

THE IMPACTS OF COVID-19 ON AGRIFOOD SYSTEMS

LESSONS LEARNED IN THE SEMIARID REGION OF NORTHEAST BRAZIL



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LIST OF ACRONYMS

AMPPEPI - Association of residents and small producers in the state of Piauí
ATER - Technical Assistance and Rural Extension
ANA - National Coordination of Agroecology
ASA - Brazilian Semi-arid Articulation
CAR - Regional Development and Action Company
CEALTRU - Center for Studies and Assistance to Workers' Struggles
CONSEA - National Council for Food and Nutritional Security
CONDRAF - National Council for Rural and Sustainable Development
COOPERCUC - Family Farming Cooperative of Canudos, Uauá and Curaçá
CTA - Continuous Technical Assistance
DAP - The Pronaf Aptitude Statement
DHAA - Human Right to Adequate Food
FAO - United Nations Food and Agriculture Organization
FNSS - Food and nutritional security and sovereignty
IA - Food insecurity
IAC - Instituto Antonio Conselheiro
IFAD - International Agricultural Development Fund
IRPAA - Regional Institute of Appropriate Small Farming
MPA - Small Farmers Movement
NGOs - Non-Governmental Organizations
PAA - Food Acquisition Program
PAS - Healthy Eating Program
PCT - Traditional Peoples and Communities
PDHC II - Dom Hélder Câmara II Project (AL, BA, CE, MA, MG, PB, PE, PI, RN, SE)
PDT - Dom Távora Project (Sergipe)
PI - Investment plans
PGPM - Minimum Price Guarantee Policy

PN - Business Plans
PNAE - National School Feeding Program
PP - Productive projects
PPF - Paulo Freire Project (Ceará)
PROCASE - Sustainable Development Project of Cariri, Seridó and Curimata (Paraíba)
PRONAF - National Program for Strengthening Family Farming
PSA - Pró-Semiárido Project (Bahia)
PVSA - Viva o Semiárido Project (Piauí)
SAF - Department of Family Agriculture
UN - United Nations
URGPs - Regional Project Management Units



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MAP OF IFAD IN BRAZIL



PRÓ SEMIÁRIDO PROJECT (PSA)

Benefited Families: 70,000

Families Headed by Young People: 20,200

Families Headed by Women: 40,500

IFAD Funding: US\$ 45 million

Government Funding: US\$ 50 million



DOM TÁVORA PROJECT (PDT)

Benefited Families: 12,000

Families Headed by Young People: 3,600

Families Headed by Women: 4,800

IFAD Funding: US\$ 16 million

Government Funding: US\$ 12.2 million



VIVA O SEMIÁRIDO PROJECT (PVSA)

Benefited Families: 22,000

Families Headed by Young People: 6,600

Families Headed by Women: 9,500

IFAD Funding: US\$ 20 million

Government Funding: US\$ 10.1 million



PROCASE PROJECT (SUSTAINABLE DEVELOPMENT OF CARIRI, SERIDÓ AND CURIMATAÚ)

Benefited Families: 22,000

Families Headed by Young People: 1,570

Families Headed by Women: 10,800

IFAD Funding: US\$ 25 million

Government Funding: US\$ 15.5 million



DOM HÉLDER CÂRAMA PROJECT 2 (PDHC 2)

Benefited Families: 74,000

Families Headed by Young People: 39,000

Families Headed by Women: 37,000

IFAD Funding: US\$ 18 million

Government Funding: US\$ 82 million



PAULO FREIRE PROJECT (PPF)

Benefited Families: 60,000

Families Headed by Young People: 16,052

Families Headed by Women: 10,800

IFAD Funding: US\$ 40 million

Government Funding: US\$ 40 million



IFAD'S PERFORMANCE IN BRAZIL WITH SEMEAR INTERNACIONAL PROGRAM

The International Fund for Agricultural Development (IFAD) is a financial agency of the United Nations (UN) that, in partnership with state and federal governments, enters into loan and grant agreements to support rural development. In Brazil, IFAD's main investment focus is the semi-arid region, where it performs actions aimed at promoting productive projects to generate agricultural income, cooperatives, associations and access to markets. With promotion of nutritional food security and reduction of poverty in rural areas among its pillars, IFAD encourages the strengthening of activities whose priority audiences are women, young people and traditional communities.

IFAD has already provided an amount of approximately US\$ 300 million for the implementation of 13 projects in Brazil. Six projects are in execution in 2020, with direct benefit to 250,000 families. Five of them are in partnership with state governments, through bilateral agreements: Paraíba (Procasa Project – Sustainable Development of Cariri, Seridó and Curimataú), Bahia (Pró-Semiárido Project), Sergipe (Dom Távora Project), Piauí (Viva o Semiárido Project), and Ceará (Paulo Freire Project). In partnership with the federal government, the Dom Hélder Câmara Project (PDHC) covers 11 states: Pernambuco, Ceará, Rio Grande do Norte, Alagoas, Bahia, Piauí, Paraíba, Sergipe, Maranhão, Minas Gerais, and Espírito Santo.

In parallel with the projects, IFAD seeks to carry out actions that go beyond productive development in the communities served, encouraging access to information through donation programs, such as the Semear Internacional Programme (PSI), whose operationalization is supported by the Inter-American Institute for Cooperation on Agriculture (IICA). Operating in Brazil, PSI has the following axes: Knowledge Management; Monitoring & Evaluation; Communication; Policy Dialogues;

and South-South and Triangular Cooperation. PSI works with the six projects supported by IFAD in Brazil, strengthening their capacities by carrying out activities that stimulate knowledge. The objective is to facilitate access to contextualized knowledge and innovations for coping with the semi-arid region.

Among the PSI's activities, there are exchange programs; training; workshops and seminars with technicians and project beneficiaries; technical training for public managers; institutional articulations; support for gender equality; support for the collection of socioeconomic data and methodization of results; book publications, and production of journalistic and communicational content in print and digital formats. In this way, the program has been making a significant contribution to the systematization and dissemination of good rural practices in IFAD's projects, both nationally and internationally.

Operation of each PSI's action component:

Knowledge Management

Training, exchange programs, thematic meetings and seminars are the main activities developed to strengthen knowledge and the knowledge exchange between projects, involving technician and beneficiaries. The most addressed themes are: access to markets, agroecology, gender, gastronomy, and goat farming. Many of these events result in publications that, in print and/or digital format, contribute to the enhancement and increased visibility of these good practices and successful experiences.

Monitoring & Evaluation

Periodic training courses for technicians from these areas are carried out, with promotion of meetings in working groups and the involvement of professionals from other institutions. All IFAD's projects in Brazil use an integrated management system called Data.Fida, a great product developed by Semear Internacional for this component, which contributes to improving quality and accuracy of the information collected and processed by the projects.

Communication

A component that permeates all others, Semear Internacional's Communication uses several channels, such as the portal and social networks, to make knowledge and information reach the most different audiences. Publications (books, booklets, manuals and studies), a collection of videos and photos and the database of good practices already listed can be found on the website, as well as texts created weekly and disseminated among

IFAD's projects A recent product in this area is the Prêmio Semear Internacional de Jornalismo, award in its first edition that honors the best news reports in Brazil on good rural practices.

South-South and Triangular Cooperation and Policy Dialogues

The objective of South-South and Triangular Cooperation is to foster new knowledge and networks through the internationalization of its actions. Through exchange programs, training and seminars involving countries in Latin America and Africa, topics of common interest in family farming are addressed, identifying techniques and practices that can help rural workers in their daily lives. In addition, PSI seeks to facilitate the dialogue on public policies, with a view to supporting spaces aimed at the debate between civil society, governments, academia, and partners.

Learn more about PSI's actions; visit the virtual library and access the events held to join the network for the dissemination of good rural practices in the semi-arid region, accessing www.portalsemear.org.br.





**INTRODUCTION:
GUIDING PRINCIPLES
FOR THE STUDY ON THE IMPACTS
OF COVID-19 ON AGRIFOOD SYSTEMS**

1. Presentation of the general objectives of the Study on the impacts of COVID-19 on agrifood systems

The study "Impacts of COVID-19 on Agrifood Systems in the semiarid region of Northeast Brazil",¹ carried out by the Semear International Program (PSI) with support from the International Fund for Agricultural Development (IFAD) and the Inter-American Institute for Cooperation on Agriculture (IICA) involved community residents, Continuous Technical Assistance (CTA) and public managers – chosen as focus groups. The research universe was the six projects supported by IFAD in the following states and regions of Northeast Brazil:

- a) Cariri, Seridó and Curimataú Sustainable Development Project – Procace: State of Paraíba;
- b) Pró-Semiárido Project: State of Bahia;
- c) Dom Távora Project: Sergipe;
- d) Viva o Semiárido Project: Piauí;
- e) Paulo Freire Project: Ceará;
- f) Dom Hélder Câmara II Project: Operates in Minas Gerais and several states in the Northeast, but focused on actions in the states of Alagoas and Pernambuco.

To carry out this diagnosis on the Food and nutritional security and sovereignty (FNSS) scenario in the semiarid region of the Northeast, we started with a broader understanding of the concept of FNSS: as something that involves not only the

nutritional perspective, but requires careful consideration of production, marketing, consumption, storage, ways to avoid losses and waste and actions to democratize access to food. Therefore, the methodological approach that was built for this investigation sought to take into account a broader conceptualization of food and nutrition security and sovereignty that encompasses eight thematic axes, in order to understand how the pandemic triggered transformations in the different dimensions of the lives of the residents of the territories and rural communities of the Northeastern semiarid region. The eight thematic axes that were focused on in this study and that reflect the different aspects of the FNSS concept are: (i) Processes of social organization and public policies; (ii) Agricultural production (production methods and degree of diversification); (iii) Food preparation and processing; (iv) Consumption (eating habits and nutritional issues); (v) Storage and supply of food; (vi) Food distribution, including non-economic relationships – of donation and exchange; and (vii) Sales (with an emphasis on small sales circuits).

There was an effort to highlight the degree of innovation in the field of methodologies and technologies on the part of community-based organizations and technical advisory institutions in each of the thematic axes. At the same time, the diagnosis was built from a time frame, in order to observe the changes that occurred during the management process of an agrifood crisis that was aggravated by the pandemic. The intention was to identify the milestones in the processes experienced by the actors involved – that is, to exercise a keen eye on the general picture in the period before the pandemic, to serve as a referential scheme in identifying the contrasts and contradictions that have arisen in this period since March 2020.

¹ The Study "Impacts of COVID-19 on Agrifood Systems in the Semiarid Region of Northeast Brazil", an action promoted by PSI – Programa Semear Internacional, was carried out under the coordination of Rodica Weitzman and a support team of two researchers: Vivian Motta and Maria de Socorro de Oliveira.

The objective of the two phases of the proposed methodology – the gathering of information and analytical crossings from the perspective of each social group – was to understand how the specific changes caused by the pandemic were absorbed by each identity category. In addition, there was an intention of understanding the complexity of resistance strategies on the part of various segments (family farmers, traditional communities and so on) in the face of the worsening sociocultural situation throughout the pandemic, based on the assumption that social groups that were affected do not constitute themselves as victims of the phenomena that occurred, but react to the facts and seek collective solutions. Therefore, the intention of the conceptual and methodological approach has been to carry out an analysis of the different thematic axes from an intersectional perspective,² which involves a keen look at the interactions between the manifestations of social inequalities, with regard to issues of race, ethnicity, class, gender, youth and territoriality.

However, it is important to point out a gap in the results presented, since in the analysis carried out, it was not possible to advance in the understanding of the specific forms of impacts, considering the differences between settled families, quilombolas, indigenous people and those belonging to the Fundo de Pasto communities. It is very common to cut out this approach by relating only to numbers, through a survey of quantitative data, but a true analysis based on intersectionality differentiates identity issues from forms of representation, considering historical, social, environmental and political factors. The root of intersectionality lies in the recognition of the different viewpoints, perspectives and angles that only the experience of diversity materializes. It is thus recommended that an in-depth research be carried out on the data systematized and analyzed in this study at another time, in order to elucidate the interaction between the different categories of analysis.



² We started from the definition of the concept of Intersectionality brought by Kimberlé Crenshaw (2002). According to Silvia Barbosa (2017), "debating intersectionalities makes it possible to perceive the 'coexistence of different approaches'; the differentiated perspectives trace diversified thoughts about "difference and power", reflecting on the margins of agency granted to the subjects and their real possibilities of acting across their social and cultural borders". (BARBOSA, p. 331, 2017)



2. Conceptions that guide the study: Dimensions of FNSS

The starting point for this study is a broad view of the concept of nutritional food security and sovereignty from its historical construction, which was the result of a long and rich process of social participation. Over the years, the increase in deficient and chronic non-communicable diseases³ in the Brazilian population led civil society movements and organizations to discuss the causes of these diseases and incorporate other issues into the FNSS concept, so that the focus on maximizing agricultural production to fight hunger has expanded to include other dimensions, such as access to food, preparation conditions, nutritional, cultural and socio-environmental aspects. A central axis of this conceptual construction has been the understanding of FNSS as a "human right", which is as important as the other rights that should be guaranteed to the Brazilian population.

To guarantee the promotion of Sovereignty and Food and Nutritional Security (FNSS) as a human right in Brazil, a complex and efficient scale was built with the creation of the National System of Food and Nutritional Security (Sisan) in 2006 (Law No. 11.346/2006), designed for coordinating a National Policy on Food and Nutritional Security in an intersectoral manner and guaranteeing social participation. For this reason, the following were defined as components of the System: (i) the Food and Nutrition Security Conferences and Councils (Consea) to ensure the participation of civil society in the construction of guidelines for implementing the policy, and (ii) the Intersectoral Chambers of Food and Nutritional Security (Caisan) to coordinate the public bodies responsible for implementing the policies.

³ Studies show that chronic-degenerative diseases, such as diabetes, hypertension and cardiovascular problems, which have intensified in Brazil over the last 20 years, are often presented in connection with "deficiency diseases", such as malnutrition, which clearly reveals the coexistence between different processes of worsening food and nutritional insecurity and the need to seek integrated solutions. (FAO, IFAD, et. al., 2020, p. 100)

The proposition of an intersectoral and participative system for the formulation, implementation and social control of public policies represents a strategy to respect, protect, promote and provide the human right to adequate food (DHAA) in the Brazilian context. Although in recent years we have witnessed a process of dismantling this structure of social control – which began with the elimination of the Consea instance at the national level in 2019 –, we still see evidence of the organizational strength of the state and municipal Consea in some regions. Some of the groups that constitute themselves as beneficiaries of projects supported by IFAD in Northeast Brazil have been participating in these instances of popular participation, in order to defend the common goods of their territories based on the principles of diversification and environmental sustainability of their agrifood systems.

For projects supported by IFAD in the context of the Northeastern semiarid region, three dimensions of the FNSS concept deserve our attention. First, on an international scale, over the past five years, IFAD has affirmed the need to incorporate a nutrition focus into its approach to agrifood systems. This translates into the creation of a series of tools that seek a sensitive approach to nutrition in the design of IFAD projects and in the monitoring of their implementation cycles. There has always been a perception on the part of IFAD that it is in the extreme poverty segments that the manifestations of food insecurity are concentrated, and that this problem is closely linked to the lack of water resources. In this regard, it should be noted that there have been strategies to incorporate the nutritional approach into the targeting strategy, so that there is a greater degree of attention to the extreme vulnerability of certain social groups (such as traditional communities, women) to the precariousness of agrifood systems.

Another dimension that has been incorporated into IFAD-supported projects in the Northeastern semiarid region is sociobiodiversity, from a focus on strengthening the regional eating culture and eco-gastronomy. This focus within the projects has intensified in the last 10 years due to the partnership that has been established with the Slow Food Movement, which is dedicated to the conservation and enhancement of traditional agricultural systems and the construction of food "safeguards" with a focus on knowledge, practices and threatened landscapes, which build connections with alternative markets. Thus, IFAD has been appropriating the notion of foods as components that integrate a symbolic universe and that must be understood from a system of meanings that is culturally variable. This cultural approach involves an appreciation of native foods, such as *umbu* and *licuri*, for self-consumption and for marketing processes – food items that have historically been placed on the margins of the local and regional economy. IFAD's institutional support to cooperatives, such as the Canudos, Uauá and Curaçá Family Farming Cooperative⁴ (Coopercuc) in Bahia, which engage in processes of processing native fruits, is a living example of the growing appreciation of the expressions of food culture of the peoples of the semiarid region. It is interesting to note that, during the pandemic, there was a high degree of innovation in the production processes of agribusinesses, such as Coopercuc, as they had to "reinvent" their practices, learning to diversify their production mix. Reports from technicians working in the context of the Pró-Semiárido Project (PSA) in Bahia have emphasized this point.

⁴ For 25 years, Coopercuc has been dedicated to working with fruit processing in the semiarid region of Bahia. The cooperative was formalized in 2004 with 44 members and today works with 450 families in 18 communities.

⁵ The National Coordination of Agroecology (ANA) is a central player in the dispute for the concept of agroecology, which has been established since 2002 as a space for articulation and convergence of social movements, networks and organizations with the political agenda of agroecology in Brazil.

⁶ ASA is a network that defends a political project based on the principles of coexistence with the Semiarid region, having a strong role in defending the right to water. The entities that make up ASA are organized in forums and networks in the 10 states that make up the Brazilian semiarid region (MG, BA, SE, AL, PE, PB, RN, CE, PI and MA). IFAD currently supports the DAKI – Semiárido Vivo Project, which is managed by ASA, together with Fundapaz (Chaco – Argentina) and FUNDE (Corredor Seco – Central America).



at diversification of species – and which has occupied a central place in many IFAD-supported projects in recent years.

In projects supported by IFAD, one of the strong indicators of a significant improvement in the eating habits of families in rural communities has been the greater diversification of species in production arrangements, which has been happening with intensity since the implementation of the agroecological approach. Several instances and articulations on an international scale and in Brazil have pointed out the importance of adopting agroecology as a guiding principle in the construction of sustainable agrifood systems. In 2014, the Special Rapporteur on the Right to Food of the United Nations (UN), Olivier De Shutter, submitted to the Council of the UN Human Rights a report that highlighted the centrality of agroecology in the transition to sustainable food systems and in the realization of DHAA in the world. In addition, it is worth highlighting the policy charter of the IV National Meeting of Agroecology (ENA) that was held in 2018 in Belo Horizonte/MG and demonstrates the imbrication between food security and sovereignty and nutrition and agro-ecology:



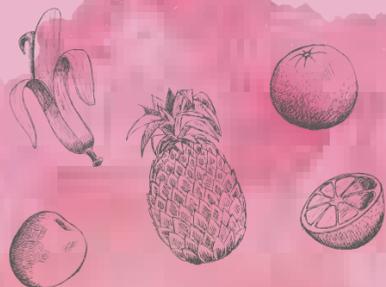
“ The food systems we want are those that produce real food in the countryside and in the city, which value agro-biodiversity, fresh and regional foods, with the leading role of women, respect for black and indigenous ancestry and the traditions of all peoples and traditional communities, in addition to the rescue of the Brazilian population's own identities, memories and food cultures. Real food does not kill either by poison or by conflict. (ANA, 2018, p. 11)



The publication entitled "IFAD Panorama 2020", which provides valuable information on the obstacles to achieving the goals of the "Sustainable Development Agenda 2030", affirms the importance of diversifying agricultural production as the most suitable way to promote food and nutrition security:

“ The diversification of production is a key element to guarantee food safety and nutrition, as well as to conserve, protect and improve natural resources (FAO, 2018c). Through diversification, productivity and efficiency in the use of resources can be increased. For example, agroecological diversification strengthens ecological and socio-economic resilience through the creation of new market opportunities. Furthermore, a varied consumption of different types of food, such as cereals, legumes, fruits, vegetables and products of animal origin contributes to improving the nutritional results of the population. (FAO, p. 84, 2019)

”



In the case of the Brazilian semiarid region, this agroecological concept must be combined with the notion of "coexistence with the semiarid region", which also directs the guidelines for projects supported by IFAD. Since 2007, we have witnessed the adoption of a notion of "peaceful coexistence" with the environmental conditions of the semiarid Northeast that has been shaping public policies aimed at agricultural development and the management of water resources. In this process, it is worth highlighting the contributions of important thinkers, such as Josué de Castro (2003), who has been supporting a structural change in the model that supports the concepts associated with "development", and Roberto Marinho da Silva (2006), who focused on guiding principles of a new development model for the semiarid region based on the construction of a distinct environmental rationality and a new system of ethics for social relations. This new perception eliminates "the faults" attributed to natural conditions and makes it possible to see the semiarid region with its own characteristics, limits and potential (CONTI ; PONTEL, 2013). For Silva (2006, p. 226), "the fundamental challenge to be given to the new guidelines for sustainable development in the Brazilian semiarid region is to build a sense of coexistence".

From this concept of coexistence with the semiarid climate, we can understand that the struggle to guarantee food and nutrition security also includes the relentless attempt to continue productive activities from an agroecological approach, which includes the use of adapted technologies, such as cisterns, biodigesters and greywater reuse systems. Many of these technological solutions are incorporated in projects and programs supported by state governments and endorsed by IFAD, and have been counting on a support network of ATER organizations in a dynamic process of experimentation and adaptation of these tools, instruments and equipment to other cultural contexts and scales.

3. Contextualization: Food and nutritional insecurity in times of pandemic in the context of the semiarid Northeast

The World Bank program estimates that more than 130 million people face acute hunger as a result of the crisis, almost doubling the 135 million who already experience extreme hunger situations (Committee on World Food Security, 2020; apud Khorsandi, 2020). One of the findings of the research entitled "National Survey on Food Security in the context of the COVID-19 Pandemic in Brazil", which was carried out by the PENSSAN Network⁷ in the period from December 5 to 24, 2020, confirms this hypothesis: in 2020, food insecurity and hunger in Brazil returned to levels close to those of 2004 (PENSSAN Network – MALUF, et. al, p. 52, 2021).

Within this survey with 2,180 households in the five major regions of the country, 518 of which are rural households, it was possible to detect that the North and Northeast concentrate households with a lower proportion of food security and a higher degree of food insecurity considered moderate and severe. Maluf et. al state that the level of food security was less than 40% in the North and 30% in the Northeast; on the other hand, the state of serious food insecurity was 18.1% in the North region and 13.8% in the Northeast.

Also, the data collected proves the relationship between food security and water resources. According to Maluf et.al, "the situation of severe food insecurity doubles when there is no adequate availability of water for food production (from 21.1% to 44.2%) and reaches levels of almost the double when there is not enough water for the animals to consume (from 24% to 42%)" (MALUF, et. al, 2021). This reality reflects the experiences of the families that inhabit the semiarid

region and that have been dealing for many years with the lack of water – both for consumption and for production. As can be seen at the heart of IFAD-supported projects, families in these communities seek creative strategies to live with this ecosystem, which has been facing prolonged droughts for a long time, but also reveals a vast and rich mosaic of socio-biodiversity that presents several alternatives to these needs.

4. Proposed methodological approach

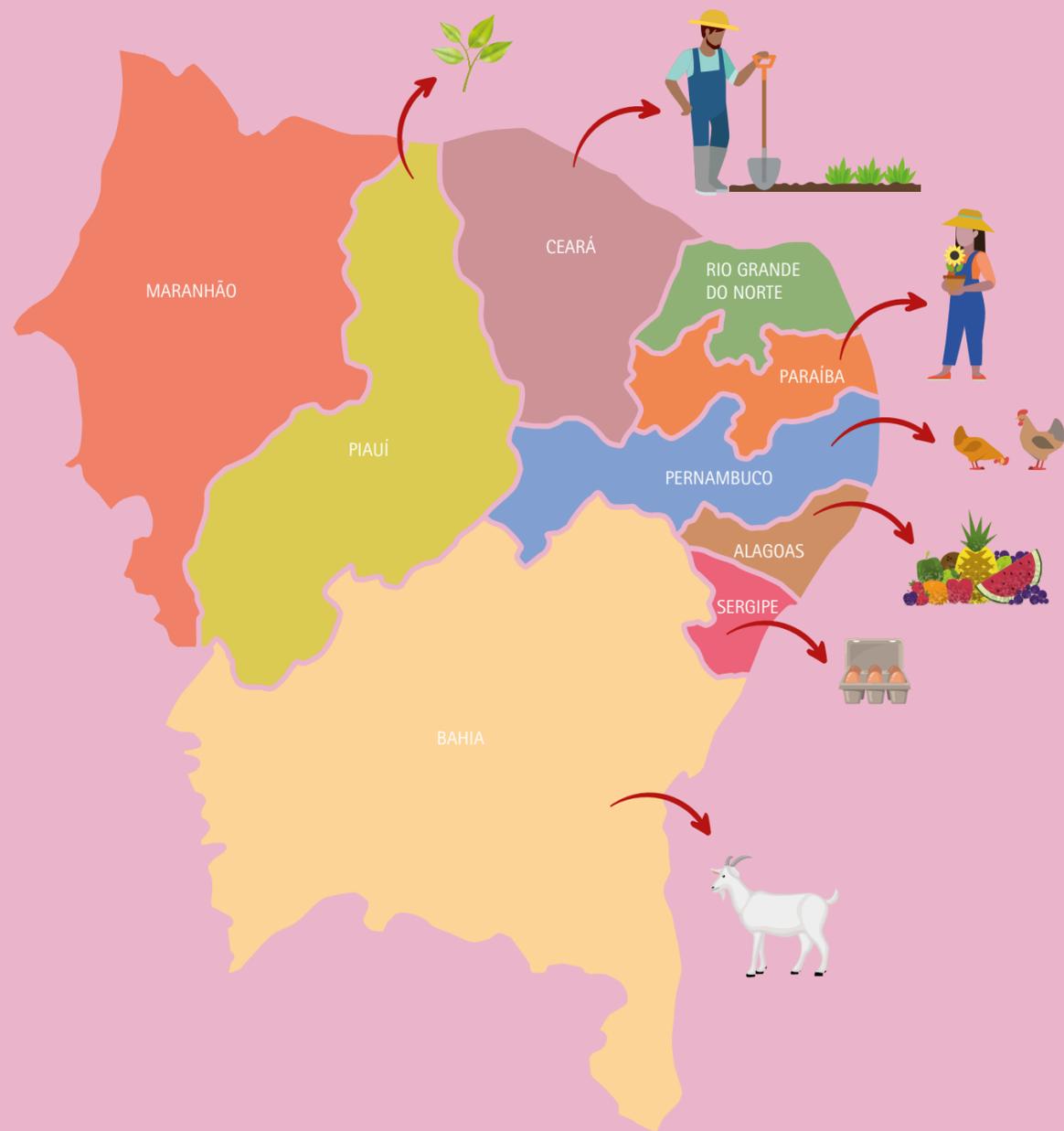
Data were collected from webinars held between 05/13/2021 and 05/20/2021 through the Zoom platform, involving the following focus groups: a) public managers; b) technicians; c) farmers and populations from traditional communities, as well as interviews with key informants in the context of the six projects supported by IFAD in which additional information was collected. To expand the analysis potential, the research team made efforts to individually interview some public managers from the Northeastern states, program officers and specialists linked to IFAD in Brazil, Latin America and the Caribbean and Rome, Italy, as well as professionals related to other partner institutions, such as the Slow Food Movement.

It is important to emphasize that the traditional communities identified in such events were: indigenous peoples, quilombolas and grassland communities, this last group being only part of the target audience of the Pró-Semiárido Project, centered on the State of Bahia. The table below shows the seven states and 14 territories that participated in the five webinars held from May 13 to May 20, 2021, through the Zoom platform.

⁷ The Brazilian Research Network on Sovereignty and Food and Nutritional Security (PENSSAN Network), created in 2012, brings together researchers, students and professionals from all over the country in the form of an independent and autonomous research and exchange network in relation to governments, political parties, national and international bodies, and private interests.

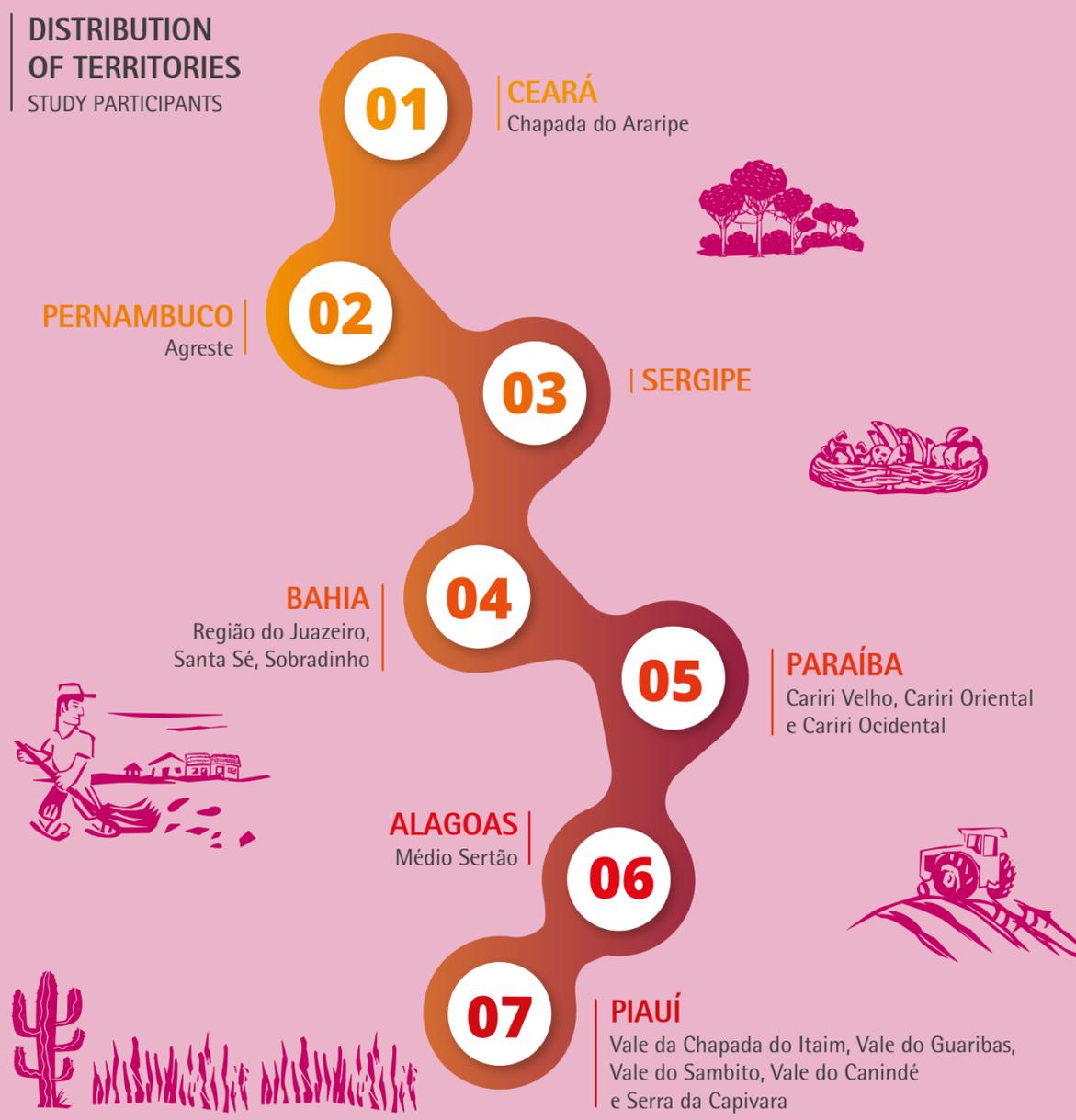


Figure 1: Map of states represented in webinars



Source: COVID-19 impact survey on agrifood systems, 2021.

Figure 2: Scheme with territories represented in webinars by state



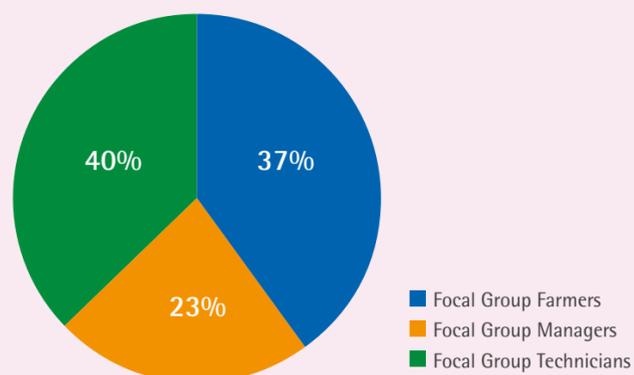
Source: Survey on the impact of COVID-19 on agrifood systems, 2021.



During the webinars, 112 people participated, according to the identification of the public mobilized for the events. There were 41 individual farmers/family members, which represented 37% of the total public. The participation of

continued Technical Assistance (CTA) agents comprised 45 individuals, who represented 40% of the total. Finally, the lesser participation was of managers, with 26 individuals, accounting for 23% of the public (OLIVEIRA; MOTTA, 2021).

Graph 1: Participation in online meetings by focus group

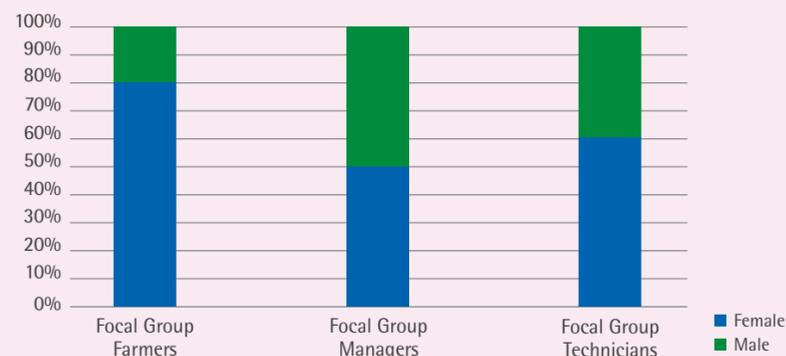


Source: Oliveira and Motta, 2021.

Graph 2 shows the distribution of participants by sex and by focus group. It was found that only in the focus group of managers managers was there a balance in the participation of women and men. Of the 26 participants, half were female and the other

half male. In the group farmers, women predominated. Of the 41 participants, 80% were women. Also in the group of technicians there was a greater participation of women. Of the 45 participants, women represented 60% (OLIVEIRA; MOTTA, 2021).

Graph 2: Participation in online meetings by focus group



Source: Oliveira and Motta, 2021.

It is important to note that, in the methodological step named "systematization", which is subsequent to data collection, it was possible to visualize the information that was generated – both in the meetings with the focus groups and in the individual interviews – so that there was an analytical crossing between analytical categories and key and transversal themes. This analytical crossing with the thematic focuses that were mentioned represents, in some way, the heart of this publication. Thus, each chapter brings us reflections based on thematic axes that are part of a broader concept of food and nutrition security and sovereignty. The intention is to ensure a comprehensive reading of the multiple dimensions of the FNSS problem – from access to food to the

storage and distribution process, including marketing actions – from the perspectives of a wide range of social actors – from family farmers to public managers. From this understanding of the factors that affect the FNSS status of target groups – before and during the pandemic – we will be able to envision possible solutions that inspire and support local governments to manage the agrifood crisis, as well as preventing its continuation from leading to a more generalized crisis. These proposals, as we shall see, must seek not only to "alleviate" the risks generated by the pandemic, but will be so designed as to build lasting and structuring solutions to deal with a crisis of such proportions based on dynamics rooted in rural territories in the Brazilian semi-arid region.



INFLUENCE OF COVID-19 ON THE AGRI-FOOD SYSTEMS IN SEMIARID REGIONS OF NORTHEASTERN BRAZIL

PUBLIC MANAGERS

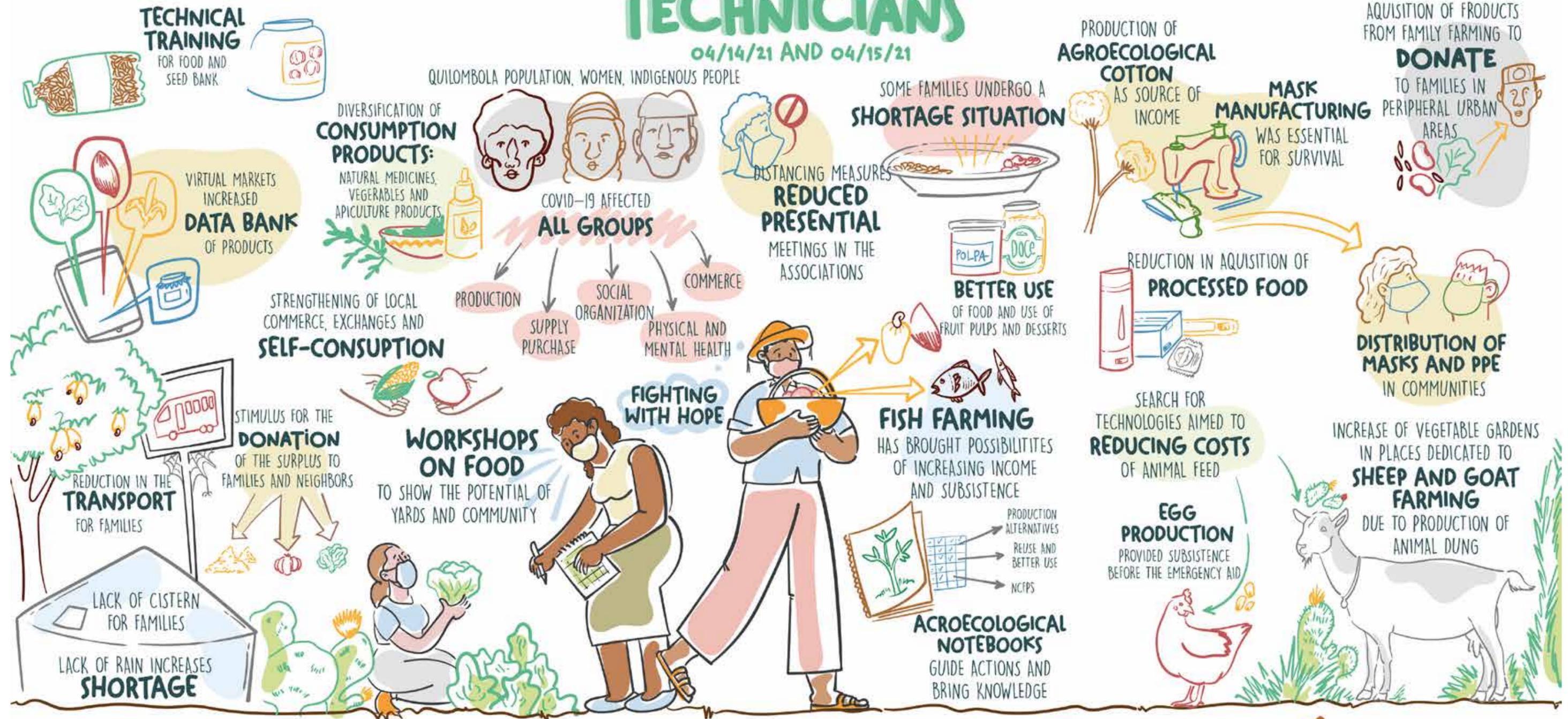
04/13/21



INFLUENCE OF COVID-19 ON THE AGRI-FOOD SYSTEMS IN SEMIARID REGIONS OF NORTHEASTERN BRAZIL

TECHNICIANS

04/14/21 AND 04/15/21



INFLUENCE OF COVID-19 ON THE AGRI-FOOD SYSTEMS IN SEMIARID REGIONS OF NORTHEASTERN BRAZIL

FARMERS AND LEADERS

04/19/21 AND 04/20/21







AGRICULTURAL PRODUCTION AND MODES OF PRODUCTION

1. Production, spaces and food

The aim of the study was to point out the main products that CTA agents and family farmers identify as the main

products for the maintenance of FNSS during this period of the pandemic. The table below shows the products described in the six projects supported by IFAD in the Brazilian semiarid region:

Table:1 - Main products described in the webinars by project

Items produced that were mentioned in webinars/interviews	PVSA	PSA	PPF	PDT	DHCP II	PROCASE
Medicinal plants	x	X	X		x	x
Vegetables	x	X	X		x	x
Potato	x			x	x	x
Pumpkin	x			x	x	
Cassava	x	X	X		x	
Grains (corn, beans)	x	X		x	x	
Fruticulture	x	X			x	x
Processed foods (sweets, fruits, cakes etc)	x	X	X		x	
Honey	x					
Forage palm		X	X	x	x	
Poultry (meat/eggs)	x	X			x	x
Agroecological cotton						x
Swine farming	x				x	
Pisciculture	x			x		
Dairy cattle					x	
Goat/Sheep (meat/milk)	x	X			x	x

Source: Research on the impact of COVID-19 on agrifood systems in Northeast Brazil - Pre-systematization worksheets, 2021.

En primer lugar, At first we need to reinforce that the table in question does not show the total production in the projects, but the products that were described by the people who participated in the webinars as important for the maintenance of FNSS during this period. What is interesting to note is that, despite the restrictions imposed by the pandemic, we can identify the great diversity of production chains that are directly linked to consumption and marketing in families in the semiarid region. Some are universal in the maintenance of the production system, for example: vegetables, tubers (such as cassava), fruits, medicinal plants, grains and the processing of products to expand the variety, making derivations or "by-products" from the same product. Thus, farmer Aparecida Silva Sousa, assisted by the Viva o Semiárido Project (PVSA) in Piauí, says: "Backyards have been very important in our lives. Because from a little thing we transform it into several foods. From manioc we do everything with it".

The gaps in production processes, with regard to food and nutritional insecurity, were many. The following are worth mentioning: i) In four projects, it is highlighted that during the pandemic there was a surplus of products destined for marketing. It was not possible to measure the lost volume. ii) In 50% of the projects, the crisis was aggravated by the impossibility of supplementing income from other jobs, such as day labors or jobs not linked to agricultural production, e.g. manicure.

Losses in production processes become quite evident in the following statement:

“ In my community, there was a loss last year, practically total, 80% of us lost last year. Until then, we are struggling to survive, it is very difficult. Everything stopped. We are unable to work on a larger scale. We are producing limited things. There was a drought, which we only managed to produce last year, we produced between March and June. From then on we are living from the mercy of God. Because it's the rainy season, when we plant, at the end of planting, the pandemic started. Then we had to adjust, limiting many things, and it's difficult. There were other jobs. We exchanged days, we worked as day laborers, then everything came to a halt. We practically lived a little bit from handicrafts, and eating what we had stored – beans and corn. ”



For the regions that were blessed with a good rainy season, there was an abundance of vegetable production, which ensured the conditions for maintaining the breeding systems during part of last year. The high price of inputs (feed, veterinary medicines, seeds, items for irrigation systems, among others), in addition to the increase in the value of fuels, in part because of the worsening of the pandemic, directly impacted production systems, particularly the animal production chain. Managers and technical assistance teams are categorical in saying that this increase was responsible for the reduction in the number of heads in the herds or even the elimination of activities in the productive systems of the families. During the dialogue, some notes on the impact of rising inputs were highlighted. Francisco das Chagas Ribeiro Filho (Chicão), PVSA coordinator, points out that: "the absurd and unjustified increase in values and inputs harmed the production of family farmers: irrigation material, for example, but also simpler things. Those who are more dependent on external inputs are really suffering". This statement is reinforced by CTA agent Jóia Germano, linked to the Procasa Project, in the state of Paraíba: "One thing that has had a great impact in 2021 is the price of fuels... (...) The purchase of feed and supplement for the animals, which makes milk production higher, they (farmers) have reported difficulty (buying), which is very expensive. In the municipality of Parari, to give you an idea, most of them stopped producing milk because they are unable to buy corn. The bag of corn costs 92 reais (...).

Still looking at Table 2, we conclude that the animal production chain is directly linked to marketing and income

generation (goat milk, sheep meat, fish and cattle), and the family's diet is linked to a second plane, greatly influenced by the price reached in the market. Small farms (chickens and pigs) are primarily linked to family consumption. The chains of small animals, in general, are linked to the actions of women. The deep listening carried out by the research team found that women are responsible for the productive processes that have family feeding as a primary factor, with the surplus being sold at fairs or in short-circuit market strategies, such as: delivery, agroecological baskets, door to door sales.

Women organize their crops, always in consortium, through a very wise strategy of using space and the physiology of plants in order to maximize the diversity of food grown around the house. This rich mix of food, medicinal and ornamental plants also involves the chains of small breeding grounds, especially free-range chickens with dual aptitudes and pigs that are fed with the products generated in the backyard, added to the corn coming from the fields. This rich space, in projects supported by IFAD, is called Productive Backyard⁸. In online meetings, all focus groups, from all projects, were categorical in allocating productive yards as strategic space to guarantee FNS during the pandemic. The application of agroecological notebooks⁹, carried out from September 2019 to September 2020, covering seven months of a period already impacted by the pandemic, shows that even with difficulty, backyards maintained food and nutritional security for families and expanded their participation in income generation.

⁸ Backyards are considered spaces for reproduction and cultivation for self-consumption that also generate products for sale. (SEMEAR INTERNACIONAL, 2020, p. 21)

⁹ It is important to contextualize the origin of the use of Agroecological Logbooks. The Zona da Mata Alternative Technologies Center (CTA-ZM), in partnership with the Zona da Mata and East Minas Women's Movement, with the objective of measuring and giving visibility to the work of agroecological women farmers, created the Agroecological Logbook instrument, in 2011. (SEMEAR INTERNACIONAL, 2020, pg. 22)



2. Productive Backyards and Agroecological Logbooks

Public managers and technicians working in PVSA and PSA point out that men started to show more interest in backyards: firstly because the agroecological logbooks showed the income-generating potential of this space and because, with the pandemic, they became strategic in maintaining the binomial consumption/sale as the production chains linked to the market were negatively impacted. Among the impact factors, we can highlight the reduction of access to public policies (e.g. the drop in the sale of goat milk via PNAE because schools have reduced face-to-face activities), the

reduction in sales of cassava flour, the increase in production costs, due to the closing of structures outside the community, such as slaughterhouses and dairy products, a reduction in the price paid to families and lack of access to traditional spaces for marketing these products (closing of restaurants, bars, agricultural fairs).

The importance of backyards for family farming and for the agroecological transition has already been highlighted by IFAD since 2019 with the launch of the publication: "Agroecological logbooks and Women in the Semi-arid Region: hand in hand strengthening agroecology" (FIDA, 2020),



which represented an overview of the process of applying 909 agroecological logbooks to women assisted by projects supported by IFAD in the semiarid region of northeastern Brazil. The distribution and number of completed logbooks are directly linked to the number of backyards made visible, offering a volume of information that centralizes women's work in the production system. This visibility of production, before the pandemic, was fundamental for the strengthening of backyards, which at this time have become the main source of food in production systems and a space for confrontation and resistance to mitigate the effects of the pandemic. Farmer Irenilda Nunes, assisted by the Paulo Freire project, points out that the agroecological logbook changed her relationship with her backyard. "We produce here with the production yards and we have production cisterns. For example, in my productive yard I have lettuce, cabbage, coriander, pepper and sweet pepper. When I was trained in the agroecological logbook, I started to value what I produced and realized how important it was. Because sometimes we produced, consumed and was not aware of it." The same farmer points out the harsh reality that her community has been facing, especially family establishments that have not invested in backyards, further emphasizing the importance of this space as resistance and maintenance of life during the pandemic period.

Based on the reports of the farmers during the collection of information for this study, it is evident that the non-monetary practices – donation and exchange –, which are based on the foods and plants that appear in the backyards, were intensified with the pandemic, especially for facing the real possibility of hunger in communities or as a strategy to improve the quality of food for family members living in urban areas.¹⁰ Dulce Naiara Carvalho Ferreira, a PSA technician, highlights:

“This practice of donation and exchange is very noticeable in the agroecological logbooks, which we introduced here. This increased in the pandemic. Donations were already common within the households, for the children, and since we are close to Pernambuco, families who have children in Petrolina, Juazeiro, donated when they came over on the weekend. But then, with the pandemic, the relationships became more distant, but even so the donation, because of the large production, was always sent to the children. Managed to send it to children, that production that was in excess, that one could neither sell nor consume on the property, it is always donated or exchanged. Donated within the community itself. They have this relationship there in the territory, three/four communities that are there in the surroundings, there is this practice of donation”.



¹⁰ See Chapter 5, which focuses more deeply on “non-economic” (donation and exchange) practices.

After the beginning of the pandemic, the agroecological logbooks showed that medicinal plants, together with honey, gained importance within the production system. Used for the treatment of family health, they turned into a daily consumption product in a preventive health system to strengthen the immune system. Some farmers have medicinal plants as products aimed at marketing, and the demand for natural treatment to strengthen health with the sale of teas, lickers and fresh herbs has also increased at fairs and in online catalogs. However, it is important to point out that the pandemic, at the same time that it increased interest, brought difficulties for the production system. Mercejane Duarte de Almeida, a farmer linked to PVSA in Piauí, sells medicinal plants and described, during the webinar, how she works with teas and handles them alone. She says she works mainly with teas and herbs and explains that she had to avoid handling due to contamination, which hindered the sale of products that require a lot of handling, such as hibiscus tea, moringa and other plants. She also claims that as her work required dialogue and visits from people to his home, the number of orders was reduced to avoid contact and communication. The farmer ends her speech with the sentence: “Everything is slowed down”.



3. Summary of pandemic impacts on food production

Annex 1 shows the summary of the negative impacts that the pandemic caused on agrifood systems, when we relate the factors “productive spaces” and “production modes”, from a closer consideration of food and nutrition security. The interruption of in-person technical assistance affected all projects. Technicians report that this process had an impact on production, but beyond that, the situation had an emotional impact on both families and CTA teams. In all projects, the technical monitoring carried on through the internet; however, participants stressed that face-to-face meetings are irreplaceable.

One of the first steps of the projects supported by IFAD involved the strengthening of communities with support for expanding digital inclusion. Although this process does not reach all families and the internet is of low quality, the technical teams that monitor the development of projects with the benefited families point out that digital inclusion was essential for the maintenance of CTA, so that some kind of support to agricultural production processes were guaranteed. Eliane Vieira, a technician from Emater-Alagoas who works as an extensionist in the Dom Helder Câmara project, emphasizes during the webinar with ATER agents that “there was no total disconnection from technical assistance, despite the reduction in field activities, there was contact by phone and by WhatsApp, frequently. With the pandemic, locations with no internet connectivity were benefited from the project and now we have expanded the capacity to monitor the communities”.

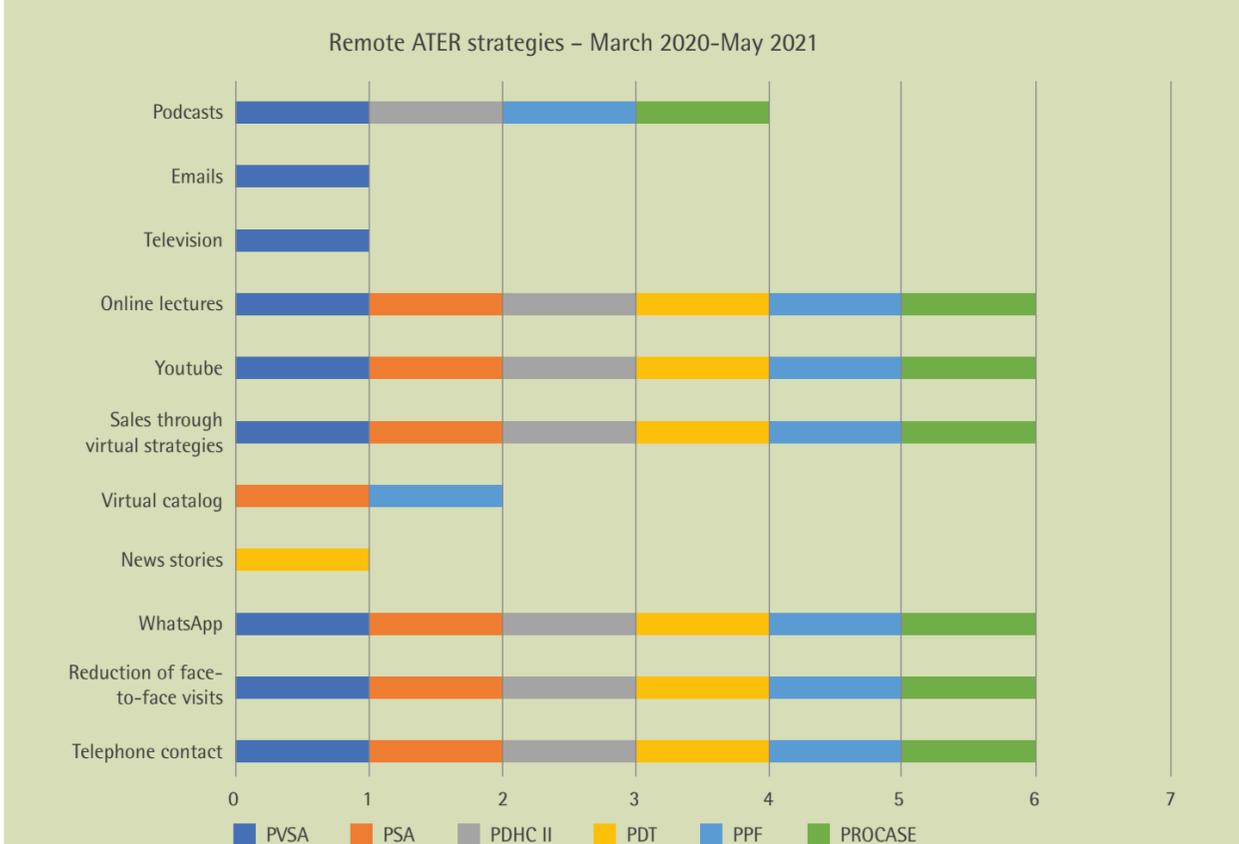
The observation described shows that the digital inclusion of family farming in the semiarid region of the Northeast occurred as an emergency action to combat the negative effects of the pandemic. The difficulty of accessing the



internet, even after one year of the pandemic, was explicitly mentioned in only two of the six projects studied (PVSA, PDHC II). IFAD-supported projects promoted the digitization of communities, allowing, even with delays, the productive systems of beneficiary families to be monitored remotely.

New ways of carrying out technical monitoring of production systems were developed from the creativity, commitment and partnership between CTA agents and the families served. The graph below shows the strategies reported by the technicians to continue work in a reduced manner and/or remotely:

Graph 3: Diversity of strategies for the continuity of ATER during the pandemic (03/2020–05/2021).



Source: Survey on the impact of COVID-19 on agrifood systems in Northeastern Brazil- from pre-systematization, 2021.

Thus, expanding the internet to access remote ATER represents an important action to mitigate losses caused by COVID-19. In this regard, it is worth emphasizing the point raised by Nancy Solano, IFAD consultant for nutrition in Latin

America and the Caribbean, on the importance of including the digitization of communities on the agenda of priority proposals – a fundamental step towards ensuring food and nutrition security.

4. Mitigating actions to strengthen production systems

In webinars and individual interviews, ongoing actions aimed at strengthening the family farming production system were explained in order to overcome the impacts caused by the pandemic.

Hardi Vieira, IFAD program officer in Brazil, says that expanding access to social technologies such as cisterns (one for family use and the other for the production system) are the basis for guaranteeing the production of family farming in the semiarid region of the Northeast. "The water/water security element is critical and IFAD understands that access to water is linked to improvements in nutrition." In line with Hardi Vieira, farmer Veronica Maria do Nascimento, beneficiary of the Dom Helder Câmara II Project, explains: "Families plant and raise free-range chickens (the main activity), cattle and pigs for self-consumption and sale. Whoever has access to water produces more (whoever has the cistern)". Juliana Peixoto, who is also a technician of the Dom Helder Câmara II project, says: "Structuring public policies are needed to support the construction of cisterns, in addition to a structure to store water for water tankers".

Regarding the CTA situation, some interviewees stated that remote ATER works very well when there is an internet access network in the association, for example. At the same time that the pandemic represented an opportunity for further evolution of ATER – from new strategies in the virtual field –, Marta Sileda, a technician linked to the Paulo Freire Project, analyzes that ATER gained an innovative character with the pandemic, but it needs be strengthened. She says that, in addition to working with agroecological logbooks, which helped to strengthen an ATER policy based on the various "segments", "virtual fairs and WhatsApp sales are initiatives that are being strengthened based on a differentiated ATER".

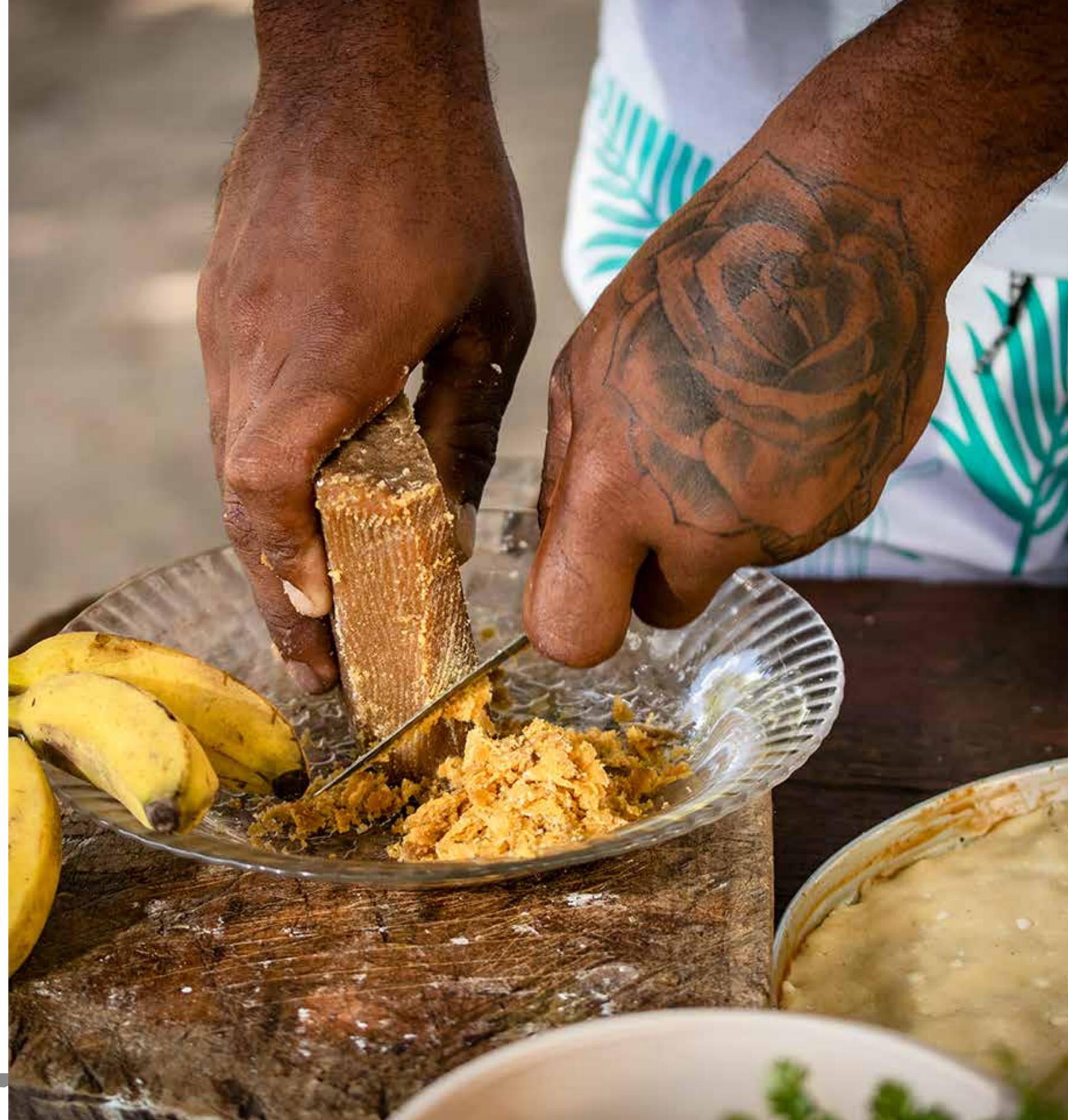


Another key point that was expressed by the technicians interviewed during the diagnosis was the issue that although remote ATER does not aim to replace face-to-face technical assistance, the innovative processes generated by the pandemic were positive to expand the communication capacity of the ATER system itself.

A point that deserves to be highlighted is the strengthening and empowerment of women's productive actions as a path to the massification and escalation of agroecology through productive backyards. In the context of agroecology, actions that validate and centralize women as promoters of FNSS and "guardians of socio-biodiversity" in particular, which guarantee family consumption and mobilize short production circuits, are noteworthy. Such actions were strengthened through the interventions of gender, race and ethnicity advisors – key figures of the technical teams that work across projects, with the exception of the Dom Távora Project and PDHC II – through training processes with groups of women and mixed groups. Also, in three IFAD-supported projects – Paulo Freire Project, Pró-Semiárido Project and Viva o Semiárido Project – there was a stronger emphasis on monitoring productive backyards within investment plans/business plans, which also intensified from the start of the pilot project with agroecological logbooks.

As for young people, there is a proposal to guarantee the expansion of income so that they want to stay in the territory and invest in the production system. IFAD program officials express the opinion that courses and activities unrelated to the themes of agrifood systems, such as installation of TV antennas or motorcycle mechanics, can increase family income and support the FNSS guarantee, even indirectly, as they enhance the acquisition of inputs that can strengthen and protect agrifood systems. In addition, innovative actions in the field of social communication and knowledge management with rural youth, such as the project with a network of young communicators in the context of PSA in Bahia, can be understood as effective strategies to strengthen the bond of young people with the key themes of the northeastern semi-arid region, such as food and nutrition security and agroecological practices based on other insertions.

By analyzing the speech of everyone involved in data collection, we can highlight that the strengthening of public food purchases, with the expansion of programs such as PNAE, PAA and the restructuring of CONAB, are political actions that, added to marketing actions through short circuits, especially within the community itself, have the potential to intensely strengthen the productive systems of family farming, especially during times of acute crisis, as has been the COVID-19 pandemic.







EATING HABITS,
FOOD PREPARATION
AND PROCESSING

1. Introduction

This chapter intends to reflect on the impacts of the COVID-19 pandemic on agrifood systems in the semiarid region of North-east Brazil, highlighting consumption habits and food preparation processes in the context of family farming and traditional peoples and communities (PCT). The processes of preparation and transformation of products into food for family consumption and for animals are, in this context, part of living with the semiarid region, as they enable access to healthy and nutritious food for longer periods, beyond the season of harvest. There is a multitude of transformation and processing practices for fruits, vegetables, grains, tubers, seeds, roots, oils and animal products developed for centuries by PCTs and family farmers.

These processes generate another infinity of food products used in different ways in traditional local cuisine. Thus, food processing practices become essential for the development of human life in full coexistence with the semiarid region.

These perspectives guided the analyses and reflections presented in this chapter. The purpose here is to contribute to the debate on the problem of the COVID-19 pandemic in the Brazilian semiarid region, highlighting the effects brought about in the processes of food preparation and transformation and in the consumption pattern of families and the contributions of the experiences and practices already developed by the families to weaken these effects, at this time of sanitary and agrifood crisis.



2. Diversity in planting and breeding, diversity in forms of transformation

The support for the processing of fruits from the caatinga has enabled the construction of agro-industries run/managed by family farmers and PCT in the semiarid region. Financing lines, such as the National Program for Strengthening Family Agriculture (Pronaf), have invested resources in these undertakings and public procurement policies have guaranteed ways to sell these products. However, only a small part of family farmers and PCT are part of these enterprises. Many families do not have adequate and sufficient means of production to integrate these organizational processes. It is in this condition of scarcity and production limitations that practices and policies to support the transformation of products originating from local agrifood systems gain even more relevance. This is an important strategy to promote autonomy in food production. Over time, traditional preparation and processing practices have been improved and enriched with more modern ones, contributing to increase the consumption time of these foods, making income from marketing possible and reducing the waste of natural products.

The agrifood systems developed by rural communities of family farmers and by traditional peoples and communities are dynamic and integrated. The product flows between them, used in their natural form or transformed or processed, enable the development/maintenance of subsystems that integrate the production units. This dynamic ensures families access to food throughout the year. For example, the range of tubers, roots and grains are processed in the form of flour used for human consumption (cassava flour, corn flour), which are used in traditional food recipes consumed for centuries by rural families, such as cakes, breads and scones. Thus, the interviewees in this study highlighted:

Cassava derivatives:

Working in the plantations with cassava is a tradition in the community. Cassava flour, tapioca cake, biscuits, cracknel, cake, and cassava drumstick. (Greice, farmer/PSA)

[...] we tried to do everything with manioc and I do everything with manioc: mush, salty because it has low cost and I make manioc soup. Because if you do that you don't need to buy noodles. To make it salty, we would use wheat and now we add cassava to make it cheaper and reduce purchases in the market. (Aparecida, farmer/PVSA)

Animal husbandry in the semiarid region is diversified and includes cattle, goats, sheep, pigs and poultry, such as chicken, turkey, guinea and others. For small animals, the strategy is also to keep the breeds resistant and adapted to environmental conditions. The amount created depends on forage production and storage conditions, which is usually done to guarantee year-round breeding.

The farm products are also intended for animal feed. Surplus corn production is generally used to feed birds, especially poultry and turkey, animals valued for the quality of the meat that is naturally produced (ROCHA, 2013). The use of farm products in animal feed is intensified by the lack of storage structures on the properties.

To store it enters the limit of not having structure to store. Therefore, most families go for use in animal feed. (Daniela, CTA/PFF)



Parts of cassava that are not used in human food have been used in animal feed, with the encouragement and training of technical advisers.

Another activity that was carried out was a processing workshop for the animals (both manioc and tubers, etc.) It is a way to take advantage of these products (cassava etc.) that they do not consume. (Manjari, CTA/PPF)

The production around the house, also known as backyards, plays an important role in food sovereignty, since most of the food for families comes from it: meat, fruits, vegetables, natural remedies, such as teas and lickers. It is also a space of intense production and income generation, since, from the food they grow, families carry out improving and processing activities. It is noticed that activities aimed at the "minimum" improvement and processing of food¹¹ tend to be carried out by women on the community level. They are the ones who have played a key role in the continuous transformation of food, exploring its potential in every way. This process of "transmutation" of food through improving and processing actions became quite visible during the use of the political-pedagogical tool of agroecological logbooks by 909 rural women from September 2019 to September 2020 (WEITZMAN, et. al, 2020). Data collected during the use of agroecological logbooks over a period of six months – in the context of a pilot project supported by PSI/IFAD – showed the richness of food diversity – which becomes more expressive when a multiplicity of by-products or derivatives are generated.

For example, cassava and its derivatives – a total of 11 products that were registered during the process of systematizing the agroecological logbooks – testify to the richness of this

plant, whose cultivation is visible throughout the national territory and is used in its entirety – from the skin to the pulp. Another important fact is that a total of 34 fruits were used in various processed products – such as pulps, juices, jellies, sweets and cakes – which is a reflection of the socio-biodiversity found in the semiarid backyards which, although historically has been seen as a place of need, shows signs of abundance and innovation in production processes.



¹¹ According to the Food Guide (BRASIL, 2014) fresh foods are those obtained directly from plants or animals. Minimally processed foods are those that have undergone cleaning processes, removal of edible parts, fractionation, grinding, drying, fermentation, pasteurization, refrigeration, freezing or other similar processes. (BRASIL, 2014)

3. Productive organization for food transformation and processing

The lack of financial resources for investments in equipment and physical structure for processing, conservation and storage, as well as the lack of technical advice to ensure the quality of the process, the proper management of resources and the insertion of production in markets have been the main challenges faced by rural families. The importance of actions to strengthen the organization of initiatives aimed at the use and processing of food is a highlight in the testimonies of technicians from the advisory organizations:

We also work with many workshops in quilombola communities. They work a lot. The use of cassava (from flour, dry gum and fresh gum). They add value to products such as snacks, cakes and pies. And they also reuse it for animal feed. (Daniela, CTA/PPF)

The Paulo Freire Project has been working on food sovereignty and security since the beginning, through workshops for the processing of fruit into sweets, jams, sweet and savory dishes. At the end of 2019, due to the community's own demand (about mango and cashew waste), we held a workshop for processing mangoes and another one for cashews. And we also had a festival. It was a cashew queen parade festival (all the foods that were there were learned in these workshops) (...) They made hamburgers, pies, etc., a variety of foods. They made a handout for each participant. They absorbed that – families making cashew products. It had a good repercussion both in terms of income and also of FNSS. (Manjari, CTA/PPF)

The organization of productive groups of women and youth and their structuring to enable the flow of food products

has been fostered by women's and youth movements, in conjunction with international institutions that promote rural development in the semiarid region. IFAD, in projects implemented in the Brazilian semiarid region, has supported initiatives to implement product processing processes, as a strategy for productive inclusion and income generation for rural women and youth. The investment plans, which are designed and implemented to support community associations and community groups in structuring their production activities, have helped a lot in strengthening enterprises aimed at improving production. A concern expressed by Hardi Vieira, IFAD program officer, is that often, when building investment plans and making investments that involve the construction of a processing unit, this equipment "remains idle, underutilized and has management problems". This shows the complexity involved with a process of managing an investment plan that encompasses the dimension of infrastructure and equipment.

The coordinator of the Viva o Semi-árido Project in Piauí, Francisco Chagas, claims that, even during the pandemic, there was continuity of activities that are inherently collective, such as farinhada, which is the collective processing of cassava in the context of the Northeast region. According to him: "it has been said they were carried out, despite the pandemic. People were distanced, but it is not possible to do it with less than 10 to 12 people to be able to handle the entire process: harvesting and processing on the same day (scraping, dough, dough washing, press, roasting and filling)".

In some IFAD-supported projects, such as PSA in Bahia, there has been a strong investment in structuring women's productive groups in enterprises on a more advanced organizational scale with the support of specific advisory services within the technical teams. Many of the local initiatives carried out by women at the community level are embryos of small "agro industries", which, if considered the focus



of investments from public credit and funding policies (such as Pronaf), or public purchases (such as the National School Feeding Program – PNAE, the Food Acquisition Program – PAA or Minimum Price Guarantee Policy for Sociobiodiversity Products – PGPMBio¹²), could be structured in such a way as to become enterprises with a significant economic return for the women who are the protagonists of this process and their families.

Also noteworthy is the participation of young people in initiatives related to the processing of certain foods, such as fish, for the purposes of enterprises focused on tourism, such as in the region of Vale de São Francisco in Sergipe. This shows how the transformation of food into by-products – which is part of the culinary processes of improvement and processing – is something that can have a financial return within enterprises that become tourist spots within a route. They are also examples of projects aimed at social inclusion, since rural youth are interested in them and get involved in experiences, such as fish farming projects, that develop tourism activities markedly.

Some actions of the Dom Távora Project that deserve to be highlighted are those that saw a great involvement of young people. There were Ecogastronomy events linked to the Slow Food movement, which mainly helped in the San Francisco Valley region (involving communities there). And it also served as an incentive/strengthening of projects there that are part of a network of communities involved in sustainable tourism in the São Francisco Valley. One of the communities has a restaurant run by young people. (G. Clelio, CTA/PDT)

Within the experiences of processing and seeking to guarantee food and nutritional security, there is the experience of the Culture and Gastronomy Center. It has been run by young people. Most of the participants are young people. They are doing some training, etc., for the work of gastronomy. To make better use of fish for community tourism in communities that benefited from fisheries investments. (F. Daniela, CTA/PDT)



¹² PGPMBio is a policy that values the extractive practices of traditional communities, especially those located in the Cerrado and Amazônia biomes, by guaranteeing minimum prices for 17 sociobiodiversity products. In 2018, PGPMBio completed nine years of operation, with more than R\$49 million transferred to the benefited groups. (CONAB, 2017).

4. The impacts of COVID-19 on food processing and processing systems

- Changes in the pattern of food consumption, with greater appreciation of local biodiversity products and healthy eating.

Ease of access to fruits, vegetables, and animal protein served as confirmation of the viability of small-scale agricultural production, at a time when it was not possible to leave their homes to sell or buy products at the fair.

It is noticed that the pandemic impacted the food routine of families, in some situations there was a reduction in the number of meals, as well as a greater consumption of products from backyards and/or local, such as cassava, sweet potatoes, fruits, eggs and chicken. The implementation of the project made it possible for the number of vulnerable families not to be even greater. (Manjari, CTA/PPF)

All the families had to cut down, as the partner said last, on cream, those things that are not so necessary. A lot of things that come from the market had to be reduced. I don't follow the sausage or mortadella logic, I can't do that. I really go for beans and rice if necessary, kill a chicken, kill a pig, I go for beans and rice, I prefer not to eat these other things. So, there was a big decrease (Sônia, farmer/PVSA)

All these statements reveal an undeniable fact: families' degree of self-consumption during the pandemic increased, so that there was a greater appreciation of food from agricultural production and extraction spaces: backyards, orchards, swiddens and forests. The difficulty of accessing supermarkets and warehouses, whether due to the lack of regular transport in the communities, the restrictions imposed on mobility due

to social isolation measures or the increase in prices, caused a greater dependence on local food. This obviously has repercussions on eating habits – once people start to consume more fresh or minimally processed foods –, reducing the consumption of ultra-processed and industrialized foods.

The testimony of Clélio Villanova, a technician for the Dom Távora Project in Sergipe, on the construction of Investment Plans (PI, PN or PP) and their relationship with the percentage of self-consumption is extremely relevant for our analysis. According to Clélio, in the process of designing the Business Plans for each of the associations, which is one of the focuses of the technical assistance work, a percentage of self-consumption is always considered in the cost calculations. Clélio then comments that when making an assessment at the end of the implementation of some of the plans in early 2021, he noticed that self-consumption was greater than the amount foreseen in the Investment Plan. Thus, there was a perception, on the part of this professional, that self-consumption took a central place during the pandemic period, a fact that can also be seen from other reports.

- Changes in the pattern of food consumption, due to the reduction in purchasing power because of the high price of products.

Changes in dietary patterns were also motivated by the price of food. Respondents reported the difficulty in purchasing certain products due to the increase in prices. Allied to the issue of rising product prices, another factor that contributed to the change in food consumption was the drop in income.

There are families that are in need and are unable to eat three meals a day. Sometimes the family produces cassava, but does not produce rice, which is 7 reais here; and it is hard. She said that there it is 22 reais for goat meat, which is 25 reais here, and



35 reais for beef. So the poor are no longer able to eat meat, are they? They have to eat eggs. I eat meat when there is pork, slaughter at home. Fish, then we have a variation in the menu, buying from outside is unfeasible. Meat here is like gold! (Aparecida, farmer/PVSA)

I don't buy meat anymore, so sheep and chicken come from my backyard, I'm not buying them at the market. So the cost of living also increased, previously it was three, now it's six meals. (Simone, farmer/PPF)

The open or agroecological fairs, where a large part of agricultural products are traded, were closed for some time during this pandemic period, making trading difficult. When they returned to work, the movement was considered weak, due to the permanence of measures to restrict movement. Thus, families were forced to replace the products usually consumed with others more accessible to the new income pattern. Using their creativity and traditional local recipes, women, the main responsible for food preparation, increased the production of breads and cakes, often reducing the use of certain products or replacing them with others. The result of this process, as shown in the statement below, was a reduction in the consumption of processed foods and an increase in the consumption of natural products, such as fruit juices and fresh vegetables.

Industrialized products are widely consumed, especially farinaceous items, such as biscuits, cookies and pasta, common in the diet. However, the price of these foods went up, family income was reduced, and access was more restricted due to the lack of transport to the municipal centers, where the price of processed products is lower. Therefore, their consumption in this pandemic period was relatively lower.

The pandemic stimulated food concerns for the population in general, and it was no different in the countryside, where we observed that families increased their consumption of fruit and vegetable juices, significantly reducing soft drinks and industrialized powdered juices. Another product that had its consumption changed was oil (soy), due to its high market value. Communities in general started to prioritize lard and butter from the land, when it is available from the production itself (Manjari, CTA/PPF)

- **Increased production and consumption of foods with medicinal effects.**

Products that in traditional local folk wisdom were known and consumed for their healing or immunity-strengthening effects were even more valued in this period. Respondents reported increased consumption of honey, teas and fruit juices as a way to strengthen the immune system.

Consumption per capita of honey, which was 1.30 grams per year (per person), should multiply by 5 or 10. These products got on the same ride as these others, which are known in popular culture, which are understood as medicines and immune system boosters. This consumption has increased a lot. (Chicão, CTA/PVSA)

Acerola had increased consumption and demand; lemon, which we have here in the production yard. Because of the pandemic, people are looking for a lot, and it is rich in vitamin C, which helps people's immunity. Diversities and exchanges are good. I thought it's good. (Irenilda, farmer/PPF)

Yes, in the part of fruit, mostly orange, acerola, lemon and soursop, there was a great increase because it increases immunity. People are consuming a lot of

orange, lemon and soursop juice, especially the soursop that we have here. (Simone, farmer/PPF)

There was an increase in the sale of medicinal herbs during the period of the pandemic in your region, citing mint, grass, boldu, saffron, honey (in replacement of sugar) and lemon – for immunity and to fight the virus. (Raimunda Borges, farmer/PSA)

This preventive logic – of protecting against the contingency of a disease that settles in the body due to its weakening in the face of some external factors, including the threat brought by COVID-19 – is expressed in the frequent use of home remedies, made with medicinal plants and foods full of medicinal properties. What is observed in these arduous circumstances in which certain social groups are exposed to conditions of greater social vulnerability is an increased perception of food as a source of medicinal principles and properties – an awareness that expands from the understanding that the consumption of certain foods – many of which were not often consumed by community residents, being channeled for sale "outside", such as honey – also has the potential to bring about a healing state, according to popular belief.

- **Increased consumption at home due to the suspension or reduction of school activities and collective work.**

The orientation towards social distance interrupted school activities and made it impossible or reduced the frequency of carrying out collective work in family productive units, in communities and in productive groups, associations and cooperatives. Thus, family members spent more time at home, increasing the demand for food consumption.

Meals increased because I have three teenagers who stopped going to school and now eat at home. Previously, they only ate twice at home and now they

are all the time asking for food. So food consumption increased a lot and when they could go out to play, and when they went to school and one studied in the morning at a school, the other stayed all day long. Coffee increased here, now I make several bottles of coffee. My father, who lives with me too, and used to wander around, now stays home and eats and drinks coffee. (Simone, farmer/PPF)

- **Project actions to encourage the consumption of healthy foods.**

The statements of the interviewees indicated the importance of the actions developed within the scope of IFAD-supported projects to guarantee access to food and food security for the families involved. Training activities and in-person technical assistance to families were stopped. But several activities were carried out "virtually", enabling the continuity of the production processes fostered by the projects.

Thus, during the pandemic, we held debates and virtual meetings specifically on food security, namely: Live (Instagram) – Food security challenges in times of pandemic; Campaign "World Health Day" in partnership with ASA, through four videos with experts on the theme of family farming and food security; Meeting of Agroecological logbooks "Biodiversity for health in the pandemic", addressing the food pyramid, food categories and the organization of nutrients in meals, presenting data on the annotated variety present in backyards and the income generated and/or saved; and Podcast "Food and Nutritional Safety – SAN", having as a guest a member of the Sabiá Center team. (Manjari, CTA/PPF)

[...] With these workshops (this training process) it contributed a lot to this sustainability (in production,





marketing and even consumption). They are forced to reduce their (animal) feed – these expenses. (Márcio Lima, CTA/PPF)

On the other hand, the pandemic showed the relevance of the actions developed in the projects so that families could face the moments of crisis in a more structured way. Thus, it revealed that the focus on promoting agroecology, strengthening agrifood systems based on healthy eating and living with local conditions in the semiarid region, is the path that should be fostered and strengthened by strategic actions and public policies aimed at transforming foods over time.

5. Propositions in the field of food preparation and processing

- i) expand investments in equipment and structure for the processing, conservation and storage of products already processed, ensuring a minimum structure of stock capacity;
- ii) promote training and advisory actions that promote the diversification of benefited products, further expanding the offer of these products for family consumption, animal feed and for sale;
- iii) motivate and support the structuring of processing, conservation and storage of products developed by productive groups of women and young people;
- iv) expand and consolidate public procurement programs (PAA and PNAE) so that community residents can continuously and permanently acquire the products benefited by the economic enterprises of family farming, PCTs, rural women and young people.







CONSERVATION, STORAGE AND SUPPLY

1. Introduction

In this chapter, we intend to identify the challenges caused by the pandemic with regard to the storage and supply practices of food in rural communities in the Brazilian semiarid region. To this end, it is important to analyze the conservation and storage practices adopted by families, individually, in their production units, or collectively, in productive groups, associations or cooperatives, and understand how they integrate the local food supply channels. The first part of this chapter contains reflections on the effects of the pandemic on stocks, on food storage and conservation structures, and on local supply dynamics. The second part presents the final considerations and recommendations that can contribute to the expansion and improvement of public policies and actions in the semiarid region for stock and storage processes of the food produced.

Creole seeds, besides being present in family farming systems, populate the fairs and markets, loans and returns on community houses and banks of seeds, or between family members and neighbors, as well as being central themes of several meetings and exchanges in territories. In fact, in some territories, the cultivation of Creole varieties, in addition to being part of practices in traditional agricultural systems, plays a catalytic role in agroecological practices and in valuing the recovery, use and conservation of the agrobiodiversity of various food crops.

Seed conservation and storage practices are developed by family farmers and PCT collectively, through community seed banks or houses, or individually in their production units. As already mentioned, they gained high importance for family farming and PCT families and were fostered by technical assistance teams, with support from social organizations and movements and, more recently, from public policies. The report of a CTA in the state of Ceará, territory

of Sobral II, describes the process of organizing and rescuing Creole seeds in the community.

In this context, in the territory of Sobral II, it was seen that there were few active seed houses, being more common and present in other municipalities that border the territory. The habit of preserving this genetic heritage in its diversity is made by more experienced, passionate and sensitive individuals to the quality of creole seeds. In this sense, CEALTRU started a seed house demonstration unit in the municipality of Ipu, Malhada Vermelha community. The process of rescuing these seeds is slower and depends, mainly, on the support network between the seed houses, being essential to the realization of exchanges, suspended during this period. (Geovana, CTA/PPF)

Grain storage aims to ensure that the family's food needs are met throughout the year. This traditional practice is used in the context of family farming and PCT, which usually keep the grains produced, preserving their physical and chemical qualities from harvesting to supply. This process involves a sequence of operations such as sorting, cleaning, drying, phytosanitary treatment, transport, which, in the traditional way, is done without using pesticides and poisons. There are many traditional grain storage techniques such as silos and plastic bottles (PET) and plastic containers as used in seed storage. In general, these practices meet the needs of those families who produce primarily for self-consumption, as highlighted by two interviewees.

The stocks stored by rural families primarily ensure family consumption. (Manjari, CTA/PPF)

In general, (storage) is inside the house or small rural property of family farming. There are no structures bigger than these [...]. (Geovan, CTA/PPF)

Families that manage to produce for sale often resort to storage facilities outside their properties. In the report of an interviewee, two paths adopted by farmers can be identified. Those that are integrated into organizational processes, such as associations and cooperatives, use structures made available by them for storage until the moment of sale. Others choose to sell the grains right after harvesting to large landowners, who generally pay low prices for the product and use their own storage structures for marketing throughout the year, at a better price.

However, through associativism and the acquisition of equipment for collective use, such as forage crops, which were processes facilitated by the Paulo Freire Project, families are having access to support bases for their activities, such as the headquarters of the associations, if any, and the processing of grains, ensuring greater use of the little space they have. Large landowners in the region tend to buy the surplus corn

produced by these families at low cost and store it in complex silo systems in order to resell the same corn at a higher price, often to the small farmer. (Geovana, CTA/PPF)

Respondents point out the deficiencies when it comes to public policies aimed at building food storage systems. The production of grain from these groups is intended for immediate trading, as reported by some interviewees, without domestic structures for storing large volumes of grain. Nor can they rely on public storage services.

If there are public food storage facilities, farming families do not have access. (Geovan, CTA/PPF)

Although public policies aimed at strengthening family farming and PCT have encouraged production aimed at marketing food, in the view of the interviewees they did not allow for storage structures that would enable stocking, providing marketing opportunities at better prices.



2. Animal feed storage

It is known that animal husbandry integrates the production systems of family farming and PCTs, being an important source of food and income for families. It is an activity that is part of the history of the peoples of the semiarid region. So to speak, goats and sheep — small animals — are at the base of the coexistence of peasant families in the region.

Both Clerisson dos Santos Belém and Egnaldo Gomes Xavier, two technicians who work in the Sertão de São Francisco region within the Pro-semiarid Project in Bahia, report that the strategy for stocking animals, such as goats and sheep, changed during the pandemic, which consequently influenced sales and self-consumption practices. As there was

a sharp increase in meat prices in local markets, there was a greater appreciation of animal husbandry as an economic activity within rural properties. At the same time, there was an increase in the consumption of animal protein, which had repercussions on the nutritional aspects of the daily diet of the monitored families. Clerisson elucidates the implications of this change, that is, how meat is no longer part of a “storage” strategy and becomes incorporated into eating habits:

As food prices have soared, families are using animals as a source of protein (goat meat, goat's milk). These proteins are having a lot of importance, because in the city the consumption of these proteins is very limited. They are now consuming higher quality protein.



3. Food Storage: Challenges experienced

Storing certain foods, such as fruits, vegetables, milk, eggs and meat and others, resulting from the processing and transformation processes, is perhaps the greatest challenge for family farmers and PCTs, due to the lack of adequate structure to conserve the quality of these foods. In general, the testimonies reveal structural problems to be able to store the products, as the storage capacity is conditioned to the equipment existing inside the house or close to it. Karina Manjari, a technician from the Paulo Freire Project, claims that, in general, families do not have an adequate structure to store their production for the following reasons: “lack of resources, difficulty in accessing public financing policies and lack of land ownership”. To deal with these difficulties, the farmers’ main strategy is to sell fresh food quickly. In this condition, families plan their plantations to meet family consumption and small-scale commercialization.

The products they usually sell are fresh and should not be stored. (Tanihely, manager (PDHC))

We worked more in order to sell what is available, to be fresh, as quickly as possible (not to keep). So we have very little in this area. (Francisco Chagas, Coordinator/PVSA)

In general, products from family farming do not have storage as a strategy, but direct sales, even to guarantee the quality and freshness of the food. (Victor, technician/PSA)

Regarding storage, there is no specific place for it. The product is taken straight from production for sale [...]. (Veronica, farmer/PDHC II)

The excess production has to be kept, honey has to be kept to sell after buying things for the family.

Here it is also the same, the person already has the container to keep in the pantry of the house where the corn and beans are stored. (Nonato, farmer/PPF)

We have the honey cooperative to store and if we want to keep it at home, we go there and get the buckets. We have fish here, we could even raise them, but the food is so expensive that we couldn't raise anymore because of the cost (feed). So it went to PAA COVID (which sold fish) and we improvised storage in the freezer for us to consume as we could. (Aparecida, farmer/PVSA)

However, products purchased by cooperatives such as honey and fruit can be stocked from the Caatinga Central and CESOL, which offer a storage/stocking structure. (Victor, technician/PSA)

Respondents drew attention to the fact that some products produced by family farming, as they are artisanal, natural, organic and preservative-free, have a very short consumption period. In this sense, the manager of DHCP II, Tanihely Costa, makes an observation about the procedures for the minimum processing of food in family farming, which has repercussions on the strategies — or rather, the lack of strategies — when it comes to storage. According to her, “the shelf life of processed products for family farming is short — for example, for cakes and breads. So the distribution already happens quickly”. This makes us reflect on the production processes associated with food that undergo a “minimum” processing process — most of which are under the responsibility of women — and which in fact cannot withstand any type of storage, as they need to be consumed quite quickly. At the same time, it raises reflections on the commercialization processes and how they interfere in the dynamics of productive groups. There is a difficulty in making long-term planning within initiatives aimed at improving and



processing production, precisely because of the uncertainties about the durability of the products and the need to sell products quickly to avoid damage and waste.

According to Verônica, agriculture linked to the DHCP II Project, the fact that most farmers organize themselves to “produce what they are actually going to sell”, means that “the leftovers” are turned to self-consumption, or for use “in the garden or for the chickens”. What can be seen is a strong tendency to take advantage of food flows within the various subsystems of rural properties in an integrated manner, instead of storing these foods for local supply purposes.

Another situation reported was the storage of fruit sweets produced by groups of women, in which they use the structure available at home for conservation and storage of these products. It is yet another situation in which the lack of structure becomes a limiting factor for expanding production and affects the result of sales, as products are sold at lower prices for not having a place to store properly.

This has also happened with groups of women who process fruit with the production of sweets. Many use their own home refrigerator, limiting production and storage, often having to sell cheaper because they have nowhere to accumulate many units. (Geovan, CTA/PPF)

Farmers who are part of community-based organizations, such as cooperatives, are able to use the structure made available by them. This was reported by a farmer who produces honey, who reported that she took containers from the cooperative to store honey in her home. Another respondent reported that he uses the structure of cooperatives to store fruit.

It is worth mentioning an observation about a product that has always been frequently stocked within the communities that work directly with the beekeeping activity: the manufacture of artisanal honey. Many interviewees testify that the demand for honey increased during the pandemic – which leads us to reflect on the greater concern, on the



part of consumers, with the medicinal properties inherent to certain foods, in the face of a pandemic that places the topic of “health” at the center of debates and discussions. Consequently, honey is no longer a food that is part of the “stock” of rural communities, as the flow rate of this production

accelerates. In other words, a food that was part of the storage processes – because it does not sell well – becomes an item consumed more frequently, which increases its degree of flow to local markets and the network of consumers consolidated via WhatsApp groups and other social networks.



4. Support to infrastructure for conservation, storage and supply

In the processes of productive organization of family farming and PCT, several cooperatives were set up to manage agribusiness and product storage and supply structures, benefiting hundreds of farmers involved in these processes. This has been a viable and fostered practice, as one interviewee described:

There is also the stimulus to the formation of cooperatives, associations or productive groups so that the formations of these stock infrastructures, as in the case of the fishermen group, are financially viable, since individually the costs do not cover the benefits, if dealing with small producers. (Geovan, CTA/PPF)

Since 2004, the Federal Government, through Pronaf, has provided financing so that farming families can meet these needs in the processing, storage and conservation of food products. However, a larger contingent of farmers is out of these processes and finds it difficult to invest in structures, equipment and utensils needed to expand and qualify their conservation and storage practices in their production units. They find opportunities in investments applied by agencies that promote rural development, such as IFAD, which has paid special attention to this issue, highlighted the IFAD representative interviewed in this study:

Infrastructure is fundamental when we talk about the issue of food and nutrition security. Transport, transformation structures, access to water are elements that are in our minds when we think about IFAD's actions, as is the case in Brazil's semiarid region. (Nancy Solano, IFAD nutrition specialist)



The projects that have been implemented in the Brazilian semiarid region by IFAD have carried out initiatives aimed at fostering productive organization, encouraging associativism and cooperativism, and supporting infrastructure, aiming to expand the storage and stocking capacity of the families served.

Another initiative was reported by the PFF technique. She highlights the process of encouraging the organization of a productive fishing group, with the perspective of creating a cooperative aimed at fish processing.

At first, this awareness begins with an exchange of an experience in this perspective, in the municipality of Pentecoste, held in 2018, where fishermen learned about fish processing in order to add value to their products. Currently, the main challenge is to make these improvements outweigh the costs necessary to maintain control of the marketing by the group, instead of transferring the fish to a middleman, in order to prevent them from spoiling. This, then, concerns access to credit. In other words, incentives for them to acquire more equipment such as freezers, expanding the infrastructure for storage time in order to value their products. (Geovana, CTA/PPF)

A key point in this statement by Geovanna (PPF) is the express perception that the dependence on the figure of "middleman" is reinforced by the lack of proactive action in relation to storage processes, combined with the absence of a policy aimed at construction of a local supply system. So to speak, the urgency of taking advantage of some products that "spoil" makes it difficult to exercise a more autonomous control over the marketing chain, without falling "into the hands" of the middlemen, who are responsible for carrying out the dialogues with the markets.



5. The impacts of the COVID-19 pandemic on storage, conservation and supply practices

• Interruption of collective activities, such as interchange and exchange of experiences

As a result of restriction measures, social isolation and suspension of public services imposed by local governments, collective activities were interrupted. In the case of work with creole seeds, for example, which feeds on the dynamics of exchanges, the suspension of collective moments to exchange the different cultivated species was a factor that made it difficult to articulate around these inputs. The report below exemplifies this impact.

The process of rescuing these seeds is slower and depends, mainly, on the support network between the Casas de Sementes, being essential to the realization of exchanges, suspended during this period. (Geovan, CTA/PPF)

• Change in stocks and demands for storage structures

From the highlighted reports, it can be seen that, with the suspension of open markets and classes, there was an interruption in the flow of commercialization, leading farmers to keep their products on their properties. It cannot be said that there was a suspension of sales, but a reduction in sales volumes seemed more evident in the informants' reports.

Last year was a very good harvest of honey, which we were able to sell. We sold it and what we didn't we stocked and stored and gave, so far this year. And the beans that we took because of the pandemic, there was no price and no middleman could pass because of the pandemic, so it's stocked. As winter is a little weak, if it doesn't improve we already have some stored (...) I used to kill a sheep and

sell half of it and now I stock it all up, because meat is very expensive and I don't know how long it will last. (Simone, farmer/PPF)

There was no increase in storage. The lack of material conditions prevents increasing storage. Not only for resource reasons, but due to isolation for the acquisition of new equipment. Moreover, storage also represents "savings" that, in need or urgency, can be sold for low prices. But the trend was to maintain storage without any significant increase or decrease, as the pandemic caught people off guard. Which can be differentiated this year with planning. On the other hand, we have the case of an initiative that has a large stock of stored fruit pulps that would be sold to PNAE, however, with the suspension of classroom classes and consequently of school lunch, they stopped receiving this demand from the municipality and the products are completely stopped. (Geovan, CTA/PPF)

However, cooperatives appear to have been more affected by the pandemic. Those who supplied food to schools, within the scope of PNAE, were forced to keep the products in their storage structures or seek partnerships, when these were not enough. The highlighted account illustrates this perception.

In relation to storage, some cooperatives here in PB were supported by the center of cooperatives that have access to several cold rooms at CEASA, which made these facilities available to store dairy drinks, fruit pulp, fish, and with the crucial support from EMPAER. And, a cooperative that works with cassava, they did an adaptation to peel and freeze cassava and use the residue for animal feed. And despite all the difficulties, the follow-up of technical assistance did not stop happening. The farmers

processed the cassava by packing it in bags and storing it for later purchase by the state government and then be distributed to the communities. So there was this action, a little timid, but important in the state of PB. (Aristeu, manager/ PROCASE)

• Increase in product storage and conservation costs

The two highlighted reports illustrate the effects of the pandemic on storage costs. With the increase in storage time and quantity of products, the consumption of electricity and inputs such as packaging increased. There was also an increase in inputs for medicines for animal husbandry, which undeniably affected the processing of animal protein products. These, in turn, had higher prices, which contributed to increase the expenses of cooperatives and agribusinesses, many of which were the result of investments made by IFAD, in the context of Investment Plans or productive projects.

[...] To discuss one that was not mentioned, the fruit pulp agro-industries. In this period, the issue of storage has also been very difficult, both because of the flow of production through commercialization and storage, also done in freezers, and storing these pulps has generated a very high cost for these agribusinesses, as Miguel has already said, the cost of energy is absurd throughout the country, and this has been difficult: coupling marketing with storage, the ends don't meet, it has been generating more outgoings and expenses for associations or agribusinesses. I believe other territories may have similar problems. (Sheila, CTA/PROCASE)

I have a spreadsheet that was contributing with Nicholas to the impact report at a consultancy made by IFAD, which is doing a study of supply chains. I set up the worksheet for the issue of goat cheese,

which is a product that is horizontal to goat farmers in our semiarid region. For us to have an idea, the farmers' report (because I did it with them, calling, sitting with them), and they said that the price of cheese packages practically doubled. He didn't know energy costs, but I went for it, I reached R\$ 0.51 per hour, and before the pandemic it was R\$ 0.43-0.44. So even not only produce, but maintain and stock. We did a study of goat farming, even to store food. These costs brought by the pandemic came to bear on them, an increase of 20-30% in energy, at least 50% in other inputs, drug inputs, they almost doubled in price. For those who raise milk goats, the cost eventually with antibiotics, they practically doubled in this pandemic, and the prices of the milk program, for example, were maintained, in the domestic market they were maintained as well. (Miguel, CTA/PROCASE).

• Changes in local supply

Another effect of the pandemic verified in the interviewees' reports refers to changes in the local supply. The restriction of transport from communities to urban centers made it difficult for families to access products, especially industrial products.

At times, in relation to industrialized products essential for consumption, there was a change in the local supply, as alternative transport between rural communities and downtown cores was suspended and many still did not return to circulate frequently. Therefore, this may have interfered with the acquisition of industrialized products, as it is in the city that the families of farmers make more affordable purchases of this kind and even from the sale of eggs, beans, animals, among others, they get the resources necessary for this acquisition, which



becomes aggravated by the suspension of municipal fairs. (Geovana, CTA/PPF)

The concern with the shortage of fresh products has occupied the perception of local governments. According to Wallene, from Procasa's technical assistance team, there is a prospect of pressure on industrialized products, which have been purchased

for distribution actions to the neediest families who need to stay in isolation. As he himself says: "they are the ones who are now helping these families, thus also opening a concern for the shortage of large networks, given the great demand, not only the availability of this food, but access to it. The government's yellow light has already turned on".



6. Final considerations

The organizational processes that lead to the constitution of productive groups or cooperatives of family farmers have been important strategies to allow for practices and structures for storing products. During meetings with focus groups, and in interviews with key informants, it became evident that there is no substantial policy to deal with food storage demands, especially with regard to processing products, and not even in the perspective of building a local and regional food supply system in such precarious times, given the impacts of COVID-19. In this sense, the speech of Francisco Chagas (Chicão), Coordinator of the Viva o Semiárido Project in Piauí confirms the existing gaps:

We do not have a food storage policy. Only PNAE stocks for a short time using the facilities of the Regional Education Management and Municipal Education Departments. The warehouses of the former CIBRAZEM/CONAB were practically all deactivated.

In relation to food storage and stocking, the effects of the pandemic seem to have mainly affected cooperatives, considering the suspension of the supply of products to schools, but above all, due to the increase in energy and input costs.

While there is this precariousness in the plan of actions and policies that seek lasting solutions to the obstacles in the food supply, the testimonies show us that the production of food with greater durability was highly valued in this period, for

self-consumption, exchange and donation, in large part due to the lack of access to processed and industrialized foods in local and regional markets, in addition to restrictions on travel and rising prices. Farmer Simone (PPF) also attests that she increased the degree of food storage because "there was no price and no middlemen because of the pandemic", which forced her to "buy more containers to store the flour, gum, beans and corn." As she herself said: "Here we already had things for stock, so with the pandemic we stocked more because we don't know how it will be and how long it will last".

The uncertainty of "how long it will last" reinforces the tendency to "stock" more intensely, within its possibilities. Although in this case, storage is motivated by the lack of opportunities to structure a more effective strategy for out-flowing production and marketing during this period of the pandemic, it is important to point out that this has repercussions on the eating habits of these families in the territories. The consumption of these same foods by those who live in these locations increases, as a result of the intensification of non-economic relations — that is, donations and exchanges between residents.

Food storage capacity is a strategy to face crises and ensure food for families and communities on local level. Thus, it is recommended to expand strategies aimed at strengthening storage structures, enabling farmers to expand their stocks, ensuring product quality and increasing their greater capacity to negotiate products at better prices.







NON-ECONOMIC RELATIONS
OF DONATION AND EXCHANGE
AND FOOD DISTRIBUTION

1. Introduction

One of the ways to nurture a food supply system on the local and regional level is through food distribution processes – dynamics that are articulated spontaneously between local residents in the social fabric, based on non-monetary practices – of donation and exchange. Another strategy that we witness at the heart of IFAD-supported projects is the intensification of donation mechanisms – for example, the delivery of “baskets” – to reach different segments that suffer more acutely from the effects of this process of social precariousness.

According to Sabourin (2008), the anthropologist Mauss (1950; 1969; 2003) managed to see the principle of “generalized reciprocity” as the “rock” or “matrix” of social relations, which is expressed in the tendency to live the triple obligation: “give, receive and reciprocate” (SABOURIN, 2008). This observation is consistent with the reality observed in the context of the six states of the semiarid northeast. In the web of social relations that are woven around agrifood systems, “non-economic” transactions – of donation and exchange – are clearly evident in the processes of social interaction.

Karina Manjari, a technician from the IAC organization in the Paulo Freire Project, shares her impressions about the ways in which these reciprocity practices, involving plants and food, take place within rural communities:

The custom of making food donations in rural areas is a common practice, especially in properties with fruit crops such as mango, lemon, banana, papaya, acerola, etc., which generate an abundance of food

and usually waste. The practice of donation and exchange is greater between farmers, neighbors and relatives, and it happens as it is available (crop and harvest period). (Karina Manjari, 2021)

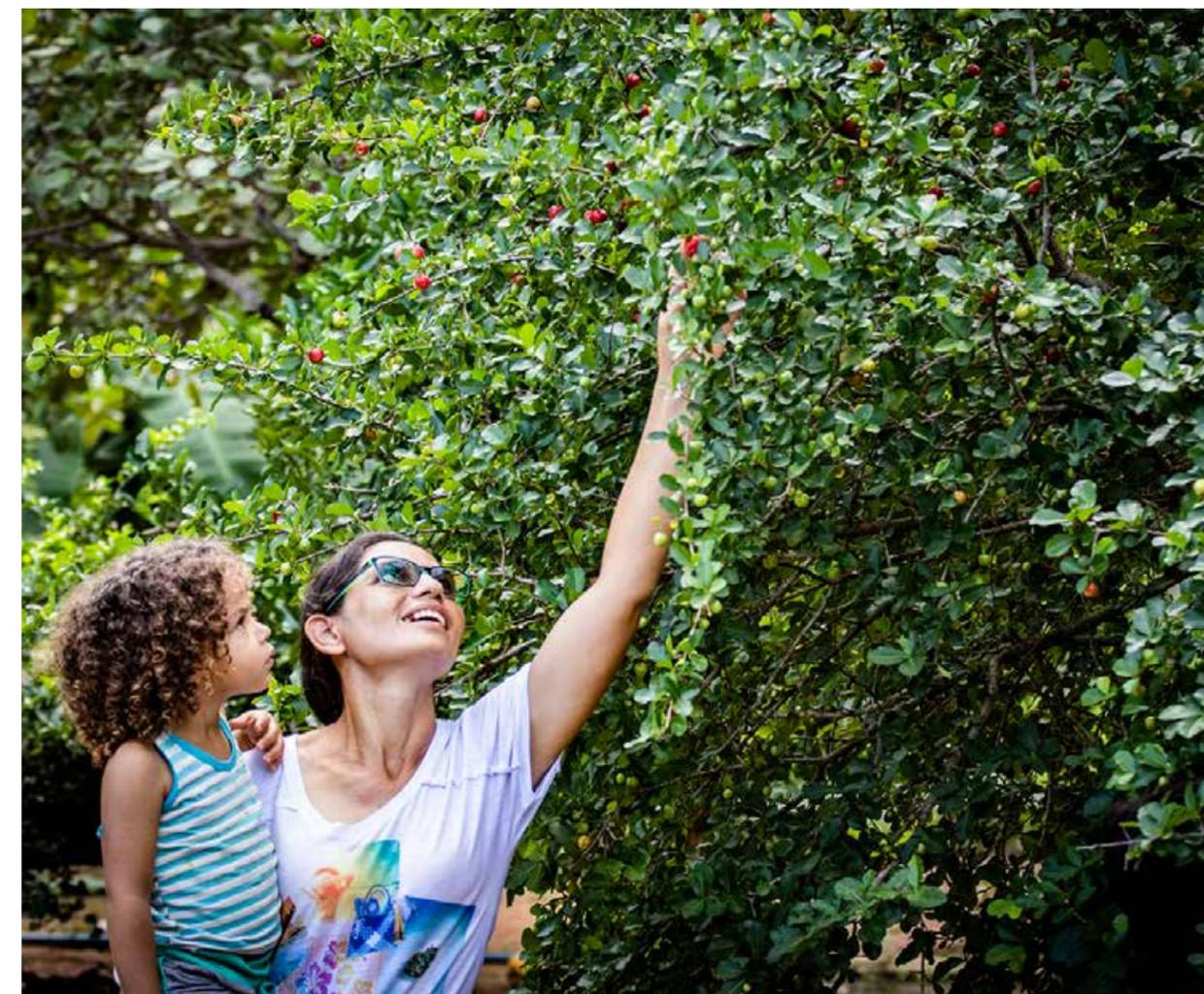
Manjari provides a definition of “exchanges” that he observes at the heart of the municipality of Ipu, where he operates, as “subtle and underreported practices, as they occur spontaneously and most of the time they do not happen formally or simultaneously”. He illustrates this scenario in the following way: “At one point a family donates a bag of acerola, weeks later the family that received it presents the family that donated the acerola with a bunch of bananas.” The feminist economy¹³ has shown that there are contributions – most of which led by women, as is the case of exchanges and donations of food and plants – that affect the economy, but which are not understood this way, when seen merely as expressions of care, aimed at the “production of living”, as if they happened on the margins of economic processes. For this reason, it is important to recognize that the work that was carried out with 909 farmers who made use of agroecological logbooks in the context of IFAD-supported projects, during the period from September 2019 to September 2020, shows us how not only the sales practices, but also the productive activities aimed at self-consumption, exchange and donation impact economic processes.

It should be noted that the practices of donating or exchanging food, seedlings and seeds between family members and neighbors have multiple functions. One of them is the propagation of species in the territories, which contributes to the preservation of agrobiodiversity in the various plantation

¹³ The feminist perspective in the field of economics introduced a critique of the exclusion of women as an object of study of theory, in addition to revealing the supposed neutrality of its categories and concepts (MOURA; MORENO, 2013). Based on a methodological and epistemological problematization of the construction of this field of knowledge, I propose that the understanding of the situation of women be brought to light from their own experiences in different social contexts.

spaces. Although these non-monetary relationships tend to be underreported, it is undeniable that these practices are part of a millenary tradition, at the basis of sociability processes between relatives, neighbors and residents of neighboring communities that affect a local supply network. This local supply network, rooted in the territories, guarantees self-consumption and constitutes one of the strategies to fight food and nutritional insecurity.

At the same time, these donations and exchanges of seedlings, seeds and food can be understood as strategies that aim to guarantee the diversification of species in backyards, crops and orchards within rural properties. A diverse backyard – that is, full of a variety of foods – was usually built not just by one or two people, but “by many hands”, from donations and exchanges – and it is precisely the richness of these exchanges that makes it possible to guarantee a healthy and balanced diet.



2. Donations and exchange of food products: plants, seedlings, seeds and food

The records from the agroecological logbooks revealed the diversity of foods that circulate in the spaces of the farmers' backyards in the semiarid region of the Northeast: in total, 1,228 types of products were registered. As already analyzed, it is very likely that this diversity that is evident from the expressive number of species is a reflection of exchange and donation practices. Another important fact is that, in the sphere of non-monetary socioeconomic relations (exchange, donation, consumption), most products are fresh and of plant origin. Studies show that fresh foods preserve nutrients over the long term, so they tend to be healthier, directly affecting the health and well-being of families who consume, donate and exchange such foods.

Raimundo Muniz (Nonato), a farmer who is part of the target audience of the Paulo Freire Project's actions, says that the relationships built from the exchange of products and services "generate a movement", which can be understood as the driving force of the sociability processes that support the organizational structures:

Worst of all is the disease focus, because one is unable to work, no selling and one has to produce to be able to feed oneself. The community here has always had this custom, of helping each other on an exchange basis. I exchange my product, I have honey and instead of buying eggs I exchange it with someone who has chicken. There are these small things that generate a movement, people are in need of each other and are exchanging products, knowledge, it has been happening here. In the winter period this year that has been better than last year and then we exchange. Exchanging is a very good experience because you can buy things without needing money. (Raimundo Muniz – Nonato, PPF)

Geovana França, a technician from the CEALTRU organization in Ceará, claims that, even during fairs that represent places aimed at sales, intense processes of exchange of food products take place, since they are devices that trigger dynamics of socialization and sharing of products, inputs, resources and knowledge. According to Geovana: "Even during the local fairs there is this stimulus for exchanges between producers, such as the exchange of eggs for beans, but these were suspended during the pandemic period". So to speak, the pandemic also affected the possibility of these exchanges in broader spheres, such as between communities and municipalities.

She also comments that the suspension of events or activities that allow the circulation of social actors is a factor that encourages other expressions of solidarity, exchange and donation at the local level, into local communities.

However, neighborhood relations, solidarity and mutual support are something present before the pandemic and have increased a little, due to limitations on the movement of people to fairs and cities. (Geovana France/PPF, 2020)

It is also observed that, given the impediments to the realization of some short commercialization circuits, such as face-to-face fairs, other ways were created to give visibility to food products and promote their exchange and commercialization processes in the virtual field. Karina Manjari, an IAC technician who works on the Paulo Freire Project, reports the experience of "community fairs" – which represent an innovative invention in the organizational field during the pandemic – and which involve four municipalities and eight communities. These "online" fairs are self-managed by the farmers themselves, who show autonomy in the ways of posting the products and make decisions about product labeling and packaging. According to her, this device has fostered interaction between people from different communities, facilitating the

process not only of marketing, but also of food distribution among families.

Community fairs also contributed to the circulation of donations, we verified this in the conversations of the association's group, in which we observed families asking for a "thread" of chives to plant, a potato or some bean seeds from the posts of the farmers themselves.

Most interviewees attest that food exchanges intensified during the pandemic due to a greater concern with preventive measures that protect the body against possible afflictions and diseases. In this sense, food donation and exchange practices during this critical moment of the pandemic are linked to a concern with their medicinal value. Thus, we look at how food is framed as a source of healing.

Acerola had an increased consumption, demand; lemon, which we have here in the production yard. Because of the pandemic, people are looking for it a lot, and it is rich in vitamin C, which helps people's immunity. Diversities and exchanges are good. (Irenilde Nunes da Silva, PPF)

Raimunda Oliveira de Melo, a beneficiary of the Paulo Freire Project, claims that the increase in trade during the pandemic is also related to the limitations on mobility to access markets. In view of this, it was necessary to develop new agrifood supply strategies within communities based on reciprocal relationships.

Here, we already had this custom of making exchanges, but they increased a lot with the issue of the pandemic, because we don't want to go out to the city much. I want to bake a cake, I don't have milk, I go to my neighbor and exchange the egg for milk. This has been very practical within my

community, after the pandemic, to exchange food. As the need appears we determine the products that are exchanged. We are not leaving home because of the COVID issue, and because of the cost. Some people are exchanging work for food too. (Raimunda Oliveira de Melo, PPF)

Raimunda also notes that during the pandemic, the logic associated with the practice of exchange underwent some changes. Whereas before it changed according to the organic processes of nature – according to the harvesting process of a certain plant that grows naturally in a specific season –, currently the need to consume food to "not go hungry" and to ensure quality food constitutes the main reason behind donation or exchange actions.

Because before, we used to exchange at the time of planting: a corn for another type of corn, the white bean for the red one. Not now, it is the consumption of food is dictating the choice of food during the exchange. (Raimunda Oliveira de Melo, PPF)

Some technicians from the institutions that provide technical assistance allege another reason for the increase in food exchange during the pandemic: the obstacles in the flow of production, due to difficulties in making sales viable. This implies a greater amount of food available at the local level, much of which cannot be stored and therefore needs to be donated or exchanged for self-consumption. According to Karina Manjari, technician at the IAC of the Paulo Freire Project:

Before the pandemic, the exchange of food for other products was already common, but it is clear that this custom has increased among families, considering that product sales have decreased significantly and it is a way to reduce production waste.



The donation and exchange of creole seeds has always been a strong tradition in several rural communities in the semi-arid region of the Northeast. Evidently, with the suspension of in-person activities during the pandemic, the events of exchange of creole seeds stopped happening, which has weakened this intense process of exchange of seeds that has been going on between houses and seed banks for so many years. Geovana França, a technician from the CEALTRU organization, who works in the Paulo Freire Project, comments that, although the habit of preserving this

genetic heritage in its diversity continues with strength in the communities, the process of rescuing creole seeds, which depends on the articulation of a network support between the seed houses, weakened during the pandemic period. In her words:

The process of rescuing these seeds is slower and depends, mainly, on the support network between the Casas de Sementes, being essential to carry out exchanges, suspended during this period.



3. Ways of food distribution in times of pandemic

Experiences organized to make food donation viable proliferated during the pandemic, sometimes through processes carried out by associations and community groups, sometimes by advisory institutions in the social field.

With regard to self-managed activities aimed at donation on the local level, it is worth noting the testimony of Raimunda Oliveira de Melo, farmer and president of the community association of a *quilombola* community in which historically there has been this tradition of donating food to those who most need. It is noticed that the pandemic only brings out spontaneous expressions of solidarity that are part of the *modus operandi* of these communities:

Here in my community, both me and other people, we always donate what we have plenty at home and that the other person doesn't have. There are two families in need here and we are always donating. Right now we've chipped in to buy medicine for a lady. And, thank God, we are always giving food away. My quilombo is always supportive and we're donating to those who don't have it. This moment is not easy (...) Here we have a WhatsApp group only for the community, and we always give the initiative, as I am the president of the community (...) Sometimes there are people who have to go out on the street to help those who need to go to the city, but they don't have gas and they need it, and we always find a Brazilian way. We already did it, with the pandemic it has now become routine even in our quilombo. (Raimunda Oliveira de Melo, PPF)

With regard to support to sustain agrifood systems during the pandemic by the network of institutions that participate

in the dynamics experienced by the projects, some points should be highlighted. Some project technicians comment that the continuity of the Investment Plans – which already provided for the supply of materials for production processes such as seeds, fishing and beekeeping material, according to the beneficiaries' records – was essential to supply the needs of families in the communities served. There is also mention of initiatives mediated by evangelical and Catholic churches, which collected food to compose basic food baskets for families who found it more difficult to face COVID-19.

It is important to emphasize that these campaigns have collected products that are mainly industrialized to compose the baskets, instead of incorporating products from family farming. In most cases, the "food baskets", which are offered by social assistance institutions, do not consider the native foods that form the basis of the diet of different social groups.

Geovana França, a technician from the CEALTRU organization, which works in six municipalities in the region called Sobral II in the context of the Paulo Freire Project, says that, although it is not a "social assistance entity", during the first quarantine of 2020 they surveyed the number of people who experience higher risk situations within the scope of the Paulo Freire Project and forwarded these data to "the Social Assistance Secretariats of the municipalities so that they could decentralize donations from the urban area" (Geovana França, 2021).

José Moacir dos Santos, IRPAA collaborator – one of the partner organizations that perform ATER services in the Pró-Semiárido Project (PSA) in Bahia – reports that, given the low production process due to the lack of "contracts" with PAA and PNAE (Public Purchasing Policies), and the disarticulation of productive groups, IRPAA reinforced food donation and distribution actions, with 60% of these actions aimed at urban communities and 30% aimed at rural





communities. These actions somehow strengthened the bonds between the communities, as IRPAA bought from communities that had food in abundance and distributed it to other communities where there was no easy access to quality food. An important observation is that these actions were carried out in articulation with consolidated movements and thematic networks, such as MPA and ASA.

Miguel Davi, PROCASE Project technician, highlights the importance of solidarity-based food distribution initiatives from the countryside to the city, such as those carried out by social movements, such as MST or MPA, since the emergence of COVID-19. These processes, some of which had the support of the Government the State of Paraíba, have been fundamental to validate the phrase currently used: "if the countryside does not plant, the city does not dine". They reveal the interdependence of the city-country relationship, besides showing the role of social movements in the construction of a food

standard based on nutritional quality and the degree of availability of these foods for different social groups.

Several family farmers engaged in the projects gave testimonies about the food donation processes during the pandemic. Irenilde Nunes da Silva, beneficiary of the Paulo Freire Project, talks about some initiatives by political bodies on the municipal level, which also include actions related to the provision of school meals in schools. She also talks about the difficulties in accessing the benefits offered by the Federal Government – such as Emergency Aid – either for not using a cell phone, or for the complications in handling the application. In her opinion, these difficulties with the support of the Federal Government – Bolsa Familia or Emergency Aid – which have become more aggravating this year, compared to last year, show the importance of other forms of support and solidarity by organizations and community-based groups.

4. Final conclusions

The pandemic called into question the value of non-monetary practices. It is these practices – already existing as part of a millenary tradition, but intensified during the pandemic – that present decentralized ways of boosting local and regional supply processes.

Emergency food donation actions, although they do not address the structural causes of food and nutritional insecurity, have been fundamental to reach the most vulnerable segments during the worsening of an agrifood crisis of drastic proportions. It is observed that these initiatives are carried out by families or community groups at the heart of local communities that decide to donate food that is part of their stock. We have also witnessed food distribution processes being organized by NGOs, churches or other charities. It is

interesting to note that even organizations that were not created from the logic of "social assistance" – that is, to provide advice to those who are most vulnerable – have been able to mobilize resources and seek allies to find quick and emergency responses to the serious crisis installed.

Finally, it is worth considering the nature of some of these initiatives aimed at distributing food, with a view to building a sustainable local and regional supply system. In the construction of programs and policies in the agrifood field, it is necessary to incorporate healthy foods that respect the criteria of "basic baskets", which represent an important measure to increase access to food by vulnerable social groups, it is essential to contemplate the values associated with native and rare species, many of which tend to be undervalued and can be considered fundamental elements when it comes to agrobiodiversity practices.







MARKETING PRACTICES

1. Introduction

One of the most affected facets during the pandemic caused by COVID-19 was the field of commercialization. Francisco das Chagas Ribeiro Filho (Chicão), Coordinator of the Viva o Semiárido Project (PVSA), describes the drop in the volume of products sold: **“It is estimated that the drop in sales was around 20% compared to 2019 and 20% more compared to 2020 down. Only 25% of the products were marketed differently (using the internet)”**. The reduction in economic activities in all cities across the country was too sudden for communities, managers and technical assistance to have time to swiftly build an alternative that would protect family farming from negative impacts. There was a difficulty, on the part of the public spheres, to establish a broad and robust plan to fight the pandemic that would prioritize the most historically vulnerable categories such as family farmers, who have lived for so many years with the negative effects of extended periods of drought, in addition to other factors of social and environmental precariousness in the semi-arid region of the Northeast.



This chapter aims to present and analyze the commercialization process from the various viewpoints and perspectives brought by communities, CTA teams and public managers linked to the six projects promoted by IFAD in the semi-arid region of Northeastern Brazil. The following key issues will be focused on in the proposed analysis: (i) the changes caused by the pandemic, with regard to the spaces and marketing channels; (ii) the strategies and action proposals that have been developed to strengthen family farmers in rural communities in their quest for food and nutrition security.

By pointing out the expressiveness of local initiatives that seek alternatives in the field of marketing – many of which include the virtual field – it is worth emphasizing what the “Practical Guide for the Marketing of Family Farming (2021)”, through a “giving hope”, points out: “Where there is chaos, there is also opportunity. (...) These people found new ways to sell and alternative forms of marketing that should remain even after the end of the pandemic” (Central de Caatinga, 2021). It is in this sense that the data and analyzes constructed by this research team will be presented.

2. Weaknesses and obstacles in the commercialization processes during the COVID-19 pandemic

Family farming, even before the pandemic, offered to markets products that did not fall into the commodity category and are not traded in large volumes. For the reality of families in the semi-arid region of the Northeast, a highlight is attributed to the short commercialization circuits, which allow negotiations directly with consumers, in addition to being the modality that most allows reaching a better price by cutting out the middleman, since loyalty ties are created and, consequently, a lower incidence of taxes, fees and inspections is generated. These short circuits are materialized in the door-to-door delivery of agroecological baskets, in addition to open markets and agroecological fairs, which constitute the strongest space for meeting the urban population. At the beginning of the pandemic, the government signed off on the ban on holding fairs in all regions, as Jaciara Ladislau Leobino, a farmer assisted by the PSA project, reports in the following statement: **“In the first six months of the pandemic, the supply to PNAE and PAA was compromised and the agroecological fairs were closed. There were also losses from productive yards. Cassava products that were widely sold had a decline”**. Door-to-door sales ceased, as both farmers and customers were isolated at home, avoiding physical contact so as not to contaminate themselves. This process generated a production volume without flow, drastically lowering the price of products in the markets.

The production chains that do not access the final buyer also suffered a considerable break. If we look at the diversity of production, we can say that the onset of the pandemic affected the plant production system in a different way as compared to the system aimed at animal production. In the vegetable production system, there were large losses because the products sold at the fairs are mostly fresh or processed with a restricted “shelf time” (that is, they need to be consumed in a short period of time). Simone Jardim, a farmer assisted by the Paulo Freire Project, reports: “This year there was no way to

sell tomatoes and we were not able to eat them all. So it was a tomato, an acerola crop lost. Because here in my community everyone produces more or less the same thing. We had to buy more containers to store flour, starch, beans and corn”.

In the study carried out by Lucena, Filho & Bonfim (2020), researchers from Embrapa Caprinos in Piauí explain the following impacts from the drop in the commercialization of goats/sheep farming, animals that are seen as emblematic for the semi-arid region of the Northeast:

In a survey carried out with the help of collaborators who inform in various goat and sheep producing regions in the country, in the second half of March, the date that marks the beginning of social distancing measures to fight the coronavirus, decreed by federal and state and municipal agencies, in addition to the recommendations of the Ministry of Health (MS) and the World Health Organization (WHO), demonstrate a total suspension of the sale of animals in open fairs, popularly known as “animal fairs”, in addition to the farming exhibition market. (our emphasis). These measures directly affected the establishments of steakhouses, bars, hotel buffets and restaurants, especially those located in coastal areas or in regions where goat and sheep meat is part of the tradition of popular cuisine, where the impacts are also already being observed. With the suspension of activities in these establishments and the reduction in tourism, the consumption of sheep meat has been decreasing, with significant impacts on the maintenance of the operation of meat packing companies and slaughterhouses at their full capacity. In some regions, there are already slaughterhouses with their activities momentarily paralyzed. (idem, 2020)

The scenario described above has a time frame, the onset of the pandemic. At that time, the unprecedented nature of the



situation and the need for an immediate stoppage of activities to avoid contamination were crucial to contain the crisis in the marketing of meat and milk. Aiming to expand the analysis scenario for IFAD-supported projects, we highlight the speech of Amanda Gomes, Manager of the Dom Helder Câmara Project, who explains that **"many producers sold their animals, sold their breeding stock of birds, sold their sheep, there was a shortage of water, the water truck was suspended, and for not having access to supplies"**. With all this difficulty reported, Sarah Luiza Moreira, gender, race and ethnicity consultant linked to PVSA, points out that, as a result of the reduction in the sale of goats and sheep, "there was a reduction in purchases" and "sales to larger businesses".

Although the flow affects both production systems (vegetable and animal), in the vegetable system the grains were

stored and the fresh products were lost, donated, consumed, ending the cost of production and causing the loss due to non-marketing. In the animal chain, without the flow, the cost of production for the maintenance of live animals continued to affect the system. Without marketing at the right time, the farmer has faced the fact of not generating income, since he is still responsible for the supply of food, water, medicines, cleaning and other handlings that impact the cost of labor and demand the constant use of inputs. Thus, we are faced with a picture that demonstrates the fall caused by livestock and the sum of non-marketing plus the increase in production costs. Remembering that families commonly have integrated animal and plant production, which also enhances the negative impacts on agri-food systems.



3. Main impacts caused by the pandemic on marketing and strategies to deal with such impasses

In the field of commercialization circuits and markets, the following impacts stand out: 1) immediate ban on the holding of agroecological and open-air fairs; 2) closing of the main sales channels: bars, restaurants, snack bars, etc; and 3) closing the structures linked to the livestock chain: slaughterhouses and livestock fairs. In the field of public policies, it is worth noting the closing of schools, which led to a drastic reduction in access to PNAE and a reduction in federal investments in maintaining PAA – two public procurement programs that have been fundamental in ensuring the local economy and food and nutrition security of these social groups.

The centrality of PNAE and PAA as marketing channels is indisputable. All focus groups in all webinars reported the two programs as structuring the strengthening of Brazilian family farming. The women interviewed highlighted an immense diversity of products from the productive backyards that were marketed based on these public policies. Felipe Caetano, a consultant linked to the Dom Távora Project, explains all the movement that took place around the PAA and how the program, although reduced, supported families during 2020:

One thing that helped in the commercialization, from 2020 on, started here, from the pressure of the movements, the State PAA, based on state food, resources were withdrawn from seeds and a part was allocated, a percentage of it, for the execution of PAA, a program was created. We are waiting for 2021, with the budget already reduced and this somehow gave some encouragement in the marketing of organizations and for the movement, we were able to access the project for the acquisition and sale of baskets, together with Banco do Brasil Foundation

and direct sales to consumers, which already existed and remained. (CAETANO, F., PDT Consultant)

Other negative impacts include the following: 1) Increased input prices, directly impacting the production price of the animal chain in keeping animals longer. 2) Damage to products caused by non-commercialization, high losses, low prices for traditional products such as cassava flour. 3) Lack of adequate structures for storage, not allowing the production to be transported later.

With regard to the challenges posed to build new marketing strategies in view of the restrictions imposed by the pandemic, it is important to emphasize the absence or difficulty in accessing the internet and the difficulty in handling digital tools: Facebook, Instagram, WhatsApp etc. This difficulty is even worse in the case of traditional communities, which tend to experience more extreme situations of social precariousness, including lack of access to basic services such as electricity.

It is important to emphasize that, despite a serious scenario that caused great impacts to the families served, the agility of the managers and the strong partnership between the families and the CTA teams of the projects supported by IFAD were essential to prevent even more serious damage. The creativity and commitment of all subjects strengthened some structures on the local levels, besides building strategies to enable marketing and communication with customers in order to build a virtual approach capable of mitigating the impacts. It is important to highlight that the pandemic has presented us with a great challenge – to implement a new way of performing ATER – with a strong dependence on the tools of the virtual world in these times of pandemic, without neglecting the power and vitality of the experiential processes of organizational strengthening that already were underway through training and the structuring of production projects and/or Business Plans.¹⁴ This situation also undeniably alerts us to the role of organizations

¹⁴ It is important to point out that "Productive Projects", "Business Plans" or "Investment Plans" are important devices in the design of IFAD-supported projects, which are part of the productive component (within the organizational structure). Community associations are responsible for the administrative and financial management of these investment plans, focusing on different types of productive activities, with the support of technical advisory teams.





that provide assistance not only in the technical aspects of agricultural production, but also in the organization processes of associations, groups of women and/or youth and cooperatives to strengthen their capabilities and find ways out in adverse situations.

Many technicians from partner institutions of IFAD-supported projects point out that there are structural

limitations in the remote ATER model that need to be considered, since some principles of rural extension – horizontality, contact and reciprocal dialogue –¹⁵ do not adapt to this format in the virtual field. Another point for reflection concerns the processes of social inclusion – so to speak, the degree of access of people from rural communities to the internet so that the ways of providing online assistance can be truly inclusive.

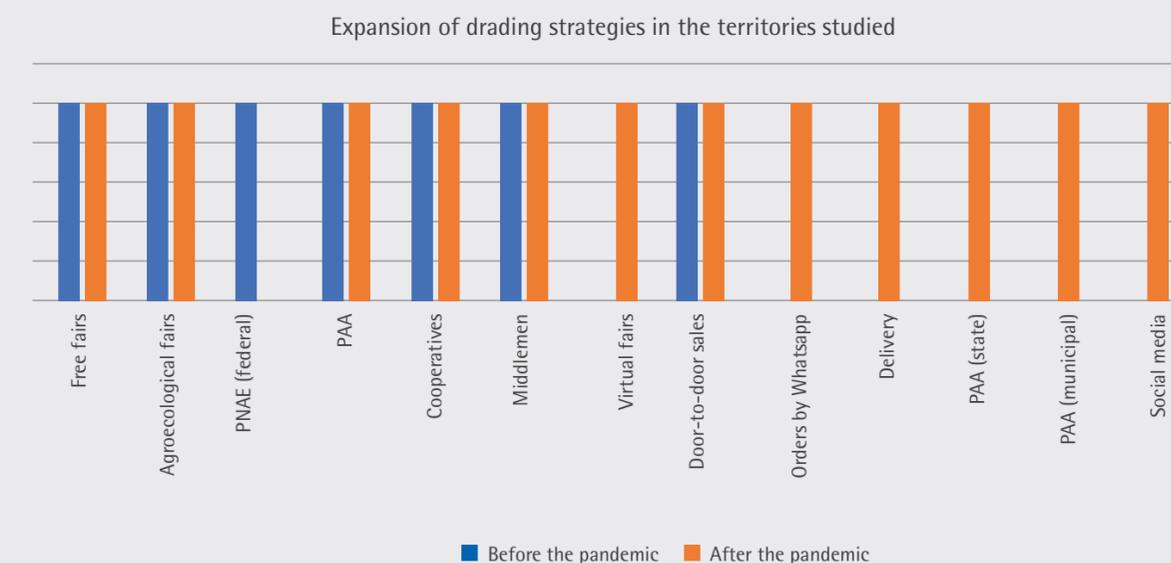
¹⁵ Here it is important to make a critical reflection on the historical evolution of ATER and its connection with social organization processes. In 2010, an ATER policy was created as a result of fruitful dialogues between social organizations and government bodies. This new vision helped to deconstruct the conventional ATER system, which, since the '50s, has been based on a unilateral approach to technical assistance, as technical knowledge that is passed on to beneficiaries, who are framed, as passive recipients of this information. The new ATER law sets a new precedent for agricultural development services in the rural world with a strong emphasis on the use of participatory methodologies that facilitate popular participation and the agroecological approach.

4. Strategies and structures: mitigating the impacts of the pandemic

During the interviews and webinars, the participants linked to the focus groups explained several and innovative strategies

to rescue the commercialization processes into new paths. The chart below shows all the new marketing strategies that farmers and CTA described during the dialogues with the team responsible for the study.

Graph 4: Marketing strategy before and after the pandemic.



Source: Survey on the impact of COVID-19 on agrifood systems, 2021.

Undoubtedly, marketing strategies involving the use of the internet – social networks and WhatsApp groups – were essential to enable the continuity of sales activities, in addition to reaching other audiences. These strategies will be further described in Chapter 7 of this publication, regarding organizational processes. It is noteworthy that the democratization of the internet and knowledge of the virtual environment is essential for such a process to be broad and involve the greatest number of farmers and buyers.

The majority of women are marketing their products through WhatsApp groups, who exchange recipes to enhance the

backyards products and increase the added value and time frame of sales. The work that was promoted by the Semear International Program with a focus on agroecological logbooks (September 2019 to September 2020) shows that the diversity of backyards leverages multiple entries into the market, ensuring constant sales with less risk of losses. Sure enough, the strengthening and scaling of agroecology through these spaces aimed at the production of clean food is essential as an effective strategy for facing the recurrent problems of COVID-19.

Some programs were created during the pandemic at the heart of IFAD-supported projects that serve as important



references in the field of commercialization. In the context of the Viva o Semiárido Project, in Piauí, for example, two programs were created to support farmers in marketing their products — the Quitanda Virtual Project and the Alimentação Saudável Program. The Virtual Quitanda Project is an emergency action by the State Government that was created within the scope of the COVID-19 pandemic and has been developed in six territories (Cocais, Entre Rios, Vale do Sambito, Vale do Canindé, Vale do Itaim and Serra da Capivara) and in seven municipalities (Piracuruca, Teresina, União, Inhuma, Oeiras, Paulistana and São Raimundo Nonato), and it consists in the sale of family farm products through cell phone applications, as part of a new marketing strategy.

According to Francisco Chagas, coordinator of PVSA, the project's implementation process involves the registration of products as a first step, in addition to the sale and scheduling of delivery of baskets made up of agro-ecological products in parking lots in public buildings and shopping malls. The Department of Family Agriculture (SAF) has provided support with the platform, technical guidance, packaging and all the security material against COVID-19, also offering sound services and tents, with due care to avoid overcrowding. Another interesting initiative mentioned by Leonardo Bichara, IFAD program officer, was the construction and use of a "COVID Radar Connection" platform, within which the families supported by the projects can register, advertise, and sell their products.



5. Reestablishment of open fairs and agroecological fairs

With short food circuits, consumers reaffirm their trust in traditional food, connecting their food tradition to the place where it was produced and to the values and knowledge of the farmer who was involved in the production process. In this way, they associate food with the knowledge, experiences and imagination of those who produced it (MARSDEN, 2004). In short circuits, values and meanings coordinate the relationship between consumer and producer, remodeling the quality standards defined by the hegemonic agrifood system

(MARSDEN, 2004). During the webinars, the focus groups informed that the open-air and agro-ecological fairs are gradually being resumed, after a period of suspension, which is a sign of a renewal in local and regional agrifood systems.

The projects invested in remodeling the fairs with greater distancing and a reduced number of farmers selling their products. This process led the families to organize themselves so that "one sells the product of the other", as Juliana, a technician from the Sabiá Center linked to the Dom Helder Câmara II Project, informs us. Some projects, such as the Dom Távora Project in Sergipe, distributed masks and gel alcohol to reduce the risk of contamination by the new coronavirus.



6. Other proposals, new paths

New paths have been built by local communities for establishing a process of strengthening family farming and consolidating spaces and marketing channels in the semiarid region of the Northeast, aiming to establish a process of reducing vulnerability. They are:

- 1) Strengthening of non-productive activities: some women reported that they increased their income from the sale of non-agricultural products, such as masks. This action was supported by the projects studied.
- 2) Expansion of the inclusion of young people in the maintenance and management of marketing processes through the internet.
- 3) Offering courses in non-agricultural activities, aiming to expand opportunities in the countryside and in the city.
- 4) Establishment of a strong partnership between family farmers, CTA and research, teaching and extension institutions to generate knowledge aimed at the commercialization channels of family farming.
- 5) Expansion of storage and transport structures in order to ensure that families have time to organize without the products getting lost on the properties.
- 6) Expansion of the vaccination process and basic income so that families can return to commercializing their products freely, but at the same time, having their FNSS guaranteed.







SOCIAL ORGANIZATION PROCESSES: IMPACTS ON AGRIFOOD SYSTEMS

1. Introduction

The pandemic triggered a greater fragility in the traditional forms of community organization, since face-to-face forms of meeting and organizing collectively were suspended. In the case of traditional communities, which build their collective identities from collective processes involving the sharing of land and natural resources, the pandemic brought restrictions that hampered their "reason for living" and their working logic. For example, certain tasks traditionally performed in "joint efforts", which are decisive in the way they operate and carry out productive processes within agrifood systems, – such as the organization of groups to plant, thresh and dry certain foods and/or make the selection of seeds for community seed banks – were modified during the period of the pandemic, which required some degree of social isolation.

The suspension of collective efforts that integrate the social fabric of quilombolas, indigenous, pasture and fisherwomen communities certainly had repercussions not only on their organizational arrangements, but also on the meanings

associated with the construction of these collective identities in the territories.

On the other hand, there were strong signs of strengthening strategies linked to agrifood systems, through new organizational arrangements that were invented based on the use of technologies and social communication mechanisms in the virtual field. Although presence is irreplaceable when it comes to social organization processes, the pandemic has indicated new ways to connect producers with consumers through initiatives for the production and marketing of food products that make use of social networks. At the same time, spontaneous and structured initiatives aimed at food donations, many of which reaching not only the rural population but also nearby towns, testify to the strength of collectives in the search for alternatives to tighten the bonds of solidarity and mutual support during an agrifood crisis that was already underway but which, with the pandemic, worsened and sharply revealed the social inequalities that permeate the realities of rural communities in the Northeastern semi-arid region.



2. Strengthening of existing organizational processes

According to Sarah Moreira from PVSA, the organizational processes that have been strengthened for some years through Productive Projects and Business Plans – with the main focus on productive activities, such as productive backyards – have provided support so that there is no shortage during this critical period of the pandemic.

Some methodological approaches, such as agroecological logbooks, contributed to strengthening social organization, as they were essential to affirm the role of the "backyard" in sustaining agrifood systems, especially during the pandemic period. It is important to highlight that, in the context of some projects, such as the Paulo Freire Project in Ceará, it is clear that investments in productive backyards have become more efficient through their combination with a wide range of social technologies, such as reuse of greywater and/or biodigesters, which are integrated with other initiatives in the productive field, such as poultry and/or swine, together with quality technical assistance based on agroecological principles. Neuma Borges, a PVSA technician, tells about her experience in monitoring a group of 10 women from Serra da Capivara who make use of agroecological logbooks, which has facilitated the strengthening of organizational processes:

In a meeting that was held at the end, it was possible to notice, after a year of this work, monthly quantifying, that these women had an income of 600 reais. It covers what used to be emergency assistance. The

backyard production of these families' women could be kept up.

Another important bias that has been strengthening organizational processes in the context of some of the projects, such as the Pró-Semiárido Project (PSA) in Bahia, is food culture and socio-biodiversity, themes that have gained visibility as a result of a partnership that IFAD has been consolidating with the Slow Food Movement.¹⁶ In the context of the Project "Slow Food in defense of Sociobiodiversity and Bahian Food Culture",¹⁷ there have been efforts to value products that are threatened with biological and cultural extinction¹⁸ and which must be preserved, which are cataloged through a methodology called the "Ark of Taste." They are foods that belong to the culture, history and gastronomic traditions of the communities and there is a perception of the importance of rediscovering and valuing them to support local economies. This awareness-raising and training work on the values attributed to native foods, linked to the local culture – through exchanges, workshops and diagnoses – was initiated before the pandemic by the Slow Food Movement in PSA and left a legacy for the communities, as regards the importance of foods that fit into each local and regional context. In some way, this inventory of native foods represents an effective strategy to enhance the food heritage that is built from local productions, which has significant repercussions on organizational processes, especially in times of acute crisis. Thus, it is clear how the appreciation of local resources in the agrifood field is an indicated way to ensure greater sustainability of local and regional initiatives.

¹⁶ Slow Food is a worldwide social movement whose basic principle is "the right to enjoy food, using artisanal products of special quality, produced in a way that respects both the environment and the people responsible for production, the producers" (Slow Food website: <http://www.slowfoodbrasil.com>)

¹⁷ This project is carried out by the Regional Development and Action Company, which is linked to the Secretaria de Desenvolvimento Rural (CAR/SDR and has the support of IFAD.

¹⁸ Several criteria are adopted for the selection and inclusion of products in the Ark of Taste: (i) present qualitative characteristics of domestic species, or wild species and improved products that are an expression of complex rural and artisanal knowledge; (ii) have special sensory quality defined by local traditions and customs; (iii) be linked to a territory and to the memory, identity and traditional local knowledge of a community; (iv) present a risk of disappearance with more limited production. There is an application form with various information that is analyzed by Slow Food committees. (MAKUTA, 2018).





In addition, it is worth mentioning the construction of a Social Gastronomy Center in Fortaleza, Ceará, in partnership with the Slow Food Movement, which has offered courses and workshops aimed at promoting food culture and strengthening enterprises focused on production and processing of native foods. Lígia Meneguello, program coordinator for the Slow Food Association of Brazil (ASFB), recognizes the School of Social Gastronomy as being emblematic of an exemplary program or policy, aimed at restoring traditional

foods, bringing a vision of gastronomy that is well linked to territories and their dynamics of knowledge construction around agrifood traditions.

Finally, it is important to emphasize that all these initiatives – from the food re-education process to the construction of agro-industries with a focus on native foods – have contributed to the strengthening of organizational strategies of communities, so that their repercussions are noticeable during the period of the pandemic.

3. New answers and strategies to deal with the greatest fragility of agrifood systems

Both farmers and technicians in the context of the six IFAD-supported projects who were interviewed report that, due to social isolation, there was a precariousness of social organization processes during the pandemic period – March 2020 to the present day – which has had repercussions on their efforts to face the greatest fragility of agrifood systems. According to Renilda Maria dos Santos, a farmer from the Dom Távora Project, “we lived collectively”: that is, “We worked together, we shared tasks together. And today we are unable to do this because of the guidelines, the care, the fear”. She also regrets that social coexistence processes that were very common, involving displacement – such as the search for seeds from other locations, or the loan of tractors to “plow the land” – became limited by the restrictions imposed by the pandemic.

Several answers were given to deal with this agrifood crisis within the collectives. First, there is the emergence of spontaneous collective initiatives. The farmer and local leader Sônia Maria da Costa Sousa, who is part of the Movement of Small Farmers (MPA) and who was involved in a productive project focused on productive backyards that is managed by the Association of residents and small producers in the state of Piauí (AMPPEPI),¹⁹ reports that in her community, made up of 45 families, a dynamic of mutual support for shopping in the nearest city was created through a WhatsApp group.

People who went to the city, the day before, circulated and saw what the person needed from the city, and what we could bring to meet the needs of each family. And then, we created the proposal that whoever went, the person would come to the gate,

leave the money in the bag and the note of what they wanted. The person arrived from town the next day with the purchase.

Studies show that in moments of acute crisis, women tend to respond quickly to moments of social precariousness, supporting collective initiatives to face the social, economic and environmental problems that result from the situation they experience. In the research focused on the impacts of COVID-19 on women in the seven states of the semi-arid Northeast where the six IFAD-supported projects carry out their interventions, Favareto (2021) found that, according to 52% of the interviewees, there were organized and materialized initiatives in the collection and distribution of food and basic food baskets. These more structured initiatives, involving the donation of food, many of which make up agro-ecological “baskets” with healthy foods, have certainly contributed to the consolidation of community groups on the local level, in addition to helping to strengthen broader social movements.

In the case of the Small Farmers Movement (MPA), which works in partnership with PVSA in the context of Piauí, it is observed that the movement had already been carrying out solidarity actions to deal with the agrifood crisis before the outbreak of the pandemic, now through PAA, from the “direct purchase”, in articulation with the Government of the State of Piauí, sometimes from their own mobilizations. According to Sonia, one of the MPA leaders, to date, eight campaigns were carried out, with 10 donation processes, totaling 80 tons of food that were taken primarily to the outskirts of Picos – the largest city in the region –, but also for small municipalities, such as Francisco Sandi, Geminiano, São João da Vajota, Santa Cruz, Campo Grande and Jaicoz. These initiatives were strengthened during the period of the pandemic.

¹⁹ This productive project, which started in 2018 in the context of the “Viva o Semiárido Project” (PVSA), involves 98 farmers from 3 territories and 10 communities.



In the case of the state of Piauí, in particular, what can be noted is that there was a tightening of institutional ties also due to a series of programs and policies that were implemented during this period of the pandemic, and which required inter-institutional articulation efforts in the political field. In this regard, we highlight the preparation of an emergency plan that included actions such as PAA Covid, Quitanda Virtual, the

Land Credit, Progere II and the Healthy Eating Program (PAS). According to Marcia Mendes Santos Araújo, PVSA technician, partnership relations between non-governmental and governmental organizations became closer throughout the period of the pandemic, and, as she herself says: "if you make the Venn diagram, we will see that before the pandemic, few institutions appear, but after the pandemic, more institutions appeared".



4. New organizational strategies to carry out the marketing of food through the resources of the virtual field

The adaptation to the delivery mode via delivery deserves to be highlighted, given the absence of grocery stores and fairs, which also led to the creation of new forms of organization, in addition to strengthening the existing ones. In the case of the Pró-Semiárido Project, the Coopercuc cooperative, which was already known in the region as a goat and fruit growing cooperative, reorganized itself during the pandemic with the purpose of making delivery, in order to locate the products made by cooperative members by region and build a logistics to bring them for sale at a focal point within Coopercuc's headquarters.

Organizational processes that were already underway were shaped by new opportunities that presented themselves during the pandemic period, in line with the demand for the manufacture of masks and other hygiene items. Groups that were already structured for sewing, such as a group of women accompanied by PSA technician Clerison dos Santos Belém, in the community of Malhada da Areia, in the rural territory of Flor de Caatinga in the Sertão de São Francisco, Juazeiro – Bahia, changed the direction of its productive activities, getting involved in the manufacture of masks, because it is a more profitable activity.²⁰ It is also noticed that those groups that were more focused on food improvement and processing, for example, diversified their field of action, entering the manufacture of home remedies for health promotion, with regard to prevention or combat of diseases.

There are different ways to carry out actions collectively. For example, transport has been a key point in the collective organization of sales. In several rural communities, informally or formally, collective work was an important factor in the search for solutions with regard to transport, product packaging and distribution of tasks for dialogue with consumers in the virtual field. In the state of Piauí, PVSA technicians report that the State Government, through SAF and its partners, has distributed trucks to transport the products of PAA, PNAE and PAS beneficiaries²¹, and that in partnership with the Federal Government, 74 trucks were distributed to the municipalities to facilitate travel in the food product delivery processes.

The use of the virtual field to support organizational processes linked to marketing activities was intensified during the pandemic. WhatsApp becomes an ally for the dissemination of products to partner institutions, which in the context of some projects, such as PSA in Bahia, enable the exhibition and sale of products from the communities in barrels inside their offices (headquarters). Farmers like Jaciara Ladislau Leobino, who is one of the beneficiaries of the Pró-Semiárido Project in Bahia, created a group on WhatsApp and an Instagram account to deliver agroecological bags/baskets for delivery within the municipality, door-to-door. Many of these initiatives are co-coordinated between different families within local communities, so that organizational dynamics linked to deliveries are enhanced.

Technological innovations were also created during the pandemic period to facilitate the flow of information between

²⁰ It should be noted that, within this public notice that was launched, among the 603 enterprises that were authorized by the State Government to manufacture handmade face protection masks, at least three associations are being directly monitored by the Pro-Semiárido Project, namely: Association for Alternative Rural Community Development (ADARC), in the municipality of Antônio Gonçalves, Cultural and Artistic Association of Community Radio Broadcasting Sertaneja FM, in Juazeiro; and Center of Family Farming Associations of the Northern Piemonte Territory of Itapicuru, in Senhor do Bonfim. These groups are available to offer Personal Protective Equipment (PPE) to municipalities, public consortia, and to local and regional organizers and promoters of mask use campaigns, as an effective means of containing COVID-19, as the various pandemic control bodies have been recommending.

²¹ PAS is a healthy eating program that was created by the "Forum of managers of the northeast". Further details on this Program can be found in the Chapter on "Public Policies" within this Report.





farmers, markets and governmental and non-governmental institutions. ATER's field technician in Alto Sertão, Alagoas, from the Dom Helder Camera Helder II Project, Tanihely Costa, tells about the invention of an application, Agro + Perto, which is a means of communication between the producer and the whole state of Alagoas, and which aims to make access to information accessible and allow small producers

to communicate with markets in a simple and effective way. The tool makes it possible to purchase foodstuffs through programs such as PAA, PNAE and others of institutional purchases. According to Tanihely, this application makes it possible to establish a way of direct communication with direct beneficiaries and consumers, so that the dependence on intermediaries/middlemen is reduced.

5. Realization of online fairs during the pandemic and their repercussions in the organizational field

There were also adaptations of organizational modalities, such as fairs, which is a device that contributes to social organization processes, not only because it provides sales possibilities, but also because of its role in the construction of interpersonal bonds, through dynamics of sociability that it provides between different social actors. Several authors in the field of Rural Sociology and Peasant Studies bring a broader notion of the "fair", which goes beyond its economic functionality, showing its role as a space that promotes new forms of sociabilities and coexistence; of cultural rescue; of building "territorialization" processes; of reciprocity practices, since at the fair there are also many interactions based on the exchange of knowledge and practices; and self-management, as this device represents an exercise of autonomy before the State (SHERWOOD, 2018; PALMEIRA, 2014; GARCIA-PARPET, 2002).

Thus, since fairs fulfill multiple social functions, it is interesting to observe how there were experiences of adapting this organizational modality during the pandemic period to be online, such as the one developed by the Antonio Conselheiro Institute (IAC), which works in the context of the Paulo Freire Project (PPF) in Ceará, are worth mentioning.

It is evident that adapting a device such as a "fair", which involves the engagement of several actors in an articulated way, to be online, cannot maintain all the characteristics that are inherent to an experiential process and that depend on the processes of social interaction. IAC is one of the few ATER organizations in the semiarid region of the Northeast that has been building an innovative methodology for building fairs in the virtual field, which involves the following dimensions: (i) designing a catalog that shows the variety of products through visual images (photos); (ii) providing guidance to

farmers on ways to post products on social networks; (iii) organizing WhatsApp groups according to the interests of each farmer for the sale and purchase of agroecological products.

Two types of online fairs have been developed since October 2020: (i) four community fairs, involving four municipalities and eight communities; and (ii) a virtual agroecological fair in the municipality of Ipu, composed of 13 families engaged in the production process that seek to sell their production to consumers in nearby cities.

Regarding the second initiative, it is important to note that the Ipu Virtual Agroecological Fair, which started on October 1, 2019 and is on its way to its 10th edition, directly involves 13 families offering an average of 40 varieties of primary and processed products for the population of the municipality, including other rural communities. The amount moved up to the present day is R\$ 7398.00.

Some innovative aspects of this experience should be highlighted: (i) the development of new products from fresh food (banana): banana chips and banana raisin – which demonstrates the creative process that is triggered when families manipulate certain foods and get involved in the production of by-products from production processing; (ii) the use of some dissemination strategies, such as leaflets and cards that were tacked up in strategic places in the center of cities, and which included a price list; (iii) the role of the technical team in systematizing orders, organizing baskets and deliveries (Zé Delivery). The farmers involved attest to the majority participation of women in these initiatives and seek alternatives to maintain this initiative over time, through the construction of a "collective box", which covers the costs associated with inputs delivery.

It should be noted that there was a wide variety of foods sold in both types of virtual fairs, reaching 55 types of products in



total during the pandemic period. It is interesting to note that the process of presenting the products on social networks to make the sale possible was, in some way, a tactic that encouraged the expansion of the products offered. As new food products were posted by farmers – visually, with images – the interest in diversifying the offer and bringing more food to virtual fairs increased proportionally.

Another issue that deserves to be highlighted and that has repercussions on the organizational processes in rural territories has to do with the tightening of product purchasing practices among communities in the same region, so that a local and regional network of agrifood supply is consolidated and at the same time the local economy is nurtured and warmed up. As becomes evident in the case of virtual fairs or basket delivery services, many customers/consumers are also farmers from other rural communities. So to speak, in this dynamic process of publicizing food products on social networks and WhatsApp

groups, many farmers had the opportunity to sell to people who lived in rural properties around them and discovered that some of the products they bought in urban centers were produced by their neighbors (CENTRAL DA CAATINGA, 2021).

Also, here is a reflection on the scope of the organizational processes that sprout in these rural communities in the Brazilian semiarid region and their connection with consumers in the surrounding urban areas. Several testimonies were collected during webinars and in individual interviews with key informants about the fact that there has been a greater demand for foods classified as "healthy" and "quality food" by consumers in nearby cities. The intensification of innovations in the marketing process – via the delivery of agro-ecological baskets or via the holding of online fairs – is connected with the manifestation of a greater interest in foods that guarantee food and nutritional security on the part of consumer groups inside and outside local communities.



6. Final Conclusions

Faced with a context of precarious living conditions for rural populations, we foresee the expansion of different ways of relating both to consumers and to technical assistance services. New organizational strategies emerge to link production and consumption poles, enabling correlation and interdependence between these social actors.

In different contexts, it was witnessed how the expansion of marketing activities reflects the strengthening of community groups, associations and cooperatives. Although face-to-face fairs, which are considered significant spaces to foster exchanges, coexistence and the sale of quality products, have been reduced due to restrictions, other spaces were created to enable strategic alignments around self-consumption, exchange, donation, and sale of food products actions.

Strengthening organizational processes also serves as a basis

for political incidence processes. Within a troubled and turbulent context that unveils a rapid process of dismantling public policies, it has become even more difficult to guarantee spaces for participation in the construction of food security and sovereignty programs and policies, such as the state and municipal CONSEA.²² However, it is undeniable that public policy management spaces in FNSS on the state and municipal level that are multisectoral and representative of the grassroots, in articulation with strategic decision-making spaces, such as the Forum of Managers of Family Agriculture in the Northeast, support interventions of target groups within projects and programs in the field of agricultural development. Thus, it is essential to continue affirming the functions of social control spaces, such as CONSEA and CONDRAF, in the communities and territories of the semiarid Northeast region, so that the organizational strategies of the various collectives – associations, community groups, cooperatives and agribusinesses – are interconnected with the political incidence processes.

²² To ensure the complexity of promoting Food and Nutritional Security (SAN) in the country, the National System of Food and Nutritional Security (Sisan) was created in 2006 (Law nº 11.346/2006), with the objective of coordinating the PNSAN, in an intersectoral manner and guaranteeing social participation. For this reason, the following were defined as components of the System: the Conferences and Councils on Food and Nutritional Security (CONSEA) to ensure the participation of civil society in the construction of guidelines for implementing the policy, and the Intersectoral Chambers for Food and Nutritional Security (Caisan) to coordinate the public bodies responsible for implementing the policies.







PUBLIC POLICIES

1. FNSS public policies in the context of the pandemic

It is important to contextualize the history of the construction of public policies in the thematic field of food and nutrition security to understand the role it plays during the pandemic period from 2020 to 2021. What is observed is that the moment of the pandemic sheds light on existing gaps, especially with regard to public procurement policies, which have occupied a place of innovation in Brazilian policy for so many years and which have been dismantled by the Federal Government over the last five years. At the same time, it shows the importance of palliative and emergency measures and policies, such as "Bolsa Família" or "Emergency Aid", which temporarily alleviate structural problems such as rural poverty. While it is clear that they are not lasting solutions for the semiarid northeast region, it is undeniable that have served a key role in mitigating situations of social instability that worsened during this crisis.

The first decades of the 2000s were marked by the strengthening and expansion of public policies aimed at family farming, the environment, access to land, agrarian reform, and rural development. Many of these policies effectively reached families in the semiarid region. In some of the IFAD-supported projects, such as PSA, there was the hiring of advisors specifically aimed at supporting public policies, located in URGP – Regional Offices –, which facilitated access to public policies in the field of family farming by part of the groups served. In others, such as the Paulo Freire Project, at the beginning of its implementation cycle, there was a series of training sessions on the subject of public policies, precisely to increase families' access to these policies and encourage the insertion of leaders in management and monitoring of programs and policies at the level of territories.

The reports highlighted below illustrate the process of increasing knowledge and access to public policies by the beneficiaries of the actions in the six projects supported by IFAD in the semiarid region of the Northeast:

42 accesses to PRONAF, DAP (the data is still being analyzed), 33 accesses to Garantia Safra (though not available in all municipalities). (Juliana, manager/PDHC II)

Garantia Safra, DAP, Maternity Salary, Rural Credit – PRONAF, first water program, CAR, Seed Program. (Tahniely, technician/PDHC II)

State PAA, School Feeding Program. (Marta, CTA/PVSA)

Accessed the Healthy Eating Program – PAS (state version of PAA), seed and seedling distribution program (state), Energy Subsidy Program for Irrigation and Agriculture (State), PRONAF; Development credit by the Piauí Fomento Agency and emergency aid. Support from the agriculture department for marketing through the Piauí Delivery and Quitanda Virtual platforms. (Francisco Chagas, coordination/PVSA)

Emergency and palliative policies were implemented, such as Emergency Assistance, which was instituted during the pandemic and established exceptional social protection measures during the period of pandemic caused by the corona virus, supporting families of informal workers in accessing basic rights, such as feeding, but presented limitations in its execution modalities. There were difficulties in accessing the benefit, such as limited access to the internet and the technological devices needed to carry out the registration (SANTOS et al, 2021).

Geovana França, a technician from the CEALTRU organization, who works in the context of the Paulo Freire Project in Ceará, emphasizes that the suspension of contracts signed with municipalities for the management of PNAE has resulted in impediments to the storage of products that had been originally produced using this channel of commercialization. It considers that organizations such as CEALTRU supported actions aimed at the donation of food, which meant that

some foods were not wasted; nevertheless, the obstacles with regard to the flow of production persist.

Some municipalities stopped requesting the supply of food to PNAE, despite being able to donate these products to the families, they chose to do this action only with stock products, such as biscuits, pasta and rice. In this sense, the farmers who planned this supply and stored it are running the risk of losing their products if they do not find alternative markets for sale, as they are still waiting for the return of the contracts signed with the municipalities. There were food donation initiatives, not very innovative though, when the CEALTRU team contributed to supporting some families who were affected by diseases and even by the unexpected consequences of the rains. (Geovan France, PPF, 2021)

However, it is worth noting that it was within the scope of PNAE that the pandemic seems to have promoted more complications. With the suspension of school activities, there was an interruption in the supply of food, impacting the income of several farmers. The participants' reports record the efforts of farmers to include their products in the program's purchase list and to advance in the purchase of products from family farming, as determined in the school feeding legislation.

For school meals, some municipalities have already managed to take large steps, now the municipality of Queimada Nova is delivering to the State, to the State's PNAE. (Sonia, farmer/PVSA)

There was a decrease in income because there was also no return of supply to PNAE by the association of women who sent cassava products to schools – this income no longer exists (Raimunda, farmer/PSA)

We are able to train, as well as articulate access to these policies. They managed to access PAA last year, deliveries ended now in June. Maybe they can expand with an additive: PNAE. There is hope for this year to be able

to increase the number of accesses, mainly individual accesses by farmers, from the fair. (Bruno, CTA/PSA)

In some cases, such as in the state of Bahia, the change in the procedure to provide students with access to school lunches – the government provided a card with a credit to purchase food in previously accredited establishments – made it impossible to purchase products from family farming, as recorded in the report below.

It was highlighted that the municipality did not seek out the community and that they were experiencing difficulties, but that due to the knowledge of the CAE (School Feeding Council), the farmers contacted them to deliver the minimum percentage of production for the delivery of the kits food, but without the products of family farming. The State of Bahia, on the other hand, produced a card and left out family farming and it was not possible for the State to deliver anything through PNAE. He emphasizes about the card given in the state of Bahia, which was registered in specific markets and it was not possible to include family farming. So, there was no way to dialogue with the cooperatives, with the farmers. Family farming was left out of this process. (Jacira, farmer/PSA)

PNAE – with food distribution and income of R\$ 60.00 on the card. (Sarah Luiza Moreira, Advisor on gender, race and ethnicity/PVSA)

It is noticeable that the use of the card as a vehicle for the purchase of food products has accelerated a process of distancing people from eating habits classified as "traditional": native foods that are part of the cultural tradition of the peoples of the semiarid Northeast region. In the case of transforming PNAE into an income transfer policy that favors the use of the card, the ease of purchasing and preparing processed foods sold in local markets meant that many of the traditional eating habits were left in the background. This generates a critical reflection on the



interference of policies in the construction of eating habits; while there are measures that value local production as a source of food, such as PNAE and PAA, other ways – mainly income transfer policies – reinforce products purchased in warehouses and supermarkets chains. In the case of PAA, it is important to point out that the late approval and with little availability of funds of Provisional Measure No. 957 resulted in the postponement of the execution of the purchase of food from family farming.

Within the instance of the Forum of Managers of Family Agriculture in the Northeast, which was created in 2015, there was an interstate articulation to build the Healthy Eating Program (PAS), which has been an important alternative for the supply of food for family agriculture to various institutions (shelters, churches, foundations and charities) in view of the decrease in federal resources for PAA.

Francisco Chagas, Coordinator of the Viva o Semiárido Project in Piauí, reports that Piauí was the first state in

the Northeast to implement PAS through simultaneous donation, as a result of a specific law, and that so far, it has used approximately R\$ 650,000, but continues to negotiate other resources to ensure its continuity. The program, which operates within PRO Piauí/PRO Social, and has the support of Seplan and Emater, benefits farmers and families with the sale of their products at a decent price, without the presence of middlemen, which has become increasingly relevant in this critical period of the pandemic, given the closing of several spaces for direct contact with consumers, such as fairs. On the other hand, it helps families in communities that have experienced aggravating situations of food insecurity since the outbreak of the pandemic in early 2020 and that are assisted by social assistance entities. Francisco Chagas points out that a notice for suppliers was created, which currently contains 20 entities formally registered for the supply of food, but the process of registering others is still underway, which indicates the possibility of including more productive groups within the communities, many of the which are within

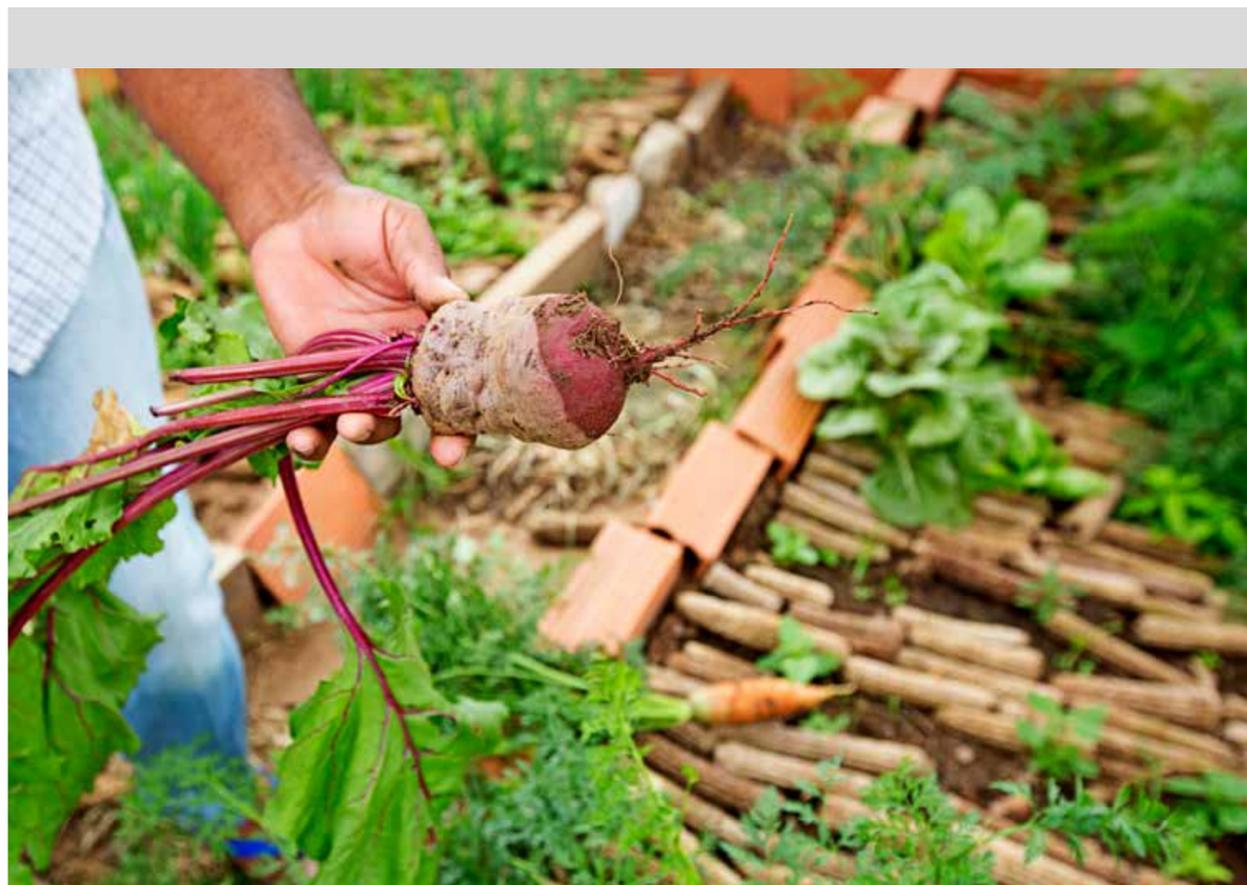


the scope of PVSA.

Another aspect apprehended from the study participants' reports was related to the ATER policy. It is important to point out that the reports demonstrate the effects of the pandemic on the ATER services themselves, since, in certain places, the staff with more advanced age led to more rigid social isolation and for a longer period of time for the teams. Also, the lack of telephone equipment and internet services made it difficult to monitor or carry out remote activities, as verified in some units.

Regarding ATER, especially Emater, these were the ones that suffered most from the pandemic, as the aging staff, almost

everyone is at risk and cannot be in person, but we found the presence of technicians. Despite the effort, the organization is committed with women and training, as we had several trainings, and despite the effort, there is a gap. Not all of them have access to the internet, another difficulty is asking questions in online activities. With insecurity to ask, inhibition. We see ourselves as a tool that does it, one that complements and alleviates distance, it's not like providing face-to-face technical assistance, it's communication and contact. There is no way to do rural extension in this format. However hard the effort, the format leaves something to be desired. We must think about the universalization of this access. (Marcia, CTA/PVSA)



2. IFAD's role in expanding and qualifying the access of the rural population of the semiarid region to FNSS through strategic actions and public policies

IFAD's Operational Framework contains the strategic results expected as a result of investments in the countries. It is hoped that nutrition-sensitive agricultural projects can shape local food systems in ways that contribute to the design of nutritious diets; that promote communication for behavioral change and effective nutritional education; and that contribute to women's equality and empowerment so that they improve their own and their families' nutrition (PADULOSI, 2017).

IFAD, as an international institution, is realizing that it is necessary to guarantee forms of emergency assistance to deal with the growing negative socioeconomic impacts on the agrifood systems of the poorest and most vulnerable segments of the world. At the same time, it is expected that, during the current pandemic, the demand for official assistance, particularly in the rural sector, will enable long-term and lasting responses through strategic actions that address the structuring problems. IFAD's engagement in the scaling up process, that is, the definition of successful actions that can be adapted to other contexts and extended to other scales, is part of a process of identifying public policies that

stand out, besides reflecting a concern with processes of political influence in the context of projects.

Thus, there is also an investment, by IFAD, in the promotion of spaces for public policy management within the semiarid region of the Northeast in Brazil. Inter-institutional management spaces that bring together social actors from different states of the Northeast, such as the Forum of Secretaries and Managers of Family Agriculture in the NE and the Consortium of Governors of the Northeast, which represent promising platforms for policy management within the thematic field of FNSS in an articulated way. It has represented spaces for innovation on the political level through the construction of programs and policies that meet specific demands, especially in three fields: ATER, PRONAF and Public Procurement Policies. For example, in 2021, IFAD, together with the Forum, has been supporting an integrated system of public procurement that is being developed by the Federal University of Rio Grande do Norte (UFRN).

It should be noted that these two spaces play a key role in managing an agrifood crisis that is triggered by the pandemic on all levels. Next, in the last chapter of this publication, some propositions will be presented that could be focused on the Action Plans of these strategic spaces in the next period, so that there are lasting and effective responses to deal with the processes of social precariousness that the pandemic brings in the various regions of the northeastern states.







FINAL CONCLUSIONS

1. Notes on the various effects of the pandemic on agrifood systems

Throughout this publication, it was possible to visualize the multiple dimensions of the agrifood crisis that was aggravated by the pandemic and had pernicious impacts on family farmers, settlers and residents of rural communities, agrarian reform settlements and communities in the semi-arid region of Northeast Brazil. Undeniably, the country is once again putting the human right to adequate food and nutrition under threat, after having managed, over 15 years, to build effective measures and policies to lift millions of people out of extreme poverty, and no longer be incorporated, formally to the World Map of Hunger in 2014, according to the report *The State of Food Insecurity in the World*, by the United Nations Food and Agriculture Organization (FAO). We are facing a framework of huge setbacks with regard to social precariousness and food insecurity of rural and urban populations in the country, since Brazil "has already returned to the World Map of Hunger."

It is evident that distances, quarantines and social isolation, which were in fact necessary measures to control the contamination rate, have had repercussions on the production and marketing processes of quality food from rural communities, and, consequently, have resulted in the reduction of income sources for farming families. Short marketing circuits are extremely important in maintaining agrifood systems and boosting the local economy. However, the closing of some of these channels for the flow and commercialization of agricultural production, as we witnessed with the suspension of local and regional fairs, brought enormous losses, all the more because of the role that fairs play in the sewing of economic and non-monetary relations and in strengthening the sociocultural fabric of rural territories. Allied to this, we also observed the increase in food prices in conventional markets, which reinforced self-consumption

practices and caused changes in farmers' eating habits; as an example, there are numerous reports on the reduction in the purchase of industrialized and ultra-processed products. In many cases, what used to be stored to transport production turns to be consumed, which has repercussions on consumption habits and avoids waste.

The pandemic causes us to look more closely at the cultural, social and environmental dimensions of food practices, so that it is possible to validate the potency of native and diversified foods, many of which have been relegated to the place of "lesser value", on the margin of local economy, but which has historically represented alternatives to solve hunger in times of food insecurity. As noticeable in the reports of farmers and technicians during the diagnosis phase of the study, the resumption of non-monetary donation and exchange practices recover the use value of diversified production and encourage solidarity within the community, in view of the current scenario of social distance, reduced trips to local markets and increased food prices. They reinforce the role of productive arrangements with sustainable bases – all the more in production spaces that were often seen as secondary, such as backyards – for self-consumption, donation and exchange, so that a local and regional supply system for healthy food is consolidated.

As Egnaldo Gomes Xavier, technician in Agroindustrial Development of the Pró-Semiárido Project (PSA) in Bahia, says, "the culture of production has been reinforced with a pandemic effect", that is, although the pandemic causes a greater precariousness in the economic life of farmers on the local level, it has also led to an intensification of production processes aimed at sustaining communities. As Clélio Villanova, technician of the Dom Távora Project in Sergipe has shown, when taking stock of the Investment Plans, managed by community associations, it was noticeable that the percentage of self-consumption is greater than the amount foreseen for this in the initial planning of the projects. Undoubtedly, this affirms the



importance of fostering production processes that are geared towards self-consumption and local supply. At the same time, dynamics inherent to agrosystems have become more dynamic, resulting, for example, in the highest rate of ways to reuse food and inputs within them; for example, the production of manure from animal husbandry – in certain productive activities, such as sheep farming – has stimulated the proliferation of community gardens in several communities, accompanied by projects supported by IFAD.

The pandemic brought a series of changes in the agrifood system that impacted both poles – both the production pole and the consumption pole. This reveals to us something that has been known for so long – the connection between production and consumption within the agrifood chain, and therefore the need to propose and integrate strategic actions that help in the flow of quality production, on the one hand, and in transforming consumers' eating habits, on the other hand. There have been many reports by farmers in rural areas about the increase in demand for agroecological food by consumers in urban areas, although there is no empirical data on the increase in purchase of agroecological food at the consumption pole.

During virtual meetings with focus groups and individual interviews, many farmers told about the increase in demand for certain types of foods that have medicinal power, in order to strengthen the immune system, which reveals health concerns in the midst of a health crisis of this nature. Some farmers report that "honey", which was a food that was part of the "stock" of families, recently began to sell better, since the interest in this type of product has intensified on the part of consumers of rural communities and nearby towns.

The approach between consumers and producers through new marketing strategies that make use of the virtual field is one of the effects of the pandemic. Undoubtedly, the organization of open or closed baskets, with delivery at home or at collective



reference points, has been facilitating the access of consumers to clean and healthy food. Also, it is evident that many of these initiatives developed during the pandemic — especially “virtual fairs and WhatsApp sales”, which require an adaptation in the field of marketing — also involve adjustments in the way of carrying out ATER by technicians but at the same time they

are part of what we could call a “differentiated ATER”. Many of these initiatives are being identified and organized within a process of mapping food supply actions on the national level: “Ação Comida de Verdade”, which is being coordinated by an articulation of 13 organizations committed to the promotion of food sovereignty and nutritional security.



2. Repercussions in the political field: the need for structuring policies that promote food and nutrition security in the semiarid Northeast

Some public policies of an emergency nature, such as the Emergency Aid benefit — the main compensatory measure created precisely to reduce the harmful impacts of the health crisis on employment and income — have been insufficient to overcome the food insecurity condition of families. Although measures that mitigate the impacts of a multidimensional crisis — such as the pandemic — still have some important effects, it is necessary to seek ways to reactivate, rearticulate and reformulate lasting public policies that seek to find solutions to the structuring causes of the problems that arise in the different points of agrifood systems. In addition, it is important to emphasize that the health, socioeconomic and care crisis caused by the advance of the virus has brought to the table an urgent debate on the need to build public policies that can make visible, recognize and value the work of care — a work historically carried out by women and, therefore, made invisible by the conventional economic model. Therefore, in the design and implementation of public policies, we need to pay attention to the need to consider the two dimensions of social life — the productive field and the social reproduction field —, understanding that the incentive to productive processes and marketing channels needs to be accompanied by mechanisms that facilitate the distribution and socialization of domestic work and care within the family and community. At this moment of acute crisis, it is necessary to reinforce the importance of ATER's actions with the perspective of social inclusion — in the sense of incorporating the specific concerns and demands of women, non-white people and

traditional communities — in addition to promoting credit lines and support for productive backyards.

It is known that both PAA and PNAE, and, more recently, the Minimum Price Guarantee Policy (PGPM)²³, which propose the inclusion of agroextractivist or socio-biodiversity products, have been important instruments to guide State action in the productive insertion of farmers. They represent great strategic importance, as they increase the availability of food and strengthen local and regional supply circuits. The dismantling of many of these policies in recent years is a matter of great concern.

In the context of this study, it is essential to bring to the center of this debate the role of public procurement policies — such as PAA and PNAE —, which have been filling gaps in the construction of sustainable agrifood systems, contributing to the strengthening of the identity category of family farmers and boosting the local and regional economy. In this period of social isolation, some municipal administrations did not comply with Law No. 11,947/2009, directly impacting family farming and rural populations, since one of the main markets for this segment is through institutional sales to PNAE, which affected the income of farmers and discouraged the continuity of production. It is worth highlighting some articulated efforts by social movements and organizations to reverse this situation.

During the pandemic, on April 8, 2020, the National Coordination of Agroecology (ANA) presented to the federal government and widely circulated a letter signed by more than 800 civil society organizations stating that the immediate contribution of 1 billion reais to PAA and 3 billion by the

²³ The minimum price guarantee policy for socio-biodiversity products (PGPMBio) is a policy that values the extractive practices of traditional communities, especially those located in the Cerrado and Amazon biomes, by guaranteeing minimum prices for 17 socio-biodiversity products. In 2018, PGPMBio completed nine years of operation, with more than R\$ 49 million transferred to the benefited groups. (CONAB, 2018)



end of 2021. Law No. 13,987, of April 7, 2020, changed the 2009 PNAE law, on an emergency basis due to the pandemic, to ensure the delivery of food to the families of students from schools while they are closed, but there have been difficulties in ensuring the implementation of PNAE in different regions of Brazil.

There are local and state initiatives to implement the emergency PAA – PAA COVID –, as we have witnessed in the state of Piauí, a process in which the Viva o Semiárido Project (PVSA) has played a key role, in addition to the Forum of Managers of Family Agriculture in the Northeast. Also, in the case of Piauí, there was the construction of a new policy to guarantee FNSS, called PAS, which has been an important alternative for the supply of food from family farming to various institutions (shelters, churches, foundations and charities) in the face of the decrease in federal resources for financing PAA.

As we have seen throughout this publication, there have been numerous initiatives led by associations, cooperatives and social movements spontaneously to organize food donations

for social groups that experience extreme situations of food and nutritional insecurity, which alerts us to the increase in scale of agroecology and the decisive importance of decentralizing the governance of agrifood systems.

Finally, even more at a time of superposition of the economic and health crisis throughout the national territory, we recognize the importance of affirming instances that have been fundamental in the management and monitoring of public policies on the national, state and municipal levels, such as the CONSEAs (Councils of SAN) and CONDRAFs (National, State and Municipal Councils for Sustainable Rural Development). In recent years, the greatest weakness of these spaces of social control has represented a setback as regards the achievements linked to the redemocratization process, such as the resumption of expressive processes of popular participation. For this reason, it is essential to strengthen the processes of social organization, encouraging the engagement of community groups in instances that promote qualified intervention in public policies, since the movement of political pressure “from the bottom up” triggers unusual effects on the political level.



3. Highlights for some concrete proposals that guarantee the right to food and nutrition security on the state and municipal levels in the semi-arid region of the Northeast

Below, we present some recommendations for concrete proposals that, in addition to alleviating the negative impacts of COVID-19, may bring new directions for the measures and policies in force, in order to seek their qualification. IFAD-supported projects have been building spaces for dialogue with various social actors – for example, the case of the State Gender Commission for Rural Women, in the state of Sergipe, whose creation was encouraged by advisors and technicians from the Dom Tavora Project as a central dimension of its “exit” strategy, aiming to close the Project in the first half of 2021. Instances such as these can serve as laboratories for the scaling up of intersectoral public policies focused on FNSS and its thematic interfaces. It is important to value the construction of these spaces for the management and monitoring of innovative actions that integrate various governmental and non-governmental institutions and that may have a degree of influence in the construction of successful policies that address the different aspects of FNSS – from access to food to its production, marketing and supply. The pandemic has put a magnifying glass into the existing gaps in the approaches of some actions and policies in the thematic field of FNSS, but at the same time it has provided us with the opportunity to look into new possibilities for political action.

Here are some proposals, which were presented and discussed at the final seminar to present the results of this study, which took place in July 2021:

Promote studies on price formation, including on local level, in the various agrifood chains, with the implementation of differentiated instruments for regulating the respective

markets during the various stages of production processes, and with attention to traditional foods;

Update the composition of the basic food basket on municipal and state level, considering the diversity of regional eating habits;

Ensure specific ordinances for the purchase of food in the various public policies that are from producers of indigenous communities, quilombolas and pasture funds, among other traditional communities, aiming at the conservation and enhancement of the food culture of these peoples and their traditional agricultural systems;

Facilitate the realization of the direct purchase of family farming to the main school, fulfilling the provisions of the law governing the National School Feeding Program (PNAE), Law n° 11.947/2009, which requires to allocate at least 30% of funds transferred by the Federal Government to purchase from family farming, prioritizing food products from different segments, especially women and traditional communities. It is also recommended a qualification of the PNAE policy, in order to develop effective actions of food and nutrition education with the school community that value the region's native foods;

Ensure municipalities' adherence to PAA, and prioritize and/or strengthen the purchase of food from specific groups of women and traditional communities;

Structuring of a support policy for food storage and supply, aiming at the construction and expansion of storage and transport structures in order to guarantee that families have time to organize without the products being lost on the properties;

Consolidation of a decentralized and horizontal ATER model, which seeks the creation and dissemination of methodological and technological innovations, in addition to contributing



to the strengthening of capacities of different social groups through training processes in FNSS and agroecology;

Create specific measures to increase the communities' connectivity to the Internet, aiming at structuring groups to receive demands and expand online food sales processes;

Encourage the use of social communication mechanisms to disseminate information on the nutritional values of foods and ecogastronomy, with a view to exchanging recipes and planting techniques among community residents.





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