farmers.

15 Food Purchase Program (PAA), has higher coverage in the Northeast, Southeast (semiarid of Minas Gerais state) and South. Ministry of Social Development (MDS) is responsible for the largest injection of funds for the program. Two thirds of the resources of the PAA are focused on the production of milk and its derivatives, as well as grains and cereals. The remaining third is applied in a significant diversity of food. With regard to producers, the participation of poorer family farmers (members of PRONAF B Group) is mainly higher in the Northeast (especially in the Ceará, Bahia, Pernambuco and Paraíba states).

16 Considered in its totality, the PAA has advanced substantially in a short time. This progress indicates the need to strengthen production policies aimed at family farming alternative to the traditional credit policy exercised by PRONAF. Moreover, the growing demand for PRONAF demonstrates that the income guarantee without the risk of indebtedness offered by the program helps to raise the productive capacity and raise the living standard of participants.

17 Policy of Guaranteed Minimum Prices/Public Stocks Management (PGPM) – Recently, among the important measures to revive the PGPM as a tool for public intervention in agricultural market, and ensure the budgetary and financial resources required for interventions, there was one meant to promote a significant restoration of minimum prices.

18 In 2003/04 harvest, there was a realignment of the lowest prices and the consequent resumption of the dynamics of public stocks management. Later, in the 2008/09 harvest, before the global food crisis, the state also made use

of minimum prices, as a stimulus for the production of food. These measures caused direct impacts on price regulation and valued products such as rice, corn and wheat.

19 Land Reform - The rural settlements constitute important part of family farming. At the end of 2009 there were almost 8600 settlement projects, which housed nearly 1 million families settled in different types of projects throughout the country, all aimed at the strengthening of family farming and the promotion of agrobiodiversity. Just over three quarters of households are settled in the North (43%) and Northeast (33%). But despite the improvements, land concentration and slow progress in the implementation of agrarian reform persist as obstacles to development and consolidation of family systems of rural production in Brazil.

20 An articulate government policy, aiming to promote food and nutrition sovereignty and security must contain as strategic components policies for strengthening family farming and realization of agrarian reform, which are equally important for coping with poverty and racial and gender inequalities in rural areas.

- 21 Regularization of runway slave settlements Despite efforts in recent years for the regularization of runway slave settlements, after twenty years, the Constitution remains largely unfulfilled, as is the low number of property deeds granted to former slave settlements. From 3,500 former slave settlements recognized by the Brazilian government, only 173 had their regularization.
- 22 Regularization of indigenous lands of the 611 indigenous lands in the country, 488 are in the process of demarcation (minimally in the "bounded" phase), comprising 12.4% of the total Brazilian territory. Most of this land is located in the biomes of the Amazon and the Cerrado (Brazilian savanna).
- 23 However, it appears that the sluggishness for the demarcation of indigenous lands has negatively impacted the achievement of the human right to adequate food of indigenous peoples, disregarding the strong link between land access and preservation of cultural and dietary habits of these peoples.

## DIMENSION 3 INCOME AND EXPENDITURE OF FAMILIES WITH FOOD

#### **A.Indicators**

24. **Indicator 3.1. Per capita Household income** - There was a real growth of average per capita income of 22% between 2004 and 2008. This phenomenon occurred in all regions of Brazil, and the Northeast, a region of lowest income, had growth above the national average of 28%.

25 There is a significant inequality in income between whites and blacks. The average per capita income of black people household reference was half of the white people household reference.

26 Indicator 3.2. Level of employment of persons aged 10 or older in relation to the labor market, the indicator of employment levels in the reference week increased from 56.5% in 2004 to 57.5% in 2008 and average real income of people aged 10 or older grew by 17% during this period. In households where there were illiterate people, aged 15 or older, the average per capita income was half the average income of the population.

27 Indicator 3.3. Income inequality - In Brazil, income inequality showed falling behavior between 2004 and 2008, although income inequality remains a major problem in Brazilian society. The Gini index of distribution of monthly income of permanent households with income, which measures income concentration fell from 0.56 to 0.53.

28 Indicator 3.4. Percentage of household spending on food - In the last six years in Brazil there is a drop in the share of food expenditures, from 20.6% (2002-2003) to 19.8% (2008-2009). Several reasons may have contributed to this fact: (i) increase in average income, (ii) increased spending on other consumer groups, and (iii) reduction of prices of some food groups. The important thing is that this reduction in expenditure on food can be better observed in the range of 60% of households owning the lowest incomes.

29 There was also reduction in spending on households with reference persons who declared themselves black (black people comprise those who declared themselves black or brown). However, in 2008-2009 the total spending power of these families, black (22.4%) or brown (23.1%) had a higher participation than people with white reference families (17.9%), which is compatible with the lowest incomes of the black population.

30 With regard to the consumption of food within and outside home, Brazilian families increased by 24% the percentage of meal expenditure made outside homes between 2002/03 and 2008/09, from 5% to 6.2% of the total spending

<sup>&</sup>lt;sup>2</sup> Pessoas negras englobam aquelas que se autodeclararam pretas ou pardas

on food. This growing trend occurs in all income ranges and is one of the factors that increase the consumption of processed foods high in fat, sodium and sugar.

#### **B. Public Income Policy**

31 Minimum Wage - Between the late 1980s and early 1990s, there was a strong swing and fall in the value of the minimum wage. Then began an upward trajectory, with a more significant recovery of their purchasing power in recent years - between April 2002 and January 2010, had a real increase of 54%. It is noteworthy the adoption, in 2007, of a continuing mechanism to guarantee the actual value of the minimum wage for the period 2008 to 2011.

32 The purchasing power of the minimum wage, expressed in quantities of basic basket provisions, more than doubled between 1995 and 2010. The actual increases in the minimum wage had strong correlation with the decrease in relative and absolute levels of poverty and its impact is even greater in less developed regions.

33 Welfare and Pension Benefits - There was an increase in the amount of benefits of the general social security for the urban and rural public, mainly driven by growth in pensions. It rose from 11.6 million in 1988 to more than 27 million in 2009.

34 Most pension rights issued in December 2009 had a value equal to the minimum wage (67%), and 85% in the North, 86% in the Northeast and almost 100% of pension rights in rural areas.

35 We should emphasize the expansion of pension coverage, from 54.7% in 2001 to 59.6% in 2008, following the favorable dynamics of the labor market in the period–falling unemployment and increased participation of formal jobs. It is noteworthy that, if we excluded all social security benefits paid in 2008, the indigent population would almost double, increasing by more than 17 million people, and the number of poor would increase by 21 million people. It was also noted that Social Security has a redistributive role, in a social and territorial view, particularly in the Northeast.

36 Despite advancements in income policies, the minimum wage is still not able to meet all basic needs of families and it is large the share of individuals that are not under social security coverage (over 40% in 2008), mainly in North and in the Northeast.. In addition, part of the population live in informality, without social rights guaranteed by the record of the employment contract, including the minimum wage.

37 Therefore challenges remain to overcome unemployment and precarious insertion in the labor market, through the continuity of policies for formal employment generation and real increase of the minimum wage.

38 Bolsa Família Program (PBF) - In 2009, the program reached 12.4 million families with resources of R\$ 11.8 billion. The Bolsa Familia was responsible for 12% of the decrease in inequality measured by the Gini index in recent years. This result is associated with significant increase in coverage since 2003 and its degree of focus, in the case of an income quite focused on the poorest, and a mechanism for redistributing income to the most vulnerable regions of the country.

39 The relevance of PBF to promote improvements in the food and nutrition security was highlighted by a study published in 2008 which found that families reported spending most of the proceeds from the Program on food (87%), reaching to 91% in the Northeast. The families said they consume more sugar, rice, cereals, milk, processed foods, meats, beans, oil, fruits, roots and to a lesser extent, vegetables. As is also observed in the general population, the increased income does not always come with options of healthier eating.

40 The challenges of the Bolsa Familia go toward its legal consolidation from the perspective of law, need to adjust the value of benefits (in relation to other social security benefits), so they can ensure a basic income and expand their impact on poverty, besides the constant improvement of mechanisms for identifying the most vulnerable families, ensuring the universality of the program in the population with the lowest incomes.

41 Continuous Cash Benefit Program (BPC) - Between 1988 and 2009 there was an increase of 243% of the total people served by the program. The welfare benefits corresponded, in 2009, about 13% of all social security benefits. Among the elderly, the BPC has contributed, along with other social security benefits, to a considerable reduction of poverty and indigence in this population. In relation to people with disabilities, despite the BPC be increasing its coverage for the segment each year, it is assumed there is still a considerable number of eligible persons with disabilities, but without access to the program.

## DIMENSION 4 ACCESS TO ADEQUATE FOOD

#### **A Indicators**

42 Indicator 4.1. Percentage of macronutrients in the total calories food in households – Analyzing the metropolitan areas, it was identified that between 1974-75 and 2002-03 there was a maintenance in the figures for protein, partial substitution of carbohydrate availability on fat and sugar and reduction of consumption of complex carbohydrates. Despite the trend to reduce consumption of sugar, the participation of this group remains above the recommended for a healthy diet. It registered a significant growth in the participation of saturated fats, which is approaching the recommended limit (maximum 10% of calories).

43 Indicator 4.2. Availability of food in the household – Between 1974-75 and 2002-03 there was a reduction in the purchase of traditional foods such as rice (23%), beans (31%) and tubers (32%), while one that occurs significant increase in the consumption of processed foods such as biscuits (400%), soft drinks (400%) and ready meals (82%).

44 Regarding participation of meat (almost 50%), there was growth in consumption of beef (23%), and especially chicken (100%), but also sausages (near 300%), products have high fat and salt; and there was also a marked reduction (41%) on fish consumption.

45 The participation of fruit and vegetables in food purchases remained stable during the period (3% to 4%), but is well below the recommendation of the World Health Organization through the Food and Nutrition Surveillance System (SISVAN), it is also possible to verify consumption of fruits and vegetables by children and adolescents far below the recommended.

46 There has been a gradual loss of food-related cultural and regional values, including the tendency to reduce consumption of traditional foods such as rice and beans, and regional fruits and vegetables, so that even with increased access to food this does not mean a healthier diet.

47 There are differences in the diet of the poorest and richest. Comparing the highest and lowest income class, participation in food is 1.5 times higher for meat, 3 times higher for dairy products, nearly six times greater for fruit and 3 times higher for fruits and vegetables, among the most rich. Besides these differences, there is also greater consumption of condiments, ready meals and alcoholic beverages to the extent that income growth occurs.

48 This study highlights the association between food insecurity and access to healthy food, which means not only the difficulty in acquiring healthy

foods, but also in increasing access to food of low nutritional content. These phenomena are directly associated with the increase of overweight and obesity and diseases related to poor nutrition, especially in poorer populations.

49 Indicator 4.3. Percentage of households with food insecurity in the total number of households by type of food insecurity - In 2009, the proportion of households whose food security was estimated at 69.8%, with mild food insecurity 18.7%, with moderate food insecurity 6, 5% and with severe food insecurity 5.0%. The latter situation reached 11.2 million people.

50 There was an increase in the proportion of households where residents reported food security situation between 2004 and 2009, as positive developments in access to food in all regions of the country. In contrast, the number of Brazilian households that were with some degree of food insecurity declined from 34.9% to 30.2% during the intervening five years (from 33.3% to 29.4% in urban areas and 43.6% to 35.1% in rural areas). As for the proportion of households with severe food insecurity (percentage of the population that may experience famine), there was a reduction in the urban area of 6.5% in 2004 to 4.6% in 2009 and 9.6% to 7.0% in rural area.

#### B. Public Policies of Access to Adequate Food

51. **National School Feeding Programme – PNAE** – it has recently been reformulated by means of Law No. 11.947/2009, which extended it to all public basic education (including high schools) and young and adults reaching 47 million students (in 2010). This law established the investment of at least 30% of resources allocated to PNAE to buy products for family farming, without bidding, giving priority to organic foods and / or agro-ecological, so as to facilitate the provision of healthier food and closer to local tastes. It also has extended financial transfers for indigenous students and runway slave settlements.

52 As a challenge, it is important that PNAE consolidate and disseminate its system of monitoring and evaluation, as well as the systematic expansion and qualification of actions of food and nutrition education, to make the program an effective space to promote healthy eating and the formation of legal subjects.

53 SAN Public Equipment Network - built from 2003, currently has over 500 units in operation. Public equipments for large and medium size cities being more present in the South and Southeast. The main challenge is the expansion of the capillary network throughout the country. Moreover, there is a need for institutionalization, defining the obligations and responsibilities of federal agencies, standardization of services, sustainability of the equipment by the direct action of the state and their integrating with the PAA in order to strengthen the structure of decentralized networks of SAN.

54 Food Distribution to Specific Groups - Focusing on the distribution of food to greatly vulnerable populations between 2003 and 2008 over 220 tons of food were delivered through food baskets for families camped out awaiting the Agrarian Reform Program, the terrace communities (by capillarity they hold before the black and the lower purchasing power population), the indigenous, the runway slave settlements, those affected by dams and the populations living in municipalities affected of public calamities.

55 Indigenous Portfolio - Projects of Portfolio Indigenous support food production for self-sustainability, such as the creation of community gardens, animal husbandry, agro-forestry, handicrafts, extractivism, recovery of degraded areas; access to water and construction of food equipment, among others. There are nearly 300 supported projects, serving 22.000 indigenous families. Institutional instability is the main challenge, by being part of a project ending in 2011.

56 Access to Water for Consumption and Production - We analyzed two programs for the northeastern semi-arid region: the Cisterns Program (First Water), which between 2003 and 2009, built 273 thousand tanks, which serve 1.4 million people; and the Program Second Water (water for production), that between 2007 and 2009 made 2,892 deployments. A challenge of these actions is to monitor the quality of water available to families.

57 Worker Food Program -PAT – In August 2010, it served 131,000 businesses, covering 13 million workers. It is a program focused on the Southeast and has more than 70% of workers with fewer than five minimum wages. On the agenda of the PAT it is necessary major revisions in its legal framework, which allow widen access to the benefits of workers, following the changes occurring in the labor market and that can also take them to areas where industrial development is still being built. As in other programs, the component of food and nutrition education needs to be strengthened in the PAT.

## DIMENSION 5 HEALTH AND ACCESS TO HEALTH SERVICES

#### A. Indicators

58 Indicator 5.1. Anthropometric indices for all stages of life – the same time that indicators of child malnutrition showed remarkable reduction between 1988 and 2009, overweight and obesity increased in both adolescents and adults, even among the poor, showing the complexity of food insecurity among more vulnerable populations.

59 There was a significant decline in child malnutrition, especially in the Northeast. Comparative analysis of national surveys from 1996 to 2006 indicated that the main causes: increased maternal education, improved population's income and increased coverage of health services and sanitation. The largest percentage reduction during this period was among children from lower income (decrease of more than three times the height deficit for the age and 2.5 times in weight deficit in children under five years of age).

60 Yet there are considerable regional differences and race and ethnicity. The prevalence of chronic malnutrition (height for age), in national terms, was 6.7%, while the North it has reached 14.8% among children in former slave settlements was 15.0% in 2006; 2008 data-09 showed a prevalence of 26.0% among indigenous children (almost four times higher than the prevalence in the general population).

61 Comparing black children to white in 2009, the prevalence of low weight per age among black children was 5.1% and the prevalence of low height per the age, 16.0% (white children presented 3.5% and 11.1%, respectively).

62 Moreover, the increasing trend in overweight in adults and adolescents occurs regardless of race and reaches high percentages in both sexes. The prevalence of obesity, between 1974-75 and 2008-09, increasing by more than four times for men (from 2.8% to 12.4%) and more than double for women (from 8.0% to 16 9%). In 2008/09, the prevalence of overweight in children aged 5 to 9 was 34.8% and obesity 16.6%. In adolescents (10 to 19 years of age) this prevalence was 20.5% and 4.9% respectively.

63. Noting the nutritional status of women between 15 and 49, in 2006 there were no differences between black women and others. Among indigenous women the prevalence is higher than in the general population. In 2008-09, we found a prevalence of overweight of 45.7%, and 15.7% obese.

64 **Indicator 5.2. Low birth weight** - Among term births (complete gestational cycle) it is observed, nationwide, a trend of gradual reduction in the percentage

of live births with low birth weight and with few regional differences, with higher percentage in black children (5 3%) and Indians (6.0%) than in the others (4.1%).

65 Indicator 5.3. Prevalence of Breastfeeding - The prevalence of breastfeeding showed increasing trend between 1989 and 2008, with the highest percentage in the North and Midwest. The proportion of infants exclusively breastfed at 2-3 months increased from 26.4% in 1996 to 48.2% in 2006. Although still low, these ratios showed improvements between 1996 and 2006, particularly in relation to children under four months of life. Early introduction of non-maternal milk was high, even among breastfed children, and the milk porridge complementary foods more often.

66 Indicator 5.4. Access to Pre-Natal - Between 1995 and 2008 there has been a gradual increase in the percentage of pregnant women with four or more medical follow-up and a concomitant reduction in pregnancies without medical consultation, and the worst situations are in the North and Northeast. But there are still 2% of Brazilian women with no prenatal consultation. It is observed racial disparities in access to prenatal care: there is a higher percentage of white women with at least one or four or more prenatal consultations in relation to black and indigenous women.

67 Indicator 5.5. Infant Mortality Rate - Between 1990 and 2008 the infant mortality rate dropped to less than half (from 47.1 to 19.0 deaths per thousand live births). While the decrease in overall infant mortality rate was around 27%, in Brazil this reduction was faster (almost 60% drop).

68 The reason for the decline in infant mortality was the reduction of mortality from infectious diseases, due to the same causes of the reduction of child malnutrition: increase in maternal education and sanitation coverage, and improvements in health care.

69 The data are worse among indigenous children: Infant Mortality Rate (IMR) among Indians in 2008 was 44.4 deaths per thousand live births (LB), about 2.3 times higher than the national average for same year (19 deaths per thousand live births).

70 Indicator 5.6. Prevalence of iron deficiency anemia, nutritional iron deficiency is a serious public health problem, which consists of nutritional deficiency of greater magnitude in the world, affecting all stages of life and that in Brazil, it affects around 21% of children under 5 years and 29.4% of women of childbearing age.

71 There is racial inequality for this indicator. In 2006, the prevalence of anemia among white women was 26.3% and 32.2% among black women. The same comparison by race/color did not find differences in children.

72 In 2008/2009, the prevalence of anemia in indigenous children was much higher than in the general child population (51.3% in indigenous children against 20.9% in the general population) and among indigenous women (32.7%) is slightly higher than in women in general (29.4%).

73 Indicator 5.6.1. Monitoring of the fortification of wheat and corn flour with iron and folic acid - The monitoring carried out by the National Sanitary Surveillance, 2006 to 2008 revealed that about 89% of wheat flour and 91% of corn flour were in accordance with the iron content established by the legislation. As for the content of folic acid, a significant portion of the flours is still not adequate, while 31% of wheat flour and 45% of corn flour were unsatisfactory. Despite advances in monitoring iron and folic acid in flour in recent years, its main challenge is the implementation of analytical methodology in the Central Public Health Laboratories.

74 Indicator 5.7. Prevalence of hypovitaminosis A - In 2006, 17.4% of children and 12.3% of women had inadequate levels of vitamin A. In children, the highest prevalence rates were found in the Northeast (19.0%) and Southeast (21.6%). The higher maternal age (> 35 years) was also associated with a higher number of children with deficient levels of vitamin A.

75 Indicator 5.8. Monitoring of iodine rate in salt - There was a tendency of increase of the suitability to the established in law. In 1999, 73% of 396 analyzed samples were satisfactory, while 95.9% of 1,192 analyzed samples in 2009 were satisfactory.

76 Indicator 5.9. Safe Food - Data of the Program Analysis of Pesticide Residues in Food (PARA) 2009 show that 29% of samples of foods most consumed in the country were considered unsatisfactory. The main irregularities identified in the samples were the use of pesticides not allowed for farming (23.7% of total), the presence of pesticides at levels above the maximum residue limit (2.7%) and both irregularities in the same sample 2.7% of the total. The qualitative analysis of the types of pesticides found illegally in the samples shows the increase of irregular use of pesticides that have been banned in many countries and are under review in Brazil by indicating high toxicity, which represents an enormous challenge to be faced in the areas of Health and Agriculture.

77 In turn, the Program for Analysis of Residues of Veterinary Drugs in Foods of Animal Origin (Pamvet), when analyzing residues of antimicrobials and antiparasitic on 2,319 samples of milk available to consumers, found between 2002 to 2009, residues of pesticides not recommended for lactating animals and antibiotic banned for use in domestic livestock since 2002, constitute a risk to public health.

78 **Indicator 5.10 Sanitation** - Between 2004 and 2008 there was little growth in the number of households served by the overall network of water supply in the country, from 82.1% to 83.9%. The worst situations are in the North (58.3%) and Northeast (78%).

79 The same occurred with households receiving garbage collection. In 2004, 84.7% of Brazilian households receiving the service. In 2008 the percentage rose to 87.9%. The worst situation was in 2008 in the Northeast (75.4%), followed by Northern Region (80.1%).

80 In the case of households provided with sanitation, the indicators show that the situation is more serious and regional disparities are more pronounced. In 2004, Brazil had 68.7% of households served. In 2008 this percentage rose to 73.2%. The highest rates are in Southeast and South.

#### **B. Public Health Policies**

81 Between 1988 and 2010, particularly in the healthcare field, there was a big step forward to achieve the right to health, since the implementation of the Unified Health System (SUS), especially after the expansion of primary health care.

82 In 1999, the National Policy on Food and Nutrition (PNAN) marks the restructuring of the food and nutrition in the SUS and plays the role of keeping the calendar of Food and Nutrition Security in a period of little support to this theme.

83 Family Health - In 2009, it reached 50.7% of the population, with greater coverage in the smaller municipalities. Research shows that for every 10% increase in the coverage of Family Health, is associated with a 4.6% reduction in infant mortality.

84 The creation of Centers of Support for Family Health (NASF) with nutritionists in its composition, allowed the integration of the actions of food and nutrition performance of the the ESF in its territory of responsibility. In 2009, 76.3% of NASF had a nutritionist integrated into the multidisciplinary team.

85 Community Health Agents - As it is installed the Family Health Teams, community agents are incorporated into them, so that by the end of 2009, more than 115 million people were followed up by community health agents (60, 9% of the population).

86 Iron Supplementation - In 2008 were sent at the national level, iron supplements to 2.4 million children and to 903,571 pregnant women. One of the challenges is to meet the Program guidelines for children, and pregnant women

and/or women with diseases present iron accumulation (hemosiderosis, sickle cell anemia, among others) are not supplemented (except for persons under medical treatment and advice of competent professionals).

87 Supplementation of Vitamin A – In 2009, it reached 63% of target children aged 6 to 11 months; 44% of the target of the first dose and 31% of the annual goal of the second dose for children 12 to 59 months; and 77% target of women in the postpartum period (before discharge).

88 SISVAN - At the end of 2009, 5,438 municipalities reported anthropometric data and 1,278 demographics (23%) reported food consumption data in more than 20,000 units of primary health care in the country. In 2009, about 7% of the population was followed by SISVAN. So there is still ample room for expansion of nutritional monitoring beyond children. In 2009, over 58% of children under five years had their nutritional status monitored by Indigenous SISVAN in 32 of 34 Indigenous Sanitary Districts.

89 Between 1988 and 2000, there are large gaps in the achievement of population surveys on health and nutrition: only in 1989 the National Survey of Health and Nutrition (PNSN) was made, and in 1996, the National Demographic and Health Survey (PNDS) occurred. In the 2000s, the return for periodic national surveys reinforced the information about the nutritional epidemiology of the population, highlighting the Family Budget Surveys (POF) of 2002/03 and 2008/09, the PNDS of 2006 and the I National Survey of Health and Nutrition of Indigenous Peoples from 2008/09, which first brought a specific analysis of maternal and child health representative of the indigenous peoples in the country. In 2008/2009 was performed a new version of the Family Budget Surveys (POF) that, in addition to checking the availability of food at home, included a module on food consumption with data yet not released until the date of publication of this report.

90 Highlights must be made to the Semi-Arid Region Nutrition Calls (2005), former slave settlement Population (2006), State of Amazonas (2006) and North (2007) and realization of the First National Survey of Health and Nutrition of Indigenous Peoples (2008/09), highlighting the uniqueness of these studies for the first time in this country for these territories, peoples and communities.

91 Promotion of Lifestyles and Healthy Eating - One of the main instruments of the Ministry of Health in this issue is the publication of technical, legal and educational material, such as the Food Guides, which seek to guide the practices of health professionals and promote food and nutrition education for the population.

92 There is the National Strategy for Promoting Healthy Complementary Feeding (ENPACS), to promote the stimulus of healthy eating in early childhood,

and the School Health Program, which in 2008 transferred funding to 608 municipalities, and for clinical evaluation and anthropometric equipments as well as educational materials of the Ministries of Health and Education.

93 In recent years, measures in the regulatory framework have been taken, as the regulation of food advertising, the improvement of food labeling rules and the enhancement of the profile of processed foods with reduced sugar, fat and salt. However, these actions are still timid and undergo pressures to the contrary, especially by the private sector. We need to strengthen them, so they can create conditions for healthier choices by the population, and support the contention of rampant obesity and chronic diseases in the country.

94 Bolsa Familia - Health Conditionality - Since 2005 there is a gradual increase in the percentage of families followed up, reaching 64.5% at the end of 2009. Among these families, over 99% have fully complied with the conditionalities of health.

95 Vaccination Coverage in the First Year of Life - Another key policy for reducing morbidity and mortality in childhood is the National Immunization Program (PNI), whose story began 15 years before the 1988 Constitution, in order to control and eradicate preventable diseases.

96 Among children under one year old, from 1994 to 2009 the vaccination coverage for BCG increased from 79% to 100% and in relation to measles rose from 78% to 99.1%. The vaccine for hepatitis B, in turn, increased from 12.6% in 1998 when it officially entered the immunization schedule, to 95.5% in 2009. Childhood vaccination eradicated diseases like smallpox (1973) and polio (1989), and was interrupted the autochthonous transmission of measles (2001), besides the elimination of neonatal tetanus as a public health problem and the large reduction in the incidence of other diseases such as meningitis and viral hepatitis.

## DIMENSION 6 EDUCATION

#### A. Indicators

97 Indicator 6.1. Years of study - the average number of years of schooling of the reference people of the households, 15 years of age or older, who in 1992 was increased from 5.2 increased 7.4 years of schooling in 2008, while women remained on average 4 months longer in formal education than men. However, there is still a gulf between whites and blacks. The latter have on average 1.9 years less of schooling than whites. The situation is worse in the North and Northeast.

98 **Indicator 6.2. Illiteracy** - The illiteracy rate of all people aged 15 and older experienced a small decline between 1992 (17.2%) and 2008 (10.0%), a 7.2 percentage point in 16 years. Although the Northeast has the highest percentage, it showed the greatest reduction in the period.

99 Between 1992 and 2008, the reduction of illiteracy was higher among blacks (12.2 percent) than whites (down 4.4 percentage points). Even so, the percentage of black people (13.6%) in 2008 is more than double the rate in whites (6.2%). In general, the highest rates of illiteracy are concentrated in the group of black people over 40 years. In the population with lower income, the number of illiterates is ten times higher compared with the portion with higher incomes.

100 **Indicator 6.3. School attendance** – The percentage of children not attending school in the population 4-17 years of age in 2008 was one in every 10 children and young people in this age group. Among adolescents aged 15 to 17, this share was 15.8%. The data show a significant increase in school attendance in all age groups between 1995 and 2008.

#### **B. Public Education Policies**

101 Basic Education Policy - There is no denying the advances resulting from changes in education which had as its starting point the 1988 Constitution. Among them deserve emphasis: increasing coverage, the gradual growth in enrollment, decrease of school failure, increase in average years of schooling per person and fall in the illiteracy rate.

102 They are significant advances, but insufficient. This is because the Brazilian educational system still suffers the consequences of historical disparities that are part of its structural composition. In this sense, the great challenge faced by the Government is to break this cycle of inequality through structural change. There was also an improvement in the quality of education between 2007

and 2009 at all levels of education - the first and second stages of primary and secondary education.

103 Combat of Illiteracy - Although the illiteracy rate is decreasing since the enactment of the 1988 Constitution, the pace at which this occurs is so slow that, according to the IPEA, if it continues this way, Brazil will still need at least more 20 years to overcome this problem. The greatest advances were made to people aged 40 years or more, however, it is on that age group where it is concentrated, though, the greatest number of illiterate people. The biggest obstacles relate to lack of education actions targeting the elderly living in rural areas and constitute a large proportion of the total percentage of illiterate people.

104 Bolsa Familia – Conditionality of Education – In 2009, the school attendance of adolescents between the ages of 15 and 17 was higher among those who are assisted by the Family Grant Program-PDF. Considering a wider age group of 6 to 17 years of age, the attendance of those enrolled in the program was 4.4 percentage points above the non-enrolled, and this difference was greater in the Northeast (11.7 percent).

## DIMENSION 7 PUBLIC POLICIES, HUMAN RIGHTS AND PUBLIC BUDGET

105 Public policies are in place to respect, protect, promote and provide human rights. The food and nutrition security policies and other programs interrelated are on the government actions to ensure the realization of DHAA. Public managers are responsible for making decisions about public policies, which in turn meet the diverse interests, needs and demands of society. Civil society plays a fundamental role in this process. Many public policies may have their origin in society, i.e. they can be born of legitimate demands and historical achievements of the population. CONSEA is becoming a promising means for mediation between civil society and government in the SAN field.

106 Food and Nutritional Security System (SISAN) is the public system created by Law No. 11.346/2006 - LOSAN to articulate and manage the public policies of SAN. Like other public systems, SISAN should be able to articulate and promote managerial relations between all states, and all of which must have as their common goal the completion of DHAA.

107 However, an important issue worth mentioning: despite progress in recent years, as regards the improvement of family income and nutritional indicators, the fact is that many people who have their DHAA violated have been unable to access public policies of which they have rights to. This has been one of the most discussed by the National CONSEA and entails a challenging task for government managers. To overcome this problem, public policies should be regularly assessed and realigned, so that their goals are actually achieved, and its rightholders can effectively access them.

#### **BUDGET ACTIONS AND SAN PROGRAMS**

108. According to CONSEA methodology, programs and actions that make up a budget for food and nutrition security totaled \$ 13.4 billion reais in 2004, having almost doubled to 25.8 billion in 2010. Its evolution is characterized by a continuous and regular year on year, rising a little more significant from 2007 to 2008 (when there was a change of Multi-Year Plan). Among the programs and actions framed in this category, the resources for the cash transfer (Bolsa Familia) account for almost 47% of the total, followed by Agrifood Supply (12.9%), Family Farming (12.7%), Reform Land (12.6%), and School Feeding (11.6%).

# SUMMARY OF FOOD AND NUTRITIONAL SECURITY INDICATORS — BRAZIL AND REGIONS — 2009

**TABLE 1** 

#### Produção de alimentos (Volume produzido, em toneladas, dos alimentos mais consumidos pela população)

Dimension/Indicador	Brasil	North	Northeast	Midwest	Southeast	South	Source/Year
1.1Rice	12.609.060	958.567	1.088.665	1.228.751	215.857	9.117.220	IBGE - Municipal Ag- ricultural Production – December/2009
1.2 Bean	3.478.775	118.653	837.043	514.373	952.211	1.056.495	IBGE - Municipal Ag- ricultural Production - December/2009
1.3 Beef	6.639.551	1.284.877	678.297	2.400.170	1.575.353	700.853	IBGE - Quarterly Survey of animal slaughter - 2009
1.4 Poultry	9.939.791	148.206	317.605	1.347.891	2.287.089	5.838.999	IBGE - Quarterly Survey of animal slaughter - 2009
1.5 Eggs (thousand dozen)	3.074.447	101.775	479.892	277.812	1.392.398	822.570	IBGE - Municipal Livestock Production - 2008
1.6 Cow's milk (thousand liters)	27.579.383	1.665.097	3.459.205	4.055.144	10.131.577	8.268.360	IBGE - Municipal Livestock Production - 2008
1.7 Banana	7.105.366	771.028	2.912.727	236.524	2.209.559	975.528	IBGE - Municipal Agricultural Produc- tion - 2009
1.8 Orange	18.331.978	237.293	1.756.469	135.844	15.210.940	991.432	IBGE - Municipal Ag- ricultural Production – December/2009
1.9 Watermelon	1.995.206	214.660	607.850	270.380	208.208	694.108	IBGE - Municipal Ag- ricultural Production – December/2009
1.10 Cassava	26.613.727	7.789.535	8.981.978	1.329.998	2.390.628	6.121.588	IBGE - Municipal Ag- ricultural Production – December/2009
1.11 Potato	3.452.454	-	293.730	248.206	1.812.447	1.098.071	IBGE - Municipal Ag- ricultural Production – December/2009
1.12 Tomato	4.184.816	7.018	632.616	1.469.836	1.494.018	581.328	IBGE - Municipal Agricultural Produc- tion – December /2009
1.13 Fish (t)	1.240.813,5	263.814,4	411.463,1	72.030,2	177.248,7	316.257,1	MPA - Fishing and Aquaculture Statistics 2008-2009 -2010

Outros alimentos a serem monitorados: pão francês (farinha para panificação), farinha de trigo, macarrão (farinha para massa), miho, fubá de milho.carne suína, ovos, mamão, maçã, farinha de mandioca, cebola, cenoura, abobóra, repolho, coco, castanha de caju, castanha do pará, noz, açaí, pescados.

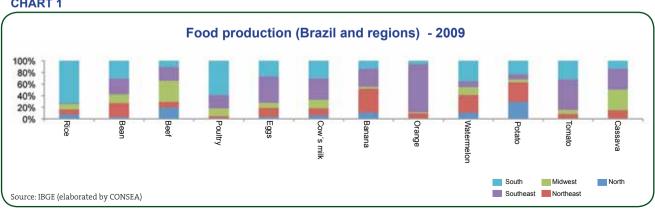


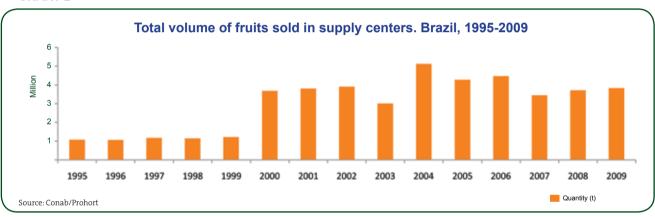
TABLE 2

Eaad	Avail	ability
FOOG	Avall	amiliv

2.1 Domestic availability for human cons	sumption (tons)	
2.1.1 Rice	12.193.800	
2.1.2 Bean	3.525.000	
2.1.3 Beef	6.740.000	
2.1.4 Chicken	7.386.700	
2.1.5 Eggs (thousand dozen)	21.254.000	CONAB - 2009
2.1.6 Wheat flour (bread)	4.248.190	
2.1.7 Wheat flour (pasta)	1.320.800	
2.1.8 Corn	11.413.900	
2.1.9 Cassava	532.200	

2.2 Sales volume of fruit and vegetables Ceasas(tonnes)	s, by product, in	
2.2.1 Potato	817.164	
2.2.2 Tomato	698.313	
2.2.3 Carrot	287.687	
2.2.4 Cabbage	201.330	CONTARY
2.2.5 Cassava	83.351	CONAB/ Prohort -
2.2.6 Orange	700.824	2008
2.2.7 Banana	437.173	
2.2.8 Papaya	364.391	
2.2.9 Apple	300.074	

#### **CHART 2**



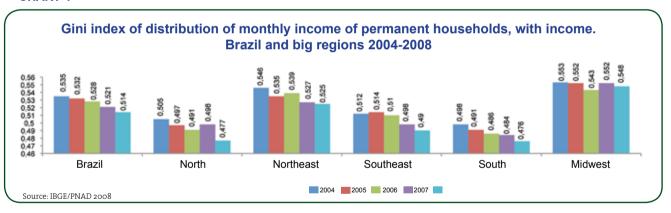


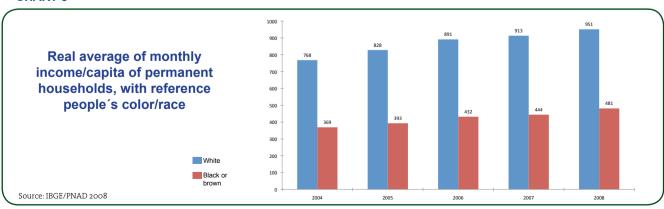
**TABLE 3** 

Income/Acces	and	Spending	on Food

Dimension/Indicador	Brasil	North	Northeast	Midwest	Southeast	South	Source/ Year
3.1.% Total percentage of household spending on food	19,8	25,8	24,2	17,7	18,3	18,5	IBGE/
3.1.1.% Percentage of household spending on food at home	13,6	20,3	18,5	12,4	11,5	13,4	Family Budget Survey
3.1.1.% Percentage of household spending on food outside home	6,2	5,5	5,7	5,3	6,8	5,1	-2008/9
3.2 Índice de Gini da distribuição do rendimento mensal dos domicílios particulares permanentes, com rendimento (grau de concentração dos rendimentos domicíliares e das unidades de consumo dos domicílios particulares).	0,514	0,477	0,525	0,548	0,490	0,476	IBGE/ PNAD 2008
3.3 Renda domiciliar média <i>per capita</i> (total da renda do domicílio dividido pelo número de moradores)	R\$ 718,00	R\$ 494,00	R\$ 444,00	R\$ 847,00	R\$ 855,00	R\$ 840,00	
3.5 Nível da ocupação na semana de referência das pessoas de 10 anos ou mais de idade.	57,50%	56,10%	55,60%	59,70%	57,20%	61,90%	IBGE/ PNAD 2008

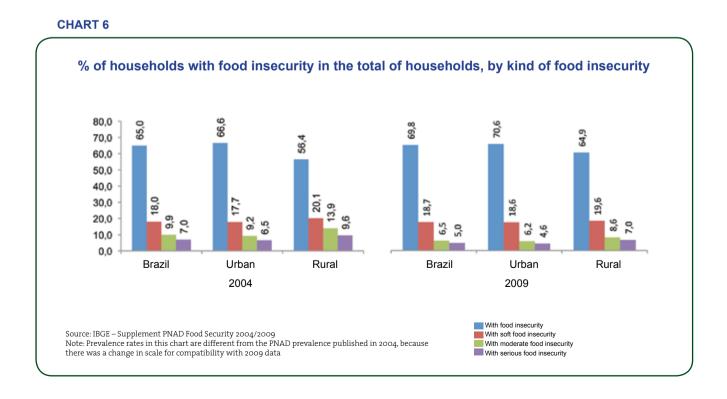
#### **CHART 4**





**TABLE 4** 

	Acc	ces to Ade	quate Foo	d					
Dimension/Indicador	Brasil	North	Northeast	Midwest	Southeast	South	Source/Yea		
4.2. % of macronutrients in the total cal	lories of hou	sehold food							
4.2.1 % of carbohydrates in the total calories of household food	59,56%	61,95%	64,80%	57,76%	57,71%	55,06%			
4.2.2 % of proteins in the total calories of household food	12,83%	13,90%	13,11%	11,88%	12,12%	14,06%	IBGE/POF 2002-2003		
4.2.3 % of lipids in the total calories of household food	27,61%	24,10%	22,09%	30,37%	30,17%	30,88%			
4.4. % of households with food insecurit Scale – EBIA)	y in the total	of househo	lds, by kind (	of food inse	curity (by Bra	zilian Food I	nsecurity		
4.4.1 % of households with food insecurity	69,80%	59,70%	53,90%	69,90%	76,70%	81,30%			
4.4.2 % of households with soft food insecurity	18,70%	21,70%	24,80%	20,30%	16,20%	13,30%	IBGE - Supplement		
4.4.3 % of households with moderate food insecurity	6,50%	9,30%	12,00%	5,80%	4,10%	3,30%	PNAD Food Security 2004-2009		
4.4.4 % of households with serious food insecurity	5,00%	9,20%	9,30%	4,00%	2,90%	2,10%			



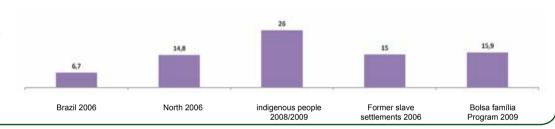
#### **TABLE 5**

Dimension/Indicador	Brasil	North	Northeast	Midwest	Southeast	South	Source/ Year
5.1. Anthropometric rates for all life coul	rse stages						
5.1.1. 1 % of children < 5 years underweight for age (indicator 4 MDG Goal2)	1,80%	3,30%	2,20%	1,60%	1,40%	1,90%	Minis- tery of Health /
5.1.1. 2 % of children < 5 years stunted for age	6,70%	14,70%	5,80%	5,50%	5,60%	8,50%	National Survey on De-
5.1.1. 3% of children < 5 years overweight for age	7,20%	6,20%	7,00%	7,50%	7,00%	9,40%	mogra- phy and Health 2006

#### **CHART 7**

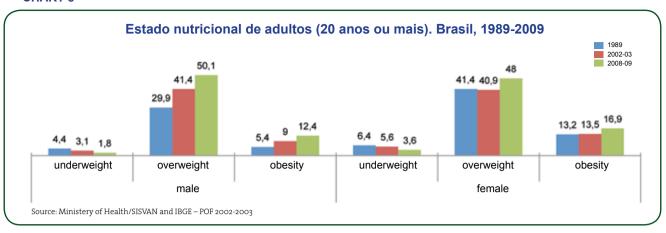
Differences in the prevalence of stunting-for-age (%) in children under 5 years old, according to the situation of Brazil, North, indigenous peoples and former slave settlements. Brazil, 2006.

Fontes: PNDS 2006 Sources: PNDS 2006 (3). I National Survey of Health and Nutrition of Indigenous People 2008-09 (4). Nutritional Call for Former Slave Settlements Population 2006 (5). Sisvan/CGPAN/ DAB/SAS/MS



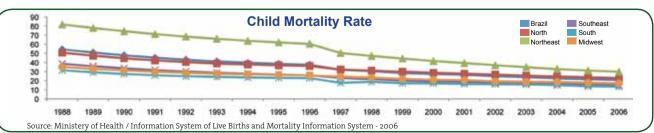
Dimension/Indicador	Brasil	North	Northeast	Midwest	Southeast	South	Source/Year
5.1.2. Nutritional Status of Adolescen	ts - 10 to 19 ye	ears					
5.1.2.1 % of overweight adolescents	Men 21,5%	Men 18,5%	Men 15,9%	Men 23,9%	Men 24,4%	Men 26,9%	Ministery of Health/ SISVAN e
	Women 19,4%	Women 16,6%	Women 17,1%	Women 20,0%	Women 20,8%	Women 22,0%	IBGE - POF 2008/2009
5.1.3. Nutritional Status of Adults - 20	or more		•				
	Men 50,1%	Men 47,7%	Men 42,9%	Men 51,0%	Men 52,4%	Men 56,8%	
5.1.3.1. % of overweight adults	Women 48,0%	Women 46,7%	Women 46,0%	Women 45,6%	Women 48,5%	Women 51,6%	Ministery of Health/
5 4 2 9 0/ of above adults	Men 12,5%	Men 10,6%	Men 9,9%	Men 13,3%	Men 13,0%	Men 15,9%	SISVAN e IBGE - POF 2008/2009
5.1.3.2. % of obese adults	Women 16,9%	Women 15,2%	Women 15,2%	Women 16,3%	Women 17,5%	Women 19,6%	

#### **CHART 8**



Dimension/Indicador	Brasil	North	Northeast	Midwest	Southeast	South	Source/Year
5.2. Low birth weight (total)	8,20%	7,01%	7,47%	7,64%	9,17%	8,71%	Ministery of Health/
5.2.1 Low term birth weight	4,50%	4,82%	4,43%	3,73%	4,62%	4,23%	Information System of live births - 2007
5.3. Prevalence of breast- feeding at six months (wheth- er the child is receiving other liquids or not)	78,00%	88,00%	77,00%	82,00%	73,00%	72,00%	Ministery of Health / National Survey of Breast Feeding in the capitals and Brazilian Federal District - 2008
5.3.1.Prevalence of exclusive breastfeeding	9,00%	10,00%	8,00%	9,00%	9,00%	10,00%	Ministery of Health/ National Survey of Breast Feeding in the capitals and Brazilian Federal District - 2008
5.4.Proportion of births with 7 or more prenatal visits	56,60%	31,57%	40,58%	62,48%	69,90%	72,20%	Ministery of Health/ Information System of live births - 2007
5.5. Infant Mortality Rate (Number of deaths of children under one year of age, per thousand live births.)	20,70	22,75	29,76	17,06	15,03	13,34	Ministery of Health/ Information System of Live Births and Mortality Informa- tion System - 2006
5.7. Prevalence of vitamin A deficiency in children < 5 years	17,40%	10,70%	19,00%	11,80%	21,60%	9,90%	Ministery of Health/ National Survey on Demography and Health - 2006





#### **TABLE 8**

5.6.1. Monitoring of the fortification of wheat and corn flour with iron and folic acid		
5.6.1.1. Percentage of wheat flour samples with satisfactory iron content	82,40%	ANVISA/GGALI - 2007
5.6.1.2. Percentage of wheat flour samples with satisfactory folic acid content	69,00%	ANVISA/GGALI e Sanitary Surveillance SP - 2006
5.6.1.3. Percentage of corn flour samples with satisfactory iron content	95,00%	ANVISA/GGALI e Sanitary Surveillance SP - 2008
5.6.1.2. Percentage of corn flour samples with satisfactory folic acid content	45,00%	ANVISA/GGALI e Sanitary Surveillance SP - 2008
5.8.1. Monitoring of iodine content in salt	95,90%	ANVISA/GGALI - 2009

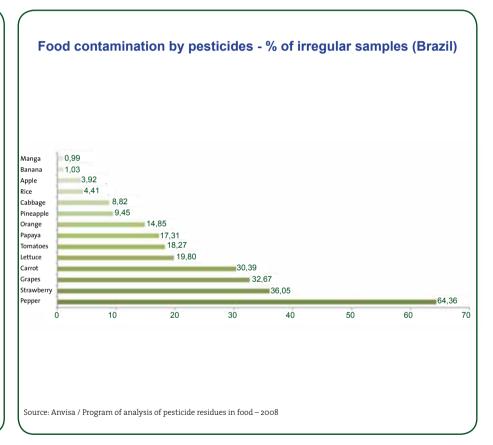
#### **TABLE 9**

#### Safe Food

5.9.1 Food contamination by pesticides. % of irregular samples (cultures with levels above the maximum residue limit permitted) 5.9.1 Pepper 64,36% 5.9.2 Strawberry 36,05% 5.9.3 Grapes 32,67% 5.9.4 Carrot 30,39% 5.9.5 Lettuce 19,80% 5.9.6 Tomatoes 18,27% 5.9.7 Papaya 17,31% 5.9.8 Orange 14,85% 5.9.9 Pineapple 9,45% 5.9.10 Cabbage 8,82% 5.9.11 Rice 4,41% 5.9.12 Apple 3,92% 5.9.13 Banana 1,03% 5.9.14 Manga 0,99%

Anvisa/Programa de Análise de Resíduos de Agrotóxicos em Alimento - 2008

#### **CHART 10**

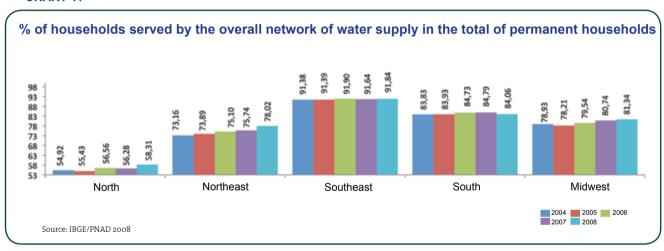


5.6.1. Monitoring of veterinary drug residues in foods of animal origin		
5.6.1.1. Percentage of wheat flour samples analyzed in relation to the ones programmed to monitoring veterinary drug residues in milk	85,20%	Anvisa/ Pamvet 2009

TABLE 11

<u> </u>							
Dimension/Indicador	Brasil	North	Northeast	Midwest	Southeast	South	Source/ Year
5.10 Sanitation	5.10 Sanitation						
5.10.1 % of households served by the overall network of water supply in the total of permanent households	83,91%	58,31%	78,02%	81,34%	91,84%	84,06%	
5.10.2 % of households receiving gar- bage collection in the total of permanent households	87,90%	80,11%	75,37%	89,15%	95,33%	90,73%	IBGE/ PNAD 2008
5.10.3 % of households who have sewage disposal by sewer or septic tank in the total of permanent households.	73,17%	60,12%	55,04%	48,50%	88,83%	76,84%	

#### **CHART 11**



Dimension/Indicador	Brasil	North	Northeast	Midwest	Southeast	South	Source/ Year	
5.11 Water and Sanitation in schools (basic education)								
5.11.1 % of schools with water supply by public service	60,69%	22,06%	49,22%	76,72%	82,76%	78,07%	INEP/ School	
5.11.2 % of schools with sanitary sewer by public service	37,82%	4,31%	18,57%	33,98%	75,92%	45,20%	Census 2007	

**TABLE 13** 

Dimension/Indicador	Brasil	North	Northeast	Midwest	Southeast	South	Source/ Year
6.1. Distribution of households reference people, 10 years or more, by groups of years of study.							
6.1.1. Without education and with less than 1 year	14,72%	17,50%	27,28%	13,11%	9,37%	8,37%	
6.1.2. 1-3 years	12,60%	14,81%	15,35%	11,99%	11,03%	11,75%	
6.1.3. 4-7 years	25,70%	22,96%	21,91%	25,90%	26,99%	29,48%	
6.1.4. 8-10 years	14,49%	15,00%	11,79%	14,70%	15,39%	16,13%	IIBGE/
6.1.5. 11-14 years	23,66%	23,70%	18,64%	24,31%	26,51%	23,68%	PNAD 2008
6.1.6. 15 years or more	8,70%	5,74%	4,91%	9,91%	10,61%	10,38%	2000
6.2.Illiteracy rate of people aged 15 or more	9,96%	10,73%	19,41%	8,18%	5,81%	5,45%	
6.3. % of children (5-17 years) who do not attend school	6,69%	8,83%	6,67%	7,75%	5,54%	7,80%	

