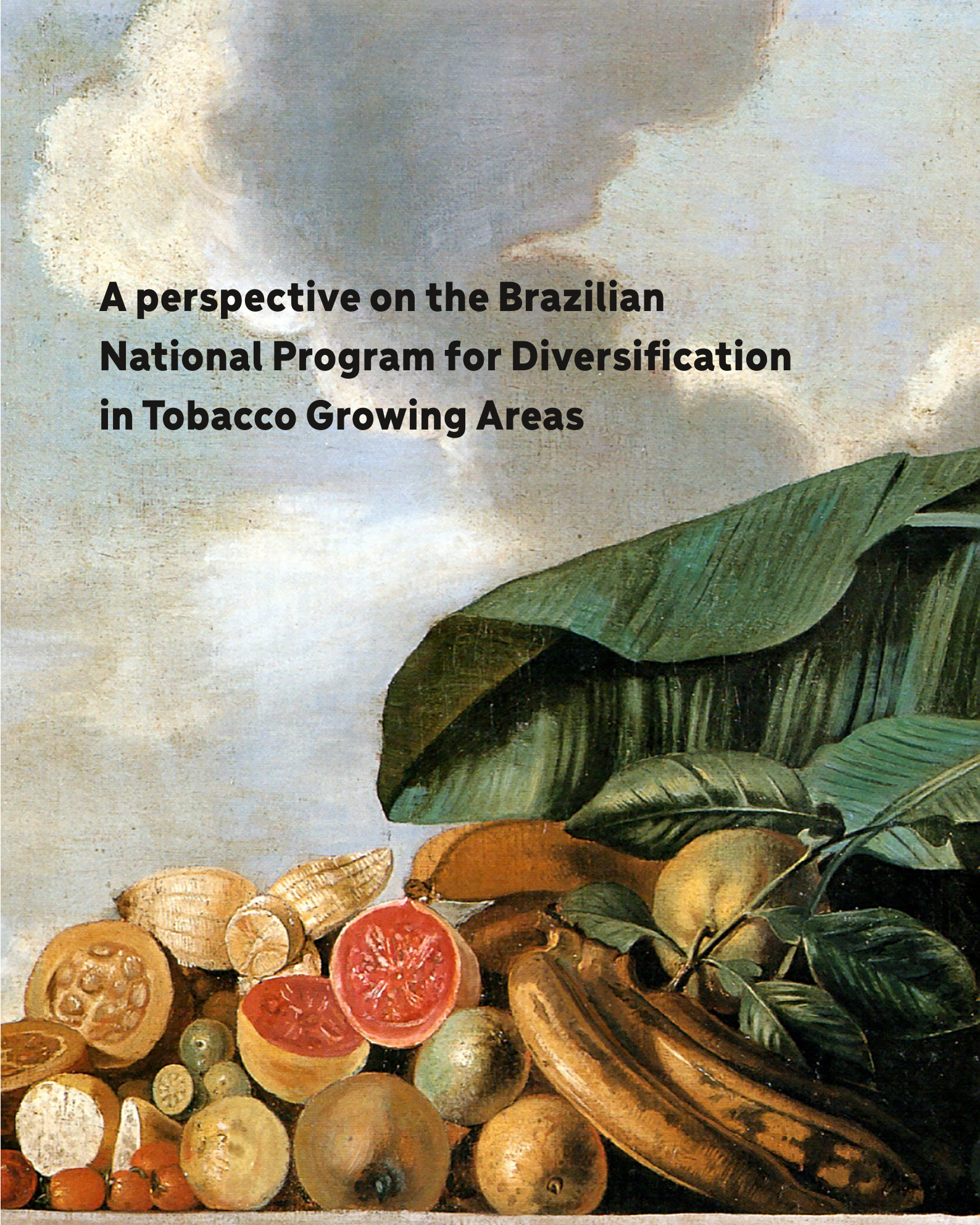
A perspective on the Brazilian National Program for Diversification in Tobacco Growing Areas



CENTRO DE ESTUDOS SOBRE TABACO E SAÚDE – CETAB
ENSP • FIOCRUZ

A perspective on the Brazilian National Program for Diversification in Tobacco Growing Areas

CENTRO DE ESTUDOS SOBRE TABACO E SAÚDE – CETAB
ENSP • FIOCRUZ

Ministry of Health

Oswaldo Cruz Foundation - Fiocruz

President
Mario Moreira

Director of the Sergio Arouca National School of Public Health - ENSP
Marco Menezes

Coordinator of the Center for Studies on Tobacco and Health - CETAB/ENSP
Silvana Rubano Turci

Coordinator of the WHO FCTC Knowledge Hub for Articles 17 and 18
Marcelo Moreno dos Reis

Text elaboration and organization
Germano Ehlert Pollnow

Collaboration
Breno Luiz Guilherme Gaspar
Marcelo Moreno dos Reis
Milena Maciel de Carvalho
Raquel Torres Gurgel
Vera Luiza da Costa e Silva

Reference standardization
Amanda dos Santos Callian

Text translation
Raquel Torres Gurgel

Cover image
Albert Eckhout | Wikimedia Commons

Design
Marcelo Moreno dos Reis
Raquel Torres Gurgel

Suggested citation:
Pollnow GE. A perspective on the Brazilian National Program for Diversification in Tobacco Growing Areas. Rio de Janeiro: Fundação Oswaldo Cruz, Centro de Estudos sobre Tabaco e Saúde; 2024 Jul. 32 p.

This document was funded with resources from the Secretariat of the WHO Framework Convention on Tobacco Control (WHO FCTC), through the project "WHO FCTC Knowledge Hub for Articles 17 and 18 to support the work of the Convention Secretariat in implementing decision FCTC/COP8(10)", under contract ENSP-010-FEX-21.

Table of contents

1. Preamble

This document was written under the auspices of the Center for Studies on Tobacco and Health (CETAB), based at the Oswaldo Cruz Foundation (Fiocruz), in Brazil.

With the aim of promoting scientific collaboration among the Parties and disseminating knowledge and experiences, the Secretariat of the WHO FCTC has established nine Knowledge Hubs around the world. Brazil's hub is responsible for Articles 17 and 18, which will be detailed in the following sections of this document. The WHO FCTC Knowledge Hub in Brazil is hosted by CETAB, in the Sergio Arouca National School of Public Health (ENSP). In other words, the activities of the Knowledge Hub are carried out by CETAB/ENSP, also referred to as the "designated Knowledge Hub".

Thus, this Knowledge Hub, through CETAB/ENSP, aims to develop, analyze, synthesize, and disseminate to the Parties knowledge related to Articles 17 and 18 of the WHO FCTC. In this sense, the purpose of this document is to trace the background, creation, principles, and objectives of the Brazilian National Program for Diversification in Tobacco Growing Areas (PNDACT). It also aims to present some obstacles and challenges to the full implementation of this important public policy, as well as the potential and successes that have undoubtedly been achieved.

To this end, in addition to this preamble, this document is structured into six other sections. The first one briefly addresses the creation of the WHO FCTC and its ratification by Brazil. The following section briefly contextualizes tobacco production in Brazil. The third section examines the PNDACT from various perspectives. The fourth section deals with some obstacles to the full implementation of the program. Nevertheless, the fifth section illustrates some of the successes of this public policy, highlighting different temporal milestones and

geographical contexts. The last section, before the bibliographic references, provides some final and holistic considerations on the set of information presented in this document.

The monetary values analyzed in this study underwent a deflation process, wherein they were adjusted to compensate for the effects of inflation over time. This adjustment was carried out using the Broad Consumer Price Index (IPCA), which is the benchmark index for the inflation-targeting system in Brazil, as the correction factor. Additionally, the values were converted from the local currency, the Brazilian Real (BRL), to US dollars (USD), using the exchange rate prevailing on the last business day of 2023. This approach allowed for a more precise and comparable analysis of financial data over time and across different economic contexts.

2. The WHO FCTC and its ratification by Brazil

Tobacco consumption is the leading cause of preventable deaths worldwide, and secondhand smoke holds the third position in this alarming ranking. In the 20th century, 100 million deaths were attributed to the tobacco epidemic. If nothing more is done, this number may reach one billion people in the 21st century (1).

The World Health Organization (WHO) states that currently tobacco kills more than 8 million people every year. Over 7 million deaths are attributed to the direct use of tobacco products, while approximately 1.3 million deaths result from non-smokers being passively exposed to tobacco smoke (2).

Realizing that the global expansion of tobacco use is a widespread issue, the United Nation Parties proposed, during the 52nd World Health Assembly, the adoption of the first-ever international public health treaty negotiated under the auspices of the WHO – the WHO FCTC, which came into force in February 2005, making history as the UN treaty that gained adhesions most rapidly (3).

Article 3 of the WHO FCTC states the Treaty's objective:

> to protect present and future generations from the devastating health, social, environmental and economic consequences of tobacco consumption and exposure to tobacco smoke by providing a framework for tobacco control measures to be implemented by the Parties at the national, regional and international levels in order to reduce continually and substantially the prevalence of tobacco use and exposure to tobacco smoke (4).

The WHO FCTC is currently ratified or accepted by 183 countries (5), including Brazil (6). It aims to reduce tobacco consumption and its health harms, and it is an evidence-based treaty that reaffirms the right of all individuals to the highest

attainable standard of health (4). In general, the main measures established by the Convention have two focuses: those aimed at reducing the demand for tobacco and those aimed at reducing the supply.

Measures related to demand reduction concern the regulation of prices and taxes, as well as other actions such as protection against exposure to tobacco smoke; regulation of tobacco products' content, packaging and labeling; education; communication; training; public awareness; regulation of tobacco advertising, promotion, and sponsorship, among others.

At the same time, measures related to the reduction of tobacco supply are associated with combating the illicit trade of tobacco products, prohibiting sales to or by minors, and providing support for economically viable alternatives for tobacco growers, workers, and sellers (3). Thus, the WHO FCTC recommends providing viable alternatives in response to the global reduction in tobacco demand. Additionally, it states that Parties must direct attention to health and environmental protection in tobacco production, as outlined in Articles 17 and 18.

Article 17 deals with support for economically viable alternative activities as follows:

> Parties shall, in cooperation with each other and with competent international and regional intergovernmental organizations, promote, as appropriate, economically viable alternatives for tobacco workers, growers and, as the case may be, individual sellers (4).

Article 18, on the other hand, addresses the protection of the environment and people's health:

> In carrying out their obligations under this Convention, the Parties agree to have due regard to the protection of the environment and the health of persons in relation to the environment in respect of tobacco cultivation and manufacture within their respective territories (4).

Brazil began the process of ratification of the WHO FCTC in August 2003, with the formal delivery of the Treaty to the Chamber of Deputies. On May 31, 2004 (World No Tobacco Day), the Treaty was approved by that House and subsequently sent to the Federal Senate (3).

In turn, the Senate held several public hearings in the Federal District and in the states of Rio Grande do Sul, Santa Catarina, Paraná, and Bahia, aiming to inform the population, especially tobacco producers, about the objectives of the international Treaty. It is worth noting that these hearings witnessed strong

mobilization from the tobacco industry, which opposed the implementation of the WHO FCTC and a program that would enable productive alternatives in the country. The industry sponsored numerous participants from different sectors for the hearings.

Despite this, in October 2005, the Federal Senate approved the ratification of the WHO FCTC through Legislative Decree No. 1,012 (7), with the commitment of the Federal Government to implement the PNDACT (3).

Brazil was the 100th country to ratify the international public health Treaty, issued by the President of the Republic through Decree No. 5,658/2006 (6). To coordinate the implementation of the measures of the WHO FCTC, the Brazilian government established the National Commission for the Implementation of the Framework Convention on Tobacco Control and its Protocols (Conicq)[1] , chaired by the Ministry of Health, with the participation of 17 other ministries.

From different perspectives, it is necessary to specifically address the PNDACT. But before doing so, it is necessary to briefly contextualize tobacco production in Brazil.

[1] For more information, see: <https://www.inca.gov.br/observatorio-da-politica-nacional-de-controle-do-tabaco/comissao-nacional-para-implementacao-convencao-quadro-para-o-controle-tabaco-e-seus-protocolos>. Cited in December 2021.

3. Tobacco production in Brazil

Brazil is the third-largest tobacco producer in the world, trailing only China and India, which hold the first and second positions in the ranking, respectively (8). The southern region of the country accounts for 92.6% of tobacco production (9), spanning over 500 municipalities (10) and involving nearly 140,000 families (11). For these families, tobacco is the primary or often the only source of income. The presence of family farming in tobacco cultivation is significant: 95% of establishments engaged in tobacco growing belong to this social category (12).

Tobacco production follows the vertical integration system of family farmers with tobacco companies, following the Green Revolution model. The integration between farmers and companies is established through contracts, wherein the industry provides technical assistance and inputs, endorses financing, and purchases the entire contracted crop (13). Moreover, through these contracts, farmers are obligated to exclusively deliver their production to the contracting company. The classification and determination of the final product's price are carried out by the industry itself, thereby determining the income derived from the family's annual work.

The integration model can lead to farmers incurring debt in a scheme where the purchase of their production is conditioned upon the sale of the agricultural inputs from the technological package. The provision of credit by tobacco companies is a commonly used strategy to foster loyalty among farming families, who often seek access to a less bureaucratic form of credit for financing crops, acquiring land and equipment, etc. The outcome can be disastrous in a real context of modern servitude: debts that linger for years, and families who find themselves compelled to remain tied to the financing company, which will determine the prices paid for the production.

Many studies emphasize the contribution of tobacco cultivation to the economies

of countries, but there is substantial evidence of harmful effects associated with this crop on the environment and the health of farmers and rural workers (1). Furthermore, in Brazil, the majority of producing families have an average income below one minimum wage per capita. Approximately 60 thousand families have very low income, and a large portion of them benefits from income transfer assistance programs (1).

Tobacco growing has environmental impacts such as soil degradation, loss of biodiversity, and deforestation. Soil degradation and biodiversity loss largely result from the monoculture production process combined with the extensive use of pesticides and synthetic fertilizers, with rare instances of crop rotation or diverse productive matrices on family farms. Additionally, there is forest degradation due to the need for wood in the curing process of the green tobacco leaves. While much of this wood comes from planted forests, there is also the clearing of native forests for firewood. Regarding the environment but also related to human health, pesticide use leads to soil and water contamination, as well as cases of chronic and acute intoxication, associated with a high prevalence of depression, suicide, and cancers among tobacco farmers.

Contact with wet tobacco green leaves, whether due to dew or rain, is a risk factor for the so-called Green Tobacco Sickness, caused by the absorption of nicotine present in the leaf through the skin (14). Characteristic symptoms include dizziness, tremors, weakness, nausea, partial loss of vision, insomnia, among others. Research indicates that the level of nicotine in the blood of non-smoking tobacco farmers is the same or even higher than that found in smokers (1).

This fact becomes even more serious when considering that there were at least 9.2 thousand children and adolescents aged 10 to 17 engaged in the cultivation, processing, and manufacturing of tobacco products in Brazil in 2019, according to the National Forum for the Prevention and Eradication of Child Labor (FNPETI) (15). Child labor is associated with the extensive use of family labor, but its cultural aspect is distorted by the social degradation caused by the indebtedness and impoverishment of tobacco farmers.

The low Human Development Index (HDI) in the majority of tobacco-producing municipalities calls into question the argument that this activity leads to local development. An analysis of the indicators that make up the HDI (life expectancy, literacy rate, school attendance rate, and per capita income) reveals that the main tobacco-producing areas in the Southern Region of Brazil have averages below the state indices. Additionally, the school attendance rate and income in municipalities where tobacco farming predominates are lower than those in municipalities where tobacco is not produced (16).

The growing awareness among tobacco farmers about the risks of tobacco

production to their own health and the socio-economic dependence to which they are subjected has engendered the desire to seek healthier and more profitable activities (13). It is common for tobacco farmers to express that they do not enjoy growing tobacco and are willing to change their activity if an economically and socially sustainable alternative is incorporated into tobacco-producing regions[2] .

The WHO FCTC itself, in its Preamble and Articles 4, 17, and 26, recognizes that the reduction in global tobacco consumption can affect the economic stability of those who depend on the cultivation or trade of these products. Hence, it envisages cooperation among Parties to seek economically viable alternatives to tobacco, especially in developing countries (17).

Thus, the national and global scenario has always pointed to the need to prepare the sector and promote alternatives that contribute to food security and income generation for family farmers. In this context, in Brazil, the PNDACT was created.

[2] Information obtained from the application of socio-productive diagnostics applied in different years and regions among families benefiting from PNDACT.

4. The National Program for Diversification in Tobacco Growing Areas (PNDACT)

To ratify the WHO FCTC, the Federal Government committed, with the National Congress, to create the National Program for Diversification in Tobacco Growing Areas (PNDACT), aiming to protect family farmers who cultivated tobacco from the global reduction in cigarette consumption. The program was developed by six ministries under the coordination of the former Ministry of Agrarian Development (MDA), now called the Ministry of Agrarian Development and Family Farming[3].

The PNDACT works to enhance the diversified production process and rural development in tobacco-growing areas, as well as towards the ecologization of production by reducing the use of pesticides (13). Its objective is:

> to support the implementation of rural extension projects, training, and research to develop productive diversification strategies on properties of family farmers who produce tobacco and create new opportunities for income generation and quality of life for families (17).

The Program principles are related to a systemic view of family production units, with actions that strengthen the following dimensions: sustainable development; food security for families; diversified production systems; effective participation of families, youth, and women in planning, production, value addition, and marketing processes; and institutional and community partnerships to enhance the quality of life on rural establishments, communities, and regions (17).

[3] The Ministry of Agrarian Development was responsible for proposing and implementing public policies aimed at agrarian reform, land regularization, promotion of sustainable development, and strengthening of family farming, among other actions. In 2016, the Ministry was converted into the Special Secretariat for Family Farming and Agrarian Development (SEAD), and in 2019, it was abolished. It was recreated in 2023 as the Ministry of Agrarian Development and Family Farming. In addition to its previous duties, new responsibilities were established, such as those related to agroecology and food sovereignty (18).

To implement the PNDACT, partnerships were established with governmental and non-governmental organizations, universities, and civil society to facilitate the execution of technical assistance and rural extension (ATER, in Portuguese), training, and research projects. Its management was collective and carried out by institutions that make up the Thematic Network for Diversification in Tobacco Growing Areas, created in 2008 under the coordination of MDA/Secretariat of Family Agriculture/Dater.

From 2006 to 2013, over 75 projects, involving governmental and non-governmental organizations in research, training, and ATER, were developed in the Southern and Northeast regions of Brazil, covering approximately 800 municipalities and 45 thousand families (13).

The focus of the PNDACT was primarily on providing specific ATER services for productive diversification. The selection of institutions providing these services was done through public calls for projects, where technical qualifications were analyzed based on the principles, guidelines, and methodological orientations outlined in the PNDACT and the National Policy for Technical Assistance and Rural Extension for Family Agriculture and Agrarian Reform (PNATER).

In this context, between 2011 and 2013, MDA issued public calls for the hiring of entities providing ATER services for productive diversification in tobacco-producing municipalities. The first instrument, launched in 2011, served 10 thousand families between 2012 and 2013 (at that time, 6.25% of the total tobacco-producing families), with eight thousand in the Southern region of Brazil and two thousand in the Northeast, involving investments of over R$ 11 million, equivalent to a deflated value of R$ 19.7 million, or US$ 4.07 million. The second call, amounting to R$ 52.6 million (equivalent to a deflated value of R$ 74.8 million, or US$ 15.5 million), provided ATER services between 2014 and 2016 for over 11 thousand families in the Southern region, representing 7.3% of the total tobacco-producing families in the country at that time.

In 2016, MDA was dissolved and the National Agency for Technical Assistance and Rural Extension (Anater) was created. The responsibility for contracting entities providing ATER services shifted to this agency starting in 2018. Thus, in 2018 – with a two-year interruption – Anater issued two public calls for productive diversification. The first, published in June 2018, aimed to serve 3,840 families in Rio Grande do Sul and Santa Catarina during the years 2019 and 2020 (19).

With a significant reduction in the audience and the budget available for PNDACT, there was a strong political incidence by the Conicq Secretariat and partner entities to open a new public call and expand the audience served. Thus, in August 2018, a second call (labeled "complementary") was launched to benefit 3,160 families in the three Southern states of Brazil and the same period of

validity as the previous call (20), totaling 7,000 families served by these last two instruments.

This represented a mere 4.7% of the total tobacco-producing families in Brazil at that time. Besides the reduced audience compared to the total number of producing families, the financial resources made available in these calls by Anater were about 50% less than the total budget of the previous public call (in 2013), which served a considerably larger number of producing families.

It is worth noting that, in addition to the mentioned public calls, specific partnership instruments were put into practice between Anater and Emater-RS (21), Epagri-SC (22), and Emater-PR (23) to provide services related to productive diversification, all valid until the end of 2020. However, these documents are not very transparent and do not explicitly state, for example, the number of beneficiary families, the municipalities served, or the budget invested.

Interestingly, after 2018, there was no hiring of entities providing ATER services for productive diversification. Since the last contracts were valid until December 2020 (with some time extensions to meet the goals), the advances in productive and economic diversification resulting from the work developed since 2012 may be in question.

However, the lack of continuity of ATER services focused on productive diversification is not the only obstacle to the full implementation and success of PNDACT. Some of these points will be discussed shortly.

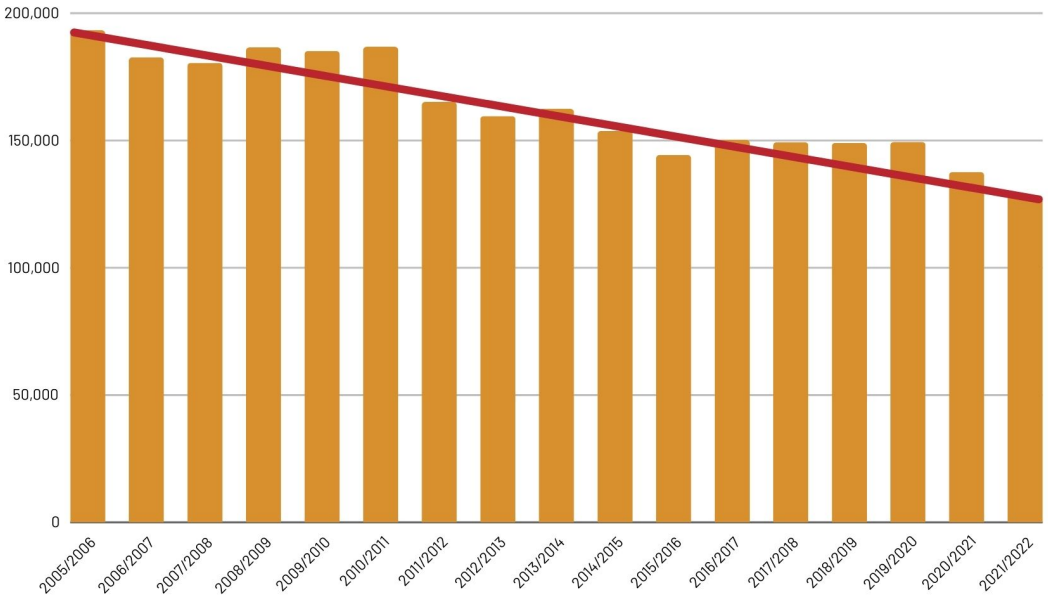
5. Obstacles to the full implementation of PNDACT

From 2013 on, in the public calls and instruments for hiring entities providing ATER services focused on productive diversification, a requirement was consistently present in the notices: priority for families that had previously been served by the PNDACT. On one hand, this represents continuity in projects for the productive diversification of families, in the sense that they could continue to access specialized ATER services in this area. However, the reach of the program is questionable, considering that little effort was made to expand the target audience.

Another aspect, however, is even more noteworthy. When observing the number of families served by PNDACT and comparing it with the total number of tobacco-producing families, a significant gap becomes apparent: while the number of tobacco-producing families in Brazil exceeded 190 thousand between 2004-2006, was over 160 thousand between 2011-2014, and is currently close to 140 thousand (fig. 1), PNDACT reached its peak between 2014 and 2016 with 11 thousand families served, representing only 7.3% of the total at that time. Therefore, the program's reach in rural areas is questionable, especially when considering the beneficiaries, principles, and objectives outlined in PNDACT and PNATER (24).

Analyzing the data from Figure 1, especially the linear trend, a clear reduction in the number of tobacco-producing families in Brazil over the last 15 years is evident. From the 2005/2006 crop season to the 2020/2021 crop season, this reduction was nearly 55 thousand families. Everything indicates that this trend will continue in the coming years.

Figure 1: Number of tobacco-producing families in Brazil from the 2005/2006 crop season to the 2020/2021 crop season.



Source: adapted from Afubra (11).

There is an underlying scenario in the global tobacco production chain that has direct consequences for Brazil. Firstly, there is a process of exclusion of families with lower productivity and lower production quality according to the industry's classification table, leading to a concentration of production in units with high productivity, a greater tendency for mechanization (reducing production costs), and higher production quality. Another factor is the tobacco industry's search for countries where the price paid to producers is lower (largely, in the last ten years, there has been an increase in tobacco production in African countries such as Zimbabwe, Zambia, and Mozambique (8). Finally, there is a trend of reducing global consumption (due to the implementation of control measures outlined in the WHO FCTC) and an increase in the use of new products, such as Heated Tobacco Products (HTP) and Electronic Nicotine Delivery Systems (ENDS).

Thus, in addition to the reduction in the number of tobacco producing families, there is also a decrease in the area planted with tobacco in the country. This is clearly evidenced in the data from the Agricultural Municipal Surveys carried out by the Brazilian Institute of Geography and Statistics (9), where the reduction in planted area was 28.4% in Brazil and 29.4% in the Southern region.

Obviously, to some extent, this reduction in the number of tobacco-producing families in Brazil is the result of PNDACT actions. However, the reduction has been much greater than the proportion of families served by the program (maximum reach of 7.3% of the total producing families between 2014-2016). This, in itself, poses a challenge for Brazil, imposing the need to seek socio-

productive insertion alternatives for the families that have left tobacco production for one reason or another. Strengthening PNDACT can be a path to search for and consolidate economically viable and environmentally sustainable productive alternatives (in the terms of Articles 17 and 18 of the WHO FCTC).

Brazilian government actions aimed at strengthening family farming and promoting sustainable development were a reference for countries at the 6th Conference of the Parties (COP 6) of the WHO FCTC, held in October 2014 in Russia (25). Federal public policies, such as credit, insurance, price guarantee, technical assistance and rural extension, the Food Acquisition Program (PAA)[4], and the National School Feeding Program (PNAE)[5], for example, guided the debate among countries in building policy options and recommendations for the final document of the event (28).

Indeed, the principles and objectives of PNDACT directly involve the articulation of different public policies that, in addition to providing specific ATER services for productive diversification, enable access to credit, price guarantee, and the marketing of diversified production. In the latter case, to a large extent, PAA and PNAE were great allies of family farmers for marketing food production – many of which originated from productive diversification in areas cultivated with tobacco – and the consequent consolidation of productive and economic diversification processes.

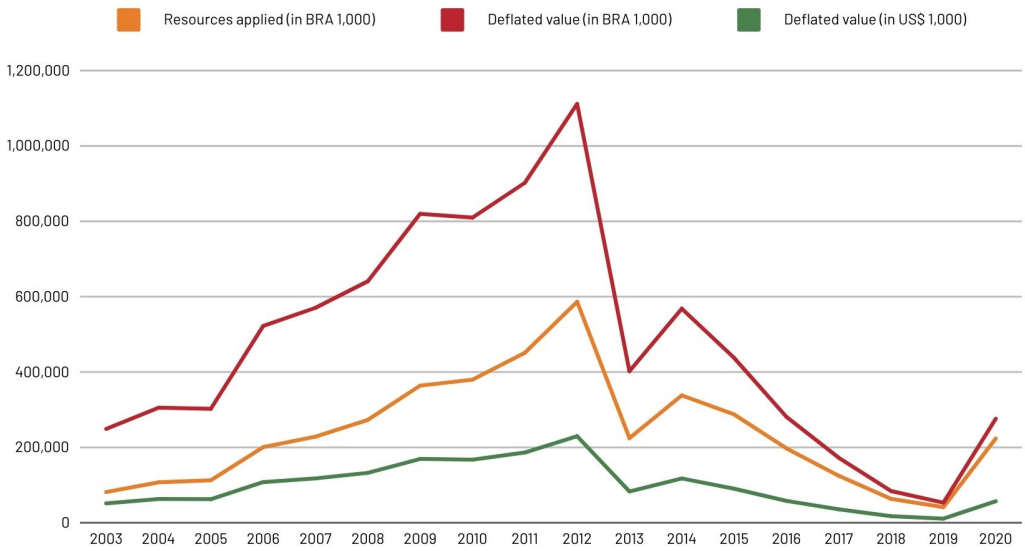
However, PAA has faced a significant budget cut in recent years, substantially compromising its implementation. According to the latest available data (Figure 2), just over R$ 41 million were operationalized in 2019 (equivalent to a deflated value of R$ 53.5 million, or US$ 11 million), benefiting 5,885 farming families (26). This figure was the lowest since the launch of the program in 2003 when R$ 81.5 million was operationalized (equivalent to a deflated value of R$ 249 million, or US$ 54.4 million). In 2020, there was an increase in the allocated resources: R$ 223.5 million were operationalized (equivalent to a deflated value of R$ 275.9 million, or US$ 57 million). Still, investments were far lower than in 2012 – the

[4] The PAA is a federal public policy in the areas of supply and regulation of agropecuary products and is among the operational objectives of the National Supply Company (Conab). In addition to promoting the development of Brazilian family agriculture, it also contributes to economic and social inclusion in rural areas; to the assistance of people in situations of food and nutritional insecurity; to the promotion of food supply; and to the constitution of public food stocks. The operationalizations of PAA are carried out with resources currently transferred by the Ministry of Citizenship (MC) and the Ministry of Agriculture, Livestock and Supply (MAPA), which are the Program's Managing Units (26).

[5] The PNAE, although existing since the 1950s, gained a new format and began to be discussed as a tool for food security and also for agricultural development, through public purchases made from family farmers. With the institution of Law No. 11,947 of June 16, 2009, the PNAE started to establish social and nutritional criteria for food purchases. Thus, the change in school food policy was a step towards strengthening Brazilian family agriculture. According to the regulation, it was determined that, at least, 30% of the funds allocated to Brazilian school meals should be invested in the direct purchase of products from family agriculture (27).

year with the highest volume executed by PAA –, when approximately R$ 580 million were operationalized (equivalent to a deflated value of R$ 1.1 billion, or US$ 229.6 million), benefiting around 185 thousand farming families in the country, with more than 297 thousand tons of food purchased and distributed (380 different items) across all Brazilian states (29).

Figure 2: Values operationalized, in BRA, by PAA between 2003 and 2019.



Source: Elaborated from Conab data (26).

This brutal reduction affected tobacco family farmers who had been seeking to consolidate their processes of productive and economic diversification. With this marketing channel closed in many municipalities, many families were left without alternatives for marketing their food production, with tobacco once again becoming the main or only source of income.

In the case of the PNAE, although the amount transferred by the National Fund for Educational Development (FNDE) had a slight increase (without considering inflation in the period), municipal governments and state education departments were unable to guarantee the minimum purchase of 30% of products from family farming, as established by the law that created the program (30). According to the available data[6], between 2011 and 2017, the national average percentage of purchases from family farming was a maximum of 22.8% (Table 1 and Figure 2) (31).

[6] It is worth noting that there are no available data after 2017.

Table 1: Values transferred by the National Fund for Educational Development (FNDE) for the purchase of school meals, the value of acquisitions from family farming by municipalities and states, and the average national percentage of purchases from family farming.

Year	Values transferred by the FNDE, in BRA	Value of acquisitions from family farming, in BRA	Percentage of purchases from family farming
2011	2.990.297.175,20	234.670.508,55	7,8
2012	3.218.920.826,00	366.611.838,48	11,4
2013	3.539.356.603,40	637.722.661,32	18,0
2014	3.329.109.837,20	719.384.367,45	21,6
2015	3.762.308.428,56	858.570.675,64	22,8
2016	3.882.673.284,31	858.777.139,55	22,1
2017	3.918.241.887,80	846.788.086,68	21,6

Source: FNDE (31).

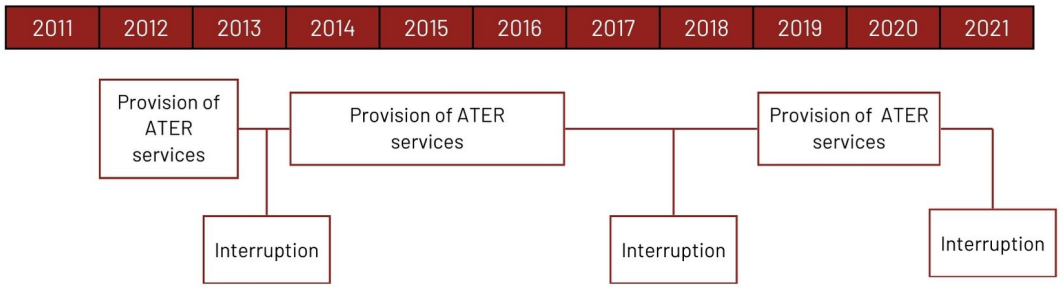
Nevertheless, PNAE could also be an important tool not only for socio-productive inclusion of family farming but also for consolidating productive diversification processes through an alternative for marketing food production. However, the non-compliance (on a national average) with the minimum purchase of 30% of products from family farming represents a lack of coordination between policies, programs, and executive powers, which can ultimately compromise the consolidation of productive diversification for those families that have the opportunity to access this market.

Beyond the lack of coordination of public policies for family farming, another aspect that demonstrates the fragility of PNDACT is the difficult relationship created between entities responsible for ATER services and Anater. An incident that uniquely illustrates this tightening is the mandatory renegotiation imposed in 2019 by Anater and MAPA on the executing entities, under the threat of contract termination signed in 2018. This renegotiation involved a reduction of contract values by about 50% of what had been agreed upon months earlier, causing serious problems in maintaining technical teams and the quality of services provided. Furthermore, the conditions imposed by Anater for the execution of ATER work itself were completely detached from the reality faced by rural extension in the field and substantially compromised the financial health of many family farming organizations with a historical presence in the field of productive diversification.

Another aspect is the absolute lack of perspective for new public calls for the hiring of ATER services focused on productive diversification. Interruptions (Figure 3) in the provision of services directly affect farming families, who no

longer have access to specialized services that supported their productive and economic diversification projects.

Figure 3: Illustrative timeline with the executions and interruptions of ATER services specifically for productive diversification.



Source: Own elaboration.

Despite all this, the PNDACT does not solely consist of obstacles and challenges. Even though there are no available numbers for a comprehensive analysis of the program's progress, there are numerous successful experiences with significant positive results in the territories.Some of these experiences and results are briefly presented on the next pages.

6. Successful examples of productive diversification in tobacco cultivation areas

In this section, two successful examples of experiences related to PNDACT will be presented. The first one was developed by the Padre Josimo Cultural Institute (ICPJ) in the Central South region of Rio Grande do Sul and was financed by Anater through one of the public calls launched in 2018. The second experience concerns the state of Santa Catarina and the work carried out by the Cooperative of Agronomists and Professionals in Rural and Environmental Development of Santa Catarina (Uneagro) between 2014 and 2016, with the support of a public call from MDA.

In this context, the first reported case is the completion by ICPJ, at the end of 2020, of the ATER project titled "Paths to Diversification,"[7] which was marked by positive numbers and achieved objectives, highlighting the importance of ATER actions for productive diversification. ICPJ's activities benefited 960 families of farmers and peasants located in the Rio Grande do Sul municipalities of Camaquã, Chuvisca, Dom Feliciano, Barão do Triunfo, General Câmara, Cerro Grande do Sul, São Jerônimo, and Cristal.

The project focused on supporting productive diversification in areas cultivated with tobacco through alternative and economically viable activities, with the aim of promoting food and nutritional security, articulating public policies, and promoting job creation and income generation, enabling economic, social, and organizational autonomy.

One of the contract managers and a member of ICPJ's coordination team reported that:

[7] For more information, see: <https://padrejosimo.com.br/site/noticias/instituto-padre-josimo-conclui-com-sucesso-projeto-caminhos-para-diversificacao/>. Cited in December, 2021.

> with the project's implementation, aiming to promote diversification of the properties and stimulate job creation and income generation, we strengthened the awareness of families for increased use of agroecological inputs, production of heirloom and varietal seeds with genetic control by the farmers themselves, focusing on the care of human and animal health. It was also possible to promote the use of medicinal and herbal plants, healthy eating, rescue and valorization of popular knowledge, and the reduction of the use of pesticides impacting health and nature (32).

The same interlocutor explained that the project also strengthened social and community organization and participation, seeking local markets such as farmers' markets and direct sales to consumers as instruments of the relationship between rural and urban areas.

Another member of the coordination team emphasized that to achieve positive results, several difficulties were faced. For example, the constant changes in management and contract managers by Anater, the implementation of unstable execution and monitoring tools during the contract – such as a mobile application used for monitoring and accountability – and the approximately 50% cut in resources with the repactuation imposed by Anater in 2019 directly impacted the execution of the initially proposed activities. According to her, "the difficulties posed by the instability of understanding the public policy of ATER and productive diversification in an environment of changing government, by the Ministry of Agriculture, Livestock and Supply and Anater, were much greater than expected" (32).

But it is worth noting that throughout this collective process, a set of activities was carried out with the vision of promoting production diversification and stimulating the generation of work and income for families. Initially, 29 meetings were held for disclosure, mobilization, and selection of families, resulting in 960 registrations of family production units. Each unit benefited by the project had an initial diagnosis carried out with the family's participation (which was also updated at the end of the project), as well as the elaboration of a family productive project. Eight meetings were also held with the agriculture and rural development councils of the municipalities, as well as 60 community diagnostics and 60 community planning sessions. In total, 4,903 technical visits were made to the properties, as well as 180 collective technical assistance activities (such as courses, field days, seminars, etc.).

In addition to these activities, ICPJ donated 15,000 kg of corn seeds, 5,000 kg of beans, 960 books, 960 kits of native fruit seedlings, 960 Guaçatonga seedlings (*Casearia sylvestris Sw.*, a medicinal plant), 960 kits of winter vegetable seeds, and 960 kits of summer vegetable seeds.

At the end of the activities, several beneficiaries of the ATER project recorded the positive evaluation indicated by the technical teams and pointed out the need for continuity of actions.

One of the beneficiary farmers from the municipality of Cristal proudly stated that in addition to the technical goal achieved by the project, what was also developed was the construction of a bond of friendship between the benefited families and the ICPJ team: "These friends came here to accompany our activities and to guide us, helped us improve, showed us that we don't live only on tobacco and that to continue improving our quality of life, we need to diversify more and more" (32).

In the same vein, a beneficiary farmer from the municipality of Camaquã noted that "it is very important for us small farmers to receive qualified technical assistance, this helps us and encourages us to stay in the field".

However, the continuity of ATER services focused on diversification is a need pointed out by this farmer: "We need more than ever to continue having this assistance to learn more and more, to exchange experiences, to develop new crops," says the farmer who previously focused primarily on tobacco cultivation and shifted the production matrix to vegetable and fruit products (32).

A farmer from the municipality of São Jerônimo emphasized that "we had a very good technical assistance work, carried out together, respecting the precautions imposed by the [COVID-19] pandemic, and still finding ways to overcome the distance to build together, to exchange experiences".

For her, the overall result was very positive, with the need for more actions in the same direction (32). Another member of the project's coordination team made a brief assessment of the experience:

> all the efforts made by farmers, technicians, and professionals in an extremely tumultuous period, as it has been during this period of the [COVID-19] pandemic and extreme weather events, could contribute to the Central South Region minimizing the negative effects on rural communities. This mitigation can be observed when we look at the improvement in production for family self-sufficiency, the expansion of the use of medicinal plants, the expansion of sovereignty over seeds, income generation, and even the dissemination of correct information about COVID-19 (32).

There are other successful examples in different territories and periods. In this regard, in the Serra Mar and Far South regions of Santa Catarina, where Uneagro worked in three public calls (MDA and Anater) for productive diversification, the

second one (2014-2016) involved 1,680 families in 17 municipalities[8] .

The diversification process proposed by Uneagro had an agroecological focus, with a prevalence of the following activities: fish farming, egg production, organic milk production, sheep farming, beekeeping, agroforestry systems, fruit farming, vegetable farming, ornamental flowers, and medicinal plants.

This ATER work focused on productive diversification also addressed the social organization of farming families, forming and advising associations such as those of organic farmers, milk producers, dragon fruit farmers, among others. It is worth highlighting the work with organic farming, which included activities related to the organic certification, homeopathy in animal and plant production, and the use of biodynamic preparations, among others.

The work encouraged the creation of cooperatives and supported existing ones through actions focused on management, production planning, local/regional marketing, and institutional markets, especially the PNAE. A series of activities were developed with cooperatives involving fresh, organic, and processed products, as well as handicrafts. The fairs gained prominence, both through the creation of new spaces and the expansion to other municipalities.

In terms of value addition, support was provided to agro-industries and the qualification of processing through the adoption of good manufacturing practices. Agro-industries were also guided to comply with legislation and develop new products: processing of fruits, vegetables, and legumes; production of honey, molasses, and brown sugar; processing of animal products; pulp processing; production of artisanal cachaça, craft beer, liqueurs, and wines.

It is worth noting the work with a gender focus, with the creation and strengthening of women's groups, aiming at cultural rescue and self-esteem; organization of family productive units; rescue of heirloom seeds; food sovereignty; comprehensive, functional, and healthy eating; and manual labor.

Among the challenges faced at the end of the project execution in 2016 were the difficulty of providing technical assistance and rural extension with a reference of one technician serving 80 families, and the discontinuity of public calls for the hiring of entities providing ATER services for diversification. At the project's closure, there were no prospects for new calls. As seen earlier, only in 2018 was there a new public call.

[8] For more information, see: <https://actbr.org.br/diversifica/uploads/biblioteca/2017_08_08_Relat%C3%B3rio%20Semin%C3%A1rio%20de%20Diversifica%C3%A7%C3%A3o_Final.pdf>. Cited Dec. 2021.

Obviously, there are other successful experiences supported by PNDACT. Some of them will be part of other studies developed by the WHO FCTC Knowledge Hub for Articles 17 and 18 and by CETAB, contributing to the systematization of experiences and best practices in productive diversification.

7. Concluding remarks

The PNDACT was created following the ratification of the WHO FCTC by Brazil, aiming at productive and economic diversification in areas cultivated with tobacco. Since its implementation, numerous projects have been supported, both in research and training, and in ATER. In this regard, at its peak (2014-2016), 11 thousand families were assisted by ATER projects supported by PNDACT. Although a significant number, it represented only 7.3% of tobacco-producing families in Brazil during that period.

When analyzing this Program, it is necessary to divide it into two temporal milestones. The first one until 2016, when, despite existing challenges, there was minimal articulation of public policies and programs for family farming: programs for access to credit, minimum prices, and marketing of production subsidized, to a greater or lesser extent, the implementation of PNDACT. However, in a second moment (after 2016) with the extinction of the MDA and the disarticulation of many public policies aimed at family farming, it seems that PNDACT also dwindled.

A first aspect pointing to this is the large interval (two years) until new public calls for the hiring of entities providing ATER services for productive diversification. This interruption period is harmful to the progress made. When tobacco-producing families no longer have specific ATER services for productive diversification, many productive projects are paralyzed, and tobacco once again becomes the main – if not the only – source of income for the family.

Another issue is the reduction in financial resources and the number of beneficiaries in the last public calls, launched by Anater in 2018. The reduction in resources was approximately 50%, while the number of beneficiaries reached only 4.7% of the total tobacco-producing families in Brazil.

It is worth noting that the dismantling of other public policies for family farming in recent years also affects progress in the field of productive diversification. For example, the excessive cut in resources operationalized by PAA represents the closing of an important gateway for the marketing of food produced by family farming, to a greater or lesser extent, in areas cultivated with tobacco that are in the process of productive diversification. The operationalization of PNAE, which until 2017 did not reach the minimum established by law for purchasing products from family farming on a national average, also represents another closing door for marketing.

PNDACT emphasized, and to some extent, was reduced to ATER, but this tool is only effective if there is an articulation of public policies that allows access to credit, minimum prices, and, mainly, access to marketing of production. Moreover, it is necessary to value the historical performance of many entities providing ATER services for productive diversification. The need for continuity is not only related to the availability of resources for hiring this type of service, but also to the fact that the contracted entities have a history, recognition, and prestige, especially among farming families, in the field of productive diversification.

The advances of PNDACT are many, but the lack of prospects in recent years has questioned all of them. In 2024, the federal government announced the resumption of the program, aiming to revitalize support for family agriculture and promote sustainable development. This measure is an important step to strengthen the process of productive diversification in areas cultivated with tobacco and ensure food production and food security and sovereignty in many rural and urban communities and regions.

In summary, ATER for diversification is fundamental, but if there are no alternatives for marketing production, productive alternatives are nothing more than an ambition without consolidation and without economic results, with tobacco remaining the main – and possibly the only – source of income for thousands of farming families.

References

1. Aliança de Controle do Tabagismo (ACT). Apoio à diversificação produtiva nas áreas cultivadas com tabaco para o desenvolvimento rural sustentável e segurança alimentar [Internet]. 2013 [cited 2024 Feb 20]. Available from: https://www.actbr.org.br/uploads/arquivo/838_FS_Diversificacao.pdf

2. World Health Organization. Tobacco [Internet]. 2021 [cited 2024 Feb 20]. Available from: https://www.who.int/news-room/fact-sheets/detail/tobacco

3. Instituto Nacional de Câncer José Alencar Gomes da Silva. Convenção-Quadro para Controle do Tabaco : texto oficial [Internet]. Rio de Janeiro: INCA; 2015 [cited 2024 Feb 20]. Available from: https://www.inca.gov.br/sites/ufu.sti.inca.local/files/media/document/convencao-quadro-para-controle-do-tabaco-texto-oficial.pdf

4. World Health Organization. WHO Framework Convention on Tobacco Control [Internet]. [cited 2024 Feb 20]. Available from: https://iris.who.int/handle/10665/42811

5. Organização das Nações Unidas (ONU). Treaty Collection: WHO Framework Convention on Tobacco Control [Internet]. [cited 2024 Feb 20]. 2021. Available from: https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtdsg_no=IX-4&chapter=9&clang=_en

6. Brasil. Decreto no 5.658, de 2 de janeiro de 2006. Promulga a Convenção-Quadro sobre Controle do Uso do Tabaco[Internet]. Brasília: Senado Federal; 2006. Available from: https://www.planalto.gov.br/ccivil_03/_Ato2004-2006/2006/Decreto/D5658.htm

7. Brasil. Decreto Legislativo no 1.012 de 2005. Aprova o texto da Convenção-Quadro sobre Controle do Uso do Tabaco, assinada pelo Brasil, em 16 de junho de 2003 [Internet]. 2005. Available from: https://www2.camara.leg.br/legin/fed/decleg/2005/decretolegislativo-1012-27-outubro-2005-539059-convencao-quadro-36837-pl.html

8. FAOSTAT. Datos [Internet]. [cited 2024 Feb 20]. Available from: https://www.fao.org/faostat/es/#data

9. Instituto Brasileiro de Geografia e Estatística. Produção Agrícola Municipal -Tabela 1612: Área plantada, área colhida, quantidade produzida, rendimento médio e valor da produção das lavouras temporárias [Internet]. [cited 2024 Feb 20]. Available from: https://sidra.ibge.gov.br/tabela/1612

10. Sinditabaco. Infográficos [Internet]. Santa Cruz do Sul: Sinditabaco; c201[cited 2024 Feb 20]. Available from: https://www.sinditabaco.com.br/sobre-o-setor/infograficos/

11. Afubra. Fumicultura no Brasil[Internet]. Santa Cruz do Sul: Afubra. [cited 2024 Feb 20]. Available from: https://afubra.com.br/fumicultura-brasil.html

12. Instituto Brasileiro de Geografia e Estatística. Censo Agropecuário - Tabela 6957: Produção, Valor da produção, Venda, Valor da venda e Área colhida da lavoura temporária nos estabelecimentos agropecuários, por tipologia, produtos da lavoura temporária, condição do produtor em relação às terras e grupos de atividade econômica [Internet]. [cited 2024 Feb 20]. Available from: https://sidra.ibge.gov.br/tabela/6957

13. Instituto Nacional de Câncer - INCA [Internet]. . Alternativas à Fumicultura e publicações sobre o tema. Ministério da Saúde. 2022 [cited 2024 Feb 20]. Available from: https://www.gov.br/inca/pt-br/assuntos/gestor-e-profissional-de-saude/observatorio-da-politica-nacional-de-controle-do-tabaco/politica-nacional/alternativas-a-fumicultura-e-publicacoes-sobre-o-tema

14. Fiori NS. Asma, tabagismo e absorção de nicotina em fumicultores do município de São Lourenço do Sul, RS [tese]. Pelotas: Universidade Federal de Pelotas, Programa de Pós-Graduação em Epidemiologia; 2015.

15. Araújo GS. O trabalho infantil no cultivo, no processamento e na fabricação de produtos do fumo no Brasil a partir dos microdados da PNADC 2016-2019 . Fórum Nacional de Prevenção e Erradicação do Trabalho Infantil (FNPETI) [Internet].2022 [cited 2024 Feb 22]. Available from: https://tabaco.ensp.fiocruz.br/sites/default/files/001408.pdf

16. Bonato A. Perspectivas e desafios para a diversificação produtiva nas áreas de cultivo de fumo: a realidade da produção de fumo na região Sul do Brasil. DESER; 2007.

17. Gregolin A. Ações do Ministério do Desenvolvimento Agrário para a diversificação da produção e renda em áreas Brasil [Internet]. 2010. Available from: https://www.inca.gov.br/sites/ufu.sti.inca.local/files/media/document/acoes-do-ministerio-do-desenvolvimento-agrario-para-a-diversificacao-da-producao-e-renda-em-areas-cultivadas-com-tabaco-no-brasil.pdf

18. Brasil. Decreto n 11.396, de 21 de janeiro de 2023. Aprova a Estrutura Regimental e o Quadro Demonstrativo dos Cargos em Comissão e das Funções de Confiança do Ministério do Desenvolvimento Agrário e Agricultura Familiar e remaneja e transforma cargos em comissão e funções de confiança. [Internet]. 2023. Available from: http://www.planalto.gov.br/ccivil_03/_ato2023-2026/2023/decreto/D11396.htm#art5

19. Agência Nacional de Assistência Técnica e Extensão Rural (Anater). Edital de Chamada Pública Anater no 004/2018 [Internet]. 2018 [cited 2024 Feb 23]. Available from: https://www.anater.org/wp-content/uploads/2021/02/chamada-publica04.pdf

20. Agência Nacional de Assistência Técnica e Extensão Rural (Anater). Edital de Chamada Pública Anater no 007/2018 [Internet]. 2018 [cited 2024 Feb 20]. Available from: https://www.anater.org/wp-content/uploads/2021/02/cp07_2018_tabaco_complementar.pdf

21. Agência Nacional de Assistência Técnica e Extensão Rural (Anater). Instrumento específico de parceria no 019/2019 [Internet]. 2018 [cited 2024 Feb 20]. Available from: https://www.anater.org/wp-content/uploads/2021/02/INSTRUMENTO-ESPECIFICO-DE-PARCERIA-No-019_2018-RS-TABACO.pdf

22. Agência Nacional de Assistência Técnica e Extensão Rural (Anater). Instrumento específico de parceria no 018/2018 [Internet]. 2018 [cited 2024 Feb 20]. Available from: https://www.anater.org/wp-content/uploads/2021/02/INSTRUMENTO-ESPECIFICO-DE-PARCERIA-No-018_2018-SC-TABACO.pdf

23. Agência Nacional de Assistência Técnica e Extensão Rural (Anater). Instrumento específico de parceria no 021/2018 [Internet]. 2018 [cited 2024 Feb 20]. Available from: https://www.anater.org/wp-content/uploads/2021/02/INSTRUMENTO-ESPECIFICO-DE-PARCERIA-No-021_2018-PR-TABACO.pdf

24. Brasil. Lei no 12.188, de 11 de janeiro de 2010. Institui a Política Nacional de Assistência Técnica e Extensão Rural para a Agricultura Familiar e Reforma Agrária - PNATER e o Programa Nacional de Assistência Técnica e Extensão Rural na Agricultura Familiar e na Reforma Agrária - PRONATER, altera a Lei no 8.666, de 21 de junho de 1993, e dá outras providências. [Internet]. 2010. Available from: http://www.planalto.gov.br/ccivil_03/_Ato2007-2010/2010/Lei/L12188.htm

25. Centro de Apoio e Promoção da Agroecologia . COP 6: ao invés de produção de tabaco, a produção de alimentos pela agricultura familiar [Internet]. 2014 [cited 2024 Feb 20].Available from: https://capa.org.br/2014/10/cop-6-ao-inves-de-producao-de-tabaco-a-producao-de-alimentos-pela-agricultura-familiar/

26. Conab - Execução do Alimenta Brasil [Internet]. [cited 2024 Feb 20]. Available from: https://www.conab.gov.br/agricultura-familiar/execucao-do-paa

27. Troian A, Troian A, Oliveira SV de, Pereira JC. Desempenho dos municípios do Rio Grande do Sul na execução dos recursos do PNAE com a agricultura familiar. Rev Econ E Sociol Rural. 2020 Jul 6;58:e204558. [cited 2024 Feb 20]. Available from: https://www.scielo.br/j/resr/a/Zbbc8WGjZJVT7j4SjTjtpSx/?lang=pt

28. Organização Mundial da Saúde (OMS). Conference of the Parties to the WHO Framework Convention on Tobacco Control [Internet].). 2014 [cited 2024 Feb 20]. Available from: https://apps.who.int/gb/fctc/E/E_cop6.htm

29. Articulação Nacional de Agroecologia (ANA). PAA - Programa de Aquisição de Alimentos: Comida Saudável para o Povo [Internet]. 2020 [cited 2024 Feb 20]. Available from: https://agroecologia.org.br/wp-content/uploads/2020/04/PAA-Comida-Saudavel-para-o-Povo.pdf

30. Brasil. Lei no 11.947, de 16 de junho de 2009. Dispõe sobre o atendimento da alimentação escolar e do Programa Dinheiro Direto na Escola aos alunos da educação básica; altera as Leis nos 10.880, de 9 de junho de 2004, 11.273, de 6 de fevereiro de 2006, 11.507, de 20 de julho de 2007; revoga dispositivos da Medida Provisória no 2.178-36, de 24 de agosto de 2001, e a Lei no 8.913, de 12 de julho de 1994; e dá outras providências. [Internet]. 2009. Available from: https://www.planalto.gov.br/ccivil_03/_ato2007-2010/2009/lei/l11947.htm

31. Fundo Nacional de Desenvolvimento da Educação (FNDE). Dados da Agricultura Familiar [Internet]. Fundo Nacional de Desenvolvimento da Educação. 2021 [cited 2022 Feb 20]. Available from: https://www.fnde.gov.br/index.php/programas/pnae/pnae-consultas/pnae-dados-da-agricultura-familiar

32. Instituto Cultural Padre Josimo . Instituto Padre Josimo conclui com sucesso projeto “Caminhos Para Diversificação”: Números positivos e objetivos alcançados demarcam ações de assistência técnica rural [Internet]. [cited 2024 Feb 22]. Available from: https://padrejosimo.com.br/site/noticias/instituto-padre-josimo-conclui-com-sucesso-projeto-caminhos-para-diversificacao/