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Scoping review on Food Security policies in Brazil

and their relationship with Land Tenure

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Los Nadies

Sueñan las pulgas con comprarse un perro
y sueñan los nadies con salir de pobres,
que algún mágico día
llueva de pronto la buena suerte,
que llueva a cántaros la buena suerte;
pero la buena suerte no llueve ayer, ni hoy,
ni mañana, ni nunca,
ni en lloviznita cae del cielo la buena suerte,
por mucho que los nadies la llamen
y aunque les pique la mano izquierda,
o se levanten con el pie derecho,
o empiecen el año cambiando de escoba.

Los nadies: los hijos de nadie,
los dueños de nada.

Los nadies: los ningunos, los ninguneados,
corriendo la liebre, muriendo la vida, jodidos,
rejodidos:

Que no son, aunque sean.
Que no hablan idiomas, sino dialectos.
Que no profesan religiones,
sino supersticiones.
Que no hacen arte, sino artesanía.
Que no practican cultura, sino folklore.
Que no son seres humanos,
sino recursos humanos.
Que no tienen cara, sino brazos.
Que no tienen nombre, sino número.
Que no figuran en la historia universal,
sino en la crónica roja de la prensa local.
Los nadies,
que cuestan menos
que la bala que los mata.

The Nobodies

Fleas dream of buying a dog
and the nobodies dream of getting out from
under their poverty,
that some magic day
suddenly good fortune will rain upon them
that it will downpour bucket-fulls of good luck.
But good luck doesn't rain today
or tomorrow or ever,
not even a little drizzle falls from the sky.
No matter how much the nobodies cry for it,
and even when their left hand itches
or they get up on the right foot,
or when they start the year getting a new
broom.

The nobodies: the sons of no one,
the owners of nothing.

The nobodies: treated as no one,
running after the carrot, dying their lives,
fucked,
double-fucked.

Who are not, even when they are.
Who don't speak languages, but rather dialects.
Who don't follow religions,
but rather superstitions.
Who don't do art, but rather crafts.
Who don't practice culture, but rather folklore.
Who are not human,
but rather human resources.
Who have no face but have arms,
who have no name, but rather a number.
Who don't appear in the universal history
books,
but rather in the police pages of the local press.
The nobodies,
the ones who are worth less
than the bullet that kills them.

Eduardo Galeano

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I. ABBREVIATIONS

CAISAN	Inter-ministerial Food and Nutrition Security Chamber (from the Portuguese Câmara Interministerial de Segurança Alimentar e Nutricional)
CFS	Committee on World Food Security
FAO	Food and Agriculture Organization of the United Nations
HRAF/ DHAA	Human Right to Adequate Food (in Portuguese Direito Humano à Alimentação Adequada)
MST	Landless' Workers Movement (from the Portuguese Movimento dos Trabalhadores Rurais Sem Terra)
SISAN	National Food and Nutrition Security System (from the Portuguese Sistema Nacional de Segurança Alimentar e Nutricional)
UN	United Nations
WHO	World Health Organization

ACRONYMS OF POLICIES

BSM	Plano Brasil Sem Miséria
PLANAPO	Plano Nacional de Agroecologia e Produção Orgânica
PLANSAN	Plano Nacional de Segurança Alimentar e Nutricional
PNA	Plano Nacional de Adaptação à Mudança do Clima
PNAA	Programa Nacional de Acesso à Alimentação
PNAE	Programa Nacional de Alimentação Escolar
PNAPO	Política Nacional de Agroecologia e Produção Orgânica
PNGATI	Política Nacional de Gestão Territorial e Ambiental de Terras Indígenas
PNPCT	Política Nacional de Desenvolvimento Sustentável dos Povos e Comunidades Tradicionais
PNPS	Política Nacional de Promoção da Saúde
PNSAN	Política Nacional de Segurança Alimentar e Nutricional
PNSIPCF	Política Nacional de Saúde integral das Populações do campo e da floresta
VGGT	Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security

II. EXECUTIVE SUMMARY

Background Today, Brazil is one of the fastest growing economies in the world, mainly relying on natural resource exploitation such as freshwater, wood and minerals. Hunger and poverty in the country have improved remarkably in recent years, yet the concentration of agricultural land remains highly unequal. Land access rights and secure tenure regimes are thought to have positive impacts on Food Security among farmers and the rural population, but it remains unclear how the Brazilian national Food Security policies address them.

Methods In order to review if land tenure security is used as a strategy for Food Security in the rural parts of Brazil, a scoping review of official national and international policy documents has been conducted. The review has analyzed three categories of organizations: (i) international agencies, (ii) Brazilian national government, and (iii) the Brazilian social movement, to better understand their diverse contributions in the field of Food Security policies. The analysis of the documents has been performed using specific key-word search and a framework description.

Results It has been found that the conceptualization of Food Security is primarily based on the Food and Agriculture Organization of the United Nations four pillars (availability, access, utilization and stability) while the Landless' Workers Movement uses the broader term 'Food Sovereignty' instead. It has also been found a lack of proposals in the national policies regarding the prevention of tenure conflicts and the accessibility of judicial tools in Food Security policies.

Conclusions The integration of land tenure in Food Security policies in Brazil has indicated room for improvement, especially in the formulation of common goals policies between the actors and by providing strong policy mechanisms to achieve these policies. We recommend reinforcing the legal means following the international guidelines on tenure rights by an inclusive and participatory process.



III. DEFINITIONS

Access to land Access to live in a certain area, work and/or use for production, safely and long-term.

Land tenure/ property rights “System of rights and institutions that govern access to and use of land and other resources” (1). For the purpose of this paper, land property will refer to the right that a person has with respect to an object such as land (2) and as a synonym to ownership.

Land title A document that registers formal property rights for land (3).

Land expropriation Land taken by the state for public purposes (3).

Land reform/ Agrarian reform State modifications to the agrarian structure, through redistributing land area in favour of the rural poor and increasing their access to land (4).

Indigenous peoples “People whose ancestors inhabited a place when persons from another culture or ethnic background arrived and dominated them through conquest, settlement, or other means and who today live more in conformity with their own social, economic, and cultural customs and traditions than those of the country of which they now form a part” (5). For this work, the term will be used including *quilombolas* (members of

quilombola communities, descendants of former-slaves) (6), *ribeirinhas* (communities living near rivers), *fishermen* and *traditional communities*.

Food systems Range of actors and their interlinked value-adding activities involved in the production, processing, distribution, consumption and disposal of food products (7).

Resilience Ability of a social or ecological system to prevent, resist, absorb, adapt, respond and recover from disruptions while retaining the same basic structure and without compromising level of functioning (7,8).

Family farming Farming activities which rely predominantly in family's own labour and that provide the major source of income in the family (9,10).

Smallholders Owners of small parcel of land, with the capacity to support one or two families (10).

Ecosystem/ environmental services “Benefits people obtain from ecosystems (including provisioning services, such as food and water; regulating services, such as regulation of floods, drought or land degradation; supporting services, such as soil formation and nutrient cycling; and cultural services, recreational, spiritual, religious, etc.)” (11).

Sustainable agriculture (Ecologically sustainable) “Agricultural practices that meet the needs of today without compromising the ability of future generations to meet their needs” (12).

Agroecology Alternative agriculture based on the dynamics of nature, which is sustainable, socially just and economically viable (9).

Policy Set of ideas or principles meant to guide the decision-making to achieve a specific goal (13). It can settle a conceptual framework of certain topic and also the action plan to reach the objective.

Governance “Processes through which public and private actors articulate their interests; frame and prioritize issues; and make, implement, monitor and enforce decisions” (14).

IV. BACKGROUND

IV.i “GOOD HEALTH IS NOT POSSIBLE WITHOUT GOOD NUTRITION” WHO(15)

The Food and Agriculture Organization of the United Nations (FAO) has reported that today **more than 820 million people in the world suffer from hunger**; meaning people cannot satisfy the daily energetic nutritional requirements defined by the health authorities necessary to have an active life (7). The intake of food and the nutrition process itself, both are strongly tied to health. In fact, today **malnutrition is the largest contributor to disease in the world** (16). Malnutrition has been described to considerably increase the risk of morbidity and mortality, children and women being the most affected population. During 2018, 5.3 million children under the age of five died; 45% of them died due to undernutrition (17).

The term “malnutrition”, defined by the World Health Organization (WHO) as “*a person’s intake of energy and/or nutrients imbalance*”, includes different conditions that can be classified in three groups; the ones related to undernutrition (like wasting, stunting or underweight); others that refer to micronutrient deficiencies or excesses (like iron or vitamin A deficiencies); and the diet-related noncommunicable diseases (such as obesity, diabetes or heart disease) (17). The above noted conditions have multiple consequences for human health, and also have long-lasting developmental, economic and societal effects (17). It has been highlighted that in this times, **at least one in three people suffer some form of malnutrition in the world** (15).

The causes of malnutrition are very diverse. The United Nations Children's Fund (UNICEF) causal framework has defined three levels of causes leading either to short-term or long-term consequences of malnutrition (18). There are **immediate causes** (affecting the individual level) as inadequate dietary intake or diseases; **underlying**

causes (at community level) such as inadequate care, lack of health services or unhealthy household environment, connected to poverty and employment situation; and finally the **basic causes** (related societal-structures) such as social, economic and political contexts (19).

People most affected by malnutrition are the population in low and middle income countries (LMICs), where the coexistence of both forms, undernutrition and overnutrition (also known as the double burden of malnutrition), has been increasing in recent years (20). There is a strong correlation between undernutrition and infectious diseases that negatively influences both the illness and the nutritional status of an individual, greatly increasing the vulnerability of LMICs population that are very much affected by the two of them (21). The linkages between poverty, infectious processes and undernutrition are well explained in the systematic review by Rytter, et al. 2014 (22), and showed in **Fig. 1**.

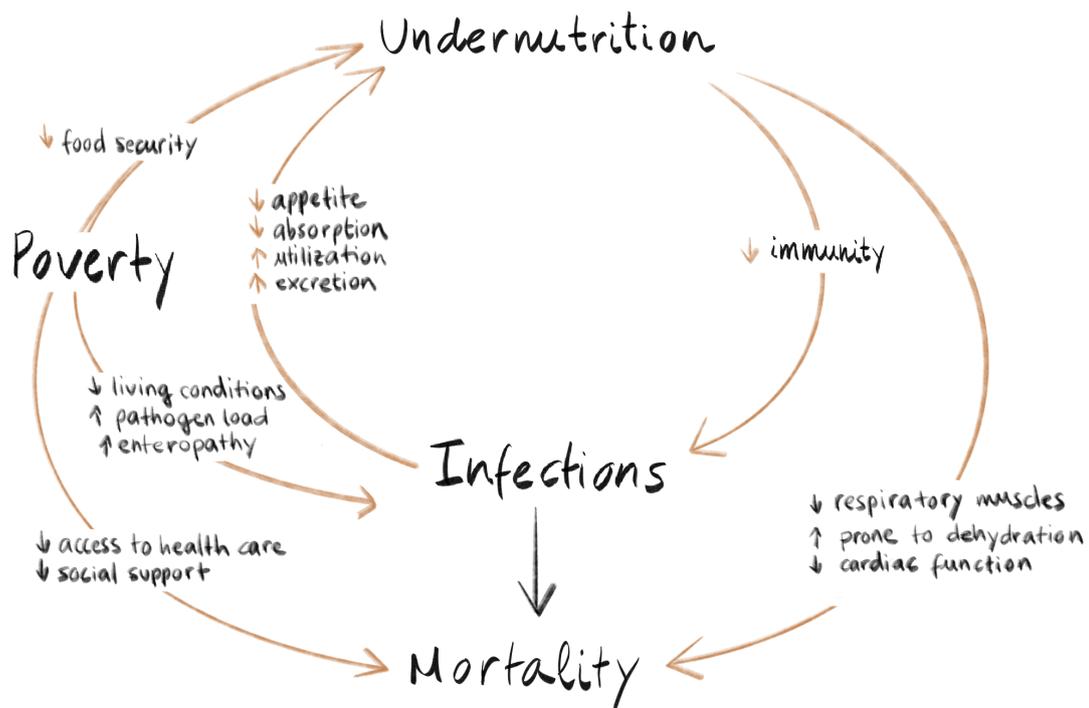


Figure 1. Conceptual framework on the relationship between malnutrition, infection and poverty (adapted from Rytter, et al. 2014).

IV.ii FOOD SECURITY POLICIES FOR HEALTH

Food insecurity (lack of Food Security) is described among the major causes of poor nutritional status together with nappropriate sanitation conditions and care (23).

The latest definition of **Food Security** of the Food and Agriculture Organization of the United Nations (FAO)¹ states that “*Food Security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life*”² (24). There are four connected dimensions of Food Security which are to be realized before Food Security is guaranteed (**Fig.2**). These dimensions, defined by the FAO, are the following:

- 1) **Physical availability of food:** having sufficient supplies regarding quantities of appropriate quality food;
- 2) **Economic and physical access to food:** the ability of individuals to obtain food through markets, own production, or other sources;
- 3) **Food Utilization:** means by which individuals get the energy and nutrients from the food;
- 4) **Stability** of the other three dimensions over time (endurance availability, access and utilization) (25,26).

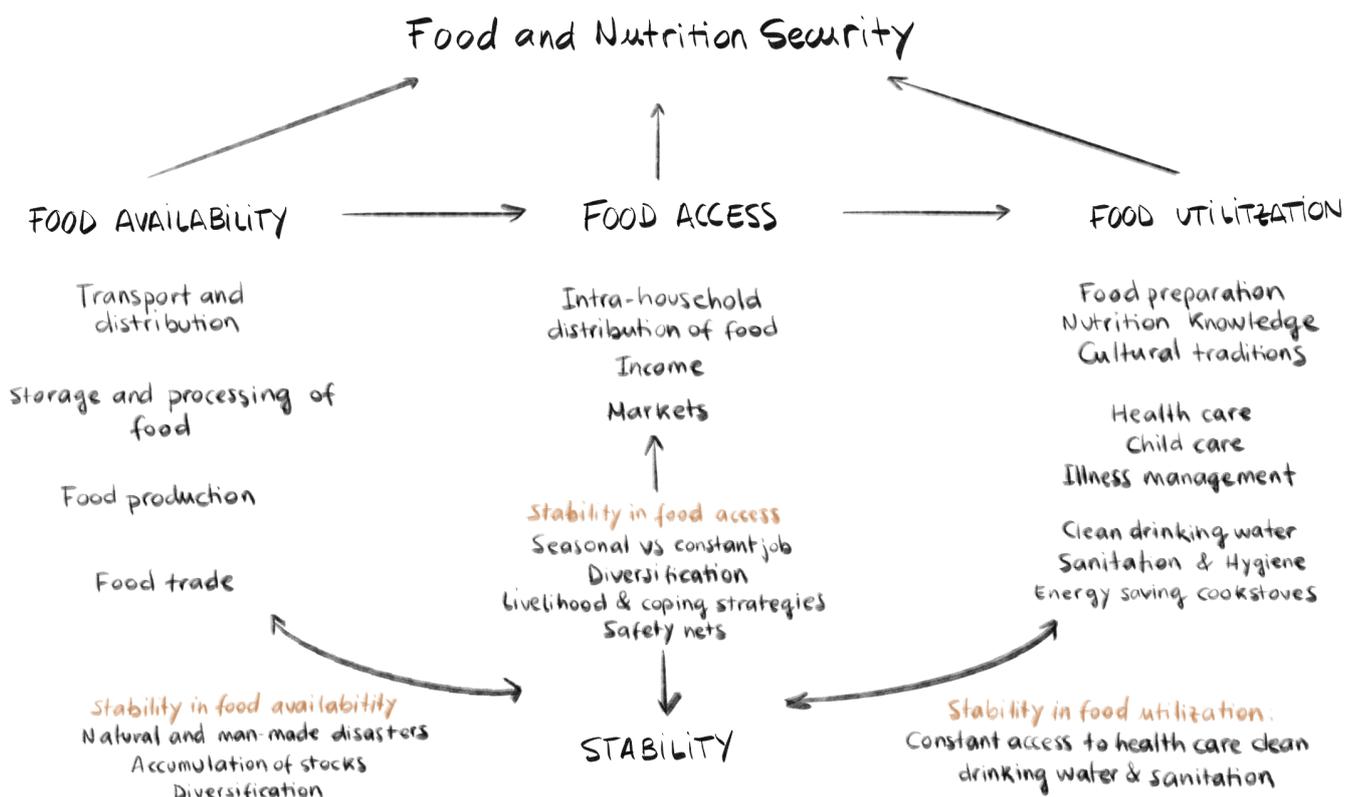


Figure 2. Connections between the four pillars of Food Security (adapted from Burchi, F. et al. 2011).

¹ Many different definitions have been used through the years, from broader conceptions of considering only food supplies volume, later including the accessibility to the supplies, social security factors, and others.

² Differently to “nutrition security”, this last also considers dietary adequacy, adequate caregiving practices and health and hygiene (7).

Public health policies refer to governmental plans, proposals or actions that are planned and applied to obtain certain health outcomes (17), acting as instruments for health improvement. In the field of Food Security, **food policies** are directed to the operation of the food system from production to consumption (processing, distribution, conservation, etc.) (27); affecting different areas like trade, industry, agriculture and livestock management, food labelling, marketing, food safety and others. All those policies are key to strengthen the four dimensions or pillars of Food Security –availability, access, utilization and stability–.

Some of the policies that can be put in place to reduce food insecurity may have positive impacts in different correlated sectors, whether their applicability is short- and long-term; these are called “twin-track-approaches” (28). An example of it would be a policy to establish a school feeding program using local products; providing school-age children every day meals (increase of food access and utilization) while ensuring stability of demand for local farmers (increase of availability, access and stability). The overlapping and interconnectivity of Food Security policies is shown in Fig. 3.

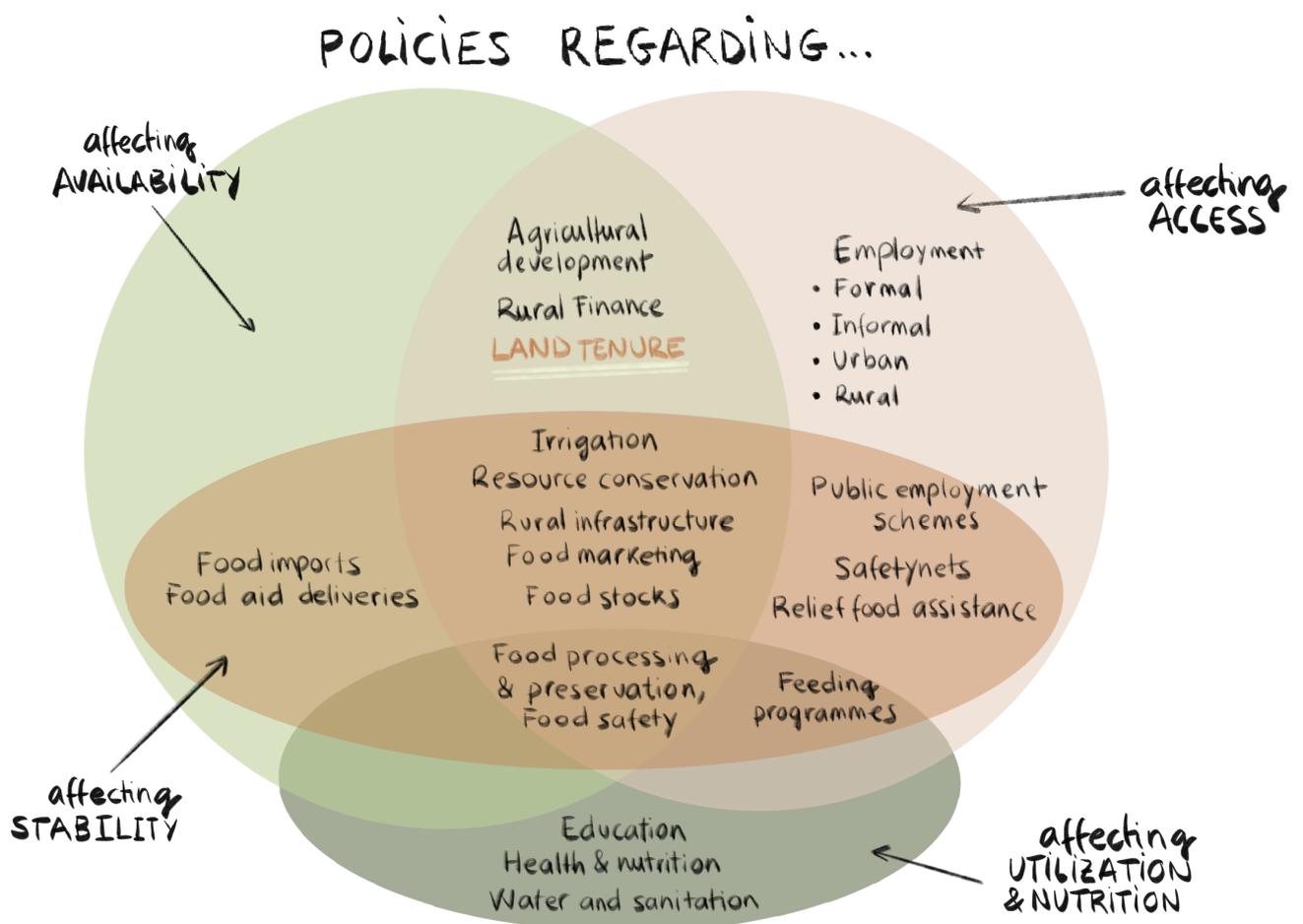


Figure 3. Food policies interrelations on the dimensions of Food Security (adapted from FAO, 2009).

Likewise, results can also happen inversely. An example of this would be a policy that, with the aim to increase food availability, promotes an increase in agricultural production through the use of pesticides. In the short-term, there would be an increase of the food supplies achieving better availability, but in the long-term, the pesticides could potentially damage the soil and/or pollute the water; therefore increasing again food insecurity (29).

Conversely, policies with a focus on sustainable and safe (free of toxic chemicals) land use could boost Food Security through the pillar of utilization and stability. An example of this would be by reforesting land that would raise agricultural productivity (through increased water storage in watersheds, soil retention and fertility) (26). More information about defined strategies by the FAO to improve Food Security can be found in annex XV.iii.

These examples are framed with a **socio-ecological perspective** of Food Security. Access, availability and biological usage of food are very much connected to ecological sustainability (30), as environmental degradation is a real threat to Food Security and human health through the reduction of ecosystem services and loss of biodiversity (31).

IV.iii PIECES OF LAND

In addition to a sustainable relationship between humans and the environment with an ecological approach, **access to land** is another relevant factor influencing Food Security. *“The System of rights and institutions that govern access to and use of land and other resources”* (1), known as **land tenure**, is strongly connected to agricultural productivity, thus increasing food availability and therefore enhancing Food Security (1,11). This can be seen in **Fig.3** located between access and availability.

Land tenure includes individual or communal rights (the absolute ownership with rights to sell and buy); adverse possession (to obtain full property rights after years of land occupation); formal and informal rent; and use rights (the right to use the land for production or grazing) (2,3). The recognition of the different rights included in land tenure can be undertaken through registration of official documents (formal property rights³) or through legitimacy. The concept of “legitimacy” is applied differently in each case. As a general approach described by the FAO, tenure rights’ holders are legitimate *“if their lands are utilized for real and effective activities and if these are known to others and accepted (...) even if legal procedures or registration is lacking”* (32–34).

³ Formal property rights as *“explicitly acknowledged by the state and which may be protected using legal means”* (2).

To secure land tenure, which means to ensure good governance on access and use of natural resources, is seen as a potential factor to contribute to the reduction of food insecurity, especially among women (35). This conception is based on the idea that by having their rights to land recognized, land users can achieve greater influence on use of land decision-making and improve Food Security through better control over the land such as simply defining the most convenient crop to grow (35).

Different authors have researched on the interconnections between Food Security and land tenure security, which seems to be complex and dynamic (**Figure 4**) (1). These relations include linkages between land titles and reinforcement of production processes, promotion of income generation, increase on access to natural resources, enhancement of better decision-making on exchange of goods, and others.

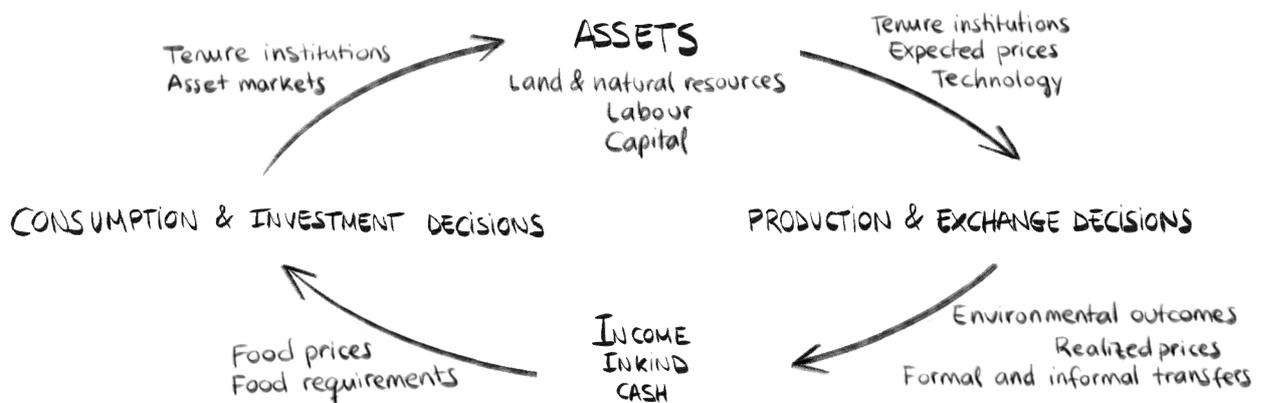


Figure 4. Framework of land tenure and Food Security links (adapted from Maxwell, D., 1999).

Governments around the globe have a legal imperative to secure food availability, access, utilization and stability; as stated in the 1948's Universal Declaration of Human Rights, the guarantee of food security is mandatory through the **Right to Food** in article 25: "Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food (...)" (36). Subsequently, the clause was expanded to **Right to Adequate Food (HRAF)**, defined as "every man, woman and child, alone or in community with others, has the physical and economic access at all times to adequate food or means for its procurement". The same article also includes the concept of being free from hunger as a fundamental right (37).

V. JUSTIFICATION

Acknowledging the many different pathways that could lead to malnutrition, the strategies to face it are equally complex. Brazil has received international attention for its pioneering approaches and effectiveness on reducing hunger together with poverty

through their well-known programs “*Fome Zero*” (Zero Hunger), “*Brasil Sem Miséria*” (Brazil without Misery) or “*Bolsa Família*” (38). The Zero Hunger program contributed to Food Security by using mixed approaches classified into four pillars: promotion to food access, enhancement of family farming, income generation and social participation processes (39).

As a result of these programs Brazil was excluded from the *World Hunger Map* by the World Food Program since 2014 (38,40,41) and managed to reduce the 65,2% of people living in extreme poverty in rural areas from 2002 to 2014 (40). As an important and growing economy, which mostly relies on the use of its natural resources (42) it is fundamental that Brazil ensures the sustainability of its land-related activities for the future of Food Security in the country.

In regard to land tenure, Brazil has the highest level of inequality among world’s countries, with respect to land distribution; 45% of Brazilian land is currently owned by the 1% of the population (3). The Gini Index⁴ for land distribution is calculated to be 0.86 (0 means absolute equality and 1 means absolute inequality)⁵ (43). This is framed in a context of a historical Agrarian Reform conflict; being the country immerse since 30 years on discussions about how to redistribute land and guarantee access to natural resources to Brazilian peoples (44,45).

After the end of two decades of military regime in 1985, the societal call for an equitable agrarian reform was emphasized and the first democratic government (José Sarney’s presidency, 1985-1989) intended to face it by designing the National Agrarian Reform Program (PNRA) (46). Nevertheless, neither Sarney’s nor the next governments’ actions until today, could really achieve a substantial decrease on land ownership inequality due to many economical lobbies influences (46).

Since 1985, land ownership is guaranteed by the Brazilian Constitution as a fundamental right (47), however, the demand for a redistribution of agricultural land (that is, land that can be cultivated) is still present (46). Tenure violent conflicts and forced evictions between private companies and smallholders or traditional communities are worsening the situation of food insecurity in the rural parts of the country, wherein adverse possession⁶ are established practices among the landless.

In addition to that, the shift to a right-wing government in January 2019, after 16 years of leftist policies has escalated the tensions and discussions between the local communities and the agribusiness actors regarding land use. Without strong political

⁴ Gini index is a measure of inequality referred to income distribution among a society (102).

⁵ Gini index calculated from the 2006 IBGE Agriculture and livestock census by FAOSTAT (43).

⁶ The Brazilian law allows adverse possession through the legal transfer of land to the individual after certain number of years of occupation (3,53).

will to address the situation of land property inequity in Brazil, the past achievements on Food Security and poverty reduction –such as the Zero Hunger program- may be jeopardized (39).

The present work is a review on the current Food Security policies applied and applicable to the rural areas in Brazil such as Acre, the Amazon and Pará, with an overview of the global recommendations from international agencies of health and food from the United Nations. The decision to concentrate on the rural part of the country relates to the fact that focused rurality policies are expected to have higher impact on the peoples, due to the large proportion of poor population living in rural areas; calculated to be 75% worldwide (48). In Brazil more than 28 million people live in rural areas (2018) (49).

Reviewing these country policies allows us to gain knowledge capacity to enhance effectiveness on their strategic actions.

VI. PROBLEM STATEMENT

Many policies are designed and implemented constantly to enhance Food Security, and yet malnourishment remains a global health concern. Despite knowing that there is a link between Food Security policies and land tenure, it remains unclear if this relationship is reflected in the Brazilian Food Security strategies. In the event that the strategies are not integrative, potential solutions to improve the nutritional status of Brazilian population could arise.

VII. OBJECTIVES AND RESEARCH QUESTIONS

VII.i OVERALL

The overall objective of the present study is: To review Brazil's current **Food Security strategies**, the recommendations of the international food and health agencies' within the United Nations (such as the World Health Organization, the Food and Agriculture Organization of the United Nations and Committee on World Food Security) and the Brazilian Landless' Workers Movement proposals regarding land tenure, and determine the extent to which the concept of Food Security is interrelated to **Land ownership**, if at all.

The aim is to provide the evidence to be able to accept or reject the following hypothesis:

*There is a lack of integration⁷ between the Brazilian **Food Security strategies** and **land ownership** that could potentially negatively affect the results of Food Security programs; reducing the access to food and, therefore, increasing the morbidity and mortality of the rural population in Brazil.*

VII.ii SPECIFIC OBJECTIVES

1. To identify the conceptual framework of Food Security used by the different organizations included in this policy review (documents' categories A, B and C).
2. To review the different modes of intervention concerning Food Security and land tenure proposed by the United Nations food and health agencies in Brazil (documents' category A).
3. To determine whether national Food Security policies in Brazil are linked to land ownership, i.e. if land ownership is included as a strategy for Food Security (documents' category B).
4. Review the current Landless' Workers Movement's strategic land-related proposals (documents' category C).

VII.iii RESEARCH QUESTIONS

The policy review will address the following questions:

1. How is Food Security conceptualized in the official documents reviewed (documents' categories A, B and C)?
2. What are the strategic recommendations and proposals of the international bodies included in category A regarding Food Security and land tenure? (documents' category A).
3. Do national Food Security policies in Brazil consider any strategy in regard to land property? If so, how? (documents' category B).
4. What land-related strategies are proposed by the Landless' Workers Movement (documents' category C)?

⁷ Being "integration" the formulation of policies that considers different voices through collaborative and participatory processes.

VIII. METHODS

To answer the research questions a policy review has been conducted via secondary data document analysis (data not collected by the author).

VIII.i CATEGORIES OF DOCUMENTS TO REVIEW

As a method of identifying and grouping the different documents for review, the main actors with diverse influence, power and participation on Food Security policy-making have been considered. This was the decisive standard because Food Security is a matter of international and national responsibility (37,50,51). These actors are divided in three documents' categories; named A, B and C:



- A) International organizations under the United Nations working on Food Security and Health: the World Health Organization (WHO), the Food and Agriculture Organization of the United Nations (FAO) and the Committee on World Food Security (CFS). The inclusion of the United Nations as “a center for harmonizing the actions of nations” (52) is intended to provide the study with a Global Framework on Food Security and land tenure strategies. The WHO, the FAO and the CFS act as intergovernmental bodies that support the UN members’ states in terms of Food and Health related practices and policies.



- B) Brazilian national Government. Under the Brazilian Constitution, the government represents the major authority in the country and it is responsible to provide services and policies that ensure Food Security and guarantee the rights of the Brazilian population (53). Within this category, documents reviewed include main Food Security policies and plans in Brazil such as the “National Food and Nutrition Security Policy” and the “National Health Promotion Policy”, among others.



- C) Landless Workers’ Movement. Beyond the official bodies, it has been considered important to include the major societal Brazilian movement for Agrarian Reform as they offer a different approach to food and land policies in Brazil. The MST represents a well-known entity involved in Food Sovereignty and peasants’ rights in Brazil since the beginning of the first agrarian reform (46). The MST has international recognition, experience and a history of long-term participation in land policy design in Brazil (46,54–56).

A document review protocol has been designed following four steps: 1) Search and document collection; 2) selection criteria application; 3) final classification; and 4) type of analysis design.

VIII.ii SEARCH STRATEGY

The process of screening and selecting the documents has been designed with the intention of obtaining the latest applicable **strategic plans, guidelines or specific proposals** regarding enhancement of Food Security for the rural population in Brazil. All the processes and steps followed are described here to facilitate traceability and reproducibility.

INCLUSION CRITERIA for search	
Availability	Official and published
Publication date	Between 2000-2020
Time of search	From 30 th October 2019 until 30 th April 2020
Current status	Applicable or not revoked
Geographic coverage	From Global to Brazil nationwide
Type of document	Legal documents (laws, decrees and resolutions), plans, guidelines, recommendations, commitments and proposals*
Language	Portuguese (if English version available, the latter preferred), English, Spanish
Authors, partners	Any of the organizations specified in the three documents' categories (A, B, C)

Table 1. Inclusion criteria defined for the search of the documents. *Hereafter referred to as “policies”.

Category A

For the review of the documents published by the **World Health Organization (WHO)**, their official website has been checked (<https://www.who.int/>). Two departments have been selected from the “Health Topics” window as more relevant for this study; “Nutrition” and “Food and Nutrition Security”.

> Health Topics:

> **Nutrition**

- > Decade of Action on Nutrition
 - > About DoA
 - > Resolutions
 - > Publications

> Publications (All)

- > Publications and resources by topic:
 - “Food and Nutrition policies”
- > Publications and resources by topic:
 - “Food and Nutrition Security”

> Health Topics:

> **Food Safety**

- > Publications/ Document centre (All)
 - > Publications and resources by topic:
 - “Nutrition and Food Security”

The second organization of category A, the **Food and Agriculture Organization of the United Nations (FAO)**, has been reviewed also checking page by page (www.fao.org). From the “Main Topics” window, 2 out of 4 pages have been selected for their assumed stronger connection to the scope of this project, “Sustainable Food and Agriculture” and “Food Systems”.

- > Main Topics
 - > Sustainable Food and Agriculture
 - > Food Systems
- > Resources
 - > Publications

The third and last organization is the **Committee on World Food Security (CFS)**. In this case, the same procedures have been followed in the correspondent website (www.fao.org/cfs/).

- > Products
 - > Major Products
 - > Policy recommendations
 - > Final Reports

From these, it has been decided to work only with the policy recommendations documents, because they are more precise and comprise the basis of the CFS strategical proposals⁸.

Category B

To access the documents produced by the **Brazilian government**, the governmental website has been accessed to get an overview of the political structure (www.brazil.gov.br). Within the official website, the next step of the search has been through the visit of the pages of the *Ministry of Agriculture*, *Ministry of Citizenship*, *Ministry of Health*, *Ministry of Environment* and finally the *Ministry of Women, Family and Human Rights*. From the review, the main structures involved in the country’s Food Security management have been identified.

The national system that articulates the response in Food Security in Brazil is the National Food and Nutrition Security System (SISAN for its acronym in Portuguese), and therefore its website has been checked (www.mds.gov.br/caisan-mds/sisan)⁹.

⁸ The policy recommendations of the CFS are summaries of the agreements taken during the annual meeting of the CFS held in Roma. In those meetings, the CFS produces Final Reports containing the agenda of the session and the recommendations agreed. The policy recommendations are based on larger reports called HLPE reports (the High Level Panel of Experts), each year focusing in different topics.

- > “Publicações” (publications)
 - > “Caisan Nacional” (national CAISAN)¹⁰
 - > “Outras Publicações” (other publications)

To increase the scope of the policies found, the website of the Food and Nutrition Security Platform of the Community of Latin American and Caribbean States (CELAC) has been also reviewed (www.plataformacelac.org)¹¹. There, the Brazilian list of policies and programs has been checked in the window “Countries: Brazil”.

- > Brazil
 - > List of policies, plans and strategies in FNS

Category C

Regarding the **Landless Workers’ Movement (MST)** documents, their website has been revised (www.mst.org.br).

- > “Publicações” (publications)
 - > “Jornal Sem Terra” (landless magazine)
 - > “Biblioteca Virtual” (virtual library)

The first entry showed last publications on the “Journal Sem Terra”, published by the organization (an informative magazine) and one document was found as the current proposal on agrarian reform including food sovereignty (57). The window “Biblioteca Virtual” presents a pool of grey literature on the topic (resources used further for the discussion).

During the literature search, other sources have been reviewed by snowball method (from primary found documents) aiming to gain a deeper understanding on the topic. Available reports and peer-reviewed papers regarding Food Security policies from Google Scholar have also been collected for further discussion and results interpretation, using as key words: Food Security, Brazil, agrarian reform, food sovereignty, malnutrition, land tenure, food policies and strategies.

⁹ SISAN is a public system composed by the Inter-ministerial Food and Nutrition Security Chamber (CAISAN) and the National Food and Nutrition Security Council (CONSEA) with participation from the civil society and all the ministries (103). Currently, the *Ministry of Social Development* (MDS) has transferred its competences to the *Ministry of Citizenship*; yet, the website of the CAISAN is still linked to the MDS site.

¹⁰ All the published documentation is organized by years and territorial applicability; for the purpose of the study it has been only considered the national sphere.

¹¹ This platform, created by the CELAC with the support of the FAO and the Latin American Integration Association, unifies each of the community country’s policies and programs in Food Security to increase awareness among the state of Food Security in those territories (104).

VIII.iii ELIGIBILITY CRITERIA

For the purpose of the study, an inclusion/exclusion criterion has been set in order to establish a method and avoid any bias on the selection. The following exclusion criterion has been applied to the documents found during the search:

EXCLUSION CRITERIA for documents selection	
Does not include	Food Security, food insecurity or food and nutrition security (in English, Spanish or Portuguese)*
Setting of focus	Urban-based
Topics excluded as main issue	Fisheries and coast management, food supplements, breastfeeding/ infant or child nutrition, markets taxation/ labelling, recommendations targeted to a specific at-risk group (HIV-patients, elderly, pregnant women, ...)
Audience addressed	Documents from teaching notes or workshop reports

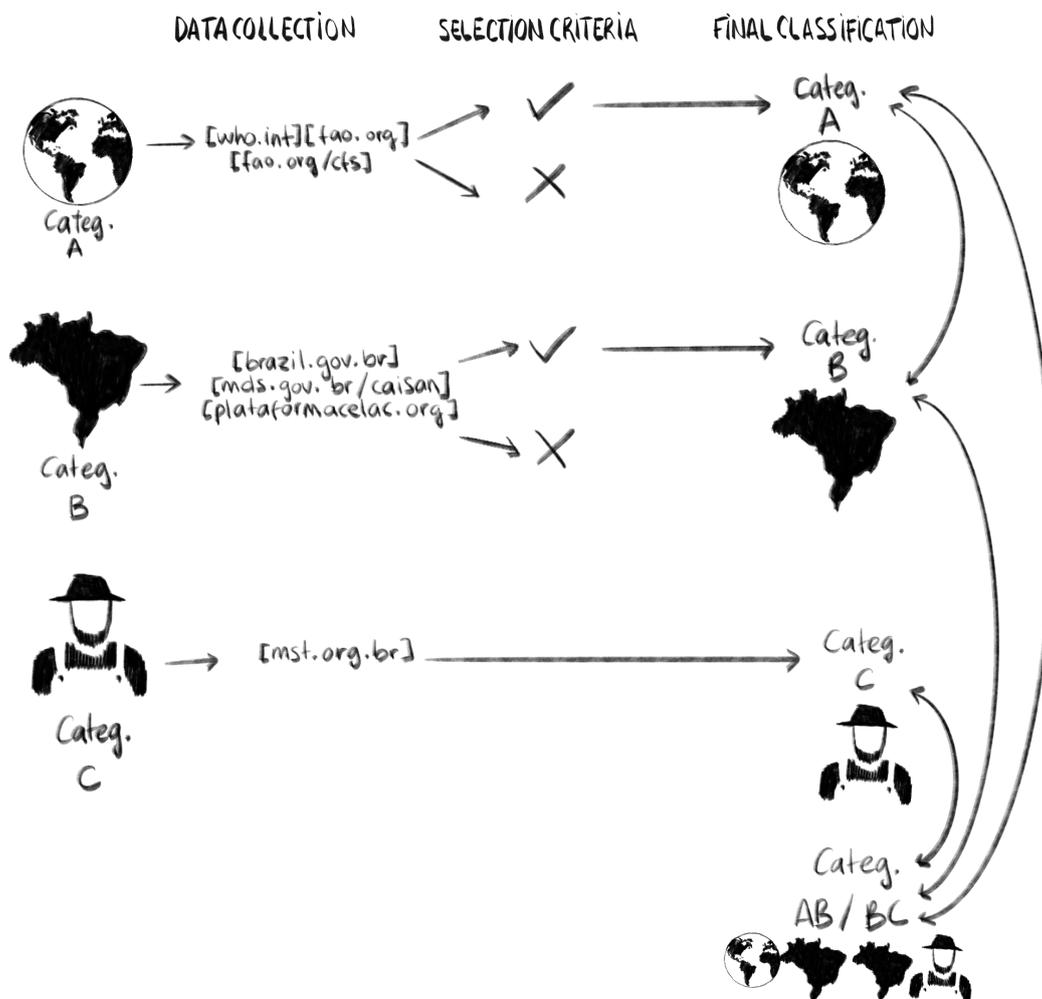
Table 2. Exclusion criteria defined for the selection of the documents to review. *In order to answer the third research question, the documents found in category C were not screened by this exclusion criteria due to the interest to include on the analysis the use of food sovereignty instead.

When reviewing the documents found during the literature search, a varied number of different topics covered has been encountered. As explained in the introduction, Food Security is a broad field of inquiry with implications at several levels of policy making; depending if they are addressed to reach the immediate, underlying or basic causes of malnutrition (27). It has been decided to dismiss documents focusing on very specific policy topics that require special considerations in Food Security such as antenatal care or HIV-patients as the scope of the project focuses mainly on general policies. This distinction has been done by assessing that the majority of such policies are already included in the generic ones (i.e. women focused policies can be included on the ones targeting population at risk).

VIII.iv FINAL CLASSIFICATION

Once all the documents have been obtained, some needed to be relocated because they did not fit on one category but another. Concurrently, some of the documents found have been categorized as “category AB” or “category BC” if the different organizations produced the document together. The list of the documents selected can be found in the annex XV.i.

A summary of all the search process is represented on the flow diagram:



VIII.v CONTENT ANALYSIS DESIGN

In order to analyze the content of the documents to obtain the information needed to answer the research questions, a reading of all of them has been done while collecting information regarding:

- Definition of Food Security (if available).
- Strategic proposals on Food Security policies and land tenure (using the terms *proposals, actions, strategies, recommendations*) by key-word search (presence of the different combinations of selected terms in the **table 3**)¹² for the documents' categories A and B.
- Strategic proposals on land tenure (using the terms *proposals, actions, strategies, recommendations*) by the MST (documents' category C).

(Land OR territory/territorial) AND (tenure OR ownership OR possession/dispossession OR rights OR titling OR access OR property/appropriation/expropriation);
 (Land OR Agrarian) AND (reform)

Table 3. Defined terms for key-word search.

¹² The Portuguese and Spanish versions of the terms used for the key-word search can be found in the annex XV.ii.

IX. RESULTS

IX.i FOOD SECURITY CONCEPTUALIZATION

In order to answer the first research question (how is Food Security conceptualized in the official channels reviewed?) a summary of the definitions found is presented in the **table 4**, indicating the name and the category of the document.

DOCUMENT (category)	DEFINITION
The nutrition challenge: food system solutions (A)	"The Nutrition Decade (...) envisions a world where all food system actors coordinate action and strengthen collaboration so that all people at all times and at all stages of life have access to sustainable, affordable, diversified, safe and healthy diets"
Forests for improved Nutrition and Food Security (A)	FAO
Developing sustainable food value chains, Guiding principles (A)	FAO, "(...) access should be the driving dimension in long-term development"
Global Strategic Framework for Food Security and Nutrition (A)	FAO, "The nutritional dimension is integral to the concept of food security and to the work of CFS"
The state of Food Security and nutrition in the world 2019 (A)	FAO
Integrated policy for forests, Food Security and sustainable livelihoods (A)	FAO
Sustainable wood fuel for Food Security (A)	FAO, "Nutrition security is integral to the concept of food security"
Climate-smart Agriculture (A)	"Ensuring availability of calories and sufficient global production is not enough; we also need to make sure that enough food is accessible to everyone, everywhere, physically and economically. In addition, we need to ensure that this food is properly utilized in the right quality and diversity. The goal is to ensure the stability of these three components of food and nutrition security: availability, access and utilization"
Sustainable Diets and Biodiversity, directions and solutions for policy, research and action (A)	"Genuinely sustainable food systems where the core goal is to feed everyone sustainably, equitably and healthily; which addresses needs for availability, affordability and accessibility; which is diverse, ecologically-sound and resilient; which builds the capabilities and skills necessary for future generations"
PNAAs (B)	"Food and nutritional security is considered the guarantee of the human person to access food every day, in sufficient quantity and with the necessary quality"
Lei SISAN (B)	"Food and nutrition security consists in realizing the right of everyone to regular and permanent access to quality food, in sufficient quantity, without compromising access to other essential needs, based on health-promoting food practices that respect cultural diversity and that be environmentally, culturally, economically and socially sustainable"

PNPCT (B)	“Food and nutritional security as a right of traditional peoples and communities to regular and permanent access to quality food, in sufficient quantity, without compromising access to other essential needs, based on health-promoting food practices that respect cultural diversity and that are environmentally, culturally, economically and socially sustainable”
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Table 4. Definitions of Food Security found in the documents reviewed.

Among the definitions found in the documents reviewed, the one set by the FAO is used directly in six cases. This is the definition established at the introductory section IV.ii of the present study.

Observed in all the definitions, “access to food” seems to be the most relevant aspect. Even more so, the term is also emphasized in one document to be considered the leading dimension when designing long-term development policies (58). The perception of time is remarked in different expressions: the access should be “permanent”, “regular”, “every day” or “at all times”. This reference to long-term sustainability is reflected not only in regard to food access, but also to diets, food systems, the environment or the other Food Security dimensions.

Other topics that appear most frequently are: the inclusion of “all people” as the beneficiaries of Food Security; the different diet characteristics or qualities of the food to be “safe”, “nutritious”, “healthy”, “affordable” (or similarly, “*without compromising access to other needs*”), “diversified” or “sustainable”; the quantity of food accessible through the expressions of “enough” or “sufficient”; and finally the considerations for “preferences” appear more specified in the Brazilian documents with the expression of “respect cultural diversity”.

In regards to the dimension of utilization, only once is the term specifically mentioned that “*the goal is to ensure the stability of these three components of food and nutrition security: availability, access and utilization*” (59). The inclusion of the term “equity” is similarly only present in one case (60).

One of the documents reviewed also presented a definition for **food insecurity**, describing it as “*A situation that exists when people lack secure access to sufficient amount of safe and nutritious food for normal growth and development and an active and healthy life. It may be caused by the unavailability of food, insufficient purchasing power, inappropriate distribution or inadequate use of food at the household level*” (23). The recurrent topics described previously are also present in this conceptualization (access, quantity, quality, and all the four analytical dimensions).

With regards to the document reviewed by the MST, there is no use of the term “Food Security”. Instead, “food sovereignty” is used as a principle to be guaranteed (57), which in their view implies a broader application of equity models and social justice.

IX.ii FOOD SECURITY AND LAND TENURE STRATEGIES

In order to analyse the different proposals designed for the three categories A, B and C, a keyword search has been performed on the selected documents. In this section, the results of the keyword search are presented in different tables; detailed information and quotes can be found in annex XV.iv.

From the first review on different guidelines in Brazil, the inclusion of land reforms and tenure security as strategies to foster Food Security appear to be limited, in comparison to other strategies such as school feeding programs or cash transfers.

The identified main document from category A in terms of land-property Food Security framework is the “*Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security*” (VGGT) by the FAO and the CFS (33), for being quoted or referred at many of the other selected documents (32,34,50,59,61–65).

The VGGT guidelines set up five principles to be guaranteed by the states, used here to classify the different approaches to develop policies: (a) recognition and respect of tenure rights, (b) safeguard tenure rights, (c) promotion and facilitation of tenure rights enjoyment, (d) prevention of tenure conflicts and (e) provision of access to justice. Although these categories are distinct, they tend to overlap and reappear in each other’s categories.

(a) Policies to recognize and respect tenure rights

The VGGT describes the importance of reinforcing tenure rights and the promotion of tenure security as critical factors for Food Security; livelihoods access and the necessary means for living in a piece of land (such as shelter, food and water) can be threatened otherwise, especially in the rural poor communities (33).

In order to achieve land tenure security, it has been defined that the state should be responsible to implement measures for tenure rights holders (and their rights) through identification and respect (66). Included in some of the documents reviewed, is an emphasis on the respect to rights of the indigenous communities in order to guarantee their practices and traditional ways (production methods, technologies or crops varieties) (67). The summarized results can be found in **Table 5**.

A 	B 	C 
<ul style="list-style-type: none"> -Respect the tenure rights of indigenous communities (33,66,67) 	<ul style="list-style-type: none"> - Recognize and guarantee indigenous' rights (68,69) - Informal land tenure regularization (70)* - Improve regularization processes and review the normative (71)** - Create a National plan to ensure completion of titling registries (71)** - Publish and implement the PNGATI (71)** - Guarantee the traditional peoples and communities their territories, and access to the natural resources (68,69) - Propose expropriation decrees for quilombola communities (72) 	<ul style="list-style-type: none"> - Guarantee tenure rights for all indigenous population (57) - Guarantee of titling (use grant) (57) - Double title to include women (57)

Table 5. Identified strategies regarding the recognition and respect of tenure rights. *Document belonging to category “AB”, written by the WHO, FAO and the Brazilian government. **Document belonging to category “BC”, written by the Brazilian government with the collaboration of the MST.

(b) Policies to safeguard tenure rights

It has also been identified that the VGGT remarked that it is the responsibility of the state to protect tenure right holders against loss of such rights (33,66). This principle also covers the protection against rights violations such as forced evictions. Clauses found in the documents include recommendations regarding the implementation of monitoring practices by state agencies to fulfil this principle (61). Some of the documents refer to special protection needs for the rights of the identified vulnerable populations (indigenous people, smallholders, farmers or other local communities) (61,73–75); who are vulnerable both to tenure and food insecurity. The results are shown in **Table 6**.

A 	B 	C 
<ul style="list-style-type: none"> - Protection of tenure right holders against unreasonable loss of such rights (66) - Protection of infringements such as forced evictions by implement monitoring practices (61) - Special protection of indigenous people’s rights (61,73,74) 	<ul style="list-style-type: none"> - Propose expropriation decrees in favour of quilombola communities (72) - Assign areas to traditional peoples (72) 	<ul style="list-style-type: none"> - Ensure land democratization (use and property) (57) - Prevent the concentration of private property (57) - Establish maximum land ownership (57) - Develop social infrastructure amongst the rural and peasant communities (57) - Guarantee social benefit of nature goods and land (57)

Table 6. Identified strategies regarding safeguarding tenure rights.

(c) Policies to promote and facilitate enjoyment of tenure rights

In order to enjoy tenure rights, the state is called upon to ensure that the full realization of them, including that ecosystem services are accessible to all. It has been described that, in order to reduce farmer's vulnerability in terms of food and tenure insecurity, and to promote sustainable production practices; promoting tenure rights security and access is among the most effective strategies (66).

A 	B 	C 
<ul style="list-style-type: none"> - Guarantee indigenous practices and ways (67) - Ensure the full realization of tenure lands (67) - Revision of laws to guarantee equal opportunities to access the natural resources, ownership and inheritance both men and women (61,76) - Informal land tenure regularization (70)* - Review inheritance legal framework regarding the youth (66) 	<ul style="list-style-type: none"> - Assign areas to traditional peoples (72) - Promote formal and informal land tenure regularization (70)*(71)** - Improve regularization processes and review the normative (71)** - Create a National plan to ensure completion of titling registries (71)** - Guarantee the traditional peoples and communities their territories, and access to the natural resources (68,69) - Provide technical assistance and rural extension (71)** -Expand and ensure access to land and territories (77) - Ensure the delivery of supporting documents for registration (71)** - Promote territorial planning initiatives (6) - Guarantee budget and structuring of the bodies responsible for regulating access to land (72) - Reinforce the National Land Credit Program (71)** - Train the public on agrarian reform, credit and regularization (71)** - Promote the inclusion of women's name in the agrarian reform registries (72) 	<ul style="list-style-type: none"> - Guarantee of titling (use grant) (57) - Double title to include women (57) - Prohibition to sell parcels of Agrarian Reform (57) - Reduce registration bureaucracy (57) - Ensure all Brazilian workers access to the land to live on it and work (57) - Improve regularization processes and review the normative (71)** - Create a National plan to ensure completion of titling registries (71)** - Provide technical assistance and rural extension (71)** -Promote land tenure regularization (57) - Ensure the delivery of supporting documents for registration (57) - Reinforce the National Land Credit Program (57) - Guarantee social benefit of nature goods and land (57)

Table 7. Identified strategies regarding promotion of tenure rights.*Document belonging to the category "AB", written by the WHO, FAO and the Brazilian government. **Document belonging to the category "AB", written by the Brazilian government and the FAO.

(d) Policies to prevent tenure conflicts

In favour of guaranteeing tenure security, the state should provide measures for tenure conflicts prevention, and in the event of such occurrence, to avoid escalation to violent events. It should also set in place procedures to prevent corruption (33). Such

measures are important because a rise in violence increases food insecurity by loss of means to produce, reduces access to food, increases forced migrations and also put lives at risk.

A 	B 	C 
<ul style="list-style-type: none"> - Protection of infringements such as forced evictions by monitoring practices (61) - Provide measures for tenure conflicts prevention (61) - Provide mechanisms to avoid escalation to violent events (61) - Provide measures to avert corruption (33) 	None	<ul style="list-style-type: none"> - Prevent handing areas to large companies (use instead to assist peasant families) (57) - Consult all families affected by public works (57)

Table 8. Identified strategies regarding prevention of tenure rights conflicts.

(e) Policies to provide access to justice

For cases of infringement or land tenure related conflicts, the VGGT refers to the state provision of channels for access indemnities (33). As previously mentioned, conflicts in land could increase food insecurity. Through providing access to conflict management tools such as mediation, the guarantee of damages reparation or restitution could improve the situation for the most vulnerable part of the conflict.

A 	B 	C 
<ul style="list-style-type: none"> - Provide accessible means to manage conflicts by judicial authorities (33) - Guarantee fair compensations in case of expropriation (33) 	None	<ul style="list-style-type: none"> - Consult all families affected by public works (57) - Compensations (land for land) in case of expropriation (57) - Ensure the return of territories, mineral resources and biodiversity appropriated by foreign companies (57) - Expropriate the lands without social function (57) - Prioritize expropriation of the land property of foreign companies (57) - Expropriate all farms with slavery work and trafficking to allocate them into the Agrarian Reform program (57)

Table 9. Identified strategies regarding providing access to justice.

Land reforms

Redistributive reforms are transactions that are meant to redistribute ownership concentration with a social justice perspective; following the principles of human dignity, equity and justice and non-discrimination, among others (33). It was specially

mentioned in the documents' analysed that redistributive reforms can increase the equity of land access promoting inclusive rural development; meaning that the regulation of land tenure rights can reduce the vulnerability of certain groups (women, youth, indigenous communities, smallholders or the poor) and therefore, increase Food Security. The FAO calls upon states to establish legal mechanisms in order to advance land reforms for land access enhancement (76). In the previously described framework, land reforms overlap in the recognition of tenure rights, promoting the enjoyment of them or as prevention for tenure conflicts.

A 	B 	C 
<ul style="list-style-type: none"> - Apply redistributive policies including land reform in settings of strong ownership inequalities (62) - Develop the regulatory framework of land reforms through participatory procedures (33) - Engage vulnerable groups in land reform processes (61,66) 	<ul style="list-style-type: none"> - Support the construction of a model based on sustainable territorial development and land reform (78) - Promote land reform and regularization policies (71,72) - Settle 120,000 families in agrarian reform projects to boost agroecological practices (72) - Train the public on agrarian reform, credit and regularization (71) - Obtain rural properties to create land reform settlements (72) - Promote agricultural extension for the PNRA¹³ beneficiaries (72) - Promote the inclusion of women's name in the agrarian reform registries (72) - Allocate new land reform parcels for rural youth (71) - Title 36,000 hectares for the benefit of quilombola communities (72) - Propose expropriation decrees for quilombola communities (72) 	<ul style="list-style-type: none"> - Popular agrarian reform (including democratization of land, establishment of water as a common good, farmers' education, etc.); democratize access, use and possession of land (redistributive justice) (57)

Table 10. Identified strategies related to land reforms.

In this analysis, the concrete agreements have been found in the *“Brazilian commitments to the UN Decade of Action on Nutrition”* agreed with the WHO, the FAO and the Brazilian government and also in the *“Dietary Guidelines for the Brazilian Population 2014”*, but those documents are focused on nutrition actions that do not include tenure rights.

With regard to the Brazilian government and the MST, two documents have been found in the category “BC”; the *“Plano Nacional de Agroecologia e Produção orgânica*

¹³ PNRA is the acronym from the Portuguese Plano Nacional de Reforma Agrária (National Plan for Agrarian Reform).

II” and the “*Política Nacional de Saúde Integral das Populações do campo e da floresta*”.

X. DISCUSSION

Polycentric governance

The integrated understanding of Food Security and its main drivers is an important step towards its achievement (7). The inclusion of different factors that may have an impact on ensuring availability, access, utilization and stability in food policies is important for the global objective to eradicate hunger. Polycentric governance, “*a complex form of governance with multiple centres of decision making, each of which operates with some degree of autonomy*” (79) is a conceptual idea to increase policies integration by bridging differently specialized organisms or institutions (80).

The challenges identified by Candel and Pereira (2017) in polycentric governance include: common construction of a policy frame, policy goals formulation, involvement of different actors in policy-making and to obtain a set of reliable policy instruments (80). Regarding the results presented above in the present descriptive analysis, those challenges are being reviewed below.

Fathoming Food Security

The aim to understand how the term Food Security is conceptualized in the selected categories A, B and C had been defined to distinguish if there is common ground for integration. The Food and Agriculture Organization of the United Nations, as an international guide for Food Security policies, appears to be the main recognized player shaping the common understanding of Food Security in the international community.

Their proposed framework of four dimensions of Food Security is used in many of the reviewed documents under category A (WHO, FAO and CFS). Documents of category B presented many similarities. Besides, the Brazilian government’s definition of Food Security presents the connection with the HRAF with the citation of “right” (81). This mention appears even before the reform of the Constitution in Brazil incorporating the right to food as a social right in 2010 (64/2010) (47).

In rural Brazil, after years of activity of the MST and *La Vía Campesina*, the term Food Security has been expanded to the concept of **Food Sovereignty**¹⁴, which incorporates other dimensions of Food Security and acts as a framework to assess the sustainability

¹⁴ Food Sovereignty: “*The right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems*” (105).

of food systems (30). This concept was used in the MST document reviewed instead of Food Security. This broader conceptualization has been used by different authors and yet, the international community (represented by the WHO, the FAO and the CFS) nor the Brazilian government, frequently use it.

Formulating common objectives

As mentioned above, the action to establish common goals among different actors is another step towards integrated policies for Food Security. The Food Security strategies identified by category A, showed a perspective of considering tenure rights enhancement from different angles; from promoting land access, to regulatory modifications or civil society engagement, specifically defined by the VGGT. The scope of voluntary guidelines like the VGGT is to offer proposals to countries to support and create general understanding. In addition, shared goals are to be defined in concrete commitments or programs built between the UN agency and the state (such are the SDGs).

As presented in the results, not many of the selected documents included common goals; which emphasizes the need of collaboration for objectives definition in regard to categories A and B. This means that, irrespective of the frequent mention of a multi-stakeholder approach on policy making, the definition of shared objectives must still be improved upon. With respect to the objectives set by the Brazilian government and the MST, the organization of a common agenda for the 2016-19 PLANAPO demonstrates a will for improving integration.

Multi-sectoral involvement

The inclusion of the many different actors who play a role in the food system at the table for policy-making is another of the key challenges suggested to be reinforced for integration (80), and overlaps with the previously discussed “common objectives”. The concept of integrating all the voices is widely emphasized in category A documents (73,82,83) but mainly referred to other aspects of Food Security policies than land tenure. The inclusion of different actors in Food Security and land policies appear to promote the engagement of vulnerable populations (61,66) and this is also particularly mentioned in the VGGT (33).

For the Brazilian government policy review, cross-sectoral approach on Food Security and land policies is observed also by including farmers and local communities in the design of policies (6,71,72,78). In fact, the Brazilian Food Security structures are very much integrative with the inclusion of different sectors. The clearest example is the National Food and Nutrition Security Council (CONSEA), a body that reinforces the idea of social participation being formed by two thirds of social society and only one third by governmental groups (70). Unfortunately, one of the first actions of the newest government was to dissolve this structure by the MPV 870 (84,85).

In regards to the MST, the multi-sectoral approach is not specifically mentioned in the document reviewed. Instead, the coordination between the working class and farmers is implied in their proposal of “Popular” Agrarian Reform; unifying voices against the system of exploitation and therefore they do not seem willing to integrate with actors such as private companies. Their program seeks strongly for the “democratization of land”, implying that the governance of power should remain with the peoples. On the other hand, historically, the MST has been involved in many policy design processes, particularly during the years of the Workers’ Party (PT for its acronym in Portuguese) governance (46).

Policy instruments for change

Concerning the provision of Food Security policies, there is a need for a full integration of land tenure demonstrated by actions that go beyond merely words and, a mix of policy mechanisms is needed (80). As mentioned before, the international agencies under category A mainly produce “soft” instruments which are not legally binding. These guidelines and strategies are focused on providing conceptual frameworks, but not more. Thus, political will from the states is needed in order to use land tenure approaches, as in the case of the VGGT.

The results found when analyzing the contents of the Brazilian Food Security policies shows an attempt to implement redistributive policies especially for vulnerable populations and traditional peoples, aiming to facilitate access to land and its natural resources. However, the government has not yet presented a strong commitment regarding land tenure in Food Security policies, as the topic is not clearly seen in the national legislative instruments. The national Food Security plans present different proposals to address land tenure insecurity, and while issues related to land tenure are mentioned, these are not reinforced by national policy laws.

Regarding the MST, their nature of a civil society organization only provides them the power of influencing the governments. To strengthen it, they have developed a strategy of land occupation and establishment of settlements “*as a first step to carry on the Popular Agrarian Reform*” (86). Today, around 350.000 families are living in occupied lands belonging to major land owners under the MST movement around the country (87).

Final considerations

The world produces enough food for all, and yet people die of hunger and suffer from malnutrition. Furthermore, the situation that the 60% of the total malnourished in the world are food producers (59), sounds unbelievable. Land tenure security is proven to provide benefits to rural communities and to Food Security in general; and there are demands for it from the peoples in Brazil. Brazil has taken its first steps into integrating

this issue into the country's national policies by including some strategies in the national plans, but it remains to be seen which parts will materialize into real action.

XI. LIMITATIONS

The limitations of the study include diverse factors. On one hand, the wide scope of the study, being Food Security a very broad topic, makes it difficult to extract and draw firm conclusions. Further, the limitation of the data used does not give a complete picture as agrarian policies have not been included in the search. The lack of such documents could potentially illustrate more realistically how both approaches interrelate, but the study design aimed to focus on the approaches of land tenure derived from the Food Security field and its actors.

On the other hand, as the analysis has been only conducted on written documents, the real implication of these documents in actions remains unknown, and the assessment of the integration of the policies can only be provided theoretically. Furthermore, as Brazil is a federal state, it may have concrete local policies that are connected to land ownership which might be in place but have not been reviewed; and thereby have been omitted in the present work.

Lastly, due to matters of translation from Portuguese to English, and the laws and policies having not being reviewed by a law-expert translator, some of the expressions could be misunderstood and lead to confusion. We intended to avoid this limitation by revising the translations with a Portuguese teacher, but the technicalities of the regulatory idiom could remain indistinct.

XII. CONCLUSIONS AND RECOMMENDATIONS

In conclusion, we can accept the presented hypothesis, and affirm that there is a lack of integration between Food Security policies and land tenure in rural Brazil.

- Food Security policies can be designed to tackle several issues, such as poverty, education or land tenure, and most of the strategies overlap in different areas.
- Land tenure security can reinforce Food Security through different factors; mainly through the increase of access and availability of food.
- The government of Brazil includes some objectives in the national plans and policies regarding land tenure, mostly focusing on increasing access to land for the vulnerable

population. Some of these documents are produced in collaboration with civil society including the MST.

- The government of Brazil does not provide a strong legal framework to guarantee tenure rights in Food Security policies; this could weaken the efforts of improving access to land for the rural population.

- There seems to be a shared policy framework regarding Food Security from the international bodies and the Brazilian government, but the conceptualization of the MST through Food Sovereignty implies broader aspects.

For a full integration of Food Security and land tenure policies in Brazil, it is needed to strengthen the partnership of all the actors, including governmental institutions and society, and to create efficient monitoring mechanisms.

Moreover, in order to assess the actual situation in the country, a review on the implemented policies and programs is suggested. Due to the scope of this project, those factors could not be evaluated, and therefore exist a gap between the documents reviewed here in comparison to the real action on the ground. It is recommended to develop further research on this.

Nowadays, the existing COVID-19 crisis is worsening the situation for many smallholders and traditional communities, where not only access to land but also to healthcare services is limited (88). We expect the results of this study to increase the evidence on the need for policy integration in Food Security, to raise interest for strengthening the efforts and little contribute to finding solutions for malnutrition; especially, for landless communities that now are facing an additional layer of difficulties dealing with the world's pandemic.

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XIV. REFERENCES

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XV. ANNEXES



XV.i SUMMARY OF SELECTED DOCUMENTS

NAME	ACRONYM	YEAR	AUTHOR	CAT
"Energy-smart" Food for people and Climate		2011	FAO	A
Guideline. Assessing and managing children at primary health-care facilities to prevent overweight and obesity in the context of the double burden of malnutrition		2017	WHO	A
Biofuels and Food Security		2013	CFS	A
Building a common vision for sustainable food and agriculture		2014	FAO	A
Climate-smart Agriculture		2013	FAO	A
Connecting Smallholders to Markets		2015	CFS	A
Coping with water scarcity. Action framework for Agriculture and Food Security		2010	FAO	A
Developing gender-sensitive value chains, Framework		2016	FAO	A
Developing gender-sensitive value chains, Guideline for practitioners		2018	FAO	A
Developing sustainable food value chains, Guiding principles		2014	FAO	A
Edible insects Future prospects for food and feed security		2013	FAO	A
Essential Nutrition Actions: mainstreaming nutrition throughout the life-course		2019	WHO	A
Food Losses and Waste in the Context of Sustainable Food Systems		2014	CFS	A
Food Security and Climate Change		2012	CFS	A
Forests for improved Nutrition and Food Security		2011	FAO	A
Framework Programme on Climate Change Adaptation		2011	FAO	A
Framework for Action for Food Security and Nutrition in Protracted Crises		2015	CFS	A
Gender, Food Security and Nutrition		2011	CFS	A
Genetic Resources for Food Security and Nutrition		2015	FAO	A
Global nutrition policy review 2016-2017		2018	WHO	A
Global Strategic Framework for Food Security and Nutrition		2017	CFS	A
Guidelines on irrigation investment projects		2018	FAO	A
How to increase Food Security and Smallholder Sensitive Investments in Agriculture		2011	CFS	A
Improving nutrition outcomes with better water, sanitation and hygiene Practical solutions for policy and programmes		2015	WHO	A
Integrated policy for forests, Food Security and sustainable livelihoods		2016	FAO	A
Investing in Smallholder Agriculture for Food Security and Nutrition		2013	CFS	A
Land Tenure and International Investment in Agriculture		2010	CFS	A
Landscapes for life. Approaches to landscape management for sustainable food and agriculture		2017	FAO	A
Livestock solutions for climate change		2017	FAO	A
Policy guide to improve water use efficiency in small-scale agriculture		2019	FAO	A
Principles for Responsible Investment in Agriculture and Food Systems		2014	CFS	A
Price Volatility and Food Security		2011	CFS	A
Save and grow		2011	FAO	A
Save and grow cassava		2013	FAO	A

Save and grow in practice		2016	FAO	A
Second International Conference on Nutrition Declaration		2014	WHO, FAO	A
Second International Conference on Nutrition Framework		2014	WHO, FAO	A
Second Report on the State of the World's Plant Genetic Resources for Food and Agriculture		2010	FAO	A
Social Protection for Food Security and Nutrition		2012	CFS	A
Strategic work of FAO for Inclusive and Efficient Food Systems		2017	FAO	A
Strategic work of FAO for Sustainable Food and Agriculture		2017	FAO	A
Strategies for effective and sustainable national nutrition plans and policies		2002	WHO, FAO	A
Strengthening nutrition action		2018	WHO, FAO	A
Sustainable Agricultural Development for Food Security and Nutrition: what roles for Livestock?		2016	CFS	A
Sustainable Agriculture for Biodiversity		2018	FAO	A
Sustainable Diets and Biodiversity, Directions and solutions for policy, research and action		2012	FAO	A
Sustainable Forestry for good Food Security and Nutrition		2017	CFS	A
Sustainable wood fuel for Food Security		2017	FAO	A
The contributions of livestock species and breeds to ecosystem services		2016	FAO	A
The nutrition challenge: food system solutions		2018	WHO, FAO	A
The Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture (GPA)		2011	FAO	A
The state of Food Security and nutrition in the world 2019		2019	WHO, FAO	A
The State of the World's Land and Water Resources for food and agriculture		2011	FAO	A
Towards Food Security and improved nutrition: increasing the contribution of forests and trees		2013	FAO	A
Towards zero hunger and sustainability		2017	FAO	A
Transforming Food and Agriculture to achieve the SDGs		2018	FAO	A
Voluntary Guidelines for the Conservation and Sustainable Use of Crop Wild Relatives and Wild Food Plants		2017	FAO	A
Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security	VGGT	2012	CFS, FAO	A
Voluntary Guidelines to support the progressive realization of the right to adequate food in the context of national Food Security		2005	FAO	A
Water for Food Security and Nutrition		2015	CFS	A
Work programme of the United Nations Decade of Action on Nutrition (2016-2025)		2017	WHO	A
Brazil's Commitments to the United Nations Decade of Action on Nutrition 2016-2025		2015	WHO, FAO, Govt	AB
Dietary Guidelines for the Brazilian Population 2014		2015	Govt, FAO	AB
Estratégia intersetorial da prevenção e Controle da Obesidade 2014-2018		2014	Govt	B
Guia de Políticas e Programas		2017	Govt	B
Intersectoral Strategy for Reduction of Food Loss and Waste in Brazil		2018	Govt	B
Lei nº 11.346, de 15 de setembro de 2006 (SISAN)		2006	Govt	B
Decreto nº 7.492, de 2 de junho de 2011 (Plano Brasil Sem Miséria)	BSM	2011	Govt	B
Plano Nacional de Adaptação à Mudança do Clima vol.1	PNA	2016	Govt	B
Plano Nacional de Adaptação à Mudança do Clima vol.2	PNA	2015	Govt	B
Plano Nacional de Segurança Alimentar e Nutricional 2016-2019	PLANSAN II	2015	Govt	B

Decreto nº 7.794, de 20 de agosto de 2012 (Política Nacional de Agroecologia e Produção Orgânica)	PNAPO	2012	Govt	B
Decreto nº 6.040, de 7 de fevereiro de 2007 (Política Nacional de Desenvolvimento Sustentável dos Povos e Comunidades Tradicionais)	PNPCT	2007	Govt	B
Decreto nº 7.747, de 5 de junho de 2012 (Política Nacional de Gestão Territorial e Ambiental de Terras Indígenas)	PNGATI	2012	Govt	B
Portaria nº 2.446, de 11 de novembro de 2014 (Política Nacional de Promoção da Saúde)	PNPS	2014	Govt	B
Decreto nº 7.272, de 25 de agosto de 2010 (Política Nacional de Segurança Alimentar e Nutricional)	PNSAN	2010	Govt	B
Lei nº 10.689, de 13 de junho de 2003 (Programa Nacional de Acesso à Alimentação)	PNAA	2003	Govt	B
Lei nº 11.947, de 16 de junho de 2009 (Programa Nacional de Alimentação Escolar, Programa Dinheiro Direto na Escola)	PNAE	2009	Govt	B
Programa Saúde na Escola	PSE	2011	Govt	B
Plano Nacional de Agroecologia e Produção orgânica 2016-2019	PLANAPO II	2016	Govt, MST	BC
Política Nacional de Saúde integral das Populações do campo e da floresta	PNSIPCF	2011	Govt, MST	BC
Programa Agrario del MST		2014	MST	C

XV.ii KEY-WORD SEARCH TERMS BY LANGUAGE

ENGLISH	PORTUGUESE	SPANISH
Land/territories	Terra/ território	Tierra/ territorio
Land/Agrarian reform	Reforma Agrária	Reforma Agraria
Right to land/ land rights	Direito à terra, direitos da terra, direitos fundiários	Derechos de tierra, derecho a la tierra, derecho sobre la tierra
Land tenure	Posse da Terra	Tenencia de tierra
Land possession/ dispossession	Posse/ desapropriação da Terra	Posesión/ desposesión de la tierra
Land ownership/property	Propriedade da terra	Propiedad de la tierra
Land appropriation/ expropriation	Apropriação/ expropriação de terras	Apropiación/ expropiación de tierras
Land titling	Titulação de terras	Titulación de tierras
Land access	Acesso à terra	Acceso a la tierra

XV.iii GENERAL FRAMEWORK OF FOOD SECURITY STRATEGIES

In order to provide a framework on the available strategic recommendations and proposals in Food Security from the Food and Agriculture Organization of the United Nations; a summary of them from the described in the Establishment of a Food Security Policy Framework of the FAO (27) is presented following the four dimensions.

Food policies to increase availability

To strengthen the food system in terms of supplies available to the population, two options are proposed by the FAO:

- **Facilitate the imports of food:** Measures to speed the import of food supplies from other countries in a moment of emergency including the reinforcement of local purchase mechanisms (82). The strategies proposed are: trade liberalization and trade reforms (89), the reduction of restrictions in transport (90) or the improvement on cooperation agreements.
- **Increase the domestic food production:** Natural resources management, agriculture extension and agricultural research (61), rural infrastructure development and improved technologies, food marketing (75) and land reforms (61). Those are policies merging with agricultural, aquaculture and livestock development policies being many twin-track approaches.

Food policies to increase access

Not accessing food is defined for not having the means to obtain it, and therefore the accessibility is framed in poverty alleviation policies (18), as purchasing power has been identified to be the most relevant factor for food access (19).

- **Employment and income generation:** Increase in the employment rate, better job opportunities (89) and diversification of income (66,75) can reduce the difficulties to obtain food products, especially in rural settings and targeting mostly women and youth (83).
- **Food prices regulations:** State interventions focused on avoiding price volatility, food exports taxation regulation, the increase of transparency on the trade system, the development of risk management instruments (82) and adaptability measures on agricultural supplies' costs (66,75).
- **Social safety nets:** Provisions of goods or economical support set aside to the most vulnerable population in case a crisis occur (91). Cash-based transfers (CTs) can be unconditional, conditional (in exchange for work or school attendance) cash vouchers or commodities vouchers; and they appear to be widely recommended (61,66,83). Other forms of social protection consider food assistance (66), feeding programs (66) or target subsidies. Again, these policies influence Food Security in many directions and can influence the four dimensions.

Food policies to improve utilization

Good utilization of food refers to using appropriately the food in terms of nutrition and specific needs. It requires knowledge on basic care and nutrition, knowledge and access to water, sanitary and hygienic conditions for food preparation (6). Hence, the policies for better utilization should focus on education, improved food preparation technologies, guarantee of WASH conditions, and assure health services coverage (18).

- **Food preparation and conservation:** Strategies proposed include training for improving the practices on food preparation and conservation (89) (mostly targeting women (92), clean conditions promotion in the cooking area and safe measures on food storage. Those are proposed to be performed while strengthening the relationship from public health services.
- **Nutritional education:** In order to enhance informed choices about practices and products (93), policies are focused on implementing nutritional education at schools (94) and also the promotion and support of breastfeeding (83,93).
- **Water, Sanitation and Hygiene (WASH):** Access to clean water, sanitation and hygiene are major issues to prevent diarrheal diseases, intestinal parasite infections, environmental enteropathy and food borne diseases. (95). Actions proposed gather from: implement education programs to enhance WASH practices (75), improve water management in agriculture and increase water

uses (95,96), invest to guarantee universal access and availability to clean drinking-water, or improve measures for water scarcity management (95,96).

Food policies to develop stability

The stability of access and availability of food can be at risk due to different factors; natural disasters (floods, earthquakes, storms, droughts, plagues, etc.), human-made hazards (war and forced displacement, resources exploitation, pollution, etc.) and seasonal variations of food supplies or others (21). Policies that could influence the stability process include:

- **Production stabilization:** Stabilize production in the long-term is important for the stability of the availability of foods, and it can be enhanced by improvements on the agricultural technologies used but also ecological sustainability measures and resilience play an important role (66,97). Employment security, working conditions and stabilization of the demand are potential strategies (98).
- **Stocking policies:** Not only for food safety guarantee, but also to ensure the stability of food supplies in time; stocking procedures are key to avoid lack of goods. Defined policies in regard to supplies stock include the promotion of either household level, national or regional stocking (i.e. seed and grazing fodder reserves or storage facilities improvement) (74,99,100). Also included in them can be found policies to establish monetary reserves in the form of emergency funds in case of market failure or economic crisis (66).
- **Rural infrastructure development:** Better infrastructure in the rural areas can provide stability of the other dimensions through the optimization of agricultural processes (from production, stocking, transport or commercialization). Strategies focused on the provision of better raw materials and tools, irrigation schemes and roads improvement are suggested to be applied (66,100).
- **Sustainability and climate-change adaptation:** In order to provide stability to Food Security dimensions, all measures possible to enhance resilience and ecological sustainability are required. This includes to reverse intensive unsustainable practices to an agroecological approach, research on climate-change modifications of the environment and biodiversity and apply the findings soon, effectively and adequately in each context (forest restoration policies, clean energies switch, protection of freshwater sources, etc) (90,98). Many guidelines include the respect and enhancement of indigenous traditional practices and knowledge to improve ecosystems resilience (97,101).

- **Political stability, good governance, social participation:** Conflict and weak governance are both identified to be improved when civil society is included in the policy-making and implementation. Food Security stability is improved when participatory inclusive processes are carried out (see discussion, section X), together with accountability measures, transparency and knowledge sharing (33,98,101).

Other strategies mentioned in the documents reviewed that are not explicitly included in this classification because of influencing all the dimensions at the same time, are: Gender-based equity policies, coherence between policies and multi-stakeholder coordination, quality food and healthy diets¹⁵, and the approach to guarantee the HRAF (Human Right to Adequate Food).

XV.iv DETAILS OF THE KEY-WORD SEARCH RESULTS

(a) Policies to recognize and respect tenure rights

In the reviewed Brazilian documents, these issues are reflected in the description of one of the PNPCT law objectives in the following context: “(...) *to promote the sustainable development of Traditional Peoples (...) with an emphasis on recognizing, strengthening and guaranteeing their territorial, social, environmental, economic and cultural rights (...)*” (68,69). The same expression is used at the goal 2.31 of the PNSAN II regarding the “*Assignment of areas aiming to promote the sustainable development of fishing communities, with emphasis on (same expression)*” (72). It has been also found as a need for governance strengthening: “*We urge the three levels of government to ensure public policies on access to land, drinking water, (...) and land tenure regularization of indigenous and quilombola territories and those of other traditional peoples and communities, as well as settlements and territories of citizenship identity*” (70)¹⁶.

Especially critical are the quilombolas and other indigenous groups’ rights recognition, and regularization reinforced in the PLANAPO II by “*Improve the process of regularizing quilombola territories through standardization of title in public and private lands (...)*”. This is earlier described in the document as a challenge: “*In the quilombola area, two major challenges were posed to Planapo: (1) revision of the Normative Instruction that regulates the procedure for the identification, recognition, delimitation, demarcation, disintrusion, titling and registration of lands occupied by remnants of quilombo communities, (...) and (2) the elaboration of the I National Strategic Titration Plan*”

¹⁵ “A balanced, diverse and appropriate selection of foods eaten over a period of time. A healthy diet ensures that the needs for macronutrients and essential micronutrients are met specific to the person’s gender, age, physical activity level and physiological state” (7).

¹⁶ Document belonging to the category “AB”, written by the WHO, FAO and the Brazilian government.

aimed at the completion of all (...) administrative procedures for the titling of quilombola territories instituted by INCRA, (...).” (71).

Regarding the MST reviewed documents, more than recognition, there is an established need to guarantee tenure rights; *“Guarantee the social function of the use, possession and ownership of land”* and also specifying indigenous’ rights; *“Guarantee the right to possession and use of land to all indigenous (...) communities”* (57).

(b) Policies to safeguard tenure rights

Regarding this approach, the Brazilian governmental documents mention the protection of rights in the context of climate-adaptive response *“Expand and strengthen protection, supervision and land-tenure status of lands traditionally occupied by indigenous peoples in a coordinated, synergistic and integrated manner (...)”* (6), being the beneficiaries of those policies normally indigenous and local communities, with their rights collected at the PNGATI. The goal 22 of the PLANAPO II (document written by the government with the collaboration of the MST) makes reference to it: *“Publish and implement the PNGATI Integrated Implementation Plan, aiming to guarantee the full possession of indigenous peoples in their territories.”* (71).

The mentions of the MST document regarding this topic are included in the land reforms section.

(c) Policies to promote and facilitate enjoyment of tenure rights

Proposals found in the reviewed documents include the revision of laws to guarantee equal opportunities to access the natural resources, ownership and inheritance both men and women (61,76), and also regarding how are the youth affected by the tenure rights inheritance legal framework (66). These approaches overlap on the promotion and protection of tenure rights for the most vulnerable (76).

Proposals for the guarantee of access and use of land appear on the Brazilian official documents; the PNPCT includes it on the specific objective I: *“guarantee the traditional peoples and communities their territories, and access to the natural resources”* (68,69). The national plan PLANSAN II includes an specific goal referred to provide *“Technical assistance and rural extension for agrarian reform”* (goal 3.11) (72). (“Rural extension” being activities related farmer education to apply innovative agricultural practices and enhance food production).

The goal 21 of the PLANAPO II includes the topic of promoting the accessibility but also recognising and safeguarding the tenure rights, by establishing the aim to *“Expand and ensure access to land and territories, promoting land tenure regularization and guaranteeing territorial rights and access to natural resources for indigenous peoples,*

traditional and settled communities of agrarian reform” (71). Later on the document, documentation is also mentioned: *“guarantee of territories for families, ensuring the delivery of supporting documents (CCU/CDRU)¹⁷”*.

Land access appeared in five of the eighteen Brazilian reviewed documents. The term was used in form of ‘target issue’ to be addressed on the first PLANSAN at the PNSAN *“The first National Plan for Food and Nutritional Security should contain policies, programs and actions related, among others, to the following themes: (...) VIII - access to land”* (77). The concept also appears in the guidelines for biome-based adaptation *“promote territorial planning initiatives, ensuring access to territory and fostering actions for economic inclusion”* (6) and as a strategic pillar of the PLANAPO II national plan; *“Guarantee access to land and territories as a way to promote the ethnodevelopment of traditional peoples and communities, indigenous peoples and land reform settlers”* (71).

Among the eight pillars of the PLANSAN II’s challenge 2, it has also been found *“Food and Nutrition Insecurity, Rural Productive Inclusion, Land Access and Territorial Management, Biodiversity, (...)”*; organized in 18 specific objectives very much focused on increasing land access to the quilombolas communities. The same document presents the term at the annexes when proposing improvements on the extension or revision of program and body budgets: *“Guarantee budget and structuring of the bodies responsible for regulating access to land and indigenous and Quilombola territories (...)”* (72).

Finally, the PLANAPO II identifies a credit-based strategy: *“(...) the National Land Credit Program, as a public policy of access to land, has been introducing, (...)”* (71).

In regards to the strategies proposed by the MST, revision of titling procedures are acknowledged; *“All beneficiary families of the Agrarian Reform will only receive concession titles for use, with the right to family inheritance, with dual ownership including women, the sale of parcels of land from the Agrarian Reform being prohibited”*. Further, the principle 1.9 establishes the need to *“Fight for governments to reduce bureaucracy, and create favourable conditions for access to land by landless families settled and/or already registered as beneficiaries of the Agrarian Reform program”*(57).

¹⁷ CCU is the Portuguese acronym for “Use Concession Agreement” (being the instrument signed between the land beneficiary and the governmental agency Incra). CDRU states for “Concession of Real Use Rights” and is the contractual instrument of transfer of the right to use the land reform parcel or lot to the beneficiary (106).

(d) Policies to prevent tenure conflicts

Of the Brazilian government documents, concrete policies regarding this matter have not appeared by the search performed.

Conflict prevention between local and foreign communities is mentioned in the MST reviewed document through the proposed strategy: *“Prevent the areas in the country's border areas from being handed over to large companies, especially foreign capital. Use them for the settlement of peasant families and for the regularization of peasants with possessions that already reside in those areas.”*(57).

(e) Policies to provide access to justice

For cases of infringement or land tenure related conflicts, the state is required to provide accessible means to manage them by judicial authorities; in the case of the tenure rights taken for public purposes (expropriation), the state should guarantee fair compensations (33).

Any referring to those issues is reflected on the key-word search on Brazilian official documents.

Instead, the MST document mentions different actions in referring to compensations in cases of expropriation and justice: *“Demand that governments consult all families affected by public works, so that the projects have the least possible social and environmental impact. And if such work is necessary, that they be assured the right to land for land, in the same conditions in which they lived and compensation for losses and damages, fairly, for their work and improvements built.”*; *“Ensure the return for the people of all the lands, territories, mineral resources and biodiversity of which foreign companies have appropriated”; “Immediately expropriate (...) all lands that do not fulfil their social function, relative to the productive use, the social and labour conditions of the workers and the conservation of the environment”*.

Other mentions appear when describing the principles of land democratization: *“Prioritize the process of expropriation of land from the largest farms, from the properties of foreign companies and from (other) companies”* (principle 1.5); and *“Immediately expropriate all farms where slave labour, drug trafficking, and merchandise smuggling are used. And allocate them to the agrarian reform program”* (principle 1.6) (57).

Land reforms

The review of the documents of the category A has presented a proposal to apply redistributive policies including land reform in settings of strong ownership inequalities (62). It has been found in the documents the encouragement of the state to

implement them developing the regulatory framework through participatory procedures including civil society (33), with a special mention regarding the engagement of vulnerable groups (61,66).

Regarding the terms' **land reform** and **agrarian reform** used by the Brazilian policies documents, seven of the total eighteen documents contain it. It appears as a key issue to improve Food Security and the realization of HRAF; *"From the point of view of Food and Nutritional Security and HRAF, it is necessary to support the construction of a model based on (...), on sustainable territorial development and agrarian reform (...)"* (78).

In health promoting policies, land reform appeared as a factor to take in consideration for intersectoral operations *"this Policy recommends mechanisms aimed at the implementation of intersectoral actions (...) bearing in mind: (...) and the advance of agrarian reform in Brazil and the territorial approach."* (9). Similarly, the approach of agroecology in the PLANAPO makes references to land governance: *"Land reform, land credit and land regularization policies represent important tools for the exercise of good land governance in a territorial context"* as well as the coordination of different policies *"PLANAPO acts jointly in the construction and strengthening of policies such as technical assistance and rural extension, food security, land reform, climate change, among others"* (71).

At the same document, it is also mentioned as a strategy to lead to agroecology practices *"Settle 120,000 families in agrarian reform settlement projects, in order to ensure the adoption of agroecological practices", "Consolidate land reform settlements, (...) and territories of traditional peoples (...), as priority areas for the promotion of organic and agro-ecological production", "(...) need to train the public on agrarian reform, land credit and land regularization, in order to identify the propitious spaces for the development of agroecology and their needs (...)." Further than this, agroecology approach in the PLANAPO aims to *"make the land reform settlements more sustainable (...) improve food security for settled families; (...) valuing the knowledge generated in the context of agrarian reform, (...)"* (71).*

At the document of PLANSAN II, the term has been found as one of the seven focus topics on the third challenge (actions to promote sustainable food production systems): *"Strengthening family farming, Agrarian Reform, Agroecological Transition, Women, Youth, Seeds, Climate Change"*. In the text, eight specific goals are settled under this category, including *"Obtaining rural properties to create land reform settlements"* (goal 3.8, 3.9) (72).

In the PLANAPO document, the term appears as well in one of the strategic pillars: *“Ensure the allocation of new land reform parcels for rural youth”*, reinforced by the 21st goal (71).

The topic of redistribution of land is included as a specific objective at the “land access” pillar of PLANSAN II, *“To title 36,000 hectares for the benefit of quilombola communities”* (goal 2.15), *“Proposition of 20 expropriation decrees for interest quilombola territories”* (goal 2.17) and *“Improvement of the process of regularization of quilombola territories through the standardization of titling in public and private lands (...)”* (goal 2.27) (72).

In regards to the MST, their proposal on “Popular Agrarian Reform” includes different objectives such as democratization of land, water as a common good or farmers’ education (establishing that *“access to education by workers is one of the basic conditions for the construction of the Popular Agrarian Reform”*). The pillar of land democratization includes all the factors MST considered for redistributive justice (socially-fair distribution of resources): *“Democratize access to land, to the goods of nature and to the means of production in agriculture, to all farmers”* (principle 1.1); *“Ensuring that the democratization of the use, possession and ownership of land and nature’s assets is linked to the interests and social, economic, cultural and political needs of the rural population”* (principle 1.2) and *“Guarantee to all Brazilian workers the right to have access to land to live on it and/or to work”* (principle 1.3), among others.

