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Chapter

Networking and Participatory Research Promoting Quality of Life and Well-Being in Portuguese-Speaking African Countries

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Abstract

Spread across the planet each human being, individually or in community, aspires for well-being and quality of life, according to the ideal of each one. However, we all believe that there are always ways to live better. For many people the measurement of a better life translates into the guarantee of social rights, the right to basic services, good land, seed and sufficient nutritious food for their community members. The Mechanism to Facilitate the Participation of Universities in the Food and Nutrition Security Council of the Community of Portuguese Speaking Countries is a cooperative academic network fomented by the Community of Portuguese Speaking Countries (CPLP) with support from the Food and Agriculture Organization of the United Nations. This mechanism works with teaching, research and extension in the CPLP Food and Nutrition Security Strategy. The pillars of CPLP Strategy are the strengthening of the governance of public policies on Food and Nutrition Security at all levels of government, social protection based on guaranteeing access to food and family farming with a strategy to increase the availability of good quality food, promoting social and environmental sustainability. CPLP University Mechanism has provided training processes for technicians

who work in public policies for Food and Nutrition Security and has contributed to the strengthening of postgraduate programs in Portuguese-speaking African countries. As consequence, it has favored participatory research and mixed methods as a theoretical methodological approach. Therefore, it seeks to focus on the territories of Food and Nutrition Security practices to transform reality, as recommended by CPLP Strategy, however, with the autonomous assumptions of the collaborative network. This chapter presents how local researchers perceive the results of a process of inducing an academic network to transform the local reality and promote Food and Nutrition Security in the context of the CPLP.

Keywords: Welfare, Academic networks, Community of Portuguese Speaking Countries, Food and Nutrition Security, Human Rights, Welfare

1. Introduction

Quality of life and well-being are strongly associated with access and availability of food, which meets biological, affective, cultural and environmental criteria. The effects of foods on wellbeing were strongly related to physical health, pleasure and emotional aspects. In this context, the human right to adequate food is one of the social rights recognized by the International Covenant on Economic, Social and Cultural Rights, adopted and opened for signature, ratification and accession by General Assembly resolution 2200A (XXI) of 16 December 1966. Forward, the right to adequate food was the subject of Covenant on Economic, Social and Cultural Rights General Comment No. 12: The Right to Adequate Food (Art. 11), adopted at the Twentieth Session of the Committee on Economic, Social and Cultural Rights, on 12 May 1999 [1]. In this document, the right to adequate food contemplates the dimensions of Food and Nutritional Security, namely, the availability and access to quality food in sufficient quantity, without compromising any other right and permanently being able to provide health and well-being. Extreme poverty rates violate the right to food and present themselves as one of the main challenges being faced among countries on the African continent.

In this context, in 2012, the Community of Portuguese Speaking Countries (CPLP) approved the CPLP Food and Nutrition Security Strategy, with the firm purpose of ending hunger and misery in member countries. The CPLP Strategy seeks to strengthen the governance of public policies in the area, encourage the production of food to improve their availability from family farming and promote social protection by improving access to food, fighting hunger and malnutrition.

Within the scope of this strategy is the search for the engagement of all sectors of society including social organizations, universities, parliamentarians, the private sector and the government. It was in this context that the CPLP University Mechanism emerged as an induced academic network that seeks to face the difficulties encountered in academic practice and at the same time actively participate in solutions to local and national problems.

This chapter presents the Mechanism of Universities of the CPLP, in the perspective of building autonomous networks, which, in addition to institutionality, conform to organizational instruments capable of promoting creative solutions, overcoming limitations and contributing to the consolidation of the food and nutritional security strategy at CPLP. For that, it brings a brief history of the construction of the strategy, presenting the perspective in each of the countries that make up the bloc, given that the different countries that make up the CPLP have different priorities in the Food Security and Nutrition agenda.

2. Standard of living and well-being in CPLP countries

Theoretical discussions, held at the Mechanism to Facilitate the Participation of Universities in the Food and Nutrition Security Council of the Community of Portuguese Speaking Countries around the terms quality of life and well-being of the population, have valued the progressive paradigms of the global South [2]. In the same direction, the ancestral paradigms of the peoples originating in Latin America and Africa have also deserved a prominent place [3].

Standard of quality of life and well-being have been debated in the scope of projects aimed at the development of nations. The theory of local development generally asks this question: How to evaluate local actions in favor of development? Orth [4] states the following indicators: first of all, local development is a matter of time; it is to realize that an artificial border exists between the economic and the cultural; Among the cultural factors of local development, four major concerns emerge: identity, quality of life, territorial or community integration and employment.

The concerns of local development are also taken into account by agents of the "theory of community economic development". Its mission is to promote and support this theory for the social, economic and environmental improvement of Canadian communities.

> *Community economic development (CED) is defined as a measure taken at the local scale to create economic opportunities and improve the social conditions of communities based on a sustainable and integral basis; particular attention being directed to the most disadvantaged people.*
>
> *A community process run by and for members, the CED is based on an integrated approach to social and economic development, and favors the economic, social, ecological and cultural well-being of communities.*
>
> *CED is a solution to conventional approaches to economic development: the problems faced by communities, specifically unemployment, poverty, job loss, environmental degradation and delinquency, must be addressed in a comprehensive and participatory manner [5].*

An important fact to be mentioned is that the development field is not only a theoretical field, but it is, likewise, a field of development practice, which implies a policy of implementation and evaluation of development actions. In this case, the community economic development values an integrative and participatory approach.

The theory of human development, elaborated by the United Nations Development Program, works in the same direction. It is a theoretical-practical field of development.

> *Human development implies the construction of an order of values in which the economic and political dimensions actually become instruments for overcoming material and cultural deprivations of human beings - that is, a new order based on the guarantee of inseparable civil, political, economic, social and cultural rights [6].*

United Nations Development Program conception of development owes much to the Indian economist Amartya Sen. Through these two points of view, development must be treated in its broadest, most human dimension. For Sen [7]: "development is a process of expanding the real freedoms that people enjoy". The author focuses

on human freedoms to contradict the narrower interpretations of development, such as those that identify development with the growth of the (GNP), increased personal incomes, industrialization, technological advancement or social modernization. At the same time, he recognizes that the growth of GNP, or of individual incomes, obviously, can be very important as "means" of expanding the freedoms enjoyed by members of society. However, freedoms depend on other determinants, such as social and economic provisions (for example, education and health services) and civil rights (for example, the freedom to participate in public discussions and inquiries).

Thus, development requires the removal of the main sources of deprivation of liberty: poverty and tyranny, lack of economic opportunities and systematic social destitution, neglect of public services and intolerance or excessive interference by repressive states.

The sustainable development paradigm has sought to bring the appreciation of the environment in addition to quality-of-life indicators linked to economic, social, cultural. Grenier [8], concerned with the establishment of criteria to develop an evaluation and taking the knowledge of native (indigenous) peoples as a reference, defines sustainable development from the view of the World Commission on Environment and Development.

> *Sustainable development is a development that responds to current needs without impairing the ability of future generations to respond to their own needs. The sustainable development of agriculture and natural resources represents the use, management and conservation of natural resources and also the orientation of technological changes to ensure the satisfaction of human needs, specifically in food, water, housing, clothing and fuel for current and future generations [...] [8].*

Granier [8] brings in his text nine objectives for sustainable development according to the World Commission on Environment and Development list: 1) leverage for growth; 2) change in the quality of growth; 3) meeting essential needs in matters of employment, food, energy, water and sanitation; 4) maintenance with a viable population level; 5) preservation and care for the resource bases; 6) the reorientation of technology and risk management; 7) the fusion of environmental and economic issues in decision making; 8) reorientation of international economic relations; 9) an increasingly cooperative development.

In dialog with World Commission on Environment and Development and Matowanyika, Grenier [8] shows that sustainable development that takes into account local and national realities is based on the integration of these five variables: biophysical and socioeconomic resources; external factors, such as available technologies and development ideologies; internal factors, including socio-cultural belief systems and local production and technology bases; demographic factors and political and economic factors.

Mamani [9], intellectual indigenous from Bolivia, brings this criticism to the Western paradigm that thinks of development as the growth or increase of something; also understood as evolution. For him, behind the concept of development are the concepts of progress, planning and production which, added to science and technology, constitute a vision of the prevailing reality of the world forged since the second world war. For this author, the word development as a concept and a way of life is totally inherent in "living better".

In this context, Mamani [9] establishes a difference between what he identifies as western anthropocentric paradigms, namely, the individualist paradigm that has the axis of "living better", the collective paradigm, which has much to do with political left, which has as its axis the "well-being of the human being", and the

ancestral paradigm of the indigenous indigenous peoples. It is a community paradigm that has the "Vivir Bien/Buen Vivir" as its horizon.

> *"Vivir Bien/Buen Vivir is life in fullness. It is knowing how to live and know how to coexist in harmony and balance; in harmony with the cycles of Mother Earth, the cosmos, life and history, and balance with all forms of existence, visible and invisible, in permanent respect"* [9].

Instead of being content with the definitions produced by progressive thoughts on food security and food sovereignty, even when well intentioned, Mamani [9] suggests the term "dignified food with identity" to think about public policies for food and nutrition security since the ancestral paradigm of the original peoples. In other words, this means, first, what food should be for everyone, and when it is said for everyone, it is referring to all forms of existence, not only for human beings, but for all beings that inhabit Mother Earth, because here it is conceived that everything is part of the balance of life. When it is said with "identity", it refers to establishing its own forms of food production; with its logic, with its own technologies, which allow people to produce healthy food, to recover healthy seeds as well. All of this makes it possible to maintain the greatest nutritional wealth of food and preserve the land. The principles that apply in this logic are to protect life before the market; and respect for Mother Earth's cycles.

Using the ancestral paradigm of ubuntu, Malomalo [3] states that it is an alternative, proposed from the global South, to face the planetary crisis imposed by capitalist development. He believes that the use of this term, like "Viver bien" [9], is the first step towards decolonization: epistemological decolonization and then other forms of political, economic and cultural decolonization. In this regard, instead of using the term development in an adjective way: alternative development, sustainable development, even though it is within an alternative theoretical repertoire, it is necessary to radicalize the debate using native terms such as ubuntu/bisoity, aiming to establish an epistemological alternative towards new society. Ubuntu also aims to build a human society based on respect for nature and the ancestry of each people.

3. The CPLP University mechanism

The Mechanism for Facilitating the Participation of Universities in the Food and Nutrition Security Council of the Community of Portuguese Speaking Countries was created in the context of CPLP Strategy in 2012 [10]. The ESAN-CPLP was established in a meeting of heads of state, held in Maputo-Mozambique in the same year, with the purpose of ending hunger in the CPLP countries. Moreover, the CPLP University Mechanism Coordination Committee was elected in 2015. This Coordination Committee includes representatives from nine universities, two of which are in Brazil, two in Portugal and one in each of the other countries (Angola, Cape Verde, Guinea-Bissau, Equatorial Guinea, Mozambique, East Timor and São Tomé and Prince). The objectives of CPLP University Mechanism are as following:

1. Strengthen research in the scientific community of Portuguese-speaking countries, which takes as an object of study the food systems in this political and economic bloc, in terms of guaranteeing the right to adequate food, food sovereignty and Food and Nutrition Security policies.

2. Develop cooperative training processes within the scope of the CPLP, from short courses to postgraduate courses, aimed at the development of inclusive, sustainable and sensitive to nutrition food systems.

3. Promote the inclusion of researchers, teachers and students in social dynamics at different levels of territorial organization, contributing to the development of food systems in this political and economic bloc.

The Universities Mechanism acts independently, in line with the strategies of the Food and Nutrition Security Council of CPLP. In 2015, the work plan included a research and development program centered on three lines: i) Strengthening food and nutrition security governance; ii) Promotion of access and use of food to improve the livelihoods of the most vulnerable groups; iii) Increasing availability of food based on small producers. These three lines correspond to the lines of action of CPLP Strategy.

To accomplish these objectives, it was planned a survey of the potentialities, weaknesses and needs of research and development in Food Sovereignty and Food and Nutrition Security based on the systematization of existing information, for each Mechanism country. Subsequently, it was intended to develop integrated research, involving at least three member states. Nevertheless, during the first two years, despite some initiatives within the scope of the CPLP University Mechanism articulation committee, this network did not raise any significant advances, which can be directly attributed to the MU-CONSAN-CPLP. Taking into account the difficulty to implement regular face-to-face meetings, due to geographic distance among the different elements that compounds the MU-CONSAN Coordination Committee, virtual communication was pursued, in order to structure and trigger this process. This was a long period of debate, in a context of a great diversity of conceptions of food and nutrition security, development models and academic dynamics. In the beginning, the differences generated strangeness that over time disappeared to make way for a network of exchange and production of knowledge.

The strengthening of diplomatic cooperation relations between the countries of the south in strategic areas, among which Food and Nutrition Security was prioritized during the governments of Lula da Silva and Dilma Rousseff, with significant investment of resources and advocacy, providing the induction of technical cooperation networks and academic.

As a result of previous processes of articulation of Brazilian researchers with government sectors, in 2018, the University Mechanism obtained financial support from the Brazilian government, that provided the hiring of technical personnel to carry out the research, and allows that the Coordination Committee meets twice a month, using an online platform (NutriSSAN Platform), to discuss (essentially) two topics: research and education. Nevertheless, countries like Angola, Guinea-Bissau are unable to maintain their presence at meetings regularly due to essentially technical communication problems. With Equatorial Guinea and East Timor, it was not yet possible to establish an academic cooperation relationship. In addition to systematic online meetings, the CPLP University Mechanism researchers have participated in face-to-face meetings, called the "Summer Schools", which were held in Brazil (2–5, May 2018) and Mozambique (14–18 November 2018), in addition to a technical mission carried out in São Tomé and Príncipe. The purposes are the strengthening of the group's cohesion and the theoretical-methodological deepening for academic work.

During the meeting of CPLP heads of state, held in Dilli in 2015, a multilateral cooperation was proposed for the improvement of training programs at different levels of formal and informal education, as well as the expansion of the offer, whether in postgraduate courses or in short courses not leading to a degree. To this end, the approach was to offer courses aligned within the objectives of ESAN-CPLP Strategy for the countries of the bloc: i) the development of specific cooperative programs, ii) the realization of a face-to-face course to build a guiding reference

framework of CPLP University Mechanism action and iii) the creation of an academic mobility program.

In 2016, the University of Afro-Brazilian Lusophone Integration (UNILAB) joined the group to follow the work of the CPLP University Mechanism coordination committee and started to occupy the second chair of Brazil in 2017. From UNILAB, discussions began for the collective construction of a proposal for postgraduate course in Food and Nutritional Security. The proposal was built collectively through online meetings and the courses have already been implemented in Brazil, Cape Verde, São Tomé and Príncipe and Mozambique. The resources for the implementation are minimal, because many tasks are distributed among the group of teachers through a process of solidarity cooperation (**Figure 1**).

The works in the development by the mechanism of CPLP involve online courses for the higher education professionals (400 h) involving 180 students in double degree process involving Brazil, Mozambique, São Tomé and Príncipe. The

Figure 1.
Final screen of video lessons with visual identity and partners of the specialization course in food and nutrition security, 2019.

Figure 2.
Opening of the summer school at UniZambeze, Tete, Mozambique, 2018.

students are government technicians, teachers and agents of food and nutrition security, challenged to develop projects that transform local contexts, such as the development of innovations for family farming practices and care for the environment, health and wellness. The specialization course program was developed collectively, involving professors from universities close to the students. Teachers who supervise final course projects also went through a training process involving virtual environments and participatory research. This virtuous interaction provides to the teachers who receive students from other countries the knowledge that makes them more sensitive to the problems of the student's local context, giving students access to information and the possibility of intervening in their reality in a systematic way using a method. As for teachers at local universities, these exchanges enrich the training processes they seek to teach by researching and intervening in reality.

The virtual environment has facilitated the process of cooperation between actors in academia and between them and the government and other social actors. However, the face-to-face meetings facilitated by FAO or the Brazilian government were fundamental to generate bond and feeling of belonging among the members of the University Mechanism (**Figure 2**).

4. Cooperation processes in research, teaching and extension

Much of the knowledge produced at the university is unknown to society and part of what is produced may not meet their needs. It is assumed that, in the face of multiple crises (economics, health, environmental, ethics …), it is necessary to create mechanisms for the dialog between the academic community among its peers and with the actors of the different scenarios where life happens. It is necessary to seek favorable scenarios for the production and dissemination of knowledge and the insertion of the academic community in actions to promote local development and well-being. Food systems are intimately and potentially inserted in the processes of local development and guarantee of rights to health and well-being.

The insertion of academic practices in the territory not only promotes and strengthens actions to promote environments favorable to local development, healthy and sustainable inclusive food systems, but also qualifies the teaching process. The presence of the academy can permeate all scenarios of the food system and the policies that support it, putting into practice specific skills of the researcher, in a contextualized way in reality, without replacing other roles, such as the role of providing, promoting, defending the right to food.

Academic practices that promote local development emphasize traditional knowledge and the empowerment of disadvantaged minorities, including women, traditional peoples and communities. In times of uncertainty, an issue as global as food and nutrition can make the most of social participation processes, with the aim of transforming reality.

The universal guarantee of the right to adequate food presents itself as one of the greatest challenges for humanity, whether due to inequities in access, or due to the not-so-distant threat of depletion of natural resources [11] and, even more, the limitations for propose and develop processes for evaluating its performance, due to the multiplicity of factors.

In this way, participatory processes [12] gain relevance to promote the insertion of research in the local social, political, economic and environmental dynamics for a better understanding of the situation and the vulnerability processes in which it is established. The second element refers to the need to place individuals as political

subjects, building their own knowledge, in order to develop coping strategies and claim their rights.

These arguments are consistent with the principles of participatory research, which seeks to involve research actors as agents and owners of their own knowledge, able to analyze their problems and develop their own solutions [13]. It seeks to "place the control of knowledge in the hands of groups and collectivities that express collective learning both in their conscience and commitment to collective action" [14].

In our view, the starting point must always be the reality of the territory from different perspectives and levels of intervention. Intersectoriality, interdisciplinarity, systemic thinking and the dialog of knowledge are taken as a basis. This approach may need tools to systematize and organize information.

Food and Nutrition Security is multisectoral and transdisciplinary and benefits from all types of research. However, participatory inter/transdisciplinary research is able to synthesize knowledge and produce innovation/transformation. Participating research should not be confused with extension, although it occurs in extension scenarios. This research follows a method and its results are validated by the logic of academic production. It is about making research meaningful, bringing it closer to issues of interest to society, having it as an ally. At CPLP University Mechanism, it is assumed that the exchange of experiences, collaborative work and the effective participation of the academy in Food Sovereign and Food and Nutrition Security public policies promote the research skills and the necessary subsidies for sustainable, healthy, fair and inclusive food systems.

The transformation of food systems and more inclusive ways of food production and trade are at the heart of global discussions, identified as challenges to a more sustainable and healthy life on the planet. This discussion went from ideas and theories to the agenda of decision makers around the world. The current food systems, despite technological advances, high productivity in agriculture, livestock and the diversity of food supplied by industry, available in supermarkets and other establishments, do not guarantee the health of the consumer or the food on everyone's table. Hunger and obesity are on this agenda, as are the processes of production and distribution of food that are sustainable and inclusive [15].

The concept of the food system is very broad and represents an integrating and meaning-producing element in this field of knowledge and practices. The food system articulates the analysis of different food activities and covers the flow of food without neglecting the actors involved. Thus, the sowing, harvesting, production, distribution and consumption processes are perceived in an interconnected manner and based on existing relationships. As food moves from side to side and is transformed, it is necessary to consider the existence of subjects above all.

Under the reference of right to adequate food, as a universal right [1], food sovereignty and Food and Nutrition Security policies as the banner of the dispute, as well as the right to produce, contribute to the construction of more just, sustainable, inclusive and resilient food systems that promote health. At the center of this discussion are the thinkers who support the logic of endogenous development, social technologies, solidary economics, emancipatory critical education, science to the south and university extension itself [16].

The transformation of food systems puts us before a paradigm shift, leading us to rethink our technologies to find new answers. More than that, it leads us to innovate and reinvent ourselves in our research questions. It makes us aware that it will be necessary to transform academic practice, from transdisciplinary perspectives. CPLP University Mechanism works in a proposal for action based on the inseparability of teaching-research-extension, which seeks to integrate the production of

technological solutions with training practices, adopting collaborative networks as a strategy to solve complex problems.

The insertion of food sovereignty and Food and Nutrition Security on the government policy agenda, as well as the development of efficient and effective processes in the governance of these policies are the great challenges for the sustainability of food systems, the guarantee of the human right to food, health and well-being suitable for all.

Within the context of the CPLP Food and Nutritional Security Council, a great effort has been made to strengthen the governance of these policies among member countries by creating laws and public policy councils with a view to engaging everyone. The academy has been called upon to participate in these processes acting directly on public policies, promoting innovation or training processes (**Figure 3**).

In the context of public policies, academy can contribute by generating evidence from research and knowledge that already exists, advising management processes, engaging in advocacy processes for the interests of sections of the less favored population, and promoting consensus through appropriate methodologies; it can, within the territories, promote innovation by generating technologies and, finally; promoting training processes for technical staff, developing information and training activities for the population, seeking to generate changes in behavior and skills in favor of the well-being and quality of life of the population (**Figure 4**).

The engagement of academy in public policy processes is determined by historical, cultural and conjunctural issues. And in this case, the actions of international organizations, for example, the Food and Nutrition Security Council of CPLP and FAO facilitate the process. Below we present how the members of the University Mechanism got involved and perceive the process in their countries.

4.1 Angola

Individual's life passes and develops in a time and space, being determined by social actions and behaviors for which a certain education is necessary as a process of transmitting social meanings in a society. Angolan society is in a constant process of change; this includes intellectual economic, social, and educational needs, among others that make up the well-being of societies.

Participation in CPLP University Mechanism has been favorable because through this mechanism, the university has the possibility to share and acquire knowledge related to food sovereignty and Food and Nutrition Security as well as the transmission or dissemination of this information in different areas of society. The mechanism has been arousing interest in the issue of Food and Nutrition Security, as it is a topic that most Angolans are still unaware of.
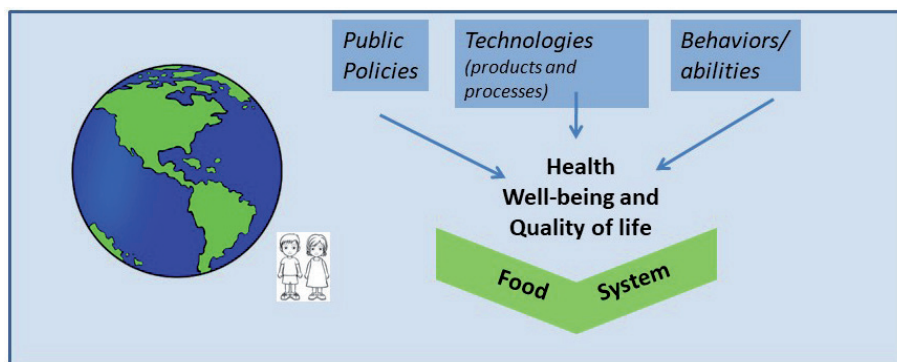

Figure 3.
Guidelines for the performance of the academy in public policies.
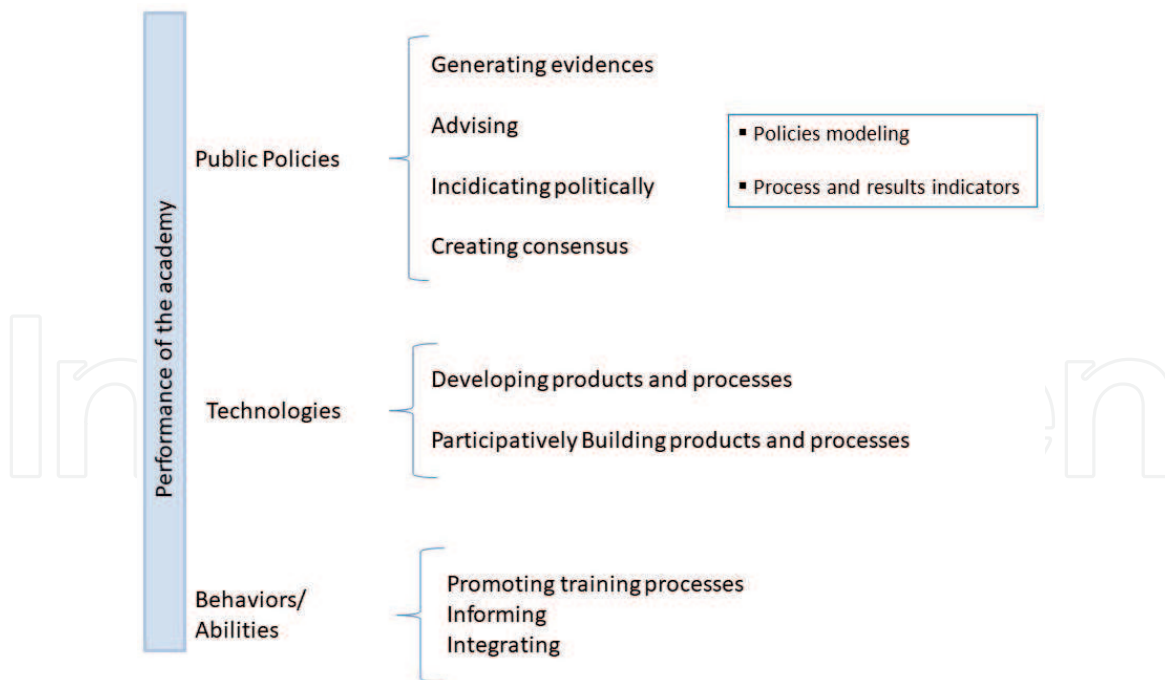
Figure 4.
Performance of the academy in public policies.

Inclusive and participatory research is a fundamental factor because through this, we seek community involvement in the analysis and resolution of problems in their own reality, developing and creating strong bonds, avoiding gaps between researchers, teachers, government entities and members of society in general. In this sense, the university, through extension, has sought to collaborate to the maximum extent with the communities to identify potential problems, the elaboration of an action plan that aims to put an end to the problems now identified.

In Angola, the government has created programs aimed at fighting hunger and poverty, although in many cases it has not been implemented for different reasons. In the current context, the government created the program to support production, export diversification and import substitution (PRODESI), aiming at the acceleration of national (local) production and the creation of wealth, generating employment opportunities within the communities and consequently the generation of a reasonable family income. PRODESI has a great potential for participatory actions involving the University.

Angolan researchers at CPLP University Mechanism believe that greater interaction between public authorities, academia and civil society is important in order to have a country with policies designed and focused on social well-being, where the right to food is a fundamental element.

4.2 Brazil – Ceará and Bahia

The University of Afro-Brazilian Lusophone Integration (UNILAB), one of the universities that make up the University Participation Mechanism at CPLP University Mechanism, is a young institution that is inserted in the context of internationalization and interiorization, as an expansion strategy and democratizing access to higher education in Brazil and in the CPLP countries. Located in northeastern Brazil, it operates in two different territories - Maciço do Baturité, state of Ceará and Recôncavo Baiano, in Bahia, with the principles of solidarity cooperation among Portuguese-speaking peoples as its north.

In this context, the integration of UNILAB in CPLP University Mechanism meets the vocation of a University in strong harmony with the demands of the territories where it is inserted, as well as the other Portuguese-speaking countries, in which there are formal cooperation processes. However, about the theme of Food and Nutrition Security, although it permeated the actions developed in teaching research and extension, especially in the Agronomy graduation course,

Figure 5.
Training process involving theory and practice in agroforestry systems training (Redenção-CE, Brazil, 2019).

Figure 6.
Traditional cassava plantation in the Recôncavo Bahiano region, Brazil, 2019.

there was no conceptual appropriation that would lead to the understanding that the construction of Food and Nutrition Security is relevant to different areas of the knowledge. Based on the project to Strengthen Teaching, Research and Extension for Sovereignty and Food and Nutrition Security in the CPLP and at the UNILAB, developed by the Pro-Rectory of Institutional Relations with resources from the Brazilian Ministry of Science, Technology, Innovations and Communications, there was an expansion of the debate on Food and Nutrition Security at the University and the integration of professors and researchers from different areas in addition to those related to agrarian sciences.

In the context of the project, in addition to the Summer Schools and Technical Mission, the aforementioned Specialization in Food and Nutrition Security was carried out, promoting the solidary participation of researchers from the institution. It should be noted that the moments of face-to-face meetings in the countries are of paramount importance for the construction of the activities to be carried out by the group, in addition to giving prominence and visibility to local researchers. In Bahia, activities are developed between the university and the surrounding communities, regarding the reconstruction of traditional cassava fields. A process of continuous training in Agroforestry Systems was carried out in Ceará, involving students from the UNILAB Agronomy graduation course, together with EMBRAPA Agroindustry Tropical, in addition to the participation of teachers in Participating Research in Sovereignty and Food and Nutrition Security (short course developed by partner UNESP). All actions have resonance in the territories, to the extent that they are appropriated by different actors and translate into course completion works, participation in scientific events and a pedagogical environment for building changes in the local reality. It is worth remembering that in the context of Food and Nutrition Security Council of the CPLP, there is recognition of the importance of agroecology and family and peasant agriculture as strategic in promoting Food and Nutrition Security, especially in rural areas, where most of the actions developed in the context of CPLP University Mechanism are concentrated (**Figures 5** and **6**). In Brazil, the development of a post-doctorate to be carried out in Guinea-Bissau and research on Food and Nutrition Security in Cape Verde are underway.

4.3 Brazil – São Paulo

UNESP (State University of São Paulo "Júlio de Mesquita Filho") is a free, public, multicampus university that has been a member of CPLP University Mechanism since 2015. It was founded in 1976 and today represents one of the most important universities in Brazil, being among the top three of the State of São Paulo.

The Center for Science, Technology and Innovation in Sovereignty and Food and Nutritional Security - INTERSSAN (http://interssan.com.br/) is coordinated by the Integrated Teaching, Research and Extension Group at UNESP, which is responsible for activities with the academic network of CPLP University Mechanism. In this network, INTERSSAN shares with UNILAB the coordination of the work agenda, organizing monthly online meetings in order to the execute the work plan with Food and Nutrition Security Council. Besides that, it has received students from partner universities in its postgraduate programs and participated in the discussion for the creation of postgraduate programs in partner universities. It manages the Moodle platform to offer distance learning courses at the graduate level or to disseminate knowledge. It has also articulated bibliographic productions in co-authorship.

The involvement in the training processes of CPLP University Mechanism, as well as research and extension, has strengthened the work of INTERSSAN researchers, providing the exercise of teaching and research processes in the critical and

participatory logic. As an example, the orientation of the course conclusion work in the UNESP/Zambeze University partnership involved around 30 researchers from UNESP. Another example was the development of educational material for children (**Figure 7**).

4.4 Cape Verde

The University of Cape Verde is the first public institution with the character of a university in the country and is therefore a reference for Cape Verdean higher education. Its organic composition consists of five faculties and it has six campus spread over several locations in two islands.

Its history can be traced back to the immediate period of post-independence, when the country's first higher education school was founded in 1979. In 2006, after the meeting of three independent public higher schools, the University of Cape Verde was created.

The University of Cape Verde has been part of CPLP University Mechanism since its creation in 2015, through the School of Agricultural and Environmental Sciences, created on 23 December 2011. This School provides degree courses in Agronomy and Zootechny and intends to open in the coming years the courses in Environmental Engineering and Forest Engineering (**Figure 8**).

4.5 Guinea-Bissau

Guinea-Bissau is a country that is building relations with CPLP University Mechanism, through the University Amílcar Cabral (UAC). It is a public institution of higher education, created in 2003 and reinstalled in 2012 after a long period of stoppage.

It is the first and only public university in Guinea-Bissau. Its mission is to create, transmit and disseminate the culture of humanistic, artistic, scientific and technological knowledge, contributing to the promotion and scientific development of Guinean society. Its goal is to improve the ability to anticipate and respond to social, scientific and technological changes with a view to community development and increasing social cohesion.
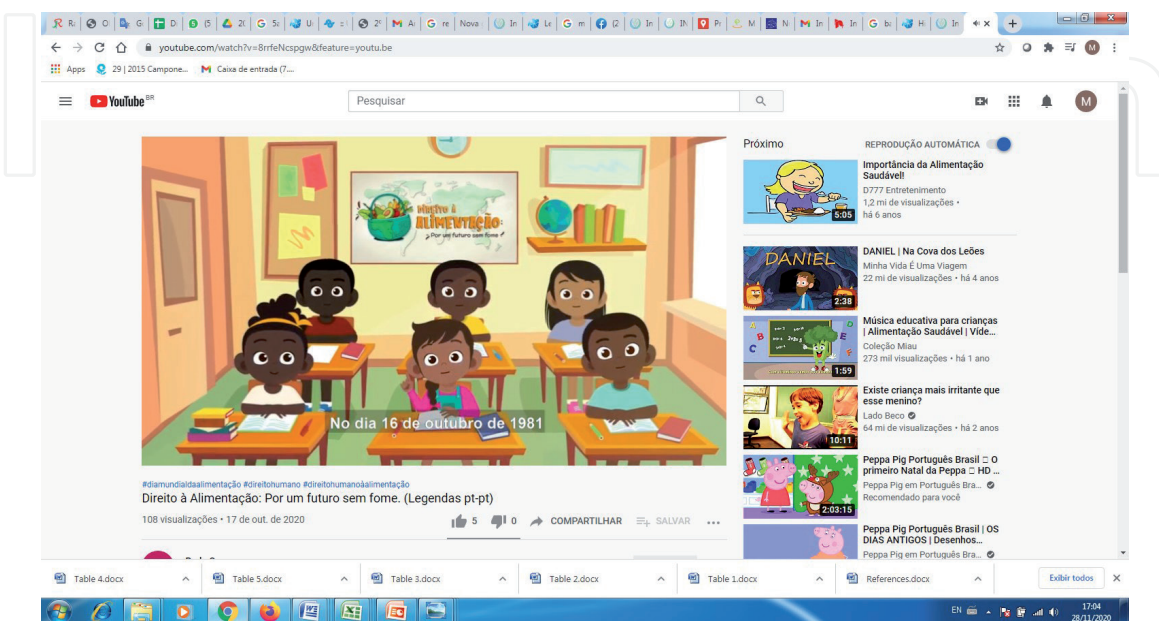

Figure 7.
Children's video prepared by INTERSSAN, in partnership with CPLP University Mechanism, 2020. Available at: https://youtu.be/8rrfeNcspgw

Figure 8.
Fair for the promotion of agroecological practices held by Uni-CV, Cidade de Praia, 2018.

The UAC also aims to promote and contribute to the consolidation of the values of freedom, the culture of peace, citizenship and human rights. In its administration, it is governed by principles of democracy and participation based on respect for identity and balance between the polytechnic and university subsystems, aiming to promote doctrinal independence in relation to any philosophical, political, ideological, esthetic or religious conceptions.

It also favors pluralism of opinion, freedom of expression and thought and promotion of intellectual tolerance. Along these lines, it encourages the active participation of all university bodies in ordinary academic life.

It is considered that the role of students and their organizations should not be neglected, with special emphasis on the essential functions performed by non-teaching staff. For this reason, strategic action is directed towards teaching and scientific research, at the national and international level so it is important to attend to human resources with respect for their adequacy and good management. Thus, UAC has not measured efforts to favor a good synergy with CPLP University Mechanism since 2015, to expand its international operations and partnerships.

4.6 Mozambique

Mozambique's participation in CPLP University Mechanism has been ensured by a representative and alternate from the Zambeze University (UniZambeze). It is a Mozambican public higher education institution founded in 2009, located in the city of Beira, which has six faculties, four of which are located in the central provinces of Manica, Tete and Zambézia, and the rest in the province of Sofala.

Most undergraduate courses, especially those taught in the first three provinces, have the potential to contribute positively to sustainable food systems and to increasing the availability of diverse and nutritious foods.

Thus, in these places, the training of small producers in the communities has been prioritized, with a view to equip them with better productive practices, as well as training young people in vocational courses, with the objective of facilitating self-employment in the civil construction and agro-livestock production sectors, enabling the expansion of conditions for access to food.

In its participation in Food and Nutrition Security Council of the CPLP, UniZambeze, in addition to strengthening its staff, has been a vehicle for raising awareness among Mozambican society regarding the need for sustainable eating practices and public policies with a view to improving access to food. In this context, in 2019, UniZambeze hosted the second edition of the CPLP University Mechanism Summer School, held in the city of Tete.

In 2020, in cooperation with UNESP, UniZambeze hosted the first specialization course in Food and Nutritional Security, taught in this country, which explains the very high demand. 130 students participate actively in this course, including managers from the public and private sectors, as well as social activists belonging to different Civil Society Organizations, coming from different parts of the country and from different areas of knowledge that dialog with Food and Nutrition Security.

This diverse participation gives the course a peculiar characteristic and potential for the promotion and search for sustainable solutions to community and population challenges in general. This includes preventable diseases and nutritional deficiencies, with a view to achieving individual and collective well-being, within the scope of local development.

Hence, the option for participating research was appropriate to the context. The experience in this course allowed UniZambeze to think about the possibility of introducing a stricto-sensu Postgraduate course, especially for students who complete the specialization, who can continue with the training, if they want to.

This fact may happen in the near future, and may have some support from Professors indicated by CPLP University Mechanism, in addition to professors of the institution. Some of these professors participate in the Participatory Research in Food and Nutrition Security course and/or have concluded recently training in the Course of Trainers in Digital Scenarios in Sovereignty and Food Security, both taught by UNESP.

Due to its participation in CPLP University Mechanism, UniZambeze was invited to join the National Council for Food and Nutritional Security of Mozambique, created in 2017, which has the task of advising the Government on inter-ministerial coordination and promotion of Food and Nutrition Security and right to adequate food. And because Food and Nutrition Security Council of CPLP is intended to unfold at the provincial and district level, UniZambeze will be able to actively participate in the training of these Councils and will share the experiences learned by the countries that are part of CPLP University Mechanism and that have consolidated their councils.

4.7 Portugal

Portugal joined the CPLP University Mechanism in 2015. Since 2018, the Polytechnic Institute of Viseu and Universidade Aberta have represented Portugal in the CPLP University Mechanism Coordination Committee. The University Mechanism of Portugal is also part of the CPLP University Mechanism representation in the Working Group on Nutrition and Food Systems, created within the scope of the CPLP Food and Nutritional Security Council, in January 2019.

The Polytechnic Institute of Viseu is one of the polytechnic higher education institutions in Portugal, located in the central region, which actively participates in activities linked to society, with emphasis on projects developed at the level of family farming and sustainable food systems. Within its schools, it offers different levels of higher education in different scientific areas, namely in the area of environmental, agronomic, forestry and veterinary sciences and social and economic sciences (https://www.ipv.pt/acesso.htm).

The Universidade Aberta (UAb) is the public distance learning university in Portugal. It is a member of the Distance Education Association of Portuguese Speaking Countries. Due to its vocation and nature, UAb uses in its teaching activities, the most advanced distance learning methodologies and technologies aimed at education without geographical borders or physical barriers, and with a special focus on the expansion of Portuguese language and culture in Portuguese-speaking countries (migrant communities and Portuguese-speaking countries).

Thus, UAb offers, anywhere in the world, higher education (degrees, masters and doctorates) and Lifelong Learning courses, in the following domains: Sciences and Technology, Social and Management Sciences, Distance Education and Humanities (https://portal.uab.pt/). In the context of food, the Master's course in Food Consumption Sciences (https://www2.uab.pt/guiainformativo/detailcursos.php?curso=25) stands out in its online offer.

The University Mechanism network in Portugal is composed of eight Higher Education Institutions, and 18 researchers, with different scientific backgrounds: agronomy, zootechnics, biology, food engineering, pharmaceutical sciences. This network actively participates in regular online (monthly) CPLP University Mechanism Coordination meetings, for better planning and better execution of the Mechanism work plan. It also participates actively in the different activities developed by University Mechanism, at the level of the following axis: teaching, research, extension.

In this regard, the participation of different researchers from the CPLP University Mechanism network in Portugal stands out in the lato-sensu specialization course in Food and Nutritional Security, proposed by UNILAB and UNESP. It is also worth mentioning the participation of researchers in the different Special Interest Groups: SIG Sustainable Agri-food System, SIG Community of Portuguese Speaking Countries, SIG Obesity.

The CPLP University Mechanism network in Portugal actively collaborates with the Civil Society Mechanism of the CPLP Food Security Council, highlighting in this regard the recent actions: International Forum on Relevant Territories for Sustainable Food Systems (July 2019); Workshops: Human Right to Adequate Food and Public Policies at the Local Level (2018), Conversations @ table: International Exchanges on the Post-COVID-19 Food System (2020).

Likewise, a number of research projects related to family farming and right to adequate food are underway within the Decade of Family Farming, in partnership with CPLP civil society mechanism and several other partners from academia and civil society (for example, the project "Contributions from Family Farming to the Promotion of Sustainable Food Systems and Diets", within the scope of the National Rural Network and the cooperation project "TERRASafe - Healthy Territories with Family Farmers", which involve Brazil, Guinea Bissau and Mozambique).

4.8 São Tomé and Príncipe

The University of São Tomé and Príncipe (USTP) is a public institution of higher education that resulted from the need to create a structure capable of bringing together the different institutions and training centers in order to provide functional and institutional uniformity to higher education in São Tomé and Prince. USTP was created in 2014 and has been a member of CPLP University Mechanism since 2015. USTP assumes itself as the institution responsible for the scientific, cultural, social and economic development of this geographic and linguistic space with around 200 thousand inhabitants. The objective of the USTP is to provide quality higher education, research and extension that enable the formation of citizens with

the capacity for entrepreneurial action and independent reflection, necessary for the country's sustainable development.

Within the scope of the CPLP University Mechanism, USTP, Uni-CV and UniZambeze hosted the Specialization Course in Food and Nutrition Security promoted by UNILAB and UNESP. USTP has been working closely with the civil society network for Food and Nutrition Security, Food and Nutrition Security Council of the STP, Center for Agricultural and Technological Research (CIAT-STP), as well as with the government in order to ensure Food and Nutrition Security, and improving the living conditions of the rural population through participatory research. Currently, USTP in cooperation with UNILAB and UNESP is working to implement a Master's course in Agroecology and Rural Development with a focus on Rural development, Agroecology, public policies for food security and the Empowerment of rural Women.

5. Final considerations

Healthy, sustainable and inclusive food systems are on the global agenda and represent a fundamental condition for the health and well-being of populations. This worldwide effort establishes general guidelines and points to the need for profound changes in economies and ways of life, putting globalization in check. However, there is a need for valuing diversity in the search for solutions to local, regional and national issues. Ancestral knowledge emerges as elements to be revisited and an important asset among CPLP countries. Teaching-research-extension processes that take into account the dialog of knowledge and life in territories in different dimensions and diversity are potentially more appropriate for transforming the reality of many families into food insecurity. The strengthening of a national network of researchers is of paramount importance for each country to develop and implement appropriate policies capable of guaranteeing the well-being of its population. In turn, each national network is nourished and strengthened when interacting with other networks. This is the working logic of CPLP University Mechanism.

Although they conform to different realities, especially Brazil and Portugal, Portuguese-speaking countries have similar challenges for which the construction of solutions discussed in a community has been shown to be able to build paths. Much of the shared challenges, especially in the African countries of the bloc, are associated with young democracies, in need of consolidation. However, for the whole group, there is a need for the use of natural resources in order to guarantee sustainable and healthy production systems. In this context, the consolidation of research networks has become an effective instrument, as efforts and resources converge to overcome challenges. The paths paved by the debate and exchange of experiences strengthen the local networks, enhancing the efforts of the countries with regard to teaching, research and extension.

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